

Hunting and Fishing in the Neolithic and Eneolithic

Weapons, Techniques and Prey

Edited by Selena Vitezović
and Christoforos Arampatzis



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Contents

Contributors	iii
Introduction: Hunting and fishing in the Neolithic and Eneolithic in Europe and Anatolia	ix
Hunting and fishing in Neolithic Anatolia	1
Abu B. Siddiq and Vecihi Özkaya	
Hunting in the Early Chalcolithic of Cappadocia, Central Turkey: Evidence from Çiftlik-Tepecik	28
Pam Crabtree and Douglas V. Campana	
The “Call of the Wild”: Hunting, fishing and foraging in the early farming villages of Northeastern Greece- environment, technologies, and culture	36
Marianna Nikolaidou and Ernestine S. Elster	
Hunting at the Neolithic lakeside settlement of Anarghiri IXb in western Macedonia, Greece. The evidence of the chipped stone projectile points	66
Stella Papadopoulou	
“Pick up your bows. We go hunting”. Deer antler hunting gear from the Neolithic lakeside settlement Anargiri IXb, Western Macedonia, Greece	89
Christoforos Arampatzis	
Going into the wild: Hunting and fishing at the Early Neolithic site of Dzhulyunitsa-Smardesh	103
Nedko Elenski, Hristina Markova, and Dragomir Markov	
Distribution and use of projectile points during the Chalcolithic Period in Bulgaria	120
Kamen Boyadzhiev	
Harpoons from the tell-settlement of Căscioarele-Ostrovel (Romania): A technological and functional analysis	151
Monica Mărgărit	
Indirect evidence for fishing on the middle course of Mureş River in the Late Neolithic: A multi-analytical approach to evaluating osseous hooks	173
Mihaela Savu and Cristian-Eduard Ştefan	
Hunting and fishing equipment in the Neolithic period in the central Balkans	201
Selena Vitezović, Dragana Antonović and Danica Mihailović	

“Where are the wild things”: Wild animal exploitation during the Neolithic of the central Balkans.....225

Annie Brown and Haskel J. Greenfield

Hunting and fishing weapons, land and marine resources, technology and ways of life in the Neolithic sites of the Strait of Gibraltar region.....254

Ignacio Clemente-Conte, José Ramos-Muñoz, Eduardo Vijande-Vila, Juan Jesús Cantillo-Duarte, José Antonio Riquelme Cantal, Niccolò Mazzucco, Diego Fernández-Sánchez, José María Corona Borrego, Milagrosa Soriguer-Escofet, Remedios Cabrera-Castro, David Cuenca-Solana, María Sánchez Aragón, Antonio Barrena-Tocino

Hunting practices in Neolithic sheepfold caves in the Iberian Peninsula: El Mirador cave (Sierra de Atapuerca, Burgos) and Cova Colomera (Serra del Montsec, Lleida).....281

Patricia Martín, Jordi Nadal, Xavier Oms and Josep Maria Vergès

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Introduction: Hunting and fishing in the Neolithic and Eneolithic in Europe and Anatolia

Hunting and fishing were of crucial importance for providing food and other vital resources in Pleistocene and early Holocene communities in Europe and adjacent regions.

Hunted animals can be dangerous and aggressive, or timid, very fast and/or well hidden; therefore, to catch them without putting themselves in danger or before they escape, human groups had to invent diverse techniques and weapons which enabled them to mortally wound animals from a safe distance (cf. Julien 2016). Evidence for organised hunting and specially produced hunting weapons may be found as early as the Lower Palaeolithic. Particularly fascinating are the finds from the site of Schöningen in Germany, where conditions were favourable for the preservation of organic materials and where wooden throwing spears were found in 1995, approximately 400,000 years old. They were found in association with stone tools and butchered remains of several equids, and are thought to be the oldest complete hunting weapons discovered so far that had been used by humans. According to H. Thieme, these spears strongly suggest that systematic hunting, involving foresight, planning and the use of appropriate technology, was part of the behavioural repertoire of pre-modern hominids (Thieme 1997). Fishing was also practiced as a subsistence activity very early; probably already in the Middle Palaeolithic, if not earlier. Fish remains were found on some Mousterian sites, such as Tito Bustillo and Cueva Millan (Cleyet-Merle 1990, 22–23). More secure evidence for fishing in Europe comes from the Upper Palaeolithic period; and fish remains were discovered at numerous sites across Europe since the Aurignacian (Cleyet-Merle 1990, 28–29).

Research of the hunting and fishing techniques in prehistoric societies may enable reconstruction not only of subsistence and economy, but also of technological level, social organisation and cultural attitude towards the environment. Such studies must include various perspectives and also combine diverse data available from the archaeological record. However, there are also multiple obstacles for comprehensive studies, mainly due to insufficient preservation of faunal remains, in particular fish remains, inadequate recovery of small bones, and also the fact that many of the structures used in hunting and fishing were made from perishable materials. Furthermore, identification of the exact function of some artefacts may not be straightforward.

Weapons are often an important part of the material culture; and hunting and fishing equipment may provide important evidence not only for the presence and reconstruction of the scale and complexity of these activities, but also for their role within given communities. Hunting activities may also have certain social role and significance beside a purely practical one. Hunting weapons, along with their utilitarian role, may also serve as symbols of status, identity, belonging to a group (cf. Wiessner 1983; Sinclair 1995). Symbolic value may be ascribed to certain animal species; animals' role in economy is tightly linked to the perception of animals and their role in social and cultural life (cf. Seetah 2005, 6).

There is a long history of research of projectile technology and hunting techniques in general (e.g., Knecht ed. 1997; Pétilion *et al.* ed. 2009; Iovita and Sano eds. 2016, inter al.), especially when it concerns the Palaeolithic period. Studies of lithic projectiles have a longer tradition, but analyses regarding those made from osseous raw materials are increasing in the past few decades (e.g., Delporte *et al.* 1988;

Pétillon 2006; Langley ed. 2016; Pfeifer 2016). Fishing in prehistory was the subject of the comprehensive study by Cleyet-Merle (1990), and more recent studies focused on fishing techniques and fishing gear in Europe are usually limited to specific sites or certain regions (e.g., Benecke *et al.* 2013; Ritchie 2010; Stratouli 1996; Živaljević 2017). Among them, the research of the site of Zamostje should be mentioned in particular, with exceptional preservation of diverse structures and features, made from perishable materials (e.g., Lozovski 1999; Lozovski and Lozovskaya 2016).

With the introduction of agriculture and animal husbandry, the role and importance of hunting and fishing activities changed, nevertheless, they did not disappear.

This volume will try to explore the extent of hunting and fishing activities, their role and importance in subsistence and also their place in social relations. Geographically, the papers will deal with the regions of southern Europe and Anatolia, and culturally and chronologically with the communities labelled as Neolithic and Eneolithic (Chalcolithic). The range of topics includes technological, typological and functional analyses of weapons used, analyses of hunting and fishing strategies and techniques, and zooarchaeological analyses of the role of hunted fauna in the economy and other aspects of lives of the past communities.

The first two papers are focused on the region of present-day Turkey. The paper by A. Siddiq and V. Özkaya offers an overview of the evidence on hunting and fishing in Anatolia during the Pre-Pottery Neolithic from both evidence from the faunal record as well as material culture. Hunting and fishing were the only means of meat diets throughout the Pre-Pottery Neolithic A and early phase of the Pre-Pottery Neolithic B, and certain temporal trends may be noted – over time, hunted large ungulates became more valuable, and the Neolithic communities gradually preferred group hunting with more effective strategies – for avoiding the dangers and securing the hunt. At the same time, authors noted gradual dependency on domestic ungulates following the PPNB. Furthermore, there is also evidence for ritual significance of hunting and certain animal species being hunted for particular rituals. Over time, many particular taxa, including cranes, vultures, aurochs and foxes, became vital for symbolism and ritual activities.

P. Crabtree and D. Campana analysed the faunal record from the Early Chalcolithic site of Çiftlik-Tepecik in Cappadocia in their paper. While Neolithic sites in the region have predominant domestic fauna, with caprinae as the most frequent species, the Early Chalcolithic levels from Tepecik include 26% wild mammals and birds. The range of wild species includes wild horses, hyruntines, aurochs, wild boars, red deer, roe deer, and smaller wild mammals, including foxes and hares.

Three papers are focused on the southern Balkans and present-day Greece. E. Elster and M. Nikolaidou provided an extensive overview of evidence for hunting, fishing and overall exploitation of wild resources, with focus on the site of Sitagroi, extensively excavated in the 1968–1970. They argue that villagers –men, women, and children—purposefully sought out wild resources for practical reasons, while such activities also reflected their perceptions of the natural world, decision making, cooperating, sharing, negotiating, learning traditions, creating material culture and surrounding it with symbolic value.

Papers by S. Papadopoulou and Ch. Arampatzis provided analyses of artefacts from the lakeside settlement of Anarghiri IXb in Western Macedonia. While S. Papadopoulou analysed lithic projectile points, Ch. Arampatzis studied hunting gear made from deer antlers. Very rich assemblage of chipped stone tools also includes projectile points made of flint and obsidian; and the assemblage is characterised by technological and typological variability, and different raw materials exploited for their production. The hunting gear produced from antler consists of items such as harpoons, harpoon heads, projectile

points, fish hooks and archer thumb rings that were almost unknown in the wider area. Both these assemblages provided evidence for the involvement of the prehistoric inhabitants in hunting activities; moreover, the Anargiri IXb inhabitants had mastered, to a high degree, a lot of manufacturing techniques and they exploited intensively the wild resources of the area along with the domesticated ones.

The Early Neolithic site of Dzhulyunitsa-Smardesh in eastern Bulgaria yielded a rich assemblage of hunting and fishing gear, namely, osseous projectile points and fish hooks, and stone net-weights, analysed and presented by N. Elenski, H. Markova and D. Markov. Both hunting and fishing had an important role in the early, phase I-II of the Dzhulyunitsa settlement, but decreased in later phases.

Weapons from the Chalcolithic period in present-day Bulgaria were analysed in the paper by K. Boyadzhiev. These include bifacial chipped-stone projectile points and bone arrowheads, and the author tried to analyse their possible function (as arrowheads and spear tips), as well as their possible use as weapons for hunting or for war.

M. Mărgărit provided technological and functional analysis of harpoons from the tell-settlement of Căscioarele in Romania. The assemblage of 70 harpoons, made mainly from red deer antler, was analysed. Author reconstructed the technological scheme for their production, identified a repair/recycling procedure, and also analysed use-wear marks. The author also argued that the specific morphology of the harpoons reflected the cultural identity of the Gumelnița culture communities.

Fishing hooks from the Late Neolithic settlement from Șoimuș–La Avicola, located in the vicinity of the Mureș river, were analysed in the paper by M. Savu and C. E. Stefan. Authors applied an integrative approach by performing a combination of technological, morphometric, morphological, and fracture studies paired with statistical analyses and ethnographic comparisons. They showed that the hooks were designed and manufactured in a systematic, homogenous fashion with the main scope of securing the desired catch while withstanding stress for the longest duration possible.

S. Vitezović, D. Antonović and D. Mihailović offered an overview of the available evidence for hunting and fishing gear from the central Balkan area from the Early Neolithic Starčevo culture and Late Neolithic Vinča culture. Predominant are items made from osseous raw materials – projectile points and fish hooks in the Early Neolithic and antler harpoons and fish hooks in the Late Neolithic. Regional differences were noted; fishing and hunting techniques and artefacts were carefully adapted to local environmental conditions. Sites located in the plains, near large, wide courses of the rivers Sava and Danube and their tributaries had richer assemblages of hunting and fishing gear and even some specific artefact types in both the Early and the Late Neolithic period. In the peculiar environment in the region of the Iron Gates, where the course of the river Danube consists of gorges, small basins and whirlpools, specific method for catching large migratory fish was invented in the Mesolithic period and was practiced throughout the Neolithic, and perhaps even in later periods.

Analysis of the faunal record from the central Balkan region was offered in the paper by A. Brown and H. J. Greenfield. Evidence from several sites from different periods also revealed some of the temporal trends. While both the Early and the Middle Neolithic cultures primarily subsisted on domestic fauna, the Late Neolithic data suggests a heavier reliance on wild fauna in some regions, and less in others. Furthermore, there are some regional differences, and also differences in exploitation of certain taxa.

The paper by I. Clemente-Conte, J. Ramos-Muñoz, E. Vijande-Vila, J. J. Cantillo-Duarte, J. A. Riquelme Cantal, N. Mazzucco, D. Fernández-Sánchez, J. M. Corona Borrego, M. Soriguer-Escofet, R. Cabrera-Castro, D. Cuenca-Solana, M. Sánchez Aragón and A. Barrera-Tocino is focused on the western parts of southern Europe. Their paper represents an interdisciplinary study of terrestrial fauna and marine

fauna as well as hunting and fishing implements, including functional analyses, from various periods of prehistory in the region around the Strait of Gibraltar, along both the European and the North African shore. Together with hunting, the exploitation of marine resources (fish and shellfish) was important for people's diet in this Atlantic–Mediterranean region.

The paper by P. Martin, J. Nadal, X. Oms and J. M. Vergès focuses on the role of hunting in two Neolithic sheepfold caves in the Iberian Peninsula: El Mirador cave and Cova Colomera. The Neolithic sheepfold caves, despite being clearly linked to the practice of husbandry, show that hunting continued to be important and was adapted to the environmental, occupational and economic characteristics of each group. Although the production economy was fully consolidated, hunting was still used as a source of resources. The main purpose of hunting could have been to obtain meat, but hunting could also have been used as a strategy for protecting the herds and fields. This is especially significant in El Mirador cave, where carnivores were hunted and consumed, and is also a clear example of the optimisation of resources.

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