Historical Aspect Of The Flora Invasibility Of The North Western Part Of The Great Caucasus

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The northwestern part of the Greater Caucasus is characterized by high invasiveness of the flora - 12% of the entire flora. The reasons for this lie in the natural phytocenotic background, differing in the abundance of ecotone communities. The main reason is connected with the history of peoples and ancient civilizations, concentrating in the region the history of the anthropogen. Since the ancient stone age, people have migrated to this part of the Caucasus, attracted by favorable natural and climatic conditions, richness and accessibility of food resources, a variety of landscapes. Beginning with the Bronze Age, long migrations of the builders of Mediterranean localites begin, the end of the first millennium before the new era - this is Greek colonization, in the early and late Middle Ages - this is the numerous nomadic steppes - all this was accompanied by the spread of adventive species. In the late XIX and early XX centuries the process of deliberate introduction and distribution of transformers is intensifying.

Keywords: *Northwestern part of Greater Caucasus, alien plants, ways of biotic invasions, history of early cultures, historical aspect*

INTRODUCTION

Adventist plant invasions are currently the second major threat to natural ecosystems. They have anthropogenic orientation and associated only with direct or indirect human activity. Attention is drawn to the continuing growth not only of the quantitative increase of alien species, but also the expansion of their phytocenotic positions. At the same time, they naturalize not only in anthropogenically disturbed cenoses, but also in stable and undisturbed communities, as it has happened with the relict *Buxus sempervirens* L. (Shchurov, Litvinskaya, 2015). The reserved Thyssen-boxwood grove currently grows 28 allochthonous species. For the Black Sea coast indicated 140 species that naturalize outside the Sochi arboretum (Soltani, 2007).

Ecological disturbances and threats from invasions unprecedented: the loss of native floristic diversity, the threat to biotopes of rare and endangered species, the transformation and simplification of the structure and a decrease in the productivity of the floral component of ecosystems, a radical change in the succession processes, the hybridization with the native species, the role of host plants for new parasites and agents of diseases. All this leads to a rapid disruption of the stability and ecological balance of ecosystems that have developed over millions of years. In the northwestern part of the Greater Caucasus there is no floristic district, wherever invasive species were not recorded. In total, more than 400 feral, naturalized, accidentally entered, penetrated "independently" by railroads, motor roads of species were registered in the region, which makes up 40% of the introduced adventures throughout Russia (Litvinskaya, 2016).

RESULTS AND DISCUSSION

The northwestern part of the Greater Caucasus - one region in Russia that has such a high quantitative index of alien species that are not characteristic of the local flora. There are several reasons for this. First of all, it is a variety of natural conditions from the steppes and dry subtropics to the humid subtropics of the Colchis ecosystem and classical vertical zonality.

Invasive species from different biogeographic regions, having close relatives with aboriginal reaction rate and ecological valence, can find suitable habitats and ecological niches.

A complex mosaic of the vegetation cover forms an abundance of natural ecotone communities, where the adventive species can penetrate without transforming influence on the cenoses.

The situation changes when the appearance of ecotone communities is associated with anthropogenic fragmentation of the ecosystem, as happened with the steppe vegetation of the Western Ciscaucasia. The preserving steppe refugiaes turned into

ecotones between inferior steppe cenosis, agrocenosis and ruderal vegetation.

High level of invasiveness of the region associated with an unprecedented anthropogenic modification of the vegetation cover, when man, depending on the type of nature management that was created, destroyed the whole landscape ecosystem, for example, the reduction of the forests of the lower and middle mountain belts in the 18th-19th centuries by circassian tribes. Formed after-forest meadows, steep slopes exposed to erosion, arable land represented new ecological niches and were open to invasions of synanthropic and adventitious species.

The ways of biotic invasions is extremely complex. The invasion in the region can not be explained only by economic activity in the XVIII-XX centuries. Many alien species penetrated earlier periods of the development of society and explain their appearance by knowing the history of the early cultures of the Russian part of the Caucasus.

In the history of the nature of the region there was not period beyond the conjugation with the development of a certain culture of man. This is the most complicated ethnoecological region, it is a testing ground for historical monitoring, which allows forecasting the development of disturbed ecosystems. Without knowledge of the complex relationships between man and natural ecosystems in the past, it is impossible to understand the modern structure of floral invasions.

At all times, the peoples of the north-western part of the Greater Caucasus migrated, sometimes changing the course of historical development and leading to major historical fractures. In the loss of stability of natural ecosystems and rapid inadequate response to modern anthropogenic intervention, lies the entire complex destabilizing history of nature and man.

Always this part of the Caucasus has been attracted to the man, as the most stable in terms of nature, the most favorable in terms of natural and geographical conditions, rich in resources, which gave food, house and opportunity to farm in all historical periods. The isthmus of the Caucasus, being at the crossroads of the routes of Eastern Europe and the Near East, fulfilled a great cultural and historical role. The Caucasus was closest to the centers of the ancient civilizations of the Near East and the Middle East.

In the biotic exchange of the region, both "latitudinal" and "longitude" ancient ways of introducing adventive species are recorded. Regular "economic" links with neighboring areas of the Caucasus can be traced in the Upper Paleolithic already.

The possibility of movement of the Paleolithic population evidenced by the fact that flint raw materials distributed in Transcaucasia were discovered at the Tugups parking lot.

The Mesolithic site of the Canopy of Satanai is marked by *Alnaster*, which does not grow now in the Caucasus (Amirkhanov, 1986). In the pieces of the bitumen of the Il'skaya site of the Upper Paleolithic, synanthropic species were found: *Lepidium perfoliatum*, *Polygonum aviculare*, *Euphorbia* cf. *palustris* cf., *Carex, Scirpus, Plantago* sp.

A number of stone tools of the Neolithic of the Western Caucasus are similar to the tools from the sites of the Near East. Throughout the entire Neolithic era, agriculture and cattle breeding took the leading place in the economy of the tribes of the region. As a result, cultivated landscapes appeared. The relations between the Caucasus and the Near East passed along the Black Sea coast, which even then served as a bridge along which the archaeophytes began to spread.

There was another ancient way of entering alien species - in the era of the Eneolithic the Caspian-Black Sea steppes began developing by the man. The basis of the economy of these landscapes was cattle breeding. In the steppe zone there was no biological background necessary for the local domestication of the sheep and the zone of active spread of wild sheep was Central Asia. The steppe became a focus, where all the oldest achievements of culture, economy, technology began to be concentrated. The steppe as a natural resource, as it were, accelerated progress. The steppes connected three Eneolithic centers: Caucasian, Central Asian and Northern Black Sea. Steppes for several millennia have become a place of human nomadism with huge herds of large and small cattle. Thus, the south-eastern European steppe path of invasions of archaeophytes to the Caucasus was formed.

Apparently, the intensification of invasions from Europe and the Mediterranean occurred during the Bronze Age, because it was characterized by significant migrations of the Mediterranean builders of localites. Period 2600-2100 years before the new era was called "the first period of sea trade" (Markovin, 1978). The seaside people in the Neolithic and Bronze began to intensively developing trade and military navigation: a connection was established between the West Caucasian dolmens and dolmens of the Mediterranean. Already in the III millennium before the new era there were direct cultural ties between the North Caucasus, Romania, and Moldavia.

In the Bronze Age in the Northern Caucasus, Maikop culture was formed, the carriers of it were closely connected with West Asia, with Transcaucasia. Maikop culture was characterized by the predominance in the economy of cattle breeding, which was the leading industry (horse breeding, small cattle). Parkings of Maikop culture were cattle parks. Cattle breeding led to the economic development of

mountain regions. The development of transhumance cattle breeding was contributed to the penetration of invasive species into the highlands.

During the Bronze Age, agricultural crops began to cultivated: soft *Triticum*, filmy and holeriferous *Hordeum*, *Panicum*, and in addition to cereals in the Kuban some leguminous plants were cultivated: *Lathyrus*, beans, *Pisum*.

In the 1-st millennium before the new era steppe nomads appear in the historical arena - Cimmerians, Scythians, Sarmatians, etc. Tribes of the North Caucasus in Cimmerian times were closely associated with the tribes of the forest-steppe zone, with the countries of the Far East (VII-VI centuries before the New era). Researchers admit that the Cimmerians camping trips in Mesopotamia and Asia Minor in the 11th century and later until the 7th century. The Cimmerians used the Meotido-Colchis road along the Black Sea in Transcaucasia. It was the ancient way of the first influx of invasive species. Migrations of Scythians in the south of Eastern Europe began not later than the end of the VIIth century before the new era. Further, the Scythians invaded the Near East and Transcaucasia and led to the death of the powerful states of the ancient East - Assyria and Urartu (Piotrovsky, 1944). Scythians used to four ancient routes that passed through the Caucasus: the Mamison Pass, the Darial and Derbent (main) passages and the Meotido- Kolkhida road of the Cimmerians (Fig. 1) (Krupnov, 1954). One of the routes lay across the valley of the White river and Belorechensky pass, so since Scythian burial mounds were located along this path. On these migratory bridges, along with humans, the range and adventitious species were expanded.

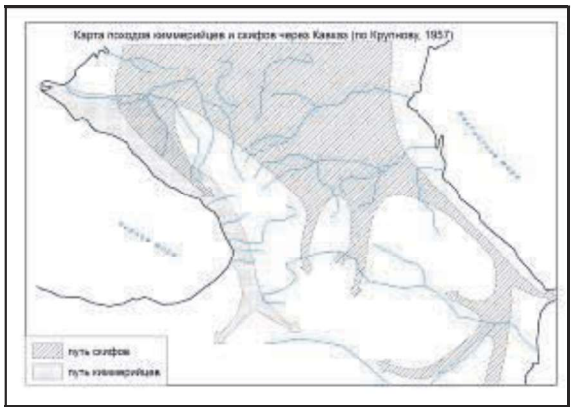

Fig. 1. Ways of migration of Scythian tribes (Krupnov, 1954).

From the beginning the Scythians, the steppes for a long time in history remain the arena of permanent nomadic (Sarmatians, Alans, Huns, Khazars, Pechenegs, Polovtsians). This can explain the wide penetration of Mediterranean adventitious species and species from Transcaucasia, the Near East. During the migrations of the Scythians in the steppes, the problem of excessive grazing arose and pasture digression was noted. Excess ungulates led to abrupt changes in the vegetation cover, resulting in a decrease in the competitive qualities of native species, and the steppes were flooded with allochthonous and synanthropic species. The constantly growing pasture load, the anthropization of steppe ecosystems, which began in the early Holocene, led to the loss of 25% humus in the 0-20 cm layer.

In the middle of the 1-st millennium before the new era agricultural economy was developing. The emergence of sedentary settlements in the Azov Sea belongs to the VI century before the new era. On the site of ancient settlement No. 3 of the stanitsa Novodzherelyevskaya and the site of the "Chumyanoy redactant" site, millet seeds (*Panicum miliaceum*), wheat (*Triticum vulgare*), barley (*Hordeum sativum*) were found. In the Krasnodar settlement (IV century BC), charred wheat grains (*Triticum vulgare*), barley grains were found, large and small grains of soft wheat were found on the Elizabethan settlement, near the chotor Novo-Nekrasovsky - millet (*Panicum miliaceum*). Millet was included in the diet. From beans cultivated *Lathyrus esculenta, Vicia faba, Pisum sativum*.

It is assumed that the meoto-sarmatian tribes cultivated cannabis for the manufacture of rough fabrics (Anfimov, 1951). The population was engaged in gardening, for Theophrastus mentions the sweet "Scythian root" (radish) growing near Meotida (Blavatsky, 1953). The development of field crop cultivation facilitated the wildness of cultivated plants and the wide spread of the weed element.

The last millennium is one of the periods most saturated with events and migrations of the population, not only to the southern regions, but also to the east. In the early Middle Ages (IV-IX centuries) significant movement of tribes is noted, trade with Byzantium, Georgia, Arabs, Khazars, etc. intensifies. In the era of the early Middle Ages, Central Ciscaucasia from the river. Urup in the west to the border with Dagestan in the east and the Caucasian ridge to the south was occupied by the Alanian culture, which penetrated from the steppes into the foothills in the 1-st century (Kovalevskaya, 1981). With the Alanian culture is associated the last ancient significant movement of adventive species from Europe.

In the 1st millennium before the new era the second wave of penetration of the Mediterranean invasions into the Caucasus begin. Colonization of the ancient Greeks coast of Pontus of Evksinsky began in the VII-VI centuries before the new era (but the penetration of Greeks and Aegeans into the northern shores of Pontus began in the 13th century

before the new era). Hellas is a great ancient civilization, a period of amazing worship of nature, beauty of the world, great monuments of human thought, but these are devastating wars, robberies, ruin of landscapes. It is a cultural phenomenon that blossomed in the bosom of an arid, mean landscape.

The Greek ancient civilization reached perfection, surprisingly flourishing and suffered a serious environmental crisis, after which irreversible processes followed. The Greeks were forced to migrate to the coast of the Black Sea.

The Kerch and Taman peninsula, the Greeks form the Bosporan kingdom, which accounts for the development of intensive farming, viticulture, horticulture and the complete destruction of natural ecosystems.

Bosphorus cultivated "soft" wheat, barley, millet, lentils. In the excavations of the ancient settlement near Semenovki found grains of soft *Triticum vulgare* Vill., *Triticum compactum* Host, *Hordeum polystichum* Doell., *Panicum miliaceum* L., *Lathyrus sativus* L., *Secale cereale* L. The main agricultural crop was *Triticum* (90%), *Hordeum* - 9%. Earlier here it was cultivated *Lens esculenta* L. and *Triticum dicoccum* Chubl. (Kiryanov, 1962). There is evidence of a culture of cannabis in the vicinity of Phanagoria (Kobylina, 1956). Flax seeds were found in the excavations of the Raevskoye settlement (Onayko, 1965). At this time there was a powerful process of synanthropization, for among the grains of wheat were found the seeds of weeds: *Polygonum convolvulus, Conringia orientalis, Convolvulus arvensis, Polygonum aviculare, Sinapis arvensis, Galium tricorne, Caucalis daucoides, Polygonum convolvulus, Aegilops squarrosa, Ervus orientalis, Brassica arvensis.*

In the VI century before the new era gardening was developed. Pliny (Pliny NH. XVI, 137) reports that garnets and fig trees, apples and pears grow on the Bosporus. The development of gardening is also evidenced by the findings of charred apples in the fortress on Battery II (beginning of the 2nd century), walnuts and hazelnuts, chestnuts, acacia pods. According to Strabon, near the major cities of Pintikapay, Hermonass, Phanagoria, there were plantations of fruit trees, *Cupressus sempervirens* L., *Juglans regia* (Sokolsky, 1971). According to archaeological scientific data, the Bosporus used many tree species of both local resources and imported from other regions of the Mediterranean: *Fraxinus excelsior*, *Ulmus*, *Acer*, *Populus*, *Tilia*, *Salix*, *Alnus*, *Betula*, *Fagus*, *Celtis*, *Ilex*, *Parrotia persica*, *Viburnum*, *Cotoneaster*, *Pinus*, *Juniperus*, *Cedrus*, *Picea*, *Taxus baccata*, *Cupressus sempervirens*, *Larix decidia*, *Juglans regia*, *Quercus suber*.

One of the well-known ways of invasions was trade. Via Bospor, trade relations were made with Athens, Mytilene on Fr. Lesbos and other cities. Bosporus imported business wood, especially in the era of the economic heyday of the end of the V and the beginning of the III century before the new era, when in the barrows there are expensive sarcophagi from species that did not grow on the Bosporus. Through Bospor, *Buxus sempervirens* entered Constantinople, *Perrotia persica* – from Transcaucasia. The cork *Quercus suber* was imported, so this species not grow in the Caucasus under natural conditions, and discovered floats from the cork date back to the 1-st century before the new era - III century. On the sarcophagus IV-III centuries the carved panel was made of *Ilex*. A sarcophagus from a child burial near Tiritaki is made of *Cupressus* boards. In the sarcophagus, a *Pinus* was used from the mound on the way to Tuzla, parts of the sarcophagus from the of the Big Bliznitsa were made of *Taxus baccata*, ornamental parts were made of *Buxus sempervirens*, less often of *Parrotia persica* (pp. 26, 44) (Sokolsky, 1969). Not all of these species were of Caucasian origin: Pinus, *Cupressus*, for example, not grow in the Caucasus.

The North Caucasus was not isolated from the outside world. For three centuries (X-XIII centuries), the steppes became the habitat of numerous nomads engaged in wars and robberies. In the middle of the XI century in the vacant steppe of the Azov Sea, new nomads arrived - the polovtsians. The North Caucasus become the center of the Polovtsian nomadic population with a high population (Minaeva, 1971). XI century - this is the time of rampant polovtsian raids and robberies, during which the polovtsians mastered the vast steppes, searched for the best pastures, places for fishing, hunting, waterways and land routes through the steppes. And again, together with the carts, livestock, people began dispersal of adventive species.

In the XIII-XIV centuries the history of the peoples of the North Caucasus was closely connected with the aggressive policy of the Tatar-Mongol tribes. A powerful Tatar-Mongol invasion affected all the peoples of the Caucasus. Broad migration of population and livestock began. It was a tough military organization led by Chinghis-han. Then the conquest of the North Caucasus began Tamerlane and in 1395 moved to the Kuban. Steppes during military and nomadic migrations in the Middle Ages again became bridges of penetration of invasions from the East.

So there were several migration waves of archaeofit penetration into the North Caucasus. The main centers from which alien species penetrated together with the peoples: the Mediterranean, the south of Europe, the Anterior, Middle and Central Asia. Due to the fact that this process took significant time limits, and the adaptation of these species

occurred gradually, they were not such aggressively entering the natural environment. Ecologically they were close to the diverse natural and climatic conditions of the region and found suitable habitats for themselves.

The invasions from Southeast, Central Asia and North America were associated with a later period, mainly from the middle of the 19th century, after the end of the war with the mountain tribes. If the steppe plain territories became heavily populated by Cossacks, mountain landscapes for about 30 years were excluded from anthropogenic impact, which contributed to the restoration of forest ecosystems.

Cossacks were engaged in agriculture, cattle breeding, melon growing, viticulture. Cossacks grew potatoes, tobacco, sunflower, cabbage, tomatoes, onions, garlic, radish, cucumbers, from beet crops, special attention paid to beetroot, from cereals - wheat and rye, millet and buckwheat, oats and barley, melons, melons, pumpkin. Trade routes to Europe were outlined from 1851 to 1865 wheat was exported to England. By this time in Europe, North American transformers were there commonly.

The first tobacco plantations were appeared in the vicinity of Anapa in 1860, then in Ekaterinodar and Maykop uyezds and by the end of the 19th century. The Kuban becomes one of the "tobacco" provinces of Russia. The culture of sunflower was appeared there in the 1870s and 1880s and associated with migrants from the Voronezh and Saratov provinces and began to rapidly gain a leading position in agricultural production, taking the third place after wheat and barley. The center of the gardening was the Labinsky department, melon growing was in the Yeisk department.

A. Holovaty testified that the Cossacks, who settled on the island of Fanagoria, are engaged in horticulture and cattle breeding and want to be engaged in viticulture, for which they are asked to bring a vine from Tavria (Crimea) (GAKK, file 249, item 1, 320, sheet 28). Viticulture took the prominent place in the economy of the region in the 1870-1880's. The center of the industry was the Temryuk division and the Black Sea coast (Anapa, Novorossiysk district - Abrau-Dyurso estate, Sochi).

From the Crimea in 1849, tens of thousands of vines, thousands of cuttings and seedlings of ornamental and fruit trees were brought. An army's garden was established with a nursery of fruit trees in Ekaterinodar. Some of the fruit varieties introduced more than 150 years ago continue cultivated in the North Caucasus to the present days. Some of them were wild, overgrown with wild species and grow in natural communities around the city and in the floodplain forests of the river Kuban.

A significant number of invasive species come to the colonization of the Black Sea coast and the settlement of the foothills. On the one hand, the process of wild fruit cultivation, local varieties of grapes, associated with the Circassian culture start and continues for nowdays.

Colonization was conducted with the settlement of Turkish Armenians, Greeks, Germans, Czechs, Estonians, natives of the Little Russian provinces. In the valley of Loo and Khobza, there were German colonies, each with 100 households, 100 Greeks and Armenians were delivered to Gelendzhik from Turkey (Vargas de Bedemar, (1867), 2005). In the mouth of the river Uch-Dere (Niji) were settled 48 Armenian families, natives of the Ottoman Empire. With the life and economy of the new settlers, the adventitization of the vegetation cover was intensified.

The increasing process of the penetration of transformers from North America through Europe began in the early XX century: *Solidago canadensis* L., *Conyza canadensis* (L.) Cronquist, *Ambrosia artemisiifolia* L., *Helianthus tuberosus* L., *Parthenocissus quinquefolia* Planch. *Cyclachaena xanthifolia* (Nutt.) Fresen and others. The xenophytes (accidentally import), should be noted *Ambrosia trifida* L., *Amaranthus retroflexus* L, *Asclepias syriaca* L., *Euphorbia davidii* Subilis, *Euphorbia humifusa* Willd., *Euphorbia maculata* L., *Oenothera oakesiana* (A. Gray) Robbis ex S. Wats et Coutt, *Epilobium pseudorubens* A. Skvorts., *Mollugo cerviana* (L.) Ser., *Brassica nigra* (L.) W. D. J. Koch, *Brassica juncea* (L.) Czern., *Lepidium virginicum* L., *Elsholtzia ciliata* (Thunb.) Hyl., *Perilla nankinensis* (Lour.) Decne, *Elsholtzia ciliata* (Thunb.) Hyl., *Polygonum calcatum* Lindm., *Xanthium albinum* (Widd.) H. Sholz.

Basically they were species of the North American origin. They were introduced or accidentally brought to Europe mainly in the XIX century. So due to their fertility, vitality, environmental aggressiveness, they were infiltrated to the natural landscapes. The success of the invasions were facilitated by the disturbances in the vegetation cover, which came with technical progress. "Escaped" from culture and widely spread can be cultural agricultural (fodder, spinning, oilseeds, spicy, cereals, etc.) species – *Phaseolus vulgaris* L., *Trifolium sativum* Schreb., *Asclepias syriaca* L., *Apium graveolens* L., *Levisticum officinale* Koch, *Helianthus annuus* L., *Ricinus communis* L., *Lallemantia iberica* (Steven) Fisch. et C.A. Mey., *Salvia sclarea* L., *Perilla ocymoides* L., *Ligustrum japonicum* Thunb., *Medicago sativa* L. *Oryza sativa* L. was cultivated in the delta of the river Kuban since 1929

and often wild. Among the invasive species, about 40 species were acclimatized in the region for phytomeliorative purposes (*Ailanthus altissima* (Mill.) Swingle, *Robinia pseudoacacia* L., *Gleditsia triacanthos* L., *Acer negundo* L., *Populus deltoides* W. Bartram ex Marshall, *Amorpha fruticosa* L., *Morus alba* L., *M. nigra* L.).

The spreading of Migratory waves was process that began in the late 19th century and intensified in the XX century, when the process of intensified introduction of tree and shrub species began. Species were planted on collector sites, on the streets, squares of the Black Sea coast. Many of them were wild, gave samosev and "left" from culture to natural conditions, growing without the care of a man. Already some of them differ by a high degree of naturalization and tend to expand the range (*Catalpa ovata* D. Don.), and others were associated with deliberate introductions, cultivated as ornamental plants and quickly naturalized (*Hemerocallis fulva* (L.) L., South American *Amaranthus caudatus* L., Mediterranean *Foeniculum vulgare* Mill. and *Levisticum officinale* Koch, Japanese *Fatsia japonica* (Thunb.) Decne. et Planch.

The ergasophytes were cultivated as decorative on the Black Sea coast and feral it should be noted: *Acer trifidum* Hooker et Arm. (с 1890 г.), *Acer negundo*, *Yucca brevifolia* Engelm., *Mahonia aquifolium* (Pursh) Nutt., *Catalpa bignonioides* Walt., *Campsis radicans* var. *praecox* C.K. Schneid., *Paulovnia tomentosa* (Thunb.) Steudel, *Buddleja davidii* Franch., *Lonicera nitida* Wils., *Lonicera japonica* Thunb., *Corylus pontica* C. Koch, *Gleditsia triacanthos*, *Robinia pseudoacacia*, *Styphnolonium japonicum* (L.) Schott, *Pueraria hirsuta* (Thund). C. Schneid., *Spartium junceum* L., *Amorpha fruticosa*, *Caragana arborescens* Lam., *Quercus rubra* L., *Juglans regia* L., *Carya illinoinensis* (Wangenh.) C. Koch, *Albizia julibrissin* Durazz., *Ligustrum lucidum* Ait., *Cedrus deodara* (Roxb.) G. Don fil., *Platycladus orientalis* (L.) Franco, *Cupressus lusitanicus* Mill. Agriophytes, which give abundant samosev, enter into natural communities, transform the structure of the cenosis and the habitat: *Trachycarpus fortunei* H. Wendl., *Campsis radicans* var. *praecox* C.K. Schneid., *Elaeagnus pungens* Thunb., *Elaeagnus angustifolia* L.

The main sources of occurrence and spread of invasions were Sochi arboretum, parks "Southern cultures" and "White Nights", botanical gardens of Kuban State University, Kuban State Agrarian University named after I.S. Kosenko, dendrological park them P.V. Bukreeva in the village Goncharka, private collections, etc.

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Böyük Qafqazın Şimal-Qərb Hissəsinin İnvazion Florasının Tarixi Aspektləri

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Böyük Qafqazın şimal-qərb hissəsinin florası yüksək invazivliyi ilə (ümumi floradan 12%) seçilir. Bunun əsas səbəbləri xalqların və qədim sivilizasiyanın tarixi inkişafı ilə bağlıdır. Daş dövründən başlayaraq insanların Qafqazın bu hissəsinə miqrasiyaları baş verirdi. Onları bura cəlb edən amillər, buranın mülayım təbii-iqlim şəraiti, zəngin və əlçatan qida resursları, landşaftın müxtəlifliyi olmuşdur. Bürünc əsrdən başlayaraq aralıqdəniz sakinlərinin bura miqrasiyası başlanılmışdır. Birinci minilliyin sonundan bizim eraya qədər adventiv növlərin daxil olması - "yunan kolonizasiyası", orta əsrlərin əvvəli və sonu isə çoxsaylı bozqır köçərlilər vasitəsi ilə meydana gəlmişdir. XIX əsrin sonu - XX əsrın əvvəllərində adventiklərin bilərəkdən daxil edilməsi baş vermişdir.

Açar sözlər: *Böyük Qafqazin şimal-qərb hissəsi, yad növlər, biotik yollarla daxil olunması, erkən mədəniyyətlərin tarixi, tarixi aspektlər*

Исторические Аспекты Инвазионной Флоры Северо-западной Части Большого Кавказа

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Северо-западная часть Большого Кавказа характеризуется высокой инвазивностью флоры (12% всей флоры). Главная причина связана с историей народов и древних цивилизаций. Со времен каменного века происходило переселение людей в эту часть Кавказа. Сюда их привлекали благоприятные природно-климатические условия, богатство и доступность пищевых ресурсов и разнообразие ландшафтов. Начиная с бронзового века происходит активная миграция жителей средиземноморья. Занос адвентивных видов в конце первого тысячелетия до нашей эры - "греческая колонизация», в раннее и позднее средневековье занос происходил многочисленными степными кочевниками. В конце XIX и начале XX в.в. усиливается преднамеренный занос и внедрение адвентиков.

Ключевые слова: *Северо-западная часть Большого Кавказа, чужеродные растения, путь биотических инвазий, история ранний культуры, исторические аспекты*