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DISCOVERY OF AN ARCHAIC HUMAN SKELETON IN ALTAMURA (BARI – ITALY)

On October 6th, 1993, some anthropologists from Bari University were alerted by the speleologists from Speleological Research Center of Altamura (C. A. R. S.) that some osteological human material, particularly a skull, was spotted in a karstic cave they had discovered some days before near Altamura (Bari). The remains were discovered during an exploration of the cave made with speleologists from "Vespertilio" group of the Italian Alpine Club (C. A. I.) of Bari.

The following evening, the anthropologists (E. Vacca, F. Potente and P. Ragone) went to Altamura to examine some slides, in some of which, effectively, it was possible to see some human bones and particularly a skull. Judging from what it was possible to see in the slides, the morphology of the skull appeared to be very ancient. Following this, the following day (October 8th, 1993) they went to the "Lamalunga" district, in the countryside near Altamura, where the karstic cave in which the human remains were spotted, was found. The entrance to the cave (Le Solagne cave) had been enlarged by the speleologists of CARS after long and patient labour with the aim of verifying the existence of a karstic system, the presence of which had been indicated on the surface by a strong air flow coming from a fissure in the rock.

The descent and route to the cavity where the remains were seen, presented certain difficulties; the entrance consisted of a shaft about 8 meters deep which led to a partly artificially excavated passage, which was a few meters long and just wide enough to allow a person to pass through. This passage led into a small compartment almost completely filled with detritus which had been partly removed by the speleologists to allow access to a first large cavity, with others branching out from it, one of which, about 60 meters long, led to the tunnel containing the human bones.

The human remains are placed in a corner of a small cavity in close association with columnar stalagmitic formations. All the bones are partly covered with, or embedded in, calcareous concretion while others are visible but still lined with a calcareous shell of varying thickness which often resembles coral-like formations.

At first it was possible to recognize the skull lying on its back and partially inclined to the left (Figure 1). At the level of the *maxilla*, the cranium comes into contact bilaterally with a stalactitic formation. Just before touching the *cranium* the stalactite bifurcates, proceeding to the left, as far as to the frontal bone and covering the zygomatic process and the area posterior to it, and, on the right covering part of the *maxilla*, leaving visible the superior margin of the intact zygomatic arch. Therefore, a large part of the face, the orbits and, on the right side, part of the lateral area of the cranium (more than half the vault) are partially free of concretion. Furthermore, it was possible to evaluate, through concretion-free cavities, the integrity of the *foramen magnum*, the

palate and the cranial base. In the areas where the stalactite comes into contact with the *cranium*, it appears fixed by calcitic concretions, whereas on the free surface there is a uniform mineral covering. The areas with accentuated convexities (the alveolar margin of the *maxilla*, the teeth, the margins of the pyriform aperture and the orbits, the supraorbital arches, etc.) appear to be thickly scattered with calcareous concretions of the "cauliflower" or "coral-like" type which, nevertheless, do not prevent appreciation of the general morphological features of the specimen.

The face is large in relation to what is visible of the neurocranium, the alveolar portion is wide. The forms of the orbits and of the pyriform aperture are not fully appreciable since their margins are covered with concretions. However, the interorbital space seems to be wide. Similarly, it is difficult to judge the degree of facial prognathism.

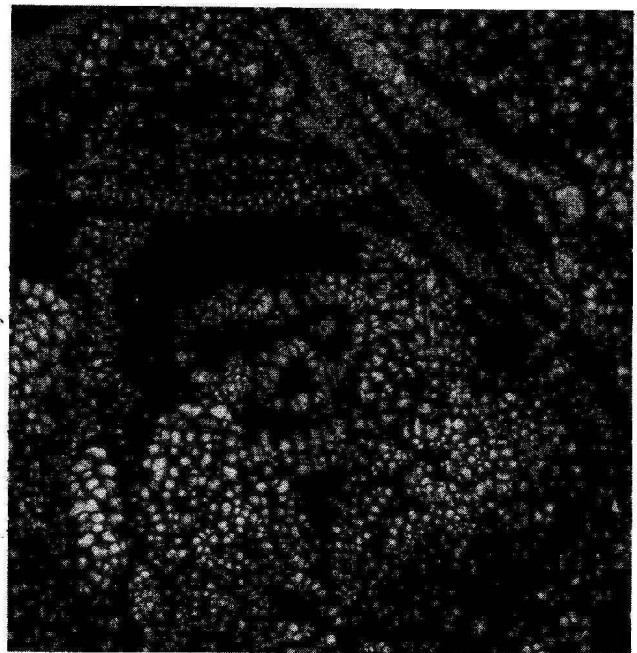


FIGURE 1. Altamura 1: cranium and part of the postcranial skeleton as they appear from the entrance to the small cavity in which they were found.

On first view, the supraorbital *tori* project strongly, an impression to consider though with caution since this is one of the regions where the thickness of the concretion is greatest. The same can be said for the evaluation of the existence and extent of a supratatorial *sulcus*. The degree of post-orbital constriction is instead remarkable. The *torus*, in any case, seems to be subdivided into two sections, each lightly arched over the orbit and separated by an evident triangular depression; the width decreases slightly from the *arcus superciliaris* to the lateral process.

The frontal squama appears on the whole moderately but regularly convex and, in the sagittal area, has a slight but evident longitudinal bony thickening (Santa Luca 1980).

In front of the *cranium* are numerous postcranial skeletal elements, not all immediately recognizable on account of the concretion. However, it was possible to ascertain the presence of the mandible, the two *radii*, both *femora*, the *tibiae* and the *fibulae*, the right *humerus*, an *ulna* and some costal elements. The femora are characterized by general robusticity and the femoral head is voluminous.

The mandible is placed inferiorly, in front of the *cranium* and lined up with the *maxilla*. The ascending ramus appears to be wide, the area of the condyle large, and the muscular impressions large and deep. The presence of teeth has been verified but they are covered by concretions. On account of the position of the mandible, it has not been possible to identify the characteristics and width of the retromolar trigone.

The element furthest from the *cranium* appears to be the left innominate bone, its iliac portion being appreciable while the remainder and the contralateral bone, is covered with calcitic crust which prevents observation of the symphyseal region. Heavily concreted pieces of bone, among which are a costal element and a vertebral body, were placed inside the pelvis.

From the general robusticity of the bones and the rather high and narrow iliac fossa, the skeleton can be judged that of an adult male.

Considering the first observation made *in situ* (Pesce Delfino and Vacca 1994) it seems that both progressive and ancient features are present on the *cranium*; if this impression is confirmed by further and more accurate observations, the Altamura specimen could be placed in the group of fossils of the European mid-Pleistocene characterized by the presence of archaic morphological traits and by a progressive increase in Neanderthal traits

(Stringer et al. 1984, Hublin 1988). In any case, the Altamura skeleton represents one of the most extraordinary paleontological discoveries in Italy and in Europe. The excellent state of preservation, the completeness of the specimen and the presence of numerous postcranial bones provide a precious opportunity in helping to clarify the evolutionary mechanisms which have led to the population of Europe and to the Neanderthal cycle. However, despite these positive aspects, it is necessary to remember that the same circumstances which have given the find its exceptional characteristics also constitute elements which make its recovery very complicated; the difficult and dangerous access to the site, the type and degree of concretion which have allowed preservation of the bones calls for the planning of specific technical solutions to guarantee the integrity of the remains necessary for the full exploitation of their scientific value.

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