

Human (*H. sapiens* L.) Settlement in the Caucasus

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In a widely accepted perspective that modern humans emerged in Africa approximately 100-200 kya, with some individuals leaving the continent around 70 kya. Based on available archaeological and genetic data, the human tribe split 50 kya, likely near the Black Sea. One group migrated southward, ultimately colonizing South Asia, Southeast Asia, and Australia through what is termed the “Southern Route,” although the specific migration routes remain a subject of ongoing research and controversy. Currently, about 50 ethnic groups inhabit the Caucasus, with three prominent ones in the South Caucasus: Georgians, Armenians, Azerbaijanis. Additionally, there are the North-West Caucasian language family and the North-East Caucasian language family. According to British biologist M. Pagel, the Georgian language belongs to one of the seven language families of the Eurasian superfamily. According to our hypothesis, proto-Eurasian speakers may have resided 15 kya in the southern part of the Arabian Peninsula. Soon after, the proto-Dravidians separated from the proto-Eurasian speakers and migrated to India via the coastal route. Proto-Kartvelian speakers might have originated in this area and later moved to the northern part of Mesopotamia. They likely lived in this region for an extended period, as our hypothesis suggests proto-Kartvelian speakers were involved in wheat domestication. The period and place of domestication of Einkorn, Emer and Timopheevii (Zanduri) wheats (10-7 kya) coincides with the location and construction date of Gobekli Tepe. Presumably, proto-Kartvelians took part both in the domestication of wheat and in the construction of Gobekli Tepe. The settlement of modern humans in the Caucasus began in the Stone Age, concluding in the Bronze Age. The population entered the Western Caucasus from the southwest and crossed the Caucasus Range. Descendants of this migration reside in the North Caucasus, while the Abkhaz live in the South Caucasus from today's Gali region to the Psou River. Nakh-Dagestans entered the East Caucasus, initially residing in present-day Eastern Caucasus. Subsequently, Kartvelian tribes arrived, compelling the Nakh-Dagestans to move northward. © 2023 *Bull. Georg. Natl. Acad. Sci.*

H. sapiens L, Caucasians, Y-chromosom, wheat, migration

Basics of settlement of modern humans should be based on the assumption that human settlement in the Caucasus took place from the South to the North, both along the coast of the Black and Caspian seas, and at the intersection of the Main Caucasian ridge. Current consensus indicates that modern

humans originated from an ancestral African population between 100 and 200 kya [1]. Anatomically modern humans left Africa about 70 kya and rapidly spread around the world [2]. The available archaeological and genetic data suggest that the human tribe split roughly 50 kya somewhere in the general

vicinity of the Black Sea. One group migrated southwards and eventually colonized South Asia, Island Southeast Asia, and Australia. This expansion followed what is commonly described in the specialist literature the “southern route” [2-4] (Fig.1). However, the exact routes of migration in the early diversification of people outside Africa remain a topic of research and controversy.

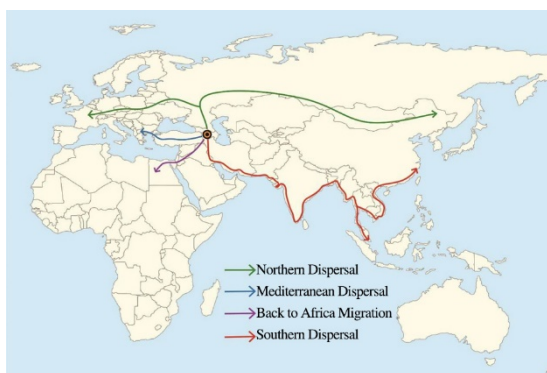


Fig.1. Human migration from the Levant during Marine Isotope stage 3 [5]. Granted permission for use of this figure.

Ethnic groups of Caucasus

The Transcaucasus is located between Iran to the south, the Caspian Sea to the east, the Black Sea

and Turkey to the west, and the Greater Caucasus range and Southern Russia to the north. It includes all of Armenia, Azerbaijan (with the exception of its northernmost portions), and Georgia (with the exception of its northernmost portions), together referred to as the South Caucasus, as well as the Lesser Caucasus mountain range and the adjacent lowlands. According to some sources, the border between Europe and Southwest Asia is the watershed along the Greater Caucasus range.

Currently, no less than fifty ethnic groups have been translated in the Caucasus, three in the South Caucasus: Georgians, Armenians, Azerbaijanis. Georgian tribes are East Caucasian (Kartlian, Kakhetian). West Caucasian (Imeretian, Adjarian, Meskhetian, Javakhetian, Gurian, Racha-Lechkhumian) also, inhabitant of Caucasian small amount Tush, Pshav, Mokhevian, Ingilo, Khevsur, Mtiuletian. The Maykop culture, existing between approximately 3,7 kya to 3 kya represented a significant Bronze Age archaeological civilization situated in the western Caucasus region [6]. The culture derives its name from a prominent royal burial site, the Maykop kurgan, located in the Kuban River valley. As per genetic analyses

Table 1. The list of ethnic groups from different language families in the Caucasus region

Kartvelian languages	Northwest Caucasian languages		Northeast Caucasian languages				Iranian	Turkic
Georgians	Abazins	Armenians	Avar-Andic	Lezgi	Nakh	Tsezic (Didoic)	Iranian group	Oghuz-Turks
Zans	Abkhazians		- Andis	- Aguls	- Arshtins	- Bezhtas	- Gilaks	Azerbaijanis
- - Lazs	Circassians		- Akhvakhs	- Archin	- Bats	- Hinukhs	- Kurds	
- - Mingrelians	- Abzakhs		- Avars	- Budukhs	- Chechens	- Hunzibs	- Mazanderanis	
- Svans	- Besleneys		- Bagvalals	- Jeks	- - Kists	- Khwarshis	- Ossetians	
	- Bzhedugs		- Botlikhs	- Kryts	- Durzüks	- Tsez	- Digors	
	- Chemirgoys		- Chamalals	- Lezgins	- Ingush		- Talysh	
	- Kabardians		- Godoberis	- Rutuls	- Malkh		- Tats	
	- Natukhajs		- Karatas	- Tabasarans			- Yazidis	
	- Shapsugs		- Tindis	- Tsakhurs			- Kumyks	
	- Ubykhs		Dargins	- Udis			- Balkars	
			Khinalugs				- Karachays	
			Laks				- Nogais	

Note. Main groups are indicated in bold. Further subgroups are depicted in cursive and divided from their parent group by a semicolon.

conducted on ancient DNA, findings published in 2018 revealed that the Maykop populace migrated from the southern region, specifically from Imereti. Their lineage traced back to the Chalcolithic farmers referred to as Darkveti-Meshoko, who were the initial settlers in the northern side of the Caucasus. Consequently, the Maykop civilization is considered a prime archaeological candidate as the progenitors of the Northwest Caucasian language family [7, 8]. Genetic investigations have indicated that the Yamnaya people's genetic makeup is a blend of Eastern European hunter-gatherers (EHG) and individuals linked to Caucasus hunter-gatherers (CHG) in roughly equal proportions, creating an ancestral element often termed "Steppe ancestry" [7]. It is not known precisely when the peopling of the North Caucasus began. Modern human peopling took place from the south to the north, most likely through passes (Klukhori, Mamisoni, Mestia, Zekari, Jvari Pass and so on), rivers (Inguri, Rioni, Aragvi, Terek), along the coastline of the Black and Caspian Seas. We should proceed from the assumption that human settlement in the Caucasus occurred from South to North, both along the coast of the Black and Caspian Seas, and when crossing the Main Caucasus Range. Moving on to the next phase, the Kartvelian tribes including the Svans, Mingrelians, Laz, and Georgians, made their way into the Western Caucasus. The majority headed north, while some intermingled along the way.

Phylogenetic Tree of Proto-Eurasiatic Languages

According to our hypothesis, one possibility is that speakers of proto-Eurasiatic language lived 15 kya in the southern part of the Arabian Peninsula. Shortly thereafter proto-Dravidians migrated to India via the coastal route. proto-Kartvelian language speakers may also have originated in this area and then moved to the northern part of Mesopotamia [9] (Fig. 3a). Presumably, they lived in this area for a long period of time, because

according to our hypothesis proto-Kartvelian speakers took part in wheat domestication. The fixation of domestication traits needs thousands of years [10]. The time of the migration of the proto-Kartvelians from Mesopotamia to the Caucasus is not known, though according to Gamkrelidze and Ivanov [11], proto-Kartvelian prior to its breakup must be placed, on the evidence of archaic lexical and toponymic data, in the mountainous regions of the western and central part of the Lesser Caucasus (the Transcaucasian foothills). It is proposed that the proto-Kartvelian language split into Svan and proto-Karto-Zan and the absolute time of separate development can be fixed for these languages at approximately 2600 and 4200 years BP, respectively [12]. According to Gamkrelidze and Ivanov [11], the first wave of Kartvelian migrations to the west and northwest, in the direction of the Colchidian plains, must have begun with one of the western dialects in the fifth millennium BP and led to the formation of Svan, which spread to the western Transcaucasus.

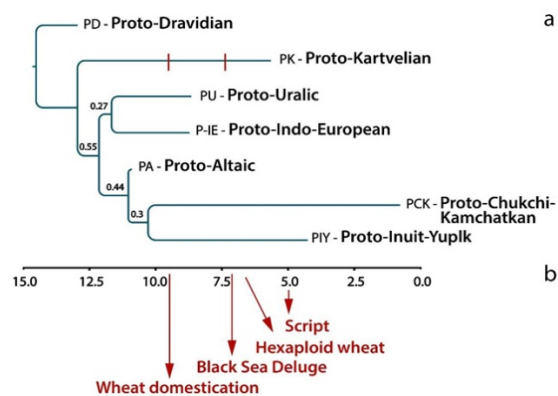


Fig. 2. a. Consensus phylogenetic tree of Eurasiatic superfamily rooted tree with estimated dates of origin of families and of superfamily [13]. P proto followed by initials of language family: PD proto-Dravidian, PK proto-Kartvelian, PU proto-Uralic, PIE proto-Indo-European, PA proto-Altaic, PCK proto-Chukchi-Kamchatkan, PIY proto-Inuit-Yupik. Consensus tree rooted using proto-Dravidian as the outgroup. The age at the root is $14.45 \pm 1.75\text{kya}$ (95% CI = 11.72–18.38kya) or a slightly older $15.61 \pm 2.29\text{kya}$ (95% CI = 11.72–20.40kya) if the tree is rooted with proto-Kartvelian (PNAS granted permission for use of this Figure); **b.** Pivotal stages in the progress of humanity development.

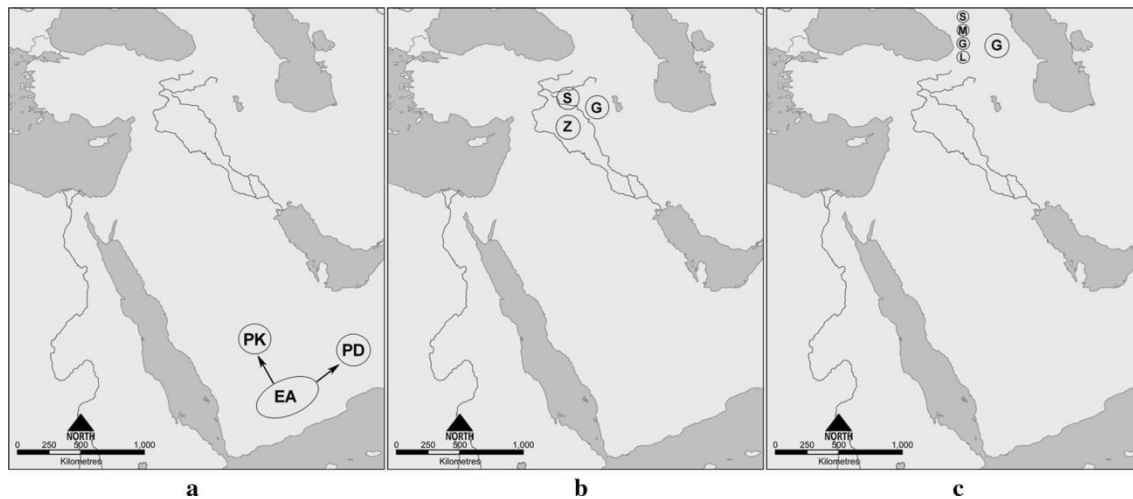


Fig. 3 a. Separation of proto-Dravidian and proto-Kartvelian speakers from Eurasiatic Language Superfamily (12–15kya BP); **b.** Kartvelians location during wheat domestication period (12–10kya BP); **c.** Modern location of Kartvelians. G Georgians, M Mingrelians; L Lazs; Z Zans (Mingrelians Lazs), PK proto- Kartvelians, PD proto-Dravidians [9].

According to Pagel and coauthors (2013), Kartvelian language is one of the seven language families of the Eurasiatic superfamily [13]. They used a statistical model, which takes into account the frequency with which words are used in common everyday speech, to predict the existence of a set of highly conserved words among seven language families of Eurasia postulated to form a linguistic superfamily that evolved from a common ancestor around 15 kya [13] (Fig. 2). The authors derived a dated phylogenetic tree of this proposed superfamily with a time-depth of 14,45 kya BP, implying that some frequently used words have been retained in related forms since the end of the last ice age. These seven language families-Dravidian, Kartvelian, Uralic, Indo-European, Altaic, Chukchi-Kamchatkan and Inuit-Yupik are hypothesized to form an ancient Eurasiatic superfamily that may have arisen from a common ancestor over 15 kya BP, and whose languages are now spoken over all of Eurasia. The further movement from Fertile Crescent of Kartvelian speakers from south to north can be represented as follows: Svans, Mingrelians, Lazs-north and Georgians (Kartvels) -north-east (Fig. 3).

Wheat Domestication and Kartvelian Route to the Caucasus

The movement patterns of wheat resemble the migration of humans. Wheat (*Triticum* L.) is the leading grain crop worldwide. It originated in the Fertile Crescent approximately 10kya and has since spread worldwide. There are four wild species, which grow in the Fertile Crescent of the Near East. The diploid wheat *Triticum monococcum* L. (einkorn) is the first crop domesticated by humans in the Fertile Crescent. Research points to the Karacadag and Kartal-Karadag mountains in Turkiye as the center of einkorn's domestication [13, 14]. Einkorn then followed migration routes, both eastward (Armenia, Georgia, Iran) and westward (through Greece to Central Europe) and also via maritime routes to the Maghreb and the Iberian Peninsula. These routes are supported by archaeological findings, but also the population structure of the einkorn gene pool that was shaped by the migration routes [15] (Fig. 4a). *T. dicoccon* spread in all directions via various routes. Europe was reached via the Bosphorus, the Balkans and the Iberian Peninsula. Africa was reached via the

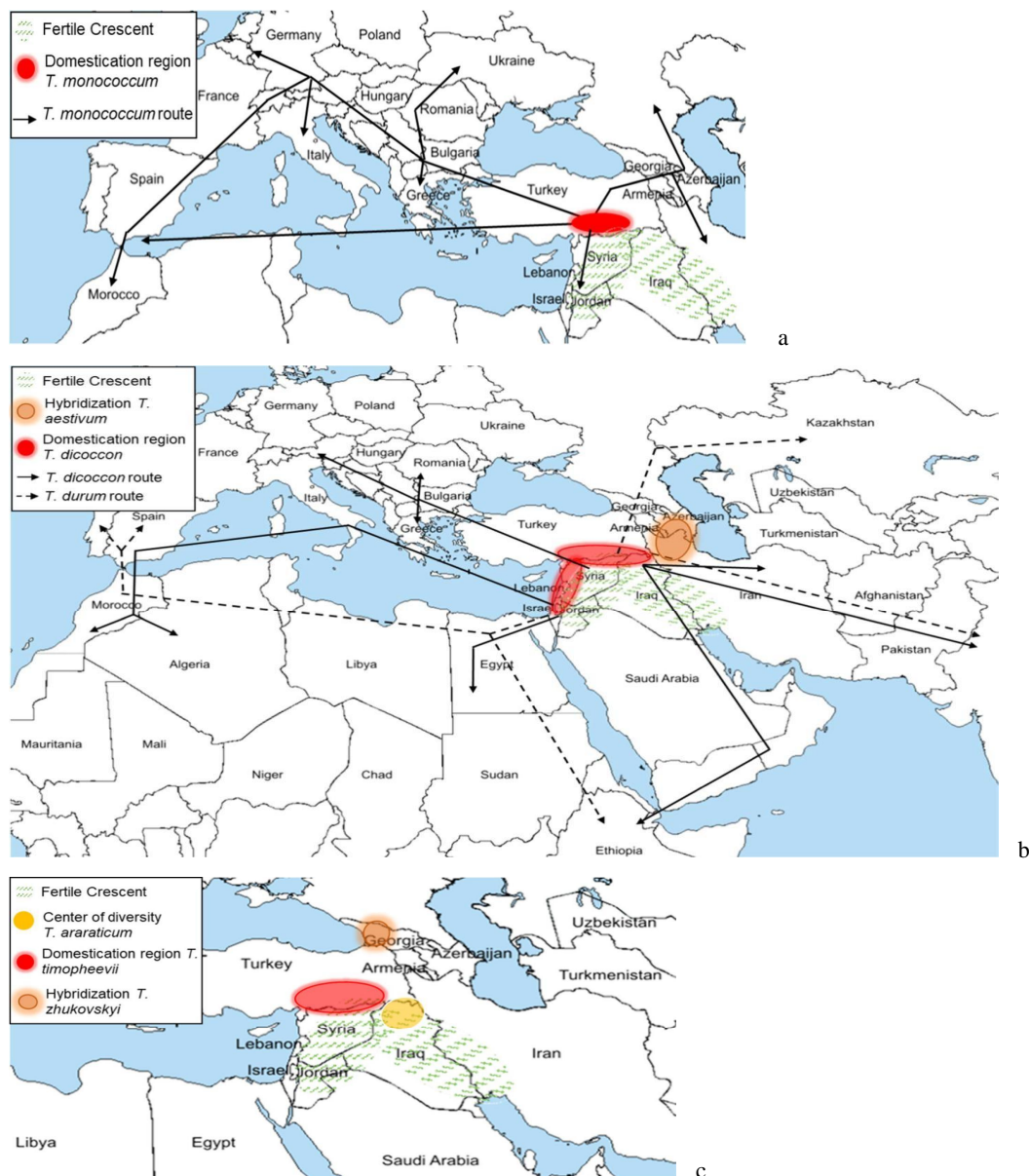


Fig. 4 a. Origin and spread of domesticated einkorn wheat *T. monococcum*. Green dashed fields represent the Fertile Crescent; red circle is the domestication region of *T. monococcum*; arrows indicate *T. monococcum*'s dispersal pathways [16]; **b.** Origin and spread of domesticated emmer and durum wheat. Green dashed fields are the Fertile Crescent; red circles are the domestication regions of *T. dicoccon*; solid arrows indicate dispersal routes of *T. dicoccon*; dashed arrows indicate dispersal route of *T. durum*; orange circle is the potential hybridization site of *T. aestivum* [16]; **c.** Origin and spread of GGAA wheat. Green dashed fields are the Fertile Crescent; yellow circle indicates the center of diversity of *T. araraticum*; red circle is the domestication region of *T. timopheevii*; orange circle indicates the hybridization site of *T. zhukovskyi* [16]. Granted permission for use of this Figure.

southern Levant and the Arabian Peninsula, and the spread to Asia was via Iran. The domesticated tetraploid wheat is very closely related to wild populations sampled in south eastern Turkey. Northeast expansion of domesticated emmer

cultivation resulted in sympatry with *Aegilops tauschii* Coss. (genome DD). Approximately 7kya, the hexaploid bread wheat *T. aestivum* L. (BBA^uA^uDD) arose in the South Caucasus region by allopolyploidization of the cultivated Emmer

wheat *Triticum dicoccum* Schrank with the Caucasian *Aegilops tauschii* subsp. *strangulata* (Eig) Tzvelev [16, 17]. Gaurav and authors [18] found that a rare lineage of *Ae. tauschii* (TauL3) geographically restricted to present-day Georgia contributed to the wheat D subgenome in the independent hybridizations that gave rise to modern bread wheat. The highest genetic diversity for hexaploid bread wheat was found in the Near and Middle East, which is probably the centre of diversity (Fig. 4b). The wild ancestral form of the timopheevii lineage is *T. araraticum*. Northern Iraq is the centre of diversity and origin of *T. araraticum* [19, 20] (Fig. 4c). *T. araraticum* comprises two subgroups. One subgroup is widespread, while the other was only found in south eastern Turkey and north western Syria. *Triticum timopheevii* (Zhuk.) Zhuk ($2x = 4n = 28$, GGA^uA^u) is the domesticate of *T. araraticum*. The origin of *T. timopheevii* s.str. (found in Georgia) remains unclear, but was probably introduced from Turkey. It is a Zanduri puzzle that the wild *T. araraticum* Jakubz. (*Triticum timopheevii* subsp. *armeniicum* (Jakubz.) Slageren) was not found in Georgia, though cultivated *T. timopheevii* is only detected here [9]. Badaeva and coauthors (2021) [21] also discuss the potential sister group relationship between the Georgian *T. timopheevii* s.str. and the prehistoric and widespread *T. timopheevii* s.l. ('New Glume Wheat'), with the oldest known records being of Turkish origin. The mixed cultivation of *T. monococcum* and *T. timopheevii* in western Georgia facilitated hybridization between the two. This event resulted in the hexaploid *Triticum zhukovskyi* Men. & Er. ($2n = 6x = 42$, GGA^uA^uA^mA^m). Gobekli Tepe is devoted to the pre-pottery Neolithic period discovered by the German scientists 30 years ago in the Southeastern Anatolia region of Turkey. This astonishing building is one of the oldest in the world (12kya). People gave up hunter-gathering and took up farming, settled in one place. They became the first farmers [22, 23]. This period coincides with the

period of wheat domestication. It was a turning point in the history. Geographically, this region is located near the Karachadag mountain where wheat domestication was believed to have occurred. After migrating from Africa, proto-Kartvelians moved to the northern part of Mesopotamia where wheat was domesticated. It is possible that they participated in wheat domestication and migrated further to South Caucasus together with the domesticated wheat subspecies. This would suggest that proto-Kartvelians participated in the construction of Gobekli Tepe and in the domestication of wheat in Mesopotamia. They were the first people to taste bread [22-24].

Ivane Javakhishvili's Opinion

In 1913, Ivane Javakhishvili outlined his vision of human settlement of the Caucasus in the following way, "When we want to study the original lifestyle and conditions of our people, we should look for traces of it not in the Caucasus, but in the south of Transcaucasia. In the ancient times Georgian tribes lived in Asia Minor, gradually moved to the north and settled in the Transcaucasia. The question arises as to how their large-scale migration and settlement in the Caucasus took place. The first to come to the Caucasus were Abkhazians- Apsihls, Svans, Tushs and other mountaineers, then the Colchians and Kaskhs, and these first settlers would inhabit further south in the Caucasus than they are now. When other Georgian tribes – Magrel-Lazes, Karts, displaced from the enemy, were forced to move from the south, the mountaineer tribes would be forced to move further north. The homeland of all Kartvelian tribes was Chaldea. Therefore, the Kartvelian tribes in the Caucasus had to come from there. This, of course, is already clear, but the question is when they left Chaldea and settled in the Caucasus. Maybe the Kartvelians had come and settled in the Caucasus already in the ancient times when no one else was living there, in which case Georgians would be the original inhabitants of the Caucasus. But it is also possible that when

Georgians found the Caucasus it was already inhabited, in which case Georgians would have to either subjugate the original inhabitants of the Caucasus or drive them beyond the Caucasus ridge. Of course, all this movement must have taken place at a time for which no historical documents can be found.” [25].

Y-chromosome DNA Analysis of the Caucasians

A geographical study of mtDNA and Y chromosome revolutionized knowledge of the peopling of the world [26-29]. Around 11kya, after the Last Glacial Maximum had passed, a new way of life based on animal husbandry, agriculture, seden-

Table 2. The list of ethnic composition of various groups in the Caucasus region.

Population	G (%)	J (%)	G/J	N	Source
Shapsuges	87	6	14.50	100	Balanovsky et al. 2011 [32]
Svanes	79	6	13.17	184	Yardumian et al. 2017 [33]
Abkhazes	96.9	13.8	4.12	58	Balanovsky et al. 2011 [32]
Mingrelians	50	12.5	4	16	Tarkhnishvili et al. 2014 [34]
Osetian (Digor)	60.6	15.7	3.86	127	Balanovsky et al. 2011 [32]
Osetians (Iron)	74.3	19.6	3.80	230	Balanovsky et al. 2011 [32]
North Ossetians	69.7	21.9	3.1	132	Rootsi et al. 2012 [35], Yunusbayev et al. 2012 [36]
South Ossetians	47.6	19.0	2.5	21	Yunusbayev et al. 2012 [36]
Balkars	32.5	19.2	1.70	135	Yunusbayev et al. 2012 [36]
Circassians	40.2	27.4	1.47	142	Balanovsky et al. 2011 [32]
Georgians (Imereti)	43.6	35.6	1.22	62	Balanovsky et al. 2017 [34]
Georgians (Racha-Lechkhumi)	40	40	1	20	Tarkhnishvili et al. 2014 [34]
Georgians (Kakheti)	36.1	38.9	0.93	19	Tarkhnishvili et al. 2014 [34]
Georgians (Adjara)	40	47	0.85	15	Tarkhnishvili et al. 2014 [34]
Lazs	19.5	27.8	0.70	36	Balanovsky et al. 2017 [37]
Georgians (Guria)	21.4	57.1	0.37	14	Tarkhnishvili et al. 2014 [34]
Azeris (Azerbaijan)	12.5	37.5	0.33	8	Shengelia et al. 2017 [38]
Armenians (Armenia)	16	53.2	0.30	757	Hovhannisyan et al. 2014 [39]
Tushs (Georgia)	23	77	0.29	13	Shengelia et al. 2017 [38]
Lezgins	13.5	46.9	0.29	81	Balanovsky et al. 2011 [32]
Kumyks	9.5	39.0	0.24	21	Clair St. 2021 [5]
Avars	11	65	0.17	115	Balanovsky et al. 2011 [32]
Georgians (Fereydan)	12.5	75	0.16	9	Shengelia et al. 2017 [38]
Nogais	9.1	70.0	0.13	22	Clair St. 2021 [5]
Chechens, Ingushes	9	75	0.12	112	Balanovsky et al. 2011 [32]
Chechens (Daghestan)	7	75	0.09	100	Balanovsky et al. 2011 [32]
Dargins (Daghestan)	2.9	94	0.03	67	Yunusbayev et al. 2012 [36]
Dargins	2	71	0.02	101	Balanovsky et al. 2011 [32]
Ingushs	1.4	91.6	0.01	143	Balanovsky et al. 2011 [32]
Chechens (Chechenia)	1	83	0.01	118	Balanovsky et al. 2011 [32]
Chechens (Vainakh)	1.2	72.7	0.01	165	Yunusbayev et al. 2012 [36]
Avars (Daghestan)	0	71.4	0	42	Yunusbayev et al. 2012 [36]
Kubachi	0	99	0	65	Balanovsky et al. 2011 [32]
Kaitaks	0	88	0	33	Balanovsky et al. 2011 [32]

Note. G/J ratios vary significantly among different groups, and some groups have a G/J ratio of 0, indicating that they have a negligible or very low presence of the G haplogroup in their population. Haplogroup designation (J) is the combined data of haplogroups: J1e, J1, J2, J2b, J2a4a, J2a4b, J2a4b1 Haplogroup designation (G) is the combined data of haplogroups: G2a1a, G2a1, G2a, G2a3a, G2a3b1

tarism and known as a Neolithic lifestyle started to emerge in several sub regions of the Fertile Crescent [30, 31]. Analyses of ancient DNA showed that this population of farmers expanded from Central Anatolia into Europe. Haplogroup J-M304, also known as J is a human Y-chromosome DNA haplogroup. Haplogroup J-M304 is found in its greatest concentration in the Arabian Peninsula. Outside of this region, haplogroup J-M304 has a significant presence in other parts of the Middle East as well as in North Africa, the Horn of Africa, and Caucasus. Haplogroup G (M201) is a human Y-chromosome haplogroup. It is one of two branches of the parent haplogroup GHIJK. G-M201 is most commonly found among various ethnic groups of the Caucasus, but is also widely distributed at low frequencies among ethnic groups throughout Europe, South Asia, Central Asia, and North Africa. In 2012, a paper by Rootsi and coauthors [35] suggested that: “We estimate that the geographic origin of haplogroup G plausibly locates somewhere nearby eastern Anatolia, Armenia or western Iran.” Previously the National Geographic Society placed its origins in the Middle East 30kya and presumes that people carrying the haplogroup took part in the spread of the Neolithic [40]. Two scholarly papers have also suggested an origin in the Middle East, while differing on the date. Semino and coauthors (2000) [41] suggested 17kya. Cinnioglu et al (2004) [42] suggested the mutation took place only 9,5kya. Currently, mitochondrial DNA (female) and the Y-chromosome (male) are used to study human genetics. Table 2 contains data on the Y-chromosome of Caucasian residents. The male part of the Caucasian population is characterized by G and J in equal quantitative values. We have introduced the G/J value to

characterize such Y-chromosomes. The data presented in Table 2 generally show that residents of the Western Caucasus have G greater than J.

Conclusions

Human population ventured into the Caucasus region and proceeded northwards, seemingly tracing the course of river valleys. They entered Western Caucasus from Ajara. The Adyghe-Abkhazians people arrived in the western part of the Caucasus and crossed the mountain range. Currently their descendants are living in north Caucasus, while Abkhazians are living around the Caucasus area reaching the Gali region (today's south Abkhazia). By the route of Kura-Araks rivers, Caucasus was entered by the Nakh-Daghestanians and as it seems now, they lived in today's Eastern Georgian territory for some time. Next were Kartvelian tribes, who forced the Nakh-Daghestanians to move further to the north. The Nakh-Daghestanians can be splitted into four groups: Avar-Ands, the Laks, the Nakhs and the Didoi. They were followed by Kartvelians, who forced these four groups to move to northern Caucasus. Nakh people are the same as Vainakh (the Chechens and the Ingush people) people. It seems, that 100 percent re-settling did not occur of those four groups, with some assimilation with Kartvelian tribes. Today's analysis shows that they are part of a hybrid population both in East and West Caucasus. The Adyghe-Abkhazians Y-chromosome's haplotypic content only slightly differs from the ones of Mingrelians, the Laz people and the Svans, therefore, G/J ratios are similar to each other. Situation differs in Eastern Caucasus where G/J ratio dithers around 1.

მოლეკულური ანთროპოლოგია

ადამიანის (*H. sapiens* L.) განსახლება კავკასიაში

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დღევანდელი შეხედულებების მიხედვით, თანამედროვე ადამიანი წარმოიშვა აფრიკაში, დაახლოებით 100-200 ათასი წლის წინ. მათმა ნაწილმა აფრიკა დატოვა დაახლოებით 70 ათასი წლის წინ. არსებული არქეოლოგიური და გენეტიკური მონაცემების მიხედვით, ადამიანის ტომი გაიყო 50 ათასი წლის წინ, შავი ზღვის მახლობლად. ერთი ჯგუფი გადავიდა სამხრეთისკენ და საბოლოოდ მოახდინა სამხრეთ აზიის, სამხრეთ-აღმოსავლეთ აზიის და ავსტრალიის კოლონიზაცია, რაც ლიტერატურაში აღწერილია „სამხრეთის მარშრუტის“ სახელწოდებით, თუმცა მიგრაციის ზუსტი გზები კვლევის და დავის თემად რჩება. ამჟამად, კავკასიაში დაახლოებით 50 ეთნიკური ჯგუფია დასახლებული. სამხრეთ კავკასიაში სამი: ქართველები, სომხები, აზერბაიჯანელები; ჩრდილო-დასავლეთ კავკასიურ ენებზე მოსაუბრე ხალხთა ოჯახები და ჩრდილო-აღმოსავლეთ კავკასიურ ენათა ოჯახები. ინგლისელი ბიოლოგის, პაგელის მიხედვით, ქართული ენა ევრაზიული ზეოჯახის შვიდი ენობრივი ოჯახიდან ერთერთია. ჩვენი ჰიპოთეზის თანახმად, პროტოევრაზიულ ენაზე მოსაუბრე ხალხი შესაძლოა ცხოვრობდა 15 ათასი წლის წინ არაბეთის ნახევარკუნძულის სამხრეთ ნაწილში. რამდენიმე ხნის შემდეგ პროტო-დრავიდიანები გამოეყვნენ პროტოევრაზიულ ენაზე მოსაუბრე ხალხს და სანაპირო მარშრუტით ინდოეთში გადავიდნენ. პროტოქართველურ ენაზე მოსაუბრე ხალხი, შესაძლოა ამ ტერიტორიაზე ჩამოყალიბდა და შემდეგ გადავიდნენ მესოპოტამიის ჩრდილოეთ ნაწილში, სავარაუდოდ, ამ მხარეში ცხოვრობდნენ დიდი ხნის განმავლობაში, რადგან, ჩვენი ჰიპოთეზის მიხედვით, პროტოქართველურ ენაზე მოსაუბრენი მონაწილეობდნენ ხორბლის მოშინაურებაში. ერთმარცვალას, ემერისა და ტიმოფეევის (ზანდური) ხორბლების (10 ათასი წლის წინ) მოშინაურების პერიოდი და ადგილი ემთხვევა გიობექლი თეფეს მდებარეობასა და აგების თარიღს. სავარაუდოდ, პროტოქართველებმა მონაწილეობა მიიღეს როგორც ხორბლის მოშინაურებაში, ასევე გიობექლი თეფეს მშენებლობაში. კავკასიაში თანამედროვე ადამიანის განსახლება ქვის ხანაში დაიწყო და ეს პროცესი დასრულდა ბრინჯაოს ხანაში. მოსახლეობა დასავლეთ კავკასიაში სამხრეთ-დასავლეთიდან შემოვიდა და გადალახა კავკასიონის ქედი. მათი შთამომავლები ცხოვრობენ ჩრდილო კავკასიაში, აფხაზები კი სამხრეთ კავკასიაში დღევანდელი გალის რაიონიდან მდ.ფსოუმდე. ნახ-დადესტნელები შევიდნენ აღმოსავლეთ კავკასიაში. როგორც ჩანს, ისინი გარკვეული პერიოდი ცხოვრობდნენ დღევანდელი აღმოსავლეთ კავკასიის ტერიტორიაზე. შემდეგ შემოსულმა ქართველურმა ტომებმა აიძულეს ნახ-დადესტნელები გადასულიყვნენ ჩრდილოეთით.

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