



Ususret projektu “Prehrana” “NEOLITIČKE UDICE S NALAZIŠTA KARGADUR KOD LIŽNJANA”

Paving the way for the project Nutrition NEOLITHIC FISHING HOOKS FROM THE SITE OF KARGADUR NEAR LIŽNJAN

This showcase of the month represents an introduction to an exhibition dedicated to nutrition, which is planned for the summer of 2012 and organized by the Coordinating Body of Istrian Museums. Except in the Archaeological Museum of Istria, showcases of the month dedicated to nutrition are also set up in the History Museum of Istria (*Showcase of the month: paving the way for the project Nutrition - Cutlery from the period of the Austro-Hungarian monarchy*), and in the Ethnographic Museum of Istria at Pazin (*Showcase of the month: paving the way for the project Nutrition - from the tables of Istrian households straight onto Museum shelves*). Nutrition and food provision are amongst the most basic needs of all living beings. Two critical periods of the human race are defined by the way food was obtained; food gathering in the course of the Paleolithic and Mesolithic, and food production from the Neolithic to the present. Fishing is one of the oldest modes of obtaining food. Catching fish was done in a variety of ways, using hooks, harpoons, fish traps, nets, and other techniques. Hooks have been in use since the Mesolithic period in Greece and the Middle East, while the earliest fishing hooks on the territory of Croatia are those that were recorded at a site called Kargadur in Istria, which date from the Early Neolithic period, between 5710 and 5630 BC. The fishing hooks that were collected on the site of Kargadur in Istria will be presented here, followed by a proposed reconstruction of the production process used in the manufacture of bone hooks.

Kargadur is the name of a little cove located in the northern section of the bay of Kuje, approximately 2 kilometers southeast of the center of Ližnjan, and roughly 12 kilometers southeast of

Pula. The site is located on the coastline. It was first recorded during the surveying of the coastal zone in 2000. A series of systematic explorations were carried out in 2002, 2005, 2006 and 2007, during which we investigated an area measuring 52 square meters in total. There were remains from the period of the Early Neolithic (impresso culture), the Middle Neolithic (Danilo culture), and the Copper Age (Nakovana culture). Two absolute radioactive carbon datings from the horizon in which the hooks were discovered date this period between 5710 and 5630 BC.

Amongst scores of other interesting finds that were collected on this site, it is necessary to emphasize a group of finds that is very rare indeed in this period on the territory of Croatia, which consists of fishing hooks made of bone, and semi-finished products. These bone fishing hooks do not differ a great deal from present-day hooks, while the semi-finished products consist of leftovers from the bone hook manufacturing process on the site itself. A total of 26 fishing hooks were discovered on the site of Kargadur, which were either whole hooks, parts thereof, or unfinished semi-products. Numerous fish remains found on site corroborate that these hooks were indeed used successfully for fishing.

The discovered finds, consisting of finished and semi-finished fishing hooks, suggest a manufacturing process for hook production, which consisted of four phases, as follows. Long bones of animals were used for the production of hooks, most probably bones of goats/sheep. The first phase consisted of the bone being cut into in a circular manner with the help of a flint blade. A small bone plate was then detached from such a bone in the second phase. This bone plate was

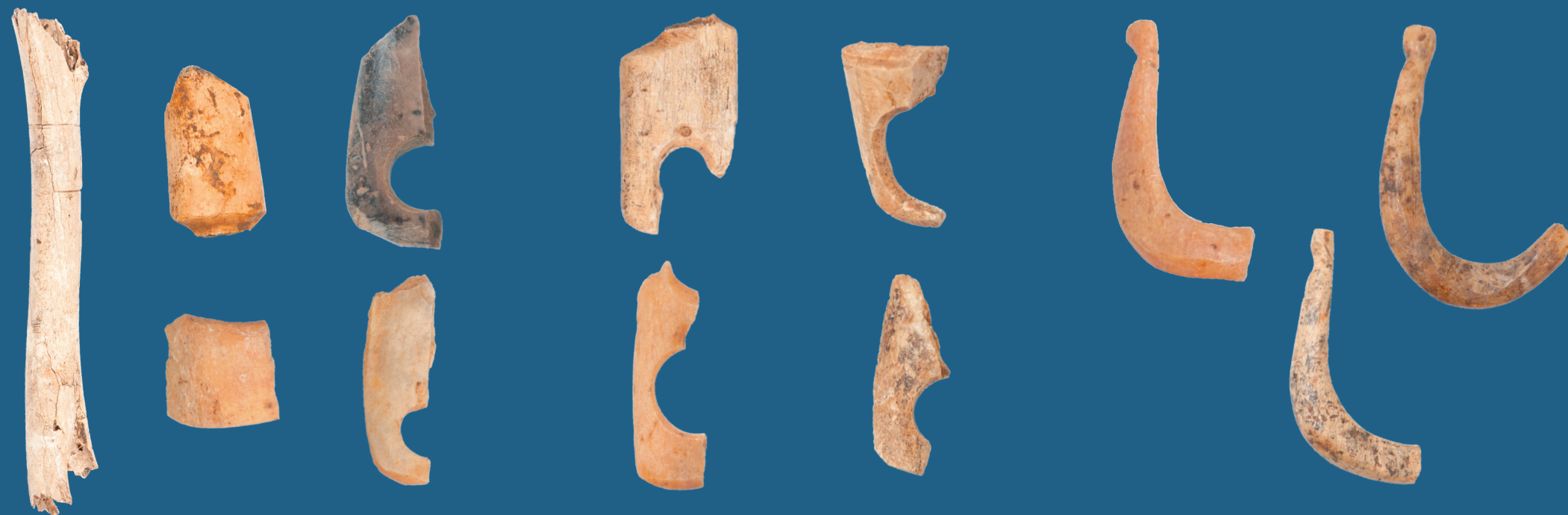
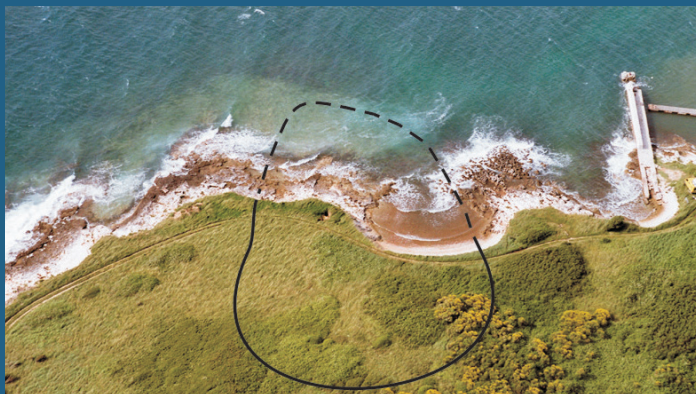
then perforated in one or more places with the help of a flint drilling utensil (third phase). In the final fourth phase, the small drilled plate was then finely processed with a flint blade and shaped into a bone hook. The discovered hooks feature one or two incisions at their end, and a thickening at the end of the hook, which served to fasten the cord. Numerous discarded semi-finished hooks, as well as those broken ones, give ample evidence about the many failed attempts at making fishing hooks.

The discovery of all the production process leftovers indicates that the hooks were manufactured on the site itself. These remains of bone fishing hooks that are almost 8000 years old, are the oldest ones on the territory of the Eastern Adriatic coast, and represent an exceptional testimony regarding the beginnings of fishing in our country, a tradition which is still very strong not only in Istria but along the entire Adriatic coast.

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Ova vitrina mjeseca predstavlja uvod u izložbu posvećenu prehrani, u organizaciji Koordinacije istarskih muzeja, koja je planirana za ljeto 2012. godine. Osim u Arheološkom muzeju Istre, vitrine mjeseca posvećene prehrani postavljene su u Povijesnom muzeju Istre u Puli (*Vitrina mjeseca: Ususret projektu "Prehrana" - "Pribor za jelo iz razdoblja Austro-Ugarske Monarhije"*) te u Etnografskom muzeju Istre u Pazinu (*Vitrina mjeseca: Ususret projektu "Prehrana" - "Sa stolova istarskih kuća na muzejske police"*).

Prehrana, odnosno pribavljanje hrane spada u najosnovnije potrebe svih živih bića. Dva ključna razdoblja ljudskog roda definirana su načinom pribavljanja hrane - prikupljanjem hrane tijekom paleolitika i mezolitika te proizvodnjom hrane od neolitika do danas. Jedan od najstarijih načina pribavljanja hrane je i ribolov. Obavljao se na različite načine, uz pomoć udica, harpuna, vrša, zamki, mreža i drugih tehnika. Udice su korištene još od razdoblja mezolitika na području Grčke i Bliskog istoka, dok su najranije udice na tlu Hrvatske zabilježene na nalazištu Kargadur u Istri i datiraju se u razdoblje ranog neolitika, između 5.710 i 5.630 godine prije naše ere. Na ovom mjestu bit će prezentirane prikupljene udice s nalazišta Kargadur u Istri te prikazan prijedlog rekonstrukcije proizvodnog procesa izrade koštanih udica.

Kargadur je naziv za malu uvalu smještenu na sjevernom dijelu zaljeva Kuje, oko dva kilometra jugoistočno od centra Ližnjana te oko 12 kilometara jugoistočno od Pule. Nalazište se nalazi na samoj obali mora. Prvi je put zabilježeno tijekom rekognosciranja obalne zone 2000. godine. Sistematska istraživanja su obavljena 2002., 2005., 2006. i 2007. godine, tijekom kojih je ukupno istražena površina od 52 m². Zabilježeni su ostaci iz razdoblja ranog neolitika (impreso kultura), srednjeg neolitika (Danilo kultura) te bakrenog doba (Nakovana kultura). Dva apsolutna datiranja radioaktivnog ugljika iz horizonta u kojem su prikupljene udice datiraju to razdoblje u period između 5710. i 5630. godine prije naše ere.

Na ovom su lokalitetu prikupljeni brojni zanimljivi nalazi, a potrebno je istaknuti jednu grupu nalaza koja je izuzetno rijetka u tom razdoblju na području Hrvatske - koštane udice i njihove poluizrađevine. Koštane udice ne razlikuju se previše od današnjih udica, a poluizrađevine su ostaci procesa izrade koštanih udica na samom nalazištu. Ukupno je na nalazištu Kargadur pronađeno 26 cijelih udica, dijelova udica i poluizrađevina. Da su te udice bile uspješno korištene za ribolov, potkrijepljuje činjenica da su na nalazištu prikupljeni brojni ostaci riba.

Prikupljeni nalazi koštanih udica i njihovih poluizrađevina ukazuju na sljedeći način proizvodnje udica, koji se sastoji od četiri faze. Za izradu udica korištene su duge kosti životinja, vjerojatno koza/ovaca. U prvoj fazi kost se zarezivala ukrug uz pomoć kremenog sječiva. Iz te je kosti u drugoj fazi izdvajana koštana pločica. Ta se koštana pločica uz pomoć kremenog svrdla bušila na jednom ili nekoliko mjesta (faza 3). Probušena pločica se na kraju u završnoj fazi 4 fino obrađivala kremenim sječivom u koštanu udicu. Prikupljene udice imaju na svom kraju jedan ili dva zareza, odnosno zadebljanje na kraju udice, a što je služilo za pričvršćivanje špagice. Brojni odbačeni poluproizvodi, kao i slomljene udice svjedoče o brojnim neuspjelim pokušajima izrade udica.

Nalaz svih ostataka proizvodnog procesa ukazuje da su udice izrađivane na samom nalazištu. Ovi ostaci koštanih udica, stari gotovo 8.000 godina, najstariji su na području istočne obale Jadrana i predstavljaju izuzetno svjedočanstvo o počecima ribolova u nas, tradicije koja je i danas izuzetno jaka na području Istre i cijele jadranske obale.