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SEVERAL RESULTS OF BIOARCHAEOLOGICAL AND ETHNOECOLOGICAL INVESTIGATIONS IN TAJIKISTAN

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Abstract. The article describes several topics of joint Russian-Tajik research conducted since 2013 in the Khatlon velayat of the Republic of Tajikistan within the framework of the Memorandum of Cooperation between the N. N. Miklukho-Maklay Institute of Ethnology and Anthropology of Russian Academy of Sciences and the A. Donish Institute of History, Archaeology and Ethnography of the National Academy of Sciences of Tajikistan. The text includes several interconnected blocks: archaeological excavations, ethnoecological study of the subsistence systems of the modern and medieval populations, and collection and analysis of human remains. The article gives brief information about the archaeological excavations of the Shakhidon burial ground of the 7th–8th centuries (Baljuvan jamoat), anthropological characteristics of the population buried in it and information about the economy of the population of the dekh Shaidon, where the site is located, as well as materials on other regions of the Republic.

Key words: Middle Asia, paleoecology, Medieval history, early nomads, funeral (burial) rituals, modern and Medieval subsistence system, human, animal and plant remains

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НЕКОТОРЫЕ РЕЗУЛЬТАТЫ БИОАРХЕОЛОГИЧЕСКИХ И ЭТНОЭКОЛОГИЧЕСКИХ ИССЛЕДОВАНИЙ В ТАДЖИКИСТАНЕ

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Резюме. В статье описывается несколько направлений совместных российско-таджикских исследований, проводимых начиная с 2013 г. в Хатлонском вилояте Республики Таджикистан в рамках Меморандума о сотрудничестве между Институтом этнологии и антропологии им. Н. Н. Миклухо-Маклая РАН и Институтом истории, археологии и этнографии им. А. Дониша Национальной академии наук Таджикистана. Текст включает несколько взаимосвязанных блоков: археологические раскопки, этноэкологическое изучение систем жизнеобеспечения современного и средневекового населения и сбор и анализ палеоантропологических данных. Приведена краткая информация о раскопках могильника VII–VIII вв. Шахидон (Балджуванский джамоат), антропологическая характеристика населения, захороненного в нем, и сведения о хозяйстве населения деха Шайдон, где памятник расположен, а также сравнительные материалы по другим районам республики.

Ключевые слова: Средняя Азия, палеоэкология, средневековая история, ранние кочевники, погребальные ритуалы, современная и средневековая система жизнеобеспечения, костные останки человека, животных и растений

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Introduction

Since 2013 Russian-Tajik team, comprised of specialists in different fields of science from the Institute of Ethnology and Anthropology of the Russian Academy of Sciences and from the Institute of History, Archaeology and Ethnography of the National Academy of Sciences of Tajikistan, is conducting comprehensive research in the river Surkhob valley in Southern Tajikistan (Dubova et al., 2019, 2020). The main purpose of the work is to study

the life support systems of ancient and medieval societies in comparison with the modern one, characteristic of the population of this region. Therefore, archaeological excavations, undertaken together with zooarchaeological and archaeobotanic studies, were supplemented by ethnoecological study. The work includes a significant replenishment of the currently available bioarchaeological data on the distribution of stress markers as well as pathological conditions and parameters of the dental system. To identify the features of age-related processes, special attention has been paid to the study of the skeletal remains of individuals of different biological ages (from early childhood to maturity).

Investigations of the Shakhidon Graveyard

The Shakhidon cemetery was one of the basic objects on this way. It was discovered by the Baljuvan archaeological expedition under the leadership of Tatyana G. Filimonova, in 2012 in the process of compiling an archaeological map of this region. The research was conducted in the village (“dekh” in Tajik language) Shaidon of the Sarikhosor jamoat (Baljuvon district) in Khatlon region of Tajikistan (38°31'45"N 69°50'10"E) on the loess remnant formed as a result of the erosion of alluvial sediments in the valley of the Surkhob River (Fig. 1; Filimonova, Akhmetdzyanov, 2016; Filimonova, 2019; Filimonova et al., 2019). In 2011 local residents found a human burial with a horse in it. The man lied on his back, next to him was an iron sword and a horse in a harness and under a saddle (psalia, bits, stirrups, etc. have been preserved). Some of the finds, including the sword, are now in the exposition of the local museum (Fig. 2). Excavations of the cemetery began in 2013.

The dating of the first discovered burials was based on a characteristic coin, which is an imitation of Peroz (the ruler of Sasanian Iran) item and dates according to the numismatist D. Dovutov back to the Kushano-Sasanian period (459–484 cc). The coin was found while clearing fragments of the neck vertebrae and base of the skull of a man buried in grave No. 2. It was put into the mouth of the deceased (three such cases in this graveyard) accordingly with the tradition left as a legacy by the Greeks of supplying the deceased with coins for Charon (Fig. 3). Based on this coin and the funeral rituals, that differ from those of the local agricultural population, the author of the excavations suggested that the cemetery belonged to nomadic tribes, probably Ephthalites (Filimonova, Akhmetdzyanov, 2016, p. 262). The analysis of grave goods carried out by Viktor S. Solovyov, allows to attribute them to the 6th–7th centuries (Solovyov, 2018). According to the conclusion of the professors of Altai State University, Alexey Tishkin, Vadim V. Gorbunov and Nikolay N. Seregin (it is planned to carry out special studies) made during a visual inspection of the available material in 2018, the burial ground may belong to a somewhat later time — the 7th–8th centuries (Tishkin et al., 2019).

During 2013–2015 twenty-nine burials most of which were destroyed or looted were unearthed there. Different types of tomb constructions are noted: single-chamber catacombs (10 graves), shaft tombs (13), pits (2), two-chamber catacomb-pits (2). In two cases, the type of graves could not be determined. Intact and destroyed stone lay outs which were probably arranged on the surface after the burial pit was filled in were found at different depths. The positions of the skeletons are no less diverse: only in 10 cases the buried were laid on their backs with bent legs, knees turned upwards, and with their feet resting on the bottom of the grave pit. Others were buried in various poses, included three on the left side in crouched position. In one burial two people were buried, all others were single.



Fig. 1. General view on the Shakhidon graveyard. 2015

Рис. 1. Общий вид могильника Шахидон. 2015 г.



Fig. 2. The sword, stirrups, bit and other fragments of funeral offerings from the destroyed burial at Shakhidon graveyard in the local museum exposition. 2013

Рис. 2. Меч, стремена, удила и другие фрагменты погребальных приношений из разрушенного погребения могильника Шахидон в экспозиции местного музея. 2013 г.



Fig. 3. Shakhidon graveyard. Tomb N 28.
The coin between the teeth of the buried woman of 25–40 years old

Рис. 3. Могильник Шахидон. Могила №28.
Монета в зубах погребенной женщины 25–40 лет

Together with human in 21 graves there were animal remains presented by skeletons and “skins”. The “skin” is the burial of the skin of an animal, taken together with the head and distal parts of the limbs. Horses (11 burials), hybrids of horses and donkeys (5 burials) as well as cattle and small ruminants can be identified. Separated bones of small ruminants were also found. In some cases, they presented funeral food (Fig. 4).

The grave assemblage includes arrowheads and spearheads, swords, knives, stirrups, bronze mirrors, beads, earrings, ceramic vessels, and coins. A microscopic study of soil samples from the filling of several graves showed a high concentration of flint formations of plant origin (phytoliths and cuticular casts) in them, which may indicate that the “skins” placed in these burials were stuffed with grass. The composition of the detected microbiomorphs includes forms characteristic of cereals and dicotyledonous plants that make up meadow communities. Another explanation for this phenomenon may be the use of grass bedding on which the deceased was laid.

The burial ritual differs sharply from the Zoroastrian traditions of the agricultural population of early medieval Bactria-Tokharistan. It unequivocally indicates that the burial

ground belongs to the circle of mobile pastoral cultures. Different variants of burial structures and the positions of the buried show the presence in their composition of groups that differ in cultural traditions. It is important to emphasize the simultaneous existence of characteristic local pottery and a number of traditions left by the Greeks with the “steppe” ones, which are evidences of the contacts that took place between mobile pastoralists and settled farmers.

The excavations of the Shakhidon cemetery will be continued and published in the special monograph.



Fig. 4. The Shakhidon graveyard.

General view of tomb N 30 with a buried woman of 25–35 and a horse

Рис. 4. Могильник Шахидон.

Общий вид могилы №30 с погребенной женщиной 25–35 лет и лошастью

Bioarchaeological Study

During the excavation of 12 burials of the Shahidon burial ground, the remains of 13 individuals of different sex and age (4 male, 6 female, 2 children and 1 fetus) were studied. Preliminary results of the study have been published (Dubova, Kufferin, 2016).

Field processing of the material was carried out taking into account traditional recommendations (Mamonova, Romanova, Kharitonov, 1989), cameral examination — according to a comprehensive anthropological program, which included sex and age identification, traditional morphometry, assessment of the muscular relief of long bones, determination of muscle relief development and of odontological features, scoring of pathological and stress mark-

ers. A separate publication is devoted to the craniological features of the population that left the site (Kufterin, Dubova, 2017).

Small series of female mesocranic skulls (only one male skull was measured by complete enough program) is characterized by large and medium diameters. Artificial deformation is absent. The forehead has middle width; the face is medium of length and moderately profiled in the horizontal plane. The nose is mesorhinnic. Orbits are absolutely and relatively high. Low nasal bones protrusion, moderate horizontal face profile as well as high orbits together with general Caucasoid image of the skull give possibility to suppose the presence of the East Asian anthropological component. But the flattened face skeleton, especially in naso-molar part is not only characteristic of Eastern Asian but with so named "Palaeocaucasoid" Eurasian population also. The amount of data is very small. So, this combination of traits gives grounds for the assumption of mechanical mixing of different components.

Canonical discriminant analysis of female Shakhidon skulls with 31 synchronous series from Middle Asia by 16 craniological traits (head length, breadth and basion-height, minimum frontal and bizigomatic diameters, upper face height, orbit maxillo-frontal breadth and height, nose width and height, simotic width and height, naso-malar, zigo-maxillar angles and angle of nasal bones protrusion) using STATISTICA 12.3 soft shows their greatest similarity with the "Ephtalite" skulls from the Kukaldy site (Alai Range) and two combined series of Turk nomads: from Eastern Kazakhstan, the 7th–12th centuries (Ginzburg, Trofimova, 1972, p. 241) and Tien Shan the 6th–8th centuries (Miklashevskaya, 1959).

The moderate degree of postcranial bones relief indicates the absence of extreme physical exertion. Stress markers are rare.

The Life Support System of the Modern Population

Bioarchaeological research was supplemented by the study of *the life support system* of the modern population. Data on the structure and characteristics of traditional forms of exploitation of plant resources and animal husbandry were obtained through observations and a survey. Heads of farms, protected areas, citizens involved in the harvesting and processing of products (wild fruits, medicinal plants, timber, etc.) and shepherds were involved in the survey as "experts". In total, 27 persons were interviewed in Tajikistan and 23 — in Turkmenistan. In addition to interviews, the structure of livestock was also evaluated through visual counts of household flocks on pastures or transhumant routes. Some 100 samples of timber, fruits, and seeds of cultivated and wild plants, used by local populations, were collected during our field research in both regions under the study (ethnobotanical collection). In addition, five wooden samples were taken for xylotomy analysis from the excavations at the Early Medieval burial ground of Shakhidon. We have also interviewed 87 families (more than 50% of the total) in the village Shaidon, where the Shakhidon burial ground was located. The questionnaire included questions about family structure (age and sex composition), specific features of farming, animal breeding, and appropriating forms of economy, aimed at exploiting plant and animal resources. The collected information was tested by the results of direct field observations of the daily activities of this population.

The Peculiarities of Ethnoecological Approach

The ideas of "cultural ecology" and, later, "ecological anthropology" gained wide acceptance abroad much earlier than in the USSR. The corresponding subdiscipline of "ethnic ecol-

ogy” was developed only in the early 1980s in the Soviet Union. The former served as an important or sometimes a leading methodological basis in the studies of the local differentiation and historical evolution of subsistence systems, including those of the pastoralist’s cultures in the arid and semiarid zones (for example, see: *The Ecology of Pastoralism*, 2015). The region of our studies comprises an integral part of those natural zones.

However, there are certain unique features of our approach. For instance, most of the relevant studies of foreign scholars, representing cultural anthropology and relying to some or great extent on ecological-anthropological methods of collecting and analyzing field data, have been devoted to the peoples of East Africa. Much less emphasis was made on related studies of pastoral peoples of other regions in Sub-Saharan Africa or the Middle East and North Africa (see, for example, reviews of this kind of literature: Dyson-Hudson R., Dyson-Hudson N., 1980; Fratkin, 1997; Muhammad et al., 2019). Archaeologists, including those who actively use methods of “cultural ecology” while reconstructing subsistence systems of ancient peoples and civilizations of arid and semiarid zones, mostly work in countries of the Middle East and North Africa (see, for instance, the review: Honeychurch, Makarewicz, 2016). There were also many archaeological studies of this kind in Central and South America. Thus, there are practically no direct analogues of the project, based on the same methodological approach and focused on studies of subsistence systems in the arid and semiarid expanses of Eurasia and Central Asia in particular.

On the other hand, the very term “subsistence system” has been interpreted quite differently in the contemporary foreign English-language social sciences, compared to the scholarly approach within “ethnic ecology”, founded by professor Victor I. Kozlov. The former is almost identical to the notion of “subsistence” in the works of Igor I. Krupnik. It also resembles the actual meaning of the popular term “economic and cultural type”, introduced into the Soviet ethnography by Maxim G. Levin and Nikolay N. Cheboksarov in the 1950’s. But neither the I. Krupnik’s approach to the term “subsistence system” nor its interpretation in the West have gained any support in the Russian-language literature (for details, see: Yamskov, 2009). Thus in methodology, our project differs considerably from the approaches that currently prevail in Western archaeology and cultural anthropology.

Finally and most importantly, in the framework of this project, we started to collect field data that might allow us to achieve an interdisciplinary synthesis of studies in ethnology, archaeology, bioarchaeology and paleoecology. These studies are integrated by the one aim — to analyze subsistence systems in all their historical diversity.

Tajikistan Regions Where Ethnoecological Research was Done

Field ecological research in Tajikistan was done in the Khatlon province (Qubodiyon, Danghara, Baljuvon, and Dusti/Jilikul districts) and the Fayzobod district of the republican subordination. The territories of these districts encompass various natural zones, from the deserts on the plains to highlands. Large-scale and in-depth interviews, as well as extensive personal observations, were conducted in the village Shaidon of the Sarikhosor jamoat to find out specific features of the use of animals and plants in individual households.

Field materials in the Dusti, or the Jilikul, district were collected to compare the current state of animal husbandry with the situation before the Soviet collectivization of farming and pastoralism (for the details about the latter see: Yamskov, 2021). In this district special at-

tention was paid to evaluating certain present-day problems in animal breeding, including social and environmental factors, limiting its development. In previous years this kind of field data was collected in Turkmenistan, in Garagum and the Bayramaly districts (“etraps” in Turkmen language) of the Mary province (“welayat”) and in villages of the Ahal province, located in the vicinity of Ashgabat. All participants of the project took part in field studies.

Before the Soviet collectivization of agriculture, traditional pastoralism of ethnic Tajiks was a highly developed part of household economy, containing practically every known form of animal husbandry, typical for a settled farming ethnic community residing both in the lowlands and highlands (see, for instance: Yamskov, 2021, pp. 251–258). During the Soviet period, the country experienced rapid growth of rural population and, correspondingly, human impact on agricultural lands, including various types of pastures. This negative environmental impact was especially serious in the areas of winter and intermediate spring-autumn pastures, where animals should be pastured for some 70% of the time due to natural conditions in Tajikistan. The highland summer pastures that cover far greater territories and are thus much better preserved, can be used by domestic animals for only some 30% of the time during a year (Abdunazarov, 2006). The collapse of the USSR and the subsequent bloody Civil war of 1992–1997 in Tajikistan led to great economic devastations and a sharp decline in total livestock numbers, but then the number of domestic animals rather quickly reached previous levels and continued to rise further, unfortunately causing deterioration of pastures and growing deficit of lands, suitable for keeping animals.

In his recent review of the main current problems of extensive pastoralism in post-Soviet Central Asia, the famous anthropologist and historian, Anatoliy Khazanov, stressed that in Tajikistan the major limitation for further development of animal husbandry is a lack of pasture lands and a poor state of the existing pastures, 85% of which have been overgrazed and degraded (Khazanov, 2017, pp. 60–61). The UN experts put the growth of total numbers of livestock in Tajikistan from 2005 through 2014 at 64% up to 7.4 million animals. The stock is comprised of 43,6% of sheep, 25% of goats, 30,5% of cattle (with milking cows comprising some 15% of the total livestock). The major problem is overgrazing and the resulting degradation of natural pastures so that 89% of the summer pastures and 97% of the winter pastures suffer from medium or heavy soil erosion. The total area of pastures in Tajikistan equals 3,6 million hectares, with summer pastures in the highlands covering 2,02 million hectares. At the same time, another 700 thousand hectares of summer pastures in the most distant parts of the country are not in use anymore, while many portions of the most accessible summer pastures have also been heavily overgrazed (Tadjikistan, 2017, pp. 206–207, 214).

The high importance of pastoralism in the economy of contemporary Tajikistan and its population can be seen even on the hillsides along the roads, linking the lowlands and mountains of this republic. Almost everywhere these hillsides are covered from top to bottom with fresh paths running strictly parallel to each other, almost exactly repeating the horizontal. These paths on the slopes were carved by sheep during the seasonal transhumance of flocks between lowland winter and highland summer pastures.

Economic statistics are no less eloquent. Animal husbandry made up some 30% of the total agricultural production in Tajikistan in 2013 (Karimova, 2015, p. 23). At the same time, individual private households contained 93% of cattle and 83% of sheep and goats in the coun-

try. From 1991 to 2011, the total number of cattle in Tajikistan rose by 69%, yaks — by 55%, sheep and goats — by 37%, horses — by 45%. It was the private households that showed those profound increases, thus more than compensating for great losses of livestock during the Civil war of 1992–1997 and a manifold decline of the number of animals in various large enterprises that were founded on the bases of the disbanded kolkhoz (collective enterprises) and sovkhoz (state-owned enterprise) of the Soviet period. Nevertheless, the fast growth of population in Tajikistan in that period resulted in lowering of *per capita* production of meat and milk in the republic — corresponding figures in 2011 became only 74% and 87%, compared to 1991 (Amirov, 2014, pp. 113–115, 155).

More than 51% of the able-bodied population are currently employed in agriculture, and the latter makes up around 20% — 22% of GNP in Tajikistan. The total amount of agricultural and other productive lands in the republic, which equals some 7,2 million hectares, is made up of pastures, comprising 53% of these areas. The pastures, in turn, are classified as winter (720 thousand hectares), summer (2 million hectares), spring (740 thousand hectares) and all year round (400 thousand hectares). For comparison, cultivated areas make up only 675 thousand hectares, including 470 thousands of hectares of irrigated fields, and the additional more than 115 thousand hectares are under gardens and vineyards (Amirshoev, 2018, p. 22).

Subsistence System of the Shaidon Village

At the time of our studies, there were 1140 people residing in the Shaidon village (totally in the jamoat — 5800 persons) and 170 households (totally in the jamoat — 850). Natural and climatic conditions strongly influence economic activities in this dekh. It is located at the elevation of 1500 meters above the sea level in the narrow sloping valley surrounded by steep mountain slopes at the place where three rivers meet. The relief inside the settlement and in adjacent territories is very dissected. Some aspects of the climate are close to subtropical. Temperatures in winter are fluctuating from –3 to +3 Centigrade (sometimes reaching as low as –10, according to locals), and in summer — from +23 to +38 (the mean yearly temperature is +14,7). The low slope valley of Sari Khosor provides for a maximum period of the Sun exposure during the year, reaching some 2600–2800 hours. The prevalent soils in the vicinity of this dekh are serozems (grey arid subtropical) and brown mountain soils, generally good for cultivation.

Our data shows that the population's economy is based on farming, transhumant and village-based pastoralism, beekeeping. Plants are cultivated on the household plots in the dekh (garden and orchard, usually about 0,5 hectares), as well as on the plots outside dekh on mountain slopes (usually about 200 hectares). The latter distant plots are used for growing cereals and potatoes, and only about 2/3 of a plot are under cultivation each year while the rest goes fallow and the grass is used to feed domestic animals. Mostly winter varieties of wheat are cultivated (summer varieties have limited distribution) with one crop per year and productivity around 15–20 centners per hectare. Grain is grounded in water mills of the traditional Central Asian design. The water mills are regularly renewed, and the new ones are constructed. As a rule, mills are not placed in the channels of large rivers, but on their banks with canals connected to them and providing running water, or on small streams, in places where there is a necessary water drop to rotate the millstones.

The local population also grows barley, oats, corn, and peas on their plots. The first three crops are used as fodder. Potatoes, cabbages, cucumbers are grown on household plots,

and they can produce up to 2 yields per year. Carrots are practically not cultivated here, because they require far more developed and deep soil layers. The garden can be located both on the household plot and separately on a distant plot. The main horticultural crops are apple, pear, peach, cherry plum, cherry, walnut (an average of 3–4 trees of each species). According to locals, the harvest of fruits and nuts of each type can reach 1 ton. The main part of the harvested fruits is dried, and dried fruits are sold.

Domestic animals of the local population include sheep (53,6%) and goats (18,9%), cows (16,9%), horses (5,3%), donkeys (5,3%). The main part of livestock in summer is kept on distant mountain pastures away from the village, on common and private plots. There can be some 20–40 sheep and goats, around 2–10 cows, 1–3 horses and donkeys in one household. Every cow usually gives some 8–10 liters of milk per day, and the milk is processed into butter, sour cream, buttermilk, kurut (dried yoghurt). Goats are rarely milked, and milk from sheep is not used. Sheep are sheared twice a year, and goats — once a year. They usually have a Gissar fat-tailed breed of sheep. Households also keep poultry — some 15–20 or more chicken and 5–10 turkeys. Apiaries include 50–125 hives. Depending on weather conditions and care, one hive produces 20–40 kg of honey per year. Dogs are used to guard houses and herds. Mostly large forms of the “Alabay” type are kept, but small forms of dogs are also present. Observations show that small dogs hunt mice. The horse and donkey retain the function of the main mode of transport because the dissected relief limits the possibility of using road transport.

Though farming is highly developed here, the gathering also retains a significant role in the economy, since the surroundings of the village are rich in wild fruits. The local population harvests hawthorn, pistachio, walnut, cherry plum, apples and pears, wild rose, barberry (including bark), as well as food and medicinal herbs and roots (cumin, rhubarb, mint, oregano, sage, lemon balm (lemongrass), St. John’s wort, plantain, liquorice, golden root, su-mac-tatum, etc.). In recent years, they began to actively collect sea buckthorn and hand it over to a small plant in Sari Khosor, which processes it into medicinal oil. The collection and production of pickled canned mountain garlic (“piezianzur”) is of no small importance.

Harvesting of hay and firewood is carried out in specially allocated areas. Firewood is the main fuel here, and dung is rarely used (usually manure is used for fertilizer). Hunting is not widespread. In the vicinity of the village, there is a high number of wild boars, which harms crops, orchards, gardens. But the local Muslim population does not use wild boar meat for food, so the killed animals are thrown on the spot. A similar situation develops with porcupines, which significantly damage crops and fruit trees. Informants also report that wolves regularly enter the territory of the village, posing a threat to livestock and poultry. Fishing is not developed.

Presently, there is a growing number of small villages, each containing some 3–6 households, in the interfluves of the Surkhob and Yakhsu rivers. The territory is a plateau, standing above river valleys. Relief is deeply dissected by ravines of ancient water flows, now dried up, and small streams. The northern slopes of the hills are usually covered by thick woods. There are narrow terraces along the streams, suited for cultivation. Thick grasses allow practicing intensive animal husbandry here. So, the amount of farmers’ households is increasing. They are based on small parts of preserved terraces of different elevations above the river in the valley of Surkhob.

Conclusion

As the result of our study at the Shakhidon graveyard (Baljuvon district) twenty-nine tombs of early nomads of 7–8 cc. were described. In twenty-one of them there were remains of horses and hybrids of horses and donkeys presented by skeletons and “skins”. Different variants of burial structures and the positions of the buried show the presence in their composition of groups that differ in cultural traditions. The contacts that took place between mobile pastoralists and settled farmers must be underlined. This result is supported by the analysis of bioarchaeological data from twelve tombs presented by thirteen individuals. The combination of morphological traits gives grounds for the assumption of mechanical mixing of different components. Canonical discriminant analysis of female Shakhidon skulls with 31 synchronous series from Middle Asia by 16 craniological traits shows their greatest similarity with the “Ephtalite” skulls from the Kukaldy site (Alai Range) and two combined series of Turk nomads: from Eastern Kazakhstan, VII–XII centuries and Tien Shan VI–VIII centuries.

The ethnoecological investigation shows that the modern local population of Southern Tajikistan is successfully utilizing natural-climatic conditions and resources, preserving their traditional ways of life to a considerable extent. The latter is due to the specifics of geographical location and environmental conditions that make innovations in life-supporting systems of little efficiency. It is hard to access studied villages because of the insufficient network of good roads, and knurled tracks along dried riverbeds are mostly used as roads in these areas.

The excavation of the Shakhidon graveyard and study of subsistence system of modern population of Tajikistan in comparison with the surrounding regions will be continued.

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