

ISSN 2221-2698

Arctic and North



**Arkhangelsk:
Northern (Arctic) Federal University
named after M.V. Lomonosov
2012. № 5 (January)**

Arctic and North. 2012. № 5 (January)

Electronic periodical edition

© The Northern (Arctic) Federal University, 2012

© An editorial office of the journal «Arctic and North», 2012

It is published 4 times a year

The journal is registered like electronic periodical edition on Russian and English languages. The testimony of the Federal service for Supervision of Communications, Information Technologies and communications (*№ FS77-42809* from the 26 of November 2010.)

The journal is registered in the system of the Russian Index of the scientific quotations (RINZ), where should be placed all the regular issues of the journal. A license agreement is № 96-04/2011R on April 12, 2011.12.

The journal is registered in the Depository in the electronic editions FSUE STC «Informregistr» (registration certificate № 543 or 13 October 2011) and it was also given a number of state registrations 0421200166.

Founder: The federal state autonomous institution of higher education «The Northern (Arctic) Federal University» named after M.V. Lomonosv. Address: 163002, Arkhangelsk, Northern Dvina Street, 17. An electronic address of the journal: <http://narfu.ru/aan>.

Chef Editor – Lukin Urii Fedorovich, Doctor of History, Professor. Tel. /Fax: +7 (818-2) 68 34 47. E-mail: mba@pomorsu.ru, ylukin@atnet.ru.

Editorial council

Vostryakov Lev Evgenievich
Glazichev Vyacheslav Leonidovich
Dergachev Vladimir Aleksandrovich
Kefeli Igor Fedorovich
Kotlyakov Vladimir Mihailovich
Kydryashova Elena Vladimirovna
Mihalchyk Iliya Filippovich
Neelov Urii Vasilievich
Selin Vladimir Stepanovich
Fedorov Igor Gennadievich
Chilingarov Artyr Nikolayevich

Editorial board.

Vertishin Aleksey Nikolaevich
Dregalo Aleksandr Alekseevich
Zalivskii Nikolai Pavlovich
Kydryashov Urii Vladimirovich
Okunev Urii Pavlovich
Sokolova Flera Harisovna
Toskynina Vera Edyardovna
Ulyanivskii Viktor Ivanovich
Shraga Moisei Haimovich
Shybin Sergei Ivanovich
Fedorov Pavel Viktorovich

All issues are freely available in the internet on the web pages: <http://narfu.ru/aan/>, http://narfu.ru/aan/article_index_years.php, <http://arctic-and-north.com/>.

The articles of the journal «Arctic and North» are published in the system of the «Academy of Google» and you can find them in the research «Arctic and North». Information for the authors is published on the web site of NArFU: <http://narfu.ru/aan/author.php>.

Money is not taken from the authors, graduate students, for publishing articles and other materials, fees are not paid. An editorial office considers it possible to publish the articles, the theoretical positions of the authors, which are good for discussion. Published materials may not reflect the opinions of the editorial officer.

All manuscripts are reviewed. The Editorial Office reserves the right to choose the most interesting and relevant materials, which should be published in the first place.

Contest

Christmas interview of the Patriarch Kirill 7 January 2012 on the channel "Russia"	4
--	---

Social Philosophy

Komleva E. A. Nature and antroposocial phenomenon of nuclear energy	16
Lykin U. F. The Arctic social fears	29
Gorelikov L. A. The Arctic project to a global society	56

Geopolitics

Zaikov K. S., Nilsen I. P. Norwegian-Russian Arctic frontier: from the whole districts to the Pomor region	64
Shybin S. I. Energy of the North to the Synergetic of Russia	78

Ecology of the Arctic and the North, nature resources

Glyaznezova U. S., Zueva I. N., Chalaya O. N., Lifshiz S. H. The questions of the environmental monitoring and rehabilitation of oil-contaminated soils of the Arctic zone of Yakutia	90
Zelenina L. I., Fedkyshova S. I. Forecasting and the results of climatic changes in the Arctic region	101

Human capital

Palkina O. A. Features of external respiration of female students in the conditions of the North	106
---	-----

History

Egorov A. M. Heroic contribution of Pskov in the protection of the Russian North during the "northern" wars at the end of XVI - to the beginning of XVIII centuries	109
Martinov A. Y. The islands of the White Sea, from the Mesolithic to the Middle Ages (the ancient development of the White Sea islands on archaeological data)	127

New Publications

Ershova U. V. NATO's actions in the Arctic and their influence on the militarization of the region	164
---	-----

Summary

Authors	168
Abstracts, keywords	169
Contacts	172

Christmas interview of the Patriarch Kirill

7 January 2012 on the channel «Russia»¹



– Your Holiness, good afternoon. It is already a traditional Christmas interview to our channel. And on this bright Christmas holiday, at the beginning of a new 2012 year, I think it would be appropriate to ask you to make conclusions about the past year. What was the main for you, for the church, for the society and what event could you put at the first place?

Patriarch Kirill:

– This is a difficult question, because there is no objective answer. Everyone looks from their point of view. A man's point of view, of course, it is not consistent with the view of God in human history. And so only after the time when the picture becomes sharper when the shadows leaving and gray ink disappears when we see where the good and evil which, if people give a more sober assessment of what happened. Therefore, my view of the current year will, of course, subjective. And surely, it is from my point of view.

But I would like to say one thing. There have been many important events in politics, economy and in social life too. There were many positive and there were something, that made people disappointing. But if you look at it from a religious point of view, all the co-existence reflects certain dynamics of life. And this dynamic life makes me personally a lot to think about it.

What happens with the modern man? Are we really getting better? Someone have a feeling that we as a people, as individuals, as families, that do us really becoming better, stronger, and wiser? It is easy for us to use modern technology, we are powerful. Some people, who have too much money, while others - because they perfectly captured on the computer technology and do something that could not be done in the past. And in fact is it the power or not?

For me, the most striking event was the bringing of the Holy Belt, which shook the whole, our society, which helped people to see the level of religiosity. The belt was a month with us. And,

¹ URL: <http://kp.ru/daily/25814.3/2793185/> (09.01.2012). Video: URL: <http://pravera.ru/index/rozhdestvenskoeintervjupatriarkhkirilla2012telekanalrossija17janvarja/0-238>.

as estimated by those who stood next to the shrine, there is a certain amount of people that can pass per unit time. So, with the maximum influx of people during the month, it could not go more than about 3.5 million, slightly smaller - between three and three and a half millions of people. So long as faith lives belong to our people, it is the strongest, the brightest and most inspiring thing. Then we will not lose the scale of values. Then we really will keep the ability to live. And when a person retains the capacity to Life with a capital letter, not to physiological life, the life and culture, and spiritual, intellectual, physical, so everything belongs to the hope. And so the bringing of the Belt Blessed Virgin gave me a great hope.

- In our society, we have very strong anti-clerical moods. And it is interesting, why does it suddenly raise such a request for a miracle?

Patriarch Kirill:

- There is a myth about the growth of anticlerical sentiment in the society. We have growth in percentage terms - a significant increase - anti-Catholic and anti-religious component in the media. But it does not reflect the sentiments of people. It only reflects only the following phenomenon: faith and the Church become more visible and more relevant to people's lives. And meet resistance from those who do not feel in the heart of faith who does not associate with faith of God, his future, even among those who consider their task to deal with religious beliefs. These people do not vanish anywhere, they were presented during the long decades of our lives. In addition, the modern consumer lifestyle contributes to the formation of agnostic sentiments. People do not think about the great, the eternal, the holy, good and evil. They think about money and how to spend it.

And these two factors on one hand - is a rudimentary anti-religious Soviet era, plus a new one, so that the consumer context, they are indeed in a certain part of our society form a kind of indifference to the religious idea. And in that sense, these people sometimes become a breeding ground for the spread of anti-religious beliefs. What took advantage of people who have worked professionally and work in this area? By the way journalists very often write on the religious topics, it is from this point of view, it is honestly that the professionals who are working professionally in the field of anti-religious propaganda, as we named in the Soviet times.

But there is something that can be more complicated. This is what a truly modern way of life as it displaces by God. You say that's a miracle. What is the religion? Religion - is a relationship with God. The man turns to God in response to this, he will get something. Something, which was asked. And so every prayer - it is a miracle. If I had not experienced a miracle in my life, I would never put on his robe, I would find, what to do. But only because I've heard since childhood, and felt like God answers me, I became not just a faithful man, deeply religious - I have all devoted their lives to this.

And some people said, that's gone to some pieces, its pagan, and its superstition. But, first, is the Word of God tells us that material objects through the energy of this parallel world are transferred to our physical world. The Shadow of Peter passing the apostle healed the sick. Handkerchief, which was held in the hands of the apostles, healed the sick. It's in God's Word said. Therefore, even the most rational-minded Christians, the most extreme of the Protestant persuasion, and then recognize the fact that the Bible speaks about the miracle. And in the Old Testa-

ment? The whole Bible - is sacred history, in the center of which there is a miracle. Otherwise, it could not be. Because the answer to prayer, which God gives something that can not provide a reality. And the man perceives it as a miracle.

So now do not have any special request for a miracle. As it always was, as he proceeded from religious feeling, so he comes now. Nothing is new there. And after many, many years, if God will suffer even the human race, and we will all be there, or our descendants, people, who will just believe in God, call upon his name and give if asked, they will understand that it is a miracle in their lives.

- Well, here are the events of the political and public life, which are serious. Some of our fellow citizens considered the elections to the parliament were dishonest. And in a country swept the protest. But the most numerous were in Moscow. And the people, who gathered at the Marsh area, and Sakharov Avenue, were completely different in their political views, but they were united by one theme - "For Honest Elections! » At the end of the year in the midst of rallies you in his sermon, which was called for the preservation of harmony and civil peace. But, perhaps, the most responsible and important - were the presidential election. What can you say about it?

Patriarch Kirill:

- This your last sentence is the key. Each person in a free society should have the right to express their views, including opposition to the actions of the authorities. If people are deprived of this right, it is perceived as a restriction of freedom. It is very painful. Let us remember the same thing the Soviet era. There was no such law. It was declared on paper, but really - no. In Novocherkassk people came, they said at the time that there is bad all the salary delay. So what? Blood was spilled. In humans, there was no such law.

And now there is such a right. And, of course, people use that right. And if people feel the presence of injustice, of any fraud, manipulation, and thus express their opinions, then the expression itself is not anything that shakes the foundations. For the church this question is very sensitive, because after all our parishioners and among those who were in the area, and among those who spoke against the area. Therefore, the word church can not be politicized; it can not be unbalanced in the fundamental sense of the word. Not in the sense of diplomatic false balance sheets, but in the sense that the word church must be the truth, which will take all - and some, and others. And the truth is that lie should go out of our lives. From the political, from economic, and social.

But let me now say something that can not leave calm any who protested in the square - from his personal life. And is there among the protester, who deceives her husband or his wife? Who is having the parallel lives? Who is dishonest in the business? But if we create truth in our personal, family life, in our professional, why it's so hot demand that the truth remained somewhere in the macro? And at the micro level, it should not be? That the Church call to ensure that at every level was the truth. At the level of individual, family, labor collective. At the level of political parties. At the level of economic corporations. At the level of government. At the level of those who led the country. The truth should be. When I spoke about God's truth, I had in mind the

truth - is the life of conscience. After all, the concept of truth - it's just matching the Divine commandments. We must learn to live according to God's truth. That is, we do not have to lie to each other.

The second point, the thing which we have already told you, if something happens, the society should have the right to express their discontent. But it must be some wisdom. Now, if the demonstration that preceded the revolution in 1917 ended in an expression of peaceful protest and did not follow them to a bloody revolution and the fratricidal war, but today in Russia would be more than 300 million of people and was either the same in the United States, in terms of economic development or even exceeded this country. We failed. We were not able to save time and keep the balance of Wisdom. We destroyed their country. And why did it happen? And because, in general, just protests of people very cleverly used by those political forces who seek the power. A radical shift in power - it is always a change of elites. Remember the great appeals of our Democrats in the late Soviet era: the need to destroy the nomenclature, we must reject all those people who use black "Volga".

- Well, surely, the curtains were took down.

Patriarch Kirill:

- The curtains took down. Do you remember? What had happened? Took power and the black "Volga" resettled in the black "Mercedes."

- Put the flashers.

Patriarch Kirill:

- And put the flashers. And they shared the resources of our country. I do not condone what happened. But I'm just talking about how easy it is to seduce people. The same thing because it was in connection with the revolution of 1917. "Rob the robbers!" And it came to break into the apartment to destroy these estates. Burned the country! Where is it stolen? The new elite was something. And people really began to live better? That task is to protest the right way expressed, leads to correction of policy. That's the main thing. If the government is insensitive to the expression of protest, this is a very bad sign. Sign of failure of power to the self-adjustment. Power should be adjusted, including the sensing signals from the outside.

I do not want to teach anyone, I just want to say how I work. I always try to hear these signals. And through the Internet, through correspondence. And there is a constant, if you can see, self-tuning of the church staff. It may be insufficient. I am aware that we are very far from perfect. But then this feedback in the church there. But it still exists because the priests are professed people.

- And do you read anything in the Internet?

Patriarch Kirill:

- I, unfortunately, have a little opportunity to sit at the computer, but my colleagues give me detailed information about what is happening in the Internet community. And when there is any free moment, I'm looking. I see. I can not say that I am glad to see it.

We need to learn. As the church is now studying and government must now learn - to receive signals from the outside. And the correct course. I remember a wonderful book, which was published, I can not now give the name without thinking it was a well-known American economist who is in the early 70s, when the first energy crisis, has written a book "The adjustment of the course." Because the global economy could no longer grow in those conditions, which were formed by the mid to early 70's. And I read this book. And the first thought that came to me then to my mind: how important it is to learn how to adjust the rate. Proofreading course.

So that's the main message of power and the main message to people. You must be able to express their disagreement, do not yield to provocations and destroy the country. We have fully exhausted the limit of separations. We do not have rights to more separation. And the government should, through dialogue and listening to the society to adjust course. And then we'll be fine. Because in fact there are smart people, educated, fairly vigorous, capable, I think, working together and relying on the broad support of people to correctly determine the country's development and promote the prosperity of our society. I have here is a deep conviction. I really would like to convey this belief to all those who see and hear us today.

- We all remember that in 2008, you participated in large project "The Name of Russia". And with the help of you to the first place came Alexander Nevskiy. From the perspective of today, what do you think, who is the leader that Russia needs today?

Patriarch Kirill:

- When finished the whole round, which helped to identify a character who was "In the name of Russia", in one of his broadcasts, Nikita Mikhalkov, who defended the Stolypin, and who certainly was upset that Stolypin was not "In the name of Russia", summed up the remarkable result throughout the discussion. He says: "I once thought, and came to the conclusion that if Alexander Nevsky was president, he'll be picked up by Prime Minister Stolypin." So I do not want to talk, but I think that the ideal features of these two great historical figures should be an example that even for those in power. Need to focus on the very high standard. On the other, which is canonized in the minds of our people? Or it is deeply revered by the whole society.

And, in fact, what priority should be manifested in terms of government policy makers? Indeed, the priorities in the work are always connected again with the scale of values. So I think it is incredibly important to the quality that will largely define the agenda and the priority is that the people have a sense of responsibility before God. If this leader believes in God, he should never forget his own responsibility before God. It is God brought him to power - through people, through some mechanism. But God made that this or that person took this great responsibility. And God will be with him to ask not only for his own sins and transgressions, but for all that he did or did not do for a living.

And, of course, responsible to the people. And here I would like to say that, for Russia is always the most is probably important. This sense of justice. Once upon a time, turning to the international community to this, I said that every country has a great slogan, with whom she could appeal to the world, and sometimes refers to the world. Well, for example, the slogan of

America - is a democracy. And in the name of democracy, we know what's going on around the world. And what could be the slogan of Russia? Only one - is the peace and justice. Because for our human justice - it is incredibly important dimension of quality of life. Now, if the system breaks down justice in society, the system begins to loosen.

Why is this happening? I am deeply convinced of our religious roots. Although we are certain, and taught modern Russian society is more individualistic than any other. This is not the case. From our religious and cultural roots is a heightened sense of justice. Every ruler should it be kept in mind. The political party program, if that party has the power, it must be borne in mind. But the most important - is the practical policy should be directed to do so.

- So what the problems do we have?

Patriarch Kirill:

-We have lacks a lot. Allow me to give you one example. One day recently I turned on the TV, and on some channel, I do not remember, for what, was a Soviet film. And there is a scene in the store. The buyer and seller. Hamit seller, the buyer - is an unfortunate person stands. And suddenly it dawned on me. And what is this picture from a philosophical point of view? Why is there the relationship of power and powerless? Who in this picture has the power? The saleswoman. Because the power - is the ability to impose its different. Affect a person's way to carry out their mentality, their goal-setting. That is it, strictly speaking, the power-even is. When the will of one dominates the will of another. Or will send another. In Soviet times we had the power to the saleswoman, merchandise, as the classic satire, conductors on trains, in ZHKH. Everywhere was the power. What happened with the system? Collapsed. Of course, not only because of the fact that sellers were angry with us. But because contact with the authorities led to rejection in humans.

What is happening now? Do we have people, who are talking with the president with the ministers? We communicate with police officers, with the housing management companies. The same ZKH and DEZy. We, fortunately, a free economy, it seems, more or less solved the problem of sellers. But again, we have the common man's nightmare, this level of power. I use the word "nightmare", not because it is the word from my vocabulary, but because this word is now widespread, and people understand what it is. You do not need any definition. Now if we can handle this nightmare at the household level, the level of local authorities in the first place and, of course, at the level of corruption at higher levels, well then will be charged topic of human relationships and power.

I can not give the social and political recipes, how to deal with. Although some thoughts I have, like any citizen. But as a pastor I will say that nothing we would not be good as long as we do not really change our mindset as we will not have another heart. Until we learn to respect and love each other. But these words of the church, they hang in the air, although we try to speak loudly, but not all of us to hear. But this is really the fundamental principles of the dispensation of human life. Why not? Because God so wished. No we are not the rulers, not parliaments, - God wanted man to be happy under certain conditions the hostel. Here let us observe these conditions

to the best of our forces. The world will be transformed so quickly that we even do not have time to blink.

– For indeed the corruption and bribery, which is impregnated and permeate virtually all, this is one of the most sharp, and perhaps dangerous problems of our society. Often a person who does not want to give a bribe or do not want to take a bribe, just looks like a white raven. In general, it can to oppose this corruption alone?

Patriarch Kirill:

– Not only it can be - it should be. But not alone, but together with others. But for this we are today and, again using a modern word, nature of the Orthodox parish. From the Soviet era, we have, unfortunately, out of parish life left social work, educational work, and cultural work. Just the parish ceased to be a community. What the community when the church was dangerous to walk? It came in the flesh and blood people. People come to church as in the shop - buy a candle, write a note, to pray and leave. Here are today used great efforts to become the parish community. To such people here, have taken the path of solid opposition to evil, to find like-minded people in the parish. So that they can engage in a church whose mission is to fight for the right of the offend people. The parish can and should be here by these centers, supporting points of moral transformation of our society.

But for this I appeal to all our Orthodox intellectuals: please, do not sleep on Sunday too long, come to the temple. Come to the temple to pray, to socialize with each other. If you end up in the church after the liturgy, please refer to the abbot and say well we want to sit and drink tea. He must organize. We really should have a system of social solidarity. And when all this is connected with the spiritual life with high moral principles of life, and when all is fertilized by a prayer, then the person has a real ability and the ability to resist evil, and in private and in public life.

By the way, when on the eve of the Revolution the church and the state reflected on the fact that we have to somehow reform the social life, the then Prime Minister Witte, a man of liberal views, as we know, offered Vadkovskaya Metropolitan Anthony, who was then the St. Petersburg Metropolitan and the primacy of the Holy Synod member, think about how you can use the system to reform the Orthodox parishes in Russia. And write, start writing a great charter of the church. But the watchdog of the government in the face of Pobedonostsev known Procurator of the Holy Synod, learned of these efforts, reported to the Emperor, and Witte have banned together to develop the project with the Metropolitan's such a reform of public life, which suggested that no political parties, protest groups are not and parishes become centers of community and social activities in society. In order for this activity served to the benefit of the people and for the benefit of the Fatherland. I think that if these plans are realized, no revolution in 1917 would not have happened. May God grant us all together today, to implement these plans, and then we will be immune from revolutions.

– What can you say about the year of 1917?

Patriarch Kirill:

– Of course, to inflame the passions it can not be compared with the pre-revolutionary months and years that preceded the 1917 revolution, nor to what happened in the extreme extent of the

restructuring, the latter, many of us remember well. But sometimes it grows from a small lot. And so today, my special word to our people. Remember that we have exhausted the limits of confrontation. What we have exhausted every possibility to carry out the revolutionary re-construction of our society. Our route - is a quiet evolution, including a real dialogue with the authorities, including, where necessary, through the outward expression of their protest. But in a way that is not shaken foundations of public life that did not stop the economy, not to destroy culture, arts, education, sports, science, all that we destroyed in the 90s. And let's add army to this.

Here we must remember that we do not have more of this law. But that does not mean that we should stagnate. We need to develop, including through dialogue, through the clash of opinions, through intellectual struggle, through mutual persuasion. And I think that it is strong enough money, especially in this enlightened age, the age of the Internet in order to really change the life of the country for the better.

- The church is now very active and rapidly enters the life of the common man. And, as I understand that, the diseases of society are connected with this too. Of the visible manifestations - is fabricated temples, is the emergence of new diseases, the ordination of bishops, priests. But how do you think it's still a natural tendency to expand their influence or somehow change the moral climate of society?

Patriarch Kirill:

- Yes, of course, change the moral climate of society. Here we sometimes say, well, that's the church was free, why not decrease the number of abortions? And why the divorce rate is not reduced? Why on these indicators we are ahead of the rest?

- Ahead of the Europe. At the first place.

Patriarch Kirill:

- Yes, that's right. Russia, Belarus, Ukraine, Moldova - four countries led by this sad list. This is because people, even preserving the religious feelings, in ordinary life often does your religious feelings do not go in order to get support, support, including in the field of motivation of their actions. And now we have the question now. I'll start from the example. Could a political officer at the 10 000 troops to influence the moral mood of the army? The rhetorical question. While in the army discipline. Right, forward, and went into the red corner, there it is possible to carry out a conversation. On average, the arrival of a Russian account for 10 thousand people, as well as a priest. It may be that the priest, who accounted for 10,000 of the baptized people, asks better statistics in the area of divorce, abortion, drug addiction, alcoholism? It is good that this average figure - at the expense of the province. And in Moscow almost 40 thousand. And in some areas - at 100,000. We live in a godless city. Center we have here these beautiful old churches and buildings - generally no religious symbols.

That is why today, increasing the number of churches - is not an attempt, as some critics say, to collect more money and do not attempt to clerical society and influence politics. From what I have said, you can see, no such aspirations and desires - even influence policy. There are only a

desire and willingness to bear the moral message of the society, including to the government. And that's what you need? Necessary to ensure that parishes become communities really, really became the centers of social, spiritual and cultural activities of people? Centers, where a sharpened solidarity, mutual support of people? But for this congregation shall be limited to a reasonable number of people. That's why we went towards the creation of new churches.

The slogan is: "The bishop and priest should be closer to the people!" And how to do this, if one church needs 10,000? Well, not as a bishop on the street walking with my father and, like some sectarians a visiting to offer their religious services. The first thing to increase the number of parishes and priests. In order for this to happen, you need to have more dioceses. After passing through Siberia and the Far East, I, you know, was struck by how few parishes, how little the priests. Hundreds of kilometers.

- In Siberia particularly.

Patriarch Kirill:

- In Siberia, in particular. 127 parishes in the Krasnoyarsk Territory. And the Krasnoyarsk Territory - is half of Europe. Therefore it was necessary to do to respond to this real need for a framework, I will say again unchurchly language macro administrative system. We had the top to create a system that would help achieve the goal to which we aspire. So that more people could attend church and to change his soul, to raise your consciousness, purify your heart. But in modern life in general cleansing man from sin is a prerequisite for health, just as someone who works in the mine, he was leaving the mine, to wash. Here is modern man, even working with the information comes into contact with such filth, that it sometimes need to be washed. Need to feel calm, peace of mind, to think about eternity. And now the parish church and give the opportunity.

- Perhaps the state of society depends on how you feel taken separately family. And you have touched upon a large number of divorces. Indeed, a sad picture. In Orthodoxy, the family referred to as the small church. Others will say that it is a social unit. But it is possible that in those moments when we speak, someone's fate is decided. Someone is on the verge of rupture. What do you as pastor and as a primate can say to those people who now, at this moment to decide whether or not to be together?

Patriarch Kirill:

- Family crisis - is a crisis of love. A man without love can not live. When we destroy the family, we destroy love. Love and pleasure - it's not synonymous. Very often we do not like something in family life, something is uncomfortable, as they say, again, modern humans, and, rushing to reach a certain comfort, prosperity, we go through it to destroy his own family. It can not be done. It is very difficult to understand the modern man, but God did not want this. Some will say: what do you do when love is gone? Love is in the case where the people themselves are destroying love. But if these joyful, heartfelt relationships, which are covered with the first years of life together, both - both husband and wife - pesto, support, nurture, protect, this feeling persists until death. But if you start a mutual deception, parallel lives, everything is destroyed. The path of destruction of the family - it's not the way to human happiness.

Of course, there are exceptions, and I do not want to say that one hundred percent of cases. There are exceptions. We will not talk about them. Because in this case, one would say: I am the exception. We say that the need to preserve the family, because it is a fortress, a house, a place where beside you dear people, loved ones, can be in joy and in sorrow. In order to make it so, we have all the time to grow in love. And love can not grow without a commitment to each other. I often talk about it. In a sense, love should always be accompanied by the ability to sacrifice oneself for the sake of another man. And if that happens, if one has learned to sacrifice for the sake of another and another and another man answers, people grow in love. And then about any divorce, and out of the question. I really wish our compatriots to learn how to keep love at the first day of their life together. In order for as little as possible of our families stood in front of this terrible problem - the separation, especially when there are children, and where this affects not only the husband and wife, but poor kids.

- As for the unity of faith and the Russian Orthodox Church, at the very beginning of his patriarch you talked about the need to keep the unity of the Russian Orthodox Church. And no state, no borders, no policy can not share the church. This, of course, talking about our spiritual understanding of this space as Holy Russia. You traveled a lot this year and you were in the Ukraine. How is life there now? Is there a threat to our unity?

Patriarch Kirill:

- So far, unfortunately, in the Ukraine, there are splinter groups. And our church is trying to do everything to make the split was overcome. And now we pray, and continually ask our brothers to, using, of course, on both sides of the necessary efforts to overcome this division. But after the division of Ukraine is not dictated by religious considerations. This is a particular kind of historical philosophy of Ukrainian society, which is strongly implicated was also on the mood of protest the late and post-Soviet period. And the desire to divide the church, according to national boundaries - it is also a consequence of this kind of political crisis.

But what happens in general in the history of human kind? The boundaries are constantly changing. There are periods of empire building, the periods of decay, then the new period of integration processes. So, the church must go so constantly in the wake of these events and to constantly change themselves and their boundaries, their whole system in accordance with what is happening on the political map, for example, in Europe? It is instructive to look at the European card, for example, XVIII Century, XVII century and the XXI century. But what would happen to the churches and the church, for example, Catholic, if the separation occurred in all of these boundaries? That's the same thing in our part of the world. Therefore, the church does not go after the political changes following the change of borders. But this requires a very large church of openness, overcoming any narrowly conceived national origin. And, on the one hand, the church should support the national culture and national identity of people on the other hand, it must always do it all in the context of Christian universalism. Only then can we avoid nationalism - rude, radical and hard, and only the church can be a mother to all. When a person of any nationality in the Church sees the message of Christian universalism. This is the building of the church life according to sacred tradition, which is present in Christianity. And the Russian Church remains

true to this tradition. And we will do everything to ensure that no local, parochial, short-term, political, nationalist and other assumptions and ideas are not torn apart the unity of the church. Because the division is sorrow. The division is a minus. A unity - is always a plus.

- Talking about the present, I certainly remember 2007 when you came to Kiev Kreschatik and addressed the youth that must be unified Holy Russia. Today we talk with you in the St. Daniel Monastery, which has such a leisurely reflection. But in fact, people today are literally buckling under the weight of the information that falls on him every minute. Sometimes he even shocked in the volume of information. Tell me how could save yourself a modern man in the rough, sometimes not very clean flow of information?

Patriarch Kirill:

- You can and should. I think it is very important to be here again, in this system of values for each of us. Lewis said the remarkable words: "When you want to come to the sky, you get to the ground. When you try to stay in the ground, you get in nowhere. "Now, if a person is always a priority of the spiritual, even obsessed with the modern flow of information, it is at the mental level is able to filter out this information flow. He has a kind of matrix, on which the dirt can not get, and if it does - quickly rebounds. It is this capacity for self-preservation of cultural identity, to preserve their religious identity, their spiritual awareness is a prerequisite for human survival in the modern world. Otherwise, the flow of information so that we are all washed away, reformat, and convert to the tumbleweed. This is a very big threat to the entire human civilization.

Well, besides the religious life helps a person is to remain ourselves. Here we are talking about the temple. Our mega-cities with a lot of noise, with a lot of stress. A man enters the temple, where no any noise, no stress, peace and quiet. Just a few minutes, even to stand, candle in place, to pray, as you can. Just think, just stop. This all is very important to reduce the degree of boiling temperature of our daily lives. Some might say - this therapy. Yes, because that man consists of soul and the body. All our spiritual manifestations have their physic and chemical basis. This is our body. One is related to another. The soul will not need to be acted upon by physical factors - visual, smell, touch, taste, and so on - when it leaves the body. Body and soul are inseparable. And so even the external peace, contemplation, icons, music, and this is helping people. Well, if you are not only external but also internal, if prayer and spiritual focus, it really is a force that can keep a person from the many stresses of modern life.

- And one more question, which I can ask you today. Today is the holiday, the Christmas. What wishes do you want to say to our viewers, like as the pastor and the main pesor in the Russian Orthodox church and as just as an authoritative person, who is really well respected in the community?

Patriarch Kirill:

- Well, I have much to say today in the hope that I will be heard by those who we see and hear. In conclusion, I would like to say this: Keep faith in your heart. Know how to learn or try to climb above the bustle of our lives. Refer to the sky. Before God to ask himself some uncomfortable questions about how I think of that as I say and what to do. That is the religious life of man. And each in his own experience feels that the implementation of the suggestions wills undoubtedly real

benefits to everyone. On this is based the lives of millions and millions of people who are so expensive is the spiritual dimension, that they will not give him any treasures in the world. I would really like to as much as possible, those who hear us today, in my experience it all felt it and understood. And may God keep our viewers, our country in the upcoming motion on our historical journey. And may 2012 be a year of divine grace.

– Thank you, your Holiness. Best regards.

Patriarch Kirill:

– Thanks a lot.

Social Philosophy

UDK [539.172+17.023.36(208)](045)

Natural and antro-po-social phenomenon of Nuclear energy



© **Komleva** Elena, the scientific research worker of the Institute of Philosophy and Political Science, Technical University of Dortmund (Germany). E-mail: elena.komleva@tu-dortmund.de.

Abstract

Identified the main concepts. Performed pioneering researchers for Russia, antro-po-social complex components of the phenomenon of nuclear energy. Phenomenon without which, life on Earth is excluded. Researchers have

brought to the pragmatic way of SAMPO.

Keywords: nuclear energy, man, society, material and spiritual culture.

*Here is my mission - to sit quietly by the water
and reduce the life of one section of a grain of sand and stars.
Lead to a system of the heart of the sun and me.
And hear, as in spring grove oriole sings.
And see how the fathomless sky - is no room for the chest!
Salt crust of bread, eat it and ...
Again, in a way...
T. Polejaeva
Echo of field's seasons. Poems. Arkhangelsk.*

During more than 10 years of different researchers on the base of more than 10 Russian and foreign universities formed the scientific and pragmatic attitude, experience the problem and obtain some results. It is useful, of course, outline the conceptual space to natural, anthropic and social aspects of nuclear energy, and suggest the working version of the main concepts.

The phenomenon of nuclear energy. The appearance of the phenomenon of nuclear energy (controlled and uncontrolled fission and fusion reactions) is varied. Material and essentially it is formed as a natural (known and unknown to man) and man-made entities. In a simple listing of the "first approximation" - is the star, cosmic radiation, the heat of the subsoil and the natural radioactivity of the Earth, the natural nuclear reactors. As well as nuclear weapons, nuclear deterrence and nonproliferation, civil nuclear energy, military and civilian nuclear power, submarines and surface ships, surface and underground nuclear facilities for various purposes. In addition, this durable energy sources for space exploration, scientific instrumentation and process control and impact in medicine, agriculture and industry, radioactive waste with a shelf life of hundreds of thousands of years. Well-known (and unknown as a separate part of) the natural and

man-made nuclear entities represent, albeit in varying degrees, the scope of intellectual and practical interests and actions of people associated "ether" of human attention.

Antropo – social component of the phenomenon of the nuclear energy. It's all positive and negative, of natural and man-made signs and effects of nuclear energy in people's lives, that nuclear energy by the different systems of characters in one way or another been identified by the society in his mental space. All of our problems and challenges, hope and caring, successful and unsuccessful ideas and practices with which it directly or indirectly. All the phenomena of humanity, which depends on nuclear energy. All the phenomena of humanity, on which the "being" of nuclear energy in contact with humanity. All the phenomena of humanity, which are developed in conjunction with the phenomenon of nuclear energy. Communication, dependence and interaction in the cosmological sense, the former for the most part, at least with respect to the period of existence of living matter, almost always, but especially now, with the emergence of nuclear technology sphere - the eternal and important components of the environment of human existence. And our natural science and technical, philosophical and religious, spiritual and humanitarian based on other and different kinds of social knowledge of reflection, as well as our changing them. In other words, a component of nuclear antropo - social phenomenon - it is therefore the material and spiritual dichotomy of man, a complex material and spiritual existence of man in the universe of nuclear and nuclear society.

Sozio –nuclear atrophic principe – is the requirement of reflection and action in the future antropo – social component of the phenomenon of nuclear energy formed in the overall secular-religious "field" of the best spiritual and humanitarian and man-made heritage of humanity, it was adequate and positively involved in the generation of new layers of material and spiritual culture "to nuclear man "was a humane and positive" kulturogennym."In other words, this requirement optimize "parameters antropo –social and nuclear universe" in terms of human welfare, through liberalization and humanization of intellectual and practical activity in the nuclear field.

The phenomenon of nuclear energy in the past, present and future was, is and will be extremely important for the people. Nuclear energy is associated with strong bonds of humanity. And mankind has felt like one that exists and fragile for the first time a nuclear threat. Man-made nuclear or nuclear risk benefit for mankind - for the most part still on the individual and society. And then, and another - is a "flesh" of the mind, heart and hands of men. This forms the feedback - the impact of such person as it is and what will be the possible consequences of nuclear phenomena. Super global values, negative and positive possibilities of the challenges of nuclear energy should correspond to an adequate effort, complexity and completeness, and consistency of activity approaches for understanding and action, containment or adapting to the real conditions of humanity of these properties of the phenomenon. As well as serious questions about the readiness of people to take heart and mind of coexisting with nuclear energy, now and in the future.

Nuclear phenomenon has rightly become the subject of careful study of philosophy, political science, economics and ecology. Came to the attention of other sciences, religion, spiritual creativity, and human culture. And this attention is the prospect of there age. Two German philosophers in the context of the general methodology can be considered as key players in the treatment of the topic. This Jaspers and E. Cassirer. The first (mostly the work of [1], see also its

fragmentary translation and analysis in [2]), motivation, and asked the way to finding antropo – social and nuclear angles, as well as establishing the scope of scientific problems. The second (by a series of works on the philosophy of human culture and symbolic forms, which are described in detail in [3, 4]) "suggests" a socio-cultural nature of the knowledge and tools along the way.

There is a tendency in the line with the spiritual and humanitarian understanding of global issues to the ambivalent perception of the phenomenon of nuclear energy in the entire available today its fullness. It is advisable to strengthen integrated in meaningful ways, the general cognitive experience, poly-and interdisciplinary respect to the sciences of man and society and non-scientific knowledge about human, system and activity-oriented joint reflection of human civilization, and nuclear energy. Reflection combines them to coexist-existence and interaction as a respect for each other external objects, and the fact that nuclear is an integral part of the phenomenon of humanity.

You can define the basic context of nuclear energy with other important events in the destiny of mankind - existential contours antropo - social components of nuclear phenomena. Based on the "logical chain", following the well-known idea of universal unity and unity in diversity, the different faces of which are interpreted by many philosophers, naturalists, writers and politicians, proposed an image diagram of a connected set antropo – social and nuclear combinations of modern "neighborhoods" of nuclear energy. Space of associative links, explicit, semantic, and random coincidences, or as a coincidence, relationships, correlations, it mates and other global phenomena using. As a rule, the social aspects of the interaction of each "chain" doubly directed. The image of the "continuum" manifestations of nuclear energy and antropo - social the phenomenon of "neighborhoods" and nuclear energy contributes to the synthesis and integration of highly specialized "institutional" approach to reflection, the transition from quantity to quality, a jump of thought to understand the need for broad and deep antropo – social -nuclear "watching" integrated and comprehensive action.

Some examples of "logical chain" that characterize the direct or indirect connection, dependence, interaction, correlation, coupling between the nuclear energy (JE) and other important human and human phenomena:

- NE – substance, energy, space, time – the universe – the whole world;
- NE – The Sun – natural processes in geo-and biospheres - life on Earth;
- NE – eschatological potential - a real "quality" of the individual and society;
- NE – weapons of mass destruction - the knowledge of mass destruction;
- NE – uranium, thorium, underground facilities, nuclear waste - geology, mining;
- NE – Fukushima - starting and self-development of disasters;
- NE – accident at nuclear power plants, nuclear submarines and nuclear materials - the environment;
- NE – Radioactive waste - waste of life in general;
- NE – ambivalence - information, bio and other technologies - the person;
- NE – nuclear community (NEA, FNCA) - International economic unions;
- NE – nuclear activities - oil and gas - the economic and political priorities;
- NE – apolegts and opponents – education and awareness;

NE – nuclear Ethics - cultural and religious traditions.

The list of these "chains" of major philosophical and pragmatic and intellectual priority issues, those tasks, activities, and similar facets of society, of course, only as a private limited sample reflects the actual antropo – social and nuclear space and is open to continue. Here it is, above all, the idea of an illustration of the need of an integrated approach to studying the phenomenon of nuclear energy in conjunction with a wide range of scientific topics, practical tasks and reflective, with a variety of symbols and images, possibilities of humanity.

Outlines approaches to strengthening Human Dimension, humanistic and humanitarian things and motivations in antropo - social component of the phenomenon of nuclear energy, a kind of anthropic and social - nuclear positions, or antropo – social and nuclear principle. Successfully appeal to the well-known classical analogue of the anthropic principle, meaningful and consistent for both the major socio-cultural paradigms - the natural sciences, philosophy and religion. Social and nuclear anthropic principle enhances the prospects for the synthesis of a unified secular-religious social and mental (in addition to technology) and the total pragmatic platform for nuclear phenomena. She is oh so necessary now, when, for example, after Fukushima, as well as after the Chernobyl fall sharply again "shares" of nuclear power.

I showed in various publications (in particular, see list below) some examples of fragments considered antropo – social components, their secular and religious, philosophical, economic, historical and political science aspects. As well as information, communication, mental, and ecological modes of modern nuclear society. And methodological way, the tools of their joint judgment, known from history and contoured for the future. In the perspective antropo – social and nuclear challenges and expectations, negative and positive potential denotes the reflexive ideological systems (philosophy, religion), the sciences of man and society, spiritual creativity (art, literature, and myth) and moral traditions. Denotes the potential in the process of information and analysis of socio-nuclear activities.

At the same time in the works I often had to build on the experience antropo – social and nuclear Japan. This is a fairly "rolled" numerous research fellows path (mainly with regard to nuclear strikes in 1945), as well as the experience of Russia and Japan. The potential ligament in this context not only of specific historical events, but also the spiritual and humanitarian heritage of both countries. The works of other authors on a tandem I do not know, but most are unlikely to have been able to do more than hope, to define the contour of «paths

Here are just some aspects of the spiritual and humanitarian considerations. Russia and Japan as the main "suppliers" for the source of the tragic facts of philosophy and humanities understanding of nuclear phenomena. Special of the social group of humanity - are hibakusha, and Chernobyl, and now nuclear kamikaze / samurai. Nuclear images, including fiction (eg, [5]). Hiroshima - is a push to a reassessment of the prospects of humanity and religious concepts (J. Garrison [6] and others). A. Kurosawa, who considers the value of the atomic bombs and civilian nuclear power in the eschatological perspectives of nuclear destruction of Japan through the images of "Fuji in Red" colored radioactive cloud (similar to dark clouds in hell), concentric zones around the lesion epicenter of the explosion in Hiroshima (similar to examples of the hell in Dante).

In The Hiroshima Peace Institute, universities, Memorial and other institutions of Hiroshima international and interdisciplinary research focuses on the integration of the experience of Hiroshima and Nagasaki in the strategy of global peace. On such a basic human capacity in Japan, many wrote. In particular, all R. J. Lifton [7] soon after World War II. Perhaps the story so ordered to Japan in the future, had the right to actively and as a leader to make sense of the social implications of nuclear energy and to encourage other countries to this, other people of different faiths. After Fukushima significance of the Japanese mission, no doubt intensify.

Maybe if you look wider, Russia and Japan are destined to share "forge" at least the contours of moral and political life of nuclear targets, checking, including, and Dostoevsky? The creators of the film "In Japan in search of ... Russia" (coordinator K. Yuka, a studio of the Far Eastern University with support from the Japanese Foreign Ministry) believe that Japan and Russia can help each other in the knowledge of ourselves and the world.

In practical terms, nuclear ties between the two countries and was available for. To name just a few examples. Japan has helped to dispose of nuclear submarines Pacific Fleet. She got right to work on uranium ores in Yakutia. Russia and Japan are complicit in the ITER project. Now the country's highest level of Chernobyl nuclear disasters combined and Fukushima. Russia has offered Japan the equipment for cleaning radioactive water, dosimeters and personal protection people. But, in fact, in Fukushima in the liquidation of known effects of greater use of the means of Western origin.

Apparently, the Japanese experts ahead of time, while being on their NPP took into account the Russian practice of seismic constraints on the choice of sites for the stations. But not fully accustomed to the logic and the experience of mistakes and achievements of the first, most difficult weeks of the Chernobyl liquidators. Logic and experience, which have been described [8]. If Chernobyl was a tragic experience learned in full, would hardly, in particular, Fukushima for so long and persistently flooded with water damaged reactor building, which was inefficient in terms of cooling, but has led to significant radioactive contamination of surrounding waters and territory. Only more than a month after the disaster manager's work, it was announced on the need for (yet to develop!) Alternative cooling water is the new measure. In addition, while Fukushima from the first day was a tragedy not only for Japan but also of universal concern across the globe, many experts, nuclear physicists, meteorologists, physicians and environmentalists, including the Russian, were concerned about the insufficient data on the professional situation, provided by the Japanese side.

At the conference, which was titled "Nuclear energy systems for future generations and the global stability of GLOBAL 2005", held in Japan with a significant share of the Japanese participants, the narrow scope of the specific problems emerged only my report, "Nuclear power: the social and humanitarian aspects." This is one of the reflections of the fact that in the global nuclear energy community, as well as in Japan, developed the ideology of sustainable energy development in the future. But the advantage is that it is a respective branch of the ideology of science, engineering and technology.

In order to build interactive forms of research and the formation of a network of partners I had (at that time as an employee of one of the institutions of United Nations University, UNU)

been published on the Internet and sent more than 90 locations in Japan, a questionnaire on the role and forms of understanding the phenomenon of nuclear energy. A kind of attempt to "philosophical sociology." The response to the questionnaire, it must be said, that it was a negligible. In Murmansk, there was one journalist who refused to answer questions honestly explained: "There is need to think!" From Japan received only two responses. One of them is very remarkable. High-level employee of Nuclear Technology and Education Center of Japan Atomic Energy Research Institute wrote that a long time doubted whether the connection will, if he will take part in the questioned. He explained his desire to respond, first of all, in respect for the brand, which I represent, and the fact that by virtue of their professional interests and the need to have experience of contact with UNU. And evaluates the usefulness of these contacts is very positive. Furthermore, thinking on issues of form, in particular, about antropo - social components, he came to a sudden thought for himself. According to him, surprisingly, almost nothing is known about the complex substantive discussion of the classified nuclear energy, with the exception of issues related to a nuclear bomb.

For the comparison, in the work [9] concluded that the nuclear community in Finland, Sweden and Norway generally have quite positive view of the generated outside interests to him. In particular, on my own, as an ordinary employee of one of the universities of the northern Finland, a request for help in analyzing the characteristics of their external information activities of 100% of the respondents responded to the major nuclear companies. Russian nuclear scientists, in fact, just slightly opened independent humanitarian studies, as well as, probably, their Japanese counterparts.

It is useful to understanding the phenomenon antropo - social components of nuclear energy through international efforts in the field of image SAMPO: meaning in the context of regional Scandinavian (or Slavic, Saida, Severodvinsk, Spitsbergen, Saamen, Syktyvkar, Solikamsk, Siberian, Streltsovsky, Selenge, Salekhard, Sakha, Sakhalin, Simushir, Semipalatinsk, Sarov, Seversk, Slavutich, Sosny) Atomic Mission (the Proliferation's Oikumene) and the universal Special Anthropo Mission (the Power (Prometheus) Obedience). The methodology of the image corresponds to the spirit of the SAMPO initiative of the President of the Russian Federation (2006) for the Global Nuclear Infrastructure and Sciences developed and Rosatom [A. A. Sarkisov. URL: http://www.fcpradbez.ru/index.php?option=com_content&task=view&id=355&Itemid=386] for the ideology of the Russian North integrative approach to the problems of nuclear waste. After Fukushima contributed to the debate on the main issue of nuclear technology – is storage of turnover derived from civil and military nuclear materials, as well as the possible return of interest in a small underground nuclear power plants. The methodology takes into account of the obvious desire of Western countries to increase control over the readily available hydrocarbons in the Middle East and Africa. It can be an integral part of reinforcing regional and national programs to create technology platforms "Infrastructure in the Arctic." In an environment where independent estimates (see [10, 11], participants telecast "In Focus" on Channel RBC from 09/03/11 and 23/03/11) indicate the absence of a stable and positive trend of the development of oil and gas business in the Arctic, as well as in the case of projects " Sakhalin-1, 2 "[12] lead to

the conclusion that the hope for the attractiveness of offshore development and the economy of the region of the conjugate is not always true.

Semantic content of the image begin to seriously discuss SAMPO. One of my articles is reflected in the official list of bibliographical material to the consideration of the bill of the Republic of Belarus "On the use of nuclear energy." Other published materials fair of innovative projects Atom - Eco 2008. I think the continuation of the discussions to follow, as, for example, specialists of Kola Science Centre proposed to build an underground nuclear storage facility in Kola Bay of the throat (Saida Guba - "underbelly" of Severomorsk and Murmansk) [13]. Foster a kind of "appendix of the first century," the largest city in the Arctic. The second version of the object (Long Zelentsy) offers scientists "at hand" of the future infrastructure of Gazprom and the landfill, which was lost "Kursk". It should be recalled that in Japan (2011), external influences, with catastrophic consequences, not only did not stand the reactors, and storage of nuclear fuel-worked.

The situation is "fueling" the decision of Barack Obama in spite of the current "Policy Act with respect to nuclear waste" in 22 years since the beginning of construction and after the cost of 9 billion dollars to stop the project "guiding star", the prototype of many similar buildings - a national repository of high-level materials Yucca Mountain. Like "postfukusimskoe tsunami" appeared decisions to close nuclear power plants (e.g. in Germany), a logical extension of which should be considered as measures to dismantle the stations with operating large amounts of additional waste, but also appeared earlier in a globalizing world economy, and projects the idea of internationalizing the last stage of treatment nuclear waste, and their reliable isolation from the biosphere.

There are specific questions "how" and "where?" Especially after the entry into force (end 2010) US-Russia Agreement number 123, opening the opportunity for countries to "exchange" of nuclear materials. Perhaps the logic of the answer to one of the options will tell V.A. Perovsky article with the eloquent title, "Where do I get radioactive waste to Said?" The author shows the redundancy of multiple constructed (for lobbying already Germany) in Said Bay facilities for recycling, if you focus only on delivery of the North and the icebreaker fleet [URL: <http://www.proatom.ru/modules.php?name=News&file=article&sid=2838>].

Russia has long been actively seeking to positively respond to new opportunities within the concept of international long-term storage underground type on its territory. Storage of the third (highest) level, complementing the system of federal and regional repositories. Accommodation options for international storage sites, the most formal "advanced", no new comprehensive analysis and additional justifications for the nuclear industry has traditionally been "docked" with the objects of heritage, "Cold War" are still the site near Krasnoyarsk, Chelyabinsk, and border with China and Mongolia (Krasnokamensk) At the same time dominated by the choice of sites in areas paleo volcanoes (as in the case of Yucca Mountain). A reference to the interest shown to Krasnokamensk operated and the largest in Russia uranium ore field. Although the dominant platform is "assigned", even loyal to his analysis (IGEM RAS) based on the geological situation is extremely low intelligence over the recognition that Russia is in the initial stages of program implementation of this concept and make decisions about the suitability of sites is premature [14]. In Kazakhstan

and Ukraine are planning similar facilities in the area, respectively, Semipalatinsk test site and the Chernobyl zone.

It is important to remember that the military-industrial nuclear facilities to the Soviet Union, which is now in Russia "tie" international underground nuclear repository located (hidden in the wilderness) is about 60 years ago in full confrontation with the West in general are not on geological criteria, excluding uranium mining and enrichment plants. But in this case, the initial geological problem fundamentally different from those in justifying the location of the store. Safety as repositories for thousands of years is determined, above all, quality rock masses (mechanical resistance and the ability to isolate the radionuclide's), and the complex geological, geophysical, hydro - geological and geochemical conditions of their continued existence. Yes, and socio-political situation "in the yard," is quite different. To apply the new time for the former approach a new task - error. Therefore, the first (and possibly the key), the arguments in this matter shall be for an international geology, should be based on the results of the international complex geological projects.

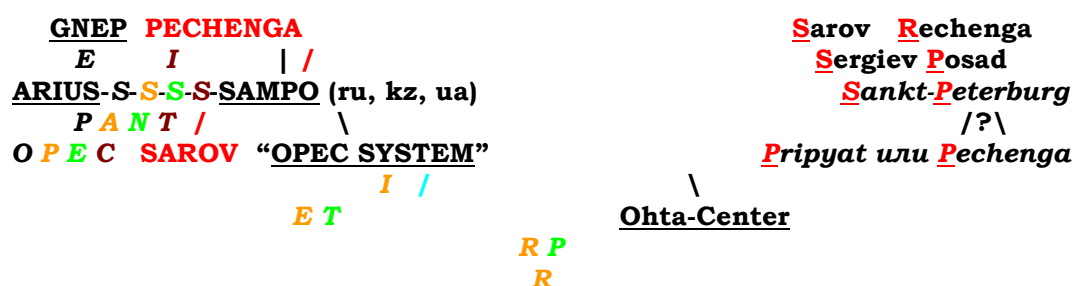
After the lessons of Fukushima in the walls of the National University of Nuclear Engineering Physics Institute formed an important message: the priority of nuclear-think of the Geological symbiosis on an international basis. "The challenge is to establish a plant for the site match between the level of natural risks and the amount of measures needed to ensure proper safety. In this case the assessment should be given on the basis of a single universally accepted methodology (which also has yet to create) a group of qualified experts provided always respecting the principle of internationality of its composition. At the same time, the said method shall include the criteria for an unconditional unsuitable areas (or regions) to construct and operate nuclear power stations "[A. B. Koldobskii. URL: <http://www.globalaffairs.ru/number/Mirnyi-atom-posle-tsunami-15187>]. And again: "The construction of nuclear power plants should not be left to the discretion of individual countries. We need some kind of globalization, universalization ... Maybe in some cases even worth thinking about international projects» [URL: <http://www.voanews.com/russian/news/After-Fucusima-2011-03-30-118918714.html>; <http://www.proatom.ru/modules.php?name=News&file=article&sid=3016>].

I should add that the position of internationalization is even more relevant when selecting the site and the creation of a nuclear repository. For example, the Japanese disaster not has been in vain and for the Swedes. The most famous project is the operator of the Swedish nuclear waste management SKB, providing for the construction of an underground vault near the national nuclear plant Oskarshamn and developed three decades, suspended in March 2011. The supervisory authority has announced the convening of an international commission of experts that will test how the waste will be disposed of underground. Apparently, the construction of an underground storage Swedish can be postponed indefinitely [URL: <http://www.dw-world.de/dw/article/0,14939212,00.Html>]. A project of SKB - the world leader in its "niche" along with Yucca Mountain and the Finnish design - largely conjugated with the Swedish version.

In the Northwest of Russia designers of Ros atom (Min atom) has consistently offered as insulating subsurface of the permafrost of Novaya Zemlya test site limestone and salt deposits of the Republic of Komi. By the way, Uhta works known in radioecology geologist VA Kopeikin, who

has serious developments in relation to geochemical barriers of protection against the spread of radio nuclides, heading some of the most difficult years of the Working Party of the USSR Ministry of Geology at Chernobyl. Perhaps, and this resulted in a series of other "drift" Ros atom interest from Novaya Zemlya to the geological structures of the Komi Republic. An alternative to the official sites of Ros atom, and the Far Zelentsov Saida Guba Pechenga is.

Again, think of the geological criteria for selecting sites. Sure, they exist at the national and sectoral level. But what is that such inhumane and comfortable only for individuals criteria that allow you to design a nuclear repository for thousands of years for conditions potentially swamp the world of the New Earth or to build nuclear power plants and storage (Fukushima and others) in the region displays the most destructive forces of nature? Most likely, the most reasonable criteria are the Swedish-Finnish. Necessary in connection with the SAMPO noted the dominance of the principle of non-proliferation of nuclear materials, and the continuity of the relationship is not only a Russian nuclear-religious centers, and international energy projects. In the diagram: the left - the basic concept of the relationship SAMPO, right - the very religious context with the addition of futuristic motifs on the prospects of nuclear-religious and mystic St. Petersburg:



One of the authors of works that contributed to the abolition of the rather high stages of low quality, from a scientific point of view, but the priority projects of the former underground storage of nuclear Yucca Mountain and the New Earth, is a geologist and caver Novosibirsk with Ukrainian "roots" Yurii Dublyansky [Yurii Dublyansky . URL: <http://www.uibk.ac.at>]. A unique situation: its general erudition and knowledge in the field of engineering geology and hydrogeology, low-temperature hydrothermal processes, double-isotope studies significantly influenced the formation of solutions of the leading nuclear powers with respect to the location of natural and man-made, with elements of self-organization, facilities, safe to operate according to the standards that have not less than ten thousand years. And indirectly - might expect delayed effects of these factors and events on the future of universal nuclear issues. He also described the style of their own impartial geological studies of such objects by the Russian and American nuclear agencies and funding of independent evaluations. No, unfortunately, like Yurii Dublyansky of objectivity, professionalism and experience of working with foreign partners of people who have expressed interest in the organization and implementation of internationally-based analysis of viability, the replacement vacuum after the close of the said projects, the hypothesis SAMPO (ru, kz, ua). Although it would be the natural science component.

It should be mentioned that in the Pechenga rocks, where possible materialization of one of the options SAMPO (in the form of an underground nuclear power plants or storage), Norwegian

and Russian geologists found fossil specimens of ancient, older than 2 billion years, microorganisms (Pechengia melezhiki). Microorganisms that formed on Earth the most important conditions for future biological evolution (development on the basis of oxygen) up to the higher forms. These fossils are preserved to us may probably be considered a sign of long-term stability of the regional geology, the much-needed nuclear facilities. A kind of talisman, amulet. A combination of open Pechengia melezhiki with SAMPO - a symbol of transformation and continuity of life energy.

On the other hand, volcanologists [15] justify the presence in the depths of the Pechenga positive for isolation of nuclear materials of the modern processes of mineral formation. On the "nuclear" potential of this structure pay attention fellow VNIPIET V.A. Perovskii, Murmansk geological industrials (N.I. Bichukov, V.G. Zaitsev, G.S. Melikhova, etc.), specialists of St. Petersburg University A. Sergeev and P. Bogdanov, and director of the Geological Institute of Kola Scientific Center, RAS (F.P. Mitrofanov), Kola super-deep borehole (D.M. Guberman), Yaroslavl, and super-deep drilling expedition, "Nedra" (L. A. Pevsner), as well as the operator of the Swedish nuclear waste management SKB, ISTC, The UNESCO International Geological Correlation Programme [16-20]. Not good signs it, given that, according to legend, at one time in the "caves" "Rock of copper" Pechenga created Sampo "Kalevala"? And no clue whether it is to unite efforts in this area, and not only to geologists? At the "reset" on the Pechenga funding from Yucca Mountain, Novaya Zemlya and other similar projects that do not have socio-cultural reasons and not withstanding the test of time. In order to reliably shield the source of electricity (in the case of an underground nuclear power plants), or (in the case of storage), artificial, complex fluids saturated with gases that inevitably arise in the rocks, which has a long high-energy materials.

Interestingly another "relationship" - the symmetry of the contour of the geopolitical demarcation between Russia and its neighbors. The site "Pechenga" is located at the north-western area, "Krasnokamensk" - at the south-eastern border of Russia. On the one hand, respectively, needs, at least, Europe, and with another - Japan, South Korea and China. Besides, did not work apart from the USA, USSR and Japan do without national nuclear disasters? High risk of terrorist initiation of such disasters in several countries of Western Europe, given their militant politics in the South, rich in hydrocarbon regions. Apparently, what happened and the potential "trouble" - another argument for combining efforts and improve surveillance, for example, has the best prerequisites for the realization with the creation of international underground nuclear storage facilities at the junction of the countries in difficult for unauthorized visits to the area. Join the idea of creating such repositories would be useful, for example, Belarus, Lithuania, Ukraine and Kazakhstan.



With respect to the field antropo – social and nuclear sphere we studied the state of affairs in the political and scientific institutions of the UN. The analysis of research methodology of The United Nations University and the Hiroshima Peace Institute. It is advisable to consider further the social and anthropic aspects of nuclear energy on the network principle - in the UNU (leader-coordinator) and other universities in a single "network of networks". On the spiritual and human, ra-

tional and irrational methodological basis, corresponding to the fullest realization of the concept and the angle of the total knowledge of man and society - from the standpoint of the principles of civil society. To facilitate the development of adequate scientific objectives of human development (human and natural), technical and policy advice in relation to the need for monitoring of nuclear and related to her areas of civilization and the nuclear public awareness, the impact on their evolution in order to make a nuclear world safe, durable and comfortable. For a successful search for intelligent and practical establishment generating the optimal future antropo –social and nuclear started.

The key publications of the authors on the topic:

1. Komleva E. V. Nuclear Humanity and F.M. Dostoevsky. URL: <http://rulit.org/read/860/>, <http://proatom.ru/modules.php?name=News&file=article&sid=2373>.
2. Komleva E.V. Humanity and nuclear energy: an attempt to socio - cultural understanding. Information and communication technology in the cultural and civilization changes: Materials of the researchers from conferences. (Moscow, October 21. 2010) / M in the culture of the Russian Federation; FSEIHPE "Chelyab. State. Acad. Culture and the Arts ", Comp. TF Berestov, V. Gushul. Chelyabinsk, 2010. P. 50-54.
3. Komleva E.V. Antropo – social and nuclear discourse and spiritual heritage of Dostoevsky / / Madeniet zharshysy. - 2010. - № 5. - P. 27-31.
4. Komleva E.V. anthropocentricity of nuclear energy / Proc. Conference on "Language, culture, society."M., 2009.
5. Komleva E.V. Sotsio - nuclear anthropic principle and pragmatism geo - nuclear / / Minerals of the Urals. - 2008. - № 5. - p. 44-47, Journal of Environmental Russia. - 2009. - № 1. - p. 39-42, Nuclear Society of Kazakhstan. - 2008. - № 1 (12). – 2008. - № 1 (12).
6. Komleva E.V. Development of nuclear-oil situation of the North Europe / / Russian Journal of Ecology. – 2008. – № 8, 9. – P. 41–47, 36–40.
7. Komleva E.V. Reflection Nuclear Oil and Gas North of the situation in Europe: Germany's interests and capabilities as a partner of Russia / / Geophysical Journal. - 2008. - № 2, T.

30. - S. 3-31. Diploma for 1st place in the International Competition of Polar Research on the International Polar Year 2007/2008. (December 2007, St. Petersburg).
8. Komleva E.V. Nuclear Murman // National interests. – 2007. – № 4 (51). – P. 55–59.
9. Komleva E.V. Civilization and nuclear energy: their understanding to the UN for peace and sustainable development management // the philosophy of the science. – 2007. – № 2 (33). – P. 3–45.
10. Komleva E.V. Nuclear waste, gas fields and the security of the North Europe / / ECO: The National Economic Journal. – 2007. – № 3. – P. 104–111.
11. Komleva E.V. Spiritual and pastoral care of the humanitarian Nuclear Oil and Gas of Russia / / the energy policy of Ukraine. – 2006. – № 1.
12. Komleva E.V. Nuclear energy: a measure of humanity / / Herald analysts. -2005. – № 2. – P. 68–85.
13. Komleva E.V. Nuclear power: the social and humanitarian aspects of the international conference "Nuclear power systems for future generations and global stability GLOBAL 2005", 9-14 October 2005 / Proc. Tsukuba, Japan, 2005.
14. Komleva E.V. The social and philosophical problems of nuclear techno sphere in Russia / / Philosophy of Science. – 2004. – № 3 (22). – P. 121–134.
15. Komleva E.V. Nuclear energy through the eyes of liberal arts / / Rosenergoatom. – 2004. – № 2. – P. 20–23.

Literature

1. Jaspers K. Die Atombombe und die Zukunft des Menschen: politisches Bewusstsein in unserer Zeit. Munchen, 1958. – 506 p.
2. Komleva E.V. The nuclear issue of social coexistence / / North Industrial. - 2009 (October). – P. 40–43.
3. Komleva E.V. The phenomenon of nuclear energy, space and symbolic forms / / Philosophy of Science. - 2008. – № 3. – P. 77–114.
4. Komleva E.V. Sotsio – nuclear beginning or the beginning of sotsio - nuclear being. URL: <http://www.dialog21.ru/biblio/komleva.htm>.
5. Treat J. W. Writing Ground Zero: Japanese Literature and the Atomic Bomb. Chicago&London, 1995. – 487 p.
6. Garrison J. The Darkness of God: Theology after Hiroshima. London, 1982. – 238 p.
7. Lifton R. J. Death in life: the survivors of Hiroshima. London, 1967. – 594 p.
8. Komlev V.N., Konuhin V.P. Radio nuclides and minerals - in the coexistence of natural and man-made environments. Apatite, 1992. – 146 P.
9. Komleva E.V. Information support decisions in radioecology / / Problems of radiation safety. Journal of "Mayak". – 2001. – № 4. – P. 52–55.
10. Krivorotov A.K. Northern Shelf in the face of global instability / / North and the Arctic in the new paradigm of global development. Luzin read-2010. Apatite, 2010. P. 40–45.

11. Cherepovitsyn A.E. Zhukov A.M. strategic analysis of opportunities and threats to the development of hydrocarbon resources of the Western Arctic / / Arctic North and in the new paradigm of global development. Luzin read-2010. Apatity, 2010. P. 61-69.
12. Shtokman // An industrial North. – 2011. – № 1. – P. 4-5.
13. Melnikov N.N., Konuhin V.P., Naumov V.A and other scientific and engineering aspects of the safe storage and disposal of radioactive materials in the European North of Russia. Apatite, 2010. - 305 p.
14. Laverov N.P., Velichkin V.I., Pek A.A. Radio – geological problems of the initial and final stages of the nuclear fuel cycle, / / security environment. - 2010. - № 4. – p.26-33.
15. Belousov VI, Leverage, SN, V.N. Komlev and other deep-Pechanga and other hydrothermal systems: A new look at the isolation of nuclear materials from the biosphere / / Ural Geological Magazine 2001. – № 3. – p. 131-153.
16. Perovskii V.A. On the possibility of near-surface storage of reactor compartments from nuclear submarines, VNIPIET, 1995 / T. Nielsen, Kudrik I. Nikitin, A. Report of the organization "Bellona," "The Northern Fleet. The potential risk of contamination of the region. "1996. p. 138.
17. Komlev V.N. Bichukov N.I, Zaitsev V.G., G.S. Melikhova about promising areas north-western part of the Murmansk region for placement of radioactive waste and spent nuclear fuel / Proc. of the conference "Radiation Safety: Radioactive waste and the environment." St. Petersburg, 1999. p. 24-25.
18. Sergeev A.S, R.V. Bogdanov, V.N. Komlev assessment of geological formations of the north-western region of Russia as the hosting environment of underground radioactive waste storage / Proc. of the conference "Radiation Safety: Radioactive-on moves and the environment." St. Petersburg, 1999. p. 88-89.
19. SKB&NEDRA Technical Report 92-39. 1992. – 116 p.
20. Project-408 in the framework of the UNESCO International Geological Correlation Programme.

Reviewer – A. A. Dregalo,
Doctor of Philosophy, Professor

YDK 1:316+316.62:616.09-008.441.1(1-922)(045)

Arctic and Social Fears



© **Lukin** Yurii, professor, Doctor of Historical Sciences, Honored Worker of Higher School of the Russian Federation, Director of Institute of Management and regional studies of NArFU named after M. V. Lomonosov, REC "Institute of the Arctic" (Arkhangelsk). The author of 12 monographies: "Great repartition of Arctic regions" (2010), "New Arkhangelsk annals" (2008), "Global society self-government of communities" (2006), etc. Tel./fax: +7 (818-2) 65 05 22. E-mail: mba@pomorsu.ru, ylukin@atnet.ru.

Abstract

This article presents the first experience of philosophical understanding of the Arctic phobias as a social phenomenon. Phobias are here considered not like as obsessive fears or apprehensions of the individual, as well as long-term threat, anxiety, expectations of social communities and groups related to Arctic issues and requiring their conceptual analysis. We try to make an attempt to identify social phobias, their classification of content studied philosophy Homo sapiens, and fears of modern Russians. It is opened polifobiya of the Arctic environment, Arctic social and cultural phobias, fears of HAARP, climatic changes, with the polar Russo phobia with Arctic performances.

Keywords: *social fears, classifications, point of views, urban fears, arctic fears, HAARP, Russophobia, polar performance.*

Social phobia can be considered as one of the strongest and private manifestations of feelings of people in the process of human existence after the sensitivity of properties of love and a sense of ownership.

Polifobia "the country of ice horror"

Already in the etymology of the concept of the "Arctic" founded fear of bears, especially polar bear as big and strong animal, which could not be reflected in the public consciousness. The concept of the "Arctic" is historically and philosophically connected with the constellation of Ursa Major. Greek «arktikos» means "North", «arctos» - «a bear." The name "Arctic" is etymologically derived from the Greek «ἄρκτος» that is translated into Russian as "Bear." It is no accident the image of Russia in the West associate with the Russian bear.

Philosophical understanding of social anxiety of the materials in the Arctic, in many ways, and today, in the twenty-first century from the birth of Christ, the remaining Terra Incognita (terra incognita) - is an uncharted land, little known and understood in a fully modern man, it is now urgent as the task. Although this is more accurate to speak not about the land ("terra") in the literal sense, not of the earth's land, and the great water-territorial space of the circumpolar, Arctic Ocean, a lot of time of the year covered by ice. The Arctic circumpolar world as a distinct society includes a global marine waters, the North Sea and coastal terrestrial mainland Alaska (USA), Greenland (Denmark), Iceland, Canada, Russia, Norway, Finland, Sweden, inhabited by people of different nationalities, their social and ethnic communities. Ethnic and cultural landscape of the Arctic, a variety of differing ethnicities and cultures, is still moving in the direction of a single multi circumpolar civilization of multiculturalism. Arctic social phobias, which are based on the reflection in the public consciousness and communication between people of a single harsh environment of the Arctic environment, contribute to some extent the formation of a common North civilizational identity.

The main goal of the philosophical approach to the problems of the Arctic is to understand the content of the spiritual and intellectual, cultural and civilizational space in the Arctic in terms of human values, the polar spirit, tolerance, social phobias, and not reduce everything of the economics, utilitarian and industrial extraction of hydrocarbon resources from bottom of the northern seas. Scientific and intellectual understanding of the concepts required and processes, such as:

- features of the origin and evolution of social phobia in the Arctic, including its historical, philosophical, geopolitical, geo - economic, social, geo - cultural (spiritual, intellectual, creative, spiritual and civilizational) space in the human dimension;
- Arctic (polar, circumpolar) phobia as an object of study, their classification according to the source and content of a (natural + social = human);
- Russophobia is the reaction of foreign politicians, scientists, media outlets for Russian scientific achievements, ongoing Arctic policy at all "Russian";
- military and political phobias Arctic Russia, USA, Norway, Canada, Sweden, Finland, Denmark, Iceland and other countries, they are reflected in philosophy, politics and public opinion;

- Changes of the climate ecological problems, like, the resource of permanent phobias not only circumpolar countries, but also the entire global society;
- Problems of identity, multiculturalism, social phobia, household, and their reflection in the everyday consciousness, mentality «Nordman» as a socio - cultural type of person.

Arctic social phobias in its most general form can be classified as polifobiya, or the presence of many phobias (fears). The entire unknown, the unknown Arctic Terra Incognita makes humans fears, then escalating to social phobias. The development of severe, huge arctic space is always required personal courage, solidarity and human decency. Those travelers, explorers, sailors, who feared for their lives more than others, and committing petty acts on the basis of various personal phobias to the harsh nature of the Arctic, is not respected in their social environment. The history of Arctic exploration is full of human tragedies, severe trials that befell many polar expeditions in the waters of northern seas. Some of them have become widely known and have contributed to shaping the image of the Arctic as inaccessible, harsh space, relentlessly taking the lives of people.

The Arctic - is a distinct region "thalassocracy" power of water, sea ice and ice country of horror, as named by F Nansen. With regard to the Arctic is possible to investigate a series has long been known to science to social phobias harsh natural environment. The Arctic can be considered talasso phobia - is a fear of the sea voyages in the Arctic Ocean in conjunction with akva fobiy, hydrophobia - is a fear of water, swimming. Only in the North can meet aurorafobiya - is the fear of the northern lights, multicolored Scorch lings fascinating, covering half the sky, from which it is impossible to look away. Astro phobia characterized by the fear of stars and the sky. The Arctic expanses seem endless, and they are the cause of manifestation of the people keno phobia - is a fear of emptiness, of open spaces.

Among the social phobia to the Arctic environment also includes kiono fobiya (hionofobiya) - is a fear of snow; krio fobiya, manifested in the fear of cold and ice. The Arctic is highly valued by the heat homes, shelter from cold and frost, low temperatures. Fear of the cold (kriofobiya) forcing my countrymen to think primarily about keeping the heat build a wooden small house with small windows, low ceilings. This is typical for any minimalist tent, yaranga, yurts, and other types of northern homes. That is why the somewhat unexpected at first seemed an initiative Matthew Chuprova (Naryan-Mar) each year to celebrate 28, February, which is the 29 Day of the cold in the Arctic. "The people shall seal the winter, it is inexplicable," the hidden meaning of which he tried to understand the Orthodox priest and poet Konstantin Kravtsov, who was born in Salekhard. And after him, I repeat: "These words strike me as enigmatic as inexplicably print winter posed by the people" [1, p. 33].

The important task of the Ice Day purely pragmatic and the cold is to raise public awareness, government, and business to major problems of the Russian Arctic. Cold for us - is a natural human environment, the habitat of all living creatures in the Arctic. It was arctic cold is one of the main fundamental parts of the climate on our planet. Thus, a public and easy way to draw attention to the people of Russia "truly a miracle," which is the Arctic. The study and protection of the arctic regions of northern seas, flora and fauna of the Arctic and, more importantly, the unique climate in this region requires a comprehensive approach. The cold - this is what unites

us all. Indeed, in the cold people tend to be closer to each other to keep warm, to give warmth. And in the heat of all, on the contrary, seek the shade. Today there are a lot of talks about the fight against global warming. But we must not fight warming, and protect the cold, this is the thought of Matthew Chuprov (URL: <http://ria.ru>).

The harsh climate really brings people together, makes warmer than in the south in their human



relationships. In the south, the land is valued. In the north, the land, tundra, taiga, the will, a lot of space are few, so here is a genuine communion of human luxury and winter, and at any other time of year. The Cold Day in the Arctic can contribute positively to this constructive dialogue and communication development of the Arctic. November 5, 2011 in Naryan-Mar was the popular

vote in support of the day cold. On this day in the center of Naryan-Mar was established real Nenets tent, where he accepted the arguments "for" and "cons". Election Commission was headed by Father Frost, a member of the Election Commission was a reindeer named Grisha, and the secretary - the Snow Maiden. 80% of the national holiday then voted for the cold and 20% for heat. Not everyone likes the cold and it's clear and quite understandable that the opposition is always and everywhere, at all times and all peoples. Voting was conducted openly, honestly and no violations were noted, as well as subsequent rallies in support of the opposition warmth of those who did not participate in this vote, but does not accept the cold at all.

The agency "RIA-Novosti" in St. Petersburg held November 23, 2011 press conference on the Day of the cold in the Arctic. All participants of the press conference unanimously supported the idea of a holiday, and the discussion was only a matter of how this holiday is called - the Day of the cold or the Arctic Day, Day of the peoples of the Arctic or the polar day. It was noted that the word "cold" is not the most apt name, because the cold is associated with the "cold war". It is assumed that this day would attract the attention of Russian and world public opinion to the people who live in the Arctic, to the problems that arise from them, to the environment, education in the Ark-Atlantic region (URL: <http://narfu.ru/university/news/25580/>). This initiative is supported by the Association of Nenets People "Yasavey" and the union of the Komi people, "Izvatasyas."

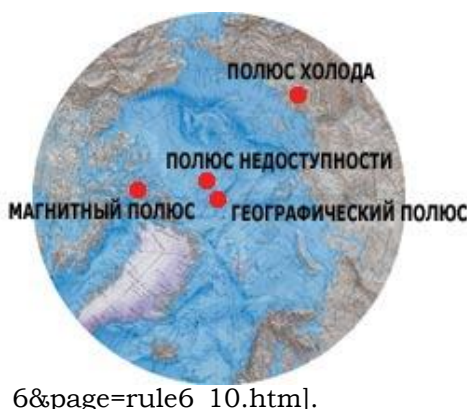
The editors of the journal «Arctic and North» and the newly created Center "Arctic partnerships centre" publicly expressed complete and unconditional support for the initiative to hold Matthew Chuprova the Cold Day in the Arctic. Through sponsorship of the information on this project, we will regularly publish materials on this topic on our website and in the journal. The Cold Day in the Arctic will be celebrated in NarFU named after M.V. Lomonosov on the February 29, 2012 (URL: <http://narfu.ru/university/news/28887/>).

The Arctic is not only the fear of cold. The Arctic basin at any time of the year covered by the drifting ice fields. As a result of the uneven drift ice is formed, and sometimes throws open water - is a divorce, and in other places, on the contrary, ice compresses, and they are breaking down to form the chaotic clutter - hummocks. In the marginal seas of the northern winter floating

ice freezes to the shores of an icy immobile fast ice. In the summer, the land fast ice cracked and broken. There are years when the ice crashed far away from the shore, making way to ships, and sometimes they do not depart or deviate far, hampering navigation. Thus, almost all area of the Arctic Ocean, located entirely the north of the Arctic Circle, most of the years covered by ice. Due to its geographical position of the Arctic Ocean receives much less solar energy than other oceans, located in the lower latitudes. The result is that the low temperature of its surface water that the entire ocean year-round almost entirely ice-bound, with a few exceptions.

It is not accidental that the Norwegian polar explorer Fritjof Nansen called the Arctic like the "land ice of terror." In 1893 on his small ship "Fram", he went into the pack ice north of the coast of Siberia, hoping to reach the North Pole along with the drifting ice. However, it appeared that the trajectory of the ice was 480 miles from the pole, Nansen, and then left the "Fram" and headed to the North Pole on foot. He reached the eighty-six degrees fourteen minutes north latitude and turned back. The ship is, bound with ice, drifted for three years. July 21, 1893 "Fram" moored to a large ice floe about 500 kilometers north-west of the island's boiler. Pro-drifted in the ice across the Arctic basin, the ship August 19, 1896 went smoothly on the open water near the north-west coast of Spitsbergen. The expedition carried out a wide range of physical and geographical observations and found that in the high Arctic, contrary to popular opinion is not located a shallow sea and deep-ocean basin - a deep polar sea, as he called it Nansen. Nansen's expedition is an example of courageous to overcome the dangers and fears of a severe Arctic cold reality.

In the Arctic, there are many unexpected for an ordinary person perception of natural phenomena, processes, causing surprise and delight, and often fear their inexplicable at first glance, the essence. The most important feature of the Arctic - the polar night and polar day. In Murmansk - the starting point of the Northern Sea Route - the polar night lasts 40 days, the polar day - 58, at Cape Chelyuskin - the northernmost point of the continent - the duration of the polar night, 107 days, the polar day - 123 at the North Pole polar night and polar day lasts approximately for six months.



In the public consciousness rooted opinion that the Arctic is the North Pole. In fact, in the Arctic, not only one but four poles: the first - is the geographic North Pole, the second pole - is magnetic. The third pole is called a "pole of inaccessibility", It lies in the center of the ice massif, an area of up to 3 million square feet. Miles. The fourth pole - is a "pole of cold", surrounded by the January isotherm of 49° [URL: [http://www.arktika.ru/rule.phtml? menu=snip &pub=6&page=rule6_10.htm](http://www.arktika.ru/rule.phtml?menu=snip&pub=6&page=rule6_10.htm)].

In the Arctic, one can observe the effect of "ice-sky", which is formed by the reflection of light coming from the ice surface. Focusing on the "ice-blink" you can choose the way in the sea, ice-free, or avoid the icebergs. The largest iceberg was recorded along the 385 and the width of - 111 km, which is half the area of Slovenia and the three of Luxembourg. But still the main dangers of seafaring and modern, - the fear to get into an ice trap to be in the grip of ice and com-

pression to be crushed by the mighty power of the Arctic ice. Phobias ice compression, and other fears about the "horrible" Arctic natural environment merge in the minds of people in this symphony of Arctic polifobii become widespread - all this is reflected in the culture, the life of society.

There is no doubt that some part of the population of Arctic states, as well as any other region of the global society, is inherent in social phobia - fear of society or people in general, difficult to overcome the internal fear of any contact with the external social environment. This is - an irrational fear of a permanent performance of any public action, such as public speaking or actions involving involuntary attention, even by strangers. A person affected by social phobia, fear to use transport, catering places, public toilets, it is difficult to do anything with any external observation from the outside. How typical is this behavior for the indigenous peoples of the circumpolar world? How important is the tolerance in the vast northern expanse, where so few people and so much land, water and sky? I have no ready answers to these questions and more logically arising from the content of the investigated problems. There is a need to understand the conceptual foundations of social phobia, their typology.

Conceptual approaches, typology

Probability of obsessive fears have a lot of people, and therefore phobia is common in any society. In the U.S., where concern for the mental health of citizens has become an obsession, the number of patients evaluated in different phobias, for example, 50 million people. In this case, according to statistics, only about 10 percent of the cases reported, become life-long phobias [URL: http://www.bienhealth.com/articles/phobia_list/]. In Russia, the sick, maybe less, but who counted them? At the national census questions on the availability of such phobias in humans, and no one asks not to ask. Even the Census in the age of information and communication technologies are increasingly becoming an anachronism, a relic of the past even as the last century when there was no scientific and technical capabilities to conduct electronic register of the total population and a permanent record of the personal data of any person. The audit, assessment of phobias is hampered not only the lack of reliable statistics, but mainly because many human fears seem well founded, and to them in everyday life is simply not paying attention. Is not it dangerous to fly a plane in a thunderstorm, or traveling on the ice in the polar night in the high Arctic? Of course, dangerous. These and other phobias are in the public mind as a perfectly natural state of man. Natural phobia - is a more open topic for discussion with family, colleagues, neighbors, can not be said about certain types of specific social fears have often intimate, private nature. In addition, no one in particular and does not tend to advertise their personal phobias, often staying alone with their inner feelings.

Conceptually, a phobia (from the Greek. Rhóbos, phobia - fear, fear) is understood as resulting sense of irresistible compulsion of fear. According to the definition of the American Psychiatric Association, a phobia - is an irrational and excessive fear of an object or situation. Usually, such a no motivated, irrational fear in the Arctic zone appears as a reaction to certain natural and social processes, situations, factors, events, items. Often, a phobia is manifested as a sense of danger to human life itself, for man's life. Arctic space in this respect is the very real threat. Symptoms of phobias can occur when a person is even just thinking philosophically about the subject of their fears, analyzing various aspects of life in the harsh environment of the North.

Common symptoms associated with phobias include not only medical conditions (dizziness, shortness of breath, nausea), but also the spiritual and psychological sense of unreality, obsessive philosophical mental images. In some cases, these symptoms can turn into a total state of anxiety, fear, and despair, to form a permanent installation of the individual. As a consequence of these symptoms, some people are beginning to be socially isolated or increased hyperactivity, which in turn leads to serious difficulties in everyday social life in the northern societies.

Social arctic phobias are, in my opinion, more or less persistent fears and anxieties that are manifested in the person (persons), large and small social groups in the process of social life in all spheres of society in the Arctic multifaceted space for any length of time. The mechanism of conscious regulation of social relationships based on a system of rules of criteria, standards of behavior control. Failure of the social mechanism and the absence of violation of rules often lead to the emergence not only of individual and group phobias, but also various kinds of conflict situations and processes. Social phobia can be considered one of the most powerful and private manifestations of feelings of people in the process of human existence after the feelings of love and a sense of ownership. Love, property, and the constant fear of losing it all largely determine the content of human existence in the modern world, its existential status, which include phobias (fear, horror, fear, depression, sadness, etc.). It should be understood that between the simple and the obsessive fear there is a distinction that should be a time for the transformation of some modifications of fear in others, in order to understand their condition and its evaluation by others. In phobias the person usually realizes that his fear is not due to anything, and even pointless, but it does not cease to be afraid. Many people are afraid of panic for some reason, the Arctic cold of the polar night, the ice hummocks, bright lights, flying an airplane, open or closed spaces. Is there even such a form as "fobofobiya" - the fear to get some phobia. Such obsessive-compulsive disorder, doctors, psychologists assessed as psychopathic deviation. But how to assess such states, if they are not a deviation at the individual level, and the norm of conduct large or small social groups? Is it possible to estimate the Arctic social phobia in philosophy, social sciences, of society as deviant behavior? The answer to this simple question seems to require an audit and evaluation of not only the content of the human fears, but, above all, the analysis and prediction of negative consequences, opportunities and threats, as well as the extent of manifestation of phobias in the levels of social community, political institutions, state international organizations, subject related to the Arctic space property.

Methodologically, phobia deep enough for a long time and thoroughly investigated in relation to the psychology of the individual to respond to social situations. In this applied not only psycho diagnostic technology, but also the methods of other branches of scientific knowledge. Thus, OA Sagalakova in his dissertation used an expert analysis of specific sources, psycho diagnostic methods (test to determine the Spielberger trait anxiety Hanina, a modified test of social phobia M. Liebowitz, Tomsk questionnaire rigidity G. Zalewski, test MMPI), social phobia questionnaire (USF), the method of focus groups, expert interviews, statistical methods (multidimensional scaling and ranking, correlation and regression analysis, cluster analysis, factor analysis, calculations of the T-Student criterion), data collection and processing [2, 2005].

The mechanism of study of the Arctic social phobia groups based on the identification of their socially important traits that have such basic features as cooperation, affiliation, association joint efforts, a community group is valuable, Stein and norms of behavior, tolerance. Phobias are not as a state, the behavior of the individual, as well as chronic fear of social situations are important in the expression of politics, economics, philosophy, sociology, social work, public opinion, communications. By fairly common phobias group include, for example, the constant fears of the possibility of a world war, in the planet nuclear disaster, adverse effects of global warming, the threat of war over natural resources in the Arctic or in any other region of the Earth, hunger, and poverty, international financial and economic crises.

Identification of the constant fear, fear of social groups is carried out by drawing more or less strict system of orderly distribution, consolidation of phobias in classes according to their similarities and differences. Applying a systematic approach can be classified as group Arctic phobia on major areas of life of society: social, economic, political, and cultural. As subclasses can be identified as religious, environmental, philosophical, Arctic, space, ethnic, urban and other groups of human phobias. Social phobia in the narrow sense is relevant only to the social life of society (services, education, health, life, the level and quality of life). In a broad sense, more or less constant obsessive fear of people can explore, using the term "social phobia" in relation to society as a whole.

Socio-economic, political, cultural phobias appear meaningful at the level of each person living in this world, and at the level of society, the state of the Arctic region, often in an implicit, hidden. In the sphere of the economy many people have seen the constant fear of loss of property, financial losses, the threat of crisis, default, inflation, before the rise in prices, corruption, fear of losing their jobs and become poor. The state fears the financial and economic crises, defaults, mass strikes and other protests, slowing economic growth, quality of life. Social phobias, fears and concerns of people almost all the underlying conflicts. Even Francis Bacon (1561-1626) saw the cause of social conflict in dire financial situation of the people. What ruined the state, so ready to rebel? Mismanagement, arbitrariness of the sovereign as contentious and cause anxiety, fear, constant fear of people, protest and resistance.

Crpax Fear of being left behind life as evidenced by a survey conducted by Euro barometer, dominated by fears of the inhabitants of Northern Europe. Afraid of unemployment 58% of Swedes, Finns, 51%, 38% of Danes [3, 2010]. In the 70-80s of the twentieth century, the employment problem solved by the development of the public sector, the creation of courses retraining, early retirement veterans administration and infusion of money into the industry crisis. Unemployment is considered the main enemy of society and the state struggled with it as best they could. At present, the situation has changed, reducing the level of social protection in the financial crisis in Europe leads to an increase in fear among the population, economic and social phobia began to manifest a substantial portion of the population. населения.

Political phobias are reflected in the obsessive fear of losing political power in the society of pessimistic expectations about the possibility of HN-curve for Arctic resources, fear of losing their territory of the state; lose the state-state sovereignty. Power is always paired with a variety of fears of the population, using the mechanisms of formation of fear through the laws, their enforcement,

security agencies, and sanctions. Measure the fears of society can, by applying proven methods of sociological research, analysis, and various mathematical and statistical techniques and other methods.

Everywhere and a large scale in the modern world is manifested fear of international terrorism, often transformed into social and religious phobias. Conflictual confrontation of Western and Eastern civilizations, among other reasons it is now often based on religious grounds, eats the souls of men, causing them to obsessive fears. Religion should ideally be unity, and not be a



cause of enmity, hatred, the appearance of phobias. Unfortunately, realizing their mission to spread tolerance, love, responsibility, compassion, equality, justice institutions of the world's religions (religious organizations) throughout the centuries have used such methods of conflict as a religious war and pogroms, crusades, jihad, the Inquisition and the persecution with devastating results, causing a constant fear. Could this be the hidden history and the genetic cause of phobias today on religious grounds? Trying to overcome

the persistent phobias that exist in regard to religious organizations, Pope John Paul II (1920-2005) urged the church to enter the third millennium "without sin." To clear my conscience, Catholics have repented for seven capital sins: 1) religious wars, crusades and the fires of the Inquisition, and 2) church splits, and 3) contempt, hostility and acts of omission, and 4) forced evangelization of America, 5) discrimination against women, some of the races and nations, and 6) manifestations of social and economic injustice, and 7) a departure from the spirit of the Gospel. There is no doubt that each of these sins has historically been a source of large-scale manifestations of personal and group phobias. In Pope John Paul II has not yet found the followers of other religious organizations, including those in the Orthodox Church, which still does not overcome the existing division between the Russian Orthodox (ROC) and the Russian Old Orthodox (ACC) churches. Events in the Middle East in 2011, in Egypt, Libya and other countries once again showed the severity of the so-called. "Islamic factor", exposed the cynical backroom games the U.S., UK, France, in an effort to use the Islamic movement to achieve its geopolitical objectives.

Cultural phobias, related to the material and spiritual culture, artifacts, have both personal and social character. Culture itself already includes social phobias as obsessive-compulsive disorder, feelings (installation, relationships, emotions), as well as symbolic objects, beliefs, rites, rituals, not only individuals but also social communities. Carriers obsessive socio-cultural fears and concerns in the circumpolar, the Eurasian civilizations can be very different social strata and groups, the population of towns and villages, men and women, adults and children.

Among the most common social phobia in many cultures, says the fear of the so-called "Black Friday", originating in the Scandinavian mythology. Founder of the Center for Stress Management and the Institute of phobias (USA), a psychologist from North Carolina, Donald Dossey, even gave the name to this phenomenon - paraskavedekatriaphobia (paraskavedekatriafobiya). Donald Dossey believes that the fear of Friday the thirteenth is associated with the old, not related to each other, negative associations with the number 13 and the fifth day of the week. Then the two phobias connected with each other, creating very bad day. Fear of "Friday the thirteenth" orig-

inates from the Scandinavian mythology, when the 12 gods feasted on Valhalla, joined 13th uninvited guest - a malicious Loki. Once at a feast, Loki made so that the blind god of darkness, Hoder Balder the Beautiful shot, the god of joy, an arrow with the tip of the mistletoe. Balder died and dark on earth. It was a poor, miserable day. Since then, the number 13 is considered to be ominous. Jesus Christ was betrayed by Judas and Friday, at the Last Supper, where together with him was thirteen. Therefore, usually the day in the public mind is associated with negative consequences, with the fear of failure, accidents, loss. According to D. Dossey, nearly 80% of high-rise buildings in the United States have no thirteenth floor. Many airports do not have thirteenth gate. And in hospitals and hotels often do not have thirteenth chamber or numbers [4, 2004]. Professor Richard Wiseman (University of Hertfordshire, UK), known for his research in the psychology of deception, luck and paranormal phenomena, the results of the survey in 2003 found that about one-third of respondents named a man on a representative sample (2068 persons) associated with the failures of the number 13. Such people, he showed, are more likely to be afraid of Friday the thirteenth, and therefore more prone to accidents [5, 2004]. By some estimates, only in the U.S. economy is one such day, suffers a loss of \$ 800-900 million due to canceled flights and imperfect cases. Fear of Friday the thirteenth in the U.S. suffer from 17 to 21 million peopleлюдей [URL: <http://science.km.ru/magazin/view.asp?id=E332D76FA6104954AC11F2DA17560BB3>].

An example of a phobia, "Black Friday" shows that the methodological quality assessment criteria in the Arctic social phobia can be used: first, large scale, the extent of obsessive fears in society (millions), and secondly, the socio-economic and political consequences of such kind of states (economic loss, business and political passivity.)

Subject matter as an individual personality and group phobias often becomes a problem of life and death as one of the most pressing issues in the philosophy of the eternal. The philosophical idea of the interdependence of life and death is obvious, banal, and as old as humanity itself. "Still no time to be born a man, and death is over it is the mistress" [Bhartrihari, VII century. / / Philosophy of ancient and medieval times. Part 1. M.: Thought, 1969. p. 178]. Everything in the world comes to an end - this is one of the most self-evident use of life-ting, as well as what we fear this end and, nevertheless, have to live with the consciousness of its inevitability and its fear of him. Many philosophers have felt the death of the most important event; saw the meaning of enjoying life is the willingness to leave it (the Stoics, Cicero, Seneca). In the management view of the finiteness of all living things are reflected in the conception of Isaac K. Adizes life cycle of the organization. Even in well-known writings Prutkov meet these aphorisms: "The first step is the first baby step toward his death," "Death to put in end of life, to make it easier for her to prepare" [Works Prutkov. Kostroma book publishing house, 1958. p. 127].

Elevated to the status of philosophical conception of the idea of death, frailty, finiteness of human existence leads to the notion of the futility of all human endeavors. This is particularly evident in the harsh arctic conditions. LE Balashov in the works conceptually substantiates the idea that the fight against terror, fear, despair is a prerequisite for survival in extreme conditions. Fear of death and despair - this emotional absolute death of harmful, dangerous and harmful to humans. A lot of castaways dying long before the physical or physiological conditions, in which they appear, are really deadly. Victims of sea phobias kills not hunger, not thirst, fear of killing them.

When the ship is sinking, people think that, along with his ship is sinking the entire world, when two floor boards go from under his feet, goes along with them all his courage and his whole mind. We run the Gauls had a saying: "Do not die before you live." This requirement is expressed by saying alive, healthy people to resist to the last gasp of death [6, 2005].

The most directly relevant to the topic are well-known line from a poem by the poet *Alexander Blok* about the Arctic Circle, where you can forget it all:

Everything on earth will die - and the mother and youth,
My wife will change, and leave one.
But you learn to taste the sweetness of another,
Looking into the cold and the polar circle.
Take your canoe, swim to the far pole
within the walls of the ice - and quietly forget
How's loved, fought and died ...
And forget the emotions experienced edge.
And startle slow refrigerant
You're tired soul are accustomed to
So that was here she did not need
When the rush out the rays.

Russian poet of the early XX century, Alexander Blok with bitterness and sorrow, wrote about the meaninglessness of human existence:

Night, street, lamp, drugstore,
Senseless and dim light.
Live another quarter century -
All will be well. Exodus does not.
Die and start again from the beginning
And again everything as before:
Night, icy ripples of the channel
Drugstore, street lamp.

Imaginative poetry of Blok phobia about life and death has some mystical philosophical and social significance [7, p. 24, 123 and others]. Block can be described as one of the most exciting poets of natural and social phobia - the wind and the night, the darkness outside the window, life and death, of aspirations, and love, terrible world.

The philosophical and conceptual study of the phenomenon, the content and structure of social fears, we find in the writings of the famous German philosopher Martin Heidegger (1889-1976), who studied the problem of eternal life and time, Nietzsche's metaphysics, and other topics [URL: [http://www.heidegger.ru / sobranie_new.php](http://www.heidegger.ru/sobranie_new.php)]. Heidegger saw the phenomenon of fear in terms of existentialism in three aspects: 1) before, what fear, 2) frightened, and 3) than on-terror, as well as the distinction between the concept of "fear", "horror", "terror" and other modifications of fear [8]. Social relations govern the individual fears and not allow them to transform into a large-scale social phobia. Personality correlates of phobia social norms, etiquette and morality. What's decent to do, how to behave, and what is not decent can not be done - these and other

rules of behavior are formed on the basis of common inherent large social group, human values and ethics.

World - viewer and fears of the modern Homo Sapiens

For understanding the content and mechanism of manifestation of the Arctic, and in general all social phobia is very important to understand the worldview of modern Homo sapiens. The answer to a question Kant's "What Is Man?" Time to fill the relevant modern content postmodern, including in Russia. Who is he - a man twenty-first century, the northern four-Right circumpolar world? What part in the perception of the world occupied by social phobia? Or a modern man no one and nothing is no longer afraid, no not believe in anything?

The concept of ideology is one of the key concepts in philosophy. Without this concept is indispensable in studying the problems of the Arctic social phobias. Heterogeneous blocks of knowledge, beliefs, thoughts, beliefs, feelings, moods, desires, hopes, fears, joining in outlook, are seen as more or less complete understanding of the people of the world and themselves. The state, religion and science, culture, practice and personal experience of each person have a multifactor influence on the world, its state at any given long period of time. Alignment of human communities, social groups and individuals historically changes permanently in response to emerging challenges. I think that the shared beliefs, principles, knowledge, values, ideals and standards of life have become a paradigm of intellectual, emotional and spiritual attitude of a particular era in which there are always obvious misconceptions, social phobia, lack of scientific knowledge and anomie.

Social philosophy of the modern Homo Sapiens as Homo sapiens, in varying degrees, affected by irrational fears, we can formulate a few basic statements, depending on the rating of certain types of people. In the context of this article, I used the concept of «homo», although it would be the first to speak of, the person - «person», held the socialization process of their own kind, and having a socially significant qualities and human values. Homo Sapiens - is a social person, persona, identity, which distinguishes it from ferralnyh people. As a socio-cultural type of modern Homo sapiens can be studied in this context and the "northern man» - Nordman, highlighting the general and particular aspects of his mentality, social lifestyle differences from others [9, 2011]. I distinguished several types of modern humans copyright; quality characteristics are to some extent inherent in the Arctic and the Northern Person of the North.

1. *Homo filled with Fears – the person, who is full of fears.* The world around us (nature, society, the Arctic, space, ocean) is full of constant dangers and threats. A person is not always a rational explanation to the external environment exhibited by fear and seeks their causes in itself, or goes into mysticism, religion, finds the protective mechanisms in the philosophical or domestic, personal explanation of his behavior and the people around him. Maybe human-existentialist French philosopher Albert Camus (1913-1960), who regarded life as an absurd irrational process that has no meaning and patterns. According to statistics, 20% of Russians once but accessed the services of people who allegedly have links with otherworldly realms, to see the future and to know about the past. How many of them were satisfied, and how many have simply lost the money - hard to say. But the fortune-tellers, clairvoyants and other similar hereditary "professionals"

with each passing year it becomes more and more. Now the number of healers in the country reached 800,000 people, and doctors there are only 620 000 thousands¹.

2. *Homo Active or Passive – the human, who is active (protective) or passive.* Passive person often feels weak and helpless in this world, can not fully resist the hostile external environment of the Arctic, terrified by M. Heidegger, hopelessness A. Block. But on the other hand, there is the exact opposite view of the power of the human mind, the omnipotence of the active man, his domination over nature. This duality in the perception of the dangers of the world determines the behavior of the individual, it is a source of social activity or passivity, resignation, formation of mysticism, superstition, phobias. Indicators of political activity can be considered Homo Active participation in the voting, membership and activities of political parties and other public associations, other positive criteria. Ochlocracy, or the power of the crowd, protest participation in meetings, use of technology in recent years so-called "color revolutions" (the power of the crowd, the activity of a small group of people super active, open blatant manipulation, big lie, the use of social networks, ICT) are the forerunners of the chaos of the permanent instability, for notions of absolutizing life (moral, religious, cultural), but not under the law. And so much of themselves become a source of social phobia, especially in our poor Russia, survived two revolutions of 1917, the Civil War, Gorbachev's perestroika senseless 80s, the collapse of the Soviet Union and the dashing 90th Yeltsin years in the twentieth century from the birth of Christ.

3. *Homo Taking Pleasure in a Life –* Meaning to life, happiness, the mission of the modern generation is getting much fun buzz. Even the thought of the upcoming recreation, entertainment, fun and possible pleasure, pleasure, fun, relaxing, as they say in life, "warms the soul" of man, motivating him to overcome his fears and possible threats to life, pain, sorrow, disappointment, and to endure all hardships and difficulties of existence. Regardless of wealth, status and position in society, large and small life of tragedy and woe inexplicable visit of all people (the rich also cry). However, many at the same time continue to hope that all changes in life lead to a better (which is not done - all the better). Happiness or unhappiness of each Homo Sapiens determined by the state of his soul and body, the accumulated human capital (education, professional competence, health), the level of consciousness and intelligence personnel available. A person who receives pleasure from life, inwardly ready for new hardships and acquisitions, opportunities and possible loss. Strengths and weaknesses of, opportunities and threats constitute the matrix in the management of the SWOT-analysis applicable to the analysis of the personal life any of us. In psychology, received a distribution of "on-the science of enjoying" - "rebirthing" (from the English. Rebirth - to be born again) and technology «vivation». The practice of rebirthing awaken the natural ability to enjoy life, learn to live in harmony with oneself and the world, helping to build their own destiny in accordance with their dreams, realizing and integrating internal fears, conflicts and limiting beliefs. Another concept - «flash mob» - is investigated as a spontaneous gathering of different people in the appointed place, at the appointed time, living, entertainment, and short campaign involving dozens or even hundreds of people, an instant crowd. The main tasks of flash mob - a good laugh and enjoy life, and confound others. In the Russian psychology, the term pleasure

¹ Fortunetellers and sorcerers will block oxygen. 29.09.2010. Recently, the State Duma in first reading was considered a bill banning advertising occult services.URL: <http://www.pravda.ru/accidents/factor/29-09-2010/1051510-extra-0/> (27.11.2010).

seeker (from the English) is almost never used, instead use the expression "thrill seeker" notation-emitting human, prone to the risk and benefit from this adrenaline [URL: [http://planetahr.ru / publication/1444](http://planetahr.ru/publication/1444)]. As you can see, the theme of getting pleasure out of life thoroughly investigated in various forms and guises, and this is reflected in the Internet, literature and media. To a lesser degree of interest shown by the fact that everything is the same threats and fears of modern humans, enjoy life in the Russian Arctic in the north.

4. *Homo Solidary*. Human solidarity is often dependent on the social situation. Around us people are hostile or indifferent to each other. However, they can show solidarity in the most unexpected situations. Social in real life often gives way to selfish, as it passes in front of individualism. The boundaries of manifestations of human solidarity, of human behavior exhibited by narrowed selfishness and self-preservation instinct, especially in the harsh environment of the North and the Arctic. There are other explanations of individual behavior in social interaction. There is a problem of defining the boundaries of human solidarity and exhibited in inhumane conditions, and in a comfortable, supportive social environment. Sometimes people are more afraid of their own kind, and often the dog is considered the best friend. What are the causes of these phobias? How common fears and trust people to each other in the Arctic? The answers to these and other questions would help to better understand attitudes and behavior of modern «the Person Filled with Fears». Solidarity and the government - the genetic basis of human existence. A particularly important role played by Solidarity in a huge arctic space, correlating to the present time the need to work together to develop its natural resources. Arctic solidarity is the basis on which it is possible to build a partnership Arctic.

5. *Homo Aloof in the Hostile World – is alienated human in hostile world* ("expressionism"). Today, it is really a total alienation of man from the property, work, power, nature, people from each other. At the present stage of development of the global society in the XXI century, the problem of alienation is even more acute than in the era of Karl Marx, when it was only on the alienation of man from the property. In the XX century Russia, Cuba, China, Vietnam, and dozens of other socialist countries have attempted to overcome the phenomenon of alienation in the economy by destroying private property and move to the public. In practice, this only led to the emergence and functioning of the political sphere of life of a totalitarian political regime and to increase the alienation of people in large numbers from the government. The result is a modern age as a time of universal total alienation of man from anything and everything - from property, government, culture and other people. Anti-human focus of terrorist acts in the twenty-first century, a constant threat to all of us to be in any place on Earth at all hostages of terrorists devalued human life and become the source of the most popular social phobias. The Arctic has attracted only a small portion of people with his ghostly pristine purity and freshness.

In place of alienated labor at the level of the individual comes ever more clearly the information exclusion. In terms of post-modernism and the rule of ICT symbols, ideas, images, intelligence, knowledge and information, the texts themselves become the object of undisguised manipulation, a constant source of social phobias, often taking an irrational sense of the perception of man. The surrounding world in a human of modernism becomes virtual reality, which forms a stable fear on the part of people living in this world and representing a little picture of a society

other than those imposed by aggressive advertising, television, media, Internet and other information and communication channels. Many people just do not get up-to-text variables, their modernist sense, intuitively use their plain language, the jargon of his generation, social environment, which is reflected in the vocabulary at meetings and in social networks (up to the mat, abuse, slander and lies) . This phenomenon, incidentally, is quite clearly manifested during the manipulation of the rallies in Russia after the elections to the State Duma, December 4, 2011. Then, few people are interested in a real situation with the outcome of a vote. The main thing was to declare the elections initially dishonest and thus cause the irrational nature of the protest against the government in society.

The problem of postmodern alienation of modern man concerned with not only philosophers and sociologists, but also writers, journalists, playwrights, directors. Horror confusion hangs heavy burden not only on the characters of modern plays, but also to the authors. The whole reality of being the twenty-first century appears to us as a socio-philosophical space of infinite variety and phobias of modern man, a sick anomie, unbelief, cynicism and pragmatism, greed. Wherever you look around, the situation around the vacuum, emptiness, lack of confidence, transforming the foundations of social life, all characters are crucified, all values are lost. There is clearly senseless being, consciousness and the dehumanization of society, the crisis of culture and mythology of the past. The man on the whole feels more fear, humiliation and impotence before the commercial, capitalist foundations of modern society, with its endless race for profits, power, money, before the bureaucratic institutions of government and governance, corruption, both at the state level and at the regional level, local community, its organization, where he works, learns. Decency, honor, compassion, dignity, respect human perceived (fortunately, not all) as the remnants of the past, which have no place in a global society of the twenty-first century. The rapidly growing marginality, savagery, powerlessness before a general violence. It is terrible that a tragedy in the Kushchevskaya (04.11.2010) - is typical of people's lives in Russia, the twenty-first century, the slice of the entire fabric of life of Russian society, where the merging of crime, government, business, where all silence and are afraid. The presences of constant fears of the population before the local gangs have already spread to the regional level. Society is rapidly losing the moral and ethical constraints, and the government continues to demonstrate his helplessness in critical situations. Not afraid to live permanently in a society where "lawlessness" is pervasive phenomenon, and the law rests somewhere in the Tmutarakan that causes socially phobias?

Problems and sources existing in today's Russia and phobias addressed in an interdisciplinary seminar on the theme "Where is the crisis of culture?", Organized by Igor Klyamkin, vice-president of the "Liberal Russia" [10, p. 7-9]. During the discussion, noting the conceptual content of the "Russian system" in the cultural dimension as a complex mythological, Andrew Pelipenko stressed that the depth of any myth is based on the fear of chaos, which in Russia has turned into a severe neurosis cultural consciousness [10, c. 58-59]. It was in this case is not even on the external manifestations of social chaos, from the barbaric "little will free" to the looting and riots. The subject of the "Russian system" fears, above all, internal chaos, rampant elements coming from the horror of the notorious "senseless and ruthless" Russian revolt. Pelipenko examines psy-

chological natural to chaos during the rebellion as an initial act of ritual renewal of the world, rejecting the futility of Russian riot.

Deliver us, God, from such a permanent renewal, damage to the ground. Peaceful, non-violent transfer of power is always the exception than the rule, if we consider it not as a momentary act of symbolic capture of a parliament building, but as the time needed for a real upgrade in order to stabilize the situation, the transition from chaos to the other's legitimacy. This conclusion follows from all the events we have witnessed in the 2011 (Egypt, Libya, etc.). In any such rebellion in the twenty-first century people are still dying, the blood flows, and ultimately all of society loses its momentum, dropped back into the past and come to power the new generation of dictatorships, plundering his country well. Even Gene Sharp, author of "From Dictatorship to Democracy," noted that "after the overthrow of dictator comes a very dangerous period, with a lot of mistakes due to lack of political responsibility. And that makes it possible for some people decide that they can now become dictators. And they will achieve this goal, using a word about freedom and democracy "[11, 2011]. Participation in such supposedly nonviolent action only leads to the disappearance or weakening of the fear of traditional social phobias. People are no longer afraid, according to D. Sharp. Why be afraid of whom? Themselves? The government, police, law? It is hoped that in this case it is not about the moral and spiritual values. Although it is not excluded. Ochlocracy spontaneous outburst of protest causes chaos, anarchy, and cynicism.

In the practice of social phobias, arising during the conflict, the importance of research into the causes of emerging fears. What is most afraid of today's Russians? If you ask a similar question some grandmother was brought up in Soviet times, the answer is fairly predictable: "If only there was no war." Whatever difficulties do not arise, as bas as people do not live, the most terrible to them are always the war, the death of loved ones, powerlessness to change anything, hopelessness. Everything else can be overcome to survive. This is a Russian defense reaction in response to the turmoil of revolution and war of the XX century, the Russian response to social phobia. According to the National Center for Public Opinion Research (VTsIOM), most Russians in the early twenty-first century fear of large-scale terrorist attacks, environmental disasters and crime [12]. If you look at the dynamics of public attitudes, the fears of the public are increasingly displaced by fear of the private, personal nature. For 15 years (2007-1992) significantly decreased the percentage of respondents for whom the worst was the famine, war, massacre, and physical violence. In the first place were such fears as the fear of losing loved ones (28%), old age, sickness, helplessness (11%), fear of arbitrary government (8%), increased the number of those who are "afraid of nothing" (1 to 7%)². According to a study conducted by the Institute of Sociology in September 2008, the undisputed leader of the Russian concern was the increase in prices for goods and services (63%). People are worried about increased alcohol and drug abuse (47%), the crisis of housing and the growth of payments (46%), low living standards of much of the population (42%), reduced access to free medicine and education (36%), rising crime, including among children and adolescents (26%), corruption and the domination of the bureaucracy (24%) [13].

² What are the fears of Russians: magazine VZIOM. 30.05.2007 // URL: http://wciom.ru/arkhiv/tematicheskii-arkhiv/item/single/8292.html?no_cache=1&cHash=4baff3bd6d (25.04.2009).

It is painfully perceived the main contradiction of modern Russia - between rich and poor. The study, "What the Russians are afraid of?" IP RAN conducted in cooperation with the Representation Foundation. F. Ebert foundation in Russia in September 2008, almost half respondents (47%) paid attention to sociologists. Studies have shown that since the default of 1998 reduced the number of those in force majeure situations, "go to the barricades" with arms in their hands (from 9% in 1999 to 3% in 2008.). But almost three times more people (not 4, and 11%) were willing to protest in the legal possibilities (the strike, the courts, picketing, hunger strikes, etc.).

Opinion polls show that with a sense of anxiety is living a good half of the country's urban dwellers. It is extremely important and relevant in terms of interdisciplinary scientific research in order to obtain a reliable picture vision, values and culture of modern Homo Sapiens - Homo sapiens, his mentality, as well as mapping the region of the country, showing the spatial distribution of social anxiety among the population of Russia in comparison with other countries, including in the Arctic and the North of the country. Map social phobia Russia to better understand the real life people. Knowing the fear of Russians, their phobia is easy to make a prediction about the most important needs of the population, its social, demographic groups and to lead in these areas of prevention efforts. And most importantly will help to determine the output of the overall crisis in the economy and social sphere, realizing the strategic objectives to promote stability, confidence in the future, poverty alleviation and poverty, for improving the quality of life and well-being of all the Russians at the state level, regional societies, municipal entities, self-governing communities, organizations of all types.

Social phobia in the Arctic and in northern Russia have their own specifics, which is closely related to the huge space of multi factorial, including both land and sea, with very harsh conditions for human life and the peculiarities of human activity.

Fears in front of HAARP, changes of climate.

Depending on what is causing fear among the people in the Arctic, we can distinguish a phobia: a) natural (fear of lightning, water, storms, ice, aurora borealis, hurricanes and other phenomena of the natural environment), b) biological (fear of polar bears, wolves and other animals), c) situational (fear of ice compression, the polar night, northern lights, flying in the Arctic, etc.), and d) ecological

Среди Among the population of many countries are extremely common phobia to environmental pollution and climate change, fear of radioactive contamination, emergency situations, geophysical war. Become widespread, especially after the hot summer of 2010 in Russia, in different sectors of society fears of climatological global warming and its consequences, the possible war with the climate (geophysical and ionospheric) weapons in the field of artificial influence on the climate and weather. What are the reasons for this are and how they are justified - to answer this question is difficult, but as they say, smoke without fire. In spring 1997, Hakon, Alaska (62 ° 23'N, 145 ° 8'W), was launched by an American research project to study the aurora «HAARP» - High Frequency Active Auroral Research Program, or a program of active auroral research the area of "Northern Lights". Auroral currents - a flow of charged particles from space, the solar wind "blowing" along the lines of the magnetic field of the Earth, causing the polar latitudes of the northern lights.

The project cost of \$ 250 million was launched under the contract if the Office of Naval Research with the firm BAE Systems, which is one of the world's largest defense corporations in a multitude of directions and general contractor for the U.S. Defense Department program HAARP. In the spring of 2006 it was officially announced that the construction of HAARP - a fantastic set of twenty-first century - successfully completed and began his active use.

Individual scientists, public figures, politicians and organizations have expressed concern also severe that HAARP could be used for destructive activities. Some experts argue that it is not just a study of the aurora and the solar wind, and the attempt to create a multi-functional integral weapon of global scale, affecting the whole Earth environment. This global weapons affects all layers of the atmosphere and can cause artificial auroras, disable radar stations, satellites and space rockets. As Me-meteorological weapons, HAARP is capable of provoking large-scale disasters: torrential rains, leading to catastrophic flooding, fog over airfields, drained and conservatory hurricanes, tornadoes and storms, snowfalls and prolonged drought in enemy territory in order to undermine its economy at a state - crop failures, famine and material losses.



Pic. 1. The project HAARP // Neutrino: scientific Internet – magazine.
URL: <http://neutrino.mk.ua/roboti/proekt-chaarp/2> (29.01.2011)³

³ This is a huge antenna field area of 60 km², which is a giant ionospheric radio emanatory. Array focuses on the short-wave radiation pulses of various parts of the ionosphere, heating them to clot plasma - plasmoids. The total power exceeds the power of HAARP radio emanatory natural solar radiation in the range of 10 MHz by 5-6 orders of magnitude, i.e. 100000-1000000 times. In addition to the radar antenna are incoherent radiation from the antenna with 20 santimeters diame-

With the help of HAARP can manipulate not only the weather, but also to geophysical warfare - burn in the upper shell of atmosphere ozone hole of any size over any state to cause severe magnetic storms, earthquakes, melting of ice in the polar latitudes, and even provoke the tectonic shifts. In certain settings, the pump can affect the psyche of all living things, especially human, causing mass insanity, aggression, or, conversely, apathy and depression, and this is a psychotropic war. Of course, in varying degrees, this information contributes to the spread of climate phobias in the early twenty-first century after Christ.

The essence of the current concerns is reduced to the following points. 1) HAARP can be used for military purposes, so that in the selected area has been completely disrupted sea and air navigation, radio communications and radar locked, disabled by on-board electronic equipment for space vehicles, missiles, aircraft and ground-based systems. In an arbitrarily delineated area may be terminated by the use of all weapons and equipment. Integrated geophysical weapon system can cause large-scale disaster in any electrical networks, oil and gas pipelines [14]. 2) The radiation energy can be directed HAARP to manipulate weather on a global scale [URL: http://www.fosar-bludorf.com/archiv/schum_eng.htm]. In one of the patents, which was used for the development of HAARP-antenna directly to a possible change of weather damage to the ecosystem or its complete destruction? 3) HAARP can be used as a psychotropic weapon. It is possible to sleep the whole settlements or lead people into a state of such excitement that they will resort to violence against each other, to direct a beam of broadcasting directly into the brain of people so that they would think if they hear the voice of God, or anyone who be presented Leading this radio. 4) You can use the directed beam technology to destroy the death of any purpose in the vast distances, and for pointing the beam of invisible even to the individual, causing cancer and other deadly diseases, and so that the victim and suspect will not be on the harmful effects. The nuclear bomb is in the public mind after reading this kind of information children firecracker compared to the new means of mass destruction, which are now born outside the U.S. secret research laboratories and tested at a military training ground in Gakkone.

Layers of the project HAARP push it, in turn, counter that the amount of energy emitted by the complex is negligible compared with the energy derived from solar radiation by the ionosphere and lightning. Disturbances in the ionosphere, the radiation of the complex made to disappear fairly quickly. Experiments conducted on the Arecibo Observatory, showed that the return section of the ionosphere in the initial state occurs at the same time, for which it was heated. There is no serious scientific basis for these features of HAARP, the destruction of all weapons, power grids, pipelines, global manipulation of the weather, the massive impact of psychotropic [URL: http://www.chelemendik.sk/808_757116.html].

However, anxiety, occasionally grow into fears and phobias of the population before the HAARP, still remain. "The international community HAARP program is presented only as a research and development, which is supposedly aimed at finding ways to improve communications.

ter, laser radars, magnetometers, command and computing center, powerful computers for signal processing and control of the antenna field.

But the program has a military component, and it is home. U.S. set a goal - in the course of this work to create a geophysical weapon. They are already close to that goal. Near-Earth space - the atmosphere, ionosphere and magnetosphere of the Earth - in the near future, a year or two, may be modified, i.e. changed. Set up and operate five emitters of various capacities for deliberate action on the environment of people radio waves high frequency. Three of them are on the Scandinavian Peninsula, in the Tromsø. One of the most powerful is - in Alaska. There are plans to build another transmitter - in Greenland. This will be more powerful than the Alaska three times, "- stated in 2002, then-chairman of the Defense Committee of the State Duma of the Army General A.I. Nikolayev ⁴ [15].

HAARP system is not unique. In the U.S. there are two stations - one in Puerto Rico (near the Arecibo Observatory), the second in Alaska (near Fairbanks). Both of these stations are similar to HAARP active and passive instruments. In Europe, the complex also has 2 world-class research on the ionosphere, both located in Norway: a more powerful radar EISCAT (European Incoherent Scatter Radar site) is located near the city of Tromsø, less powerful SPEAR (Space Plasma Exploration by Active Radar) - on the Spitsbergen archipelago. Similar complexes are located: in Dzhi-kamarka (Peru), in Vasil'sursk (Surat), Apatite (Russia) near Kharkov (Ukraine) in Dushanbe (Tajikistan). The primary goal of all these systems is to study the ionosphere, as well as most of them have the opportunity to encourage small, localized areas of the ionosphere. But HAARP is different from these complexes is an unusual combination of research tools, which allows you to control light. Radiation power: HAARP (Alaska) - up to 3600 kW; EISCAT (Norway, Tromsø) - 1200 kW; SPEAR (Norway, Longyearbyen) - 288 kW. HAARP uses highly directional transmitting antennas such as phased array antenna capable of focusing all the energy radiated in a small region of space.

Information on the climate (geophysical, ionospheric) weapons can indeed cause widespread arctic social phobias. However, the default, top-secret about the possible negative effects of ongoing research may give rise to no less ambitious fears among the population, including the Arctic countries, noting that similar complexes are located not only in Alaska, but also in Norway (Tromsø, Svalbard), Greenland, Russia (Sura).

Russo phobia with a polar performance

Not being able to get answers to all questions in the study of Arctic social phobia, believe it is important to stay on the same old "disease" being shown in relation to all things Russian in the Russian sense, and obviously intensified after the famous Russian expedition to the North Pole in 2007. This polar expedition, headed by A.N. Chilingarov, then the world has caused unprecedented excitement, pride and envy of some other variety of international assessments from attaching the label "show" before the announcement almost a new round of "cold war", "Battle of Arctic" and similar definitions. Many people have tried to find their own sense of watching live on television all the details of the polar performance. Someone pointed out the true heroism and courage of domestic and foreign aquanauts for the first time in human history have visited the Arctic Ocean

⁴ URL: http://www.universalist.ru/prensa/stat5_1.htm (21.11.2010). Nikolaev Andrey Ivanovich - Deputy of State Duma of the second and third convocations, army general, former commander of Russian border troops, the director of the Federal Frontier Service of Russia, member of the Russian Security Council in 1994-1997.

floor, and felt a tremendous sense of pride in Russia, someone is gloating, do they say, nothing more. There were interviews, published under the headings: "Russian scientists for the first time in history immersed in submersibles" Mir "at the bottom of the Arctic Ocean," "Russia has a high chance for self-development of the Arctic Shelf," "Russia staked out territory. For the first time in history bathyscaphes dropped by more than 4,000 meters at the northernmost point of the planet", "obedient to the depth of Arctic Russia, "etc.России».

Certain foreign diplomats, rather than to congratulate Russia on a great scientific achievement in the polar latitudes, they saw a threat from the Russian side and tried every possible way to reduce the effect of the Russian polar expedition. Reduction of the real achievements of Russian science to the level of the show here, most likely covers the inner sense of Russophobia - prejudiced, suspicious, hostile attitude to everything connected with Russia.

First, the term "Russophobia" was coined by the famous Russian poet Tyutchev (1803-1973), as opposed to this concept pan-Slavism. But Russo phobia is the fear of a Russian, a pathological fear of Russ, Ruses has deep historical roots going back thousands of years. Age-old negative fantasies, fears, phobias with respect to all Russian now transformed into a systemic rejection of modern Russia, including in the Arctic - homeland into slavyan [16, p. 9-10, 87-103], to multi-millennial history super ethnos Ruses', and autonomous protorus and prarusov [17, p. 450]. The well-known Slavic, Doctor of Historical Sciences SV Alekseev, revealing the background of the Slavic states, said that the past of the Slavs to the fifth century, d.c. more than one millennium [18, p. 26]. Perhaps this is ancient history and centuries-old permanent phobia?

Manifestations of Russo phobia in the twenty-first century can be classified by fields of application into several groups, layers:

- a. social and domestic Russo phobia is manifested in the cultural and social relations between people in everyday life, tourism, real life situations of conflict;
- b. political Russo phobia – at the level of the foreign policy of individual states in international relations, in the activities of some political parties and public-governmental associations, customs and immigration policy;
- c. cultural Russo phobia as a cultural rejection of Russian culture and civilization in general and some of its achievements in science, art, image creation, images, bear, Cossacks, dolls, and other red stars that cause negative emotions;
- d. national, ethnic phobia– idea of the Russian as "barbarians" inferior race (Nazism), backward nation, and hence the phobia to unpredictable behavior of Russian, their uncivilized;
- e. phobia as a competition between Russia and the West, fear of the economic potential and a vast territory, rich in natural resources, "a new energy empire" (Europe's dependence on Russian supplies of oil, gas);
- f. Other phobias in different spheres of life.

The absurdity of Russo phobia is deeply rooted in politics and other Baltic states. Aggravation of Russo phobia in the West, public opinion became especially noticeable after the polar expedition, Artur Chilingarov in 2007 and the hoisting of the bottom of the Arctic Ocean near the North Pole, the Russian flag. Before the expedition was set when the task to study in detail the structure of the ocean floor in the polar region, as well as to a number of unique scientific research. July

24, 2007 the expedition set off from Murmansk to the North Pole on the research vessel "Academic Fedorov" ice-breaker and the Murmansk Shipping Company "Russia". August 2nd, 2007 at the North Pole dives were made in two vehicles "Mir". The crew vehicle, "Mir-1" consisted of Duma deputy Artur Chilingarov⁵, Ph.D., submersible pilot, Anatoly Sagalevich, PhD, State Duma Deputy Vladimir Gruzdev.



Pic. 2. 2 august 2007. URL: <http://www.rgo.ru/2010/08/artur-chilingarov-vo-slavu-rossii/>

The crew vehicle, "Mir-2" was as follows: Candidate of Geographical Sciences Slipenchuk Michael, a citizen of Sweden, Honorary Polar Explorer of Russia Frederik Paulsen, a citizen of the Australia Mike McDowell. "Mir-1" began to dive into the 928, Moscow time, and in 1208 reached the seabed at a depth of 4261 meters, "Mir-2" plunge began in 947 and in 1235 reached the bottom at a depth of 4302 m at 500 m from the "World-1 ". Devices selected samples of soil and water and safely completed the ascent. In 1346, both devices have begun surfacing in 1808 reached the surface of the "Mir-1" in 1915 - "Mir-2". During the dive the first time in human history has reached the bottom of the Arctic Ocean under the North Pole. There, a team of staff, "Mir-1" was the flag of the Russian Federation, made for durability of titanium alloy. Deep-sea manned vehicles "Mir-1" and "Mir-2", up from 4 kilometers depth, were taken up not only samples of the Arctic marine fauna, and soil samples, designed to prove that the ranges of Mendeleyev and Lomonosov Moscow State University, located on the ocean deep water, are an integral part of the Eurasian continental platform. Details of the expedition are important, as it should be noted that the expedition was of a research nature, there were two of the crew, and participated in the immersion not only Russian but also foreign aquanauts.

⁵ Chilingarov Arthur N. - Doctor of Geographical Sciences, corresponding member of Academy of Sciences (since 2008) and the Natural Sciences (1994), honored meteorologist of the Russian Federation (2005), president of the State Polar Academy. The deputy State Duma. Special Envoy of the President of the Russian Federation for International Cooperation in the Arctic and Antarctic. Hero of the Soviet Union (1986), Hero of Russia (2008). A member of the editorial board of the electronic scientific journal "Arctic and the North."



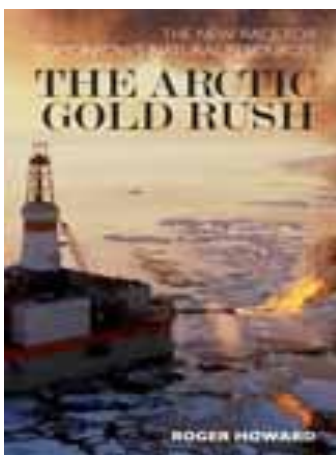
The emergence of the Russian flag on the Arctic shelf is strongly excited while bordering the Arctic countries and the world's leading media outlets. Negatively evaluated the installation of the Russian flag on the seabed at the North Pole USA. "I do not know what they're installed on the ocean floor - a metal flag, a rubber or sheet. In any case, it does not give the Russian claims on the ocean shelf is legitimate. U.S. are skeptical of these claims," - said the U.S. State Department spokesman Tom Casey,

commenting on the August 3, 2007 the results of the Russian expedition "Arctic 2007". "Even if they went and painted underwater ridges in the colors of the flag of Russia, and in this case I do not think it would at least something has changed in the slightest," [BBC, 08/03/2007. URL: <http://www.kommersant.ru/doc.aspx? DocsID = 792832 & print = true>]. Even more irritating emotionally expressed Foreign Minister Peter MacKay: "This is not the XV century. You can not go through the world, just put your flags and say, "We take this territory." Threats to Canadian sovereignty in the Arctic. We are not concerned about this mission - in fact, it only shows arranged Russia » [CTV, 02.08.2007. URL: <http://grani.ru/Economy/m.125661.html>]. In the world talking about the loud public relations and unacceptable Russian ambitions. Assessing the response of the State Department it was possible to conclude that the U.S. has embraced the installation of the Russian flag on the seabed at the North Pole almost as a declaration of war for the Arctic.

The questions arise: why is the scientific polar expedition caused such a significant international impact, mostly negative from the circumpolar nations? Why is the Russian "show", the polar performance of Western terminology, so alarmed foreign diplomats? Perhaps the most reasonable explanation is that it was quite a predictable reaction to the installation of the Russian flag on the Arctic Ocean as a manifestation of long-standing illness – Russo phobia. It is not talked about the scientific results of the expedition, but mainly for its political implications.

We note with regret that the politicization of the Arctic area is reflected in the media is a powerful charge of the Arctic Russo phobia. More restrained different publications. War of Arctic natural resources (oil and gas) is unlikely, according to, for example Roger Howard, author, specializing in inter-national relations [19]. But his book «The Arctic Gold

Rush: The New Race for Tomorrow's Natural Resources» can be considered as an example of the reflection of Russo phobia in the West due to the polar expedition A.N. Chilingarov in 2007. R. Howard writes that the place where two Russian researchers (Anatoly Sagalevich, Artur Chilingarov) hoping to make history and dramatically capture the attention of the outside world, it was cold and completely irresistible. Prior to each distant horizon, they could only see a frozen, barren landscape that seemed to have blazed a brilliant below the bright sun and a light blue sky. Nowhere in this icy wilderness, there was no form



of life or motion, only a comprehensive peace and isolation. It was not a simple feat. In such extreme temperatures are freezing machines, a failure of life instruments, and return them back to the surface would be even more difficult because of the moving ice floes. If they were unable to find the exact spot where they began to dive, the submarine would have been unable to break the ice above them, and the team would have been to a slow, agonizing death, as the air supply slowly came to an end. But the team was ideally qualified to undertake such a dangerous mission⁶.

After paying tribute to the deeds committed in such dangerous conditions, R. Howard still believes this expedition provocation conducive to the spread of fears about Russia. As one of the arguments he refers to the approval of the patriotic A. Chilingarov «Russia is a great polar empire», that Russia has a large polar empire. Evaluating the Russian polar expedition as part of the carefully planned operation, supporting Russia's demand on the part of the region, which seemed to belong to nobody, R. Howard said the installation of the Russian flag purely symbolic action, and rightly points out that setting a flag in any part of the world does not give any country the right to manage it. Here it is close to the estimate of the polar expeditions performances, rolling in the Arctic phobia. After all, even a symbolic action causes some people have the worst fears about the Russian, doubts about the seizure of a large part of the Arc-tics for themselves. The cause of fear, according to R. Howard, are some of the rhetoric of political leaders, and provocations, such as underwater expedition made by the Russian submarine in August 2007, which helped spread fears that the Arctic could be the future battleground for oil and natural gas [19, p. 64].

We are living in Russia, it is very difficult to understand why it is necessary to consider provocation biggest scientific advance of our country. Flight of Yuri Gagarin into space, if you follow this logic, then, too, must be regarded as a provocation of the twentieth century? We note here that such a phobia is really common in the western public opinion. And nothing can be done, because Russo phobia has long been a feature of mentality of the majority of Western politicians, journalists and other social groups.

R. Howard also wrote about the fears of loss of natural resources in the world, especially oil, a possible scenario of brutal, bitter and bloody confrontation between competing international forces, who are desperately trying to acquire the world's dwindling supply of natural resources. However, it must be emphasized that, nevertheless, the central argument of the book «The Arctic Gold Rush» is the author's claim that a military scenario in the Arctic is less likely than elsewhere, that the events of August 2007 are unlikely to be the prelude to a future war for resources Arctic. In his opinion, is not danger of accidental war due to the existing problems with territorial claims, the property in the Arctic. In any case, the Government is another way, a more efficient and less costly than the use of military force, which they can gain access to rare commodities.

⁶ Roger Howard admits with inaccuracies in the crew, "Mir-1" and "Mir-2" when submerged to the bottom of the Arctic Ocean, absolutely no mention of Frederick Paulsen, Mike McDowell, and others in the dive.

"It is fear in the West and a new crisis over the exploitation of the Northern Sea Route. Climate change opens the Northern Sea Route to European consumers are, and it can also give Russia a means of blackmailing the West" - Roger Howard wrote in his article on the Suez crisis of



the next [20]. He notes that the Northern Sea Route along Russia's Arctic coast of South Korea through the Bering Strait is made available to the global warming and could be ice-free for most of the year. This route will connect Europe with the boom in Asian markets, reducing the distance and travel time through the Suez and Panama canals as a third. Shippers, customers will benefit from lower prices. However, further R. Howard

begins to whip up fears that Russia could block the court of unfriendly countries. "The political price of active Northern Sea Route, however, may not be as attractive," - emphasizes R. Howard. Moscow will benefit from this business line in the Arctic Ocean in two different ways. On the one hand, it could be potentially exorbitant revenues for transit, thinly disguised as "icebreaking fee," even if such support is necessary for the courts. But, more importantly, the Russian could potentially use the passage as a political trump card, threatening to block or impede the passage of ships of hostile nations. The emergence of the North Sea Route, or even the prospect of it, add in the words of R. Howard, significantly, "the political firepower" in the arms of the Kremlin. Along with rising prices for oil and gas expected in the next few years, it could be a recipe for increased political weight of Russia. Further, the article presents an analogy with the Suez Canal, when Gamal Nasser nationalized the canal, has introduced a huge transit fees and the right to block the delivery of goods. Anthony Eden was alarmed when the fact that Nasser had his "finger on our windpipe." Of course, the Russian leaders will not have as many levers as opposed to the Suez Canal in the Middle East oil will never reach the Western markets via the Northern Sea Route. The real comparison is that Moscow's control over the NSR can change its spirit, will scare the neighbors as well as the nationalization of the Suez Canal Company. It is in this sense, the Northern Sea Route could become the next Suez" - sums up R. Howard.

This position of the West can be called like a complete foundation of a new Arctic phobia before opening the Northern Sea Route. Wait for their researchers and other foreign publications related to the Arctic and the North, in which there are many interesting findings, observations. Charles Emerson, author of «The Future History of the Arctic», for example, subtly noted: "The Arctic is inseparable from the high adventurism of the policy" [21]. The Arctic is particularly vulnerable to rapid changes due to the harsh climate - believe Richard Sale, Eugene Potapov, the authors of the book «The Scramble for the Arctic: Ownership, Exploitation and Conflict in the Far North» [22, c. 11].

In conclusion, we must emphasize again that this paper represents the first experience of a modest socio-philosophical understanding of the Arctic phobias as a social phenomenon. Phobias are treated not just as fears or concerns of the individual, but as a long-term threat, anxious expectations of social communities and institutions, social and ethnic groups that have a direct or indirect relevance to Arctic issues. The Arctic is still unknown to many people and dangerous ground, the source of many phobias. It is rightly called "the land of icy terror." Here, social phobia, caused by natural phenomena are superimposed on the relationship between humans and correlated with the eternal problem of the survival of mankind, in varying degrees, reflecting a global perspective. One can hypothesize that the Arctic social phobia are often widespread and cover a large social groups, social institutions in many countries around the world. In varying degrees, persistent fears and anxieties inherent in all modern civilizations, not excluding circumpolar.

The framework does not permit full consideration to all the problems of presentation and understanding of the Arctic social phobias. Therefore, in the first approximation to the study of the problem it was possible to dwell only on some conceptual regulations governing the Arctic relevant to issues of social phobia and requiring them to further social and philosophical analysis. Arctic theme of social anxiety is just beginning to be studied and the author hopes that her research will be continued.

Literature

1. A. Krivtsov Constantine. Color permafrost / / Polar anthology. - Moscow: Izd. "Paulsen", 2010.p.33.
2. Sagalakova O.A. Social phobia: an analysis of algorithms psy chosemantic emotional and cognitive responses to social situations: Dis. Candidate. Psychology. Sciences: 19.00.04. Tomsk, 2005. URL: <http://www.lib.ua-ru.net/diss/cont/161827.html> (27.07.2010).
3. Veronika Pennanen. New Frontiers: North European Journal. - 2010. - № 5 (68). - p. 6.
4. Dossey Donald. Friday the Thirteenth feared since ancient times. URL: <http://science.km.ru/magazin/view.asp?id=E332D76FA6104954AC11F2DA17560BB3> (06/03/2011).
5. Wiseman Richard. How to get lucky. - Minsk: Publishing House "Potpourri", 2006. URL: <http://buildyourself.ru/articles/4-sekreta-udachi.html>(27.11.2010).
6. Balashov, L. E. Life, death, immortality. 2nd edition, revised. Enlarged, with applications. - M., 2005. URL: <http://hpsy.ru/public/x2195.htm> (22.08.2010).
7. Block A. Coll. cit. in six volumes. T. 3. Poems. 1907-1916. - M. Spark, 1971. - Pp. 24, 47, 49, 52, 62, 63, 100, 123, 173, 177, 322, etc.
8. Heidegger M. Being and Time. URL: <http://lib.ru/HEIDEGGER/bytie.txt> (22.08.2010).
9. Dregalo AA, Ulyanovsk VI «Nordman»: Prolegomena to a typology of sociocultural "/ / The Arctic and the North. - 2011. - № 1. - p. 14-34. URL: <http://narfu.ru/aan/>.
10. Where is the crisis of culture? Experience in interdisciplinary dialogues / edited by IM Klyamkin. - M.: New Publishing House, 2011. - 538p.

11. Gene Sharp: nonviolent revolution. Author guidelines for non-violent protest told how important it is to believe in them and overcome fear. URL: <http://www.voanews.com/russian/news/Non-Violent-Revolt-Gene-Sharp-02-18-2011-116511263.html>(31.12.2011).
12. Sapogova E. What the Russians are afraid of / / URL: (25.04.2009).
13. Dobrynin, E. Sinica in hand, shearwater in the sky: Sociologists have found what really afraid of the Russians, and so terrible a crisis for them / / Rossiyskaya Gazeta. - 2008. - 22December.
14. Mozharovsky G. S. American geophysical weapon - HAARP. URL: <http://siac.com.ua/index.php?option.=1075&Itemid=59>(29.01.2011).
15. Vostrukhin W. Washington prepares a weapon against all the global and the global attack on their people / / True. - 2002. - September 9.
16. NR Guseva Russian North - indoslavov homeland. - Moscow: Veche, 2010. – 304p.
17. Petukhov, Yu J. The history of ancient Rus. - Moscow: Veche, 2009. – 464p.
18. Alekseev, SV Slavic Europe V-VIII centuries. - Moscow: Veche, 2009. - 528. Howard Roger. The Arctic Gold Rush: The New Race for Tomorrow's Natural Resources. London: First published, 2009. – 259 p.
19. Roger Howard. The next Suez (23.09.2009). URL: <http://www.thefirstpost.co.uk/53899,news-comment,news-politics,the-northeast-passage-could-enable-russia-to-blackmail-europe> (29.01.2011).
20. Emerson Ch. What Moscow wants in Arctic // The Financial Times. URL: http://rus.ruvr.ru/by_source/1563279/index.html (01.05.2010).
21. Sale Richard, Potapov Eugene. The Scramble for the Arctic: Ownership, Exploitation and Conflict in the Far North. London: Frances Lincoln Ltd, 2010.

Reviewer – A. N. Solovieva,
Doctor of Philosophy, Professor

UDK11+13+008+327+316(42+722)

The Arctic project of the development of the global society



© **Gorelikov** Lev, Ph. D. of Philosophy, professor of the department of social and humanitarian disciplines of the National Metallurgical Academy of Ukraine. The author more than 160 scientific publications. *Priority research topics*: social philosophy, history philosophy, ontology and the knowledge theory, methodology of scientific knowledge, socio-cultural anthropology, ethnology. Contact Phone: +38 063 990 68 39. E-mail: lev_gorelikov@mail.ru.

Abstract

The article investigates the spiritual, moral and historical grounds of objectively formation of a global society in the world content integrity. Expands the historical logic of the development of world society as the rise of social practice from the requirements of natural necessity to creative strategies, universal freedom. Substantiates the key role of the Arctic in a humanistic civilization and consolidation of humanity.

Keywords: *global society, spiritual creation, the national idea, the universal humanism, Arctic civilization, the world's integrity.*

The new century will be crucial in the formation of humanity as a planetary society, as a society of world cultures. Modern man has to overcome the power of external necessity, and to understand the natural and social reality does not limit personal freedom and the objective conditions of its supreme expression. In the twenty-first century to replace the technological civilization has come to the spiritual and creative form of social organization, based on the humanization of education universalization and generalization of social intelligence in the social imperatives of social and natural harmony practice. An important role in the liberalization and harmonization of the world community of the XXI century Russia to play as a central link in the conjugation of spiritual cultures of East and West.

The world drama of humanity outlines its worldview fractures. The fates of nations are hidden in the spiritual origins of their historical work. In XX century, a man ascended to unprecedented heights of power production. The same age, and showed terrible destructiveness of irrational use of this power, attesting to the global challenges of our time, that one-sided knowledge are not only a creative sense, but the chaos and madness. Stop being the decay can only limit the concentration of spiritual energy of man, through the full deployment of the creative essence of the human spirit. "After all, the world's history - on Hegel's thought, - is an expression of the divine spirit in the process of the absolute top of his images, it is an expression of the series of steps, yes, through which he carries out the truth comes to self-awareness"¹.

The concept of "spirit" which appeared in the depths of religious and mythological consciousness was categorical and logical understanding of the philosophy of Hegel, denoting here

¹ Gegel G.V.F. The philosophy of history // Essays. T. 8. – M.; A.: Sozektiz, 1935. – p. 51.

the universal base of the internal practices of human communities, elevating their lives above the natural necessity of natural processes. Nature and Spirit, in his view, represent different ways of implementing the universal essence of being, the substance of the world, serving in an infinite unity of their capabilities as "absolute idea" as "truth in and for itself, the absolute unity of concept and objectivity"². The absolute definition of "ideas" describes it as a creative force of life. The root of the absolute essence of the idea as a complete fullness of being is, according to Hegel, "to return to itself through self-determination or justification ... Nature and Spirit are all different ways to present it to cash being"³. If Nature is an absolute idea of "reverse perspective", in a fragmented and transitory form, inspired human life means its true form, acts as a dynamic phenomenon of an absolute beginning, united and eternal life, as a moving image of eternity. "The vast, - Hegel's Logic - is the spirit, such is the definition of the absolute top."⁴ Spirit - this universal inner base of creative people, the incarnate mind of the world as a valid method of realizing their full creative powers, that is, the dynamic implementation of the absolute unity of being in the necessary relationship of physical forms of social practice.

General way to realize the creative potential of the mind of the world, according to Christian doctrine, is the power of love, which determines the integrity of all parts of the universe. Love gets the creative fullness of religious and moral judgment in the idea of self-sacrifice as the supreme law of life that defines the historic hundred things of "the kingdom of heaven", that is the society of universal humanism - the global association of social expression of their people as a reasonable point. The concept of the incarnation, asserting implementation of the fullness of truth in a bodily form of Jesus Christ, sends the human mind in search of earthly manifestation of the law of love in the world of practical human activity. The conscious nature of the formation of a global society as a global unification of mankind requires the implementation of the ideal in public practice, the spiritual meaning of life and brings to the fore the problem of defining social cognition general subject, the chief designer of the world's future society of universal humanism.

Guided by the idea of Christian humanism of the unity of God and man must be admitted that the "higher meaning" of the peoples are not hidden from human understanding in the other world, and manages the earthly affairs of men as a universal law of historical practice, as a general goal of their joint action. Earth's projection of the creative energy of the Universal Mind becomes a practical mind of the masses, which determines the unity of the collective will and concentrated in the "national idea". "For an idea of the nation, - stressed Vladimir Solovyov - is not what she thinks of itself in time, but what God thinks about it for eternity" [1, p. 220]. Indeed a holistic, practical creative potential of people will denote spiritual life of ethnic communities, representing an inner, spiritual kinship between the individual and collective. "By substantially to its value - Stresses the VS Soloviev - society does not have an external limit of the individual, and its internal replenishment" [2, p. 284]. Ethnicity - is the natural history community of people linked by common origin and historical destiny, by ties of consanguinity and affinity, shared services, common territory, language and culture. The highest form of existence of ethnic communities is the nation as a socio - cultural product of purposeful human reproduction characteristics of living

² Hegel G.V.F. Encyclopedia of Philosophy. V. 1. The science of logics. - M.: Misl, 1975. - p. 399.

³ Hegel G.V.F. The science of logics: в 3 т. Т. 3. - M.: Misl, 1972. -p. 288-289.

⁴ Hegel G.V. F. Encyclopedia of philosophy. V. The philosophy of the spirit. - M.: Misl, 1977. - p. 29.

together based on the prevailing social ideal of self-determination through their "national idea". We can say that the "idea", the hidden spirit of the ideal of unity, transforming people into a "nation". In this regard, the "nation" is the ethno-cultural community of people associated the spiritual unity and meaningfully developing a generic feature of the joint activity, consciously affirms their identity in a global community based on the "national idea". In view of the spiritual nature of humans authentic creators of world history are not abstract classes and class, and inspired, one-piece "personality", acting as individuals and ethno cultural communities. In a global reorganization of modern society, underlines the YF Lukin, culture "is becoming a determining factor in the ex-territorial identity of each person and ethnic communities, the formation of a new global human solidarity and simultaneously increase their autonomy, alienation in the twenty-first century" [3, p. 60].

Creativity is present in the life of every nation. However, the extent of this presence is not the same in the daily practice of various ethnic groups. The universal association of humankind will be determined by the activity of the most distinctive in the creative self-expression of ethno-cultural community. Life is a subject of world history should be different from other peoples' everyday systems maximal humanity, the ability to empathize and understand the feelings of every human being, and thus have a major advantage of the sincerity of his feelings and actions, that is the truth in word and deed, to follow the call of eternal life.

Today, the determining force in world history, Western civilization stands at the head of the United States. However, the strategy of Western civilization is technocratic in nature, guided by the logic of the abstract-mathematical intelligence, designed to unlimited exploitation of natural resources and the harmonization of regional cultures. If Western civilization tends to weaken the social contradictions through technocratic abuse of the natural environment, pushing the world to environmental disaster, the Eastern civilization tries to maintain a balance with nature, but due to the preservation of social traditions in the division of the population in the lower and upper bound to the "land" and the sublime to "God." If the inner East confesses, but the local need, the West is guided by universal, but the external mechanical necessity. The ideological difference between the two cultures inevitably creates "geopolitical confrontation in the world" community of civilizations "East and" individualistic civilization, "the West" [4, p. 196]. To reduce the destructive processes in the modern world, threatening to escalate into a war of civilizations, we must first determine the true subject of the global consolidation of humanity that can overcome the senses sided policies of East and West, and to express the interests of the entire world civilization, to reveal its universal creative mind.

Hegel's philosophy which expresses the essence of Western logical thought, paints a picture of human history as a process of gradual ascent to the fullness of his freedom of reasonable people in joint activities. Global stages of the ascent are speaking the language of our time, the era of Savagery, Civilization, Culture, representing, respectively, primitive natural history of mankind, its subjective, arbitrary, "semi-conscious" corporate-class present and reasonably universal future. "There should only be mentioned that the first step ... is an immersion in the natural spirit, the second stage - a way out of this state and the consciousness of his freedom. But this first separation (from natural) is not complete and there is partial ... The third stage is the elevation of

this private freedom even to her universal clean up self-esteem and the sense of the very essence of spirituality "⁵. The implementation of the potentials of spiritual freedom is, according to Hegel's logic in special kinds of practical human masses and proceeds on the background of the natural environment, in the unity of the material factors. "Different geographic principles are developed in a form and marked"⁶. In this German thinker considers the geographical center of law-course world history, the natural area of the Old World in the natural pairing of Africa, Asia and Europe. The logic of world history, in Hegel's sense, is not hidden from the view of interested people, and lies on the surface of their natural life, natural landscape is designated the main parts of the Old World, the Spirit guides the movement of the world from the "identity" of mountain ranges in Africa through the "separation" of mountain and lowland areas Asia to the "unity" of opposites in the environment of Europe. Total freedom of spirit, according to the German idealist asserts its reality in Europe, which is the habitat of its own naval element, which opens its secrets only the tricks of the human mind. The major milestones in implementing the spirit of freedom in the development of world civilization began, according to Hegel, ways of organizing political power: "The East knew and knows only that one is free, Greek and Roman world knows that some are free, the German world knows that all are free. So, the first form ... there is despotism, the second - democracy and aristocracy, and the third - the monarchy "⁷.

But freedom is immeasurably advanced the German spirit, in the modern society has created a global controversy, threatening to blow up the human civilization, and just to prove the validity of the Hegelian concept of the West as the "end" of world history. In Hegel, the historical path to the worldwide unity of people in this end, only outlining the possibility of future movement. This future is defined by Hegel geopolitical differentiation of European countries on the southern, central and north-east. The general logic of the global culture is not only the movement of the creative spirit of mankind from East to West, but also its movement from south to north and connecting to the world-historical power of the Slav peoples in the vital practices that implement the "northern synthesis" capabilities of the West and East. "Dominate until recently Eurocentric dichotomy between East and West, - states AA and VI Dregalo Ulyanovsk - organically complemented by the designation of civilizational orientations geographical concepts," West ", East "and" North ", South "[5, p. 16].

Among the Slavic peoples most deeply rooted in the Eastern world has a Russian ethnicity. It was Russia, Berdyaev believed, will start living a creative fusion of Western and Eastern cultures. "Russia can not define itself as the East, and to oppose itself to the West. Russia should be aware of yourself and the West, the East-West connector between two worlds, not divider "[6, p. 244]. If the principle of Western thought is the requirement of "unity of opposites", the general idea of the Russian soul is a divine imperative super logical "inspiration", "creative renewal" of being, the hidden spirit of which is expressed in the Christian ideology of self-sacrifice as a "self-determination super personal 'rights in the light of absolute truth. "Here is the secret of the Russian spirit. This spirit directed to the last and final, the absolute in everything to the absolute freedom and absolute love "[6, p. 247]. The ultimate secret histories of the world are the spirit of

⁵ Gegel G.V.F. The philosophy of history // Essays. T. 8. - M.; L.: Sozektiz, 1935. - p. 53-54.

⁶ The same place. P. 94.

⁷ The same place 98-99.

creativity, awaken to a world-wide action and called the entire human, catholic attitude of the Russian soul.

The actual form of implementation of the completeness of wisdom in the minds of people is a practical philosophy, conceptual and logical center of which stands the philosophy. In view of the substantial role of philosophy in a rational self-determination of people's logic it self is a perfect measure of the intellectual progress of the world community. Therefore, the nature of the free development of modern European philosophy can serve as an intellectual guide the actual progress of modern society that emerged on the historical stage in the Renaissance. If the philosophical thought of Italy at that time was aimed at restoring intellectual heritage of ancient culture, its logical essence of Cartesian rationalism, expressed, which became the ideological basis for the development of logical-mathematical sciences, which established the categorical spirit of the Enlightenment and the firmly established in the seventeenth-XVIII centuries, France, the center of world civilization. Together with in French rationalism and ideological dispute with the British empiricism developed, which contributed to the XIX-XX centuries intensive growth of natural history knowledge, to determine the energy features of industrial society and established the ideological leader of modern technological civilization, the Anglo-Saxon socio-cultural community.

Following the dogmatic thinking of rationalism and empiricism comes transcendental-critical idealism of classical German philosophy, revealed in the form of categorical logic creative mind of world history and became the ideological foundation of intellectual self-determination of the socio-historical, humanitarian and psychological sciences. The overall logic of the "philosophical guidance" of the modern global community, as well as logical and ideological integrity of the wealth of classical German philosophy can make a historic forecast that the leader of world culture in the XXI century will be a united Germany. But the same logic of the development of world philosophy shows rapid growth in the XIX-XX centuries Russian philosophical thought, brought up on the ideas of the German philosophical classics and became a consistent overcoming its logical formalism. Empirical logic of the intellectual development of modern society confirms Hegel's idea of Germany as the final form in the development of the social logic of Western civilization and culture "north vector" world-historical process as the general direction of the spiritual progress of mankind. Social center of the "Northern Spirit" in today's global community is the Russian society, linking in the XIX century the entire human nature, "the Russian soul," the northern lands of Europe, Asia and America and has become, thus, a special world civilization along with the West and East.

The social and practical face of the "Russian soul" acts "Eurasian culture" in Russia and "Russian world" as its ideological essence of the original, not a split between Europe and Asia, and collected in a particular historical unity. Objective expression of the historical unity of the "Russian world" Arctic Civilization is a high quality end of the northern aspirations of world history. One of the main outcomes of the ideological development of Russian society in the XX century was the realization of his being as a historical debited Arctic civilization, not only from different life strategies of East and West in their separateness, but also the mutual conjugation, elevated above their local historical meanings. "In the north converge beginnings and ends of the Russian idea, the alpha and omega of the sacred space of Russian life" [7, p. 42-43]. In the new century Russia

should cease to be a transport hub between Europe and Asia and to the world its true, Arctic civilizational entity [8, 2011].

Geopolitical horizon in the development of modern civilization is increasingly determined by the struggle for natural resources in the Arctic. "The unfolding struggle for control over the Arctic is not an accident ... a quarter of the region's undiscovered hydrocarbon reserves of the world" [9, p. 43-48]. Not Europe, the Arctic serves as a visible end of the ascent of humanity to the assertion of completeness, a reasonable human freedom. Therefore, the ultimate truth of human history, the world opens our understanding of the natural features of the Arctic, the inner core of which is "permafrost." Monolith "permafrost" puts a limit man-made expansion of humanity and requires it to act in strict accordance with the eternal laws of natural life. "Society of the North - note modern scholars - is regarded as a selective - strictly delimiting be approved behaviors of rejected and invalid ... For the" Northern Man "is typical to conform, on the one hand, with a personal judgment on a particular issue, but on the other - to appeal directly to higher values and higher levels of social hierarchy "[5, p. 16]. In the Arctic, the original restored a significant role, adaptive logic, the relationship between man and nature, but not in its local parameters, and the universe, not in private, and the world need. The actual image of the world needs to be disclosed to our minds in the process of unification, consolidation, the increment being the primary cause of which is the power of creativity, the energy of creation. So mostly we establish the law of the Arctic civilization becomes the principle of creativity, spiritual development of people.

In the Arctic zone of the diversity of natural phenomena and forms of life are minimized. Against the background of the constancy of the maximum natural environment, given the conditions of "permafrost", people need a wide external communication channel, as new information fades, concentrated within the immediate family circle. In this historical context to the forefront of contemporary social practices are not put forward the task of an extended dialogue with the neighboring cultures, and the problem of survival and above all, procreation, reproduction of new generations, but not in the local peculiarities of their natural bodily existence, and the universal needs of theological education rights, child-rearing as a whole person. Culture of the Arctic civilization - a holistic, quality completion of the "childish mentality" that is configured to reproduce the universal spiritual practices of society in the new generations of people, the continuous self-learning of mankind in the light of higher truth. This child, morally pure as the coming of World Culture Society once said to his disciples, Jesus Christ: "Whosoever therefore shall humble himself as this little child is the greatest in the kingdom of heaven." ⁸. Therefore, the ideological basis of the strategy of the Arctic in the formation of societies of the world culture is the system of upbringing and education.

Under natural conditions, "permafrost" as a major sphere of social practice of the Arctic civilization is an educational activity aimed at mastering the personality of the universal potential of creative activity of the whole human community. In the process of education, Hegel emphasizes that "every subject ... makes your property directly to the universality of ... considers itself as universal, and thus gains ... in relation to itself the potentiality and the universal, and thus becomes

⁸ The New Testament. The Gospel of Matthew. 18: 1-4.

a very special"⁹. In the Arctic environment, a universal experience of people living together is a universal spiritual basis of personality. But on the other hand, in the frozen environment the human spirit focuses on the internal experiences of individuals themselves, prompting the need for their self-contemplation, deepening self-reflective capacity, developing the sensitivity of their world view in detail of life, creating a culture of creative imagination. To the greatest extent the capacity for creative imagination is characteristic of children's mentality, which becomes the object of conscious cultivation of future society, world culture, "But Jesus said, Suffer little children and forbid them not to come unto me: for of such is the kingdom of heaven" *«Небесное»*¹⁰.

The most characteristic feature of the modern national social tradition, nurtured in the bosom of liberated, revolutionary mentality of the Russian intelligentsia as the ideological nature of the mature "Russian society," was the belief in the "true spirit" of youth, able to restructure society on the basis of a higher justice. "And if the elders in Christianity is the natural embodiment of spiritual experience and management, among our intelligentsia that role naturally took young students ... this is because the spiritual storehouse of intellectuals, which remains for a lifetime ... by the same young students in their world view," [10, p. 47-48]. In this truly "Russian faith" is not the experience of the past builds the future contours of the world, and "clean image" of an ideal future. The eternal spirit of discipleship, educational attitude of the intelligentsia will determine reasonable ways of coming global human history.

Arctic identity - a sense of self in the global dimensions of life, understanding of human abilities against the boundless expanse of the universe. Consequently, this self-consciousness is the original form of the universal perception of the world of mankind, who has completed primary education in the local limits of the earth's natural environment and entered the path of exploration of other planetary worlds. In the space of "permafrost" the main driving force of the universe of cosmic history of mankind is a creative interpretation of reality based on personal self-knowledge of man, in the ideal sense of words, to improve our spiritual being. Hegel's concept of the development of the international community as a historical process of implementation of "rational freedom" becomes today the most complete embodiment in the life "of the Arctic civilization" as the first social-historical form of truly "universal culture" of humanity.

Russian spirit in its "universal projection" is the eternal quest for truth, never-ending process of cognition, the ideological core of which is creativity. The energy of creativity is a spiritual guide to the approval of cosmic ray the future of humanity, the historical beginning, and which serves the Russian-Eurasian, arctic civilization.

Literature

1. Soloviev V. S Russian idea // an essay in 2 volumes. V. 2. – M.: Pravda, 1989. – p. 220.
2. Soloviev V. S. Justification of the Good. Moral Philosophy / / Works in two volumes. v. 1. – M.: Misl, 1990-p.284.

⁹ Gegel G.V.F. The system of morality// political works. – M.: Nauka, 1978. – C. 285–286.

¹⁰ The New Testament. The Gospel of Matthew. 19:14.

3. Lukin, Y. F. Performance of ethnic and cultural landscape of the Arctic in global and regional dimensions / / Arctic and North: Electronic Journal of Science. - 2011. - № 1 (February). - p. 60. URL: http://narfu.ru/aan/archive/AaN_2011_1.pdf (03/20/2011).
4. Subetto A. I. The battle of Russia: 1991-2008. - St., Kostroma: KSU Nekrasov, 2009. - p. 196.
5. Dregalo A. A. Ulyanovsk V.I. Nordman: Prolegomena to the typology of social and cultural rights of the northern / / Arctic and North: Electronic Journal of Science. - 2011. - № 1 (February). - p. 16. URL: http://narfu.ru/aan/archive/AaN_2011_1.pdf (21.03.2011)
6. Berdyaev N. The Russian Idea. The fate of Russia. - M.: Svarog and K, 1997. - p. 244.
7. Terebihin N. M. Metaphysics of the North. - Archangel: Pomeranian University, 2004. - p. 42-43.
8. Putin V. V. Speech at the II International Arctic Forum "The Arctic - Territory of Dialogue." 09/22/2011. URL: <http://premier.gov.ru/visits/ru/16523/events/16536/> (09/24/2011).
9. Konyshchev V.N. Sergunin A.A. Arctic's geopolitical interests in the crosshairs / / World Economy and International Relations. - 2009. - № 9. - p. 43-48.
10. Bulgakov S. N. and selfless heroism / / Milestones: Collection of articles on the Russian intelligentsia. Reprint. ed. 1909 - Moscow: News 1990. - p. 47-48.47-48.

Reviewer – A. A. Dregalo
Doctor of Philosophy, professor.

Geopolitics

UDK 327(470+481)(091)(045)

Norwegian-Russian arctic Borderland: from the common districts to the Pomor zone



© **Nielsen** Jens Petter, Professor, Institute of History and Religious Studies, University of Tromsø (Norway). Contact Phone: +47 4 43 54. E-mail: jens.petter.nielsen@uit.no.



© **Zaikov** Konstantin, Ph.D., Institute of History and Religious Studies, University of Tromsø (Norway). Contact Phone: +47 968 235 89. E-mail: konstantin.zaikov@uit.no.

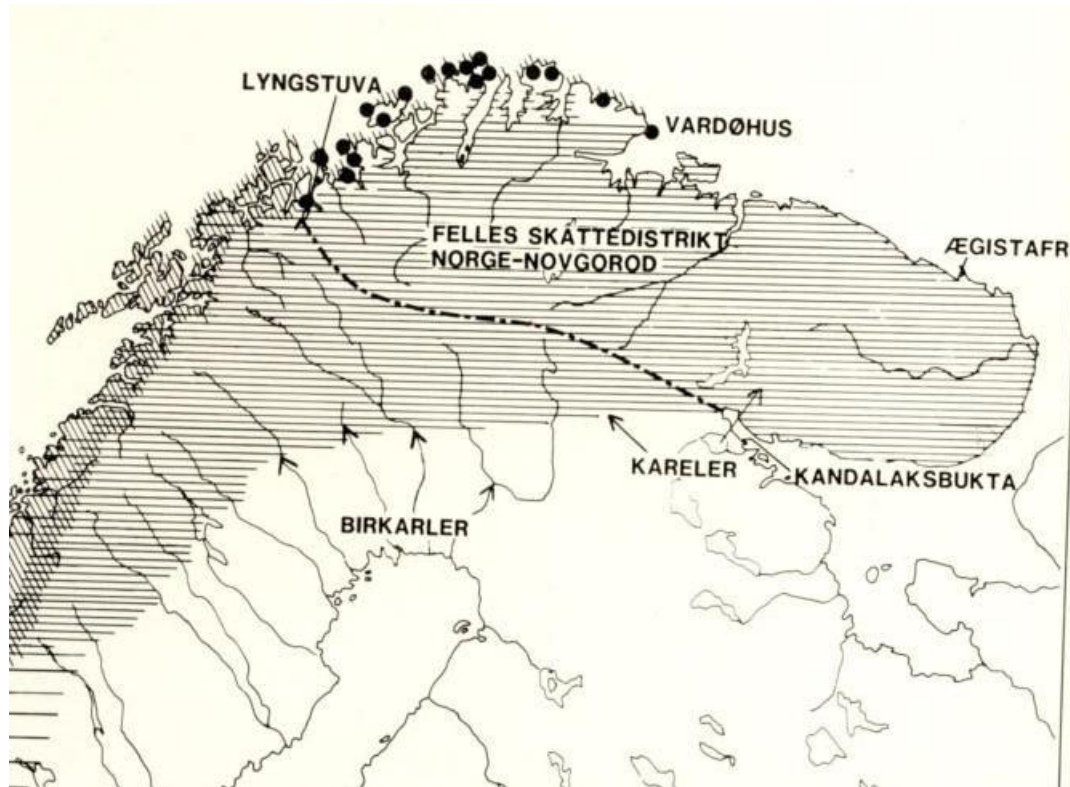
Abstract

In the present article the authors analyse the history of the Norwegian-Russian state border. Three main periods are pointed out. In the middle ages and Early Modern Period there existed a large frontier or common taxation district. Thence the common district gradually shrank until in 1826 a permanent territorial border was drawn. In the Soviet epoch the border became almost hermetically closed. To-day it is again opening up and politicians and researchers on both sides are discussing the possibility of establishing a joint Special Economic Zone (SEZ), a new and modern form of "common district".

Keywords: *the Russian-Norwegian border, the Pomor zone, the general districts, history, the Russian-Norwegian relations.*

The idea of creating special economic zones (SEZ), the so-called "zone of the Pomeranian" decay splits along the subarctic Barents Sea coast in the border area between Norway and Russia, is an initiative, recently adopted by the governments of both countries [1, 2009]. However, in the history of Russian-Norwegian border relations the idea of a common border area is not new. In the XVIII - early XIX centuries, the prototype of the modern Pomeranian zone, a single micro region was a space of "general district" (South Varanger), which included the territory of the modern location of the Norwegian-Russian border. The common space has developed in the Middle Ages, and it was a lot more territory, "district" XIX century. Geographically, they cover the whole of Finnmark ("Sami land") - the coastline, about the modern Tromsø in northern Norway to the White Sea in the east, as well as vast areas in the interior of North Fennoscandia and the Kola

Peninsula. Designated space corresponds to the territory which we now call North Caloto (Arctic), including, in the broadest sense, also the Kola Peninsula. Originally the area was homogeneous. Up until the XIII century Finnmark was a single cultural region with a low density of the indigenous Sami population. Between different Sami siytami and their territories, of course, there were boundaries, but this area was boundless in the sense that there existed no boundaries between the states [2, p. 31-95].



Pic. 1. On the map 1 depicted a little bit last periods. The black points mean точки Norwegian fishing settlements along the coast

Before analyzing the historical dynamics of Russian-Norwegian border region turn to categories such as the border, the state and society, relationship between the border and the state, the values of the boundaries for society as a whole.

The demarcation of borders and the maintenance was and probably still is the primary task of the modern state. Therefore, one of the fundamental characteristics of sovereignty is the ability and willingness of the state for the lines of the boundaries between their own territory and the territories of neighboring countries, the introduction of rules governing the flow of goods and people across the established boundaries, underscoring of national independence and exclusivity. At the same time it is clear that the precise delineation of territorial boundaries by not a universal feature of all societies that have existed at all times. The ability to maintain border demarcation and especially characteristic of modern society and is the culmination of a century of development, when the value of the boundaries changed with the changing social structure of society.

At first, in Europe there was no precise boundary lines, and was attended by only a border or transit zone between the kingdoms in the guise of forest and desert areas. Problems with boundaries were one of the main characteristics of the feudal era, which has never existed geographically clearly defined political subjects [3, 1992]. Gradually vague power relations in the

sphere of sovereignty of the subjects changed more precise definitions of property rights and areas of jurisdiction of the authority. This change was confirmed with the signing of the Peace of Westphalia in 1648, when it was formulated by the well-known doctrine of the state as an independent political entity. The great European powers agreed to respect the principle of territorial integrity. For the first time the state was made to the forefront as a guarantor of internal order, the owner and artist of the principle of territorial sovereignty. However, in early modern times the rulers have often lacked accurate information about their own country: the number of population, natural resources, and the amount of possessions. Even when the need was recognized in the state borders, the establishment of boundaries was a matter quite problematic [4, 1986].

Systematic mapping of the physical landscape, the study of natural resources, use of maps and statistics have been widely used in Europe only since the beginning of the XVIII century. Establish boundaries, indicating the territory of the state, are easier from a practical point of view. Nevertheless, the need for territorial control and clear physical boundaries even further increased in the XIX century. This was due to the spread of ideas of "popular sovereignty" and "nation-state." While the language and culture are increasingly becoming instruments of national integration, further increased the need and clearly defined boundaries. Now the boundary formed physical and political limits of national and cultural entities, keeping their integrity and protection from external infiltration [5, 1997].

The North Calot in the early Middle Ages was a boundless field, in the sense that there existed state borders. Later this area became a single stream of European development, and within a few centuries, this has led to the formation of nations, separated by lines of permanent borders, conducted by neighboring states. To some extent, the region deviated from the common European model of the evolution of boundaries. His main distinction was that the border line in the European North was conducted quite late relative to other European micro-regions. For example, permanent Norwegian-Swedish (or, rather, Norwegian and Swedish-Finnish) in the northern border of Calot was first established only in 1751, and the Norwegian-Russian (or Russian-Norwegian and Finnish), the boundary only in 1826, that is less than 200 years ago. How can we explain such a delay in the demarcation of boundaries in the far north of Europe?

There are several factors that have hampered the precise delimitation and demarcation lines of conduct. One of the important factors that probably was a huge extent of the North Caloto. Another factor was the weak density of population and its peripheral location relative to the center. Reigning actors took a long time for the control of the territory by building churches, colonization, create a system of ecclesiastical and secular government. And, perhaps, the state did not seek to hasten the establishment of boundaries, because they wished territorial expansion [2, p. 31-95].

Without a doubt, the Sami culture and the question of economic adaptation of the Sami were also very important. The traditional Sami culture of fishing based on extensive use of the land. Since the beginning of spring with the nomadic Sami wintering sites in the interior of the region and beyond to the summer parking along the coasts of seas and rivers to the most efficient use of natural resources in different seasons. In the autumn they may be in other areas habitat.

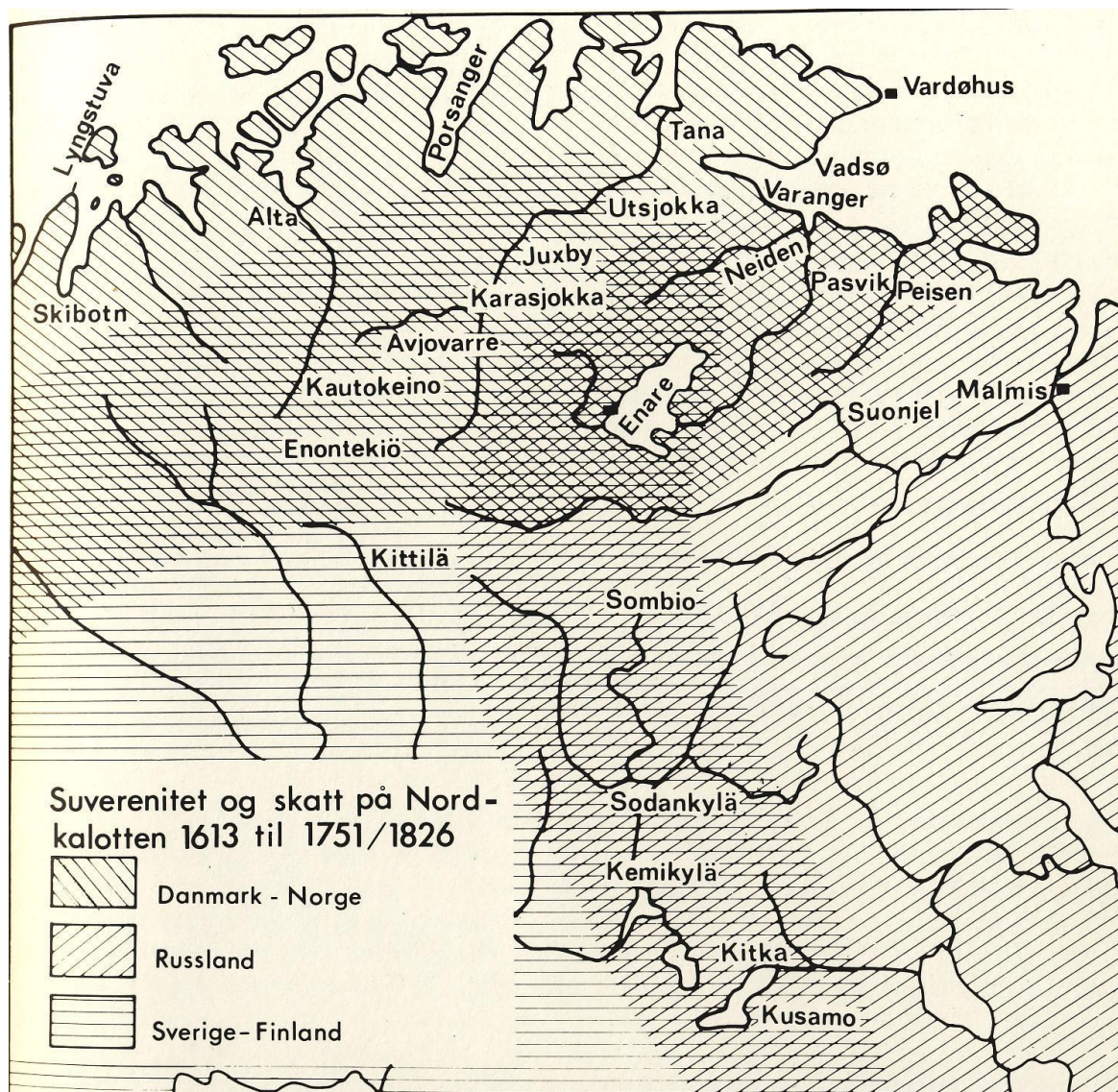
With the proliferation in the XVII century the importance of reindeer herding Sami nomadic economy have increased.

Perhaps it was a unique phenomenon in Northern Europe of the XIX century, but it is known that such a situation encountered in other parts of the world where the predominant population of the nomadic way of life. For example, a similar form of semi-nomadic economy, and met with Mongolian tribes who moved cyclically through the China-Mongolian border, which is in the middle of the XX century, wrote anthropologist Owen Lattimore. For the Mongolian nomads pasture taken separately did not represent a value, because the rapidly dwindled. On the contrary, the right to travel was much more important than the right to stay in one place [6, p. 534]. Also for the Sami decisive factor was the preservation of the rights of free movement. Carrying out the boundaries in the North Caloto could create barriers to traditional routes. Without a doubt, the annual cycle of the Saami migrations slowed the process of installing permanent borders.

Instead of defining the territorial borders of Norway and Russia for many centuries, were reconciled with the existence of huge public lands where the State's right to tax was not tied to a particular territory and to specific groups of Sami [2, p. 31-95]. This allowed us to collect taxes from the Sami, where they were in a certain season of the year without a loss to the state treasury. Binding of fiscal jurisdiction to ethnicity, rather than to a particular physical space, was the essence of the border treaty signed between the Norwegian king and grand prince of Novgorod in 1326¹.

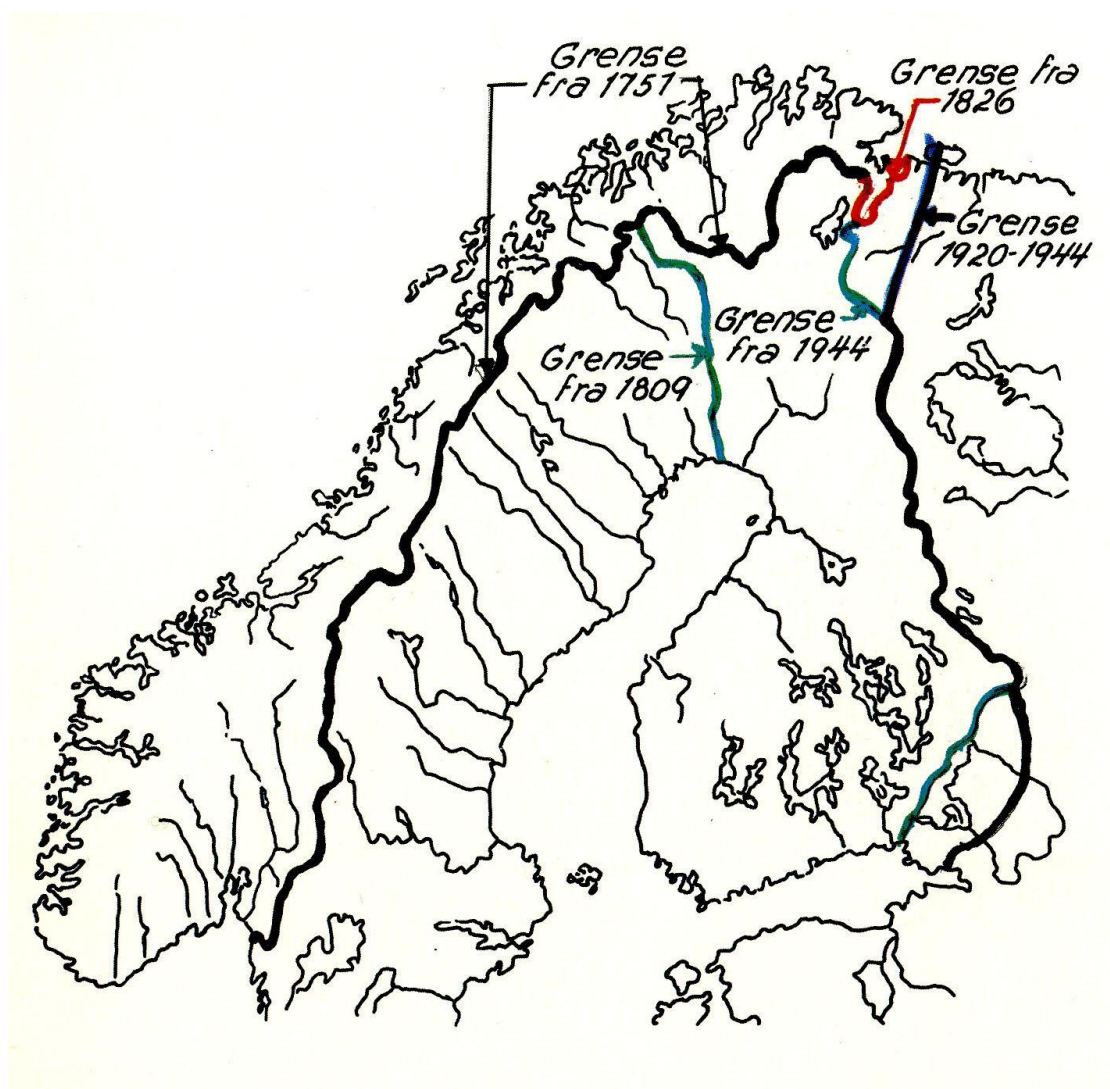
Since the beginning of migration of the more developed nations of southern Scandinavia, Finland and Russia shared the Norwegian-Russian possessions were gradually reduced. New settlers created their own economic space, integrating the new land that eventually became a continuation of the national territory. The rivalry between them has led to that the Sami have to charge more taxes. It was believed that the more able to collect the tax, the greater the rights to the land. Later, the king of Sweden presented the claim to a common territory, referring to the so-tax collection, they were called birkarlerami in the late Middle Ages. In the second half of the XVI century, the coastal Sami in northern Norway had to pay taxes to three different rulers - Danish-Norwegian king, king of Sweden and the Russian Czar [7, p. 40-61].

¹ Birkarleri- Finnish merchants engaged in trade with the Sami and collect these taxes on behalf of the Swedish king.



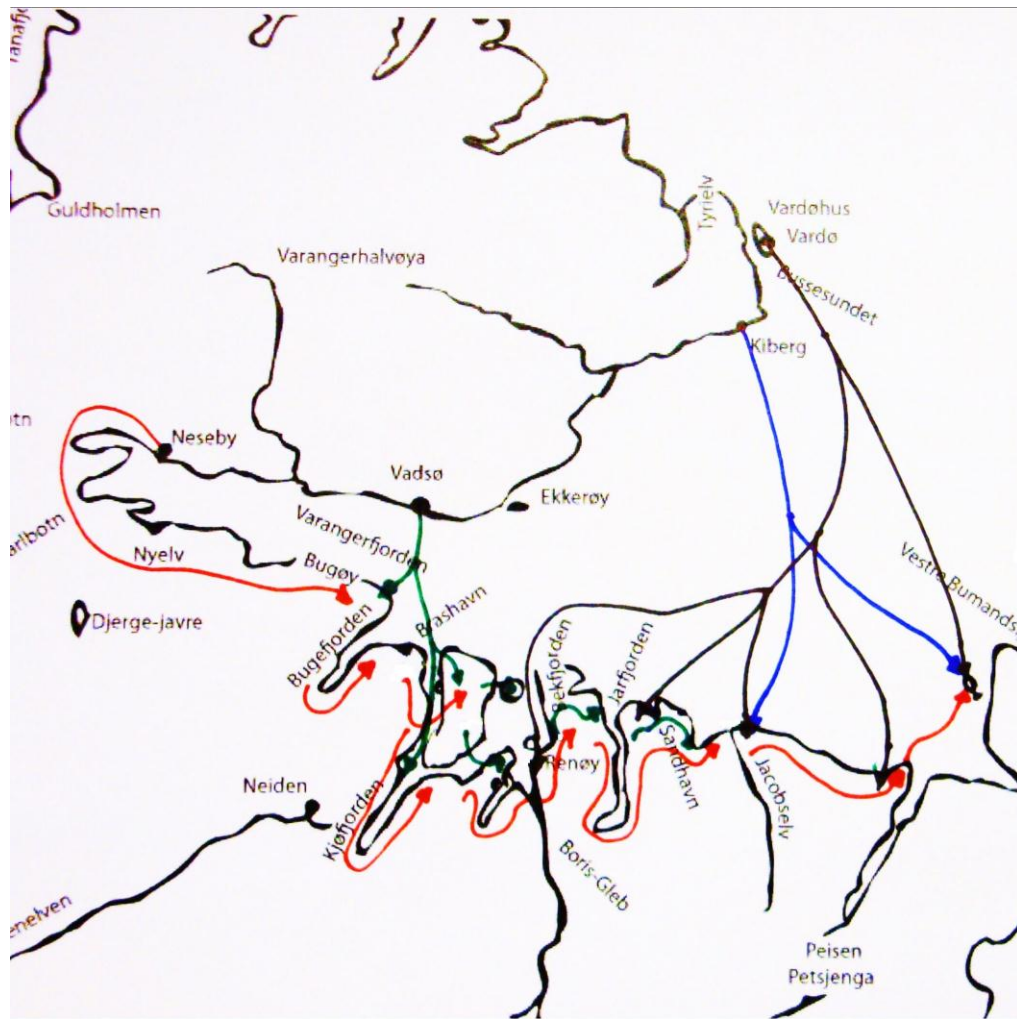
Pic. 2. The shaded area shown on the map of fiscal sovereignty and jurisdiction of Denmark - Norway, Russia and Sweden - Finland.

During the XVII and XVIII centuries the territory of "general district" was gradually reduced. The war years 1611-1613 (Kalmar War) between Denmark - Norway and Sweden was associated primarily with the question of how the state will monitor the coast of Finnmark. After losing the war, Sweden had to leave the coastal areas of Finnmark. Only in 1751 was set to a constant state border between Sweden and Norway on the plateau Finnmarksvidda. After the conquest of Russia in Finland in 1808-1809 and the subsequent peace treaty was signed in Hamina Sweden had to give up its right to collect taxes in the area of Enar.



Pic. 3. On the map marked dates of founding state borders

After that, from the initial public lands there was only a small strip of land in Varanger, which was a joint Norwegian-Russian possession.



Pic. 5. Red arrows indicate the direction of migration of Norwegian Sami, black - areas of economic activity Norwegian garrison Vardøhus. Green arrow indicated areas of economic activity of Norwegian settlers from Vadsø, blue - areas of economic activity of Norwegian settlers from Kiberg.

The extensive nature of the mountain herding Sami, a convention of political boundaries are gradually led to an increase in migration of Norwegian citizens in the Skolt the middle of the XVIII century. In the same period there was intensive development of the Norwegian settlers of the North Varanger (settlements Varde, Vadsø Kiberg) of natural resources "general constituencies" [10, p. 39-46].

The absence of the institute boundaries, convenient geographical location of graveyards Skolt, high tolerance to the presence of Russian Sami and Norwegian subjects provided an opportunity to merchants and Pomorie Norwegian, Russian and Norwegian Sami trade freely and conduct joint business activities without hindrance from the authorities of both nations. Already in the XVIII century the territory of South Varanger was a transit zone, where every year since the beginning of the summer came Russian and Norwegian industrialists, merchants barter for the product. Depended on supplies from the province of Finnmark and the Arkhangelsk region of grain, cloth, tools, metal products and luxury goods Skolt willingly played the role of intermediary in trade between the Norwegian merchants and Pomorie. Living between two asymmetric centers on the scale of forces, different socio-cultural communities (Protestant, Orthodox and Western Europe, Eurasia) Skolt tried to integrate in both directions of Russian-Norwegian frontier. While

Norway and Russia is gradually came to the idea of setting limits to the Institute of XVIII - early XIX centuries, the Sami constructed image of a "general district" as a unified socio-cultural community, multicultural micro region.

Skolts were dvoedantsi, but they did not identify himself with the citizens of Norway and Russia. Aware of their borderline position, they tried to balance between the two powers. Depending on the Norwegian and Russian threats to both sides of the Sami used in solving economic problems, while retaining their social and cultural integrity and identity of designing a special border. Playing the role of contracting in the economic integration of the Arkhangelsk region and the province of Finnmark, Lapps were a factor in the design of the general attraction of the area where experienced economic and political interests of Russia and Norway.

Unclear legal status has been beneficial to the population of neighboring regional entities of the two countries, but the fact of "general district" caused great concern among the authorities of Denmark - Norway, because it was thought that the kingdom could easily be drawn into the conflict with great power - the Russian Empire. The most important task was to conclude a treaty on the demarcation line, which once and for all would determine which ended in Norway and Russia began. Good neighbors in need and in good fences. Russia, by contrast, did not hurry with the division and for various reasons, preferred to take a wait and see. We know that the Danish-Norwegian authorities have regularly turned to the Russian government on this issue, but it did not lead to the desired result [11]. In principle, the Russian government did not prevent solution of the problem, but has always had an excuse to postpone it. Why Russia has been so cautious?

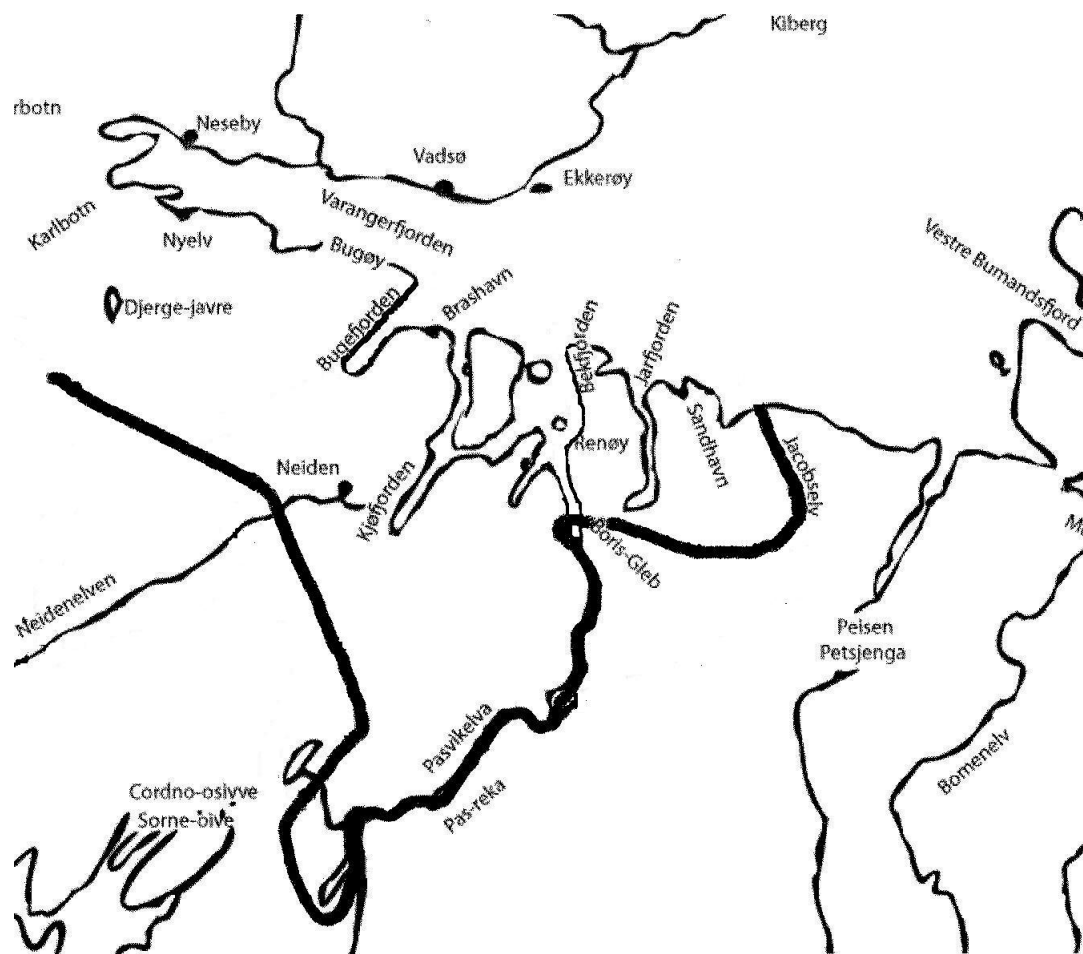
Probably some of this can be explained by asymmetric neighborhood relations, ie relations between small and great powers. This required great attention to the neighborhood and wants a clear separation of the small state, then as a great power did not show similar motives. Another approach is explained by the fact that the Russian Empire (autocracy) lagged behind the political development in Western Europe. Like other empires of the past, Russia is not particularly interested in the establishment of clear boundaries to the surrounding countries. Lack of synchrony in the time development between East and West may have been particularly noticeable in the far north, in the only place where Russia is directly in contact with Western Europe without a zone located between the Eastern and Central European nations. Far North was the area where two different systems of government, as it were fused together, a place where it was about two different concepts of the border. On the one hand, it is developing a small nation state with a strong need to control its own territory, but on the other - a huge, multinational, dynastic state, more tolerant to the transparent borders.

The uncertainty in the territorial size of Tsarist Russia is associated with a relative sense of distance, borders and places in the Russian culture. This is not necessarily perceived as a weakness, or was it a weakness that could result in a symbolic force. Russian poets, who sang in the XVIII century, the Empress Catherine II, mentioned the huge size of the country as its most important feature, a symbol of power and grandeur. Simply put, Russia was so powerful and extended over long distances, such that its boundaries could not be clearly identified [12, Medvedev S. A., Tolz Vera, Berdyayev N.]. The Russian force of gravity was in itself so great that there was no need to set clear boundaries in all parts of the empire, or spend money to strengthen the sov-

ereignty of the state in the peripheral regions. Unlike Norway, Russia could continue to exist with vague and uncertain boundaries in the North West.

Basis for the resolution of the Norwegian-Russian border issue arose only at the end of the Napoleonic wars, when there was a rapprochement between Russia and Sweden after a period of cool relations caused by the Russian conquest of Finland. In 1812 Tsar Alexander I signed a contract with the Swedish heir Karl Johan. This meant that Sweden has not had any hope of return to Finland (so, at least, the treaty was perceived in Russia). In return, Russia promised to support Sweden in its desire to liberate Norway from Denmark and Norway in the subsequent union with Sweden. "Agreement 1812" and further the brotherhood of arms in the war against Napoleon was the beginning of a long period of official Russian-Swedish friendship. Russian tsar's favor with respect to Sweden - Norway has led to the ratification of border treaty in 1826, which was quite profitable for Norway. It seems that the negotiations the king did not take into account the skepticism of the new Finnish and Russian Lapps, as well as the public Archangel of the North.

Norway and Russia were willing to consider the legal enshrinement of "general constituencies" status of a special zone of economic interests of the indigenous population only after the finalization of the boundaries of internal sovereignty. Initially, the two powers had to destroy the old buffer zone in order to reconstruct it again, but in the framework of existing international law, public interest and the internal rules. Legal implementation of a common economic area with public authorities responsible for control of the border population and economic activity was carried out only after the ratification of the border in the 1826 convention. According to the articles of the Convention were adopted special rules to guarantee the special rights and privileges for cross-border indigenous people to fish in the neighboring state [13, p. 154-155].



Pic. 6. Black line indicated the state border between the United Kingdom, Norway and Sweden to the Russian Empire, established by the Convention for the Border 1826

Although the scope of rights granted under the Sami Article 7 Border Convention, 1834 has been reduced and had narrowed the geographical areas of implementation, the existence of a single micro region continued until 1917. With the onset of civil war in Russia in the Far North have been significant geopolitical changes. Finland gained its independence in 1920 received from Soviet Russia Pechenga. In the next twenty years in the Norwegian-Russian border was the Norwegian and Finnish. September 19, 1944 on the result of the Moscow Armistice Pechenga area was returned to the Soviet Union. There has been a revival of the Norwegian-Russian border. Her line of repeat architecture of the border line established by the Convention in 1826, but the ideological differences between the new state actors (the Kingdom of Norway and the Soviet Union) led to a reduction of border institutions in charge of the execution of an additional protocol in 1834 [14, p. 80-104]. The new regime of tight boundaries existed for over 40 years. This is clearly reflected ideologically picture of the world at that time and the cold war.

But times have changed, and after the Cold War, the development has gone in the opposite direction. Today, many believe that the nation-state weakens or changes its character and that this could lead to territorial systems with fuzzy boundaries. If so, then it will affect Russia's borders? Part of the politicians and scientists believe that it would be easier to achieve this and in

general to overcome the division between East and West in the new trans-regional co-operation in the northern areas of the Barents Euro-Arctic Region, established in 1993 as the northern outskirts of Europe, at least influenced by traditional debate on about government, history and identity [15, 2003]. *The farther to the north, the closer becomes the East and West.*

Unfortunately, these hopes have not yet been fully realized, and the Russian government during the last presidential term of Vladimir Putin (2000-2008 gg.) Was transferred to a certain stagnation in the relationship. As before, it was necessary to cooperate with the West, but at the same time and do not be afraid of confrontation. This was seen in the context of the desire to recreate Russia as a great power after the systemic crisis of the 1990s, which was seen by many Russians as a national humiliation. While the EU was trying to move away from the concept of nation state and to establish procedures in forming its policy based on the moving boundaries, the new Russia has sought to assert its full sovereignty. Perhaps the situation has changed from two centuries earlier. In the XVIII - XIX centuries Russia safely treated her frontirnym zones, and even welcomed the regime of open borders, Norway, on the contrary sought to clear and tight boundaries. Today, neighbors, bordering Russia (Finland and Norway), seems to aspire to a more transparent borders, while Russia continues to rely on the Westphalian doctrine.

But the picture is mixed. The period of presidency of Dmitry Medvedev has demonstrated greater openness and flexibility of Russia's approaches to resolving territorial issues. For example, in Norway has found broad support for reaching an agreement with Russia in April 2010 on the delimitation of the territories of the two countries in the Barents Sea, as negotiations were held for nearly forty years. Both countries have expressed a desire to move away from its principles. Norway defended the principle of dividing the equivalent marine areas between States and Russia advocated the principle of sectors. "General," the marine territory considered an area located between the boundaries formed by the application of these two quite different principles of maritime delimitation. Ratified by the current letter of intent comes from the fact that this "common area" shall be equivalent to the split between the parties².

The agreement on the delimitation can be summarized as "an unexpected gift to Russian Tsar," on a par with the contract in 1826. But, apparently, Russia hopes to get something in return concessions to which they are cooperating with Norway in the forthcoming issue of oil and gas fields in the Barents Sea. Norwegian authorities have been extremely interested in establishing the exact maritime border with Russia and Russia rejected the proposed initiative on the establishment of a general control over the disputed area of the Barents Sea. Based on the above is interesting to note that the Norwegian government at the same time supports the use of cross-border actions on the ground that, in fact, may lead to the restoration of it a kind of "general constituencies."

The Norwegian government has invited Russia to create a Norwegian-Russian industrial and economic zone of cooperation in the border areas of both countries, the so-called "Pomeranian zone" whose activities will be especially associated with the advancing age of the oil in the Barents Sea. Russia reacted positively to this, but so far this idea has not gained general acceptance [1, 2009]. But perhaps, as a step in advance in this direction can be taken with effect from De-

² URL: <http://www.regjeringen.no/nb/dep/ud/kampanjer/delelinje.html?id=614002>.

cember 1, 2008 significant easing of visa rules in the Norwegian-Russian border, as well as the abolition of restrictions on entry into the border town of Nikel and Polar. At present, negotiations on visa-free border passage for residents of Southern Varanger municipality (Norway) and Pechenga (Russia). This is an area which very closely matches the former territory of siyt: Neiden, Pasvik and Pechenga, i.e., the "general constituencies." Residents of this area in future will be able to cross the border, showing the identity of the border area residents, i.e., they can move freely within the territory, which until 1826 was a common territory. And if after this planned follow their own customs, economic and transit agreements, which, in accordance with the plan should be included in the Pomeranian area, then you can really talk about the restoration of the former common Norwegian-Russian possessions, but in the modern version.

Literature:

1. Urban Wråkber. Pomor Zone. A Cross-Border Initiative to Further Regional Development in Northern Norway and northwest Russia, Presentation at the IV Northern Social and Environmental Congress, 21–22 April 2009, Moscow.
2. Hansen L. I. Interaction between Northern European Sub-Arctic Societies during the Middle Ages. Indigenous Peoples, Peasants and State Builders. In Rindal M. (ed.) Two Studies on the Middle Ages. KULTs Skriftserie No. 66. 1996. P. 31–95.
3. Ruggie J. G. Territoriality and Beyond: Problematizing Modernity in International Relations. In: International Organization, Vol. 47, No. 1. 1992.
4. Kratochwil F. Of Systems, Boundaries, and Territories: An Inquiry into the Formation of the State System. In: World Politics, Vol. 39, No. 1. 1986.
5. Häkli J. Borders in the political geography of knowledge. In: Lars-Folke Landgren & Maunu Häyrynen (eds.), The Dividing line: borders and national peripheries. Helsinki, 1997.
6. Lattimore O. Studies in Frontier History. Collected Papers 1928–1958. London, 1962. P. 534.
7. Hansen L. I. I Russia – Norway. Physical and Symbolic Borders / Ed.: T. N. Jackson, J. P. Nielsen. Moscow, 2005. P. 40–61.
8. Nielsen J. P. Some Reflections on the Norwegian-Russian Border and the Evolution of State Borders in General // Russia – Norway. Physical and Symbolic Borders / Ed.: T. N. Jackson, J. P. Nielsen. Moscow, 2005. P. 8.
9. Johnsen O. A. Finmarkens politiske historie, aktmæssing fremstillet // Skrifter utgitt av Det norske videnskapsakademi i Oslo, II, Hist. fil. klasse. Kristiania, 1922. S. 231–236; Nikolskii V.N., On The Russian - Norwegian borders. Arkhangelsk 1914. p. 4.
10. Wikan S. Grensebygda Neiden. Møte mellom folkegrupper og kampen om ressursene. Svanvik, 1995. S. 39–46.
11. Johnsen Loc. Cit. (Note 5), 218–219, the Archive of the Foreign Policy of the Russian Empire (AVPRI) F. 53/3. D. 661, D. 662.
12. Medvedev S. A General Theory of Russian Space: A Gay Science and a Rigorous Science, in J. Smith (ed.) Beyond the Limits: The Concept of Space in Russian History and Culture.

- Suomen Historiallinen Seura, Helsinki. P. 18; Tolz Vera. Russia. Inventing the Nation Series. London, 2001. P. 159; Berdyaev N. The Origin of Russian Communism. London, 1937.
13. Chulkov N.K. The history of bordering Russia with Norwegian. M., 1901. p. 154–155.
14. Andresen A. States Demarcated-People Divided: the Skolts and the 1826 Border Treaty // Russia-Norway. Physical and Symbolic Borders / Ed.: T. N. Jackson, J. P. Nielsen. Moscow, 2005. PP. 80–104.
15. Joenniemi Pertti & Sergounin Alexander. Russia and the EU's Northern Dimension. Encounter or Clash of Civilisation? Nizhny Novgorod, 2003.

Reviewer – U. F. Lukin,
Doctor of History, Professor.

UDK [(332.02+332.1)(470.1/.2)+620.91](985)(045)

Energy of the North to the Synergetic of Russia



© **Shubin** Sergei, Doctor of Historical Sciences, Professor of the department of the International Relations and Regional Studies NArFU named after M. V. Lomonosov. E-mail: serg1946@atknnet.ru.

Abstract

The history of the administrative-territorial division of the European North of Russia suggests that only a consolidated region, which is united by common interests province, territory, economic region, it can play a role of a springboard development of Arctic areas. A new model of territorial organization, able to convert energy of the North to synergetic of Russia, re-

flects the author of the article.

Keywords: *synergetic, Russia, energy, region, enlargement of the regions, the northern economic region, the Northern Federal District, Dvina-Pechora region.*

The European North has always been and remains an important outpost of Russia - it is an axiom. However, the performance of this function from the time of the European North of Russia joining in, the better was more consolidated. At this draws attention to a well-known historian of Murmansk P.V. Fedorov, "Large areas along the coast of northern rivers, - he writes - the southern and western coast of the White Sea, entering into the possession of Russia, became a sort of springboard for the Russian state for subsequent spurt in Arctic and the Arctic "[1, p. 53-56].1,

Peter I captured this very well urge Northerners, three having been in Arkhangelsk and formed in 1708 among the eight Russian provinces Arkhangelogorodskaya (from Arkhangelsk in 1796), with minor changes lasted more than two centuries before the revolutionary events of the early XX century. Arkhangelsk province so harmoniously was inserted into the space of the European North that its boundaries formed a special sub region of the Russian Empire – Pomorye.



Pic 1. The map -scheme-of Archangel province at the end of XIX – at the beginning XX centuries

During the revolutionary elements of the province was disbanded. In 1920 he was created Korelsky labor commune, part of which was included Kem County Arkhangelsk province, a year later, Alexander County Arkhangelsk province was transformed into an independent province of Murmansk. In August, 1921 in the territory of Ust-Sysolskiy, 21 municipality districts Yarenskogo Northern Dvina Province, 19 counties Pechora district of the Arkhangelsk province autonomous region was established and the name was Komi Zyrians.



Pic. 2. The map -scheme-of Northern region (1929–1936.)

The New Economic Policy introduced dramatic changes in the nature of the regional government. As a result, in the late 1920s and 30s the European territory of the North was again united under the name of the Northern Territory in the Arkhangelsk, Vologda, Severodvinsk provinces, autonomous region of Komi and the Nenets Autonomous District.

It was during these years was made a major new breakthrough in the northern high-latitude Arctic, the decisive steps taken by the Northern Sea Route. During the Great Patriotic War, the region once again functioned essentially as a whole. Post-war regional fragmentation of the European North tried to overcome in the Khrushchev years through the creation of economic councils. совнархозов.

In November 1982 the Council of Ministers of the USSR was formed a new district - the Northern economic region in the Arkhangelsk, Vologda and Murmansk regions, Karelia, Komi ASSR and that the same actions had been excluded from the North-West economic region.



Pic 3. The map –scheme of the Northern economic region

A new area has been allocated from the North-West district based on the following reasoning: "... in connection with the specification of the specialization, the emergence of new centers of economic gravity, and links the formation of new territorial-wide economic entities - the Timan-Pechora RIC, is the creation of many industrial centers and nodes"¹. It is interesting to note that the decision was made after coming to power of Yuri Andropov, the man is deeply understands the laws of domestic and international development.

This historical review, in our view, indicates that at present, a new stage of the European North of the Arctic in order to achieve greater agility should be consolidated much more thoroughly than is the case in the current situation.

It's not a secret that the northern component is substantially lost their weight in the country after the abolition of the State Committee for Northern Affairs, and as it turns out now, at a time when other Arctic countries is just really took care of their northern development strategies. The inclusion of the Northern economic region (composed of the Arkhangelsk, Vologda and Murmansk regions, Karelia, Komi and Nenets Autonomous District) in the North-West Federal District disputed and contested by many experts².

¹ Refinement of economic regionalization USSR Council of Ministers on November 19, 1982, № 1005 / / Collection of Resolutions of the Government of the Union of Soviet Socialist Republics. In 1982. (1), № 31. st 158.

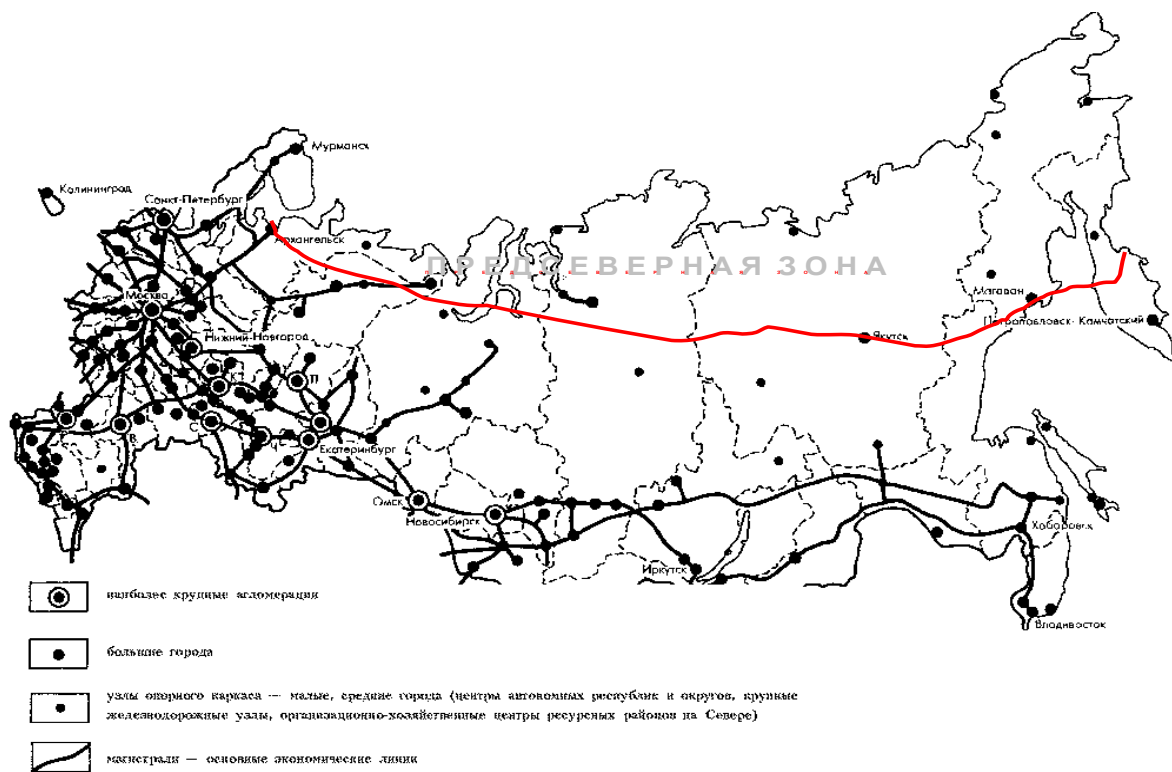
² Turov, R., Hochberg M.Y., Korolev, S., Islyayev RI, Tkachev AV, Prusak, MA Karakchiev AA Fedorov, PV, etc.



Fig. 4. The map – scheme of the North - Western Federal region

As a result of this decision (lack of thoughts have a proven history of the 1920s and 1980s) was largely lost interest in the European North as an important vector of internal and external policy of Russia. According to many analysts, the need for greater attention to regional policy in the European North explains gaining importance in the idea of forming a so-called before Northern or sub polar surface area as a kind of springboard, springboard for the development of the Arctic [2, p. 22].

The most comfortable fit, and the vast region of before northern zone is the European North of Russia. This, in particular, drew attention to a well-known contemporary Russian geopolitics A.G. Dugin, "Arkhangelsk and the Arkhangelsk region are in the strategic position that is most consistent with the principle of strategic integration of the North in the interests of the center. Axis of Moscow - Arkhangelsk, the only full range of internal "geopolitical ray" is not just a military and strategic construction. It is necessary to maximize the integration of diverse and the South up to Moscow. Migration of the Russian population ... to the North, its active exploration, development and transformation should begin with this Archangel. This is the largest port in the most advantageous position in comparison with all other settlements of the North, so it is most logical to select the Archangel as the "capital of the Arctic pact" [3, p. 317].

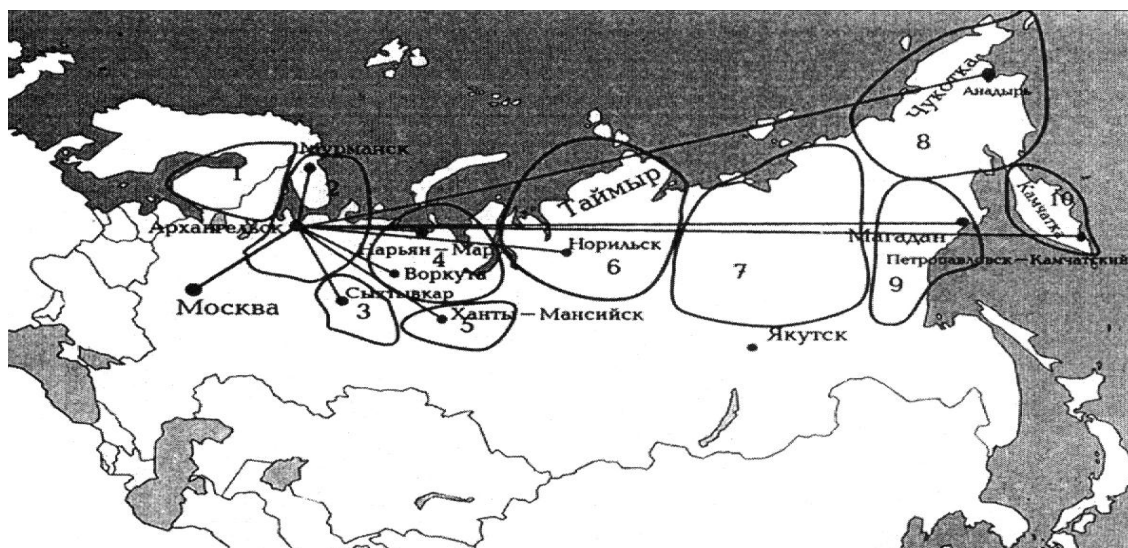


Pic. 5. The map – scheme of the reference frame with the liberation of Russia before Northern zone



Pic.6 The map – scheme of the main of the major axes, which are connecting «the arctic trapezia » with main-land of Russia

The development of the axis of Moscow - Arkhangelsk should be comprehensive and prioritized. The quality and the dynamics of this single (out of the North) meridian of integration will depend on the consistency and efficiency of the entire Arctic strategy.



Pic. 6. A schematic map reflects the role of Archangel in providing geo-political interests [3, p. 322].

It is no accident, that one of the mechanisms of formation and realization of state policy in the Russian Federation in the Arctic up to 2020 provided the consolidation strategies of socio-economic development of northern regions of the Russian Federation, the development of territorial planning schemes and programs of socio-economic development. The question is how to provide the necessary consolidation of the European North?

In our view, we can consider two possibilities: either the formation of the Northern Federal District within the boundaries of the Northern economic region, by area, by the way, coinciding with the U.S. Alaska, or enlarged in the region under the code name Dvina-Pechora region, which could unite the Arkhangelsk region, Komi Republic and Nenets Autonomous District.



Pic. 7. A schematic map of Dvina-Pechora region, bringing together the Arkhangelsk region, Komi Republic and Nenets Autonomous District

Both options do not seem utopian and depend on the choice of strategy for regional development of the Russian Federation and, of course, from the political will and the central government interest - is the regional.

The Complex formation in support of the Northern economic region (Arkhangelsk, Murmansk and Vologda regions, Karelia, Komi and Nenets Autonomous District), Northern Federal District was the very real challenge due to the fact that in the south of the decree of Russian President Dmitry Medvedev on January 19 2010 was formed a new, eighth - North Caucasus federal district.

Thus, the ten-year taboo on the so-called "council of seven" was overcome. In the corridors of power of the federal re-actualized the problem of improving the spatial structure of Russia, including in the North West. If the central government intends to continue to use the regional government of the country the federal district, the need for the provision of the North-West Federal District of the North is not in doubt.

Russia, as you know, after the collapse of the Soviet Union became more northern country, made a lot of efforts to create a northern strategy, and institute a springboard for the development and implementation of the strategy of the Arctic there. PV Fedorov, not without reason, calls attention to the contradiction "between ... attempts to justify the status of the Russian Arctic and the policy of submission the territory of the Russian North the interests of the Baltic Sea region" [4, p. 3]. At this time drawn the attention of the ex-governor of the Novgorod Region Mikhail Prusak. Is St. Petersburg, the most western city of mainland Russia, will be engaged in the Russian North? Not at all. He, like all the obvious problems of its own - the Baltic. It would be nice if he decided they were not at the expense of the northern territories. And the fact that this is the case, and not otherwise, we northerners are well aware of the example and the port of Arkhangelsk and Severodvinsk. Incidentally, the construction of the railway BELKOMUR (Arkhangelsk - Syktyvkar - Perm) was terminated immediately after arrival in the capital of St. Petersburg team, headed by Vladimir Putin. Therefore, the Northern Federal District - The best model is an effective institution for the development and implementation strategies of northern Russia.

One of the most authoritative experts in the field of Russia, Professor regionologii Turovsky, for example, explicitly says: "Expediency is the division of the North-Western District in accordance with an exemplary ex-economic regions, ie, actually the North-West District, with its center in St. Petersburg (including Kaliningrad region) and the Northern district of Arkhangelsk center "[5, p. 245]. This approach, in his opinion, would preserve the possibility of state regulation of the northern regions of the country.

The second option - option of consolidation - must be borne in mind first of all, because the unknown prospect of federal districts themselves. It's no secret that the creation of seven federal districts in 2000 was seen very clearly, to analyze, much less to question. The decision of the President of the Russian Federation D. Medvedev on the establishment of the eighth - the North Caucasus - District, perceived by many as a "very wise decision" for the duration of his presidency, gives cause for serious reflection on the structure and content of Territorial Administration. First and foremost, the problem is updated on the prospects of the federal districts.

The fact that neither the Constitution nor federal law, these powers not spelled out. Therefore, some districts offer regionovedy eliminated, given that the candidatures for the post of regional leaders now offered from the center and can be released by the president. The process of enlargement of the regions can also go to other than authorized representatives of the president.

Therefore, they are quite expensive institution, according to many experts, has lost meaning. Not by chance on a new president drew attention to the leader of the party *"Right Cause"*.

Others offer to leave the task of coordinating the federal districts of the socio-economic activities at the district level. But for this it is necessary to make appropriate laws that would have given additional authority to the district in the area of budgeting, taxation, etc. In this case, the problem of optimality boundaries of federal constituencies. Their borders, according to the doctor of economic sciences, professor of St. Petersburg R.I. Islyayeva do not correspond to the territorial division of labor in the country, "subjective" some of the districts are too cumbersome and does not meet the requirements of the theory of governance ... The district boundary adjustment - a near future [6, p. 15].

The reform of territorial administration in the south may have continued mirror in the North. Many believe that districts should be in number, at least not less than the economic areas. In the formation of the eighth - the North Caucasus federal district just had to take into account these factors. A. It is no accident that Khloponin functions in addition to the presidential envoy was promoted to Deputy Prime Minister and the new district boundaries almost coincide with the boundaries of the economic area.

But the envoys of deputy prime ministers do not work, so the third, experts believe that the federal district should be preserved as bodies from purely administrative functions, conducting independent oversight of the regional authorities. In this case, the border can be left unchanged.

The process of enlargement of the regions - a phenomenon in the transition from administrative to economic methods of territorial management objective, but it should be approached very carefully, taking into account the scientific, practical experience, both international and domestic.

There is a pattern: when the country is controlled by the administrative-command methods, the process of fragmentation of the regions, for guidance in the field must be carried out quickly and only in accordance with directives from above. Local officials, however, as the center, are interested in reducing the area of responsibility, so increasing the number of officials at all levels is growing and the number of administrative-territorial units. In essence, dividing the country into small administrative units - a legacy of dictatorships: it's more convenient to carry out military and police surveillance over the country. For example, Spain under Franco, too, was divided into small administrative units.

Conversely, when the fore the economic management methods, shows a different pattern: the consolidation of administrative and territorial entities that are socially and economically tend to be, at least, amateur, up - self-sufficient. Center in this case becomes a kind of manager who performs the tasks that are not on the shoulder within the regions.

So it was during the years of the new economic policy during the Khrushchev consolidated economic councils, finally, the current economic areas mainly formed during the Kosygin reforms. The process of regional enlargement is completed, or in many countries: France, Italy ... In Poland, for example, the preparation of such a reform took seven years (from 1990 to 1997.). Today,

instead of 48 provinces there are only 16. And in recent years - major successes in the economy, which brought her among the most dynamic economies in Europe³.

Another thing is that our authoritarian, not afraid of the competent authority and continues to fear the amateur and the more self-sufficient regions, and therefore are always folded territorial reforms without bringing them to complete and return the country again and again to the authoritarian vertical with lots of small administrative units.

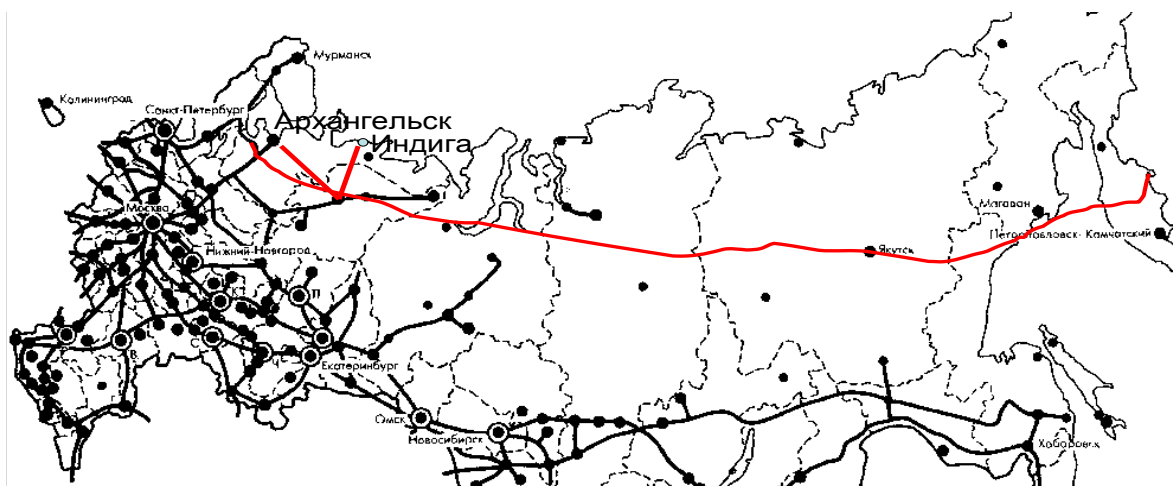
If we take into account the irreversibility of this transition to a market economy, the need for enlarging the regions in Russia, too, should recognize the inevitable. Only a strong regional elite of large self-contained regions can reasonably build relationships of government, business and the people entrusted to the territory and the center of force to reckon with it, which is important in the process of democratization, regionalization and decentralization of power. No coincidence that one of the most respected regional leaders of the Russian Federation, Kemerovo Governor A. Tuleyev - produced a supporter of regional enlargement. "The less of you, the bosses - he argues - the freer economic life" [7, 2004]. The same write-known scientists Senchagov V., V. Daldalko, A. Bagin applied to the whole of Russia: "The union of regions is necessary and must be carried out within the framework of optimizing the structure of government as a whole, taking into account the solution of economic problems. In the case of combining the conditions for the normal functioning of the territory, the optimal number of regional officials. As a result, should form a more transparent, efficient and inexpensive system of government "[8, p. 10].

Absolutely right, in our opinion, the AG Dugin, when he writes: "This would give the North from the center of considerable independence, freedom from control in detail provisions for regional development of flexible and rapid response of the investment. At all these levels supports the need for integration of the North. This is important in the spiritual, ethnic, cultural, military, strategic, industrial, social, and financial terms. The result of this multi-level integration (as long as existing only potentially) would create an entirely new geopolitical reality in which a significant increase in autonomy and regional autonomy would not weaken the strategic communication with the center. Development of the North would be through the future, an entirely new bridgehead (based on geo-politics) understanding of the space in the long run. Severnaya Zemlya was to develop a combination of tradition and development, loyalty to the roots and technological modernization "[9, p. 312-313].

Of course, this process is not easy, it requires much more attention, a reasonable political, intellectual, legislative, administrative, financial, economic, informational efforts by, above all, the federal government. The easiest ways to let it take its course of consolidation areas, as happened in the zero years of the XXI century, and then seek an explanation for the lack of efficiency in some objective factors.

To create a common space in the North European Russia should seek, above all, common interests and incentives. One of the unifying ideas of the European regions of the north, among others, would be to develop a common position in the construction of transport corridors in the proof of Belkomur and BarentsKomUr.

³ The administrative-territorial division of Russia. URL: <http://yandex.ru/yandsearch?text> (29.05.2011).



Pic. 8. The map-cxema of the reference frame with the liberation of Russia before Northern zones and corridors: BELKOMUR and BARENTSKOMUR

The fact that, according to economists, the term available in the North and even in North-West ports will not be able to process the growing volumes of cargo. And Indiga port, for example, the most easterly ice and deep-water port, incommensurate opinions, will be needed eventually. Therefore it is absolutely correct leadership of the NAO put the issue on the agenda. But it is more reasonable to solve it together.

The second reason is the need for consolidation of the gradual transition of the Russian federalism of nation-building to the principle of territorial and state. In the current environment of public authorities, ethnic formations, and especially business-oriented structures are not so much on the preservation of ethnic groups, how to obtain the greatest possible profits from the exploitation of natural resources. The question arises as to whether the interests of a native population of the Russian North preserve the independence of the national-territorial autonomous entities? Out of this situation, in our view, lies in the way of state and decentralization of ethnicity.

And to begin this process is not logical from the South and the North, as in the North a different mentality. "It is home to quiet, far-sighted people who can understand your opponent, step over in favor of a private common. It is inherent in the people of northern Russia, Alaska, American, European, and Scandinavian. Pomors ... always lived fully. This is their main strength: the strength of character and strength of Russia. This then have psevido liberalov in troubled times emerged the idea that all people should be evicted from the north. Such wise men must not be allowed to manage even the tricycle!" - Writes Academician E.P. Velikhov [10, p. 17]. The harsh climate and closely pressed people to each other. Despite the harsh and cold climate of nature, in the North of human relations climate is warmer than the South and vice versa [11, p. 109].

Another reason for consolidation lies in the need for alignment of regional development. The world is a catastrophic situation where per capita GDP of a region of the country's GDP than the other 5 times. We have the figure as high as 25 times. "This is a clear sign of economic collapse," - said the deputy director of the Institute of Applied Mathematics George Malinetskii. Here's how, with bitterness, writes about this in the homogeneous-Artist of the USSR Oleg Basi-lashvili: "The huge expanse known as Russia, there are several cities who live by the sale of gas and oil. Everything else is almost extinct," [12, 2008].

This thesis can be attributed directly to a large part of the northern territories, which are a result of the transition to a market economy were hit the hardest, because their development was largely due to budgetary subsidies. The hopes of reformers in a purely market-based economy are clearly not justified. Moreover, our oligarchs, I think, Goskomsever, Ministry of the Environment prevented "master in his own" northern territories, and therefore were eliminated.

Finland, Sweden, Norway, Canada, the United States do not spare funds for the development of northern territories, recognizing that the future funding. Russia operates the North; it seems, not for, but at the expense of the future. And finally, we should not forget that most of the North - the border and the border areas [13].

«Overhaul of regional governance - one of the conditions for the revival of Russia, - emphasized the country's famous economist and geographer G.M. Lappo. - Rationalization of the territorial unit - an important reserve for its development. If Russia wants to exist as a state, its authorities should pay serious attention to the territorial unit. Given that will continue to use the rich resources of the North; you must pay close attention to the North in general and effective policies in the North in particular, "[2, p. 22].

Undoubtedly, an important role in the unification process could play Northern (Arctic) Federal University named after M.V. Lomonosov. Its creation should be treated as a first step towards understanding the significance of the federal government in the implementation of the European North of the Arctic strategy. The task of the political establishment of Arkhangelsk, intellectual and business communities is that for the first step followed by the solution is not less important for the consolidation of the region.

In one of his last works of renowned scientist and former director of the Institute of Physiology, Arkhangelsk and natural adaptations of UB RAS A.V. Tkachev, untimely deceased, wrote, and in fact, commanded: "The North is vulnerable because there is no general concept of Northerners ... "[14]

It is time for its formation, as the mainland continues to deteriorate, "patchy" European North will not be able to fully fulfill its role as a bridgehead in the implementation of the strategy of Arctic Russia. It is necessary, without going to extremes, as has happened in the past, to ensure that the consolidated power of the northern regions provide synergies of Russia!

Literature

1. Fedorov P.V. Center and the northern outskirts of the Russian state in XVI-XX centuries: Dynamics of strategic alliances (for example of the Kola Polar). Diss. on research. Account. Of Art. Doctor of History. Sciences. Arkhangelsk, 2009. p. 55-56.
2. Lappo G.M. territorial structure of Russia in the beginning of the XXI century / / Geography. In 2002. - №33. - p.22.
3. Dugin A. Fundamentals of Geopolitics. The geopolitical future of Russia. Think space. M., 1999. p.317.
4. Fedorov P.V. The Center and the northern outskirts of the Russian state in XVI-XX centuries: The dynamics of strategic alliances (for example of the Kola Polar) / Author. Doctor. thesis. Arkhangelsk, 2009. p.3.

5. R. Turovsky Federal District: the political-geographical approach to the theory and practice // Federalism. - 2003. - № 1. - p. 245.
6. The State and municipal management: regional-economic determinants / Ed. RA Islyayeva. -Saint-Petersburg, 2002.p.15.
7. Kapitonov A. Do the Russia need subjects - matreshki? / / Rossiyskaya Gazeta. In 2004. May13.
8. Senchagov V, V. Dadalko, Bagin A. Consolidation of Regions: goals and realities / / Federalism. - 2004. - № 3. - p. 10.
9. Dugin A.G. Basics of geopolitics. M., 1997. p. 312-313.
10. Velikhov E. / / Pomeranian capital (Arkhangelsk). - 2010. - № 11. - p. 17.
11. Stanislav chidori. Reflections on the northern mentality / / North. - 1997. - № 11-12. - p. 109.
12. O.Basilashvili. To kill a slave in yourself / / Arguments and Facts. - 2008. - № 49.
13. The logic of the President Sh. Sultanov understandable. And it is true. URL.: [Http://www.russia-today.ru/archive/2004/no_20/20_topic_1.htm](http://www.russia-today.ru/archive/2004/no_20/20_topic_1.htm) (05/01/2011).
14. Tkachev, AV / / Proceedings. In 2004. April 30.

Reviewer – V.I. Goldin.,
Doctor of History, Professor

Ecology of the Arctic and the North, natural resources

UDK: 540.4:552.578.2(571.56)

The questions of environmental monitoring and rehabilitation of oil –contained soils in the Arctic zone of Yakutia.



© **Glyaznezova** Yliya, Ph.D. of Chemistry, senior researcher at the Institute of Oil and Gas Problems SB RAS. E-mail: geochem-lab@ipng.ysn.ru.



© **Zueva** Iraida, candidate of geological-mineralogical sciences, senior researcher at the Institute of Oil and Gas Problems SB RAS. E-mail: i.n.zueva@ipng.ysn.ru



© **Chalaya** Olga, candidate of geological-mineralogical sciences, head of the Laboratory of Geochemistry caustobioliths, a leading researcher at the Institute of Oil and Gas Problems SB RAS. E-mail: o.n.chalaya@ipng.ysn.ru.



© **Lifshiz** Sara Ph.D. of Chemistry, senior research worker of the Institute of Oil and Gas Problems SB RAS. E-mail: s.h.lifshits@ipng.ysn.ru.

Abstract

In the study of permafrost soils to characterize the features of the natural background, the identification of oil pollution of soil, its composition and characteristics of the boundaries, it was used a complex of analytic methods: IR-Fourier spectroscopy, gas-liquid chromatography, chromatography mass-spectrometry and geochemical approach to the interpretation of the data. The results of an experiment of the study of the degradation of oil pollution in the soils of permafrost under the effect of oil destructors on native micro flora of hydrocarbon.

Keywords: *oil pollution, biodegrading, permafrost soil, micro flora, the natural background.*

On the shelf of the northern seas of the Russian sector of Arctic oil and gas reserves, according to geologists, may be up to 80% of the hydrocarbon potential of Russia as a whole. Development of these resources in harsh environments is a difficult technical problem, including the creation of conditions required for environmental management, industrial and environmental safety. Prior to the implementation of large-scale projects on hydrocarbon production is important to assess the ecological status of Arctic shelf to oil pollution (OP).

A significant contribution to pollution made by the seaports, transportation - sea and river fleet, oil facilities and vessels. Bottom sediments of port facilities in coastal bays of the Arctic seas are characterized by high concentrations of petroleum hydrocarbons. Of great importance is monitoring and evaluation of coastal ecological status of the territories in relation to human activities, leading to a change in the environment.

In arctic and subarctic regions, in contrast to regions with favorable climatic conditions the processes of biodegradation of spilled oil and NP occur much more slowly, which determines a lower capacity of permafrost soils to cleanse itself. The presence of closely overlies the permafrost, low temperatures and short growing season - all this leads to lower rates of transformation of oil pollution.

The state of the environment of the Arctic and subarctic zones of Yakutia is practically unknown. Oil and NP are the most dangerous sources of pollution and are a particular risk of pollution and environmental threat to the Arctic environment. They are delivered to the Arctic regions along the rivers. Most oil depots are located on the banks of rivers and coastal zone of the Laptev Sea. As a result of spills during transportation and storage depots in the operation is contaminated water and the shore of the land. International experience of events shows that in the arctic conditions it is possible to collect and dispose of only 10-15% of spilled oil. The residual oil contaminations in permafrost, surviving for many years, it is source of petroleum hydrocarbons in runoff into the sea and its coastal part. Thus, initially the local oil pollution can spread over large areas. Specific features of the vast arctic and subarctic regions are the presence of permafrost soils, long-term freezing of ponds, marshes and wide distribution of wetlands [1, 1993]. The soils of northern latitudes, which have a low biogenic poor talent to heal itself. When oil spills, soaks the moss surface, penetrates to the zone of thawing and continues to spread laterally over this area, undergoing a slow transformation. Most of the spilled oil remains in the top surface (10 cm) layer of the soil [2, 2003].

In this regard, on the northern territories of environmental monitoring facilities NGK is one of the priorities in order to minimize damage as a result of human impact on natural ecosystems in the Arctic.

In the Republic of Sakha (Yakutia) in the last 5 years there have been several major accidents involving oil spills, and NP, including in the Arctic and subarctic zones. In 2008 there was an emergency spill of diesel fuel "Arctic" in the stock of fuel and lubricants in Moma district, in 2009, according to official data, in the waters of the Gulf Bulunkan Laptev Sea (Tiksi n) as a result of the accident got 37 tons of oil. Many northern regions of Yakutia for heating homes using crude oil. Her delivery and storage, as seen from the examples, pose a threat to the environment.

All of this is the solution of tasks, which include: prolonged monitoring of areas of the Arctic zone in the modern analytical level, especially in areas placing oil and gas facilities. An important direction is to study the ability of northern ecosystems to recover when hit by oil components and the NP. Of particular importance is research aimed at developing technologies for the elimination of oil pollution and the creation of oil destructors, effective in extreme climatic conditions of the subarctic zone.

In our opinion, the issues of monitoring oil pollution in the area and the NP and scientific support for the rehabilitation of contaminated territories were more likely to promote the use of methods of organic geochemistry.

One of the key tasks of geo – chemical monitoring is the research of informative and reliable parameters for the diagnosis of soil and sediment of oil and NP to evaluate the quality of the sewage treatment works and the choice of destructors, the most effective for arctic and subarctic conditions. As practice has shown environmental studies, existing methods for determining oil pollution in the soils of the methods of fluorescence and infrared spectroscopy [3, 4] should be considered as an express definition for oil pollution in case of fresh spills and mass analysis of a large number of samples to identify areas of possible contamination.

Their weakness is a significant understatement of the content of NP in soil samples was due to incomplete definition of a light hydrocarbon (HC) - gasoline and kerosene fractions and high HC and getero taking components - resins and asphaltenes [5, 2007]. Analyst in determining the content of NP in soils should be clear that the extracts selected for their composition is a mixture of hydrocarbon compounds of man-made, i.e., the actual oil pollution, and natural origins - organic matter (OM) of soils. Each of these components is characterized by a set of large number of hydrocarbon compounds, whose content may vary over a wide range.

One way to assess anthropogenic component (residual oil pollution, or NP) is proposed in the above-mentioned methods [3, 4], in which the contribution of natural soil OM is minimized through the use of the lightest of the solvent - hexane and adsorption of heavy hydrocarbons and asphalt-resin components columns with a aluminum dioxide. These techniques are widely used to assess oil-contaminated soils and sediments in the light spills NP and fresh oil spills, but they do not meet the objectives of long-term monitoring of contaminated areas and evaluating the work of rehabilitation, as well as spills of heavy NP.

When monitoring contaminated areas the researcher faces the task definition of oil pollution on the background of the presence of native soil OM and sediment. On the non-standard and

complexity of the problem and possible ways to solve a lot of useful information can be found in [6-8]. Because of the complexity and diversity of pollutants and the characteristics of soil OM question should be decided in each case, specifically, in accordance with the task. There may be a useful experience in geochemical studies of rocks and RH naphthides.

In the study of organic geochemistry of recent sediments OM contains information on research findings bituminous component agents (bitumen), the features of their structure for the agents of different types of soils and sediments are reviews of modern methods of analysis of organic compounds. Significant variations in the content of bitumens in the OM of modern sediments and diversity of their composition leads to an understanding that the contribution of the native bitumens OM in the total content of the extract of the analyzed samples from contaminated areas can not be reduced to simple arithmetic subtraction "average natural background" as defined to break bitumoid in background samples [9]. Moreover, as shown by geochemical studies, background samples themselves, which are selected on the "clean" areas may be contaminated with NP. Knowledge of the regional natural background, the specific composition of the RH soils or sediments must, from the stage of selecting background samples, which requires specialized geochemical studies.

On the other hand, in organic geochemistry provides extensive and detailed information on the composition of the condensates and oil characteristics of the distribution of individual hydrocarbons, the presence in their composition of hydrocarbon biomarkers. The data in each case can be very useful in the identification of a particular type of pollutant that requires a special study of a pollutant source.

The petroleum geochemistry with a high degree of detail and studied the issues of oil degradation in terms of deposits, and the results of the model experiment. The data on the processes of transformation of oil as a result of bacterial oxidation of hydrocarbons under aerobic conditions, the selectivity and the phasing of these processes can be very useful in studying the characteristics of the degradation of oil pollution in time. The results can serve as a basis for the creation of new efficient oil destructors, using indigenous micro flora in the development of methods of oil spill.

However, it is necessary to take into account that under natural conditions, the influence of factors such as the contribution of native soil OM, and the possible imposition of secondary pollutants may actually bio degradatsionnyh to snivelirovat effect of changes in the composition of oil pollution, and thus lead to underestimation of the effectiveness of oil destructors. The criteria for a correct evaluation of the effectiveness of developed oil destructors, and quality control for the remediation of contaminated soils remidiatsii is an independent scientific challenge that requires special features of the transformation studies of oil pollution in different contexts, taking into account the influence of natural background and secondary factors.

The Institute of Oil and Gas Problems SB RAS for 11 years of environmental studies are conducted to monitor different areas of oil and gas complex of contamination of soils and sediments by oil and PP in the subarctic zone of Yakutia. One of the ways is to increase the effectiveness of monitoring through the development of informative and reliable parameters to assess the

contamination of soils and sediments by oil and NP. The results obtained may be useful in connection with the planned research on the environmental assessment of the Arctic zone of Russia.

In our studies used a set of analytical methods of organic geochemistry: FT-IR spectroscopy, gas-liquid chromatography, gas chromatography-mass spectrometry and geochemical approach to the selection of analytical parameters, which has enabled to take into account the specifics of contaminants and the native soil OM and sediment - natural background. The proposed geochemical parameters have several advantages over the methods of [3, 4] and allow: 1) differentiate the oil pollution from the native soil OM and sediments, 2) to determine the residual hydrocarbon oil spills as a light - gasoline, kerosene, condensate, and heavy NP - oil, fuel oil, butter, which is especially important for long-term monitoring of contaminated areas, and 3) identify and define the nature of the distribution of individual hydrocarbons in the oil pollution [10, 2004, 11, 2007].

In our view, it is possible to improve the quality of monitoring and at the present level of the analytical approach to the study of important environmental problems. These include the definition of a regional natural background, the study of the current state of soil and sediment contamination in the oil and NP in the oil and gas facilities, the identification of man-made anomalies, determine the level and composition of the pollution, the study of the transformation of oil pollution in natural conditions and under the influence of oil destructors, performance evaluation of the quality of remediation work in contaminated areas.

In this paper the results of studies on the degradation oil pollution native soil micro flora of hydrocarbon (VDM) with regional sorbents - zeolite deposits Khonguruu (Suntarsky District, Western Yakutia) and vermiculite deposits Inagli (Aldan district, South Yakutia). The aim of research was to evaluate the technology being developed for the treatment of permafrost soil from pollution by oil and PP in the subarctic conditions of Yakutia.

The experiment was conducted under natural conditions in the storage of fuels and lubricants in a. Hon, where the September 16, 2008 there was an emergency spill of diesel fuel "Arctic." The total area of contamination was 0.8 hectares. For frozen soils is characterized by the maximum temperature of -9 to -11 ° C. The average temperature in July from 6 to 14 ° C. The materials for the study were the sample of soil contaminated with diesel fuel, "Arctic" from the accident site and background samples taken at a distance from the spill with non-contaminated sites.

The experiment was conducted from June 16 to August 21, 2009, and consisted of two phases. In the first phase in June were selected contaminated soil samples in the experimental plots and then held tillage VDM immobilized on sorbents - zeolite and vermiculite. Immobilized on the surface of minerals, micro-organisms have made to the contaminated sites at the rate of 200 g per 1 m² - for the zeolite and 50 g per 1 m² - for vermiculite. In the second phase in August at these sites were re-sampled to study the degradation of diesel fuel under the influence of oil destructors under natural conditions.

In addition, the two segments were selected from the control samples of contaminated sites, where soil treatment was not carried out with the introduction of drugs that allowed us to estimate the effectiveness of the impact of oil destructors by VDM on the processes of degradation of oil pollution in comparison with control samples.

Analytical studies included cold extraction of hydrocarbon compounds with chloroform from the soil samples, quantification of the extract yield (residual petroleum hydrocarbons), study group composition of extracts: The number of oils, resins and asphaltenes, as well as qualitative structural-group composition of the extracts by FT-IR spectroscopy and determination of the individual composition of saturated hydrocarbons by gas chromatography-mass spectrometry.

Instruction results of samples of permafrost soil contaminated with diesel fuel, and background samples are presented in Table 1. When evaluating oil pollution of soil samples using data on natural background. They were used as diagnostics of oil pollution in the soil samples, and in assessing the extent of degradation of oil pollution. It was assumed that the composition of the contaminated samples after the effective biological treatment should be changed in a direction approaching the composition of the background samples.

Table 1

Degradation of oil pollution in the frozen soils contaminated with diesel fuel "Arctic"

Point sampling	The conditions of experiment	№ sample	exit Xb*, g/kg	Degradation of oil – pollution june - august, %	The group component XB, %		
					UV	RESIN	ASFAL-TENI
BACK-GROUND SAMPLE			0–1,516		6,23–13,79	58,22–69,34	21,94–32,70
Control samples	<i>without YOM and sorbents JUNE AND AUGUST</i>	1 2	25,823 21,247	17,80	92,64 81,99	6,87 13,23	0,49 4,77
X –Y3-09	<i>UOM +vermikulit вермикулит to make - June after objection - August</i>	3	23,420		81,53	14,22	4,25
		4	2,450	89,53	23,05	65,29	11,66
X –Y7-09	<i>UOM+ ZEOLIT to make - June after objection - August</i>	5	18,35		80,72	16,37	2,91
		6	1,521	91,71	21,50	50,86	26,91
X –Y8-09	<i>UOM+ ZEOLIT to make - June after objection - August</i>	7	19,803		93,13	6,51	0,36
		8	2,875	85,48	17,05	71,14	11,81

* – the oil content determined by the output of the chloroform extract - bitumoid chloroform (CB) in soil samples.

The background of the sample. As can be seen from Table 1, the content of natural hydrocarbons in background samples ranged from trace to high values of 1.516 g / kg. The peculiarities of the chemical structure of the background samples correspond to the CB soil samples collected from natural sites studied previously [9, 2009]. This is indicated by a close nature of the IR spectra of samples and component composition of the group with a predominance of asphalt-resin components of the hydrocarbon compounds (Table 1). However, according to gas chromatography-mass spectrometry in the saturated alkane hydrocarbons were found relatively low molecular weight alkanes C12-C15, which is not typical for alkane hydrocarbon organic matter in recent sediments. In this case, it indicates the presence of traces of diesel fuel contamination in the

background samples. Since the study area belongs to the oil and gas complex, such deviations from the natural background typical of man-made objects. The analyzed samples can be considered as background for the territory object location.

The first phase (June 2009). In all samples studied (1, 3, 5, 7) with contaminated sites, selected in June 2009 before making the soil VDM, the yield of CB ranged from 18.350 to 25.823 g / kg, which corresponds to a high level of contamination on the classification of [12, 2001]. CB samples are characterized by a close structural-group composition of hydrocarbon compounds with a predominance of compounds with oxygen-containing groups and bonds, as indicated by the low absorption in the 1100-1300, 1700-1740, 3300 cm⁻¹. The IR spectra of extracts are typical of oil-contaminated areas. The group is also a component of the characteristic oil - gruntyovyyh samples contaminated with oil or NP. This is indicated by the predominance of hydrocarbons (oil) 80,72-93,13% over the amount of asphalt-resin components (Table 1). According to gas chromatography-mass spectrometry of the saturated hydrocarbon extracts of the relevant pollutant - diesel fuel, results in the predominance of relatively low molecular weight alkanes of high molecular (Table 2, sample 1, 2, 7). Hydrocarbon composition of oil-polluted samples is characterized by a high content of alkanes of normal structure, represented by the homological series of n-C12 n-C29. Among them, 97% is a relatively low-molecular structure of n-C12 n-C20, which accounts for the high value of the ratio of their relatively high-molecular homologues. The maximum of the distribution of n-alkanes account for n-C15, 16, the coefficient of I_f / h close to unity. Among the saturated hydrocarbons n-Heptadecan and n-octadecane and pristane prevail over fitanom, the ratio $(Pr + Ph) / (n-C17 + n-C18)$ is less than unity, which is typical for oil polluted objects.

Table 2

Individual composition of saturated hydrocarbons

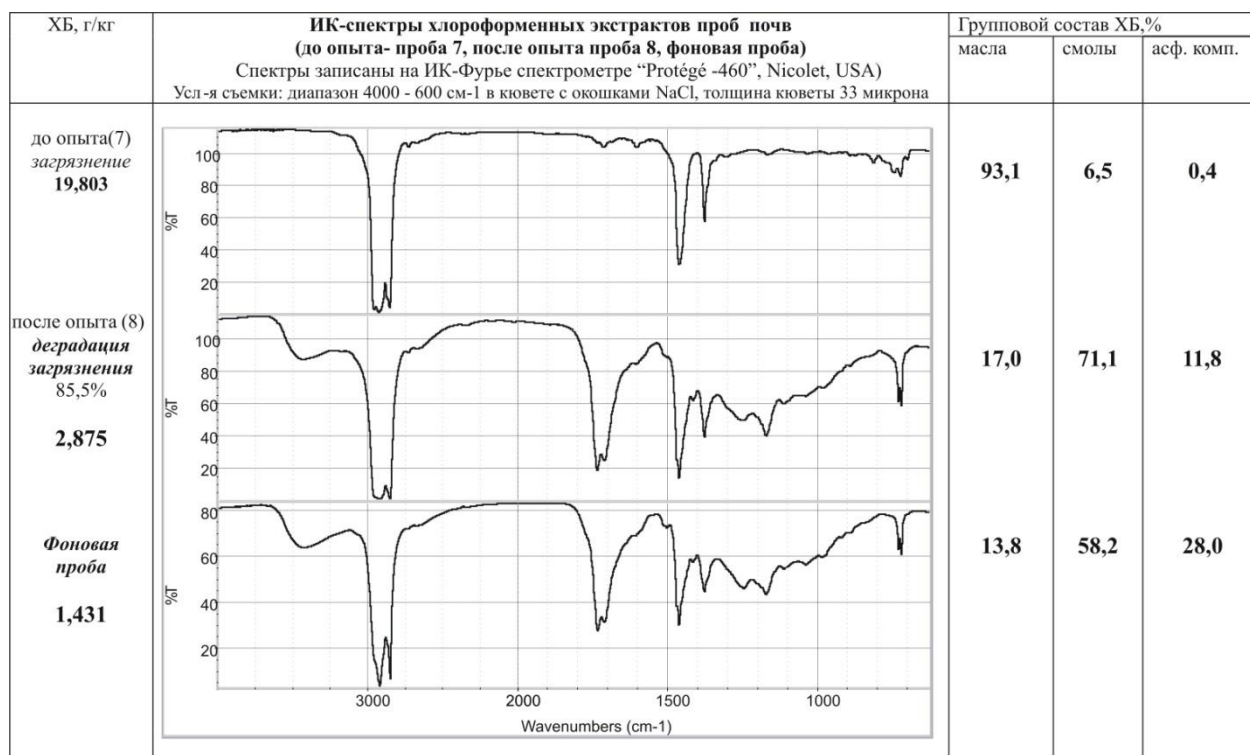
Параметры	№ SAMPLE				
	1	2	7	8	BACK-GROUND
The conditions of experiment	Control samples (without UOM)		With UOM and zeolits UOM+zeolit		
	JUNE	AUGUST	BEFORE PUTTING – JUNE	AFTER PUTTING – AUGUST	
$HK-HC_{20}/HC_{21-K.K.}$	34,13	26,57	33,65	1,19	0,59
ALKANOV	$H-C_{16,17}$	$H-C_{15,16}$	$H-C_{15,16}$	$H-C_{17,18,27,29}$	$H-C_{27,29,31}$
Coefficient IN THE WHOLE	0,99	0,95	1,08	1,74	2,04
$iZOPRENOIDI/H-ALKANI$	0,45	0,54	0,46	0,88	0,41
iC_{19}/HC_{17}	0,74	0,95	0,71	2,70	2,45
iC_{20}/HC_{18}	0,72	0,85	0,79	2,67	2,46
$iC_{19}+iC_{20}/HC_{17}+HC_{18}$	0,73	0,93	0,75	2,69	2,46

These results indicate that the composition of soil samples analyzed, selected almost a year after the accidental spill of diesel fuel, there are no visible signs of biodegradation of contamination. This confirms the very low ability to cleanse itself of permafrost soils in cold regions.

The second phase (August 2009). The results of the study of soil samples from experimental plots in two months after the introduction of VDM showed a decrease in residual petroleum hydrocarbons on the order, which corresponds to 85,5-91,7% degradation of oil pollution in

comparison with control samples (without making VDM), where the degradation was 17, 8% (Table 1).

The high degree of degradation of oil pollution of soil installed on the results of studying the composition and chemical structure of the selected extracts. As seen in the IR spectrum (Fig 1/sample7 in the chemical structure of the original extract soil samples is dominated by hydrocarbon groups and communications connections with longmethyline chains (720 -1 cm)aromatic hydrocarbons (750,810 and 1600 cm - 1). Oxygen-containing groups and links are present in small numbers (1170 and 1710 cm-1). The group composition of these samples (Table 1) is dominated by hydrocarbons, and the share of resins and asphaltenes have less than 20%.



Pic.1. The IR spectra of chloroform extracts of soils

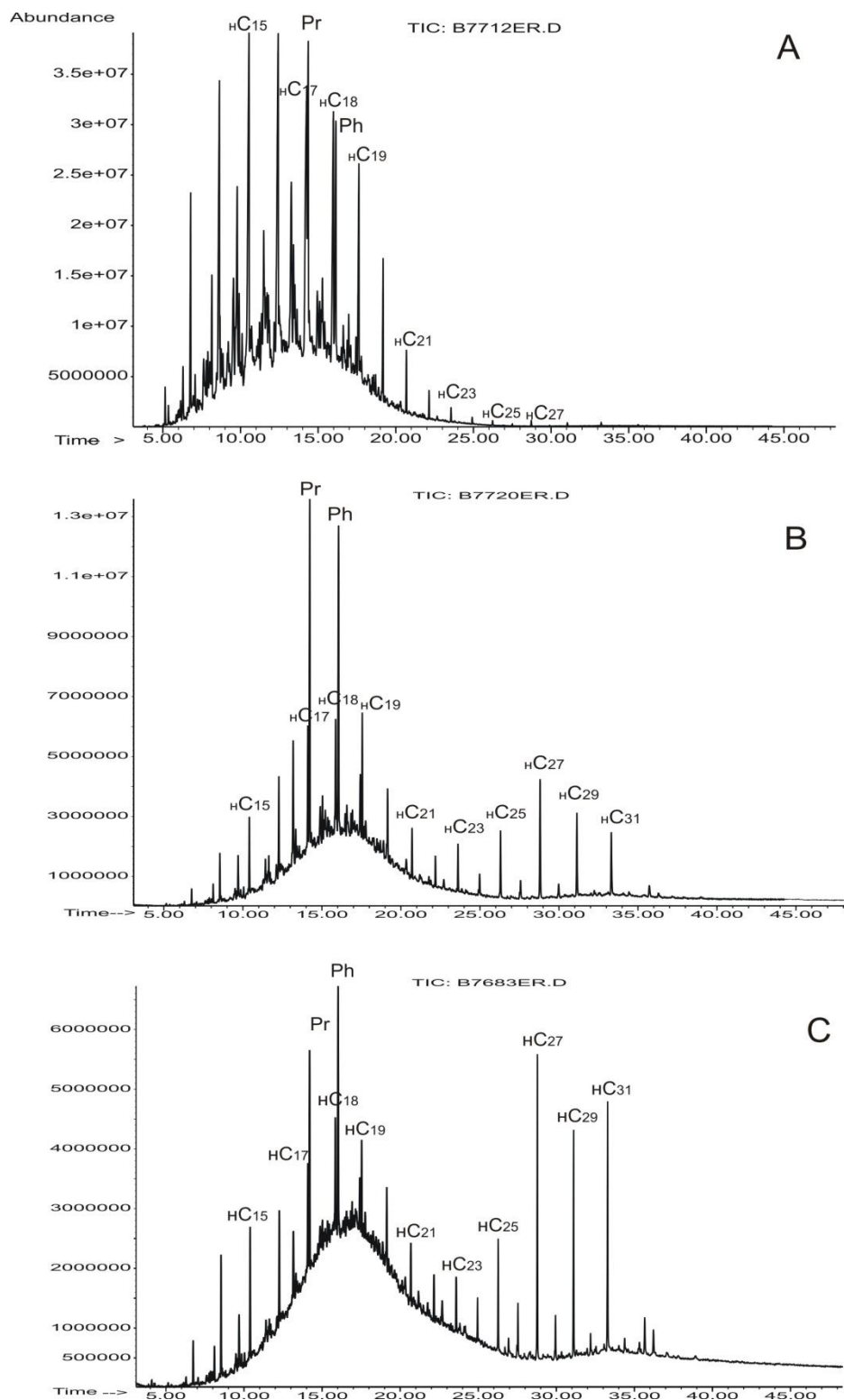
According to the group composition (Table 1) we can conclude that in the process of biodegradation by microorganisms in the first part of the hydrocarbon contamination is utilized, ie, oil. Their number in the extracts of soil samples with the introduction of VDM drops from 80,72-93,13 23,05-17,05% up. As expected, after the Bioremediation of the "residual contamination" has changed dramatically in the direction of increasing the amount of asphaltenes and especially the resinous components (Table 1). However, the results of FT-IR spectroscopy showed that the structural-group composition of extracts of samples with the introduction of VDM more in line with the natural soil OM rather than residual oil pollution (Fig. 1, sample 8). The findings suggest that deep biochemical transformation of oil pollution, which resulted in the studied samples from the IR spectra is practically difficult to detect the presence of petroleum hydrocarbons. The nature of the IR spectrum is typical of CB agents' bitumens recent sediments. The dominant absorption band in the spectrum in the 1700-1740 cm-1 indicates the highest amount of carbonyl groups, a strong absorption at 1170 cm-1 - the high number of ester bonds. Clearly marked absorption in the region 3200-3600 cm-1 due to the presence of hydroxyl groups belonging to the carboxylic

acids, ketones and esters. In the chemical structure substantially involved long methylene chains (doublet of 720 and 730, 1380 and 1460 cm^{-1}) and low - compounds with aromatic rings (750 and 1600 cm^{-1}). All these features are characteristic of immature OM of continental facies, and are set for different types of agents permafrost soils of Yakutia [9, 2009].

After making the VDM in the CB samples show significant changes in the composition of acyclic saturated hydrocarbons. Almost 10% decreased the proportion of n-alkanes, which are longer homological series of n-C13 to n-C33 (Table 2, sample 8, Fig. 2, B). In their structure compared with the initial oil pollution (Fig. 2, A) is significantly increased relative content of high molecular homologues of n-C21 n-C25, which is expressed in a decrease in the ratio is relatively low, relatively high-molecular n-alkanes.. Changed the distribution of n-alkanes: it has become bimodal, with peaks at n-C17, 18 and n-C27, 29. Was found between the redistribution of normal alkanes and isoprenoid structure: pristane and fit prevail over the next elution of n-and n-heptadekanom oktadekanom. The value of the ratio $iC_{19} + iC_{20}/nS_{17} nS_{18}$ in the sample increased to 2.69 compared to 0.75 with a sample of 7 (Table 2).

The changes in the composition of the hydrocarbon fraction of the treated samples indicate that VDM is actively running processes of biodegradation. As a result of the chemical, structural-group and component composition of the group (and especially the distribution of individual saturated hydrocarbon extracts of soil samples) after treatment with oil destructors become almost identical with that of the background samples. These results indicate that, when introduced into soil contaminated with native VDM immobilized on local sorbents, in just one summer season, you can achieve a high degree of degradation of the permafrost soil-pollution diesel fuel.

High rates of degradation of 85 to 92% in soil samples with high levels of soil contamination in comparison with control samples without the introduction of VDM, in which the degradation rate was only 18 % indicate the effectiveness of oil destructions in a cold sub_ Arctic permafrost soils of the regions Thus, the results of research on the development of indigenous oil destructors by VDM, immobilized on a local sorbents showed that this trend is promising during bioremediation of contaminated soils in the permafrost of various oil and gas facilities.



Pic. 2. Mass chromatograms of hydrocarbon fractions chloroform extracts of samples: A - Sample 7 (to experience), B - Sample 8 (after the experience), C - Sample Background.

Literature

1. Pikovsky U.I. Natural and man-made streams of hydrocarbons in the environment. M., 1993. P.115.
2. Gildeeva I.M. Influence of seasonal processes of freezing - thawing of soil on the evolution of oil pollution in the Arctic regions / Ed. V.K. Shimansky St. Petersburg, 2003. P. 118.

3. The method of measuring the mass fraction of oil in the samples Fluor-metric method for fluid analyzer "Fluorat-02." PND F 16.1.21-98. Russian State Committee for Environmental Protection. The technique allowed for the purpose of state-governmental environmental control. M., 1998.
4. Quantitative chemical analysis of soils. The method of measuring the mass fraction of oil in soils and sediments by IR spectroscopy. PNDF 16.1:2.2.22-98. Moscow: Russian Federation State Committee for Environmental Protection, 1998. - P.16
5. Drugov S., Rodin A. The environmental analysis for oil spills and oil products. How to: 2nd Ed.M., 2007.P.177-214.
6. White D. M., Collins D. S., Barnes D. and Byard H. In 2004. Effect of crude oil spill on permafrost after 24 years in interior Alaska / / Proc. Cold Regions Engineering and Construction Conf. American Society of Civil Engineers. Edmonton. May 16-19.
7. White D. M. and Irvine R. L. In 1996. The bituminous material in Arctic peat: implications for analyses of petroleum contamination. J. Haz. Mat'ls. 49. 81-196 pp.
8. Bioremediation of Petroleum Hydrocarbons in Cold Regions / / Edited by Dennis M. Filler, Ian Snape and David L. Barnes. Cambridge University Press, 2008. 109-125 pp.
9. I. Zuev, Glyaznetsova S., C. Lifshitz, H., O. Chala, Kashirtsev VA Methods of study of the surface geochemical hydrocarbon fields of natural and technogenic origin / / Science and Education. - 2009. - № 1. - P. 50-55.
10. I. Zuev, C. Lifshitz, H., O. Chala, Kashirtsev VA Glyaznetsova S. iden all vessels of oil contamination of soil by IR Fourier spectroscopy and chromatography / / Proc. sustainable development issues in the region. Materials Abstracts. 3 School-Seminars of Young Scientists of Russia. 8.12 in June 2004 Ulan-Ude. P. 158-163.
11. Glyaznetsova S., I. Zuev, Chala O., C. Lifshitz J. Chromato-mass spectrometric determination of soil contaminants such as oil spills / / Problems of sustainable development in the region: Proceedings of the IV School-Seminar of Young Scientists of Russia . Ulan-Ude, 2007. P.133-135.
12. Goldberg V.M, Zverev, V.P, Arbuzov, A.I, etc. Man-caused pollution of natural waters by hydrocarbons and its environmental consequences. M., 2001. P. 94.

Reviewer – M.G. Gubaidullin
Doctor of geology and mineralogy, professor

UDK[551.588.7(985)+005.521](045)

Forecasting and the result of climatic changes in the Arctic region



© **Zelenina** Larisa, Ph.D. of Technical Sciences, Associate Professor, Russian Correspondence Financial and Economic Institute (Arkhangelsk). Quantity of scientific publications – 38, monographers – 1. E-mail: lzelenina0106@mail.ru.



© **Fedkyshova** Svetlana, Russian Correspondence Financial and Economic Institute (Arkhangelsk). Quantity of scientific publications – 6, monographers – 1. E-mail: SIF-7@yandex.ru.

The article defines the role of the Arctic region. The causes of climatic changes have been studied. The statistics of changes in key climate indicators is written. A mathematical model of a polynomial trend of the minimum area of Arctic sea ice is created.

Keywords: *Arctic region, climatic changes, forecasting models.*

The nature of the Arctic is highly sensitive to human impacts and very slowly recovering from unreasonable interference. In the Arctic, meet the basic atmospheric flow, river and ocean currents that bring here from far away of pollutants.

In the Arctic zone of Russia allocated 27 districts (11 - on land, 16 - in the seas and the coastal zone), where there was a strong transformation of the natural geochemical background, atmospheric pollution, degradation of vegetation, soil and subsoil, the introduction of harmful substances in the food chain, increase in morbidity.

The distribution is extremely uneven areas. Four major source of tension - it is the Murmansk region (10% of the total emission of pollutants), Norilsk agglomeration (30%), areas of oil and gas fields in Western Siberia (30%) and Arkhangelsk (high degree of contamination by specific substances).

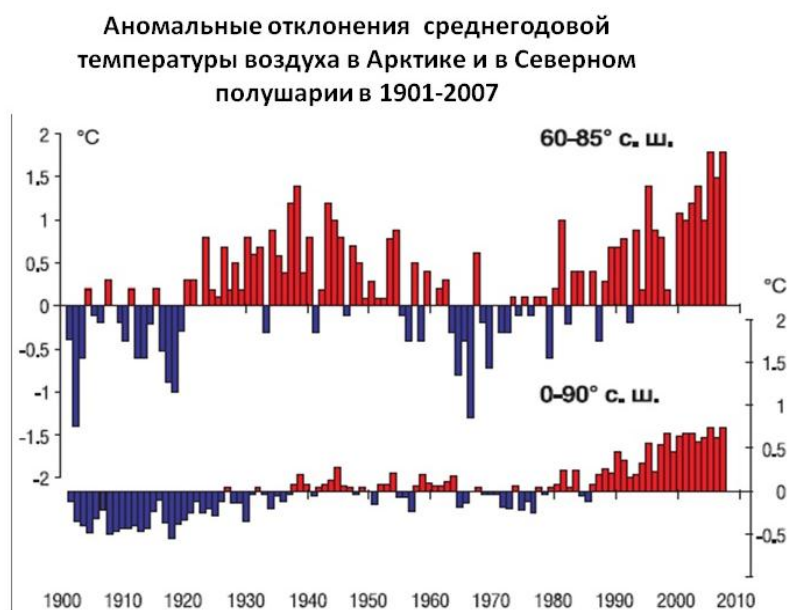
The Arctic is extremely vulnerable to such effects because of extreme natural and climatic conditions, fragile ecosystems, isolation of the polar regions of the major economic and political centers of the country and their poorly developed transport communications and other infrastructure.

The Russian Arctic is an important source of fossil fuels. Given the plans to increase the volume of extraction of natural resources and the development of industrial production in the Po-

lar Regions is important to consider the possibilities for adaptation to the Arctic region to climate change and for climate change mitigation by reducing greenhouse gas emissions.

According to the observations, the temperature in the Arctic over the past century has increased almost twice as fast as the average temperature of the Earth. Since the 1980's. Temperature in the cold season in most parts of the Arctic zone has increased by about 1°C per decade. The warming is most noticeable in winter. 2007 was the warmest for the region over the entire observation period from 1921. In 2008, the average anomaly temperature of air in the polar region was $1,4^{\circ}\text{C}$.

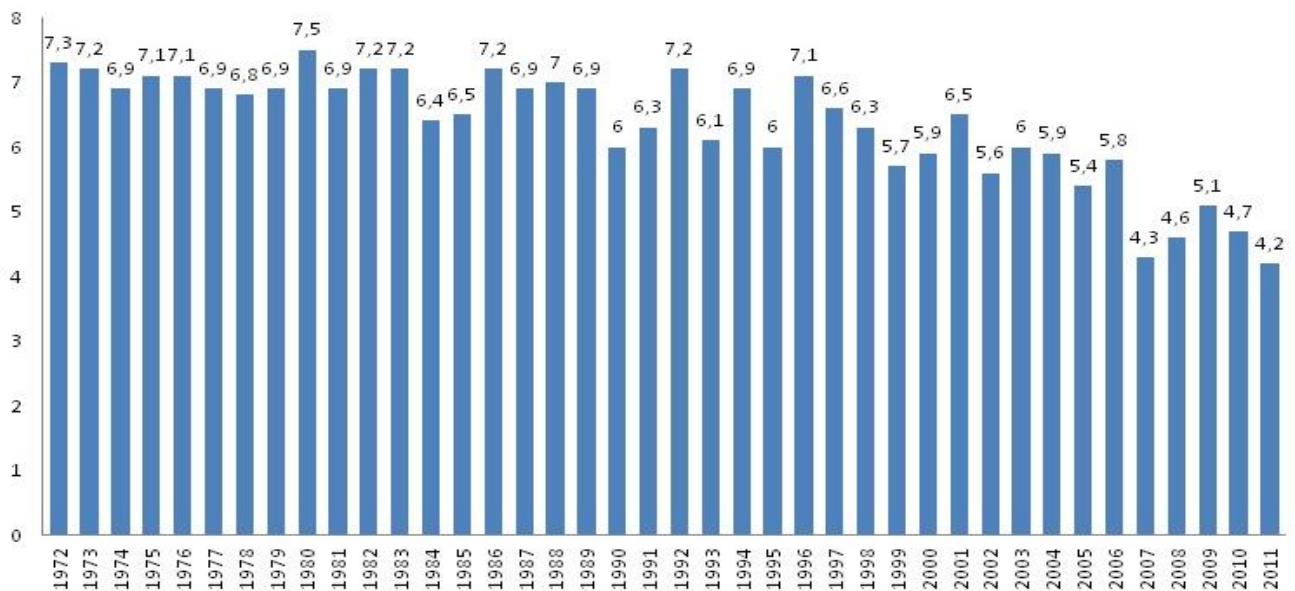
According to Hydromet, the patterns of abnormal deviations of the average air temperature in the Arctic and the Northern Hemisphere in 1901-2007 year have such image:



Pic. 1 Abnormal deviation means annual air temperature in the Arctic and in the Northern Hemisphere 1901-2007 years

Over the past hundred years the amount of precipitation in the Arctic has increased on average by about 8%. Most have increased precipitation in the form of rain with a maximum increase in autumn and winter. Approximately 10% of the area of snow cover has decreased over the past 30 years.

Significant reductions in the area of glaciers in the last 30 years (15-20%) confirm the instrumental monitoring Arctic ice from satellites. Satellite data show that an average of 2.7% over the decade reduced average area of ice in the Arctic. Especially noticeable dynamics of summer ice. Over the last decade the area of sea ice in September fell by 7.4%. Beginning in 2002, one by one all the more in-depth recorded lows of summer ice area, and in 2007 was made an absolute minimum for the period of satellite observation c 1979 - 4.3 million km^2 (Pic. 2).

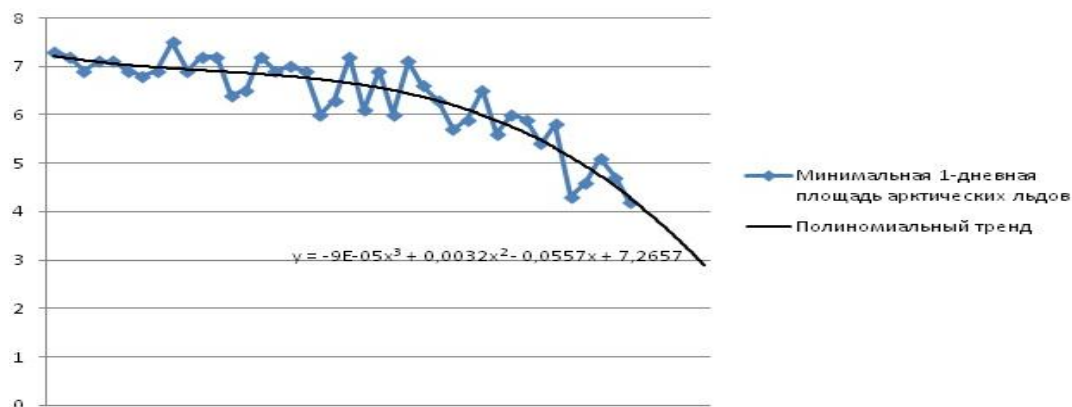


Pic. 2. Histogram of the minimum area of Arctic sea ice (1972–2011 years)

It also decreases the average thickness of sea ice in the Arctic Basin. This is mainly due to reduction of the area occupied by perennial ice and, to a lesser extent, by reducing their thickness.

The melting of Arctic sea ice leads to increased warming in the region due to the so-called positive feedback: an increase in the rate of reduction of ice cover reduces the reflectivity of the surface (the dark ocean absorbs more heat than white ice) and, consequently, an increase in incoming solar radiation.

Statistical analysis of data allowed constructing a polynomial trend, determining a sufficient degree of probability forecast values for the minimum area of Arctic ice, for example, by 2016. The results: less than 3 million km² (Pic. 3).



Pic. 3. Minimal one day area of the Arctic ice

Estimates of future changes in ice cover in the Arctic Ocean talking about accelerating the reduction of its size and weight. Calculations show that, during the XXI century the maximum area of sea ice (March) will be reduced by 2% per decade, and the minimum area of ice (September) - 7% per decade over the area of ice at the end of the XX century. At this rate of reduction of the ice is already in the next decade we can expect them to retreat by the end of summer to the

Arctic polar region, and after 30 years in the summertime Arctic could completely freed from the ice.

The changes of climate can lead to irreversible results the eco system of the Arctic:

- a) The reduction of biodiversity;
- b) exacerbation of existing problems of competition;
- c) the growing influence of ultraviolet radiation on biological processes in the marine environment ;
- d) reduction in the habitat of polar bears, seals, several species of birds;
- e) violation of the forage base and traditional migration routes of reindeer and other animals.

For the environment:

- 1) it will continue to increase in average surface air temperature. The most notable increase in temperature will be in the winter. It should be borne in mind the rather high level of uncertainty in the estimates, due to insufficiently dense network of observations, the relatively short series of multi-instrumental meteorological observations (regular observations in the Arctic began in the second half of the twentieth century) and the limitations of spatial resolution of climate models. More research is needed to climate change in selected regions of the Russian Arctic;
- 2) it is expected to reduce the period of stable snow cover, more precipitation (especially winter), river flow and temperature rise of water in the reservoirs;
- 3) by the middle-century could be reduced during icy conditions, increase the rate of degradation of the permafrost. Reduced Arctic sea ice will be mainly due to reduction in size and thickness of the multi-year ice;
- 4) The projected sea-level rise and increased frequency and intensity of hazardous-weather events;
- 5) increase in the concentration of pollutants in the atmosphere;
- 6) increase in water pollution, land and sea;
- 7) the increase in methane emissions from thawing permafrost.

Predicted economic losses are as follows:

- 1) an increase in height of wind waves and the appearance of degraded fragments of icebergs in the Arctic ice islands, which may pose a risk to production facilities and vehicles;
- 2) due to sudden changes in temperature and increasing severe weather events may increase the load on the energy infrastructure, growth in the number of accidents;
- 3) reducing capacity and the period for delivery in remote areas on winter road routes, laid on frozen beds, due to changes in the timing and processes of freezing and opening of rivers and reservoirs;
- 4) there is a possibility of formation of complex ice conditions (frequency of 10-20%) in the Straits Vilkitski, Shokalski, Dmitry Laptev, Sannikov and Long limiting bezledokolnoe sailing the Northern Sea Route;
- 5) a violation of transportation due to the increased frequency and intensity of the anomalous weather events;

- 6) because of the ground motions in the zones of melting permafrost could increase risks to buildings and facilities, transportation systems, including pipelines;
- 7) violation of the infrastructure of coastal areas due to increased storm activity, coastal erosion and rising sea levels.

Literature:

1. The Arctic on the eve of the third millennium: the resource potential and environmental issues / ed. Gramberg JS, Laverov NP - St. Petersburg: Nauka, 2000.
2. Beketov, NV Greening of investment policy in the Arctic / / Problems of the modern economy. - 2002. - № 1 (5).
3. The impact of climate change on the Russian Arctic: analysis and solutions to problems. WWF-Russia. M., 2008.
4. Report on the peculiarities of climate in Russia. - M: Roshydromet, 2008.
5. Istomin, A., K. Pavlov, Celine B. Economy of the Arctic zone of Russia / / Society and Economy. - 2008- № 7. - p. 158-172.
6. Leonov Yu Arctic Investigations are continuing / / Science in Russia. - 2008. - № 3. - C. 104-112.

Reviewer – N. M. Bizova,
PhD in geography, professor.

Human Capital

UDK 612.223.3

Features of external respiration of female students in the conditions of the North



© © **Palkina** Oksana, Ph.D. of biological sciences, associate professor of Institute of Physical Culture, Sport and Health NarFU named after M. V. Lomonosov. Contact Phone: +7 952 255 61 69. E-mail: palkina111@rambler.ru.

Abstract

The respiratory apparatus of the female students have been studied. A small voltage functional capacity of respiratory apparatus is found.

Keywords: *female students, the respiratory system, oxygen.*

In recent years, more and more actualized the need to radically improve the health of Russians, forcing a fresh look at the current situation in public health with the aim of changing for the better. The most important institution of the formation of an educated, skilled, cultural and intellectual elite of the state is the education system, in particular universities, and so in addition to specific educational purposes falls on the state and the task of maintaining the physical, mental and moral health of students.

It is known that the harsh climate of the North has high requirements for all systems of the body, and to the respiratory system, primarily because it can not be protected from the adverse effects of a reliable artificial barrier [1]. The apparatus of external respiration provides the body with oxygen to maintain an appropriate level of oxidation-reduction processes, the constancy of the acid-alkaline balance. In addition, the "northern light" the process of intensive heat, to warm the incoming cold air [4].

The aim of our study - to study features of the system of external respiration in freshmen students enrolled in NarFU named after Lomonosov aged 17-18 years.

The organization of the research

The study was conducted in the autumn-winter period in healthy women (39). Functional state of external respiration was assessed on an automatic spirometer "Spiros-100" ("Altonika", Moscow, Russia). With the help of this device was determined the following parameters: lung volumes and capacity - vital capacity (VC), inspiratory reserve volume (police department) and expiratory (ROvyd), tidal volume (TV), parameters of pulmonary ventilation - respiratory minute volume (RMV), the frequency respiration (RR), maximal ventilation (MVL). The results obtained were compared with students living in central Russia [3]. Thus, I have a group of students were in Arkhangelsk, II - secondary students in the band.

The results of the research

An important indicator that reflects the functionality of the respiratory system as a whole, is a VC. In a comparative evaluation of this quantity was found in students a slight increase in group I (2%) (Table 1). It is known that individuals with higher these indicators there is a great

opportunity to increase pulmonary ventilation and oxygen to the lungs and release carbon dioxide.

In the analysis of fractional VC revealed that the magnitude and the police department ROvyd differed little from the parameters obtained from the natives of the middle band.

Table 1

Indicators of external respiration, $M \pm mn = 39$

Indicators	I group	II группа
Jel, l	$2,93 \pm 0,11$	$2,87 \pm 0,08$
POvs, l	$1,61 \pm 0,01^{**}$	$1,58 \pm 0,06$
POvid, l	$0,90 \pm 0,02$	$0,91 \pm 0,02$
do, l	$0,59 \pm 0,09^{**}$	$0,48 \pm 0,01$
mod, l/min	$10,63 \pm 0,61$	$8,48 \pm 0,34$
chd, in min	$18,5 \pm 1,06$	$17,6 \pm 0,94$
MVL, L/MIN	$72,06 \pm 3,26^{**}$	$65,97 \pm 0,91$

Note: The asterisks (*) denotes a significant difference in actual values. $^{**} - p < 0,01$.

Along with the ROvyd, ROvyd vital capacity and tidal volume contains. Comparing this with students in group I revealed the depth of breathing increase by 8.6%. Exceeding these parameters have students living in the North, apparently contributes to increasing the number of functioning alveoli [2]. In this case oxygen is stepping in the right amount necessary to maintain the required level of thermal-induction, increasing the efficiency of ventilation [7].

The values of pulmonary ventilation is also higher in the first group I girls. Increasing minute volume of breathing for more than a factor of 1.2 indicates hyperventilation. Pulmonary ventilation is dependent on metabolic processes in the body. An individual living in areas of the North, the level of metabolism is higher than that of the inhabitants of temperate latitudes. Consequently, hyperventilation with students NArFU is adaptive mechanisms of external respiration in response to the increased need for oxygen, aimed at providing enhanced tissue metabolism at elevated energy expenditure [4].

Valuable parameter for evaluating lung is also a black hole. We surveyed students in Arkhangelsk found an increase in respiratory rate by 4.9%. This may indicate a certain voltage of respiratory function. But the magnitude of the black hole depends on the minute volume of respiration. A more rational in the North is considered to be an increase in the MOU due to a larger increase in UP than in respiratory rate [6]. Thus, the pulmonary ventilation with students in group I associated with simultaneous increase in tidal volume and respiratory rate, which is the most effective mechanism to ensure the optimum combination of high gas exchange while minimizing energy costs.

MVL function characterizes the possibility of using the apparatus of external respiration. This value is a summary measure of the ventilation apparatus of external respiration function and reflects the limits of the system of external respiration used to use the functional reserves. Studies have shown that the absolute value of the girls who live in the middle zone, below the 1.1 times than that of students in Arkhangelsk. It is known that MVL can be judged on the integral mechanics of breathing changes, since depends on the muscle strength of respiratory muscles, lung compliance and chest, as well as resistance to air flow. Therefore, the revealed a decrease in group II may indicate the development of lower respiratory muscles [5].

The results obtained from students in Arkhangelsk indicate a small voltage of the functional capacities of the apparatus of external respiration, lowering its compensation-Sathorn features. This response of the body most likely associated with the manifestation of defense reactions of respiratory system, designed to limit contact with the respiratory tract with cold air and reduce heat loss.

Literature

1. Aghajanian, NA, Marach AG, Bobkov, G. Ecological physiology. - M.: Publishing company "Crook", 1998.-p.279-345
2. .Aydraliev A.A. Maksimov, A.L. Human adaptation to extreme conditions: Experience in forecasting. - Leningrad: Nauka, 1988. - 126 p.
3. Vlasov, A., Okunev GN Circulation and gas exchange of man. - Novosibirsk.: Science, 1983.-p.159-205.
4. Gudkov, AB, Anciferova OA, Kubushka O., Smolin VS External respiration schoolchildren in the North. - Arkhangelsk: Publishing Center of SSMU. - 2003. - 262 p.
5. Gudkov, A., B., Popov, O. External respiration rights in the European North. - Arkhangelsk: Publishing Center of SSMU. - 2009. - 239 p.
6. Kuznetsova TD, Razzhivin IM Age development of mechanisms for the regulation of respiration / / Age characteristics of the physiological systems of children and adolescents / edited. VI Kozlov. - M., 1985. - p. 168-198.
7. Nikitin Yu.P., Shishkin GS Health status and functional features of the respiratory, circulatory, and lipid metabolism in young people in the North-East of the country / / Bull. Siberian Academy of Medical Sciences. - 1981. - № 2. - p. 13-20- 1981. - № 2. - C. 13-20.

Reviewer – M. H. Shraga,
Doctor of Medicine, Professor.

History

UDK 94(470.25),15/17"+355.48(045)

Heroic contribution of Pskov in the protection of the Russian North during the "northern" wars at the end of XVI – to the beginning of XVIII centuries



© **Egorov** Andrei, Associate Professor of Public and legal disciplines Pskov Law Institute FSIN of Russia, colonel of internal service, candidate of historical sciences. *Priority research topics:* history of contrabandism, boundary safety and transboundary cooperation in the Northwest and the North of Russia. Contact Phone: +7 921 212 36 33. E-mail: egovam2009@rambler.ru.

Abstract

The article deals with difficult problems of cross-border relations in the north of Europe have not lost their importance and relevance to the present. In the work we showed the events reflected and so-called "Northern" wars middle. XVI – the beginning. XVIII centuries. In the form how they look through the lens of a key border town in the north-western border of Russia, Pskov, which was at this period the main city of Russian statehood in the Northwest and the country, was in the middle of international controversy. Article introduces the scientific revolution, some little known facts that allows to use more objective look at the history and present of the North and North-West Russia.

Keywords: *centralized state, a geopolitical vacuum, strategic, military conflict, dynastic controversy, claim, privilege, an international treaty, neutrality, intervention, border truce, diplomacy, the demarcation, the coalition, disposition, surrender.*

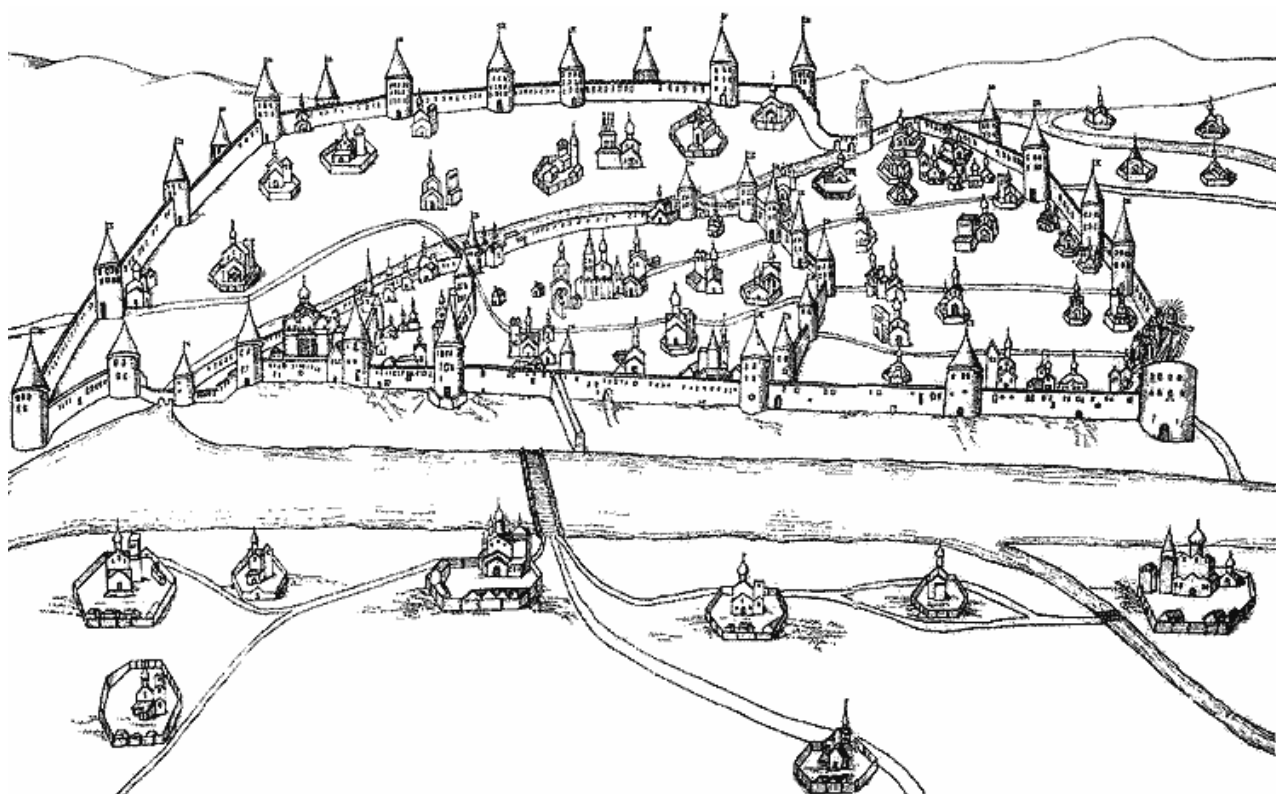
Strengthening of centralized states surrounding the Baltic Sea, and the collapse of the medieval Livonian Confederation created at the dawn of modern times geopolitical vacuum, has drawn the neighboring countries in an active struggle for the Eastern Baltic. Of particular importance was the struggle for Poland, Lithuania, Sweden and Russia. In the midst of international conflict between the two countries was of Pskov, who was in XVI-XVII centuries, the main stronghold of the Russian state in the area. Foreigners, in turn, is highly valued as a defensive and offensive capabilities of Pskov, "Russia considered it the surest bulwark against Livonia, and Poland and Sweden have always wanted to get him as foreign hedge against this country" [1, p. 302].

The strategic importance of Pskov very apparent in a whole series of so-called "northern" wars that took place from 1558 to 1721 and to establish their own hegemony in the members area of the Baltic Sea (*dominium maris Baltic*). Pskov fortress was one of the greatest defenses in Eastern Europe. The length of the walls in the XVI century was 9 miles, and they have expanded and consolidated, built monumental towers were - Gremyachaya and others. Construction of the fortress was built of local limestone and boulders. Experts estimate the numbers flow of materials during the construction: about 600 thousand cubic meters of stone materials, 123 thousand cubic meters of lime, the same amount of sand and about 20 million buckets of water. One of the

participants of the Polish siege of Pskov in 1581 admired its scale, "Admiring Pskov. Lord, what a great city! Similarly, Paris! God help us deal with it" [2, p. 321]. The outstanding quality of the Pskov stronghold recognized and modern foreign experts (for example, the British military historian Robert Frost) [3, p. 83].

During the Livonian War, 1558-1583. The heroic defense of Pskov frustrated aggressive plans of the Polish king Stefan Batory. These events are well known, has long received due recognition in both domestic and in foreign historiography, and require no further comment under this humble article. Suffice it to recall the remark by N.M. Karamzin, who believed that his heroic defense of Pskov "saved Russia from the greatest danger, and the memory of this important contribution not be wiped away in our history, until we lose our love of country and his name" [4, 142].

Unfortunately, this covenant is not a classic of safe conduct for the subsequent events of the Pskov history. At present, sometimes even the venerable Russian historians, well-versed in the vicissitudes of European politics of the period, allow the annoying bugs (or reservation) when it comes to military and political past of their country. Very strange, for example, voice an opinion about what to Stolbovo 1617 the Swedes were forced to return (?) Pskov [5, p. 55]. Especially these errors are not acceptable when they are replicated reputable scientific journals. For this reason, it is worth recalling some facts that are not without the participation of Pskov predetermined path of development of the Russian state in the XVII - early XVIII centuries and led eventually to the creation of the Russian Empire.



Pic. 1. The plan of Pskov 1581. URL: <http://www.kremly.ru/pskov.html> (03.01.2012)

Less than twenty years after the end of the Livonian War, as the very threshold of Pskov, a new military conflict broke out. His back was the catalyst for the Baltic region, divided between the Polish-Lithuanian Commonwealth and Sweden. Moreover, the first owned by Livonia with Riga

and Tartu, the second - Estonia with Reval and Narva. However, both parties were not averse to expand its ownership by a neighbor. The situation was aggravated by their dynastic contradiction.

In 1592 the king of the Polish-Lithuanian Commonwealth Sigismund III Vasa, and inherited the Swedish throne. But his inflexible policies and a fervent Catholicism provoked the resistance of the Protestant population of Sweden, Sigismund III had to go back to Poland. In 1599 the Swedish Riksdag elected the new ruler of the king's uncle, Duke Charles Södermanlandskogo, who was crowned in 1604 under the name of Charles IX. The contradictions between the Polish-Lithuanian Commonwealth and Sweden continued to grow.

The first military action started by the Swedes, using as a pretext claim Sigismund III in Northern Estonia. In 1600 the then Duke Charles at the head of the troops entered Tallinn. Despite the fact that the main military forces of the Commonwealth were engaged in war with the Turks, the Swedes suffered heavy losses under the Cēsis and Koknese. Ended in failure and the Swedish siege of Riga. In autumn 1601 the Livonian Pardaugava arrived with his troops the King Sigismund III, and by the end of the year the Polish-Lithuanian forces managed to drive out the Swedes from the entire territory of modern Latvia.

In 1604 during the siege of Riga, the Swedes again failed. City of Riga, who received income from trade with Belarus and Lithuania, was interested in maintaining good relations with Poland. In gratitude for the loyalty demanded by the city of the Polish king of new privileges. The Swedes made a raid deep into the Duchy of Courland, but in 1605 suffered a major defeat at the Kirchgolma, where the troops of the Commonwealth under the leader-property Hetman Chodkiewicz defeated John superior enemy forces. Charles IX narrowly avoided capture.

In Russia at this time of turmoil raged, this is extremely complicated situation of Pskov in the face of belligerent neighbors. However, the new Swedish king Charles IX was originally demonstrated the Moscow authorities ostentatious friendliness and tried to conclude an alliance with them against the hostile Poles. In 1608, a popular Russian commander MV Skopin-Shuisky concluded at a meeting held in Novgorod with the Swedish Ambassador M. Mårtensson tentative agreement to provide the Government of Sweden, King Basil Shuisky military aid to fight his opponents. This agreement was confirmed in 1609 Vyborg contract, which provided for the transfer at the disposal of a subsidiary in Moscow in the Swedish contingent of five thousand soldiers under the command of Jacob De la Gardie. Union between Sweden and Russia, concluded in 1609, has angered the Polish king. Taking advantage of internal political problems in Russia, Sigismund III in the same year she officially declared war. Vyborg contract was valid only until mid-1610, ie before the defeat of the Russian-Swedish army under Klushino at Smolensk. In this battle, defeated the Poles, and the Swedish mercenaries Delagardi for a promise to remain neutral in an organized retreat to the north, thus betraying their allies. The troops of the Commonwealth took Moscow. After a long siege in June 1611 fell Smolensk.

Sure of the plight of Russia, the Swedish military leadership treacherously launched against her undeclared intervention. It is intended to deprive the benefit of all the Swedish coast of the Gulf, especially Izhorskaya land (Ingria) and Karelia. To consolidate his power in the Swedish army entered the ancient Russian cities such as Korela (Kexholm), Nut (Noteburg), Yam (Yamburg), Ladoga, Koporye, Ivangorod. Moreover, in the summer of 1611 De la Gardie came to

Novgorod, rose Khutyn camp at the monastery, and then went on to assault and was able to capture the Sofia side. This immediately made the Swedish masters of the situation and prompted some of Novgorod to swear allegiance to their king. Until 1617 the Swedish invaders held entire Russian Lapland to the north of Staraya Russa.

In these conditions, only Pskov, heroically defended by in almost complete isolation from the rest of the country, prevented the final annexation of the North-West Russia in favor of the Swedish crown. The situation was aggravated by the presence in neighboring Livonia, Pskov another dangerous enemy - the Polish-Lithuanian invaders. In the spring of 1611 the Lithuanian hetman Jan Chodkiewicz Livonia, who was at that moment in Tartu, attacked the Pechora River, and within six weeks of siege to the monastery-fortress. Timely help from Pskov saved his western outpost [6, p. 120]. In the end, broke out in Russia, the People's Liberation War forced the Poles to withdraw completely. But to the north and east of the city continued to threaten the Swedish invaders. Beginning in 1611 the Swedes and their allies Novgorod five times trying to capture Pskov. Particularly acute struggle to reach the city in 1615.

The main danger threatening from the Pskov belonged to the Swedes of Narva. However, on their way to lay unconquered Pskov Gdov suburbs. In the implementation of the Swedish and other plans have a hitch. October 30, 1611 Charles IX died, and the Swedish king was his seventeen year old son, Gustav II Adolf. He would later become famous as an outstanding leader and a pioneer, which will radically change the course of the so-called Thirty Years' War (1618-1648) - the first pan-European conflict, which laid the fundamental principles of modern international law. However, the Glory "Northern Lion" was waiting for him in the future. And while "Snow King" (another romantic epithet, which awarded the Gustav Adolf's contemporaries) had to complete the work begun by his father.

In the 1611-1613 years. Kalmar War broke out galloping between Sweden and Denmark, which required the personal presence of the new monarch. However, as soon as possible to the situation the young Swedish king turned his attention to Pskov border. In a letter to Jacob De la Gardie, dated 1613 year, Gustav Adolf wrote: "It is very useful to attack Pskov and try there luck for the reason that Pskov is a great trading city, which was then Sweden and its people can lead a great deal if it goes into our hands" [7, p. 75]. In 1614, Gustav Adolf personally went for the next theater of operations through the capital of Swedish Finland Abo (Turku), Vyborg and Narva. King managed to Gdov, after which he sailed to Sweden with the intention to continue the offensive in the Pskov next year.

At the beginning of 1615 against the Swedes had Pskov reconnaissance in force, but were driven back to the defenders. Then in the summer of that year, the city rushed to the walls of the Swedish army garrison commander Novgorod Evert Horn. Finally, 30 July 1615 from the north on the road to Pskov Gdov approached the main forces of the Swedes led by the king himself. The rate of Gustavus Adolphus was organized in Snetogorsk monastery. The same day, made an unexpected attack of Pskov against the enemy. As a result, the Swedish troops have suffered significant damage, the King Gustav Adolf is rumored to have been injured and killed by Marshal Horn. Pskov Chronicle highlighted the death of the eminent Swedish commander: "The Miracle byst full of glory. By the grace of the Holy Trinity and the Blessed Virgin Mary and the saints Wonderwork-

ers Pskov unseen evil force of the barbarian slaughter bits their brave commander Evergorn like of the old Goliath "[6, p. 120]. This first collision immediately showed the Swedes that they will have to overcome the defenses are not demoralized turmoil of the population, as they expected, and well-organized resistance experienced and accustomed to war, people.людей.

The Swedes attempted to take the Pskov cunning. On the night of August 15 of a small group together with the "Little Russian" Cossacks deserters made a diversion by trying to penetrate the fortress of deceit under the guise of refugees. However, the vigilant guardian of them did not miss. Then they blew up near the gates Vzvozskie Lower lattices and, by breaking into the fortress wall Zapskovye, rushed to Varlaamskim gate, which stood opposite the main forces of the Swedes. The situation was critical, but the Pskov garrison and local residents rose to the occasion. As a result of fierce street fighting Pskov managed to dislodge the invaders from the city and shut the gates Vzvozskie.

Night storm broke, and Gustav Adolf had to resume a planned siege of the city, which lasted about two months. On the perimeter walls were erected Swedish fortified batteries (so-called. "Hill"). October 9, 1615 the Swedes were the general assault on the north side of Pskov. This was preceded by a three-day bombardment, which resulted in the damaged tower Kutekroma and serfs in the Kremlin, as well as on the angular Varlaamskaya Zapskovye [8, p. 220]. The Swedish king sent his main force to attack Vaarlamskih gate. In addition, the Swedes crossed the Great and inflicted a blow on the support of the Ivanovo monastery toward the bottom bars. However, all these operations have ended in failure for the Swedes.

After Pskov repulsed the assault, Gustav Adolf finally lifted the siege and 17 October gave the order to retreat. Trying to paralyze the normal life of the city, the invaders have erected at the mouth of the Great fortified fort, which was supposed to supply the garrison from Narva to Lake Pskov - Chyidskii. The Swedish king hoped to use the fort as a harbor for their galleys, and a beachhead in the event of renewed campaign against the Pskov next year. Pskov is well understood concept, and the Swedes have left them a chance to implement it. In early 1616 they were cleared of the invaders of the Great Delta, thereby restoring the ability of normal navigation and communication Pskov with its northern suburbs and the Baltic States.

The news about the final defeat of the Swedes on the banks of the Great Gustavus Adolphus found in Helsingfors (now Helsinki), where in January 1616 began meeting birth assembly of the kingdom. Events at Pskov negative impact on the mood of his deputies who expressed the King claims in the sense that "the Russian war is more of the greed of a foreign land, than on the need to" [7, p. 77]. Thus, Pskov became the first among the few military and political fiasco of Gustavus Adolphus. Hardest crushing defeat the Swedes at Pskov forced them to moderate their ambitions for great-power agreement signed Stolbovo 1617, according to which the Russian government returned the core of Novgorod lands. However, to fully restore the prewar status quo is not possible, resulting from Russia was cut off everything she owned the Gulf of Finland. In this case the boundary of Pskov remained intact.

In 1617, Rech Pospolita and Sweden continued to struggle for supremacy in the Baltic Sea. A young Swedish King Gustav II Adolf took Courland coast and the port of Pärnu and then began an active diplomatic effort to recruit allies against the Commonwealth. At the same time, he made

a complete reorganization of the Swedish army and navy. Aiming to capture the entire Polish Livonia (Inflyanty), Gustav Adolf began to implement their intentions. In 1621, before the Swedes finally surrendered Riga, and in 1625 - Tartu. A little later, to finally eradicate the Polish Livonia in Eastern influence, the king will sign a decree on the establishment of the Protestant University of Tartu. The new school was designed to replace the abolished Jesuit College, founded during the reign of Poles here.

After lengthy negotiations in 1629 in the Altmark armistice was concluded, which meant the end of the war between the Polish-Lithuanian Commonwealth and Sweden. Under the terms of Altmarkskogo world, Poland's former possessions in Livonia were divided as follows: the territory of modern Northern Latvia (Vidzeme), and Southern Estonia withdrew Sweden, and the territory of Eastern Latvia (Latgale) remained in the possession of Poland. Thus, all the major ports on the east coast of the Baltic Sea - Riga, Tallinn and Narva - were in the hands of the Swedes. Under their rule, and joined the city of Tartu, who controlled the western coast of Lake Chydscoe.

In the middle of XVII century, relations between Russia, Poland and Sweden were very confused and did not improve. After the first pan-European Thirty Years' War (1618-1648) Sweden fully controlled the Baltic Sea and claimed the lead in the North-Eastern Europe. At the same time, neither Rech Pospolita, nor Russia have refused from the intentions to strengthen its position in the region. In 1654 war broke out between Russia and Ukraine because of the Polish-Lithuanian Commonwealth. Russian troops recaptured Smolensk, captured the most important centers of the Grand Duchy of Lithuania (Vitebsk, Mogilev, Minsk) for the first time in the history of Lithuania was occupied Vilnius, Kaunas and then Grodno. Tsar Alexei Mikhailovich required declaring his Grand Duke of Lithuania.

The new king, Charles X of Sweden took the approach of Russian troops to seize some of the territory of the Polish-Lithuanian state for themselves, thus securing the supremacy of Sweden on the Baltic Sea and to prevent access to it in Russia. In 1655 two Swedish army invaded Poland and occupied the third Inflyantiyu (Polish Livonia) and part of the territory of modern Lithuania. Warsaw fell on September 8. In a situation where most of the Grand Duchy of Lithuania was occupied by Russian troops, Hetman Janusz Radziwill and some other noble lords have decided to join the Swedes. Near the town of Kedainiai signed the Lithuanian-Swedish agreement, tearing the union between the Grand Duchy of Lithuania and Poland, and proclaiming the same union between Lithuania and Sweden. The Swedish king Charles X Gustav was proclaimed Grand Duke of Lithuania. However, the behavior of the Swedish troops in the occupied territories has led to the fact that in 1656 broke anti-Swedish rebellion. The war dragged on. Swedish army had to leave Lithuania, which meant the termination of the union of Lithuania with Sweden.

The interference in Polish affairs in Sweden was not included in the plans of Russia. The clash of their interests in the Baltic States in the same year led to the outbreak of war between the two countries. The war began with a conflict of Swedish and Russian troops from Daugavpils. In the summer of 1656 Moscow's troops, led by Tsar Alexei Mikhailovich, captured from the Swedes and the Daugavpils Kokengauzen. They were able to go as far as Riga, but the strength to take the besieged city, is not enough, which caused extreme frustration and anger of the king.

Successfully developed the offensive of the Russian troops from Pskov. The Swedish garrison in Dorpat (Tartu, Estonian, Russian, St. George), was besieged by the troops governor Prince Trubetskoy A., and Revel, and Narva on the roads covered their squads II Sunbulova and LK Shehovskogo. Swedes had taken refuge in the Lais were not able to assist the besieged, and in October 1656 Tartu capitulated [9, p. 37]. Thus, the city, founded Kievan Prince Yaroslav the Wise, passed under the authority of the Russian Tsar and his people brought to the proper oath of allegiance. At the same time in Latgale came under Russian rule, and Marienburg (Aluksne).

One of the main initiators of Russia's entry into another "Northern" war with Sweden was the head of the Ambassadors of the order AL Ordin-Nashchokin, came from a noble family of the Pskov and made a brilliant career at the court of Tsar Alexei Mikhailovich, due to the personal abilities and education. His diplomatic skills first appeared before the war as a commissioner for the demarcation of Pskov, the Swedish section of the border. Later, the Swedes, who had to deal with Ordin-Nashchokin, called him a "Russian Richelieu" [10, 275-276].

In early 1657 the Swedes made a foray into the vicinity of the Pskov-Pechora monastery and laid siege to Gdov. However, the IA troops forced the enemy to withdraw Khovanskii to Narva, which was not enclosed by a chain of bastions and was close to collapse. Russian captured the Swedish fortress on the Neva Nyenskans, and Cossacks, equipped by Patriarch Nikon, even were able to board a Swedish sailing near the island of Kotlin. However, the key points of the Ingrian land - Nut and Yam - were the Swedes.

In 1658 in the village Valiesari halfway between Narva Syrenskom and representatives of Sweden and Russia concluded a truce for three years. Negotiations with the Russian side led Ordin-Nashchokin, who was able to hold on to all of Russia won her Livonian cities. However, the peace treaty between Sweden and the Polish-Lithuanian Commonwealth, following the death of a prisoner of Charles X in Oliva, near Danzig, complicated the situation in Russia. The Polish king John Casimir renounced all claims to the Swedish throne, which are put forward by his predecessors since the days of Sigismund III Vasa. This peace was necessary for Poland to continue the war against Russia. In 1661 the Polish-Lithuanian troops took the offensive, including capturing Sebez on the southern borders of Pskov region.

In the same year in the village Kardiss that the half-way between the Yuriev and Revel, started the Russian-Swedish talks on the subject of peace. Ordin-Nashchokin they basically did not take part. He was convinced of the need for any price to secure for Russia conquered by the Livonian town, for which, even thought it possible to give up Ukraine in favor of Poland to free the hands for war against the hated western neighbor [11, p. 510].

However, faced with the prospect of war on two fronts, the Russian side was forced to make concessions to the Swedes. As a result Kardissky a peace treaty in 1661 restored between Sweden and Russia, the pre-war status under the Stolbovo 1617. Thus, Russia has once again been cut off from the Baltic Sea.

The political significance of Pskov on the eve of the following account of the Great Northern War (1700-1721) reached its climax. Especially, it is clearly evident in March 1665, when he was appointed voivod from Pskov A.L. Ordin-Nashchokin, who continued, however, to carry out effectively the functions of state chancellor (custodian great sovereign press). During his province of

Pskov became a kind of diplomatic capital of the country. In the 1666-1667 years. Ordin-Nashchokin, remaining head of the Pskov administration, and led the negotiations that resulted in the signing Andrussovskogo truce between Russia and the Polish-Lithuanian Commonwealth, in which the latter refused on the left-careful of Ukraine and Kiev. And in September 1668 for his active participation was opened Russia's first international highway Moscow - Pskov - Riga with the regular mail, with the communication. Junction of the canal was just Pskov. Weekly on Wednesdays in the Pechora met Riga and Pskov couriers, exchange diplomatic and private correspondence.

After World Kardissky relations between Russia and Sweden seemed to be calm, developed trade. But the tension remained. In Stockholm, do not forget about their old plans to establish control over the North-West Russia. They were resuscitated as early as 1674 - just in time for the Swedish Embassy in Moscow Oksensherna Gustav, which was moving towards its goal through the Pskov. March of that year, an anonymous document dated to the expressive title "Project inarticulate, to who should be a way to fight with Moscow" [12, p. 34]. The unknown author of the project is strongly advised to maintain the Swedish king, trusting relationship with Poland, so that in case of need together to oppose the Russian. In his opinion, Sweden should have been closer, and with the Ottoman Empire and the Crimean Khanate, and Persia, to be their allies face in case of war with Russia. Then followed a description of the Russian lands to the military-strategic point of view, the shocks were planned direction of the Swedish troops during the alleged winter and summer campaigns. Discussed and what the fleet and the forces should keep alert to the White Sea, to seize Kargopol, Archangel and their surroundings. Provided data about the sea depths, fairways, harbors, islands, etc. After mastering the Archangel Swedes asked to move deeper into the Ob River in Siberia and to seize its capital - Tobolsk. The main occupation forces encouraged to send to the area between the Kargopol, White Sea, Northern Dvina, and Vologda, in order to permanently secure them for the Swedish kingdom.

A special place in these plans was given to Pskov and Novgorod. Their neighborhood was assumed to use as the main front-line base for the maintenance of the Swedish army, and strengthened by additional new frontier fortresses, and mobile military units. In addition, the author of searchlights reflected on how to achieve the loyalty of the Russian population in the occupied lands of Sweden, stressing that local commoners dissatisfied with life, restless disposition, and inclined to revolt. He believed that their location can be achieved distribution of monastic lands and church property, and freedom of religion, "characteristic of our religion in relation to their faith." The author also believed that the cost would be to select a hundred or two more or less educated, entrepreneurial, have good health of local young people and to attribute the content to universities in Tartu, Turku and Uppsala. In the case of the Swedish invasion of their proposed use as a sort of "agents of influence" to ensure that they are traveling on the said land, would act with speeches, winning the hearts and otherwise ensuring the loyalty of the population. In any case, at that time all of the above plans have remained on paper, as the leading position of Sweden in the Baltic Sea are not satisfied with its southern neighbors, primarily Denmark and Poland.

To be fair to mention that on cross-border cultural exchange existed, and the opposite point of view. For example, in late November 1698 the deputy military commandant, Major Valenshted Tartu in a report to the Governor-General of the Swedish Livonia Eric Dahlberg was trying to clear up rumors about the alleged probable arrival at the University of Tartu four Russian students, each of which, moreover, must be accompanied by a few slaves. Mayor was concerned that under the guise of students come to town disguised as none other archers from Moscow! In a panic from a hypothetical influx of Russian Major suggested that even in the form of an ultimatum to require the neighbors to clean from the Pechora Monastery monks near the University of Tartu and move there. According to Swedish warriors, it is better to let people on the go for the science of Tartu in the Pechora than a "fifth column" of Russian students flood the city entrusted to him [12, p. 37].

Dissatisfaction with the domination of the Baltic States of Sweden and the fear of further aggression contributed to the formation of anti-Swedish coalition. This coalition would involve Russia, having, however, measures to ensure "that this powerful ally snatched from under the nose is not hot and did not go beyond Narva and Lake Chyd" [13, p. 383].

At the beginning of the XVIII century the Baltic region, which borders Pskov land once again became the scene of hostilities. In 1699 was created anti-Swedish Northern League, which included Russia, Denmark, Rech Pospolita, and Saxony. The ruler of Poland and Saxony August II the Strong was hoping with the support of Peter I return to Livonia (and if possible, and Estonia) in the Polish-Lithuanian state. The decision of the Elector of Saxony, influenced by the fact that the capture of Livonia, he saw the best way to consolidate his power in the Commonwealth and its transformation into a hereditary [14, p. 284]. Active coalition was inspired Livonia landlord Johann Reinhold Patkul, an outspoken opponent of Swedish agrarian reform (reduction). It was he who organized the 1698 meeting of the Saxon Elector Augustus II, who was both King of Poland, and Peter I on the way back from Europe last. Patkul hoped to wrest Livonia from Sweden and make it an autonomous province of the magnate, Polish gentry, decentralized political system which is more impressed by some local landowners than the absolutism of the Swedish monarchy. In a secret agreement in August with the assumed transition Patkul Livonia and Estonia in the family possession of the Saxon house.

The original purpose of Russia in this war was the return of the native Russian territory on the southern coast of the Gulf of Finland - Ingrian land (Ingria, and Ingria), the coast of the Neva River and parts of Karelia, seized by the Swedes during the Time of Troubles in accordance Stolbovsky contract in 1617. In particular, the Saxon envoy in Moscow, wrote to his sovereign: "Peter has expressed a desire to make your Royal Highness helped him to take those of the Swedish, who by God's grace and rightly so, in fact belong to Russia and have been lost due to confusion at the beginning of this century" [14]. In accordance with the disposition of the allies the Danes were to engage in controversial and Sweden Holstein, Saxon troops invade Livonia, and the Russian army to take Ingria (Izhorskaya land, or Ingermanland).

Hostile neighbors could not be a big secret to their enemy. Swedish authorities serious concern expressed in the spring of 1697, when passing through the Pskov and Riga Livonia visited the Grand Embassy of Peter I, bound for Western Europe. From Moscow, the embassy had left

10.9 in March 1697 by the usual route through the embassy of Pskov. The first foreign city to visit Peter I, was Riga, owned by Sweden at the time [15, p. 226]. According to the Governor-General of Riga Dahlberg, some ladies of the royal embassy were "very intrusive" and not only climbed on the fortifications of the city, collecting information of a military nature, but "with great diligence burdened residents meaningful discourse." Misunderstandings that occurred during the stay of the Russian Embassy in Riga, Peter later known to be used as an official pretext for declaring war on Sweden. Disturbing rumors brought to the Swedes and the Pskov men who were in the taxi driver and returning from the border of Courland. Focusing on the night of the peasants in the neighborhood of Riga, they were told that the king's army in the summer to come back and attack, as the attack on Azov [12, p. 37].

The Great Northern War began in February 1700 roll Saxons to Riga. To capture the city failed. In March, Denmark entered the war, and after a few months after her, and Russia. Diet of Poland, seeking to avoid war, the king did not give permission for the participation of Polish troops in military operations. That's why Augustus II had to use only the Saxon troops. Rech Polspolita as a state in the war did not participate. After the start of the offensive on the Western Dvina Saxon nobility of Livonia troops left their farms and evacuated to the city - Revel, Pärnu and Tartu. The entire southern part of Livonia was left to plunder. However, first landed estates began to plunder not enemies, but local farmers [12].

Russia is also preparing for action against the Swedes. From August 4 to October 2, 1700 in Pskov was the king himself. The city was a single large arsenal. Pskov masters produced edged weapons for the army, cast cannon, built a river and lake vessels. Military preparations could not go unnoticed by the Swedes. The messenger, who arrived from Pskov, said the commandant of the Tartu Karl Schutte, there is concentrated the army of many thousands, but no one knows where and for what purpose it will move. Assumed that it will go to Narva. However, the details of the Swedes did not know, because in the early autumn of Pskov authorities closed the border and did not let across the border.

Suddenly, for the Allies the young Swedish King Karl XII was quite energetic commander. Already in August, he defeated the Danes, and forced them to go to a peace treaty. However, the royal government has not yet aware of this and actively preparing for entry into the war. In November 1700 the Russian army besieging Narva were defeated by the approaching suddenly expeditionary army of Charles XII. Russian losses were great. Suffice it to recall that the Russian army at Narva had lost almost all his field artillery - 135 guns. However, this failure was not fatal to the Russian side and the damage it should not be exaggerated. "Narva confusion" in 1700 can be compared with the "Pskov embarrassing," the Swedes in 1615, because, like Gustavus Adolphus, Peter I could learn a lesson from this defeat and mobilize all forces to restore and strengthen the combat readiness of its army.

Even the fact that the requisition of church bells to recover lost Narva artillery used by some historians as an illustration of the depths of the Russian army experienced a fiasco, it was certainly a necessary measure, but not to be so extraordinary, as usually seems to a layman. In Europe, a so-called "right to the bell" at this time was a common practice. In the English-manusk Ripto XVII century, establishes the duties of Provost Marshal, said that "the gunners and their

assistants are entitled to the best bell in place of the conquered." In 1807, Major-General Blomfield wrote that "it was continuing a tradition in our service, when a city capitulated, allowing the officer to require the Royal Artillery, lokola in the city and dependent areas." In the French Army Grand Maitre des Arbaletriers would require guns, bells and brass or bronze utensils in all the conquered cities. In the Spanish army there is the same custom. At one time in England, the bells were confiscated from the monasteries were the main source of weapons-grade metal [16, p. 20]. During this difficult period for the army of Peter the impregnable fortress of Pskov, 200 bristling with guns, enabled Russian to recover, regroup and regain their fighting ability to fight standing almost on the verge of an enemy. Prior to 1705 Pskov became the main base for the army passed under the command of the BP Sheremetev. The headquarters was located in Pskov housing wards in the Postnikov Zapskovye ("house-bag"), acting simultaneously as a commandant.

In all the border points of the Pskov region were reinforced garrisons. Around the old walls of the Pskov on the orders of Peter I hastily erected earthworks, which became the prototype of a new type of fortification of the future of the Russian Empire. King did not personally inspected every performance data. Important role in the preparation of the defense played Pskov Governor V.B. Bukhvostov and his assistants - clerks, and L. L. Klishin Valkov.

Some breathing room necessary to enhance border Pskov, Russian, provided their allies-Saxons, and again threatened the capital of Swedish Livonia - Riga. However, in July 1701 took place on the coast in the Western Dvina Spilveskom battle the Swedes defeated the Saxon army. After this victory, Charles XII became interested in the persecution of the Polish king and moved in the opposite direction from Pskov, south-westerly direction. Specifically dealing with this issue A.G. Zakharenko suggested that the refusal of the Swedish king to storm the north-western border of the Russian state could have influenced this finding in his path such a powerful fortress, like Pskov [17, p. 188]. It is possible that Charles XII really did not want to tempt fate, where a failure by his great predecessor, Gustavus Adolphus.

This does not mean that the Swedes have forgotten about Pskov. Against him in the East of Livonia was concentrated ten thousandth Shlipenbaha bodies, which constantly threatened the frontiers of Pskov. In autumn 1701 the son of Commander Sheremetev - Mikhail Borisovich - defeated the Swedes on their way to the Pechora, and then, crossing the river Vybovku (Vöhandu) under myzami Ozeretskoyu frisky and attacked a detachment of Major Rosen and almost completely destroyed it. Of the 600 Swedes were saved only by a lieutenant and major, with 80 soldiers. Russian seized as booty by Swedish convoy, two guns and three Standard enemies.

In December 1701 a campaign against the body Shlipenbaha from Pskov were the main forces Sheremetev. They moved across the ice of the Great River and Lake Pskov. Nomination of Russian troops on Swedish territory took three day transition. The first camp was organized at the church of St. Nicholas from the mouth on the left bank of the Great Delta. The second stop troops made near the village of fox, near the mouth of the river Pimzhy on the west coast of Lake Pskov. At the end of the third day squads Sheremetev finally went to the Estonian coast and camped on the banks of the river Vybovki (Vöhandu) in the Rāpina. Leaving the train in the latter camp, Pskov body through deep snow secretly moved to Eresteru, where the winter apartment unsuspecting Shlipenbaha.

December 29, 1701 at the battle field Erstfere occurred, culminating in this first major victory in the Russian war. Soldiers of the enemy fled, pursued by Russian regiments, which do not come to Tartu, only about 10 miles away. Nevertheless, her, his garrison was burned himself in a panic suburbs of the city. This victory was celebrated loudly and Pskov, and Moscow. As a reward for her Sheremetev was awarded the title of field marshal.

July 18, 1702 in Pskov Gummelsgofo housing Sheremetev scored another victory over the Swedes, after which the region was virtually cleared from the Swedish field pieces. In August of that year fell Fortress Marienburg (Aluksne). Among the prisoners were captured here and Martha Skavronskaya - future wife of Peter I, better known under the name of Catherine I.

Pskov Corps took an active part in the reconquest of the Ingrian land at the end of 1702-1703 years. Under the direct command of its connection Sheremetev stormed Nut (Noteburg), and Nyenskans Koporie [18, p. 64-65]. At the same time a detachment of General von Verdun, acting independently, struck from Pskov in the north along the east coast of Lake Peipsi and captured Yamburg (modern Kingisepp), putting the finishing point in the reconquest of Ingria [19, p. 167]. The way in Estonia and Livonia was opened.

Lightning fast connection of the southern Gulf coast between the mouth of the Neva and Narva was achieved by concentrating on this area the most combat-ready units of the Russian army, whose rears were covered securely from a possible attack the main army of Charles XII fortifications of Pskov. In late 1700 - early 1701's. Pskov was launched Russia's first Field Artillery Regiment, whose gunners dressed in uniforms of the symbolic color of "smoke and flame" - short, knee-length red coat with blue trim and brass buttons, red waistcoat, blue stockings and low shoes with buckles blunt. The choice of deployment Artillery Regiment, possibly due not only to the approximate nature of Pskov in the theater of hostilities, but the presence of the necessary infrastructure.

In Pskov, the first time in European military history (earlier than in Western armies) was created by horse artillery, which is confirmed by a number of significant facts. Thus, in the battles of 1702 in Gummelsgofom servants long howitzer was planted on the horses when dragoon regiments had their own mobile artillery, remained a decree "On the horse-drawn artillery dress", which included supplying them with horses and riding accessories. Those skilled in the reasonably argue that it is in the early years of the Great Northern War Russian army began to use field artillery on such a scale that had not been known to European business in Europe [20, p. 73].

Reorganization of the Russian artillery, launched in Pskov, a beneficial impact on future campaigns. Thus, during the siege of the troops Kopor'e Sheremetev in 1703 the Swedes surrendered the next day after the shelling started, despite the bluster preceding the commandant of the fortress, answered the standard offer of surrender, "do not go away." In a report to Peter I Russian field marshal on this occasion said: "Thank God, the music is yours, sir, - mortar bombs - well played: the Swedes are much given to dancing and the Fortress, and if it were not for the bomb, god knows what to do" [21, P. 41].

In July 1704 during the siege of Pskov housing decisive assault on the city of Tartu was preceded by intense artillery bombardment so that Peter I call this tactic "a fiery feast." In August of that year, the king is even organized a kind of command and staff duties to his generals and

ministers, explaining the nuances of the position held at the Pskov gunners' fire-feast "[22, p. 103]. This tactic is actively used by Russian troops in their advance on the Baltic and beyond. For example, the threat of massive bombing contributed to the relatively bloodless surrender of Riga, which at that time exceeded in size Stockholm. The famous scholar of the Northern War Academician EV Tarle rightly noted in this connection that "one of the elements of the final victory of Russian and Swedish defeat was rapidly increasing strength of the Russian field and siege artillery and in the parallel there is the decline of the Swedish artillery," [20, p. 71].

Pskov, the Great Northern War was also the birthplace of the first individual in the Russian army pontoon, minernogo and engineering units [1, p. 314]. An important, though, unfortunately, little known now, the role played Pskov and in the initial stage of the domestic fleet. Back in 1667 at the initiative of the famous statesman and Pskov AL Ordin-Nashchokina, who was an enthusiast of the domestic shipbuilding industry, and with the permission of Tsar Alexei Mikhailovich Oka was laid the first naval ship "Eagle" [23, p. 9]. In the spring of 1669 built the ship was transferred to Astrakhan to protect shipping in the Caspian Sea, where he was subsequently killed during the uprising Razin [24, p. 71]. However, later in the book of Peter I "The Charter of the sea ..." remarked about the project Ordin-Nashchokina: "From the beginnings of, like a kind of seed, it was the current of the sea." By itself, Pskov was not only a powerful arsenal for the Army, aimed at Swedes in Livonia and Estonia, but also one of the first military shipyards in the North-West of Russia. At the same time the experiences of the Azov campaigns and construction of the fleet in Voronezh. Contribute to the creation of the last made, including the clergy, and Pskov. The Dutch artist built a galley on the Don, "Metropolitan of Pskov," which provided the funds for, apparently, Pskov diocese.

The need for auxiliary flotillas came quickly and was recognized by the Russian command in preparation for the struggle for the Baltic and in the Baltic Sea. Particularly active hostilities at the beginning of the Great Northern War between the Gulf unfolded, Chyd Lake and Lake Ladoga, where the enemy had a squadron of warships, manned by personnel sailors. They provided support for the actions of its ground troops and prevented the Russian advance. Swedish commands do not imply the water to meet any serious competitor.

At the beginning of the war is completely ruled by the Swedes in the Lake Peipsi, interrupting water transport and ruining his opponent Russian coast. For example, in 1700 the first trophy - Pskov flag embroidery, delivered just arrived in the Baltic Karl XII, - it was captured by the Swedish flotilla on Lake Peipsi, intercepting a caravan of ships that came from Pskov with military cargoes to Narva [25, p. 90].

Over the next few years since the war began, the Swedish squadron, based at the River Emajõgi near Tartu, has increased from six to fourteen units. Markedly increased and its firepower. Most other guns (14) was the ship "Vahtmeyster" flagships "Karlous" and "Karlskrona" carrying 12 guns, respectively, "Ulrike" - 10 "Narva" and "Schutte" - 8 "Victoria", "Viva "and" Elephant " - 6 "Shtremfeld " - 5 "Numers ", " Shlipenbah "and" Horn " - 4 guns. In the fleet also included the ship "Dorpat", which for some reason mostly remained laid up in Tartu [12, p. 106]. The Swedes tried to lock the Russian ships stationed on the roads of the Great River, within the Pskov lake and do not let them into the waters of Lake Chyd. The command of Russian troops in Pskov, in contrast,

is committed to break the blockade established by the Swedish fleet. Reconnaissance Squadron of the lake against the enemy was held in 1701, when released from the mouth of the Great "pskovitin" Ivan Stepanov with the Cossacks joined the battle with the Swedes, they stole 56 guns and fuzeynyh sank two iron cannons.

In winter 1702 in Pskov was built about 200 "small galleys," as a result of having covered securely Pskov and Lake Peipsi from the Swedes. To perform this task in front of the church Stefanovsky Mirozhsky monastery was organized by this shipyard and mobilized local artisans. In the folk epic of the period preserved the memory of these events: "on the Talab Islands of the Chyd Lake many ship masters and assistants in the city were brought to the meadow at the Great River, near the church Stepan ships against the Swedes

In May 1702 the Pskov garrison troops in boats and longboats moved to the offensive in the north and through the river delta of the Great came to the operating room. In the narrow strait that connects Lake Cgydfrom Pskov, a detachment of Colonel FS Tolbukhin was greeted by the Swedish squadron under the command of Vice Admiral Lesherna. As a result, between Swedish and Russian vessels began a hard fight, which lasted almost continuously for three days [26, p. 34]. Swedish ships had the advantage in arms and artillery showered with a hail of Russian shells. Their volleys were smashed and sunk several Pskov sailboat. However, in response to our soldiers used the tactic of boarding, courageously drawing closer to the enemy under continuous fire and forcing him to join the melee. As a result of a fierce battle the Swedes were forced to leave a lucrative position, and Pskov court, broke the resistance of the enemy, broke through the waters of Lake Chyd. May 31 there has been a battle between the new squad Tolbukhin and five ships of the squadron Lesherna.

Finally, in July 1702 four Swedish ships were attacked Lesherna near the mouth of the river Amovzhi (Embah now Emajõgi) detachment of Russian sailboat, Major-General Gulitsa, out-of Pskov in a few days before. Along the way, landing Gulitsa destroyed at the mouth of the strengthening of the Swedish Amovzhi.

In all unfolded in 1702 in Pskov-Chud battles Swedes suffered significant losses. In the first clash of Pskov soldiers was captured yacht "Vahtmeyster" and the second and the third ended in the capture of two Swedish Shkut - "Flundran" and "Viva" [27, p. 118-119]. These events were a prelude to the formation of Russian naval infantry units in the Baltic. In the battle on Lake Chyd was baptized in the sea as commander of the soldier's regiment Fedot S. Tolbukhin, famed in June - July 1705 of the heroic defense of the island Kotlin that saved St. Petersburg was being built on a massive attack of Swedish Navy [26, p.38- 40]. Pskov experience in dealing with better armed Swedish ships was repeated a month later, on Lake Ladoga, where the enemy had a squadron under the command of Vice Admiral Numersa. June 27, 1702 thirty Russian sailboats attacked him near Keksholm, causing serious damage to the Swedes. In the end, did not dare to stay Numers in Lake Ladoga and took their ships on the River Neva in the Gulf of Finland, which has created favorable conditions for the successful siege of the Russian troops Noteburg - ancient Novgorod fortress Nut. Taking the latter opened the way to the Russian Baltic Sea down the Neva River to the mouth of which the army and went Sheremetev spring 1703. Here, in May of that year a detachment of boats under the command of Peter I and Menshikov took on board the ship two

Swedish ship "Gedan" and "Astrild" that inadvertently separated from the squadron Numersa, who continued to ply the Gulf of Finland.

One of the most important results of the breakout of the Pskov flotilla in the waters of Lake Chyd was the seizure of Russian castle Syrenska (Neyshlossa) - a powerful coastal fortifications on the north-east coast of Narva at the source [28, p. 82]. The ruins of this castle, rising above the Estonian side of the village limits Vaskanarva, still make a strong impression of monumentality. The harbor was Neyshlossa convenient point for the reception of military cargo from the Pskov necessary for the fighting in the operational direction of Narva. Proceeding from this springboard, Russian troops were able to make forays into the neighborhood of Narva and Ivangorod.

However, the main forces of the Swedish squadron at the Emajõgi hiding still represent a serious danger, threatening the flank Russian communications between Pskov and Syrenskom. In 1703 the Swedes were reminded that their early to dismiss, committing sabotage on Talab Islands in Lake Pskov. However, to gain a foothold here, they could not, and destroying the monastery on the island of Superior, sailed to Tartu. Finally, the Swedish threat to the Chud was finished the following summer. This refers to large-scale operation against the Russian Swedish flotilla on the river Emajõgi.

By the summer campaign of 1704 is actively preparing for both sides of the Pskov-Sveyskogo abroad. The Swedes were afraid of the big offensive of the Russian troops from Pskov and confused like most of their plans. It was therefore decided to withdraw the court in Lake Chud as soon as possible. April 16, Major General Commandant of the Tartu Slippenbach sent the following note: "Probably, Lake Chud to this point is completely free of ice, so that the fleet could sail to the familiar spot. The situation is such that its inaction to Tartu, then simply intolerable "[12, p. 107]. After that began a feverish Swedish ships equipped for the campaign. However, the Russian command in Pskov was able to outmaneuver the enemy.

The rate of the Russian troops in Pskov, has decided to shut the Swedes at the mouth of Emajõgi and do not let them into the lake. April 30 the commander of the Swedish fleet Leshern Carl Gustav von Herzfeld, received training in the Netherlands, reported to the commandant of Tartu, with a fair wind that his ships ready to sail. But by this time in the race for who first went down to the water court, the top scored Pskov. Already April 26, Major-General Nikolai von Verdun led 7066 soldiers and archers with eighteen guns to boot sailed from the mouth of the Pskov Emajõgi. Climbing up the river, the Russian team May 3 landed a few miles from the village of Castro. Just the next morning, May 4, 1704 the Swedish squadron finally moved from Tartu to the side of Lake Chud.

After a brief stop at the village Luunja Loshers von Herzfeld learned from local fishermen, who were returning to Tartu, which is suitable to the mouth of Emajõgi to hundreds of Russian vessels, and ordered to add the course. Swedish ships raised anchor and deployed in three groups under the sails flew downstream toward its own destruction.

By this time the troops had time to arrange Pskov Swedes trap. The village was blocked by the river Castres interconnected barges, and in front of them, just upstream, a barrier built of logs. Part of infantry and two regiments of musketeers sat down in their boats, and other soldiers

lay on the banks of the river. In this way turned out a kind of "bag" in which between seven and eight o'clock in the morning at full speed and flew into the Swedish squadron.

The battle lasted about three hours. Longest held at the flagship "Karlous" he Losher von Herzfeld. But seeing the hopelessness of their situation and unwilling to surrender, the Swedish admiral threw the burning torch into a powder keg and perished with his ship exploded. Swedes 142 people were captured, about 190 people have died or deserted more than 240 officers and soldiers who were in the tail of the squadron, jumped ashore and were able to return under the protection of the fortress walls of Tartu. On the Russian side were killed Lieutenant Colonel, Major and 56 soldiers, 162 people were injured. As winners of the trophies went to twelve ships with 86 guns. Part of the Swedish guns had drowned in the river, but the Russian soldiers were able to raise them.

Captured from the Swedes ships with great triumph was distilled in Pskov. Then they were used in military operations against Tartu and transport of materials needed for re-siege of Narva. As a result of this victory, the Swedes suffered heavy damage to the strategic and navigation on the Lake Chud fully came under Russian control. Waterway from Pskov in Tartu and Narva, very convenient for transportation of military goods required to deploy offensive in the Baltic States, was finally open to the Russian troops.

In St. Petersburg, in the newly erected St. Peter and Paul Church held a thanksgiving service in honor of "lucky 'victory at Castres. King wrote to celebrate Marshal Sheremetev in Pskov, which can only heartily thank God, because "those cases of a single attribute to him worthy." The Dutchman, Adrian Shhonebek dedicated to this event his engraving "Panorama Amovzhe battle on the river where it flows into Lake Chud May 4, 1704," which became the first in a series of local paintings, depicting the outstanding naval victory of Russia.

Soon after this victory, from Pskov in the direction of Tartu were the main forces of Field Marshal Sheremetev and pitched this stronghold of Swedish rule over the eastern Livonia. Russian ships coming up from the lake, assisted by his troops, bombarding Tartu Emajõgi River. July 3 at Tartu in Lake Chyd on the yacht, chipped from the Swedes from the besieged Narva, came the king himself.

July 14, 1704 as a result of violent assault on the city was finally taken. At five o'clock in the afternoon Marshal Sheremetev put his signature to the treaty of surrender of Tartu. As the spoils of war winners received 97 guns, 18 mortars, six howitzers, about 500 thousand musket bullets, more than 1,500 cannon balls and 500 bombs. Impressive were captured from the enemy's food supplies. This victory of the Russian army launched a hand for the taking of Narva, Pskov during which her body carried a cover against possible counter-attack the Swedes from Revel.

Narva Victoria had signed important for the morale of the Russian army. But it was a victory for Tartu, Pskov case was a turning point that began the final expulsion of the Swedish Baltic.

The potential threat to the Swedish attack on Pskov remained for several years, but in practice it was limited to small acts of sabotage by the enemy. In November 1705 a detachment of dragoons of thousand and a half Swedish Colonel Hermann Brockhaus made a raid on the road in

the direction of the Riga Russian positions near Pskov and Tartu. In January, 1706 in the direction of the Pechora made foray into a detachment of three hundred Swedish dragoons under the command of Major Freydenfelda. No significant damage to the lands of Pskov, the Swedes were unable to deliver. But stepping back from the old boundaries, they blocked the entire winter of Tartu and burned near the village of Luunja Russian ships stationed there, and hay.

January 3, 1707 an order was issued on the establishment between the Russian and Swedish armies of the dead zone in the border zone of 200 kilometres, from Pskov, Smolensk, through to Cherkassy, a length of 1,400 kilometers in a straight line. In Pskov, the militia was formed.

The defeat of the Swedish royal army at Poltava contributed to the successful offensive of the Russian troops in the Baltic States, which finally deflected a threat of hostilities from Pskov. In July 1710 the army of Field Marshal Sheremetev opened its gates of Riga, in August of that year, the fortress fell Pärnu, and in September - Revel (now Tallinn) [29, p. 203]. This victory secured the Baltic States to Russia, first de facto and eventually de jure.

After the final surrender of Pskov, Livonia and Estonia lost its role as the principal bulwark of Russian interests in the Baltic region. However, its potential strategic importance for the Russian state's geopolitical position in the North West continued to persist as the event proved the 20's and 30's and 90's. XX century. After joining at the turn of XX-XXI centuries. Baltic countries to the European Union Pskov again, as discussed above in the period, turned to the next land to the West Gate of Russia.

Literature

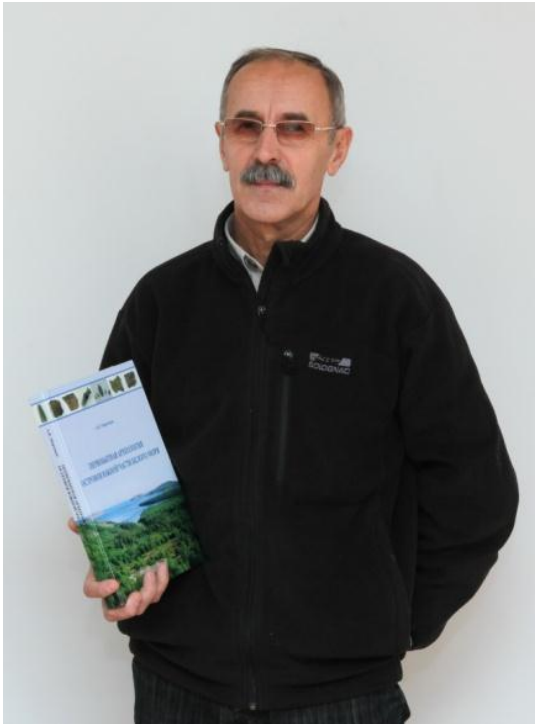
1. Pskov – is a city of military glory, articles and documents / Comp. NF Levin. Pskov, 2010. p.302.
2. Siege of Pskov eyes of aliens: Blogs Batory trips to Russia (1580-1581 gg.) / Join. Of Art. and with the comments of Mr. A. Mikhailov, Biographical. Sketch NF Levin. Pskov, 2005. p. 321.
3. Robert I. Frost. The Northern wars. War, State and Northeastern Europe, 1558-1721. Harlow, 2000. P. 83.
4. N.M. Karamzin History of the Russian state. T. IX-XII. Kaluga, 1993. p. 142.
5. Ivonin Yu, E., A. Hodin Gustav II Adolf / / Questions of history. - 2010. - № 9. - p. 55.
6. Pskov Chronicle. Complete Collection of Russian Chronicles. Volume V. Issue 1. M., 2003. p.120.
7. Kovalenko, the Russian and the Swedes from Rurik to Lenin. Contacts and conflicts. M., 2010.p.75.
8. Bologov A.A. Pskov. L., 1979. p.220.
9. Babulin IB Prince Semen Pozharsky and Konotop battle. St. Petersburg., 2009. p. 37.
10. History of Diplomacy: [Sat] / comp. A. Laktionov. M., 2005. p. 275-276.
11. Andreev, IL Alexis. M., 2006. p. 510.
12. Laydre AM Great Northern War, Estonia. Tartu in the hour of testing (1700-1708). Tallinn, 2010.P.34.

13. Brikner AG History of Peter the Great. M., 2002. p. 383.
14. History of Poland / Eds VD Korolyuk M. et al, 1954. p. 284.
15. East Prussia. From ancient times to the end of World War II: the East. essays. Documents. Materials / VI Gal'tsov, VS Isupov, VI Kulakov, Kaliningrad and others, 1996. p. 226.
16. Cipolla C. Artillery and sailing fleet. Description of technology and weapons XV-XVIII centuries. M., 2007. p. 20.
17. Zakharenko AG Creating defenses around the stone walls of Novgorod, Pskov and Pechora monastery in the early XVIII century / / Novgorod historical collection. No. 9. Novgorod, 1959. p. 188.
18. Zaozerskii A.I. Marshal B.P. Sheremetev. M., 1989. p. 64-65.
19. E.V. Anisimov time of Peter's reforms. L., 1989. p. 167.
20. E.V. Tarle Northern War: The Northern War and the Swedish invasion of Russia. Russian Navy and Foreign Policy of Peter I. M., 2009. p. 73.
21. Pavlenko N.I. Chicks Peter's nest. - M.: Thought, 1988. p. 41.
22. Pavlenko N.I Peter I. M., 2007. p. 103.
23. Mitrofanov, VP Mitrofanov, P.S. School of Sailing: Training sailing fleet XVIII-XX centuries. L., 1989. p. 9.
24. Skritsky NV Corsairs Russia. M., 2007. S. 24; Viskovatov A. Overview of Russian marine expeditions. IX-XVII centuries. M., 1946. p. 71.
25. Boris Grigoriev, Karl XII, or five bullets to the king. M., 2006. p. 90.
26. Zverev, BI Page naval annals of Russia. M., 1981. P. 34.
27. Adoption of Elagin Russia on the Baltic coast / / Sea collection. - 1866. - № 1. - p. 118-119.
28. Field NA Russian generals, or the life and exploits of Russian generals from the time of Emperor Peter the Great to the reign of Emperor Nicholas I / N. Field, foreword. B.P. Utkin - Perepechi with Vol. 1845 with the rev. - St. Petersburg. "Russian Symphony", 2006. -p. 82.
29. History of the World Wars. Moscow - Minsk, 2008. S. 203. Минск, 2008. p. 203.

Reviewer – V. A. Palmin,
Ph. D. in history, associate professor.

UDK 904(470.116) (045)

The islands of the White Sea, from the Mesolithic to the Middle Ages (the ancient development of the White Sea islands on archaeological data)



© **Martynov** Alexandr, archaeologist, Ph.D. of history, Deputy Director for Science FGUK "Solovki State Historical, Architectural and Natural Museum-Reserve". Author of 6 books and 90 articles devoted to prehistoric history and culture of the North. Contact Phone: +7 911 573 00 45. E-mail: martinov@solovky.ru.

Abstract

The article is devoted to the history of development of the White Sea Islands (Solovki, Kuzova, Zhizhgin, Mudyug) in the Stone Age – Iron (VI millennium BC. E. – I millennium AD. E.). On the basis of archaeological sources and experimental data it contains answers to questions about the nature of the ancient island of settlements, the culture of their inhabitants, cultural ties with continental cultures, ancient sea routes, origin and destination of stone labyrinths of the White Sea.

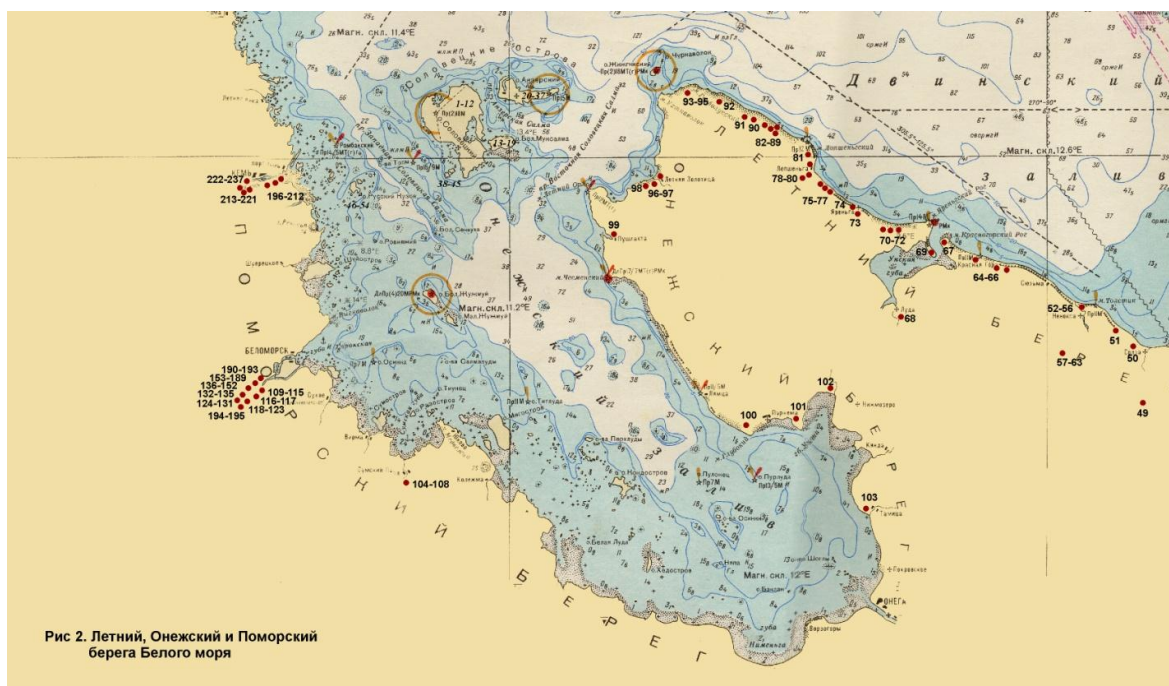
Keywords: *White Sea, Solovki Islands, an ancient settlement, excavations, artifacts, pottery, stone tools, labyrinth, an experiment, a boat.*

A short geological - geographical characteristic

The White Sea - one of the few, and the smallest sea in the Arctic Ocean. Its area - 90000 square meters. km length of coastline - 2,000 kilometers. From the North Sea is limited to south - Terek and Kandalaksha - shores of the Kola Peninsula, the west is washed by the Karelian and Pomeranian coast (Karelia), to the south - Onega, Summer and Winter shore (Arkhangelsk region). White Sea Islands mainly concentrated in the western half of the pond. The largest of these are great Solovki, Anzersky, Myagostrov, Kondostrov and Russian body. Two of them are united around the island's largest archipelagos of the White Sea: Solovki and body.

The Solovki archipelago consists of 6 large and 110 small islands in the western part of the White Sea at the entrance to Onega Bay. The shortest distance from the main island of the archipelago - Solovki - to the west coast, "as the crow flies" is 35 miles from the island Anzerskogo to the south-east coast - the arrows of the Onega Peninsula - 25 km. In respect of archaeological interest are the greatest major islands: Big Solovki (225.28 sq. km.), Anzersky (48.51 sq. km.), Big Muksalma (19.91 sq. km.), Greater and Lesser Zayatsky (respectively 1.38 and 1.24 sq. km.). Total area of the archipelago naturalist determined in 295.23 sq. m. km (Schwartzman, Bolotov etc, 2007, p. 184).

The archipelago Body (translated from Sami - "Spruce Island") is located 20 km west of the Solovki Archipelago in the 12-15 km east of the Karelian White Sea coast. Separated from the three-kilometer strait Kem Islands, the archipelago consists of twenty islands, which are rocky dome, composed of crystalline rocks and protruding from the water to a height of 123 meters. The islands are visible signs of tectonic activity, rock is visible from afar interrupted gully with taiga vegetation. At the base of the cliffs, as a rule, there are convenient for the residence of Bani-important area of human groups 8-10 and 16-20-meter height above sea level, adjacent to sources of fresh water - isolated, but rather large springs, and many rocky basins and depressions that fill with rainwater during the summer. The area of the largest islands of Russian and German body is approximately 7 and 1.5 square meters. Miles. Other islands in the archipelago are



rent level of the White Sea to a height of from 5-10 to 20-23 m (Kheladze, 1926, Kolosov, Novikov, 1996, p. 134-135; Demidov, 2002, p. 10).

The research of primitive monuments of the White Sea Islands

Professional archaeological study of prehistoric past the islands of the White Sea is the second half of 1920. Over the years, archaeologists have worked on Solovki Vinogradov (1926-1931), A.A. Kuratov (1964-1981) and Alexander Martynov (1984 to Present. Time).

H. N. Vinogradov was first surveyed about 1,000 stone additions (mazes, mounds, "symbolic" computations), published the first and only in the XX century book on archeology Solovki (Vinogradov, 1927), as well as a number of scientific and popular articles. They formulated the basic problems associated with the stone maze, and proposed a hypothesis about the dating, cultural background and purpose of "Babylon."



Pic. 2. N.N. Vinogradov

A.A. Kuratov and he founded the Arkhangelsk archaeological expedition carried out a second survey is open stone calculations, stationary investigated three stone embankment, discovered and partially excavated the first two parking Archipelago (Bronze Age), and thus were the first real archaeological sources. Researcher published several articles and a monograph (Kuratov, 2008), devoted to problems of prehistoric archeology Solovki archipelago.

A. Martynov and members of the archaeological expedition of the Solovki museum opened 58 primitive sites, workshops and locations of waste stone industry VI millennium BC. Oe. - I millennium AD. Oe. They excavated 25 sites and 20 stone embankments received more than 30,000 artifacts discovered and studied the monuments' before monasteries period "Middle Ages. Successfully implemented the project "Solovki - the continent: the ancient sea routes. Reconstruction of routes and modes of transportation on the White Sea in the antiquity and middle Ages. "Published three books (Martynov, 2002, 2006, 2010) and over 40 articles on the history of development and culture of the islands of the White Sea in the Mesolithic - the Middle Ages.

The primitive Bodies parking lot of the archipelago have been discovered and investigated Kuratov AA (1989) and A. Ya Martynov (1990, 2002, 2004), as well as the Karelian archaeologists

NV Lobanova, and JS Manyuhinym (2002), A. Zhulnikovym M. (2007) and M. Shakhnovich (2007). Campsites on Zhizhgin partially excavated by the author of the article (1995, 1998), about the parking. Mudyug to investigate the A. Ya Martynov (1984, 1995) and A.E. Belichenko (1995, 1996)

Ancient parking of the White Sea Islands

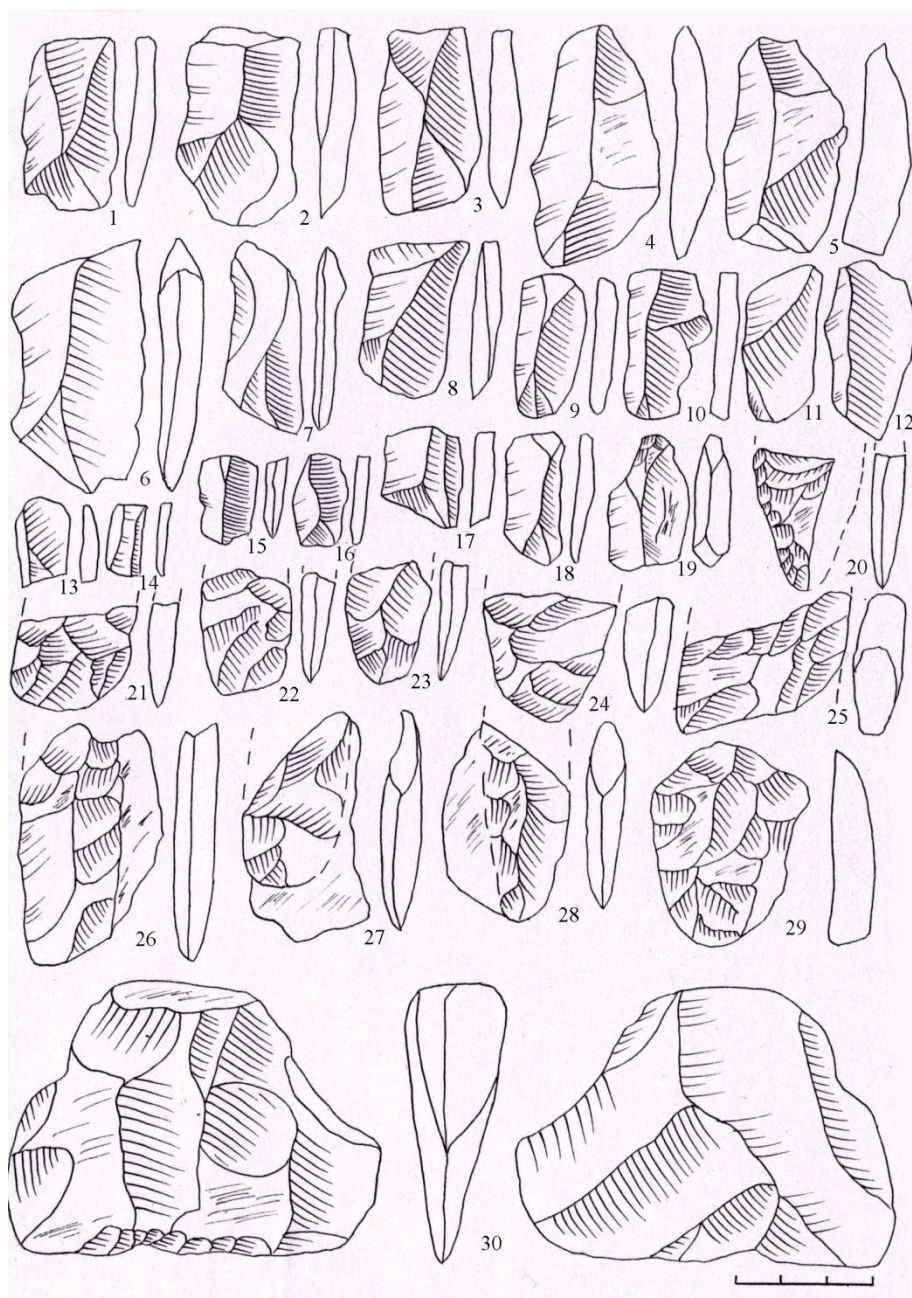
The history of the ancient development of the White Sea islands away in the late Mesolithic period, from mid-sixth to the middle of the fifth millennium BC. It is dated to this time the remains of ancient camps and workshops are open to the archaeological expedition Solovki Solovki. And it was at this time are the most recent parking Mesolithic era and the oldest (earliest) the settlement of North Karelia with ceramics (pottery), whose appearance is considered to be the main feature of the next period of history - "New Stone Age," Stone Age. However, full confidence in the fact that archaeologists do not find a more ancient island park with us, of course, not.

The oldest island settlements - a seasonal (summer), parking lots, which are located some distance from the modern coast and the Solovki Islands Anzerskogo, as well. Muksalma, high (18-20 m above sea level) of sand and sand-stone terraces, near lakes or marshes (Pic. 3).



The size of areas that are occupied by the discoverers of the islands are small (from 400 to 2500 sq. m.). The thickness of the formed with their participation of the cultural layer (from 3 to 20 cm) is such that you can with some reason to believe: they lived in a small (10-15 people) group of people who are likely to have visited the place many times, they have chosen to stay. This is confirmed by radiocarbon dates of samples of coal from the hearths of several parking lots and parking of multi-ceramic workshop Muksalma-6.).

During the excavation of these seasonal settlements was gathered an impressive collection of stone implements, among which there were also fragments of hunting weapons (composite spear, dart tips and arrowheads), and household tools (axes, scrapers, fragments of knives, awls, chisels, scrapers) and commercial products (fishing weights) (Pic. 4).



No less interesting were observations of how the discoveries were located on the grounds of parking. The majority of them were revealed in the form of clusters of different size, archaeologists have received the title "master of the place." The most common (eg, parking Solovetskaia-4 and Small Kumin) is quite large in size, but individual clusters, sometimes (in German Body-3) a group of smaller clusters, arranged in a circle with a boulder, "anvil" near one of them. As a rule, meets an archaeologist in such places whatever, except for whole articles: chipped stones, cores, large flakes, prepared for further processing, chips, flakes (small and tiny flakes), and harvesting of various products and parts procurement, of broken in the manufacturing process. "Place Wizard" - it's really kind of mini workshop in the open, where he worked who have sufficient ability, physical strength and patience to transform amorphous silica chips with a nodule in a different shape, sometimes beautiful, axes, scrapers, knives. The experiments were specialists from the Institute of Archaeology leave no doubt that this was done not very easy.

Another category of finds - individual artifacts found on the entire area of the settlements in different horizons of the cultural layer at different distances from each other. Their presence can be explained by several reasons. Some of them were discarded masters were fabricated tools (flakes, chips), other (gun, suitable for use) dropped by owners of products, and others (fragments of "work" guns) discarded as useless. There have been specifically brought to the parking lot "from the" items: coasters, "anvil", sinkers, anchor stones, large quartz nodules. Location of inventory accumulation and individual findings led us to the conclusion that at some sites of their inhabitants is quite clearly separated two "zones": the production, which was attached to the edges of the terraces and are often located on the moraine rocks, and "living", separated from the slopes of 10 - 15 meters and is located on the sand. This separation is yatno and explained: on the stones easier to split the quartz nodules, it is more convenient to move around in the sand, stand, sit, make fire, roost...

Binding sites are part of the ancient campfire, or foci, near which, presumably, the primitive "islanders" spent a lot of time. They vary in size (diameter, thickness of coal fly ash-layer texture) and shape (oval, round, amorphous), suggesting a different life in a particular settlement: very short on the shore of the lake is very small cumin and long-stationary-Solovetskaia 15. Laboratory analysis of coal from the hearth parking Solovetskaia-4 (Fig. 5) allowed to set a date for one of the oldest to date archeological White Sea islands - 6460 ± 70 BP (years ago).



Even more impressive is the dating of charcoal from the cultural layer is open in 2011 and has not yet excavated parking Solovetskaia-21, established the Laboratory of Isotope RSPU. AI Herzen - 7600 ± 70 BP.

Judging by analogy to the stone inventory (axes, harvesting tips from the lateral plate, scrapers, chippers, cores) in the raw material (quartz) and in the earliest samples of pottery ornamented with a patching material for parking Pribelomorya, the inhabitants of the oldest island

settlements came Solovki from the west coast of the White Sea, or rather from the lower reaches of the rivers Kemi and Vig.

The Solovetskii Islands in the period of the Neolithic

The development of White Sea islands was continued in IV-III millennium BC. Oe., but this time the islands were already different. Strictly speaking, they changed their shape and dimensions of all ages, but judging from the topography of the sites Kolguevskaya-2, 3 and 4, cemeteries, Muksalma-2, 5 and 9, the most notable changes have taken place just in the developed and the Late Neolithic. It can even determine the location of ancient monuments. If early Neolithic parking Solovki, and body separated from the modern shoreline at a distance of not less than 500 meters and situated at a height of not less than 18 m above sea level, the Late Neolithic are much closer to the coast (50-150 m), and their height does not exceed 14 - 15 meters.

It should be noted that the earliest representatives of the new phase of development of the White Sea islands a little different from their predecessors. They also came from the west - Karelian - beaches, fishing and home produced inventory mostly of quartz and quartzite, but very rarely - from oil shale and sandstone. Habitable sandy areas near lakes and swamps, doing the same things that their predecessors: to hunt marine mammals and migratory birds, marine and lake catching fish, gathering shellfish, sea kale, edible plants of coastal meadows, berries and mushrooms. Crockery, which they brought from the mainland, and were made in the archipelago, had a different, comb-patching, ornamentation (Pic. 6).

However, in the second half of the IV millennium BC. in the history of navigation and exploration of the northern White Sea islands have been significant changes. They concluded that in addition to the west (with the Karelian coast) came south-east "sea" way to Solovki Pribelomorya from the South, with the Onega Peninsula (today's Arkhangelsk region).



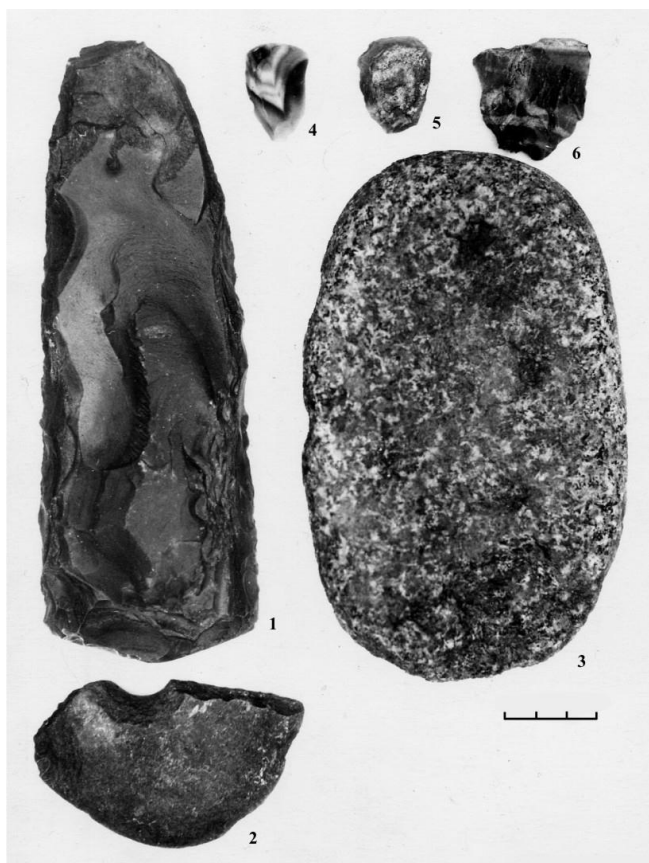
The island populations of these people are very different from all previous and subsequent. The ancient monk The summer beach dune hollow-mastered pits Kolguevskogo Cape Anzerskom on the island. Cavities are holes in the sandy terrace depth of four meters and an area of 100 to 1,500 square meters with fairly high walls. In one of them, they settled down, judging by the impressive cultural layer, on a very long time (Pic 7).



A dozen other basins were used as places where they split the master quartz nodules, and of the formed in the primary cleavage flakes produced blanks of different tools: scrapers, prokolok, knives, arrowheads and darts.

The selection of dune depressions and stone-working for a living "workshops" was not accidental, as no accident, and the fact that the only settlement on the damn-zhe Onega peninsula, where archaeologists in the first half of the XX century have been found similar to 'kolguevskoy "pottery and stone tools, was parking in a dune hollow on the banks of the river Galdarei. In all likelihood, that the inhabitants of the settlement Galdareya-1 were the first "onezhan" who, from that time until the beginning of a new era, from time to time visited the Solovki Archipelago. Monk parking Kolguevskaya-2 not only owned quartz stock, although he was more than 90% of all products, but also tools, made of flint, slate gray and red sandstone. A set of commercial inventory of these people was much wider, and made themselves the product more closely than their predecessors. Among them are a variety of weights (oval with "interception" and round with holes), scrapers, grinding slabs, hunting ax, and the reader is familiar knives, scrapers, awls, drills, fragments of arrowheads and spears, pieces of chopping tools. Dishes, which used to Kolguevskoy-2, was a large and small vessels poluyaytsevidnoy form, fashioned from yellow, red and gray clay and decorated with ornaments of conical pits alternating with impressing the so-called "comb".

Judging by the fishing gear, discovered in the parking lot, its inhabitants were hunting migratory birds, marine and island animals, catch fish, not only archaic hunting techniques (with a bow, arrows and darts), but also by fishing nets or other projectiles, requiring the use of weights. They brought with them implements of flint (Pic. 8), which is not in Solovki, and perhaps found in the parking lot of the pottery.



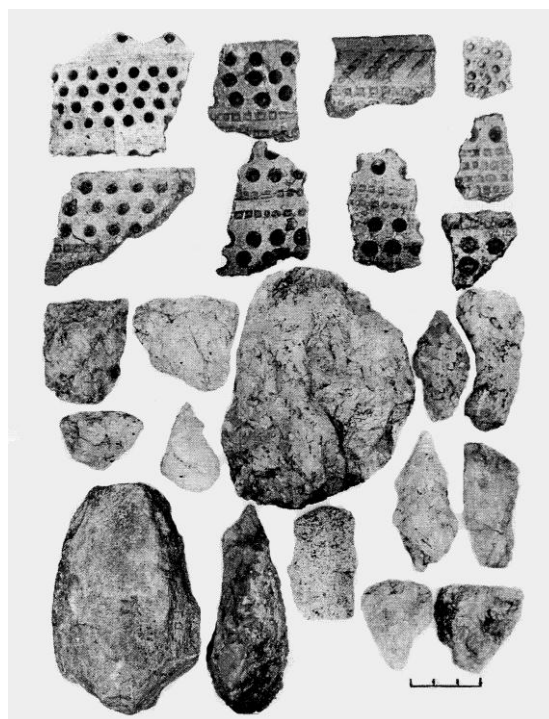
surface of the "pot", an ancient wizard burned him at the stake (Pic.9).

Quartz equipment manufactured in two stages. First, split the old masters of quartz and schist boulders and knocked them to the so-called nodular crust to check the quality of raw materials, and then cleaved flakes - the basis for future tools. Is carried out in the "shops" - dune depressions, located near the settlement. Flakes and chips which were good for secondary treatment, was transferred to the parking lot, and there is first turned their guns in the blanks, and then "adjusted" (if able) to the products ready for use.

Of particular interest is the oldest found in the White Sea populations anchor stone. It is not a stone anchor, because there are no openings for tench and wooden or bone anchor the "horns", but the shape of the object, the traces of processing and, in particular, artificial grooves on opposite faces can confidently assert that it used in this quality.

To IV-III millennium BC include a number of parking spaces, located on the open sandy terraces Anzerskogo (Kolguevskie 3 and 4, cemeteries), B. Solovki (Solovetsky-3, 5, 15), B. Muksalmskogo (Muksalma-2, 3, 5, 9) of the islands. On-site parking repeatedly visited Workshop Muksalma-6 in the 2006 excavation (fig. 10) also found several sculptured vessels and stone tools dating from the late Neolithic.

Flint brought exclusively in the form of finished products. In this clearly indicates the complete absence of the monument in the cultural layer of flakes, chips and flakes - waste flint industry, always accompanying the stone tools there, where the initial cleavage and production of flint tools. As for the ceramics, we can not exclude that some vessels were made on Solovki, in any case, the clay of similar colors we found in different parts of the archipelago. Judging by the traces of smoothing on the inside of blood vessels, they produced the so-called tape method. Well mixed with sea sand and plant fibers clay rolled in a rather narrow bands, which are superimposed on the spiral of a "bottom up" and then his hands and tufts of grass, wipe out the inner and outer vessel wall. Causing the ornament on the entire outer





The materials of these settlements are very much complementary to our understanding of the insular culture of the time. Their inhabitants were molding thin-walled and thick-walled vessels of specific shapes of different sizes. Their diameter varies from 20 to 40 cm, height - 30 to 45 cm outer surface of stucco "pots" primitive masters covered the so-called comb-patching ornamentation, which prints stamps comb prevailed over the number of pits. Together they accounted for very diverse and original combinations. They are produced and very small cup diameter of 12 cm and a height - 6-8 cm, decorating them with rows of tiny pits and shallow impressions "comb". As for the stone tools, in addition to normal household and hunting implements of the inhabitants of these settlements quartz schist used sinkers "interception", grinding slabs, chippers, as well as stand-massive "anvil" of hard sandstone, which rested in a quartz nodules in shear with these flakes. Parked Muksalma-6 was detected strongly touch stone with mysterious notches on the side face of the product and the two triangular indentations on the sides, for which the tool is tied to his belt with the strap.



Solovki in the period of an early metal

In the culture of mainland hunters and fishermen who visited the White Sea islands in the early metal in II-I millennia BC has several important features. Noticeable changes in the material culture of the island population can be traced in the second half of the III millennium BC. Eneolithic sites in the materials and they are related primarily to the re-

placement of quartz raw materials to better and more flexible to handle the flint. If more ancient sites of quartz products and waste industry are 95-97% of all items made of stone, in the Chalcolithic ("copper-stone age") imported flint 'gains' of up to 30%. The tools made of flint, quartz is much stronger, the form of tips, scrapers and knives becomes stable, they are beautiful and attractive. Flint delivered Solovki not only in the form of finished products, but also instruments of work pieces, and in the form of cores - shot up from all sides of flint nodules, from which you can still shear off flakes. This is evidenced by a fairly large amount of waste flint industry found in the cultural layer Eneolithic sites Solovetskaia Muksalma-13 and-8. Judging by the analogues in the mineral known deposits of Karelia and the basin. Northern Dvina, flint sites of this time was taken to the island with Lake Onega, and from Orlets. At the Chalcolithic settlements are new items for the Solovki: the massive "cutting board" found broken into three parts, an elegant adze, made clear on the mainland, and most curious thing in the island archeology - amber button, similar to such ornaments in the Eneolithic sites of North Karelia. The appearance of her colleagues in the area associated with the existence of cultural ties between the primitive inhabitants of Karelia and the Baltic States. Dishes of this time are different from the previous form and ornamentation. The vessels found in the parking lot Solovetskaia-13, smaller in size, shape, they are close to spherical, and in the ornamentation of pits have almost entirely disappeared (Pic. 11).

Especially notable changes can be traced to the culture of island settlements of the Bronze "age". Stone tools at these sites in the 90-93% consists of imported (from the Northern Dvina), flint and slate and sandstone. Local minerals - quartz - in the cultural layer are almost no parking. A set of products different from the Neolithic even wider range and better treatment. Among the items found by archaeologists have at least five types of arrowheads, darts and spears, six varieties of pigs, three types of knives, a variety of shapes and sizes awls, scrapers, scrapers, axes (Pic 12).

In contrast to the Neolithic settlements Kolguevskoe-2 and Muksalma-6, and 9 residents parking an early metal Solovetskaia-13-1 Muksalma, Kaporskaya, Kolguevskaya-1, Body-2 German and Russian Body-1 produced spherical medium-sized vessels, which were decorated with "comb "or" grid "pattern. The pits were deposited on the surface of blood vessels is extremely rare, and they do not play a significant practical role.

For all the dislike of archaeologists to the word "unique" several items of the time will have to enroll in this class. One of



them - polished ax, a similar "battle-ax with a perforated pistil ax," was once a distinguished archaeologists A.Y. Bryusov and M.P. Zimin (1966, p. 27-28) from a variety of other chopping tools. Solovetskaia finding such ax was seventeenth in the USSR and the most northerly, indicating a very distant relationship with the holders of the ancient tribes who lived on the Upper Volga. Features of the island ax (size, curved shape, the hole for the handle diameter 1.5 cm) are such that use it as a battle and even more so as the owners, respectively was impossible. Therefore, we could draw only one conclusion - this ax on Solovki was wearing a ritual function (Pic. 13).



In addition to this, the archaeologists have found a few flint figures, images of animals - seals, are also extremely rare finds on the islands of the White Sea.

The archeologist link the parking of the period of an early metal with the inhabitants of the southern coast of the White Sea.

The development of the ancient White Sea islands in ancient times ended in the early Iron Age, in the first half of I

millennium AD. Campsites are located at this time of low marine terraces, and their stock (plain household items and rough flat-bottomed dishes) shows the decline of Stone "production" due to the gradual "occurrence" in the primitive culture of the North metals: copper, bronze and iron. Travel the continental Early Iron Age inhabitants, according to the small number of sites have been rare, and possibly associated with the burial of the dead fellow and visiting the so-called "sanctuaries" of the Solovki archipelago, far more well-known reading public, rather than prehistoric campsites and "workshops".

The main occupations of the ancient «islanders»

What were the occupations of the ancient inhabitants of the White Sea islands in the VI-I millennia BC? What has been their subject of the daily life?

Obtained in our expedition materials indicate that their constant concern was to manufacture stone tools, for which they found in the archipelago are several types of raw materials: quartz and quartzite of varying quality (gray, porous transparent to high), gray and red sandstone and shale. Quartz did the bulk of commercial and consumer equipment (arrowheads and spears, axes, knives, scrapers, scrapers, scraper, borers), sandstone and shale - anchor stones, sinkers and "anvil".

«A special "song" - the ancient "Workshops" are open to the expedition of Solovki and body. There are only three, but each is so individual that deserves a separate description and interpretation.

The first of them, our intelligence discovered in 2002 on the east coast of the island B. Muksalma. Notice it was due to the large quartz boulder that lay in the middle of a sloping terrace, which consisted of several stone ridges. One edge of the boulder had been shot up, and next to him beneath the turf, could be seen half a dozen flakes. In the pit, laid next to the boulder, an area of 1 sq. m. m, 10 centimeters of cultural layer were discovered more than 600 items. Among them are pieces of blank products (scrapers, tips), cores, chips, flakes, flakes. The site, which served the old master, is small - not more than 6 square meters and the choice of location for

such a "mini workshop» due to two factors: the presence of the above mentioned boulder and the nature of the terrace on which you can now find a lot of quartz. It is clear also that at this point was carried out only primary cracking of quartz material and it's processing prior to harvesting, which has turned into instruments of the nearby parking lots "Muksalma-2, 5 and 6.

The second workshop is an exact opposite: a long, narrow terrace of the northern coast of the island of Solovki we recorded up to a dozen different concentrations of quartz objects: ready-to-use tools, blanks, quartz waste industry. There were also investigated several oval-shaped depressions with a cultural layer inside them - most likely short-term summer dwellings of the ancient fishermen. These features (the presence of shells and remnants of dwellings), new object prehistoric archeology suggest that the workshop was both a seasonal fishing camp.

The third workshop was found on the side of a granite cliff Russian Body, about a quartz "veins" and was a rather large waste collection industry with some things, which were clearly not well made, blanks arrowheads.

Thus, over several millennia the ancient inhabitants of the White Sea islands of stone tools were made in different places: during short stops in the workshop "open air", linked to the outputs of raw materials - quartz, quartzite and slate, in parking lots - workshops and temporary settlements.

However, even then mainland residents brought with them a stone implements, made of more durable and high quality minerals - flint, which is practically not on the White Sea islands. Judging from the extremely rare finds in the cultural layer of the oldest island sites only fragments of the broken items, but their inhabitants were imported ready to use household and hunting implements. This practice is likely related to the small number of flint, prevailed, as shown by archaeological excavations of Karelia, on the West Coast settlements early Neolithic the White Sea. The latter is a historical fact is explained by the absence of natural output of flint in North Karelia. According to research by A.M. Zhulnikova, Flint delivered Pribelomore with Lake Onega and the Onega River, and its number increased gradually. With increasing supplies of flint at sites of western and southern coasts of the White Sea and its growing number of car parks on the island until it is almost completely replaced the use of the main local mineral - quartz

The main daily activities of these people were, of course, getting food. Judging by the composition and size of the stone implements of hunting guns, the most ancient "natives" themselves and hunted sea mammals, and the island game. On the seal and bearded seal are hunted with composite shells, the remnants of which form the so-called "cross-liners" (fragments of knife-like blades), we were able to detect the early lots. Migrating birds can strike with bows and arrows, blanks which were found at sites Solovetskaia-4 and German Body-1. The cultural layer is not sites preserved for us, no tree, no bones, but rare occurrences of weights suggest that fisheries, including the Uses of some braided fishing devices, were also one way of obtaining food. And the gathering, probably made by a certain variety in the menus of people who lived "at sea", which gave all sorts of shellfish, edible seaweed and plants.

The hunt for the sea and the forest primeval beast gave the Islanders not only vital product - meat, but also fat and skin. If the nature of the first we can only guess at during the experiments, the dressed skin of an animal killed replaced the old "Pomorie" much of what modern man

enjoys. From the skins sewed clothes and shoes, wrapped in a skin newly born babies were sleeping on the skin, and it is sheltered, marine animal fur trim on the frame was a boat on the roof of the hut, as it did from the quivers for arrows, cut belts, ropes, straps ...

The ancient inhabitants of the Solovki Islands undoubtedly prepared their own food on the fire, but the use of pottery, we can speak only since the turn of V-IV millennium BC. Oe. By this time (5900 years ago) are the fragments of vessels with patching ornamentation found in the parking lot, the studio Muksalma-6 (Pic 14).



The earliest vessels used islanders had specific shape, large size (height 45 cm, diameter 40 cm) thick walls, entirely covered with the outside of the pits. This pattern served at least two functions: to provide a relatively rapid heating of the contents of a thick-walled pot

and contributed to its preservation by roasting on a fire. These vessels are likely to have been brought from the mainland, but we can not exclude the fact that poverty could cause temporary inhabitants of the islands manufactured dishes right on the Solovki. Perhaps this is evidenced by the pieces and lenses of clay, recorded at sites Solovetskaia-4, cumin and Small Muksalma-6.

Were the settlements of the ancient inhabitants of the White Sea islands of any permanent dwelling designed for long stay? Archaeological materials while give a negative answer to this: no obvious traces of artificial construction of residential parking in the cultural layer, we have not detected. No parking on the main and indisputable signs of winter shelters - oval-shaped depressions with a "wave" around them, which almost, dies before our time, if the dwelling-huts were once built on an ancient settlement. One can only assume that the primitive "natives" were building some kind of a simple summer shelter from the rain and wind, such as tents and canopies that are not preserved any traces. Anyway, to cut down thin trees they could with a small ax, and his release from the cortex, crop and sharpen allow multiple household tools: scrapers, scrapers, knives and knife-like raw plate.

These observations lead to the unequivocal conclusion that the resident population that can live in the White Sea islands year-round for several years, in ancient times was not. Since prehistoric archeology confirms this for a long time, but without sufficient scientific evidence, concluded that the first residents of Solovki monks were Herman and Savatie, two of the three founders of Solovki monastery, and it happened only in the first half of the XV century.

How often visited the islands of the White Sea ancient monks of the western and southern coasts? Given the total number of open far island sites and locations (not more than 75), a rather high power of the cultural layer of some of them, big time gaps between the radiocarbon dates, sites, and differences in elevation of settlements within the "parking Heights' western White Sea,

can be quite confident to draw some conclusions and assumptions. First, a number of island sites of settlements (Muksalma-6-4 Solovki, German Body-1) were used repeatedly. Secondly, the frequency of visits to the islands at different times of the primitive era was different. Considering that seven dozen primitive sites and locations that are open to the White Sea islands occur in 6000 years (!), It becomes clear that between visits to the ancient people there were great breaks, and new generations had to rediscover for themselves and Bodies and Solovki.

Stone labyrinth and «sanctuary» of the Solovki Islands

A separate big topic, and partly related to the primitive monuments of material culture - the so-called "religious-symbolic" computations White Sea islands: "Sanctuary", stone labyrinths and other calculations of the stones. Her broad perspective is reflected in dozens of articles (Martynov, 2010. Bibliography), as well as in several books of researchers (Vinogradov, 1927; Kuratov, 2008; Martynov, 2002, 2006, 2010) and interpreters (Kodolov, Sochevanov, 2003). The vast majority of published hypotheses, ideas and thoughts on labyrinths, unfortunately, can not be any proven. Yet coverage of prehistoric and medieval past the White Sea islands without presenting these monuments would be the same one-sided, which is repeated for many decades and the only description of the labyrinths.

During the years of searching, archaeologists have recorded on the Solovki Islands for more than 20 mazes and three clusters of artificial stone additions, A.A. Kuratov interpreted as a primitive "sanctuary" (Vinogradov, 1927; Kuratov, 1973, p. 63-76). In our view, part of the labyrinth, apparently, really is a part of the ancient "shrines" and the rest probably do not have to do with them. All of them are located on the shores of three of the six major islands: Solovki, and the Big Anzerskogo Zayatsky. Part of the calculations was recorded by researchers in the first half of XX century, but later destroyed by the inhabitants of Solovki in the process of construction. In addition to the mazes and "sanctuaries," among the "religious-symbolic" monuments can presumably be attributed not yet studied in stationary conditions, artificial computations that accompany some of the components of the maze, or independent groups.

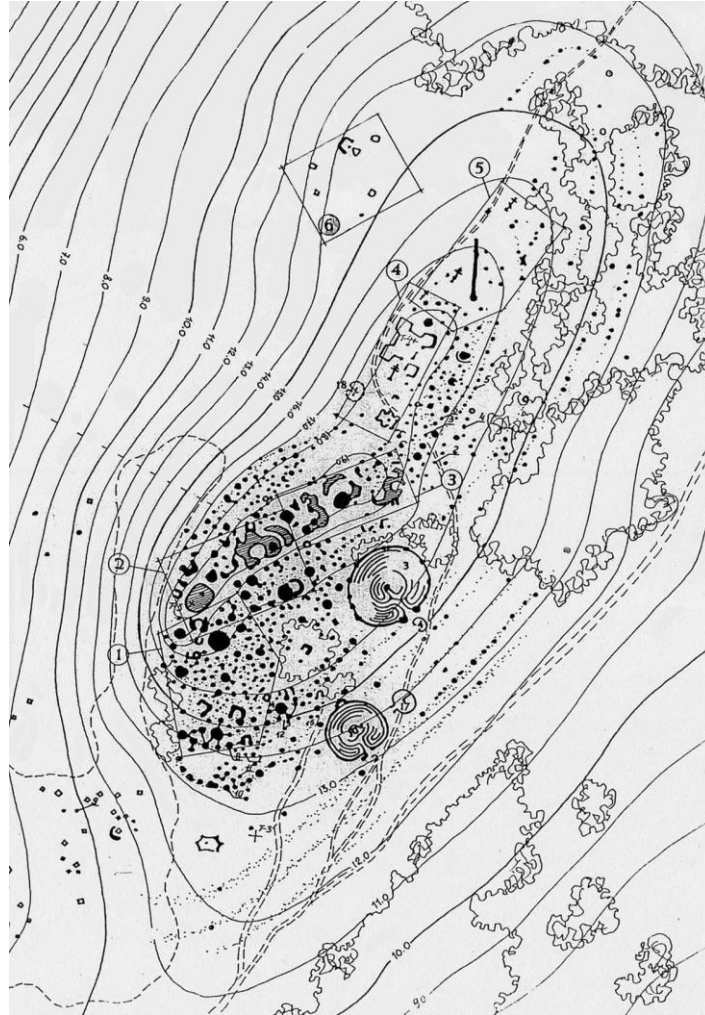
Given the controversial nature of the definitions and interpretations of archaeological data sources, the concept of "sanctuary", "complex", "cult-burial" and "cult-symbolic" monuments of intentionally placed in the article in quotation marks.

«Sanctuary»

According to A.A. Kuratov "sanctuary" Solovki included "ritual and funerary monuments." Their composition may include "stone labyrinths and piles of stones, dolmens, stone ridge, and other calculations figured stone" (Kuratov, 1973, p. 73). Taking this definition as a hypothetical, it should be noted that as long as there is no steady-state study carried out "other curly calculations," the archaeologists, there are some grounds for inclusion in the alleged "sanctuaries" only part of the maze and embankments. Registered to date can be considered a "sanctuary" in B. Zayatsky Island and Cape Labyrinths Anzer Island (preserved), as well as at Cape Fireplace between the School and Sour lips Greater Solovki Islands (demolished in the 1930s - early 1950s).

Sanctuary **"B. Zayatsky Island"** is one of the largest in the North European part of Russia" complexes "artificial stone calculations ("cult-burial" sites), once numbering not less than 13 mazes, over 600 boulder mounds and perhaps tens of others were not significantly interpreted,

artificial manipulations. Overall, B. Zayatsky Island registered 900 artificial stone additions (Skvortsov, 1990, p. 291). The main group of buildings located on the top and slopes of the Signal and includes two of the maze and about 600 mounds. Height of "sanctuary" above the level of the White Sea ranges from 13 to 18 meters. Strictly speaking, only that part of the whole "Zayatsky" assembly of artificial manipulations can presumably be interpreted as remnants of the primitive sanctuary (Pic. 15).



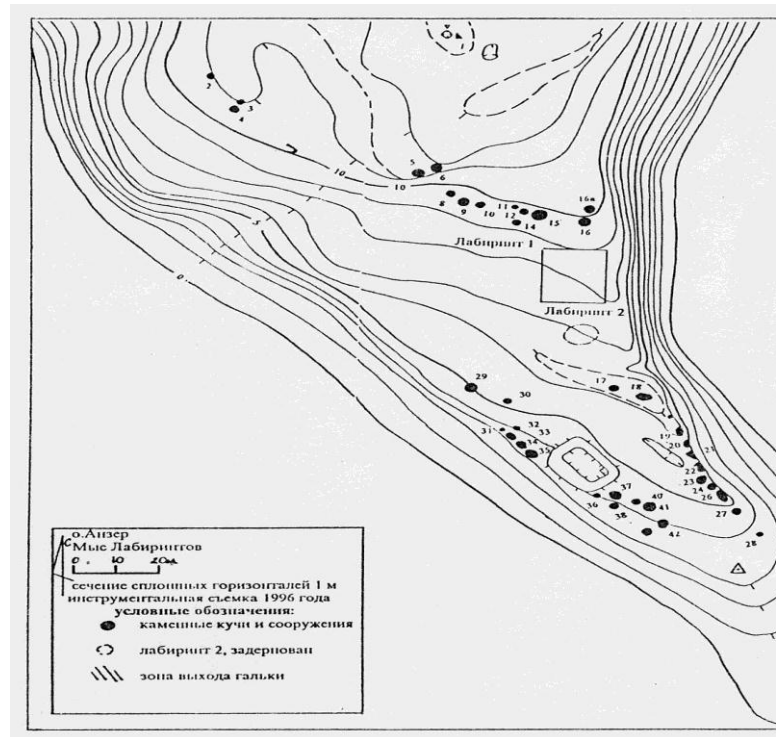
The basis for the dating of the end of calculations, the primitive age can be considered:

- Waste quartz industry, found under the mounds of excavated most of which can be dated to the Iron alleged "age";
- much larger size mazes number 2 and number 3 in comparison with other such calculations, indicating that other, perhaps more ancient technology;
- Big number of durn at the second and third mazes, as well as the adjacent rock piles;
- similar, similar in size, lichens, fixed on the rocks excavated mounds and labyrinths number 2 and number 3;
- location of this group calculations on the terrace with sufficient elevations (12-16 m above sea level), in contrast to most of the maze, located on the terraces of height from 2 to 5 meters

The remaining composition recorded in different places of the island in the form of clusters or detached mounds. All man-made structures are built of boulders and resting on moraine deposits -

a powerful layer of stones. They were not excavated, the time structure and purpose of these calculations are not known.

"Sanctuary" at Cape Labyrinths - a compact group of "religious and burial" of objects, among which also includes mazes and stone mounds. Addition located in the direction of the cape, on the east side of the bounding Kaporskuyu Anzerskogo Bay Islands. In the northern part of Cape intersects the east-west natural moraine ridge. Most of the archaeological sites located south of Stone Ridge, and mazes - about her, and piles of stone - along the ridge and along the eastern and western shores of the Cape. Several embankments crossing the Cape in the middle. He has a gentle slope to the sea, so that the height of the terrace to the archaeological monuments ranging from 4 to 15 m above sea level. At the present time "sanctuary" consists of two stone labyrinths and 36 mounds (Pic. 16).

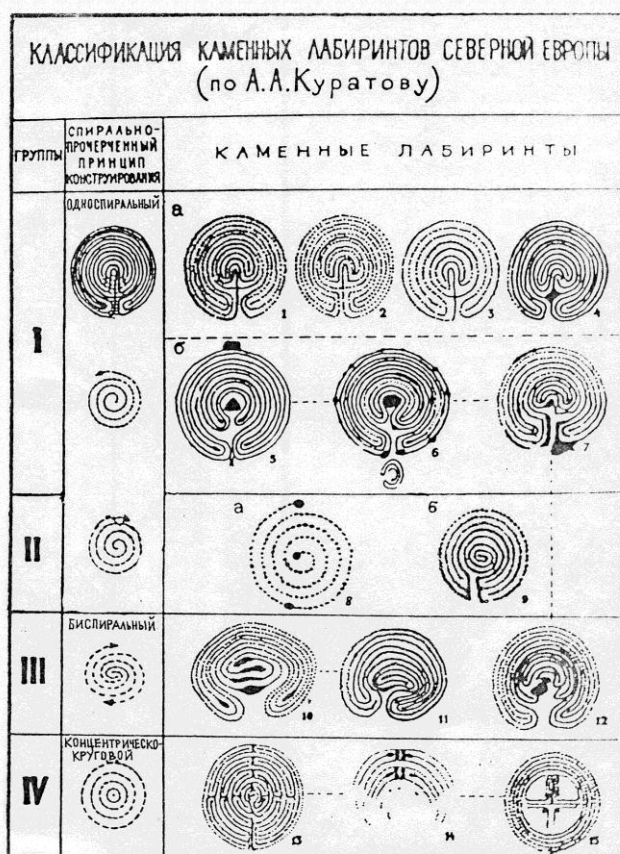


Labyrinths and u embankments

So, the basic elements of the hypothetical "sanctuaries" Solovki archipelago can be expected to assume the **stone labyrinths and embankments** ("heap", "pile" "mounds" in the interpretation of different specialists).

Labyrinths typologically divided into circular spiral, horseshoe shaped, "classic" and concentric circular (Pic. 17).

Unique is the "labyrinthine" figure of concentric rectangular shapes. You must first be noted that the labyrinths B. Zayatsky island, as well as the stone embankment, do not leave the impression of a whole, and can be



reasonably divided at least into two groups. The first of these are figures of number 2, 3, located on the southern slopes of the Signal in a complex with mounds (Fig. 18), the second - the rest of the calculations, which occupy a larger area of the second terrace western tip of the island.



They shared a space of not less than 150 m, mazes number 2 and 3 differ from the other additions in this category a number of significant features (much larger dimensions, the calculation of the walls in the form of a "roller coaster" and not one - two rows of stones, the presence of a large number of mounds in the structure calculations, including a pronounced central structure). The labyrinth is a number and geographically, and by their appearance intermediate between these groups of additions in this category. It is a direct analogue of the maze to the number 1 pm Labyrinths Anzerskogo Island, presumably dated by archaeologists era of an early metal (Pic. 19).



Embankments are a heap of stones round or oval in shape, which can be divided into three categories according to the parameters and the presence or absence of these additional elements. Most of the mounds is characterized by medium-size (base diameter - 1.5-2.3 m, height 1 m) and large (up to than half-stack) of dern. The second group is composed of small (diameter 1.5 m and height 0.5 m) not dern heap. Some of the "mounds" before large, partly turf-covered mounds (diameter up to 4 m, height 1.5 m), which are sometimes accompanied by additional

clutches in the form of so-called "fences" - in terms of the oval boulder walls - up to 0.7 m and a width of 0.8 m.

Stationary studies of stone embankments B. Zayatsky isles over the years, K.P. Reva (1907, p. 107), A. J. Bruce (verbal information), A.A. Kuratov (1969, p. 19-20) and author (2010, p. 200-207), but only the last two archaeologists managed to get positive results. Under the first of the two excavated mounds (1.8 x 1.3 x 0.75 m) at zero AA Kuratov recorded "black humus horizon in the form of lenses burned soil mixed with cobble stones, filled with ashes, charcoal and crushed calcined bones." In the same layer were found two human bones calcined (femur and tibia bones) and two quartz flakes. Disassembly of the second (small) pile (1.3 x 0.7 m) made it possible to detect an oval spot of humus with no signs of dumping. At the level of the spots were found several quartz flakes (Kuratov, 1969, p. 32). Proceedings of the excavations have allowed the researcher to consider the stone piles B. Zayatsky Island gravestones structures containing the remains of graves, "provides for cremation" (Kuratov, 1973, p. 72-73).

The expedition Solovki museum so far excavated 22 embankments, selected on a representative basis (pic 20).



Comparative analysis of materials excavated mounds gives the following picture. When disassembling small piles at the surface moraines identified in one case, a large flat boulder with a baked surface, the other seven - a layer of small stones unburned. In the six cases under the cap mounds were found quartz and quartzite flakes and chips. Exca-

vation of medium-sized mound yielded largely similar, although more informative, picture. Under the three mounds were recorded soil horizons of burned to 10 cm, mixed with stones, which were found when disassembling a few calcined bones of mammals, as well as quartz flakes, cores and blanks scrapers.

The same results were gotten in the process of the research in the ruined stone embankments from the «sanctuaries» in the M. Labyrinths and M. Kirillova of the Anzerskii Island.

Thus, the materials of our excavations have substantially broadened the understanding of the nature of the stone piles. On the one hand, they have reinforced the hypothesis of A.A. Kuratov funeral appointing some of them, on the other - a problem complicated the interpretation of the stone embankments Solovki Archipelago in connection with the findings in their structure of

objects that do not fit into the perception of them as "gravestones" primitive structures "sanctuary."

The main problems «funery - cult » monuments of the Solovetskii Islands.

The range of problems associated with the prehistoric archeology of Solovki Archipelago and other islands of the White Sea, was formed during the time of search and study of ancient monuments. Originally identified three main issues relating exclusively to the stone maze: Who, when and why built the data addition (Vinogradov, 1927, p. 140, 144, 149). Were later formulated the problems of classification of labyrinths and "technology" of their facilities, as well as "raised" the question of "sanctuaries" (Kuratov, 1970, p. 37-46, 1973, p. 73-76). With the accumulation of sources in the field of studies in recent decades, a problem of chronology and periodization of the monuments of primitive culture of the archipelago, the ratio of parking and the "cult-burial" of objects, reconstruction of material culture and beliefs of the ancient inhabitants of the island, features an island of culture in different epochs. In recent years, questions have been formulated about the reasons for visiting Solovki ancient people, as well as on the means, methods and routes of movement between the archipelago and the mainland (Martynov, 1990, p. 22-23, 2002, p. 94-122, 2004, p. 5 -17, 2007, p. 80-96).

The problems of dating and cultural identity "cult-burial" monuments of Solovki archipelago are closely interrelated and can not be discussed without considering this relationship. All comments made about this hypothesis in more or less unsatisfactory, primarily because of the finite time of uncertainty and cultural definitions ("date back to II-I millennium BC. E.", "Belong to the circle of circumpolar cultures," " belong to the Bronze Age, "" built in the Middle Ages "). Such conclusion is partly acceptable, as long as we think about the stone maze in Northern Europe in general, but critics call when it comes to issues of specific local cultural facilities such as "sanctuaries" Solovki archipelago. In our opinion, methodologically correct is the following statement of these problems. When construction began on the formation of labyrinths and Solovki "sanctuaries" and when the practice of their construction has been discontinued? At what time they stopped the original (old) function? What exactly geographically separate cultural group they belonged to the White Sea? Are all the mazes of the archipelago can be attributed to the number of primitive, or they were built in different eras?

Studies of the last two decades allow us to formulate a hypothesis about the "pribelomorskoy" primitive origins of the founders of Solovki "sanctuaries." The earliest discovered in their vicinity and parking Kaporskaya Kolguevskaya-1 located on the 8-meter sandy terraces. Their pottery is characterized by a comb-like ornamentation, as well as stone tools, which is dominated by silicon products characteristic of the White Sea area of Southern types. These monuments are dated in the second half of the II-I millennium BC. and most likely were related to parking Onega Peninsula this time. Topography, pottery and implements settlements Solovetskaia-1, 2, and Andrew's deserts can be more likely to associate their origin with a population of early Iron Age culture Pozdnebelomorsky from the west coast of the White Sea.

We define a chain of "mainland parking lot « -> Island Park - "Sanctuary" link, which requires study is the relationship of some of the island sites and "sanctuaries." The work of AA Kuratov and our long-term excavations make it possible to give a number of arguments in favor of

the existence of such a connection. First of all, it is of territorial proximity of parking and the "religious-funerary monuments," as well as their topography. The maximum distance between them is 0.4 km, the minimum - 150 m part of the labyrinth and the piles located at a height of 8-14 m above sea level, which corresponds to elevation sites. Secondly, this may indicate the analogs in the inventory of settlements and mounds. The collection of finds from the "mounds", excavated in the 8-15 meter B. Zayatsky areas of the island, dominated by quartz items, equipment under the mounds on the m. Zayatsky consists of quartz, shale, and flint flakes and scrapers. Inventory Muksalma-1-1 and Kolguevskoy Kaporskoy made mostly of flint, as well as slate, quartz and sandstone, and this allows for a specified time-cultural communication. Natural (natural) in the presence of such a connection is present in the inventory-Muksalma a ritual ax, and in the collections of Kaporskoy Kolguevskoy-1 - flint figurines of game animals, as well as the discovery of flint stone sculptures of seals in the embankment near the labyrinths M. Zayatsky island.

Thus, the analysis of all available to the research of archaeological material leads us to the assumption that the complexes of the Solovki "cult-burial" sites were established in the second half of the II-I millennium BC. with the appearance of Fr. Anzer and parking Kaporskaya Kolguevskaya-1 and, apparently, the first stone labyrinth, labyrinth, and mounds (Pic 21).

The oldest period of construction and "functioning" island "sanctuaries" has ended, apparently, in the first half of I millennium AD. Perhaps this is due to the disappearance of the early Iron Age sites late belomorskoy cultural group in the lower reaches of the rivers Kemi and Vig (Kosmenko, 1991, p. 212-213). c. 212-213).

All other labyrinths, which



are located on the terraces of height from 3 to 5 m and is not associated with stone embankments, could be posted no earlier than the Middle Ages (Pic 22).



The most difficult and complicated problem Solovki "sanctuaries" was and remains the question of their appointment. Do not forget about the controversy of interpretation of clusters of mounds and labyrinths as a primitive "sanctuaries", it is essential to allocate her two aspects: the appointment of a "sanctuary" as a complex of burial and ceremonial objects and purpose of labyrinths as one of the elements of the "sanctuaries." It is equally relevant to the nomination of the so-called "single" maze, laid out in the field of fisheries and related marine animals (Cape Beluga, Cape Kirillov).

So far, the only archaeologist who studied the problem of special-purpose "religious-funerary complex" Solovki Islands, has been and remains AA Kuratov. The researcher notes that "the shrine visited by people for the burial of the dead, as well as for the administration of various rites of primitive religion ... There have been hunting and fishing, and fishing magic ... conducted initial operations" (Kuratov, 1973, p. 73, 1974, p. 18 -20). Agreeing with this view as a hypothetical, it should be noted that the new archaeological materials can add to it a number of important considerations. First, we note that the formula "the burial of the dead" does not disclose the nature of the rite and does not provide information about the sequence of operations may be made at his departure. Analyzing the entire set of data obtained during the excavation of stone mounds, one can not ignore the significant differences in a set of cultural remains. In some cases (OB Zayatsky) there is reason to believe that the mound was built over the decomposed and burned at the site of the sanctuary a symbolic funeral pyre (the cultural layer of charcoal, human-centered pits and waste management industry, quartz), remnants of which were strewn with shells of mollusks. The other (labyrinths of B. Zayatsky) the entire ritual would be to be placed on a platform of the future "mound" or unfired calcified bones of mammals, quartz, and subjects them to lay the boulders. In the third, where it was laid out on the operation of the stone heap on the moraine

ridge. The presence of "barrows" spaces of bones of mammals and birds permits the assumption of sacrifices, committed in the process of burial and is probably part of the rite of burial.

The list of possible rites of primitive religion, committed to the maze, researchers including actions related to the cult-commercial magic and initiations. Justification first saw Gurin NN (Gurin, 1948, p. 126-142):

- at the location (some - AM) labyrinths on the coast in places developed (by ethnographic data) of sea fishing;
- → in the similarity calculations with some traditional fishing projectiles (eg, kill, and Venter);
- the choice to build a maze coastal areas, resembling in form the outer contour of horse-shoe-shaped labyrinths

These characteristics also apply to some island of addition (in the m Beluga, Cyril M.), with the difference that the traditional mammals and fishing in these areas have been artificially interrupted in the first half of XX century.

In general, agree with this assumption can be one important caveat: we have in mind only a single (not accompanied by stone embankments) maze, located near the sites of sea fishing.

With regard to the rite of initiation, the author of the hypothesis VR Cape justify it, given the archaeological analogues, distribution of such facilities in Australia, Aboriginal people who served for the rites of initiation. In general, the hypothesis is based on the general philosophical understanding of death as a rite initiate and returns it to a new life (Cape, 1969, p. 309-314).

Various ceremonies of primitive religion, which could be committed to "sanctuaries" are probably not confined to religious-magic and initial commercial operations. Findings in the cultural layers of parking lots and near the "sanctuary" B. Zayatsky island figurines game animals suggests the hypothesis of the existence of the inhabitants of the island settlements - the creators of "sanctuaries" - sea fishing worship animals - seals, and (or) the beluga. The presence in the beliefs of the population of the island is a natural element of totemism, and due to the fact that his life is largely dependent on the success or failure in the maritime industry (fat, skin, meat, seal). Could play an important role and the fact that it is the white whale and the seal were the representatives of the fauna in the White Sea, which has the strongest emotional impact on the primitive inhabitants of the archipelago.

A small number of sources make it possible to include in the hypothetical number of their beliefs, worship the sun god. On a certain probability of existence of the cult of the primitive belief in the White Sea population showed, in my opinion, some petroglyphs Zalavruga (Savvateev, 1970, p. 66). To perform rituals of worship to the sun-god in Solovki, may indicate some of the stone composition of the archipelago, as well as the very conditions of life and economy of the ancient population of the coast and islands of the White Sea. Seasonal hunting, fishing, sailing for long distances, harsh climate conditions in which the sun was one of the few sources of heat and light, as well as a guide for determining the direction of movement, there were compelling prerequisites for the treatment of Aboriginal people as the supernatural power of the sun, people who awards heat and light.

But could there be something to do with the cult of the sun to the Solovki "sanctuary"? A positive answer to this question is justified, given that the two types of Solovki mazes correlate well with the sun. Labyrinths of these types are one spiral structures, which follows the outer wall of the circle and concentric-circular shape in the form of a system, each refined stone rings. If other than a close resemblance to consider the fact that the "sanctuary" located on the headlands, which are seen from a sunrise or sunset, it can be assumed that some of the mazes and symbolic figures in the shrines were built for the administration of ritual action, the proper cause disappearing from time to time shining. Construction on the shrines of stone symbols of the sun is quite acceptable for many days of absences during the last hunting season, a cold rainy summer, and in other adverse situations.

So, the old "sanctuary" could be places where the place of the "ritual" of life of the primitive inhabitants of the White Sea. Presumably they were committed ceremonies connected with the symbolic burial of the dead, the worship of ancestors, hunting and fishing magic, initiation, worship the sun god, and perhaps others not identified or understood, magic acts.

* * *

In light of the foregoing, it becomes more certain and the appointment of stone labyrinths of prehistoric items as "sanctuary." It should be noted that in the scientific literature, there are a number of different hypotheses about the appointment of these enigmatic structures, and the vast majority of their views as a maze of objects that are functionally related to other ancient artificial structures. This circumstance led to the vulnerability of the assumptions and the impossibility of their distribution to all sites in this category. Without going into an analysis of existing hypotheses concerning the appointment of mazes (this is done Kuratov A.A.), one should first of all, notice that the original, ancient, and the later Middle Ages, the appointment of stone labyrinths in Northern Europe was obviously different. Most likely, the different functions of mazes located groups and accompanied by mounds of "sanctuaries" Solovki Islands, on the one hand, and individual labyrinths of the archipelago and the Kola Peninsula, on the other. Ambiguous it seems the use of single figures and clusters in the labyrinths of burial cult complexes Solovki Islands. We can not exclude also the specific function of different types of figures. Different functions can perform maze and in the process of committing various ceremonies of primitive religion.

Archaeological materials are not allowed to reliably identify the function of ancient stone labyrinths, however, allow us to formulate some ideas on this subject.

As a symbolic burial place of Solovki islands were chosen is obviously no accident (which was easier and safer to bury the dead on the mainland), and in connection with some ideas about the afterlife¹ and the death. In analyzing the likely sequence of steps in the process of "funeral," one can agree with the assumption N.N. Vinogradova, that they were committed with a conscious purpose - to provide a non-return of the deceased or his soul from the afterlife, which is at such ideas about death could be perceived alien and hostile. But the presence of mounds near the labyrinths, which are a system of intricate passages, suggests that in their understanding of these

¹ According to popular opinion in science, primitive population of the oikumene divided the universe into three worlds: the upper (world of celestial bodies and the good spirits), medium (the world of humans, animals, birds and plants) and lower (underground and underwater, populated by dark otherworldly forces and evil spirits)

procedures were insufficient. Probably for the administration to another world and could constructed, primarily, those figures have undergone at Solovki evolution from the simple (circle and spiral) to a much more complex ("classical"). From this it follows that the Solovki stone labyrinths "sanctuaries", built on the border of two worlds, can be symbols or hereafter - "the bottom" - a world in which entangled souls of the dead, or the way in it. This conclusion is consistent with the common in the ancient northern European views of the islands as a "staging" areas on the way to the "land of the setting sun" (Ravdonikas, 1940, p. 61), where the ancient mounds were formed with different, sometimes very specific, burials (Deer Island on Lake Onega) (Gurin, 1956, p. 47). In this symbolic role could be, in our opinion, the main function of labyrinths, implemented through the magic of special operations.

The second, more concrete and materialized purpose data structures in the sanctuary lay, apparently, in their use of magic as a tool to perform various rituals (dancing, fortune-telling, divination, communication with spirits, etc.)

Who, why and how went to the islands in the ancient times»?

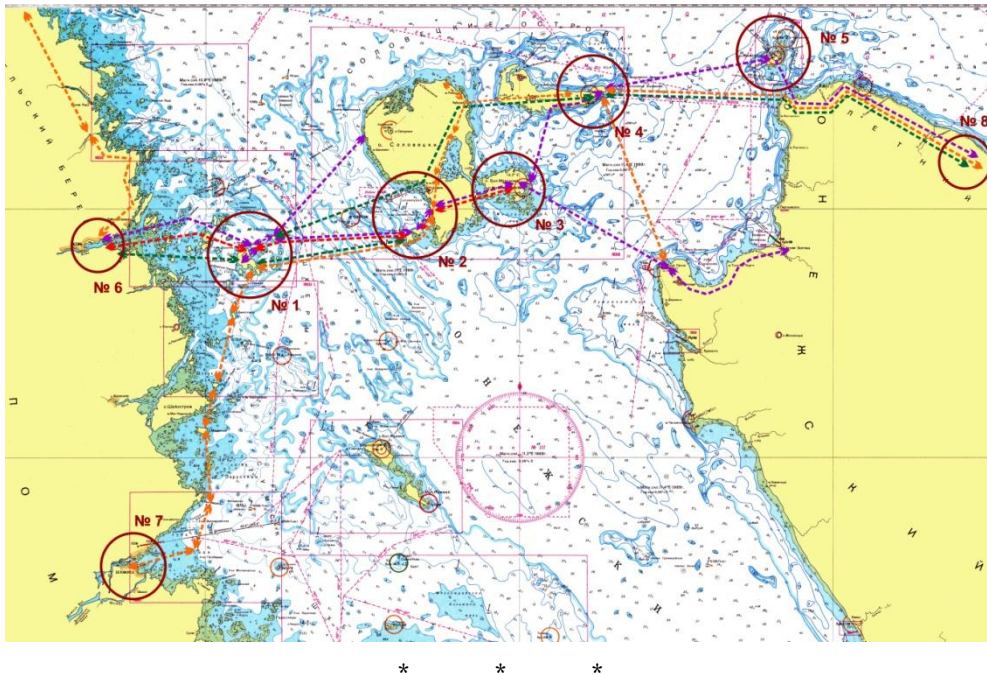
Examining the ancient island parking area and comparing them to the topography, pottery and stone tools from the materials of known settlements of the time on the mainland, we are easily found in only two analogues, but the most important for the understanding of ancient historical situation in the White Sea, places. This - the west coast, the lower reaches of the rivers Kemi and Vig to the surrounding areas, as well as the Summer White Sea coast. And the elevation and location of parking areas on the moraine and sand, and geomorphology (a thin, weakly stained cultural layer), and stone implements of mainland and island sites are similar. The very geography of (the existence between the west coast and the body of many islands, separated by distances of 0.5-1.5 km) eliminates any doubt that the pioneers were the inhabitants of the islands, and Kemi late Mesolithic and early Neolithic settlements (Martynov, 1995, p. 68-79; Manyuhin, Lobanov, 2002, p. 19-27).

So, the first islands discovered in ancient times in the White Sea, were closest to the mainland Body, and should be considered the pioneers west coast of the population that lived there from the **VII millennium BC**.

Opening of the Solovki archipelago was also in the Mesolithic. In addition to the equally expressive analogies between the two parking lots adjacent archipelagos, as indicated by another circumstance, as now, in ancient times as a goal Solovki voyage was visible only from the rocky peaks of German and Russian bodies, and even with the arrows of the Onega Peninsula - Cape UHT-Navolok . But on the Onega Peninsula, no Mesolithic or Neolithic sites with quartz stock, and a few dozen meters from the rocks of the German Body has already been excavated village and a workshop this time (pic. 23).



Yes, and without any sensible person of archeology it is clear that ancient people could explore the White Sea island only on the principle "from the mainland - to the nearby island of it - to the next and so on," going to the apparent target distance sea travel. The oldest by sea from the mainland to the Solovki Islands, which exists in the middle of VI millennium BC and to this day, is the "West": the lower reaches Kem Body through the archipelago (pic 24).



Of particular interest is the question of the root causes of the opening of the Solovki Archipelago, which, of course, was dangerous and risky business. Traditional archeology is the view that the migration to new lands in ancient times were caused by the disappearance of most of the

object of hunting - the beast and the need to search for untapped, rich in game animals and fish areas. In this situation, when one of the objects were hunting marine animals, such a cause can be considered possible if the hunters have observed in the body of the migration of seals or whales in the direction of the Solovki archipelago. However, to be the main cause of the dangerous walking "across the sea," it could not, it was much easier to produce and forestry, and marine mammals along the coast. Much more represented a different root cause - inherent in human nature at all times, inquisitiveness, curiosity, overwhelming desire to consider the dark stripes near the far shore. Watching from the rocky peaks of German Bodies are weird, viewed only in clear weather, the rise on the horizon, they could decide, and decide on the first trip. The important fact was, and their experience of coastal navigation (Kem between the islands and the body), the existence of which no doubt.

* * *

An interesting problem, the solution of which depends largely on the reliability of our understanding of the primitive navigation is a reconstruction of the vehicles on the White Sea. Terms of archaeological sources for this very narrow and not indisputable, however, and they provide a basis for formulating hypotheses.

First of all, this stone "anchors," or, more precisely, the "anchor stones" found in the cultural layer of the Solovki camps-4-2 and Muksalma Kolguevskaya-2. "Anchor stones" are a slate or sandstone slabs with slightly prominent or well-defined (in Kolguevskoy-2) grooves, performed on opposite sides for the tench, which joined rock the boat. Dimensions "anchor stones" ranging from 32 x 30 x 4 to 44 x 31 x 5 cm, weight of products - from 5 to 18 kg (Pic. 25).



A separate group of sources is the stone tools, used for logging and wood processing (chopping tools, scraper, scrapers), hunting for marine animals (spearheads, axes, hunting) and the processing of skins (knives, scrapers, borers). This category of sources in one way or another is present in most of the settlements of the Stone Age and Early Metal.

Important sources for the reconstruction of marine vehicles can be considered as one category of rock art found in the lower reaches of the river Vygloodki. According to its Karelian researchers Professor A. Savvateeva (1970, p. 92, 172) and in concert. Mr. Zhulnikova A.M. (2006, p. 143-144), among the White Sea petroglyphs were depicted and framed dugout boats that could carry the 1 to 24 man (Pic.26)

Now available to archaeologists, sources indicate the two most likely way to get around on the White Sea in ancient times: in the frame boats and boat-dugout. But indicate only indirectly. Looking for additional arguments in favor of this hypothesis could be done one of two things: either to find the remains of boats in the cultural layer of the island sites, or build such

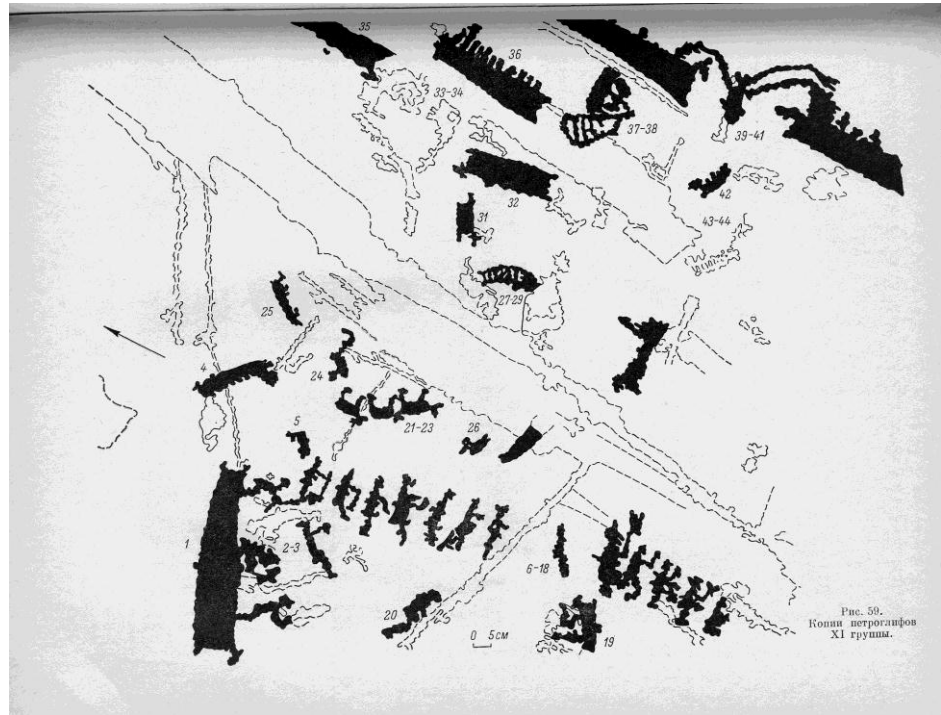


Рис. 59.
Копия петроглифов
XI группы.

a boat and go at them from the west coast to Solovki. Because wood and leather in the sand of the primitive sites Solovki islands have not been preserved, are experiments.

In 2009-2010 the White Sea were carried out two experiments. Their participants: employees Solovki museum-reserve A. Martynov, SB, and A.L. Balan Sharkov, People's artist of bark A.V. Shutihin (Kotlas), a master wood A.A. Kazakov (the village of Borodino Ustyansky district of the Arkhangelsk region), and their associates.

Experiment № 1: frame boat «berestyanka»

Construction of the "sea" frame boats and pilot tested it in the White Sea was carried out in several stages.

Step 1. Procurement of material (birch bark, pine root, resin and branches of conifers and deciduous trees).

For the manufacture of boats needed a young, flexible, crack-free and the "evils" of birch bark with a minimum thickness of 3 mm. Material should harvest in late May - early June, when the crust is moving away from a good barrel. The removed bark should be twisted together into a roll and stored in this form prior to construction. Can be considered an ideal case where the construction of the boat starts immediately after harvesting, while elm is still wet. Cortex of two birch trees with a diameter "in the butt" is not less than 30 cm is enough for one boat.

The branches of the firs go to the ribs and the upper edges of the boards ("frame"). To "frame" must be 8 long (over three meters), gently curved at the base of the branches with a diameter of 4 to 5 cm frames are used for branch length from 1 to 2 m thick and 2.5 cm. All the branches selected for the construction, must be cleaned of bark and twigs.

To form a gasket between the birch and fir paneling frames can be used long (2-2.5 m) and thin (1.5-2 cm) of young stems of deciduous trees, pre-"barked" (partially released from the cortex and completely - from knots). Provisional title of these boat are the parts – stringers.

Harvesting pine root most easily in the sand to make (bor) terraces, which are generally located north parking lot of the Mesolithic and early metal. The root of the pines exhibit at a distance of 2-3 m from the tree at a depth of 5-10 cm thickness of the root should be from 5 to 15 mm. Before use, the root soaked in water, purified from the bark and split in two.

Fir resin is collected on the ground in spruce stem damage (a broken twig, a natural fissure, etc.). To use the good and the dried and fresh resin. When heated, it melts and adds it to any animal fat (pork, goose, seals, and whales). The standard ratio of 10 parts resin to one part of the animal fat.

Step 2. Building.

For the construction of boats used simple tools: an ax, a knife and an awl. On the ground, the contours of the bottom of the next boats were driven stakes height of 60-70 cm, birch bark laid between the sticks and stones pressed to the ground. To the bottom of the boat used very long, tough pieces of birch bark (3 x 1 m). They sewed the pine root on top, additional pieces of bark, which formed the sides (pic 27).

The top sides clamped between two thick branches of the top "frame," which tied with pine roots. After 60-100 cm the upper side joined together by six transverse 'ties', which later served as a backrest for the rowers. Frames placed every 7-12 cm, resting in the side. Between frames and birch bark laid "stringers", fashioned thus, the second - wood - the bottom and the second side. The seams on bark cloth missed spruce resin. The working group composed of A. Shutihina, A. Polezhayev, V. Yarysh, A. Martynov, J. and M. Dubrovsky Hohlinoy built a "sea" boat for three days (Pic. 28).



Period 3. Go along the route of
Kem (Port) - Body - Solovki

The transition from Kemi to Fr. German Body (about 23 km) was carried out for 6 hours with an average speed of 3-3.5 km / h with two short (15-20 minutes) stopping at intermediate islands, which were caused by the need to pour out the accumulated water in the boat and the "stretch feet" paddlers (A. Martynov and A. Shutihin). The first two hours of transition coincided with the mean low water phase, when the flow velocity is greatest, so at this stage was recorded maximum boat speed - 6 km / h. Rest of the way I had to go in a situation where, on the one hand, the movement contributed to gradually weaken during the ebb, and the other - it prevented a headwind, so the boat speed dropped to 2.5-3 km / h. Depending on the location of the boat wave height ranged from 20 to 80 cm, and the direction - from the "bow" to the board. These circumstances complicate the movement, but at the same time, allow the possibility of faith-boats in the natural environment of the White Sea (pic. 29).

After a brief stop on the island Nemezki in submarine Body has set its sights on the island of B. Zayatsky Solovki archipelago. The movement on this, the most complex and lengthy, the way the site was complicated by two factors: a strong head wind and the fatigue of a long day. For these reasons, managed to get two and a half hours of the most difficult part ("Suvorov" between Fr. Oleshin about. B Top), as part of the way to the Gulf Wealth Pesey ludy done "in tow." The final section of this part of the journey was passed in a boat without interference.

During the summer of 2009 on it occasionally went to the Holy Lake. In July, the museum staff Alexander Martynov and S. Balan has been successfully passed a route length of about 10 km from the royal pier B. Solovki islands of the harbor. B. Zayatsky.

Experiments № 2: boat - dolbenka

Step 1. Harvesting of the materials.

According to ethnographic data, the only kind of deciduous trees, of which the XIX-XX centuries. Produced in the North dugout boat ("odnoderevki") was aspen. This explains the origin of the name of another northern dolblenok - "Osinovka." The modern practice of building dolblenok suggests that "Osinovka" size 4.5-5 m is capable of carrying no more than 3 people, boats of greater length on the rivers is not just built, it was not necessary. For the construction of "marine" version dugout were prepared two aspen stem length of 10 m and 80 cm in diameter in the field saw cut.

Step2. Building of the boat - dolblenki.

"Marine" version of the dugout boat ("Osinovka", "odnoderevki", "kamyagi") was executed by order of the Solovki museum master A.A. Kazakov in 2010. Assistant foreman in the con-



struction of the boat were his countrymen A. Ipatov and author of the article.

The main periods of the work (pic 30):

- exemption from the bark of the trunk (okarivanie) in the warm season, when the bark is detached from the shiny surface of the wood with a crackle;
- markings on the trunk of the future boat, with an overlap on the crop and at its end;
- registration form bow and stern of the future boat;
- gouging a steel timber (in ancient times - quartz, flint and shale) with an adze on the principle: first, the central part, and then the side;;
- cleaning inside and outside of the boat a steel scraper (in ancient times it could be done with stone scrapers and scraper);
- Phased wiring boards to the required width by heating to boiling water poured into the ship (in ancient times - putting hot stones into the water) and bursting with thick sides with fir branches;
- Installation of frames of spruce branches bent by attaching them to the ledge - clamp;
- drying and impregnation of the boat seal fat.



Parameters of the "sea" boats: length - 8 m, maximum width - 1.2 m, depth of 40-45 cm, weight - 200 kg load capacity - more than 1.2 m According to our data, a boat of this size built Archangel on the north for the first time in the last two centuries.

Step 3. Test of the doblenki in the conditions of the White Sea.

Invaluable assistance in the implementation of the project was provided by the sponsor company "Ecological Technologies" (leader - Y. N. Rogachev, pos. October Ustyansky district of the

Arkhangelsk region), have provided the master source material, as well as deliver a boat manufactured over 1200 km to the west bank of the White Sea (in pic 31).



In the process of building boats formed a crew consisting of six persons: A. Martynov - the captain and the helmsman, S. Balan and Sharkov (Solovki), A. Kazakov and Y. Rogachev (mouth), Denisov (Moscow). Tests of the boat, dugout held in July 2010 in different weather conditions: with a tail, a head and side winds up to 5 m / sec downstream and upstream, against the tide and wind, the wave height of 30 cm and calm. We worked with five oars, allowing paddlers to rest in turn. The transition from Kemi (Port) to a. German body was carried out for 6 hours with a short (20 minutes) rest in one of the Kem islands (Pic 32).



Due to strong winds and high waves in the area of Zayatsky, and not being able to stay on bodies until the next day, this part of the route the boat was dragged on a tow boat for the museum Pechak, ensuring at the same time its ability to float in a wave of up to 1 m in height and flow rates up to 8 nodes.

The transition from the harbor to the XVI century on Zayatsky to the monastery of Solovki islands dock was carried out during calm weather for two and a half hours. The maximum speed recorded at the site, and was 8 km / h.

* * *

Observations of the "behavior" of boats, carried out in the process of transition, led to several conclusions that are important to the practice of walking on the White Sea on so small and fragile vessels:

- 1) The bark and dugout boat is stable, provided that the seats for the rowers and passengers are at the waterline (the lower the seat, the more stable the boat). The degree of stability depends also on the total weight of the rowers, and weight (more weight, more stable boats);
- 2) The speed depends on several factors. Maximum speed (6-8 km / h) reached the boat moving in a line of the main flow, the minimum (1.5-2 km / h) was recorded during the motion against the tide and wind in the strait between the islands of Russian and German Body. The average speed was 3-4 km / h;
- 3) the motion of the sea in a frequently changing wind (primarily between the islands), you must use different methods of rowing in the dugout: pairs of oars with a tail or head wind, the three (or four), rowing against a crosswind, the oars with all five one side with strong gusts of wind drift;
- 4) The holding of the specified rate on a heavy boat, dugout, in contrast to the light frame boat, you need to constantly work the steering oar, and to monitor and regulate the work of the rowers;

- 5) and "canoe" and dugout boat "cut" the oncoming wave, wave board up to 50 cm in height raises and lowers them when they met with a wave "in cheek" in the boat gets a small amount of water;
- 6) by impregnating the bottom and sides Spruce gum and seal fat boat passed a small amount of water ("canoe"), or does not pass water, get into the dugout, it can only be through the side;
- 7) on the bark boat length 5.5m to walk of 3-4, the dugout 8 m long - up to 12 people.

* * *

Thus, experiments were carried out Solovki museum – reserve, masters A.Shutihinym and A.Kazakov, and the working group and the crews have proved the possibility of building birch bark frame boats and boats –dolbenok and sailing by them in the White Sea in any of them was studied by archaeologists in the North eras. They also confirm the authenticity of images of two types of boats in the petroglyphs Zalavruga (made in the technique of a continuous contour, and a knockout), and the validity of their interpretation as a frame and hollowed. As the historical evidence of the existence of such a practice in ancient times could only serve the immediate archaeological sources - fragments of birch bark and wooden boats dolblenok associated with primitive parking and perhaps the areas adjacent to them (eg, marsh, adjacent to the terrace on which there are six ancient sites marked with the names "Solovki-4, 5, 6, 13, 15, 21 "). Given the small area of the excavated sites (no more than 10% of the total area of the cultural layer of the primitive sites White Sea), it is hoped that such sources will appear in the future steady-state operations. As for the boat with rocker and sail catamarans and other "small size" of vessels, the possibility of their use on the White Sea also be verified experimentally. Leather boat is built, and tested in the White Sea was planned in May 2012.

* * *

In the process, "before monasteries" Solovki past, most researchers confine the description and interpretation of stone additions. Thanks to the frivolous attitude to the sources, and to history in general, popularizes have spread to hundreds of pages of its publications, in a completely unproven "hypothesis" and "conclusions" about of time, authorship and purpose of labyrinths and "sanctuaries." No it does not remember that, in reality these sites do not answer to any question related to the development of primitive islands of the White Sea. A lot of questions. When and why were the first to close the White Sea (and Solovki, of course) of the island? Who and where "walked" on them, and how long it lasted in ancient times? As for what "courts", they traveled to the islands? Where, in any field of modern living Solovki ancient islanders? Only in the summer or all year round? What were their settlements, and that kept them so far? What are they doing, what means to earn their living in various stages of development of the ancient islands? Where they took a stone raw material for tools and clay for dishes? What was the technique of manufacturing stone tools? What distinguished them as "clay pots" in different eras? Which of the generation of primitive "solovchan" lay down the mysterious maze of stone and all kinds of calculations is not always friendly destination? And so on and so forth.

As revealed in the course of our work, the answers given by other sites - lost in the woods and hidden under the tundra lichens prehistoric campsites and workshops. If the maze is still a

mystery to all, the settlements and artifacts as you can see, it is able to reliably tell us about the prehistoric past, the famous archipelago.

Literature:

1. Bruce A. J., Stone, MP Zimin perforated battle-axes in the territory of the European part of USSR / / Code of archaeological sources. No. B-4. - Moscow: Nauka, 1966.
2. Vinogradov, N.N. Solovetskie mazes. Their origin and place in a number of homogeneous prehistoric monuments / / Proceedings of the SOC. Volume VII. Solovki, 1927.
3. Vinogradov, N.N. New mazes Solovki archipelago / / Proceedings of the Solovki Society local history. Volume XII. Solovki, 1927.
4. Gurin NN Stone labyrinths of the White Sea / / Soviet archeology. - 1948. - № 10. - P. 125-142.
5. Gurin NN Oleneostrovsky repository / / IEA, 1956.
6. Demidov I. The history of the landscape reserve "Body" in the White Sea in the late-and post-glacial / / Cultural and Natural Heritage of the White Sea islands. Petrozavodsk, 2002.
7. Zhulnikov AM Petroglyphs of Karelia. The image of the world and the worlds of images. Petrozavodsk, 2006.
8. Cape VR The origin and early history of Aboriginal Australia. M., 1969.
9. Kodolov O.E., Sochevanov VN path of the labyrinth. St. Petersburg, 2003.
10. Kolosova, G.N., Novikov VS brief physical and geographical characteristics of the island of Great Muksalma / / Solovki Islands. Most Muksalma. M., 1996.
11. Kosmenko MG genesis and chronology of the cultural formations of the Iron Age in southwestern and northern Karelia / / The chronology and periodization of the archaeological monuments of Karelia-workers. Petrozavodsk, 1991.
12. Kuratov A. Proceedings of the archaeological expedition AOKM and ACRI them. MV Lomonosov Moscow State University in 1969 / / Archives AOKM. 462a.
13. Kuratov A.A. stone labyrinths in Northern Europe. The experience of the classification / / CA. - № 1. - 1970.
14. Kuratov A. Stone labyrinths Arkhangelsk White Sea. On the appointment of labyrinths in Northern Europe / / Historical and Regional Studies collection. Vologda, 1973.
15. Kuratov A. On the appointment of an irrational stone labyrinths in Northern Europe / / Problems of the Soviet Finno-Ugric. XV All-Union Conference of the Finno-Ugric. Abstracts. Petrozavodsk, 1974.
16. Kuratov A.A. Solovetskie maze - the ancient monuments of culture in Northern Europe / / Culture of the Russian North. L., 1988.
17. Manyuhin IS, Lobanov NV Archaeological sites of the archipelago Body / / Cultural and Natural Heritage of the White Sea islands. Petrozavodsk, 2002.
18. Martynov, A. J. Some problems in the Solovki sanctuaries / / the study of historical and cultural environment of the Arctic. M., 1990.

19. Martynov, A. J. Primitive Bodies parking lot of the archipelago in the White Sea / / Bulletin of the Karelian Museum. Petrozavodsk, 1995.
20. Martynov, A. J. Archaeological monuments of Solovki Archipelago and other islands in the southern part of the White Sea. III millennium BC.. - XV century. Arkhangelsk - Solovki, 2002
21. Martynov, A. J. Prehistoric archaeological past of the islands of the White Sea: Results and problems in the study / / Journal Pomeranian University. Number 1 (5). Arkhangelsk, 2004.
22. Martynov, A. J. Ancient Paths Solovki Islands. M., 2006.
23. A. Martynov, J. On the beginning of the Northern Maritime (according to archaeological sources) / / Russian culture of the new century: problems of study, preservation and use of historical and cultural heritage. Vologda, 2007.
24. Martynov, A. J. prehistoric archeology of islands south of the White Sea. Arkhan-Gel, 2010.
25. Okorokov, AV ship anchors. M., 1986.
26. Ravdonikas VI Neolithic burial site on Lake Onega / / CA. - 1940. - № 6.
27. Reva K., On excavations in 1907 / / KLA in 1907
28. Savvateev A. Zalavruga. Archaeological Site of p. Vig. Part 1. Petroglyphs. - L.: "Science", 1970.
29. How Skvortsov AP sites in Solovki? / / The study of historical and cultural environment of the Arctic. M., 1990.
30. Kheladze I. A brief sketch of the geological structure of the Solovki Islands / / Proceedings of SOAOK. - 1926. - Issue 1.
31. G. Shvartsman, I. Bolotov, etc. The environment Solovki archipelago under the conditions of a changing climate. Ekaterinburg, 2007.

Reviewer – A. A. Kuratov,
Ph. D. of the history, Professor.

New publications

UDK [327+327.51](98)(045)

NATO's actions in the Arctic and their influence on the Militarization of the region



© © **Ershova** Yliya, 3rd year student of Department of Regional Studies and International Relations Institute of Management and regional studies NArFU (Arkhangelsk).
E-mail: ers-yulya@yandex.ru.

Abstract

This article describes the major years of militarization of the Arctic region at present and NATO's role in this process. In conclusion, we can say about a low probability

of military confrontation in the Arctic.

Keywords: *Arctic, militarization, NATO, Denmark, Norway, USA, Russia, Canada.*

The emergence of attractive prospects in the Arctic due to global warming caused the aggravation of the international relations between the circumpolar nations in the fight for the Arctic area. Especially active are showing their position-state properties of the Arctic: Canada, Denmark, Norway, USA and Russia. But other countries such as Sweden, Finland, Iceland, which are also part of the Arctic Council, every kind of way trying to defend its interests in the region. Do not forget about China, for which the Northern Sea Route is quite attractive as an alternative to the south aisle (the latter is longer than the SMP for a few thousand kilometers).

Each of the above mentioned States is trying to defend its national interests in the Arctic region, and take all possible measures to expand its influence in the area. Between states is a struggle for the acquisition of the most significant role in the Arctic. In addition to economic competition grows faster competition in military capabilities. Militarization has become one of the founders, Fundamental factors of power in the Arctic region.

Do not deny that Russia also has a fairly aggressive policy in the region, if you look at the situation through the eyes of other states. In 2007, the Russian polar explorer set the state flag at the bottom of the Arctic Ocean. The incident immediately caused the event of a mixed reaction in the area of interest which includes Arctic territory.¹. This event has not gone out of focus and an organization such as NATO. It should be noted that in many respects Russia's actions have prompted this military-political bloc to move to action, including the militarization of the Arctic. Increasingly, in the territories of the northern states, NATO members have carried out military exercises. For example, one of the largest NATO exercise was held in Sweden in 2009. These maneuvers are called «Loyal Arrow 2009» ("True Arrow 2009"). The exercises were involved in 10 countries [1], but it is worth noting that Russia was not among the participants.

In the past three years, Canada's leadership has repeatedly expressed concern about the situation in the Arctic, including Russia's military activity, the USA claims the Northwest Passage,

¹ See article in this issue: Y.F. Lukin Arctic social phobia / / Arctic and the North. - 2012. - № 1 (5). URL: <http://narfu.ru/aan>.

and territorial disputes with Denmark. In this connection, intended to increase the number of rangers from 4.1 to 5 thousand people, Built in the center of dry-Resolute worthwhile to train troops fighting in arctic conditions [2]. However, these plans are not implemented.

Denmark is also taking steps to ensure its security in the Arctic began to modernize and expand the military base in Greenland, and to place a rapid reaction force to protect its interests in northern latitudes [3].

In 2008, Iceland had made an offer of Russia to the positioning of forces at a military base Keflavik, which previously belonged to the United States. The Russian side has politely refused the offer is so unexpected. Such a response of the Russian Federation can be explained by the fact that such actions could lead to further development of the militarization of the Arctic region. And from Iceland such actions were dictated by the difficult economic situation in the country because of the crisis. The small island nation was waiting with their nearest neighbors (Denmark and Sweden), but they were slow. As a result, the President of Iceland Olafur Ragnar Grimsson said the search for new allies. At the moment, a military base in question is the militarization of space, although the prospect of acquiring it remains as the NATO, and Russia.

Despite the real-life disputes between the U.S. and Canada and between Canada and Denmark, the three members of NATO in August last year took part in "Operation Nanook 2010", and it was a clear indication that they close ranks against the sole bidder, not a member of NATO - against Russia [4]. The paradox is that most countries have conflicts with each other. But Norway, Denmark, Canada and the USA somehow work together as members of one organization.

As a result, Canada has a special status of the representative of the interests of NATO in the Arctic and the main opponent of Russia. Under this strategy, the U.S. and Denmark have taken part in military maneuvers of the Canadian Navy in the Arctic, who every year are becoming a larger scale.

In early 2009, NATO held an unprecedented summit in Iceland, which was dedicated, it was reported that the prospects for security in the Far North. Then NATO openly acknowledged that it has strategic interests with respect to the Arctic region. Russia, in turn, has attended to gain military control over the water area belonging to it [5].

In March 2009, at the site of the Russian Security Council appeared the document "Principles of state policy in the Arctic for the period up to 2020 and beyond." According to him it was planned to create "actively functioning system of the Coast Guard Federal Security Service in the Arctic zone [6]. The document has been two years in limbo, and none of the tasks set before the state was not reached. Moreover, not every task involved in implementing the strategy.

To date, Russia denies the possibility of war in the Arctic. This was stated at the II International Arctic Forum "The Arctic - Territory of Dialogue", held in Arkhangelsk. According to Vladimir Putin, Russia is planning to spend on the development of the Arctic shelf in the next 30 years, nearly 10 trillion. rubles. In fact, it was a 180 degree turn, as early as 2009 plans voiced by some [7], are much more harsh and vivid desire to defend its interests in the Arctic.

In early 2011, the United Kingdom, Iceland, Sweden, Denmark, Finland, Norway, Estonia, Latvia and Lithuania discussed the strengthening of cooperation and the establishment of the northern mini-NATO [8]. Some analysts believe that the main purpose of the organization of the

future - keep an eye on Russia in the Arctic. In response, the Russian Defense Minister Serdyukov AE proposed to develop military cooperation between the Arctic states, to carry out collective activities, primarily to assist in crisis situations [9]. For example, in 2011 Russia and Denmark began planning joint naval exercises.

In addition, Russia and Norway have already conducted joint military exercises "Pomor-2011 in the Barents and Norwegian Seas. [10] Joint activities of Norway and Russia today in the framework of issues related to the Arctic region, in my opinion, is the most progressive. These states have already signed and ratified the 2011 "Treaty between the Russian Federation and the Kingdom of Norway on the delimitation of maritime areas and cooperation in the Barents Sea and Arctic Ocean."

But none of the countries listed have not yet led to major changes in the balance of power. The U.S. military presence, despite the fact that a significant portion of U.S. resources deployed to the south of the Arctic Circle, far superior to that of other members of the "Arctic Eight". Suffice it to mention the American military bases and missile defense systems, located in Alaska and Greenland. Nevertheless, Canada is considered by the state, which is most actively pursuing militarization in the Arctic.

Although the current situation in the Arctic has already been called "the last redistribution of the world", yet no armed conflict in the Arctic can not be. Already now there is information and diplomatic war, but no more. Militarization - this is only one element in a dispute over the Arctic, wearing a demonstrative character, which can play a major role later in the distribution of forces in the Arctic region. The thesis of the deployment of war in the Arctic is very questionable. No state currently will not wage a war for such unfamed, poorly studied and difficult region.

Literature

1. Rick Rozoff, Scandinavia And The Baltic Sea: NATO's War Plans For The High North. URL: <http://rickrozoff.wordpress.com/2009/08/31/scandinavia-and-the-baltic-sea-natos-war-plans-for-the-high-north/> (12.11.2011).
2. Нестёркин Nesterkin B. Military activities in the Canadian Arctic / / Foreign Military Review. - 2007. - № 11. - p. 21-32.
3. Ishchenko S. icebreaker "Russia" is thrown into the battle for the Arctic. URL: <http://svpressa.ru/society/article/31733/> (30/10/11).
4. Robles J. Militarization of the Arctic. URL: <http://www.inosmi.ru/arctica/20110708/171774600.html> (30/10/11).
5. Serov N. militarization in the Arctic: Russia against the inevitable? URL: <http://www.arcticuniverse.com/ru/analytics/20101028/00238.html> (30/10/11).
6. Principles of State Policy of the Russian Federation in the Arctic for the period till 2020 and beyond. URL: <http://www.scrf.gov.ru/documents/98.html> (30/10/11).
7. The militarization of the Arctic: Russia against the inevitable? URL: <http://www.arcticuniverse.com/ru/analytics/20101028/00238.html> (30/10/11).
8. Russia opposed to the "Arctic NATO." URL: <http://www.dni.ru/polit/2011/9/14/218783.html> (10/30/11).

9. Defense: Russia against the militarization of the Arctic. URL: http://ria.ru/arctic_news / 20110208/331769796.html (10/30/11).
10. Russian-Norwegian teaching / / Rossiyskaya Gazeta. URL: <http://www.rg.ru/ 2011/05/12/ucheniya-anons.html> (10/04/2011).

Reviewer – U. F. Lukin,
Doctor of History, Professor.

Authors

1. Glyaznezova Yliya Stanislavovna – Ph.D. of Chemistry, senior researcher at the Institute of Oil and Gas Problems SB RAS.
2. Gorelikov Lev Aleksandrovich – Ph.D. of Philosophy, professor of the department of social and humanitarian disciplines of the National Metallurgical Academy of Ukraine.
3. Egorov Andrei Mihailovich – Associate Professor of Public and legal disciplines Pskov Law Institute FSIN of Russia, colonel of internal service, candidate of historical sciences.
4. Ershova Yliya Vladimirovna – 3rd year student of Department of Regional Studies and International Relations Institute of Management and regional studies NarFU (Arkhangelsk).
5. Zaikov Konstantin Sergeevich – Ph.D., Institute of History and Religious Studies, University of Tromsø (Norway).
6. Zelenina Larisa Ivanovna – Ph.D. of Technical Sciences, Associate Professor, Russian Correspondence Financial and Economic Institute (Arkhangelsk).
7. Zueva Iraida Nikolaevna – candidate of geological-mineralogical sciences, senior researcher at the Institute of Oil and Gas Problems SB RAS.
8. Komleva Elena Vladimirovna – The scientific research worker of the Institute of Philosophy and Political Science, Technical University of Dortmund (Germany).
9. Lifshiz Sara Haimovna – Ph.D. of Chemistry, senior research worker of the Institute of Oil and Gas Problems SB RAS.
10. Lukin Yriy Fedorovich – Professor, Doctor of Historical Sciences, Honored Worker of Higher School of the Russian Federation, Director of Institute of Management and regional studies of NarFU (Arkhangelsk).
11. Martinov Aleksandr Yakovlevich – archaeologist, Ph.D. of history, Deputy Director for Science FGUK “Solovki State Historical, Architectural and Natural Museum-Reserve”.
12. Nilsen Yens Petter – Professor, Institute of History and Religious Studies, University of Tromsø (Norway).
13. Palkina Oksana Albertovna – Ph.D. of biological sciences, associate professor of Institute of Physical Culture, Sport and Health NarFU.
14. Fedkyshova Svetlana Ivanovna – Russian Correspondence Financial and Economic Institute (Arkhangelsk).
15. Chlaya Olga Nikolaevna – candidate of geological-mineralogical sciences, head of the Laboratory of Geochemistry caustobioliths, a leading researcher at the Institute of Oil and Gas Problems SB RAS.
16. Shybin Sergei Ivanovich – Doctor of Historical Sciences, Professor of the department of the International Relations and Regional Studies NarFU.

Absrtacts, keywords

© **Komleva E. A. Natural-antropo-social phenomenon of nuclear energy**

Identified the main concepts. Performed pioneering researchers for Russia, antropo-social complex components of the phenomenon of nuclear energy. Phenomenon without which, life on Earth is excluded. Researchers have brought to the pragmatic way of SAMPO.

Keywords: *Nuclear energy, man, society, material and spiritual culture.*

© **Lukin Y. F. Arctic social fears**

This article presents the first experience of philosophical understanding of the Arctic phobias as a social phenomenon. Phobias are here considered not like as obsessive fears or apprehensions of the individual, as well as long-term threat, anxiety, expectations of social communities and groups related to Arctic issues and requiring their conceptual analysis. We try to make an attempt to identify social phobias, their classification of content studied philosophy Homo sapiens, and fears of modern Russians. It is opened polifobiya of the Arctic environment, Arctic social and cultural phobias, fears of HAARP, climatic changes, with the polar Russo phobia with Arctic performances.

Keywords: *Social fears, classifications, point of views, urban fears, arctic fears, HAARP, Russo-phobe, polar performance.*

© **Gorelikov L. A. Arctic project on the development of global society**

The article investigates the spiritual, moral and historical grounds of objectively formation of a global society in the world content integrity. Expands the historical logic of the development of world society as the rise of social practice from the requirements of natural necessity to creative strategies, universal freedom. Substantiates the key role of the Arctic in a humanistic civilization and consolidation of humanity.

Keywords: *global society, spiritual creation, the national idea, the universal humanism, Arctic civilization, the world's integrity.*

© **Zaikov K. S, Nilsen I. P. Norwegian-Russian Arctic frontier: from the whole districts to the Pomor region**

In this magazine, the authors analyze the major years in the history of Russian-Norwegian border, highlighting the three key stages: 1) the Middle Ages and early modern times – a period of frontier zone and overall fiscal district, gradually diminishing in the process of penetration of the state to the north; 2) the Soviet period with nearly hermetic state border; 3) the modern period, with the process of integration, transparent boundaries and initiatives to create a modern form of “general district”.

Keywords: *Norwegian-Russian border, Pomor land, general district, History, Russian-Norwegian relations.*

© **Shybin S. I. Energy of the North to the Synergetic of Russia**

The history of the administrative-territorial division of the European North of Russia suggests that only a consolidated region, which is united by common interests (province, territory, economic region), it can play a role of a springboard development of Arctic areas. A new model of territorial organization, able to convert energy of the North to synergetic of Russia, reflects the author of the article.

Keywords: *Synergetic, Russia, energy, region, enlargement of the regions, the northern economic region, the Northern Federal District Dvina-Pechora region.*

© **Glyaznezova U. S., Zueva I. N., Chalaya O. N., Lifshiz S. H. The questions of environmental monitoring and rehabilitation of oil-contaminated soils of the Arctic zone of Yakutia**

In the study of permafrost soils to characterize the features of the natural background, the identification of oil pollution of soil, its composition and characteristics of the boundaries, it was used a complex of analytic methods: IK-Fyrie spectroscopy, gas-liquid chromatography, chromatography mass-spectrometry and geochemical approach to the interpretation of the data. The results of an experiment of the study of the degradation of oil pollution in the soils of permafrost under the effect of oil destructors on native micro flora of hydrocarbon.

Keywords: *oil pollution, biodegrading, permafrost soil, micro flora, the natural background.*

© **Zelenina L. I., Fedkyshova S. I. Forecasting and the results of climatic changes in the Arctic region**

The article defines the role of the Arctic region. The causes of climatic changes have been studied. The statistics of changes in key climate indicators is written. A mathematical model of a polynomial trend of the minimum area of Arctic sea ice is created.

Keywords: *Arctic region, climatic changes, forecasting models.*

© **Palkina O. A. Features of external respiration of female students in the conditions of the North**

The respiratory apparatus of the female students have been studied. A small voltage functional capacity of respiratory apparatus is found.

Keywords: *female students, the respiratory system, oxygen*

© **Egorov A. M. Heroic contribution of Pskov in the protection of the Russian North during the “northern” wars at the end of XVI – to the beginning of XVIII centuries**

The article deals with difficult problems of cross-border relations in the north of Europe, have not lost their importance and relevance to the present. In the work we showed the events reflected and so-called “Northern” wars middle. XVI – the beginning. XVIII centuries. In the form how they look through the lens of a key border town in the north-western border of Russia, Pskov, which was at this period the main city of Russian statehood in the Northwest and the country was in the middle of international controversy. Article introduces the scientific revolution, some little known

facts that allows to use more objective look at the history and present of the North and North-West Russia.

Key words: *centralized state, a geopolitical vacuum, strategic, military conflict, dynastic controversy, claim, privilege, an international treaty, neutrality, intervention, border truce, diplomacy, the demarcation, the coalition, disposition, surrender.*

© **Martinov A. Y. The islands of the White Sea, from the Mesolithic to the Middle Ages (the ancient development of the White Sea islands on archaeological data)**

The article is devoted to the history of development of the White Sea Islands (Solovki, Kuzova, Zhizhgin, Mudyug) in the Stone Age – Iron (VI millennium BC. E. – I millennium AD. E.). On the basis of archaeological sources and experimental data it contains answers to questions about the nature of the ancient island of settlements, the culture of their inhabitants, cultural ties with continental cultures, ancient sea routes, origin and destination of stone labyrinths of the White Sea.

Keywords: *White Sea, Solovki Islands, an ancient settlement, excavations, artifacts, pottery, stone tools, labyrinth, an experiment, a boat.*

© **Ershova U. V. NATO's actions in the Arctic and their influence on the militarization of the region**

This article describes the major years of militarization of the Arctic region at present and NATO's role in this process. In conclusion, we can say about a low probability of military confrontation in the Arctic.

Keywords: *Arctic, militarization, NATO, Denmark, Norway, USA, Russia, Canada.*

ARCTIC and NORTH

Electronic scientific journal

2012. Issue 5 (January)

Editor in chief: *Y. F. Lukin.*

Executive secretary: *E. S. Toppel.* Tel.: + 7 902 199 12 00.

An editor on Russian language: *E. A. Suvorova.* E-mail: suvorova.elena@pomorsu.ru,
e.suvorova@narfu.ru. Tel.: +7 (818-2) 68 34 47.

An editor on English language: *M. A. Malakhovskaya.*

Computer design and cover: *A. E. Eremin.*

Placement on the webpage: *Y. V. Novikov.*

Registration certificate – *El № FS77-42809 from 26 of November 2010.*

Founder – *Federal State Autonomous Educational Institution of Higher Professional Education
“Northern (Arctic) Federal University named after M. V. Lomonosov”.*

An address of founder: *Russia, 163002, Arkhangelsk, Northern Dvina River Street, 17.*

Electronic address of editorial office: mba@pomorsu.ru, iuppk@pomorsu.ru.

An address of editorial office: *Russia, 163002, Arkhangelsk, Novgorodskii Street, 8, room. 4–3a.*

Signed for placement on the webpage: <http://narfu.ru/aan>: 12.01.2012.

Webpage: <http://narfu.ru/aan>: 12.01.2012.