

THE POSSIBLE EXISTENCE OF THE PROTO-HOMINIDS IN RUMANIA'S VILLAFRANCHEAN

The readers of «Dacia» were informed, in due time, of the discovery of the Gravel culture in the Dîrjov River Valley, in 1958¹. In the history of the researches concerning the lower Palaeolithic, this discovery represents an important stage of the endeavour to elucidate the beginnings of Rumania's history; that stage was preceded by the finds of Slatina and Alexandria² (1953—1954), those at Valea Lupului³ and Mitoc⁴ (1955—1956) and by other more recent but quite as important, such as the finds at Fărcașele⁵ (1961).

The results we are going to present were yielded by an action which started on the basis of a working hypothesis of 1951; they are the results of a drive of exploring the Rumanian Palaeolithic, initiated and organized 12 years ago, by the Anthropological Research Centre and pursued in cooperation with the region and district museums and chiefly with the Archaeology Institute of the R.P.R. Academy (cooperation with the latter started in 1955, and since researches concerning Rumania's Palaeolithic have gone on at a pace never known before in Rumanian archaeology).

In that well-organized network, our concern was focussed on settling the main zones of anthropogenetic interest on Rumanian territory.

Following the discoveries in the Dîrjov Valley, the efforts made by the staffs of the Archaeology Institute and the Anthropological Research Centre were rewarded in 1961 by a new and important find on the territory of the village of Bugiulești (Oltețu District, Oltenia Region): the remnants of a place inhabited by corpse-looting hunters of the monkey-men's time.

To be sure, this assumption compells us to be highly cautious and to display — as discoverers — all the data concerning the scientific premises which led to the discovery, as well as all data on which it was founded.

¹ C. S. Nicolăescu-Plopșor and I. N. Moroșan, *Sur le commencement du paléolithique en Roumanie*, in «Dacia», N. S., III, 1959, pp. 9—33.

² C. S. Nicolăescu-Plopșor, *Noi descoperiri paleolitice timpurii în R.P.R.*, in «Probleme de Antropologie», II, 1956, pp. 75—98.

³ Idem *Cercetări, asupra paleoliticului timpuriu*, in «Materiale», III, pp. 281—291.

⁴ C. S. Nicolăescu-Plopșor and N. Zaharia, *IV Mitoc*, in *Raport preliminar asupra cercetărilor paleolitice din anul 1956*, in «Materiale», V, pp. 15—43; C. S. Nicolăescu-Plopșor, *Cercetările de la Mitoc*, in «Materiale», VI, pp. 11—23.

⁵ Marin Nica, *Cultura de prund de la Fărcașele*, Report at the Scientific Session for Anthropology, 21—23 June 1962, Bucharest.

The scientific premises are twofold and, as new data were placed at our disposal, they have been acquired and enriched in proportion. Thus, from the very beginning, a series of well-known data drew our attention to some bio-geographical circumstances which were common, at the beginning of the Quaternary, on a large zone around the Mediterranean, as a result of possible ties between the three continents bordering it.

As it is well-known, there are, in the Villafranchian of South-West Europe and North Africa, common elements of the fauna, among which the cynomorph monkeys, whose ecology resembles that of the fossil anthropomorphs and, consequently, that of the proto-human forms. Small Abbevillean hand-axes have been found on both continents. These facts prove, for the said times, a close relation between Africa and Europe. But in Europe the Gravel culture had not yet been discovered, and in Rumania nothing earlier than the Middle Palaeolithic had been known. Considering the fact that in Southern Moldavia, at Mălușteni⁶, certain older finds indicated the presence of *Maccacus florentinus*, and that other districts of Rumania were rich in warm climate fossils belonging to the beginning of the Anthropozoic, we found ourselves in front of the first working hypothesis. This urged us to begin immediately the researches which, we supposed, ought to enable us, to also detect the presence of proofs of human life and toil older than the Lavalloisean and, eventually, even the fossil remains of the first toolmakers on Rumanian territory.

We considered that such proofs could not be found anywhere else, but, naturally, where conditions of physical surroundings had been favourable. Starting with the cartography of the places where remains of Plio-Pleistocene mammals were found, we mapped, as a whole, the palaeo-geographical outline of the Getian Lake, and established, on the same basis, the older Carstean zones. The Getian Lake especially drew our attention at the beginning of the Quaternary, when it spread over more than 50,000 km², covering a good part of Oltenia, Wallachia and Southern Moldavia. This enormous water-stretch, spreading from West eastwards on more than 500 km, reaching here and there a breadth of over 100 km, must have been at that time a large heat-storing reservoir. Owing to the geographical position of the lake, its western borders were exposed to the Mediterranean influence, which there engendered a climate very favourable to both fauna and flora, chiefly in the bays between the rivers' deltas. Around that lake (an immense heat reservoir formed during the Pre-Glaciary, which, together with the Transylvanian lakes and the remains of the Pannonian Lake, even hindered the development of the first glaciations in the Carpathian mountains), a good many warm climate mammals took shelter towards the end of the Tertiary. Consequently, there existed undoubted bio-geographical conditions, forming a climatic and biotic facies also favourable to the development of proto-human life on the outskirts of the lake. Under such circumstances, it was only natural to conclude that the rich vegetation which grew on the lake border attracted there many species of animals. The abundance of vegetal and animal food must have been enticing the proto-human groups too. The elaboration of the map of the Plio-pleistocene Proboscidiens has shown indeed that while at the level of the Olt and the Jiu Rivers mastodonts were very common and were to be met south of Slatina and Craiova, they appeared only sporadically in the basin of the

⁶ I. Simionescu, *Fauna vertebratelor de la Mălușteni*, in AIGR, IX, 1922.

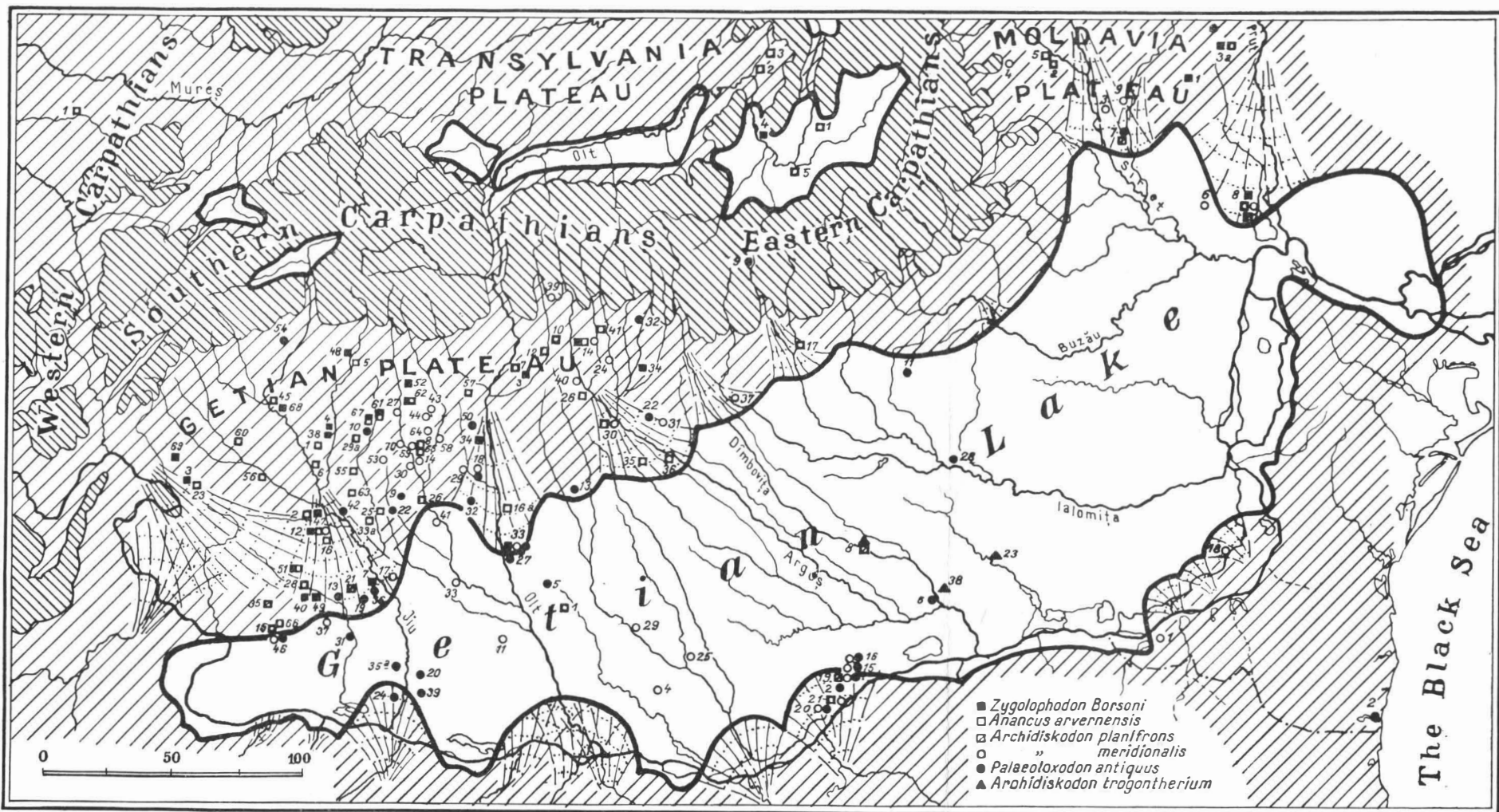


Fig. 1. — Map of the spreading of the Plio-Pleistocene mammals in the southern half of Romania; presumed surface of the Getian lake at the beginning of the Quaternary, after I. P. Popescu-Voitești, with the authors' modifications.

- I, *Banat*: 1, Temeșești.
 II, *Dobruđja*: 1, Canlia; 2, Mangalia.
 III, *Moldavia*: 1, Adam; 2, Copăcești; 3, Grozăvești; 3a, Mălușteni; 4, Pralea; 5, Ruginești; 6, Slobozia-Conachi; 7, Tecuci; 8, Tulucești; 9, Țepu.
 IV, *Wallachia*: 1, Alimănești; 2, Bălănești; 3, Bălcești; 4, Bogdana; 5, Brebeni; 6, Buciumeni; 7, Bindești; 8, București; 9, Bușteni; 10, Blăju; 11, Ceptura; 12, Ciofringeni; 13, Colonești; 14, Curtea de Argeș; 15, Daia; 16, Dăița; 16a, Deleni; 17, Doftana; 18, Fetești; 19, Frătești; 20, Ghizdaru; 21, Giurgiu; 22, Gorgani; 23, Gurbănești; 24, Jupinești; 25, Mavrodin; 26, Merișani; 27, Milcovu din Vale; 28, Moldoveni; 29, Papa; 30, Pitești; 31, Priboeni; 32, Schitu-Golești; 33, Slatina; 34, Stîlpeni; 35, Ștefănești; 36, Ticeveni; 37, Tirgoviște; 38, Vasilați; 39, Văleni; 40, Vilcele; 41, Vilsănești.
 V, *Oltenia*: 1, Aninoasa; 2, Argetoaia; 3, Balota; 4, Bărbătești; 5, Benghești; 6, Broșteni; 7, Bucovăț; 8, Bugiulești; 9, Bulzești; 10, Busuioci; 11, Caracal; 12, Cernătești; 13, Ciutura; 14, Cîrlagani; 15, Corlatele; 16, Cornița; 17, Craiova; 18, Crețeni; 19, Criva; 20, Dobrești; 21, Dobromira; 22, Gaia; 23, Ghelmeșioaia; 24, Gîngiova; 25, Godeni; 26, Gorunești; 27, Grădiște; 28, Gubauca; 29, Gușoieni; 29a, Hurezani; 30, Lăcusteni; 31, Lipovu; 32, Lunghești; 33, Mărgăritești; 33a, Negoești; 34, Orlești; 35, Orodelu; 35a, Padea; 36, Palilula; 37, Perșoru; 38, Petrești; 39, Pîșcu Sadovei; 40, Ploșoru; 41, Preotești; 42, Răcari; 43, Românești; 44, Roșiile; 45, Rovinari; 46, Rudari; 47, Salcia; 48, Săcelu; 49, Sălcuța; 50, Scundu; 51, Seaca (Veleni); 52, Sinești; 53, Soceni; 54, Stănești; 55, Stoina; 56, Strehăia; 57, Sirineasa; 58, Ștefănești (Oveselu); 59, Tepești; 60, Țirioiu; 61, Tîndălești; 62, Turburea; 63, Valea Boului; 64, Valea Ursului; 65, Vîjioești; 66, Virtop; 67, Vladimir; 68, Vlădueni; 69, Valea Boerească; 70, Zătreani.
 VI, *Transylvania*: 1, Anghelșu; 2, Baraolt; 3, Brăduț; 4, Hăghig; 5, Ilieni.

Olt River, much more to the north. This fact led us to conclude that the Jiu and the Olt, with their great volume of water and carrying force pushed their deltas, made of ooze, sands and gravel, farther on, thus filling in the retreating Anthropozoic lake. And while these rivers' deltas advanced towards the south, a bay remained in the present basin of the Olt, owing to the slower flow of the river, which could not keep in step with the quicker-flowing Jiu and Olt (Fig. 1). The recent researches of the geo-morphologist L. Badea proved that the Olt had mapped its upper course at that time and was tributary to the Cerna River, which flowed towards the Olt along the Sub-Carpathian Depression⁷.

Our researches were therefore centered on the banks of this retreating bay, where the southernmost line of the northern shore passed south of the 45° parallel, and the Mediterranean influence is still nowadays felt on the flora and the fauna of the region. On the shores of the bay formed by this immense Eopleistocene lake we found, as early as in 1952, a series of fossiliferous points at Preotești and Dobriceni, then the important fossil plot found by the Oltenia Region Museum, at Fântina lui Drăghici, on the territory of the Vasilă village (Irimești commune) in 1957, the plot of Pietrișu-Vijoești we excavated in 1959–1961, the fossiliferous plots at Fântina alor Tiței and Valea lui Grăunceanu, belonging to the Bugiulești village, which we examined and excavated, together with the Oltenia Region Museum, in 1961–1962.

Comparing these fossiliferous points, we must stress that some basic differences regarding the heaping up of the fossil remains appeared. This being an inward lake, its banks oscillated seasonally, through more or less ample regressions and transgressions, depending on the rainfall and, periodically, on the climatic changes. During the regressions, the mammals which lived in the border area were compelled to take refuge inland, on sandy bends or oozy banks freshly quitted by the water. We imagine it was only on such moving, marshy banks that some meridional elephants, young as well as old, could have been engulfed owing to their weight, on a very narrow bend at Fântina lui Drăghici. At Pietrișu, however, things happened otherwise. The sandy bog could only partially preserve the skeletons of some copitatae, mostly of the horses' and stags' species, whose limbs are there found in anatomic connexion. Field observations led us to the conclusion that these animals, on their way to the drinking places, fell the prey to a hidden marsh where they got bogged in, generally up to the belly only. Their desperate roars, as they could not tear themselves away, at once attracted the carnivorous beasts, which finished what was left above. These last species, lighter in weight and having broader paws, sank more rarely. Their fossil remains are the result of their fights for possessing the copitatae corpses; the presence of teeth is easily explained, as they could not be gnawed. That is why, of such a great many sunken animals, only seldom just a bit of a rib or of a vertebra is found. Such natural traps must have been profitable to the proto-human groups too; they stole away important portions of the corpses and carried them to sheltered places for common feasts. A convincing proof of this supposition is the fact that at Pietrișu some tools were found, of the type precisely used for carving corpses.

⁷ Lucian Badea, *Cu privire la unele modificări ale rețelei hidrografice din depresiunea Polovragi în*

Pleistocenul superior, Report at the Scientific Session for Anthropology, 21–23 June 1962, Bucharest.

At Grăunceanu too the geological deposits consist of fine oozes and sands with small granules, horizontally stratified, which only means that some level oscillations had taken place due to climatic change, of seasonal or periodical duration. While at Pietrișu and at Fîntîna lui Drăghici, as already mentioned, the bones of the animals are found, totally or partly, in anatomic connexion, at Grăunceanu the bones are split and without connexion. No natural phenomena, be it periglacial moves, falls in the abyss, stream or billow effects, or hoarding by wild beasts — could explain the spreading on a limited area and the clustering of these skeleton remains, which, judging by the latest determinations, amount to a faunal association of 17 species. The number of bones and individuals, of the Equidae and the Cervidae prevail, as against a smaller percentage of carnivorous animals and another, still smaller percentage of young Proboscides, Rodents and Primates. As at Pietrișu, again, we are here in the presence of an evolved Villafranchian association, the geological level where they were uncovered being nearly of the same altitude.

In the table below the faunal associations found at Pietrișu and Grăunceanu — the two spots more intensely searched by us are shown comparatively.

| | Grăunceanu | Pietrișu |
|--|------------|----------|
| <i>Canis (Nyctereutes) megamastoides</i> POMEL | + | + |
| <i>Canis</i> aff. <i>donnezani</i> DEPÉRET | — | + |
| <i>Canis</i> cf. <i>falconeri</i> F. MAJOR | — | + |
| <i>Ursus etruscus</i> CUVIER | + | — |
| <i>Crocuta perrieri</i> CROIZET & JOBERT | + | — |
| <i>Homotherium crenatidens</i> FABRINI | + | — |
| <i>Megantereon megantereon</i> CROIZET & JOBERT | + | — |
| <i>Felis</i> sp. | + | — |
| <i>Felis (Lynx) issiodorensis</i> CROIZET & JOBERT | + | + |
| <i>Meles</i> sp. | + | — |
| <i>Castor plicidens</i> F. MAJOR | + | — |
| <i>Hystrix resfossa</i> GERVAIS | + | — |
| <i>Hypolagus brachygnathus</i> KORMOS | — | + |
| <i>Beremendia (fissidens?)</i> | — | + |
| <i>Eucenoceros</i> sp. | + | + |
| <i>Dama nestii?</i> F. MAJOR | + | — |
| <i>Cervus</i> sp. | + | — |
| <i>Capreolus</i> sp. | + | — |
| <i>Gazella</i> sp. | + | — |
| <i>Hippopotamus</i> sp. | + | — |
| <i>Sus</i> sp. | + | — |
| <i>Archidiskodon meridionalis</i> NESTII | + | + |
| <i>Dicerorhinus etruscus</i> FALCONER | — | + |
| <i>Rhinoceros</i> sp. | + | — |
| <i>Equus stenonis</i> COCCHI | + | + |
| <i>Dolichopithecus arvernensis</i> DEPÉRET | + | — |
| <i>Ophis</i> sp. | — | + |
| <i>Bufo</i> sp. | — | + |

The determinations were made by our collaborator, the palaeontologist Alexandra Paul-Bolomey*.

* C. S. Nicolăescu-Plopșor, I. Firu, Alexandra Paul-Bolomey, dr. Dardu Nicolăescu-Plopșor, *Cele*

mai vechi mărturii ale vieții omului în Europa descoperite în țara noastră. O nouă contribuție cu privire

The composition of these associations shows a definite difference of the two places, thus strengthening the conclusions we have already reached on the basis of other observations.

Thus, at Pietrișu, the presence of certain aquatic animals, such as *Bufo* and *Ophis*, points out a swampy place favourable to submersion. The aquatic elements found here are in their place, dead in their natural surroundings, where they left their bones in *anatomic connexion*.

Grăunceanu on the other hand, being a human inhabited place, a dry land bend on the lake border, squeezed between the shallow beds of the brooklets and of the trickling waters which supplied the lake in that zone, the presence of such elements is uncouth. Most likely the horde of monkey-men was not even interested in such elements as frogs, snails and little mice, since, as the remains of the skeletons of the devoured animals prove, its attention was drawn only by such animals which could supply it with larger quantities of food. It was much easier for these monkey-men to profit by natural traps which offered great amounts of food, than to stalk such mean prey.

The frequent finds of remains of horses' and stags' skeletons, representing animals much more easily submerged, must be connected with the presence of certain submersion spots — natural traps — in the close proximity, such as that at Pietrișu, which the horde deftly exploited.

Yet, it is not impossible that incidentally and quite sporadically tiny water or land animals, with a slow moving system, could have served as nourishment; nor did the horde overlook, we believe, the medium of large size animal cubs, which were more easily caught than their parents. The find of a mandibula of a young *Arehidiskodon meridionalis* is an irrefutable proof of this fact.

The existence of submersion spots, which supplied the horde with most of the necessary food, explains the preferential differences of the monkey-men at Grăunceanu, as against the *Zinjanthropus* at Oldowai who, owing to the absence of such natural traps close to their living places, were found to resort for their feeding to turtles, lizards, rats and other slow-moving animals which were easily watched and caught.

Anyhow, an explanation for the death in that place of such species which could not have lived together — carnivorous and herbivorous animals — is hard to find; thus we cannot think of a biocoenosis; and a thanatocoenosis is as difficult to imagine, as there is not the slightest reason for their death on that spot. The same is also indicated by the very feeble amount of vertebrae and ribs in relation to the skull bones. And this cannot be due to decaying through corrosion of this kind of less resisting bones, since they are still extant and well preserved, but in such a slight amount, that it can be overlooked.

All these remarks constituted the first arguments which prompted us to assume, from the beginning, that only the fleshy or favourite parts of the corpses of fortuitously sunken or even purposely chased animals were brought to this spot. Another reason which pleads in favour of our hypothesis is the fact that whole sets of bones

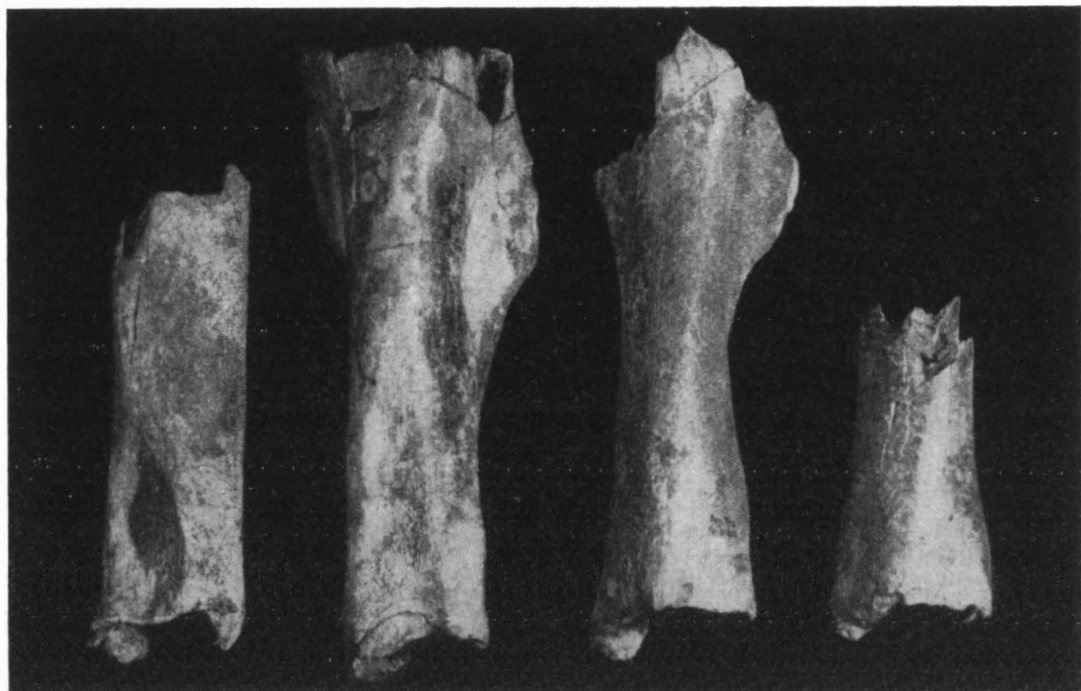


Fig. 2. — Bugiulești — Valea lui Grăunceanu. Femorals of *Equus Stenonis*, split at both ends (photo Professor Gr. Avakian).

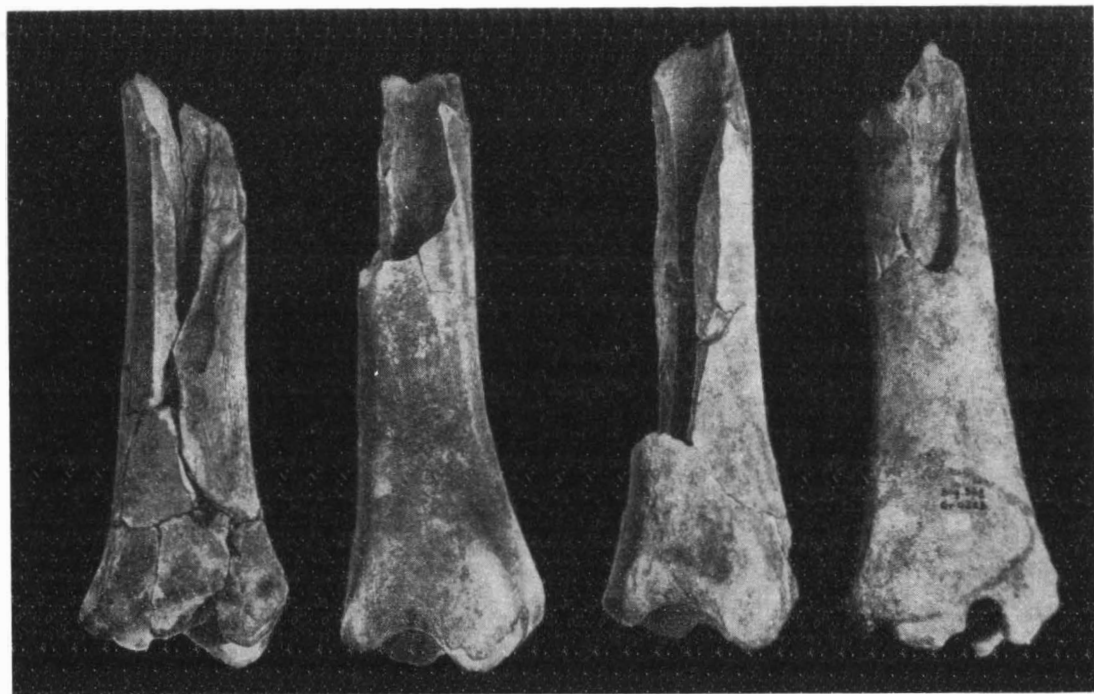


Fig. 3. — Bugiulești — Valea lui Grăunceanu. Humeruses of *Equus Stenonis* split in the same manner (photo Professor Gr. Avakian).

are smashed at both ends, such as some thigh bones of *Equus stenonis* (Fig. 2), or only at one end, as is the case of the humeruses, radiuses and tibiae. In all instances, these are long bones, with large medullar channel (Fig. 3). Such frequent and consistent recurrences led us to the conclusion that—to break the bone in order to extract its marrow—had been a deliberate purpose and that each time the same procedure had been used for reaching the medullar channel. According to anatomist Dr Vasile Gheție, these bones were broken by means of striking on the diaphyses, the bone being then propped on the two epiphyses, or by striking on the proximal ends of the bones. What is worth remarking, says Dr Gheție, is the fact that «the fractures of these bones were caused by striking the proximal extremity on a hard body, while the distal extremity was held in hand. The fractures were produced post-mortem».

Equally conclusive for a deliberate breaking are the quite perceptible marks on an *Equus stenonis* femoral of concentric chinks from the outside towards the inside (Fig. 4), as well as the fact that these bursts perfectly coincide with the size and the roundness of the condylar masses of the distal ends of some humeruses, which, in our opinion, were used as crushing clubs.

But besides the bones broken on purpose for extracting their marrow, we there identified certain sets of bone tools similar to those in the caverns inhabited by the *Australopithecus* in South Africa⁹, and analogous to those used by the *Sinanthropus* at Choukoutien¹⁰. There exists perfect similarity, which makes it easier for us to range the Grăunceanu tools under known shapes, such as:

Crushing Clubs. Humeruses of *Equus* and *Cervus*, distal extremities with portions of the diaphysis of variable length, on which sometimes the condyls as well as the epicondyls are provided with chinks made by strong blows against hard bodies. The diaphysis' length, the size and weight of the distal extremity are suitable, and make them convenient for use as crushing clubs, easily handled in such cases (Fig. 5).

Piercing tools. Some of the broken bones consist either of distal halves of the tibiae, or of proximal halves of canons, usually of *Cervus*, as well as of *Equus* radiuses which still preserve two thirds of the distal extremity. Thanks to their size, they all are easily handled. In the diaphysical region they show carvings deliberately made by means of neat, well directed blows, which resulted in pointed tips (Fig. 6).



Fig. 4. — Buginlești — Valea lui Grăunceanu. Femoral of *Equus Stenonis*, bearing concentric chinks going from the outside to the interior, and resulted from a hard blow (photo Professor Gr. Avakian).

⁹ R. A. Dart, *The Osteodontokeratic Culture of Australopithecus Prometheus*, in «Transvaal Museum Memoir», Pretoria, VII, 10, p. 105, 1957.

¹⁰ H. Breuil, *Bone and Antler Industry of sinanthropus site of Choukoutien*, in «Paleontologica Sinica», N. S., D., no. 6, pp. 1–40, 1939.

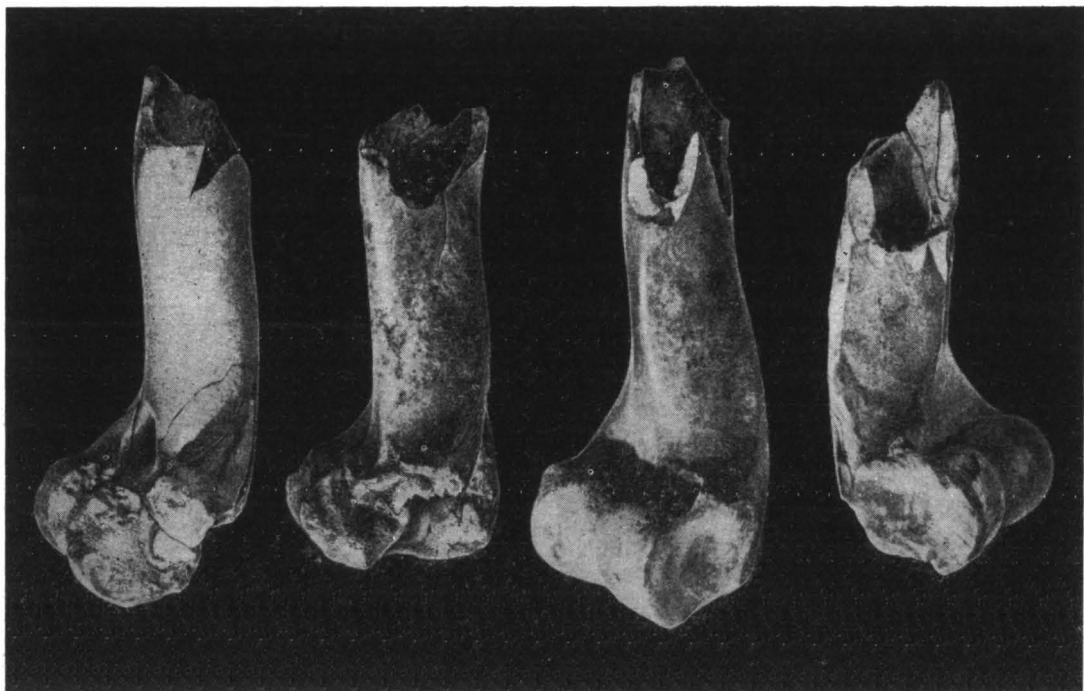


Fig. 5. — Bugiulești — Valea lui Grăunceanu. Crushing clubs made out of the distal extremities and parts of the diaphyses of humeruses of *Equus Stenonis* (photo Professor Gr. Avakian).

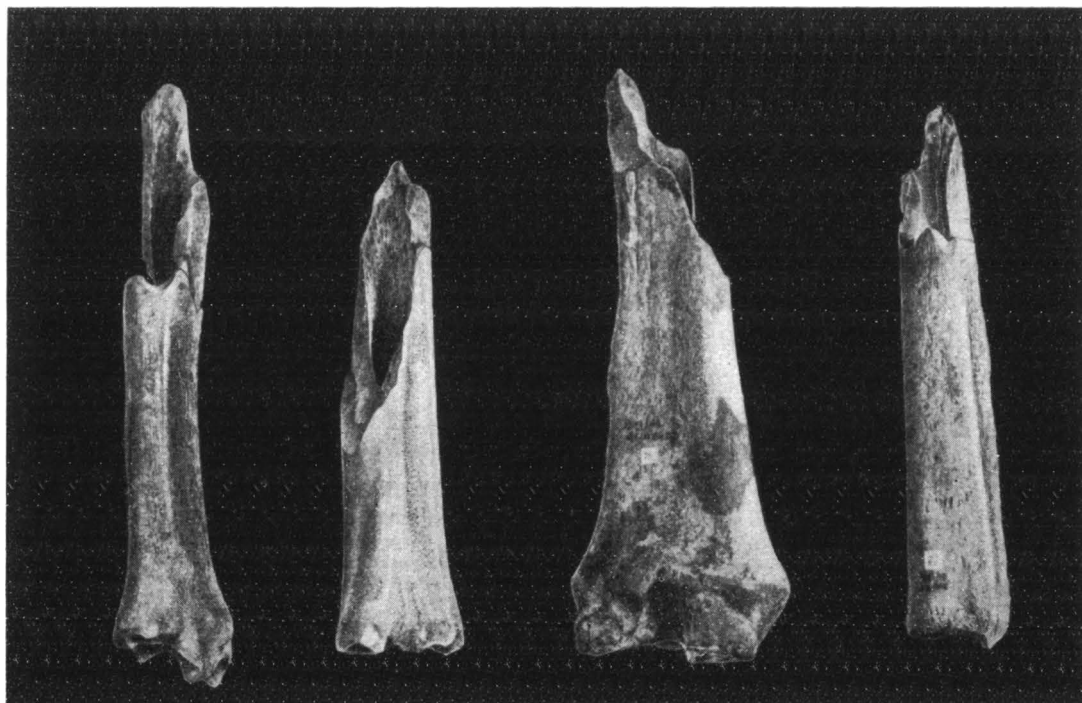


Fig. 6. — Bugiulești — Valea lui Grăunceanu. Awls manufactured from *Cervus* antlers and from an *Equus* radius (photo Professor Gr. Avakian).

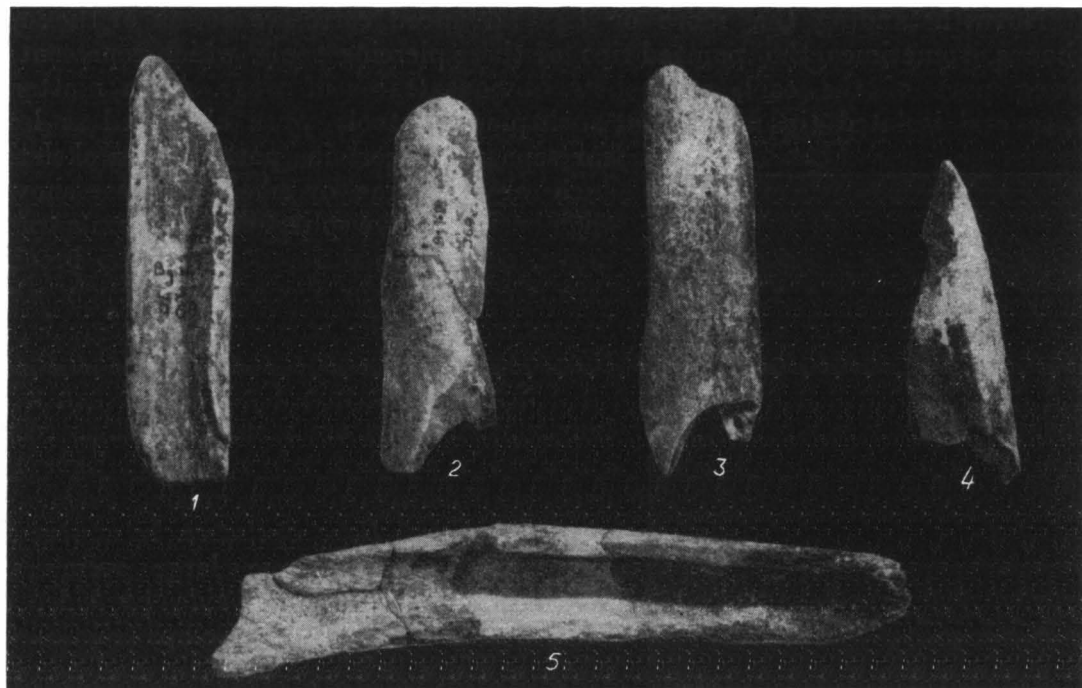


Fig. 7. — Bugiulești — Valea lui Grăunceanu. 2–4, awls' points broken following a torsion movement; 1, 5, scrapers (photo Professor Gr. Avakian).

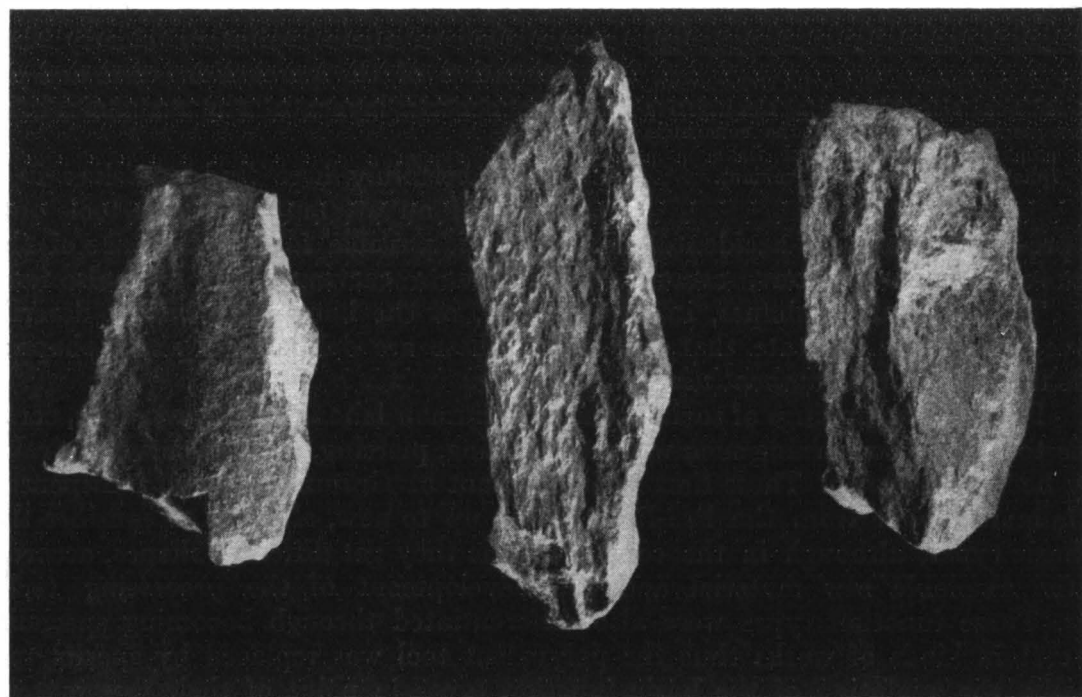


Fig. 8. — Bugiulești — Valea lui Grăunceanu. Pre-fossil bone chips (photo Professor Gr. Avakian).



Notwithstanding the more or less advanced corrosive action of the soil on the bones, sometimes the pointed tips of these piercing tools, which represent the working part of the tool, still show obvious traces of wear. As a matter of fact, several isolated tips show that such piercing tools were also used as levers for separating certain parts of the skeletons, such as vertebrae or ribs. All these show at their basis concave splits resulted from a torsion move, and quite different from the breaking through striking or from that brought about by pressure in the respective geological level (Fig. 7).

Scrapers. Certain *Equus* tibiae, on which longitudinal splits are seen, as well as certain chips with polished edges, might have been used for rubbing off and erasing skins.

Pre-Fossil Bone Splinters. In square 1 of the 1961 diggings, three large splinters of *Elephas* bone were found side by side, and around them a lot of smaller chips (Fig. 8). One of these chips, with pointed tip and an easily handled base, was shaped through strong striking; the traces of the conchoidal splintering undoubtedly prove that the bone used as raw material for that tool was at the time at an advanced stage of mineralising and, as such, nearly as fit for splitting and chipping as a stone. One of these splinters clearly shows the negative of the percussion cone and even two concentric layers of the conchoidal flake (Fig. 9).

We certainly here find ourselves in the presence of an attempt to shape tools out of

old pre-fossil bones. No accidental explanation is possible for the presence of three large fossil bone splinters, around which minute carving chips were also found.

The ascertained shapes, in whole series, of the bone tools briefly described above, compel us to state that, no doubt, these are deliberately made shapes of tools intended for *permanent use*.

From the beginnings of social, conscious human labour up to nowadays, certain basic tool types concerning such work as crushing, piercing, cutting, carving or raking may be traced down. These first types, extant at Grăunceanu, and indispensable to human labour from the Pre-Palaeolithic up to now, allow us to consider them as basic types, although in the course of time they got different shapes, according to the available raw material and the development of the processing techniques. These function types were also differentiated through becoming specialized for certain kinds of work: thus the polyvalent tool was replaced by special tools. Finally, the evolution of the basic function types in point of their raw material, processing, polyvalent or special, differentiated forms, may be connected with the

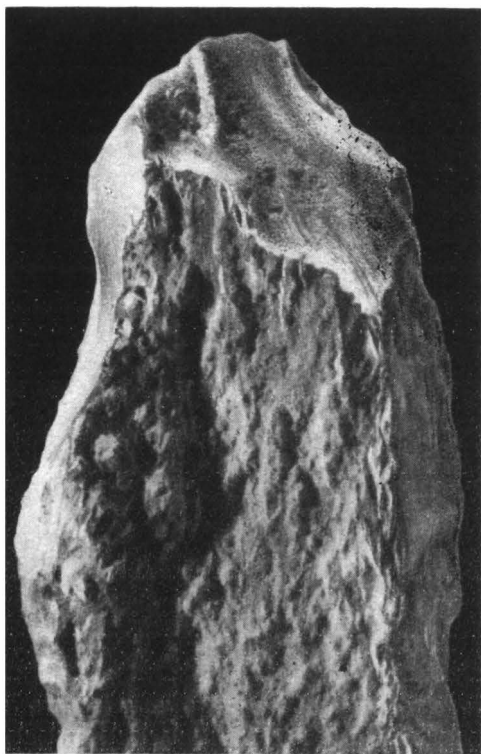


Fig. 9. — Bugiulești — Valea lui Grăunceanu. Pre-fossil bone chip still showing the negative of the percussion cone and the concentric chinks of the conchoidal flake (photo Professor Gr. Avakian).

evolution of cognition and with the level of social and economic organization of the human groups, which it directly reflects.

Another argument in favour of our assertion was brought by the 1962 diggings. In the said complex of fossil remains, mixed up with bone tools, two abraded stones were found. Taking into consideration their weight, as against the sandy-clayey geological layer, where pebbles very reduced in diameter are rarely met with, there is no other possible explanation for their presence than they having been brought there by an intelligent being. Likewise, in the last layer of circulation of *the horde* of corpse-looting hunters at Grăunceanu, side by side with some large split bones, an unabraded quartzite stone was found, whose presence in a fine clay stratum can be understood only if it too, had been brought there on purpose.

In connection with such finds, worth taking into account are the remarks of the geo-morphologist Lucian Badea, who, thanks to his researches on the spot, is well acquainted with the area. From his report we quote the following: « Among the levels of the whole stratigraphic column at Valea lui Grăunceanu, none contains granules having their larger axis more than 25–26 mm long and possessing a high weathering and a high abrasion degree; such granules are seldom dispersed in clayey sand masses. As for the abrasion degree of the two stones, it is lower than that of the small pebbles. By reckoning the weathering degree of the two larger stones found in Level 1, according to the Cailleux formulas, we found 0.38 for stone A and 0.25 for stone B, which means that these fragments had not undergone a long transport, so as to gain a weathering degree... approaching that of the granules in this level, whose weathering degree varies from 0.40 to 0.65. This means that the two larger stones got there otherwise than by river transport.

Even stranger is the finding of an almost unabraded fragment of quartzite in the clayey-sandy Level 2, whose origin seems to be even more ticklish:

— the stone shows no abrasion traces (degree 0);

— its faces are very close to the initial splits and intersect at hardly blunt edges (for which reason its blunting degree cannot be calculated).

This means, therefore, that the quartzite fragment C was not driven in a longer process of transport and that its presence in a clayey mass cannot be explained by the normal way of precipitation and formation of such a level.

Because of the big difference between the largest granules dispersed in the mass of levels 1, 2 and 3 and the three large fragments, the latter's presence there cannot be explained by the normal ways of formation of the above described levels. Likewise, it can be stated that the transport conditions as well as the depositing of the materials belonging to the two levels (1 and 2) did not allow the transport and laying down of any elements like the stones A, B and especially C».

By reckoning the ratio between the weight of the two stones from the lowest layer — which is of 270 g for the first and of 365 g for the second — and that of the pebbles, which is on an average of 2 g only, we find that the first stone is 135 times and the second 182 times heavier than the pebbles. As for the unrolled quartzite weighing 535 g, by drawing the ratio between its weight and the rare sand granules, of only 5–3 mm, of the superior level, it appears several ten thousand times heavier than the latter.

The finding place and a good many of the bone remains at Bugiulești were studied, among others, by the palaeontologist Miclos Kretzoi, a well-known expert

in problems of the Quaternary fauna and stratigraphy. In a private letter to the authors, the scientist shows that: «The stratigraphic position clearly speaks against transportation by running water of the materials found there». He believes: «it is very unlikely that these bones, whose size compared to that of the granules of the coarsest plastic materials. . . should have been brought there in the normal way (that is transported by water); these are, therefore. . . fragments brought there by a living being».

Having examined the bones, the palaeontologist Kretzoi stressed that: «it cannot be ascertained that their surface bears any traces of animal interference (. . . wild beasts' bites, such as the hyena's, or traces of rodents). On the contrary, on several bones traces of splintering are seen, which, in my opinion, cannot be taken for natural (the so-called natural fractures, incurred by slipping animals, as they fell into precipices, and so on); this is precisely why I am inclined to consider these bones as deliberately broken by a superior being» (that is the prehomínids). Finally, says Miclos Kretzoi «*all this enable me to think of the presence and, consequently, of the existence of prehomínids of the European Villafranchian type*» (the underlining is ours — C.S.N.P., D.N.P.).

Concluding this short account of our discoveries in the Valea lui Grăunceanu, at Bugiulești, we believe that we are here in the presence of primary forms of human toil, a stage when the use of unprocessed objects directly furnished by the natural surroundings, as well as of implements with just a beginning of processing, is the starting point of human activity¹¹. Obviously, the processing of certain stone pieces, and the making of such splinters belonging to the Gravel culture, as those found in the Dirjov River Valley and at Fărcașele, are for the history of human labour and implements, the result of a prolonged series of observations, of experience storing, of working practice for obtaining food — to be sure a very long period during which man developed markedly and manifoldly. But before? How and by what has the road he covered manifested itself? The Bugiulești bone tools may furnish many a piece of information, even if for the time being it cannot be maintained that they belonged to a bone culture of the osteodontokeratic type, similar to that from the caverns inhabited by the Australopithecus. This is, undoubtedly, the Pre-Palaeolithic era.

A conscious activity of food securing is evident, and characterized by food selection; this activity is naturally accompanied by a conscious care for the acquisition and use of bone implements, in a region where stones, although entirely absent, were nevertheless brought from far away and used in their chosen natural shapes. We can therefore affirm that we have caught here the very moment when the

¹¹ The archaeologist Radu Vulpe, who was most interested in the Bugiulești finds, wrote the following in a letter to the authors: . . . the bones he saw «bear obvious traces of a reasonable being activity». He finds «blows applied with a hard object, always on the best-suited spot for the convenient removal of the marrow out of the long bones», «tubular bones carved so as to serve as awls, shaped through the same splintering and in the same form; the points of these tools, blunted by use, in opposition of the unused part of the same

bones, where the splinters were preserved untouched»; and he draws our attention to the «polished lustre shown, without exception, by all pieces considered as bearing traces of use, and which is the result of the prolonged contact with the hand of the being that used these rudimentary tools». This remark seems to him «conclusive for characterizing that being as a homínid par excellence»; and the repeated use of the same tool, as well as its shaping for a determined purpose «may be considered as resulting from an already human action».

primary forms — uncarved stones — existed side by side with the processed bone tools. This is, in the opinion of most searchers, the first phase of a hunting life with a looting character, an age when the monkey-men «contented themselves — as Nesturh puts it — with eating the sick or dead animals' flesh» and «with catching small animals with a slow locomotion system»¹². We are rather in the presence of a horde of corpse-looting hunters than of hunters in the proper sense of the word. This is the sole interpretation possible of the heaping up of certain parts only, from the skeletons' remains of so many species of animals; their accumulation in the same spot cannot either be ascribed to a developed hunting economy.

Concerning the finds at Bugiulești, we think it worth while to insist on a few more important questions, viz.:

a) To determine whether the implements at Valea lui Grăunceanu might be considered as the first stage of conscious toil, or whether this is the phase in which «human labour was still purely instinctive»¹³, phase which K. Marx had discerned in his time with such insight and power of comprehending the primary problems proper to human labour process;

b) Who were the makers of that rich set of pre-palaeolithic tools of daily use, with well particularized function types, and what evolution stage, what degree of human development had they reached?

In respect to the first question, it can be asserted that we are here in the presence of deliberately made bone tools, for permanent use, preceding the Gravel culture, that is Pre-Palaeolithic, but contemporary to the beginnings of the use of natural, unprocessed stone.

As a proof in favour of the opinion that the finds in Valea lui Grăunceanu were implements of daily use, we must also state, that the chief function types are represented by a great deal of items. Now, nature does not make things in series. Had these been made by nature's agency, the two halves of the fractured bones ought to have been found in the same excavation by all means, which does not occur. Only the proximal or distal extremities were found there (depending on the employed bone and the function type the tool-maker intended to get by its processing), which is, in our opinion, an indication that the manufacturing of these implements was usually done elsewhere than in the human abiding place we investigated. Besides the polishing of the butt, caused by repeated and prolonged use, the polishing by wear of the active parts of the tool must be mentioned as well. The processing of awls by applying torsion pressure to the whole bone before splitting it, in order to obtain an oblong, helicoidal active part, with sharp edges intersecting at an acute angle — a form which cannot be realized without torsion — shows too a close acquaintance with the bone's properties as raw material¹⁴. Another proof of the knowledge concerning such qualities is the use of pre-fossilized bone, out of which the wanted shapes could be gained by chopping.

The priority of the bone implements as against the use of natural stone is fully demonstrated at Bugiulești. The following arguments plead for it:

¹² M. F. Nesturh, *Originea omului*, Bucharest, 1959.

¹³ K. Marx, *Capital*, I, J. M. Dent & Sons, London-Toronto 1930, p. 169.

¹⁴ R. J. Mason, R. A. Dart and J. W. Kitching,

Bone tools at the Kalkbank Middle Stone Age Site and the Makapansgat Australopithecine Locality, Central Transvaal, in «South Africa Journal Sci.», 1958, 13, pp. 85—116.

1. The absence of even the coarsest processing of the three stones, in sharp contrast with the principal function types of tools proper to human tools from the oldest times up to nowadays, which bear convincing signs of permanent use, such as clubs, awls, scrapers, equally used for crushing, piercing, cutting and rubbing off, as well as the small hand-axes made of bone. The «standardization» of the forms, as revealed by the whole series of tools for each function type, fully proves a deliberate, conscious activity while the polishing of the butt betrays the prolonged and repeated use of the tools. This is what gives them the character of permanently used tools, a more advanced stage which succeeds the earlier, beginning phase, when sometimes the tools might have constituted a set, because they had to meet certain function needs, yet this set was not necessarily the result of a conscious «standardization» of the forms, although its processing was a deliberate action: the tool lost its meaning as soon as the want for it disappeared¹⁵.

As for the presence of the three unprocessed stones associated with the varying function types of bone tools for daily use, they range with the primary, poorly developed forms of human labour, as against the more advanced forms represented by the bone tools.

We consider the unprocessed stones as being real tools because, as results from the geo-morphologist Lucian Badea's researches, one of those stones comes from Măgura Slătioarei, which is situated at a distance of about 40 km. To have brought the stone from so far means, for the horde of monkey-men, on the one hand to have been acquainted with the fact that the surroundings entirely lacked stone and, on the other hand, to have known one of the chief properties of stone that is its hardness, far greater than that of the bones. In the cognition process of the horde of monkey-men at Grăunceanu, this sole feature which made stones superior to the long-used bones, namely its hardness, determined the choice of suitable stones and their transportation from quite a great distance, in order to be used, most likely, as crushing tools or even as flinging weapons; but not even the clumsiest attempt at splitting these stones was made, although the splitting properties of pre-fossil bones, which enabled them to take certain wished for shapes, were known. We are justified in using the term of «tools» for such common stones by the fact alone that they were chosen so as to have suitable sizes and were brought there on purpose, for permanent use.

Another fact we are now going to discuss is L.S.B. Leakey's discovery at Oldowai: in the lower level, side by side with the *Prezinjaanthropus*, in a zone very poor in stone implements, as against the upper levels, a long bone fragment was found which was polished on one of its sides, as if being repeatedly used most likely for rasping hides. The discoverer was puzzled and wondered—as H.V. Vallois did, too¹⁶—how the presence of such a bone tool which evinced a far more advanced technique than the lithic implements and the archaic features of the *Zinjanthropus* and the *Prezinjaanthropus* was to be explained, taking into account the great antiquity of the deposits of Oldowai as well.

¹⁵ M. O. Kosven, *Introduce în istoria culturii primitive*, Bucharest, 1957.

¹⁶ H. V. Vallois, *Les nouveaux zinjanthropus d'Oldowai et le problème de l'ancienneté de l'homme*, in «L'Anthropologie», LXVI, 1—2, 1962, pp. 175—183.

The answer is quite simple and convincing thanks to our finds at Grăunceanu: the bone tool of permanent use at Oldowai, in association with stone implements of rudimentary technique, is one more proof in favour of the thesis that bones were used as raw material long before stone was known and used, and it strengthens Dart's assertions¹⁷ concerning the osteodontokeratic culture of the Australopithecines.

If we are to consider certain representatives of the Australopithecines group, among which the Zinjanthropus of Oldowai, as creators of the Gravel culture, the question arises who are the makers of the bone tools of daily use uncovered in the Grăunceanu's Valley? If the first human beings appeared in those herds of antropomorphous, among which some pursuits and habits concerning the methods of obtaining food with the help of tools became common and characteristic¹⁸, the makers of the tools found in Valea lui Grăunceanu may rightly be considered as «men in the making», belonging undoubtedly to one of the first stages in the human process of labour.

The circumstance that in South Africa an «osteodontokeratic culture» is ascribed to the Australopithecines, enables us to present some remarks on the stage of evolution of the proto-human groups which freely developed in the Grăunceanu's Valley. We must therefore mention some well-known data.

The Oreopithecus is the first evidence of a process of evolution towards humanization, as it already had acquired a bipedal standing and, most likely, a bipedal walking. Schultz, who analysed the remains of the skeleton of the Oreopithecus discovered at Grosseto, in Tuscany, and pointed out the reduction of the dentomaxillar apparatus, with much smaller canines than the present chimpanzee, believed that the Oreopithecus must have looked for other protecting means, and most likely used as weapons certain unprocessed objects with which nature abundantly provided him¹⁹.

On the other hand, as results from the latest finds, it has been established that the Australopithecines had a bipedal standing and walking.

In the period of about 6,000,000 years which separates the development of the Oreopithecus and that of the group of Australopithecines, from the Oreopithecus (which shows a bipedal standing and, perhaps, even bipedal walking, so much the more as one of the forearm bones — the cubitus — has some interesting features which bring it close to the specific human morphology), up to the Australopithecus which are proved to be the authors of the so-called osteodontokeratic culture, on the one hand, and of the Gravel culture at Oldowai on the other hand, in this same interval ought to be sought — although they cannot be easily detected — earlier stages of the human labour process, such as the primary form of activity which used natural, unprocessed bones. It is during this interval and namely towards its superior limit, which was about the time when the Australopithecines' group developed, that the moment ought to be placed, at which human toil had not yet shaken off its first, instinctive form.

¹⁷ R. A. Dart, *Further Light on Australopithecine Humeral and Femoral Weapons*, in «American Journal Phys. Anthropol.», 1959, XVII, 2, pp. 87—93.

¹⁸ M. P. Nestorh, *op. cit.*

¹⁹ A. H. Schultz, *Einige Beobachtungen und Masse am Skelett von Oreopithecus im Vergleich mit anderen catarrhinen Primaten*, in «Zeitschrift für Morphologie and Anthropologie», L, II, 1960, pp. 136—149.

We believe that, the long period of time covering the development of the Australopithecine group must have included some of the first stages (most probably not the very first ones) of a specifically human, social work activity.

More evolved forms, such as the Zinjanthropus, were discovered in association with implements belonging to the Gravel culture. To earlier forms, such as those in South Africa, are ascribed the creation and use of the osteodontokeratic culture. In the present stage of the researches, no doubt the finds in Grăunceanu valley prompt us to think rather of the earlier forms of the Australopithecines. The same trend is given by the geo-chronological setting of the discoveries at Bugiulești, to which we are constrained by the evolved Villafranchian fauna association, as well as by the bone tools of permanent use in association with rudimentarily carved stone implements, found by L.S.B. and M. Leakey at Oldowai, in the Pre-Zinjanthropus level, near its fossil remains.

If our interpretation is right, the discovery at Bugiulești, thanks to its scientific importance, will go not only beyond Rumania's border, but beyond that of Europe too, for it is bound to have its place in the general debate about the first stages of the humanization process, of transition from the biological to the social. It could be a stimulus for more attentive search of other Villafranchian fossiliferous spots in Europe. The presence of the archaeologist side by side with the palaeontologist becomes more and more necessary. We dare think consequently of Saint Vallier²⁰.

Anyhow, in this respect we must not forget that Australopithecines, at first known only in South Africa, whence they got their name, spread northwards to Tanganyika, to the Oldowai Gorge, where they existed as Pre-Zinjanthropus and Zinjanthropus, then passed the Equator into Sahara, northwards of Lake Tchad, at 15° northern latitude: there, an Australopithecine skull was found, while other Australopithecus lost their teeth in the Jordan Valley or even in China²¹. What could then have prevented the Australopithecus to leave its tracks on Rumanian soil too? And it is not unfit to remember that R.A. Dart asserted with great scientific insight, in 1960 — that is one year before our find — that «it is unavoidable that similar bone implements should be found in the Palaeolithic, or the subjacent deposits, of the European continent»²².

In this situation, the Villafranchian fauna is so placed as to focus the searchers' attention, as it represents the crucial stage when man wrested himself, through his labour, from animality. The fossiliferous spots in the Oltețu area are at present the richest Villafranchian fauna association that we have come across so far. Thanks to its geographical position this fossiliferous zone has actually become the link between finds in Western Europe and South-Eastern Asia.

If we take into account the fact that in one of these faunal complexes we found the oldest evidence of the beginnings of deliberate tools, this means, then, that important scientific tasks are in store for future researchers. If researches for a thorough knowledge of that early stage of the anthropogenesis are continued, future finds may

²⁰ J. Viret, *Le loess à banc durci de Saint-Vallier*, in «Nouvelles Archives d'Histoire Naturelle du Musée de Lyon», 1954.

²¹ H. V. Vallois, *op. cit.*

²² R. A. Dart, *Pithecanthropus and Australopithecus*, in «Zeitschrift für Morphologie und Anthropologie», L, 3, 1960, pp. 261 — 274.

eventually bring to light the maker of the bone tools found at the human dwelling place at Grăunceanu himself.

Even in the scientific knowledge-process new facts have forcibly to front the resistance of the old ones, — of already conquered and unanimously recognized positions, even if not always entirely according to facts.

We firmly believe our discoveries will arise the scientists' interest too, chiefly on account of their being so new on the European continent; but they will not be accepted without reserve either. We have here presented them with a view to submitting them to general debate and, at the same time, to draw the scientists' attention on the existence of the Pre-Palaeolithic in Europe.

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