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Recent archaeological research at Romuald's cave, Istria

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INTRODUCTION

Romuald's cave is located on the southern slopes of the Lim channel in Istria. It was named after St. Romuald who allegedly lived in it around year 1000. The archaeological potential of the site was realized in the late 19th century during small scale excavations by Marchesetti, and later by Gnirs. Most of the archaeological and paleontological material was unearthed during excavations by M. Malez in 1961-1962, and 1973, including remains from Bronze, Iron Age, and Upper Paleolithic (including two juvenile human teeth), alongside numerous remains of Holocene and Pleistocene fauna. During excavations by D. Komšo in 2007 and 2008, several Mousterian-like artefacts were collected. In 2014 new excavations at the site started, as a part of the project entitled Archaeological investigations into the Late Pleistocene and Early Holocene of the Lim Channel, Istria, financed by the Croatian Science Foundation (for a more detailed description of the ARCHAOLIM Project, its goals and members see: <http://www.inantro.hr/?lang=eng&id0=2&id1=16&id3=273>).

Two excavation seasons (2014 and 2015) yielded archaeological material from Iron and Bronze Age, including human skeletal remains of at least two people. Lower stratigraphic sequence (dated to approx. 46 kya and over 50 kya respectively) yielded several Mousterian stone tools, confirming Neandertal presence at the site. Numerous remains of Holocene and Pleistocene fauna were found (including *Ursus spelaeus*, *Equus ferus*, *Cervus elaphus*).

SKELETAL ANALYSIS



Age at death was based on several morphological criteria, including overall bone thickness and size, epiphyseal fusion, dental morphology, attrition and formation and other morphological criteria commonly used in standard bioarchaeological practice. Sex assessment was based on the morphological features of cranial elements skull and measurements of long bones. Based on these criteria, the minimum number of individuals present at the site is two, (one adult, likely male, over 35 years of age, and one juvenile under five years of age). Distal tibial fragment was dated by radiocarbon to 3150±46 BP¹.

¹ Chrono Laboratory identification UBA-27651. Date is in conventional ¹⁴C Age, fraction corrected using AMS ^δ¹³C. Calibrated AD age ranges (1 sigma) are 1496-1473 (probability distribution 0.187), 1462-1392 (probability distribution 0.736), 1335-1324 (probability distribution 0.078), (2 sigma) 1507-1293 (probability distribution 1.000).

Skeletal element	Square/layer	Sex/age
distal right tibia	S3/L1	adult, probably male
parietal fragment	S3/L1	adult, possibly male
proximal 2nd left metatarsal	S3 (A2)/L2	adult
5 th left metacarpal	S3 (A2)/L2	adult
permanent maxillary 2nd right premolar	S3 (B2)/L2	adult
frontal or parietal fragment	S3 (B3)/L2	adult
permanent maxillary right 1st molar	S3 (B3)/L2	adult (over 35), possibly male
thoracic vertebral body fragment	S3 (A2)/L2/3	adult
frontal fragment	S3 (C1)/L2/3	juvenile (under 5 years of age)
permanent maxillary left 1st incisor	S3 (B3)/L2	adult (over 35)



FAUNAL REMAINS

Faunal remains of Holocene age were found in upper layers and include following species: badger (*Meles meles*), leporids, i.e. hare or rabbit (*Lepus europaeus* / *Oryctolagus cuniculus*), fox (*Vulpes vulpes*) and domestic sheep (*Ovis aries*). In contrast, lower, Pleistocene deposits include cave bear (*Ursus spelaeus*), horse (*Equus ferus*), ibex (*Capra ibex*) and red deer (*Cervus elaphus*) and a medium-sized canid (probably wolf, *Canis lupus*). Cranial and post-cranial remains of micro-mammals (i.e. small rodents) most probably represent pellets regurgitated by raptor birds roosting in the cave. Similarly, the presence of carnivore coprolites indicate that the cave at times was used as a carnivore den.

POTTERY

Upper sequence yielded over 700 pottery fragments dating to later phases of the Middle Bronze age, Late Bronze Age, and Early Iron Age.

Most common pottery types are jars, bowls and cups of various types. Similar material can be found at several sites in Istria, such as Monkodonja, Picugi, and the nearby hillfort Gradina nad Limom.



LITHICS

In the lower, Pleistocene sequence, several Mousterian tools were found (e.g. side scrapers) in layers dated to 46 kya, and over 50 kya by radiocarbon. Presence of the Middle Paleolithic material confirms that Neandertals were using the site. Further field work will give us more insight on the patterns and other details of the site use in Prehistory.



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