© *Leonard I. Ibraev*

(*Yoshkar-Ola, Russia*)

THE NAIAPITHEC ORIGIN OF HUMANKIND[1]

Abstract

A new theory of human origin from Pliocene riverside apes -- Naiapithecs -- is put forward.

Contrary to Darwin our direct ancestors were not hairy, small brained and awkward strangers from the forests in the savannah and contrary to A. Hardy "Aquatic Apes Hypothesis" they were not seaside amphibious "naked apes", but big-headed and biped riverside semi-aquatic, therefore semi-terrestrial apes (but **not** at *all* aquatic apes).

They were wandering in shallow water, often swimming and diving, gathered, caught and ate crawfish, frogs, jammed stranded fish, tortoises, mollusks, rodents, birds' eggs, riverside fruits and berries, roots and insects. Naiapithecs used cleaved pebbles, sticks and bones to hunt and open shells.

This theory is **proved** by morphology, odontology, primatology, etholjgy, ecology and paleontology data.

The **explanation** of many contradictions and uncertainties of anthropogenesis is given. Unsolved problems of the Semial theory of anthropogenesis are **analyzed**: reconstruction of human ancestors' morphology and mode of life, causes of transition to the upright posture, loss of hair, exceptional spatial movement coordination, orthognatism, reduction of teeth and forelimbs, protruding of the nose and chin, development of lips, cheeks and biological preconditions for speech, the bigger closeness to the modern people of earlier hominoids that later ones and others.

The process of human formation – anatomy, language, thinking – in connection with the progress in tools and methods of production, consumption and socialization – is shown.

[1] The abridged translation of the article: Л.И. Ибраев. Наяпитековые истоки человека. // www.Leonard-I-Braev.//Naiphiteki._Statja..pdf - 35 с.

1. Paradoxes of anthropogenesis

The origin of people from anthropoid apes is confirmed by the similarity of their anatomy, physiology, ethology, immunology and their genetic structure, and also by bone remains of intermediate fossils - Pithecanthropus - and, in general, it is causes no doubts in the natural sciences.

But in spite of it, in the semial hypothesis of anthropogenesis there are some serious contradictions and riddles. Sometimes they are silenced at all, or used by anti-Darwinists, or don't get sight, are not paid attention to.

The whole bone-muscle system of the man, his too large and inflexible ***legs*** and weak ***arms*** evidently are not fit to quickly climb trees by means of swinging (brachiating), and it testifies - contrary to Darwin - to impossibility of ***brachiation*** among the closest man's ancestors. Both the morphology of fossil Praezinjanthropes and footprints in petrified volcano ash of Laetoli (in Tanzania) prove the fact that the upright posture preceded labour by millions of years. Labour led to the upright posture perfection, but the upright posture is a precondition for freeing forelimbs for labour. The man acquired hands thanks to his standing on his feet. But why did our ape ancestors after descending from the trees to the land chose such a strange manner of locomotion though the quadrapedal one is easier, quicker and all modern terrestrial apes use?

Why are the forelimbs of people reduced and weak though the strong ***arms*** gain an evident advantage in hunting and labour, especially when using primitive tools? Why didn't the chimpanzees and the extinct Australopithecs, who had the upright posture for millions of years, consumed meat and often used sticks and bones, turn to labour?

The acute Little Red Riding Hood was very much surprised to see the strange teeth of the Wolf--Granny. But much more surprising are human ***teeth***. If our ancestors were hunters and ate meat, why our teeth and ***jaws*** are so weak to eat raw meat and the ***bowels*** are twice as long as those of a carnivore? Moreover already the Praezinjanthropus had diminished jaws, though they didn't use fire and could not soften meat with it.

What did human ancestors feed on?

In danger birds fly up into the air, ungulate animals run away, apes climb up trees or rocks. How could human ancestors, being so slow and having no weapons but miserable sticks and stones, ***resist beasts*** of prey? *M.F. Nesturkh* and *B.F. Porshnev* frankly admit that they cannot imagine it. B.F. Porshnev draws a highly fantastic picture: the terrestrial primates managed to survive due to "interdiction" -- a signal way of communication with the beasts. Did they persuade animals? Or did they use a steady "hypnotizing look"? "The beasts of prey cannot bear a man's stare".

The latest pale anthropological discoveries in the second half of the 20 – beginning of the 21st century in Africa created an even more paradoxical situation: in Olduvai Gorge and also near the lake Turkana (Rudolf), river Omo and in some other places in Kenya and Ethiopia *L.*, *M.* and *R. Leakey* and other researchers found some bones of a creature named "Homo habilis" ("skillful human") or Praezinjanthropus, -- and these findings, by almost commonly accepted evaluation, have the antiquity of 2 million years, and generally are contemporaries of the Australopithecus, but morphologically they were much closer to humans and used split pebbles for instruments.

How could it be?

These ***much earlier*** hominoids are to some extent closer ***to modern*** humans than the ***later*** pithecanthropes who had too long arms, big teeth and superciliary arches that many well-known paleoanthropologists refuse to recognize as a human ancestor.

To the unsolved problems of anthropogenesis we can also refer mysterious reasons of human ***hairlessness*** though even in tropics it is cold at nights and all the apes still have fur.

There is no explanation of the ***hair*** on the man's head, the advanced ***chin*** and ***nose*** with the turned downwards nostrils, the functional difference between the man's and other primates' ***teeth***, though they are both considered to be identically omnivorous, genetically incredible ***speed*** (it's believed to be 4--5 thousand years) of the Pithecanthropes' transformation into modern Homo sapiens and some other phenomena have not been still explained.

Such numerous mysteries in the man's original form reconstruction testify that in the modern theory of anthropogenesis there is a large fundamental **gap**.

2. **Naiapithecs**

I think that many contradictions and uncertainties in the comprehension of anthropogenesis can be eliminated by the theory of human origin from Pliocene riverside apes – Naiapithecs – which was put forward by me in 1985.

Our direct ancestors were not hairy, small brained, awkward from the forest, but naked, big-headed and biped riverside apes. Let's call them Naiapithecus, – Naiapithecs (according to the name of river' nymphs – ***naiads*** in Greek myths).

They lived during the Neogene several million years ago on the river banks and lake shores in the semi-savannah of the fore hills. They wandered in shallow water, often swimming and diving, gathered, caught and ate crawfish, jammed stranded fish, tortoises, frogs, mollusks, rodents, birds' eggs, riverside

fruits and berries, roots and insects. Naiapithecs used cleaved pebbles, sticks and bones to hunt and open shells and testae.

The former life on the trees, which helped to develop flexible and tenacious paws, the color binocular vision, exceptional spatial movement coordination, the enlarged cervical optical and parietal kinesthetic parts of the cerebral cortex whence their quick wits -- all this trained them well for such a riverside mode of life, that no other animal leads.

As it should be in any hypothetical-deductive theory, the **proof** of the drawn picture of anthropogenesis is its consequences that give an **explanation** of many morph-physiological peculiarities of the man and the **solution** of the contradictions in modern conceptions of the man's origin and the **predictions** of new directions and the geography of the search for ancient hominoid and hominids.

Water and employment forepaws obtaining food gathering prevented naiapithecs from down on all fours and conditioned the ***upright*** posture of locomotion – **bipedalism**. The bottoms of shallow rivers, which are often soft, required ***wide*** and ***flat feet***. Half aquatic existence in the hot tropical sun against which there was no forest shad, and overcooling from wet fur conditioned the ***loss of hair*** as in rhinoceros and elephant which both have semi-aquatic ancestors. Diving developed a reflex slowing of the heart beat (***bradycardia***) when sinking into the water though it was not as slow as in the cetacean.

3. The sea apes hypothesis

Thus, many morphological and physiological characteristics, and, as we can see, the most important, distinguish people from their recognized immediate "family" - great apes, "anthropoids", but suddenly pull together with aquatic mammals. Are otters or dolphins are also the same our anthropoid relatives?

The first on this strange fact noticed in 1923 and 1942 German pathologist *M. Westenhöfer* (looks like without the influence of the National Socialist hostility to England with her Charles Darwin) and in 1960 the English marine biologist *A. C. Hardy*. They struck seen their people are some significant similarities with aquatic animals: wool loss, subcutaneous fat, the pinna is not pointed like a monkey, and a rounded curl, and the upright posture similarities in the structure of the spleen, kidneys, etc., - and they put forth a similar explanation of the aqueous adaptation of people - an assumption "aqueous phase" in the evolution of "subhuman primates".

M. Westenhöfer ventured on the assumption of life of our ancestors, "in the high seas" and likeness "amphibians - such as salamanders", and, according to A. Hardy, our ancestors were monkeys seaside, lived in the late Pliocene on

the sandy shores "in the tropical lagoons seas" (*pp*. 642 - 645), - the so called coastal "aquatic ape" hypothesis.

As you can see, aquatist's guess about the hydro generation of many peculiarities of a human organism has well grounds.

However, wild imagination of the anatomist and "marine passion" of the oceanographer led them to the idea of a sea or coastal settlements of human ancestors and *excessive* likening them to marine mammals, even in such completely aqueous, dolphins, whales, seals and other Pinnipeds. And this despite the fact that neither any marine mammal bipedal running is not known.

Pioneers of "Marinism" were though not by anthropologists: the first is the pathologist, the second is the researcher of zooplankton and whales in the Antarctic seas, vaguely representing conditions "of the tropical seas"; but still, after all, professional biologists, and why were they with commendable caution in the minds of failure of their bases - in the form of mere "logical hypothesis" or even questionings in front of some not very learned audience SubAqua Club at Brighton: "Was man more aquatic in the past?" - and with hope for the future "additional confirmation" of their guesses. Even with a strange timidity: by the conviction of A. Hardy, he came to his controversial thoughts even thirty years ago, but fearing to spoil own academic career, announced it only became an academician in 1960, and even then only in the club, followed by journalistic explanation of his speech.

Their bold ideas orthodox scientists welcomed, as it should be in science - with the necessary skepticism.

But on the one hand, *exaggeration* of themselves Marinism' fathers, and on the other hand, own enthusiasm has its followers "explanatory power" ideas, as well as a clear lack of competence in many of them, such as the English poet and TV-writer Elaine Morgan, or at least even "general practitioner" M. Verhaegen and many other enthusiasts, pushing them to all sorts of absurdities, right up the funny search the *atavistic* swimming webbing in the fold of skin between the fingers of people, or the identification of underwater breath-holding divers with the regulation of breathing whales and pinnipeds although those in immersion not hold their breath, and, conversely, expel air from the lungs, but store up oxygen in the blood and myoglobin in the muscles.

With characteristic reckless aplomb dilettantes, bumping into specifics, such aquatists were ignoring numerous factual details, discussion of qualified expert opinions and complex theoretical analysis of the contradictions in the accumulation of materials, and eventually pile up a lot of hits mess than the order to discredit the idea and sowed to it prejudice among academic augurs, naturally irritated invading their sanctuary outrageous heresy of profanes, and even with the attempt on their situation and prestige. Thus, fighters for the idea did open to snobs the field to laugh to their water blunders as well, especially in the begin-

ning, as usual, the field for the protection from drivel by posture arrogant disregard unworthy such venerable luminaries as they to perceive it seriously.

And not without reason. Marine hypothesis, in fact, is reduced mainly to the comparative anatomy of aquatic and terrestrial mammals, but led us away from well-known in paleontology, without of their analysis and to explore fossilized petrified traces of anthropogenesis and left without paleontological evidence and their “seaside” and the "sea amphibious monkeys" turned into fantastic and elusive ghosts and, no wonder, generally marine idea has not been recognized by the science.

Marinist’s publications quickly gained popularity among students and researchers-not specialists, but none of them did not take in any scientific journal on anthropology or related disciplines, leaving outsiders to vegetate somewhere on the border of pseudo-science and faith. And the most smashing weapon critics were triumphant incrimination: "Where are fossils of your water monkeys?"

And this requirement is drawn the marinists in the confused retreat.

Therefore, although the deduction of people from the sea "amphibious monkeys" found among theorists anthropogenesis some authoritative supporters, and some of them: *Pilbeam D.* 1987, *Wood B.A*. 1987, *Hunt H. D.* 1994, *Tobias P. V.* and others - eventually even became known as the old "Savannah" antiquated theory, nevertheless the hypothesis Westenhöfer - Hardy did not receive general recognition in science. Not even helped her inspired support in 1989, the famous Swedish biologist *J. Lindblad*, author of the popular European television series about the life of animals.

However, bold public pressure amateurs to startling facts, their cocky and stubborn challenges experts explain to the public the strange differences between humans and apes, proclaimed nevertheless "anthropoid" and relatives of our ancestors, and, on the other hand, the strange similarities of people with aquatic mammals, yet forced anthropologists old school mumbling something in return - even unintelligible - and their ulcerate their impotence forced to look for these explanations.

Eventually, in 1987 in the Dutch town of Valkenburg conference was organized for discussion between supporters and opponents of the theory - with the publication of materials: The Aquatic Are: Fact or Fiction? Valkenburg, 1991. Since then, these debates were held repeatedly.

As a result, the original "sea" version of the "aquatic ape hypothesis" was rejected as unfounded and fantastic speculation, but the ground semi-aquatic concept beginning anthropogenesis deemed worthy of further research in pale anthropology - and now the water and other ecological "environmental factors" of evolution has long featured even in student textbooks as, for example, the Cambridge professor and academician *Foley R*., 1995, 2009, the popular British promoter *Lewin R*., 2003, 2005, or the Californian professor and academician *Howell F.C*, 1996.

Thus, we can say that the marine version of anthropogenesis on Westenhöfer - Hardy did not stand the test and have already gone, but the idea of our semi-aquatic – semi-terrestrial ancestors essentially began in the world of science is almost general accepted.

Naiapithec's theory gave an analysis and explanation of the above described contradictions and unresolved problems ("mysteries") of the existing semial conceptions of anthropogenesis showing his factors and processes in organic compounds in evidence on actualistic approach to the interpretation of the traditional empirical studies in pale anthropology fossils.

4. The actualistic proof of the Naiapithec theory of the man's origin

The trouble of the "sea apes hypothesis" is not just in the absence of proof. Its trouble is more seriously, their "beach" seaside apes are impossible.

In the tropics, the sea coast and lagoons everywhere where there is moisture, overgrown with impenetrable mangrove forests with a continuous palisade stilted and air roots. While mangroves come not only very close to the water, but also moving away from the shore out on far to sea, even covering the entire bandwidth of tides – littoral, and leave the monkeys no choice but either to climb up trees or go in sea.

The sandy or rocky coasts are free from mangroves in such places there where there is no fresh water or the surf is too big. But then how monkeys could quench your thirst here, which is frequent and strong in the equatorial sun heat? And what would they feed here in during stormy weather, which can last for days, weeks or even months?

Thus we see that A. Hardy's *sea ape hypothesis* on the whole contradicts the seaside biology. It's evident that the *sea*side semi-aquatic apes on the sea coasts could not survive.

Naturally, that no semi-terrestrial mammals (such as like river minks and beavers) in the littoral do not exist. The sea is too severe to tolerate the anything half. Seals, walruses, sea otters, manatees, seals and other Pinnipeds, and even more whales and dolphins have been compelled to leave entirely to the sea and only some species briefly chosen on land for rest and birth. By the way, paleontological cetaceans ancestors have evolved from terrestrial mammals, most likely in fresh water and from there moved in the sea.

Thus human ancestors were monkeys in-1) **not** coastal *sea*side but namely **river**side and **lake**side apes.

Although, of course, sometimes these riverside apes could go earn one, and at the seaside, but in areas secured fresh water, that is, near the mouths of

rivers and streams, and are free from mangroves and in good weather, where besides them less plagued distills wind bloodsucking Dipterans.

In particular, it seems, nothing prevented naiapithecs settle near the mouths of rivers and streams on the banks of a small internal Afar Sea (now the salty desert in Ethiopia), getting rid of large tides, therefore, from the mangroves and protected by mountains from ocean storms, as well as on the shores of salt and alkaline lakes along the Great rift valley of East Africa.

Elevated levels in their fish, clams, oysters, mussels and other products iodine and sodium chloride (table salt), should be, and led to today's increased need for them the human organism, and his kidneys have the capacity to better display these salts than are the kidneys have terrestrial monkeys. Presumably, because a lack of iodine leads people to hypothyroidism, and it is - to the looseness of the muscle tissue, skin swelling, bone growth retardation, hair, mental retardation, cretinism, even, I guess - multiple sclerosis.

In-2) human ancestors were apes are not aquatic, but only semi-aquatic and hence semi-terrestrial, - Naiapithecs.

And it is fundamentally important, saves us from aquatist's *exaggeration* and overexposures and opens the necessary proofs of the origin from Naiapithecs.

The naiapithecs theory of the man's origin gives solution - explanation the apparent contradictions between today noticeable peculiarities of human morph physiology, ecology and ethology, thereby it brings them into the system and thus gives to it of actualistic proof.

Diving developed ***breath*** control, its long hold-up, and, in some way, non-oxygen (***anaerobic***) oxidation of carbohydrates with lactic acid secretion into the blood.

Diving probably also conditioned a human innate predisposition to ***short-sightedness***, though it is not the permanent myopia characteristic of fishes and other inhabitants of the less transparent water medium; and also partial compensation of external hydrostatic pressure on the eyes by filling the arteries of the back chamber with blood resulting in eyes reddening after diving.

Protection from the sun and the counter water stream their *noses* were protruded with the nostrils directed downwards. The *skin* became darker because of the melanin generation that protected deep under the skin lying blood vessels from radiation. They had a developed ***subcutaneous fat*** layer though it was not as thick as that of pigs and hippopotamuses. The number of ***sweat glands*** came up to 2-5 million and extensive perspiration caused frequent drinking. The ***hair on the crown*** became thicker because it was more rarely immersed into the water and suffered more sun heat.

Female Naiapithecus' hair on the head became even thicker and stronger - because it served her not only as a shield from the sunrays, but also as traces

for her babies. The modern ape's young hang on their mothers holding on to their fur. Apparently this semiaquatic mode of our ancestors' life accounts for the surprising phenomenon discovered not long ago: the ability of human *infants* to start swimming earlier than walking.

The necessity to split and open shells and testae and in close proximity of the smoothed by water stones – pebbles, naturally, had led naiapithecs to using them instead of instruments for obtaining food. Naiapithecs used cleaved pebbles and sticks which developed the flexibility of their ***fingers***, ***hands***, good ***eye*** and ***thinking***. Even chimpanzees cannot crack or throw stones as far and as accurately.

They had to bite, scratch out of the shells and chew slippery and elastic shellfish or fish, easily moving them in the mouth cavity and holding them in from sliding out. This conditioned the main tooth-and-jaw (***odontological***) differences between hominids and apes – the loss of unnecessary sticking out ***fangs***, reduction and development of spade shape ***front teeth***, the increasing in number of ***prominences*** on molars from 4 to 5, teeth position not in the form of a quadrangle but ***arched***; concavity of the palate and other peculiarities that are used as signs to determine of a species of a fossil but which haven't yet been explained.

Finally, the Naiapithec's ***jaws*** became shorter, their back ends – wider and the ***nose*** and the ***chin*** protruded relatively forward and the ***tongue*** as masticatory organs receives the increase of the mouth cavity and the higher loosing and mobility.

The same necessity of holding of food by eating and not letting the water into the mouth caused covering it with ***cheeks*** on the sides, higher mobility and tight closing of the ***lips***. The other terrestrial mammals in order not to get choked when swimming have to hold their muzzles high above water and because of their fur they get wet, cold and do not like to ***swim***.

The ratio of the ***bowels*** to the length of the man's body is 5.6 can be explained by the fact that ancestors' food consisted mainly of mollusks, fish and crayfish and other crustaceans. This index is just between piscevorous (4.5) and omnivorous (6.8) and it is far from carnivorous (3.7) and cerealvorous (8.7), to say nothing of herbivorous (15.1).

In the water Naiapithecs could ***save*** themselves from tropical beasts of prey. Before the appearance of weapons they were almost powerless even in flocks. They were saved by riverside steeps and trees, shallows and sand spits, whirlpools and deep pools, small islands, cliffs and rocks, rush and bushes.

Because there was no danger from the prairie and forest fires - safe near water – they were not afraid of ***fire*** - which was a precondition for its future adaptation and usage.

Some of the similar morphological changes can be observed in modern

big-***nosed apes*** (Nasalis larvatus: Rinopithecs, Simians etc.) in South-East Asia. Though surely they aren't the ancestors of people, they lived in the boggy mangrove forests, spending most of the time in the trees, eating leaves and fruits. But they have something in common with water naiapithecs: often they had to walk on a swampy ground on the hind limbs – which are twice as big as front legs with long flat feet. They dive well and can swim under water for about 12 metres; they have a long nose, short hair and a fat body. Their long tail serves as a rudder during the turns and jumps in the trees and it is not tenacious.

It seems that fossil anthropomorphous apes, found in the layers of the upper Miocene of the North Italy, hidden in the waterlogged forests, ***oreopithecs*** - as big as a chimpanzee, with a long skull and overhung nasal bones, with the combination of the ability for brachiation and two feet walking on hind limbs were somewhat close to them. That was 12 million years ago.

The cases of crab hunting in the river mouths was observed among the green *marmosets* in South Senegal, though they lived and fed in the trees of mangrove forest, also java *macaques* of Indochina, Malacca and archipelago Malayan – are named crab eaters for that. Sometimes they even used stones for hunting.

As the rest of terrestrial primates Naiapithecs lived in herds, and I suppose they were as noisy. Loud cries, shouting, squeal, screeches, heavy breathing, puffing, mewling, grunting, growl, roar, barking and hooting of contemporary apes serve as the ***expression*** of their fear, anger, joy, impatience and other feelings and also for ***signaling*** danger, appeal etc. However, their palate is low and flat, the tongue is thin, vocal cords are also thin, with uneven non-rounded edges (that's why their *voice* is harsh and hoarse) and they lack the tense muscles (m. thyreoarytenoidens). So they have no physiological *basis* for ***speaking*** and ***singing***.

But in the high tropical grass and dense forest leaves and greenery only such sharp and loud sounds can be heard.

Naiapithecs owing to the specific features of their nutrition had relatively light jaws, moving tongue and lips, a clear resonator due to the volumetric, covered with cheeks, mouth cavity, big lungs of a swimmer, the ability to arbitrarily control their breath, and on the other hand nice acoustics of the water surface -- all these became the biological preconditions for the future development of phonation and articulation and transition from expressive and signal communication to ***speech***.

Even the following subjective indicator such as our feeling better near water reservoirs, the man's desire to relax by the water basins, is another proof that this is the man's native place, his ***ecological niche*** to which his organism is adapted best.

Unfortunately, in special ecological literature the man's original ecological niche hasn't been defined. For example, *J.Winer* comes from the fact that people live in the different existence conditions, but he pays no attention to that the modern humans live in different natural-climatic zones – from the tropics up to the Arctic – and it has become possible thanks to artificially created means and conditions of living. So we cannot call it biological adaptation. Though morphological observation of modern native people living in different natural zones -- tropical, desert, mild, continental, high mountainous, arctic -- reveal a definite biological adaptation of the man that includes both physiological processes: blood pressure, perspiration, metabolism, content of hemoglobin, erythrocytes, cholesterol, gamma-globulin fractions of protein, and the man's build: height, proportions of arms, legs and the head, muscle mass, etc. But even this biological accommodation is not primary. It happened later on in the process of anthropogenesis and can be referred not just to the environing nature but to the definite historical and geographical types of economics and culture.

Now we can see that the **man's past is recorded in the texture of his organism and in the way of living.**

5. The fossil naiapithecs. The paleontological discovery and proof

Naiapithec's roots of the man are proved not only by actualistic method of the object history reconstruction according to his nowadays structure but also in accordance with direct ***material remains*** of Naiapithecs.

Does the modern paleontology know about such riverside apes?

The history of primates is known to the science still of course fragmentary but we have material proves of these apes. They do exist, though they haven't been sighted. The problem is that till now we don't have a satisfactory interpretation, because at present there aren't any similar apes in reality and therefore in our minds.

In Kashmir and Sivalick hills, foothills of the Himalayas and in East Africa along the rivers the researches discovered the petrified bones of ***Ramapithecus*** apes and forms off Keniapithecus, Proconsuls, closer to them. I don't think that these monkeys were Naiapithecs. They lived at the end of Miocene, 14-8 million years ago when the period of drought, and savanna drive back the jungle, stretching along rivers and made them change the tree way of life to the ground one. We can also mention a characteristic feature – ramapithecs were distinguished by a short muzzle, round forehead without an eye roller, thin jaw which does not go forward too much; narrow, horseshoe

type without the monkey shelf; more straight chin; not slant, as usual in apes, but plate beveled teeth; many protuberances on the chewing surface of the cheekteeth; lower corner teeth are little and upper corner teeth are difficult to distinguish from the human ones, – these are the indications of delicate food consuming. At the same time fangs, though they are smaller than other monkeys have, are longer than other teeth, cone-shaped with diastema for them in the lower teeth range; on the corona of cheekteeth there are enamel stripe (cingulum) which is not characteristic of people; nose bones are narrow and long; the heel bone is as the one of the straightened foot.

However, the found fragments of Ramaphitecus skeleton are not enough to treat about the morphology on the whole. Some researches consider ramapithecs to be 4 footed, the others – 2 footed, using the front extremities for holding the objects, and refer it even to hominid's.

Considering their morphology and their existing in the water deposition, it is possible to suppose that ramapithecs and some other close to them forms were ***ancestors of Naiapithecs***.

I think that the properly Naiapithecs, quite-developed semi water apes are represented apparently by the fossil hominoid beings in Olduvai Gorge (90 metres deep, 2 million years old), though *L. Leakey* himself called them "people" – "Homo habilis" or "Praezinjananthropus" – too optimistically.

Habilises are Naiapithecs according to both their morphology and ethology.

Rather a big brain (about 650 cubic centimeters), legs longer than arms, arched feet, ankle and pelvis texture, easy head balance on the neck and other signs of the upright posture; the absence of the sagittal crest hence weak masticatory muscles; smaller than Pithecanthropus' size of the face, jaw and teeth; unusually wide finger phalanxes that means a strong grip of hands able to hold pebble tools.

The cleaved pebbles, shells and tortoise, fish, flamingo, water rabbit, frog and other remains scattered around; petrified papyrus roots, their position in the clay deposits of water sediment, etc, – all this undoable proves that low Olduvai creatures were just riverside apes, one of the Naiapithec's species and their further evolution confirms (and it can be seen in the upper layers) that they were human ancestors.

But in my opinion it is not correct to refer the habilises to the apes of the Australopithecus type. The long jaw of Australopithecus, his beveled chin, large molars, bigger even than a gorilla's, a huge sagittal crest, forelimbs longer than hind limbs, short fingers on a long metacarpus (that is their rough motoric), short half bent legs - all this speaks for different mode of life. Australopithecus africanus was apparently a savannah ape that hunted small and young animals and picked up bones after beasts of prey and cracked those us-

ing stones. Bigger Australopithecus robustus had even more impressive masticatory organs that were necessary to grind a lot of greenery, I think, this was a forest ape that used its forelimbs to bend down twigs and branches, to gather fruits, to dig out edible roots and tubers.

The life of our naiapithec's ancestors on warm riversides is testified by the ***geography*** of the finds of the most ancient ***fossils hominoids***. Hot tropical or subtropical climate, hilly savanna with separated thickets of trees and bushes, with river and lake valleys and rocky escapes – such were landscape, climate, flora and fauna of the two discovered hotbeds of the appearance of humans in Eastern Africa and Eastern Asia. This permits to take one's courage in *prediction* of the other hotbeds of anthropogenesis somewhere in Western Asia and Southern Europe, having the similar conditions.

Scatterings of cleaved pebbles of the Low Olduvai type were found in Africa, in Southern Europe, in the Near East, in India, South-Eastern Asia and everywhere in river, lake and seaside deposits. One must think, this was not accidental, not only because their owners came to water to slake thirst. Naturally, australopithecs also consumed water but their remains were found far from water, in dry savannah, foothills and caves.

Low Olduvai habilises were just apes – the human ancestors, Naiapithecs, but we cannot consider them "people" (hominids) even though ancient and their pebble tools cannot considered a "culture". Properly speaking, the whole before Chellean (≡ before Abbeville period) Olduvai had only one tools – a chopper. Its "manufacture" comes to the simple cleaving of pebble without any special attention to the crack edge shape. Their diversiform and chance changeability evidence that here are known animal's actions. Beavers and birds do the same. For thousands generations, during more than two million years, these tools have not been modernized, the "technology" has remained the same. The last speaks about the absence of any speech transfer and accumulation of its experience in these actions. And similarly during these million of years the apes themselves almost haven't changed in their physical type.

The use of tools by the riverside apes was going on these for million years but it does *not* mean that the use of tools is not an indication of the difference between a man and an animal – because for millions of years this has not been yet human labour, but just a biological phenomenon, animal actions based already not on the instinct (monkeys risen in captivity, as the observations of *L.A.Firsov* and other ethologists show, can not make nests for lodging for the night), but not yet on the speech notional thinking. In my opinion, the psychic of such actions among the upper animals is based on the figurative thinking – ***con-imagination*** and also learning by way of imitating.

The customary drawings of human ancestors with sticks and stones in hands winning wild horses and even elephants and cave bears in my view are fantastic. Hunt for such big animal was impossible for riverside monkeys and even for Archanthropes a very long time. Biped running is much slower than quadrupedal and they could not catch them, and using sticks and stones they would not be able to overcome them even by the whole herd. And what was the use of hunting such big animals it they were not able to eat them? No fangs to bite through their thick skin, no sharp instruments to dress the carcass, to cut joints, no teeth to chew this raw meat, and no stomach which was used to digest such kind of food.

6. How prepeople became people

The anthropogenesis process was long but not gradual; it is divided in two steep ***fractures*** (bounds, spurts, leaps).

The ***first bound*** was the transformation of Naiapithecs into ***prepeople*** (prehumans), high habilises, *Pithecanthropus* ("Homo erectus"), – about 1.3 - 1 million years ago.

The habilises of the second Chellean layer of Olduvai (90-60 *m* deep) already could be referred to the ancient forming people and to some extent justified the name "Homo habilis". Their tools are cleaved on 2 sides (bifaced) and are slimmer. They reveal the attention to the form and ***the beginning of technological development***, though very slow.

The giraffe, antelope and elephant bones scattered about testify that these habilises passed on to the Australopithecus trade – they gathered bones and splinted them to extract marrow – the role of hunting increased. Apparently because the climate became dryer and the water reservoirs dried up too. Palinological data and fauna of those days testify to it.

If at first the naiapithecs hunted for small and young animals, but prehumans start hunting big animals; judging by the found bones, these were wild boars, sheep's, antelopes, horses, even elephants. This became possible thanks to the perfection of tools: making big choppers, suitable (that can be proved experimentally) for dismember these animals and skin them, and also scrapers and punches, with the help of which it is possible to scalp an animal for fell processing. Perhaps at that time the first spears appeared -- just simple poles with sharpened and burnt ends.

No doubt that hunting big animals even then was difficult and dangerous. Prehumans rarely attacked them openly, but preferred to make ambushes or to pursue and drive a beast to bogs or precipices.

It's significant at that time of Australopithecs disappeared. Probably

they couldn't win this competition with unprecedented equipped and armed hunters or they just were destroyed and exterminated as game.

Habilis's physical appearance is also changing. To the middle stratum, – approximately 60 metres deep, they are transforming into Olduvai Pithecanthropus (Homo erectus) – using the traditional term - though it would be precise to call such forming people (from upper habilises, pithecanthropes to the Neanderthals) ***prepeople*.**

The transition to hunting became a reason for resettlement of prepeople ***to the steppe***. That is why the tools of pithecanthropes were not made of pebbles but of unrolled solid hard rocky races: quartzite, quartz, clinkers etc.

The progress of ***tools*** and ***ways*** of hunting changed material relations between prepeople.

In the processes of gathering and catch small animals the individual activity predominated. Therefore the former naiapithecs' horde was formed mostly on the basis of sexual and relative links and common necessity in looking the food and warning against danger. The connecting function is performed by the orientation towards the behaviour of the neighbour and the leader that facilitates the finding of food and protection from the enemies. All the naiapithecs in the flock play the role of the mutual chiefs and mutual guards.

Now ambushed and driving hunt of prepeople is the first ***cooperation*** (role sharing in the search of capture, pursuit, encirclement and attack) which is the same as the one in the flock of beasts of prey. However if carnivores hunt animals which are weaker in the physical aspect individually and their cooperation is only situational, though the prepeaple hunted even elephants, rhinoceros, bears and other giants, which are 10 times bigger, stronger and faster than any prehuman. That's why they were able to overcome them only due to manufacturing and use of tools and complicated, stretched out in time and space, long labour cooperation – ***organization***, which served as a precondition to the raising from an animal flock into ***society***.

But the necessities of the social organization and the making of implements made expressions and signalization, typical of animals and limited by the situation, not sufficient and required the development of ***speech*** with its oversituation, abstraction, metaphorical case etc. It had led to the rise of ***signalization*** in the ***language*** and, accordingly, the ***conimagination*** - in the ***oversituational abstract thinking***, able to foresee of series of their own and other actions and their complicated results. (See -"Problems of Linguistics", M., 1981, N 1, *pp*. 17-35).

Physiological consequence of labour and of organization was the following cephalization (development of cerebral segment), the complication of cytoarchitecture and the growth of brain to 900 *cc* and then to 1300 *cc* and some-

times to 1600 *cc*.

The further evolution of prehuman beings went with the making tools. Their settlement from former natural areas in new places influenced by changes of climate was always possible due to mastering new means of production. The selective adaptation not only to the nature but also for a method of production and consumption began. Forming of the human body type came along with the development of the production.

Yet the progress in texture and volume of their brains was connected with regress of skull and hands.

Burnt bones which were rarely meet in the fires of Pithecanthropus and the state of their dents means that they couldn't make food on fire; they ate either raw or burnt meat. Though masticating of praesapienses of rough fare lead to the permanent self purification of their teeth from the deposit of protein coatings, saliva minerals, food remains and microorganisms. That is why they rarely had dental calculus and caries. When scientists found in Brokenhille, Zimbabwe, one with caries, who perhaps was very fond of honey, they were very much surprised. But caries became a characteristic feature of the sapienses and the great curse of modern people. Up to 90 % of the population of all the continents suffers from it now. It is like payment for the use of mild boiled food and the surplus of carbohydrates in it.

But the chewing of uncooked fruits, hard raw meat of big animals and other kinds of rough food caused their jaw enlargement and thickening of the superciliary arch and skull – sometimes twice – as much, which deteriorated their speech articulation.

The absence of handles in Acheulean stone tools and holding them directly in hands led to their monstrous strengthening. They became wider, paws shaped, but were unable to fulfill fine motions.

The difference of local nature conditions caused the morphological difference of Pithecanthropes. One of those specializations was thickset, huge ***Neanderthals***, who got used to beforeglacial tundra-steppes and cold semideserts, which covered the whole continents. Almost all the remains of these subarctical prehumans were found in the beforeglacial zones of Europe, Atlas, Caucasus, Zagros and others. In the cold Europe of other hominid species according to the paleontological data, did not exist.

However in the tropical zone, in the ecological niche near water basins habilises lived at the same time with the pithecantropes: in the middle layer of Olduvai there are their bones, which are more refined and making anthropologists doubt in the succession of the human evolution.

The ***second bound*** was the transformation of Pithecanthropes to people, Homo sapiens, about 200 - 40 thousand years ago that was conditioned by two

acquisitions.

The first one - starting the everywhere use of ***fire***.

Though the traces of that fire (bituminous coal, ash, burnt bones) appears from the Acheulean culture approximately 750 years ago (the cave Acheul in France, 7 metres layer of ash from sinanthropuses in the cave Cocetang by Chjou Kojdyan in China), but the fire was used only for warming up, frighten of beasts and in the driving hunt.

The already everywhere use of fire and consequently its artificial making and cooking food on it began approximately 200-100 years ago and undoubtedly - with Mousterian culture.

The reason for ***orthognathism*** (the loss of big projection of the facial part of skull) was just the ability of making food on fire. It gave the shortening and lightening of the jaw and superciliary arch.

The big jaw of Pithecanthropus with beveled chin, overeye roller and muscles relief are not present in the human ***embryo*** and are less indicated in the fossilized ***infant*** skull than in the skull of adult species. Does it mean that the above marked features of Pithecanthropus are not the initial ones, but the result of the later adaptation, caused by the passage of prehumans to hunting big animals? Then the incredible fast transformation of prehuman into Homo sapiens becomes understandable. It was a progress of the face by way of removal of certain sides of the then morphological stage – the loss of ***prognotism*** (the big projection of the facial part of skull), apparently accelerated by the hormone stop (retardation) of ontogenesis – that is partial return to the previous earlier infantile Naiapithec morphology and from that stage – the mutation-selective later lessening. It explains well paradoxes of bigger sapienty of earlier hominoids than later ones and genetically surprising rapidity of final evolution of pithecanthropes into modern people – though it longer than usual 4-5 thousands years.

Such controversy of the man's origin shows that Pithecanthropus was both the extinct dead species and the ancestor of the man.

The reduction - lessening of jaws and overeye roller lead to shortening and bowing up of the practically plate skull base and due to it – the descent of ***larynx*** and growth of the resonator camera near ***pharynx***. The shortening of the scull base accommodate the brain the same volume needed the ascent of its arch and ***straightening of the forehead***. These selective changes as physical preconditions of speech ***articulation*** caused the exceptional importance of the latter for surviving and the solution by this circumstance of the contradiction between the necessity to speak and morphological obstacles for it.

The perfection of speech and mind caused the second acquisition -- appearing of ***composite tools*** with wooden ***handles***: stone axes, spears with flint

tips. They made possible ***distant*** hunting even ***alone*** in the forest and allow the population of the forests of Europe, Siberia, Congo, Somali and others, increase the lissomness of hands and it became a morph functional precondition for the creation of the Cro-Magnon's bow and arrows, bone needles and consequently for clothes, statuettes and rock paintings.

So at the end of the long contradictive anthropogenesis process having transformed the face, larynx, mouth, brain and hands, – the fire and the handle led the prepeople into people.

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© 1986. Ibraev, Leonard Ivanovich. Docent of Philosophy Chair of Mari State University. Russia, 424002, Yoshkar-Ola, Ryabinin St., 7A-16. **E-mail:** libraev@mail.ru