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Dinko RADIĆ

VELA SPILA: PRELIMINARNA ANALIZA
STARIJENEOLITIČKIH I MEZOLITIČKIH NASLAGA IZ
SONDE ISTRAŽENE 2004. GODINE

VELA SPILA: PRELIMINARY ANALYSIS OF EARLY
NEOLITHIC AND MESOLITHIC STRATA IN TEST PIT
EXAMINED IN 2004

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Naslage u "sondi" h x 5–7 površine oko 3–4 m² odlikuju se pravilnim sedimentiranjem i razmjerno brojnim arheološkim materijalom. Najstariji u ovome radu поближе opisan materijal pripada mezolitiku, njegovu mlađem razvojnom stupnju, tijekom kojega je stanovništvo gotovo u potpunosti okrenuto moru, odnosno prehrani namirnica morskoga podrijetla. Grob iz sloja 12 jedinstven je i zasad najstariji primjer mezolitičkog ukapanja poznat na istočnoj obali Jadrana. Za slojeve br. 8 i 7 smatramo da predstavljaju prijelazno razdoblje tijekom kojega mezolitički pomorci s apulijske na istočnu obalu prenose nov način cijepanja kamena, a postupno i ostale elemente "neolitičkoga paketa". U slojevima od br. 6 do 4 bilo je moguće izdvojiti sva tri razvojna stupnja impresso-kulture.

Ključne riječi: Vela spila, Korčula, Vela Luka, impresso-kultura, neolitik, neolitizacija, mezolitik, ukapanje

The sediments in "test pit" h x 5–7, with a surface area of approximately 3–4 m², are characterised by regular sedimentation and relatively numerous archaeological materials. The oldest materials described in some detail in this article date to the Mesolithic, in its more recent developmental phase, during which the population was almost entirely oriented to the sea, i.e. their diet consisted of sea-food. The grave from stratum 12 is a unique and so far the oldest example of Mesolithic burial on the eastern Adriatic coast. Strata no. 8 and 7 are believed to represent the transition period during which Mesolithic seafarers brought a new method for knapping stone, and gradually other elements of the "Neolithic package", from Apulia to the eastern Adriatic coast. In strata no. 6 through 4, it was possible to discern all three developmental phases of Impressed Ware culture.

Key words: Vela Spila, Korčula, Vela Luka, Impressed Ware culture, Neolithic, Neolithisation, Mesolithic, burial

U jesen godine 2004. u Veloj spili pored Vele Luke na otoku Korčuli radilo se na sanaciji profila u kvadrantima h x 5–7, koji se često urušavao te tako uništavao jedinstvene naslage i dovodio u opasnost posjetite-

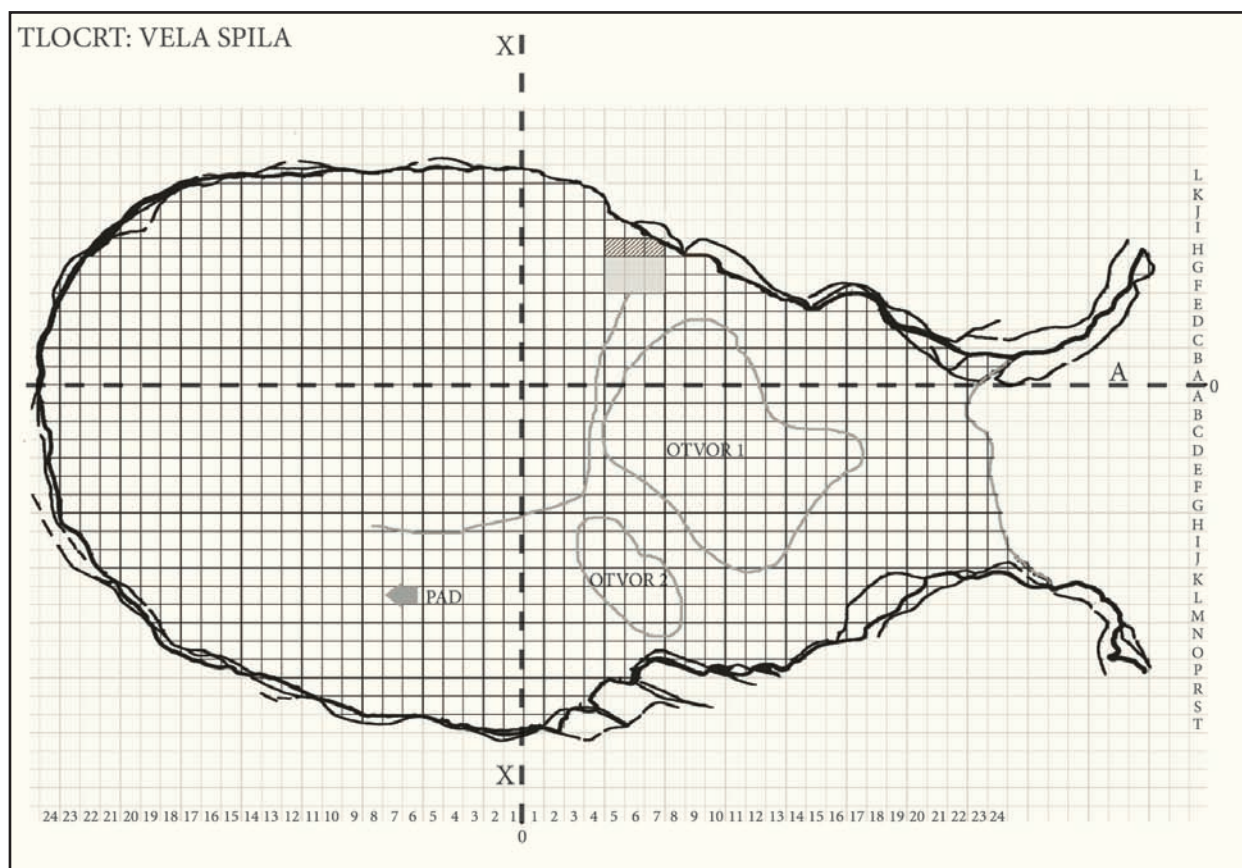
In the autumn of 2004, rescue work was done in Vela Spila cave near Vela Luka on the island of Korčula on the profile in quadrants h x 5–7, which frequently caved in and thus destroyed unique sedi-

lje i stručnu ekipu.¹ Profil viši od 6 m, naslonjen na špiljsku stijenu, zaostao je nakon jedne od kampa- nja s kraja 90-ih godina prošloga stoljeća pa je bilo samo pitanje vremena kad će se urušiti. Osim toga, nalazio se neposredno iznad “paleolitičke” sonde u kvadrantima *f-g x 5-7* pa svojom nestabilnošću nije dopuštao istraživanje dubljih naslaga. U takvoj situaciji jedino rješenje bilo je iskapanje, odnosno snižavanje njegove visine do razine okolnih kvadra- nata.

Točna veličina istražene površine – zbog dijelom urušena materijala te činjenice da je nepravilan sje- verni i zapadni rub oblikovala sama špilja – nije mo- guće odrediti. Površina se mijenjala ovisno o iska- panome sloju, u gornjih desetak slojeva iznosila je približno manje od 3 m², a u donjem dijelu oko 4 m², odnosno dijelom je zalazila u kvadrant *i*.

ments and imperilled visitors and expert teams.¹ This profile, over 6 m high and leaning on a cave wall, was left over after a campaign at the end of the 1990s, so it was only a matter of time before it collapsed. Additionally, it is immediately above the “Paleolithic” test pit in quadrants *f-g x 5-7*, so its instability prevented research into the deeper sedi- ments. The only solution to this situation was exca- vation, or rather reduction of its height to the level of the surrounding quadrants.

The exact size of the surface cannot be determined due to the partially collapsed material and the fact that the cave itself formed the irregular northern and western edges. The surface altered depending on the excavated stratum; in the upper strata it is slightly less than 3 m², while in the lower portion it is approximately 4 m² – at that portion it merged into quadrant *i*.



Slika 1. Tlocrt Vele spile s označenim položajem sonde *h x 5-7* (crtež: K. Rončević).

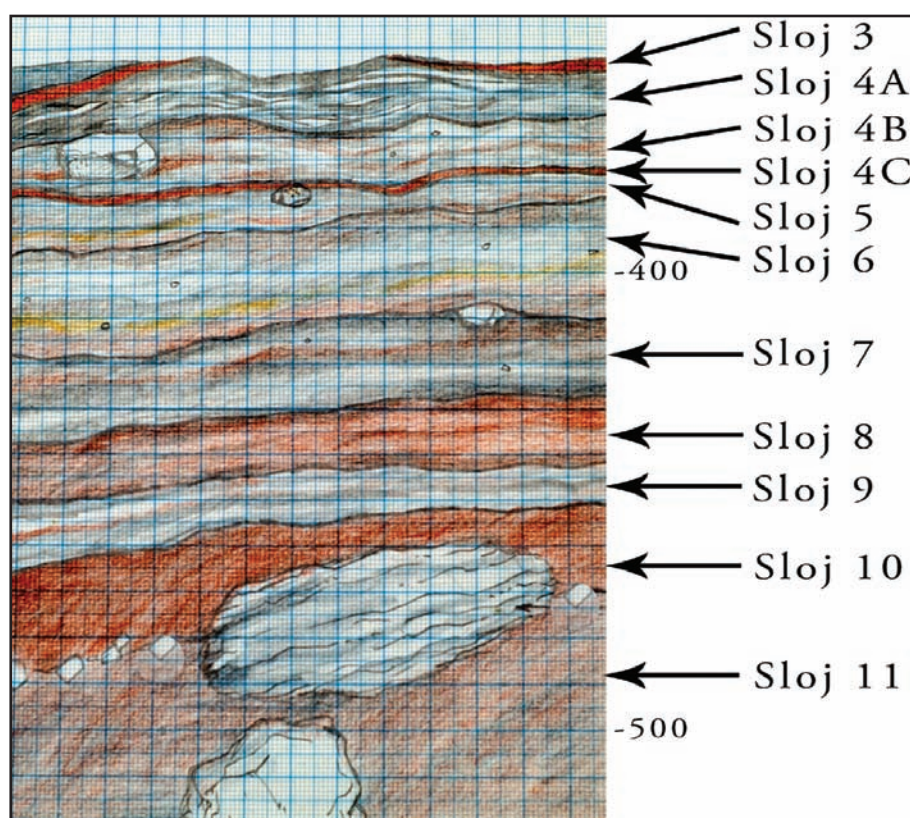
Figure 1. Ground-plan of Vela Spila with position of test pit *h x 5-7* marked (drawing by K. Rončević).

¹ Osim potpisanog u radovima su sudjelovali Kazimir Miculinić, Zavod za paleontologiju i geologiju kvartara HAZU, Zagreb, Metka Culiberg, Institut za biologiju, SAZU, Ljubljana, studenti arheologije iz Zadra Ivica Pleština i Jure Popović te nekoliko fizičkih radnika.

¹ Besides this author, other participants included Kazimir Miculinić, Quaternary Palaeontology and Geology Department of the Croatian Academy of Arts and Science, Zagreb, Metka Culiberg, Biology Institute, Slovenian Academy of Arts and Science, Ljubljana, Ivica Pleština and Jure Popović, archaeology students from Zadar, and several manual labourers.

Spomenute naslage, one gornje i bliže profilu, bile su potpuno isušene, a zbog povišena položaja i teško pristupačne (odnosno vrlo opasne za rad), pa je iskapanje gornjega dijela obavljeno tako da su "skidani" slojevi debljine 5–10 cm, a tek kad su se snižavanjem profila stvorili uvjeti za normalan rad, bilo je moguće iskopati i cjelovite kulturne slojeve. Mala površina te preglednost (vidljivost) južnoga i istočnoga profila omogućili su vrlo veliku preciznost pri radu (sl. 2). Sedimentiranje u sondi bilo je dosta pravilno, bez znatnijih padova i probijanja naslaga. Iznimka je prostor neposredno uz špiljsku stijenu, gdje je postojala mogućnost propadanja mladih predmeta. Pri radu je rabljeno sito promjera oko 0,3 cm.

The aforementioned sediments, the upper ones and nearer the profile, were completely desiccated and, due to the elevated position, difficult to approach (that is, very hazardous for work), so excavation of the upper portions was done by "peeling off" 5–10 cm thick layers, and only when such lowering of the profile created conditions for normal work was it possible to excavate entire cultural strata. The small surface and visibility of the southern and eastern profile facilitated a high degree of precision during work (Fig. 2). Sedimentation in the test pit was very regular, without significant drops or interpenetration of sediments. An exception was the area directly along the cave wall, where there was a possibility of more recent items falling. A sieve with a 0.3 cm diameter was used during work.



Slika 2. Profil h x 5–6 nacrtan tijekom iskapanja 1997. g. Slojevi 3–5 = srednji neolitik, 6–7 = 4–6/2004, 8–10 = 7–8/2004, 10/11 = 9/2004, 11 = 10–13/2004 (autor: D. Ercegović, 1997).

Figure 2. Profile of h x 5–6 drawn during excavation in 1997. Strata 3–5 = Middle Neolithic, 6–7 = 4–6/2004, 8–10 = 7–8/2004, 10/11 = 9/2004, 11 = 10–13/2004 (by D. Ercegović, 1997).

OPIS NASLAGA

SLOJ 4

∇ 374–389.² Nađeno je 37 keramičkih ulomaka, od kojih osam ukrašenih, jedan je dio dna, pet su dijelovi oboda, jedan je oštećena figurica. Ulomci načinom ukrašavanja, strukturom sirovine i bojom

² Mjereno od relativne nulte točke, koja se nalazi na ulazu u špilju. Nulta točka odgovara, ovisno o kvadrantu, vrhu naslaga.

DESCRIPTION OF SEDIMENTS

STRATUM 4

∇ 374–389.² Thirty-seven pottery fragments were found, eight of them decorated, one bottom piece, five parts of rims and one damaged figurine. Based on their decoration style, the structure of the mate-

² Measured from the relative base point, which is at the cave's entrance. The base point, depending on the quadrant, corresponds to the top of the sediment.

površine odgovaraju keramici *impresso*-kulture poznatoj na ostalim lokalitetima (T. 1: 1, 3). Izdvajamo fragment na kojem je urezima omeđen kvadratan prostor s trima (očuvanim) vodoravno urezanim crtama podijeljen na više pojasa ispunjenih nizovima kratkih ureza (T. 1: 2) te valjkasto, 3,2 cm dugo, izduženo tijelo životinje kojoj nedostaju glava s vratom i udovi (T. 1: 8). Iz ovoga sloja poznata su 23 kremenata predmeta, od čega šest slomljenih neolitičkih sječiva (noževa) (T. 2: 2–4), strugalica i dvije šiljate alatke nastale strmom obradbom distalnoga dijela sječiva (T. 2: 5–6). Većinu ostalih kremenih predmeta čine krhotine i odbojci.

SLOJ 5

▽ 389–396. Nađeno je 19 keramičkih ulomaka od čega pet ukrašenih. Keramika po općim svojstvima odgovara onoj iz prethodnoga sloja. Zanimljivi su fragmenti ukrašeni nizom okomitih, međusobno usporednih dugih ureza (T. 1: 4–5). Među 11 kremenih predmeta jedan je tipično neolitičko sječivo, a ostatak čine dva odbojka s tragovima korištenja i više krhotina. Najzanimljivija kamena alatka oštećen je kalupast klin zelene boje (T. 2: 1). U ovome sloju nađene su dvije koštane igle dužine 7,6 i 5,0 cm (T. 2: 9–10).

SLOJ 6

▽ 396–411. Nađeno je devet keramičkih ulomaka, od kojih četiri ukrašena. Keramika je nešto tanjih stijenka, tehnički bolje izvedena, ali ipak vrlo slična onoj iz gornjih naslaga. Nekoliko je ulomaka ukrašeno nizovima okomitih, usporednih ureza, odnosno utisaka (T. 1: 6, 7), a ti nizovi tvore trake koje teku oko posude. Od 21 kremenog predmeta četiri su ulomci ili čitava sječiva trapezesto-trokutasta presjeka (T. 2: 8–11). Njihovu međusobnu razliku možemo prikazati oscilacijama u širini sječiva, koje iznose od 2,3 cm do samo 0,4 cm. Nađeno je pet većih krhotina, nekoliko prvotnih sječiva i odbojaka. Izdvajamo još jedan primjerak oruđa s oštricom i bočnom strmom obradbom (T. 2: 7).

SLOJ 7

▽ 411–423. Nađena su samo dva ulomka, bez posebna ukrasa, jedan odgovara standardnoj *impresso*-keramici, a drugi je homogena presjeka, tamne crvenkastosmeđe jednolične boje (5YR, 3/2), za stariji neolitik odlično uglačane vanjske i unutrašnje površine (sl. 3). Drugi se ulomak po općim svojstvima uklapa u ostalu starijeneolitičku keramiku, ali se iz nje izdvaja kvalitetom izradbe te posebno do-

rials composing them and surface colour, these correspond to Impressed Ware culture ceramics known at other sites (T. 1: 1, 3). A notable fragment is one containing a square area bordered by engravings with three (preserved) horizontally inscribed lines divided into several belts filled with rows of short incisions (T. 1: 2) and a cylindrical, 3.2 cm long, elongated animal body lacking a head, neck and limbs (T. 1: 8). Twenty-three flint items are known from this stratum, including six Neolithic blades (knives) (T. 2: 2–4), a scraper and two pointed implements made by steep retouching of the distal blade section (T. 2: 5–6). Most of the remaining flint items are débitage and flakes.

STRATUM 5

▽ 389–396. Nineteen pottery fragments were found, five of them decorated. In terms of general properties, the ceramics correspond to that of the preceding stratum. Fragments decorated with a row of horizontal, mutually parallel long incisions are interesting (T. 1: 4–5). Among the 11 flint items, one is a typical Neolithic blade, while the rest consist of two flakes with traces of use, and several débitage chips. The most interesting stone tool is a damaged green, mould-shaped wedge (T. 2: 1). Two bone needles, 7.6 and 5 cm long, were found in this stratum (T. 2: 9–10).

STRATUM 6

▽ 396–411. Nine pottery fragments were found, four of them decorated. The pottery has somewhat thinner sides, and is technically better crafted, but nonetheless similar to that from the upper sediments. Several fragments are decorated with rows of vertical, parallel incisions or impressions (T. 1: 6, 7), and these rows form bands that run around the vessel. Out of the twenty-one flint items, four are fragments or whole blades with trapezoidal-triangular cross-sections (T. 2: 8–11). Their mutual differences can be shown in oscillations in the width of the blades, which run from 2.3 cm to only 0.4 cm. Five larger débitage pieces were found, and several primary blades and flakes. There is another implement with a blade that was laterally, steeply retouched (T. 2: 7).

STRATUM 7

▽ 411–423. Only two pottery fragments were found, without particular decoration; one corresponds to standard Impressed Ware ceramics, while the other has a homogenous cross-section and a dark red-brown uniform colour (5YR, 3/2) and polished ex-



Slika 3. Nekoliko spojenih ulomaka "monokromne" keramike. U sondi h x 5–7 naden je samo jedan ulomak (foto: D. Cetinić, 2004).

Figure 3. Grave in stratum 12, detail during excavation (photo: D. Cetinić, 2004).

brom obradbom vanjske površine. Nađeno je i 12 kremenih predmeta, među kojima nije prepoznata nijedna alatka, nego je pretežito riječ o krhotinama, prvotnim sječivima i odbojcima.

SLOJ 8

▽ 423–435. Naslage se sastoje od tamnosmeđe zemlje i dosta kamenja. Zbog rastresita karaktera sljedećega, 9. sloja, postojala je mogućnost propadanja dijela predmeta iz sloja 8 u sloj 9. U ovome i dubljim slojevima nema keramičkih izrađevina. Nađeno je 12 kremenih predmeta, od čega dvije istrošene jezgre, nekoliko krhotina, tri odbojka i jedno sječivo trapezasta presjeka svojstvena neolitiku (T. 2: 12). Kao i u drugim slojevima uobičajeni su vapnenački valuci različitih veličina, često slomljeni i s tragovima korištenja.

SLOJ 9

▽ 435–456. Ovaj rastresit sloj zapravo je (od prijašnjih godina poznata) "podnica", napravljena tako

ternal and internal surfaces that are exquisite for the earlier Neolithic (Fig. 3). The second fragment fits in among the remaining Early Neolithic ceramics in terms of its general properties, but it stands out in terms of the quality of its crafting and the particularly fine crafting of its external surface. Twelve flint items were also found; not one tool was recognised among them, as they are largely débitage, primary blades and flakes.

STRATUM 8

▽ 423–435. The sediments consist of dark brown soil and a considerable quantity of stones. Due to the loose character of the subsequent, ninth stratum, there is a possibility that items from stratum 8 fell into stratum 9. There are no ceramic finds in this and deeper strata. Twelve flint items were found, of which two are worn out cores, several are débitage, three are flakes and one is a blade with trapezoidal cross-section typical of the Neolithic (T. 2: 12). As in other strata, limestone pebbles of varying size are customary, often broken with signs of use.

što je na široj površini poslagano kamenje veličine šake (Čečuk & Radić 2005: sl. 13 na str. 59 i sloj 8 na crtežu br. 11, str. 70). Nije poznato je li riječ o ljudskoj djelatnosti ili o prirodnome procesu, ali je prostor između kamenja te osobito neposredno pod njim ispunjen brojnim ljušturama školjkaša i morskih puževa. Nađeno je 17 kremenih predmeta, od čega sedam krhotina, tri kratka sječiva te nekoliko odbojaka i komadića otpadnog materijala. Obradena je samo alatka (2,2 x 0,5 x 0,3 cm) koja po tipu odgovara pločici s dvostranom, kosom obradbom (T. 2: 13). Česti su vapnenački valuci. Nađeno je dvanaest morskih pužića kokica (*Columbella rustica*), a na većini primjeraka pažljivo su probušene rupice za nizanje na ogrlici.

SLOJ 10

▽ 456–468. Sipka smeđa zemlja ispod “podnice” s dosta ostataka života. Izgleda da ovaj i sljedeći sloj čine cjelinu. Poznato je desetak kremenih predmeta uglavnom od sirovine slabije kvalitete te više čitavih i slomljenih valutaka. Među njima su odbačena jezgrića te po nekoliko krhotina i odbojaka. Jedan oštećeni predmet mogao je biti korišten kao grebalo.

SLOJ 11

▽ 468–487. Nehomogena smeđa zemlja miješana s 20–30 % sitna kamenja zaobljenih rubova, prošarana kratkim i razmjerno tankim proslojcima ugljena. Dosta tragova života ljudi. Samo četiri kremena predmeta i to odbojci i krhotine. Dva morska valutka. Nađen je jedan pužić kokica s probušenom rupom.

SLOJ 12

▽ 487–512. Svjetlosmeđa crvenica s dosta pepela, vrlo prhka i nehomogena, miješana s ponekim kamenčićem (10–15 %), velikom količinom ljuštura puževa i ribljim kostima. Od ukupno deset kremenih predmeta jedan je oštećeno grebalo (T. 2: 14) te više uglavnom amorfnih krhotina. Nakon flotacije 50 litara sedimenta nađen je niz manjih kremenih predmeta, mahom krhotina, nekoliko pužića *Columbella rustica* te vrlo velika količina manjih ribljih kostiju, zdrobljenih ljuštura školjkaša i kopnenih puževa.

GROB U SLOJU 12

Tijekom iskapanja sloja 10 i 11, približno u kvadrantu *i x 6*, pojavljivale su se ispremiješane ljudske kosti, a u sloju 12 nađen je dosta oštećen ljudski ukop

STRATUM 9

▽ 435–456. This loose layer is actually (known from previous years) a “floor” made up of fist-sized stones laid over the entire surface (Čečuk & Radić 2005: fig. 13 on p. 59 and stratum 8 on illustration no. 11, p. 70). It is unknown if this was due to human activity or a natural process, but the space between the stones and particularly just beneath them is filled with sea-shell remains. Seventeen flint items were found, of which seven are débitage, three are short blades and several are flakes and pieces of refuse material. Only a tool has been retouched (2.2 x 0.5 x 0.3 cm), which in terms of type corresponds to a bladelet with bifacial, steep retouching (T. 2: 13). Limestone pebbles are common. Twelve *Rustica* dove shells (*Columbella rustica*) were found, and most of them have carefully pierced holes so they can be placed on a necklace.

STRATUM 10

▽ 456–468. Loose brown soil under the “floor” with considerable signs of habitation. This and the next stratum appear to form a whole. Approximately ten flint items are known, generally raw material of poorer quality with several whole and broken pebbles. There is a discarded core among them, and several débitage chips and flakes. One damaged item may have been used as a notch.

STRATUM 11

▽ 468–487. Non-homogenous brown soil mixed with 20–30% tiny stones with rounded edges, dappled with embedded layers of charcoal. Numerous signs of human habitation. Only four flint items were found: flakes and débitage. Two pebbles from the sea. One pierced dove shell was found.

STRATUM 12

▽ 487–512. Light brown red soil with a considerable quantity of ash, very friable and non-homogenous, intermixed with occasional pebbles (10–15%), and a large quantity of sea-shells and fish bones. The ten flint items include a damaged notch (T. 2: 14) and several generally amorphous débitage pieces. After flotation of 50 litres of sediment, a series of smaller flint items were found, mainly débitage, several *Columbella rustica* shells and a very large quantity of small fish bones and crushed shells of land and sea snails.



Slika 4. Grob u sloju 12, detalj tijekom iskopavanja (foto: D. Cetinić, 2004).

Figure 4. Several connected fragments of "monochrome" ceramics. In test pit h x 5–7 only one fragment was found (photo: D. Cetinić, 2004).

(sl. 4). Orijentacija je ovoga groba sjever-jug (glava prema sjeveru), a nalazio se neposredno uza špiljsku stijenu. Oveći kamen u visini nogu definirao je njegov položaj s istočne strane. O položaju kostura teško je više reći jer nedostaju sve duge kosti nogu, ali visok položaj desne lakatne kosti te mala udaljenost kostiju stopala od slabinskih kralježaka kao logičnu nameću pretpostavku o zgrčenu položaju pokojnika položena na lijevo rame (odnosno pokojnik "gleda" na stranu suprotnu od špiljske stijene).

SLOJ 13

∇ 512–524. Naslage gotovo čista prhka pepela svijetle boje s tankim proslojcima ugljena, manje kame- nje i zemlja miješana s ostacima prehrane. Nađena su tri kremena predmeta, dvije krhotine, manji odbojak, dio slomljena valutka i izdužen kamen sa završetkom nalik spatuli.

SLOJ 14

∇ 524–527. Naslaga zemlje svjetlocrvenkaste boje u kojoj je oko 10 % sitnih kamenčića promjera 1–2 cm. Četiri kremene krhotine i nekoliko glačanih morskih valutaka te jedan pužić kokica s probušenom rupom.

SLOJ 15

∇ 527–539. Smečkasta zemlja miješana sa sitnim kamenjem zaobljenih rubova. Osam kamenih predmeta, uglavnom krhotina i odbojaka neodređena

GRAVE IN STRATUM 12

During excavation of strata 10 and 11, approximately at quadrant *i x 6*, scattered human bones were found, while in stratum 12 a considerably damaged human grave (Fig. 4) was found. The grave is orientated north-to-south (head toward the north), and it was immediately against the cave wall. A large stone at the level of the foot defined its position from the east. It is difficult to say anything about the position of the skeleton because all of the long leg bones are missing, although the position of the right elbow and the short distance between the foot bones and the lateral vertebrae lead to the logical assumption that the body of the deceased was crouched and lying on its left shoulder (i.e. the deceased faced the side opposite to the cave wall).

STRATUM 13

∇ 512–524. Sediments of almost pure, light-coloured friable ash with embedded layers of charcoal, small stones and soil mixed with food remains. Three flint items were found: two débitage chips, a smaller flake, part of a broken pebble and an elongated rock with one end shaped like a spatula.

STRATUM 14

∇ 524–527. Light red soil sediment of which roughly 10% is small 1–2 cm diameter stones. Four flint débitage chips and several smoothed sea pebbles and one pierced dove shell.

oblika, a na nekim odbojcima nalazimo tragove korištenja. Iz ovoga sloja potječe nekoliko kamenčića koji se prirodno mrve u prah, a taj se prah može rabiti kao intenzivna crveno-smeđa boja.

SLOJ 16

∇ 539–546. Crvenkasta zemlja miješana s izrazito sitnim oštrobriđim šljunkom. Vrlo malo tragova života, uglavnom riblje kosti. Tri kremenata predmeta, od toga dvije krhotine i jezgra od koje su odbijani odbojci.

SLOJ 17

∇ 546–553. Naslaga vrlo slična prethodnoj, ali količina kamenja donekle se smanjuje. Nađena su samo tri kremenata predmeta, dvije manje krhotine i krhotina korištena kao dubilo. Jedan pužić kokica s rupom.

SLOJ 18

∇ 553–559. Kameno kršje oštarih bridova i kamenčići veličine 3–6 cm (više od 50 %) pomiješani sa zemljom svjetlosmeđe boje. Tragovi kalcificiranja cijeloga sloja. Vrlo malo nalaza. Tri kremenata predmeta, od toga jedna loše izrađena strugalica i dvije krhotine. Kao i u svim prethodnim naslagama dosta ribljih kostiju.

SLOJ 19

∇ 559–563. Pomalo sterilna izgleda, miješan šljunak i zemlja, ali sloj je izuzetno tvrd jer je gotovo došlo do njegova kalcificiranja. Kamenje je uglavnom slijepljeno, a iskapanje je jedva bilo moguće jedino krampom. Šest kremenih predmeta, od čega jedan ulomak pripada sječivu trapezasta presjeka, a jedan strmo obrađenu šiljku.

INTERPRETACIJA REZULTATA

SLOJEVI OD 19 DO 16

Slojevi na dubini od -563 do -539 cm, tj. od najniže točke dostignute u sondi *h x 5–7*, do -539 cm, siromašni su svim vidovima ostataka života, a zbog klimatskih uvjeta u vremenu nakon njihova formiranja došlo je do zasigavanja i pretvaranja sloja u gotovo kompaktnu kamenu masu. Na osnovi malobrojnih

STRATUM 15

∇ 527–539. Brownish soil mixed with tiny stones with rounded edges. Eight stone items, generally débitage and flakes of indeterminate form. Some flakes bear signs of use. Several tiny stones that naturally crumble into powder were found in this stratum, and this powder can be used as an intense red-brown dye.

STRATUM 16

∇ 539–546. Reddish soil mixed with tiny sharp-edged gravel. Very few signs of living, generally fish bones. Three flint items, of these two pieces of débitage and a core from which flakes were knapped.

STRATUM 17

∇ 546–553. A sediment very similar to the preceding one, but the quantity of stones is somewhat less. Only three flint items were found, two smaller débitage chips and a piece of débitage used as a burin. One pierced dove shell.

STRATUM 18

∇ 553–559. Stone debris with sharp edges and tiny 3–6 cm stones (over 50%) intermixed with light brown soil. Traces of calcification in entire stratum. Very few finds. Three stone items: one poorly-made scraper and two débitage chips. As in all preceding strata, it has a considerable quantity of fish bones.

STRATUM 19

∇ 559–563. Somewhat sterile appearance, mixed gravel and soil, but the stratum is exceptionally hard because it is almost calcified. The stones are generally stuck to each other, and excavation was only possible using a pick-axe. Six stone items, including one fragment of a blade with trapezoidal cross-section, and one steeply retouched pick.

INTERPRETATION OF RESULTS

STRATA 19 THROUGH 16

Strata at depths from -563 to -539 cm, i.e. from the lowest point reached by test pit *h x 5–7*, down to -539

| sloj <i>stratum</i> | ▽ | ulomci keramike (komada) <i>ceramic fragments (pieces)</i> | kremeni predmeti (komada) <i>flint items (pieces)</i> | iskopano ukupno naslaga (dm ³) <i>total sediment excavated (dm³)</i> | školjkaši i puževi (dm ³) <i>shellfish and snails (dm³)</i> | postotak školjkaša i puževa od ukupno iskopanih naslaga <i>percentage of shellfish and snails in total excavated sediment</i> |
|------------------------|---------|--|---|---|--|---|
| 4 | 374–389 | 37 | 24 | 350 | 0,4 | 0,114% |
| 5 | 389–396 | 19 | 11 | 140 | 0,3 | 0,214% |
| 6 | 396–411 | 9 | 21 | 310 | 0,6 | 0,194% |
| 7 | 411–423 | 2 | 12 | 260 | 0,7 | 0,269% |
| 8 | 423–435 | 0 | 12 | 240 | 2,5 | 1,042% |
| 9 | 435–456 | 0 | 18 | 490 | 14,7 | 3,000% |
| 10 | 456–468 | 0 | 10 | 310 | 5,1 | 1,645% |
| 11 | 468–487 | 0 | 4 | 380 | 3,1 | 0,816% |
| 12 | 487–512 | 0 | 10 | 450 | 15,1 | 3,555% |
| 13 | 512–524 | 0 | 3 | 270 | 5,3 | 1,963% |
| 14 | 524–527 | 0 | 4 | 70 | 0,5 | 0,714% |
| 15 | 527–539 | 0 | 8 | 260 | 0,9 | 0,346% |
| 16 | 539–546 | 0 | 3 | 130 | 0,1 | 0,077% |
| 17 | 546–553 | 0 | 3 | 270 | 0,1 | 0,037% |
| 18 | 553–559 | 0 | 3 | 140 | 0,2 | 0,143% |
| 19 | 559–563 | 0 | 6 | 80 | 0,1 | 0,125% |
| | | 67 kom. | 152 kom. | 4,15 m ³ | 49,7dm ³ | 1,198% |

Tablica 1. Sonda h x 5–7, broj nađenih kamenih i keramičkih predmeta te količina ostataka puževa i školjkaša u odnosu na ukupnu masu iskopanoga sedimenta (autor: D. Radić).

Table 1. Test pit h x 5–7, number of stone and ceramic items found and quantity of remains of snails and shellfish in comparison to overall mass of excavated sediment (by D. Radić).

nalaza teško se može govoriti o detaljnijim kulturno-kronološkim odnosima, posebno stoga što su posrijedi slojevi iz razdoblja donjega mezolitika i prijelaza paleolitika u mezolitik, koji su na istočnojadranskim lokalitetima slabo poznati. I u svim ostalim dosad istraživanim kvadrantima Vele spile, na dubinama približno od 5,40 do 5,80 m, ustanovljene su siromašne naslage koje odgovaraju donjemu mezolitiku i kraju paleolitika (Čečuk & Radić 2005: 51, donji dio sloja 7/1), odnosno početku holocena i kraju pleistocena. Temeljitiije proučavanje i potrebne analize nađena materijala tek predstoje. Što se tiče još dubljih naslaga (ispod -5,80 m), starijih od 12000 g. BP, one su (u drugim sondama) istražene do -8,85 m i odlikuju se veoma bogatim raznolikim paleolitičkim nalazima (kultura epigravetijen) (*ibid.*: 21–48).

U sloju br. 19 nađeni su skromni ostaci divljega goveda (*Bos primigenius*) i polumagarca (*Equus hydruntinus*), što su, osim jelena iz sloja br. 11, i jedini ostaci krupnih životinja u cijeloj sondi. Treba spomenuti da su epigravetijenske naslage specifične upravo po čestim nalazima ostataka spomenutih životinja (*ibid.*: 29–30).

cm, are very meagre in all aspects of signs of habitation, and due to climatic conditions in the time after their formation, they became calcified and transformed into an almost compact stone mass. Based on the small number of finds, it is difficult to make any cultural/chronological assessments, particularly since these are strata from the Lower Mesolithic and the transition from Paleolithic into Mesolithic, which are scarcely known on the eastern Adriatic coast. In all other quadrants examined in Vela Spila at depths ranging from approximately 5.4 to 5.8 m, unsubstantial strata were ascertained that correspond to the Lower Mesolithic and the end of the Paleolithic (Čečuk & Radić 2005: 51, lower portion of stratum 7/1), i.e. the beginning of the Holocene and end of the Pleistocene. More thorough study and the requisite analysis of the materials found have yet to be done. As to even deeper sediments (below -5.8 m), older than 12,000 years BP, they were (in other probes) examined down to -8.85 m and are characterised by very rich, diverse Paleolithic finds (Epigravettian culture) (*ibid.*: 21–48).

In stratum no. 19 scant remains of wild cattle (*Bos primigenius*) and wild ass (*Equus hydruntinus*) were found, which are, besides the deer in stratum no. 11,

SLOJEVI OD 15 DO 9

U naslagama na dubini od -539 do -435 cm, odnosno od sloja 15 pa do sloja 9, ukupne debljine 104 cm, nađeno je samo 57 kremenih predmeta i tridesetak vapnenačkih valutaka. Obradba kремена krajnje je jednostavna, manifestira se bezličnošću odbojaka i gotovo nepostojanjem oruđa. Ipak, već sama amorfnost lomljevine, usitnjenost materijala, heterogenost korištenih ležišta, loša kvaliteta sirovine, male dimenzije jezgara, uz sve češće nalaze uglavnom slomljenih vapnenačkih valutaka, upućuju na analogiju s ostalim sličnim naslagama koje u Veloj spili pripisujemo razdoblju mezolitika (*ibid.*: 49–68).

Malobrojni primjerci alatka vrlo su loše obrađeni pa se stječe dojam da se kremen u životu mezolitičkoga stanovništva upotrebljavao rijetko i to samo za izradbu krajnje jednostavna oruđa prilagođena obavljanju ne previše zahtjevnih poslova. Česti odbojci s okorinom upućuju na izradbu oruđa *in situ*, a njihov izgled, količina krhotina i otpada na vrlo lošu sirovinu. Donekle se po nešto većoj kvaliteti izdvajaju ulomci jezgara na kojima je vidljivo da su korišteni za odbijanje pločica i/ili sječiva. Mali broj nađenih alatka, osim o rijetkoj uporabi, govori i o njihovu čuvanju, odnosno o dugotrajnu korištenju (npr. vrlo oštećeno grebalo na odbojku s okorinom – T. 2: 14). Gotovo identična situacija poznata je i u ostalim istovremenim kvadrantima Vele spile.

Od svih alatki nađenih u mezolitičkim naslagama izdvaja se fino i precizno dvostrano strmo obrađena pločica koja završava šiljatim vrhom (T. 2: 13). To odlično izrađeno oruđe nađeno u sloju 9 malih je dimenzija (2,2 x 0,5 x 0,3 cm) i nalikuje mnogobrojnim pločicama s hrptom iz paleolitičkih naslaga ovog i brojnih drugih lokaliteta. U starijih primjerkama rijetko je zapažena dvostrana strma (praktično okomita) obradba, ali su namjena alatke i sirovina od koje je napravljena (vrlo kvalitetan rožnjak tamnocrvene boje) isti kao i u paleolitiku, što upućuje na određen kontinuitet tehnike obradbe, a vjerojatno i namjene oruđa.³

Među ostacima prehrane brojnošću se izdvajaju kosti riba te ljuštura školjkaša i puževa, što upućuje na apsolutnu prevlast hrane iz mora nad onom s kopna. Rak grmalj (*Eriphia spinifrons*) iz sloja br. 10 upućuje na pretpostavku da je mezolitsko stanovništvo poznavalo i konzumiralo praktično sve dostupne jestive morske organizme, uključujući i neke

³ Za analogije s predmetima iz paleolitičkih naslaga Vele spile v. Čečuk & Radić 2005: T. 2: 9, 22; T. 3: 4–6, 9–10, a za slične mezolitičke alatke usp. Brodar 1992: T. 5: 27 i dalje; Miracle *et al.* 2000: 302, sl. 5/e-k.

the only remains of larger animals in the entire test pit. It should be noted that Epigravettian sediments are specific precisely due to the frequency of the remains of these animals (*Ibid.*: 29–30).

STRATA 15 TO 9

In sediments at depths from -539 to -435 cm, i.e. from stratum 15 to stratum 9, with a total thickness of 104 cm, only fifty-seven flint items and approximately thirty limestone pebbles were found. The retouching of the flint is extremely rudimentary, reflected in the featureless character of the flakes and the almost non-existent implements. Nonetheless, the very amorphousness of the broken pieces, the crushed materials, the heterogeneity of the deposits used, the poor quality of the raw materials, the small dimensions of the cores, and increasingly frequent finds of generally broken limestone pebbles point to an analogy with other, similar sediments that have been ascribed to the Mesolithic in Vela Spila (*Ibid.*: 49–68).

The meagre examples of tools are very poorly made, leading one to conclude that flint was used only rarely by this Mesolithic population and only to make very simple implements suited for the performance of not very demanding tasks. Frequent flakes with cortex indicate crafting of implements *in situ*, while their appearance and the quantity of débitage and refuse indicate very poor raw materials. A somewhat better quality can be observed in the core fragments, which were visibly used for flaking notches and/or blades. The small number of tools found, besides rare use, also indicates their preservation, or rather their long-term use (e.g. a very damaged notch with cortex – T. 2: 14). An almost identical situation is known from the other, contemporaneous quadrants of Vela Spila.

Out of all tools found in the Mesolithic strata, one that stands out is the finely and precisely retouched bifacial bladelet, with a steep angle that ends in a pointed tip (T. 2: 13). This excellently retouched implement was found in stratum 9, its dimensions are small (2.2 x 0.5 x 0.3 cm) and it resembles the numerous bladelets with ridges from the Paleolithic sediments and many other sites. In the older examples, such bifacial, steep (practically vertical) flaking has rarely been observed, but the purpose of the tools and the materials from which they are made (high quality dark red chert) are the same as during the Paleolithic, which indicates a certain continuity of crafting techniques, and probably purpose of these implements.³

³ For analogies to the items from the Paleolithic sediment of Vela Spila, see Čečuk & Radić 2005: T. 2: 9, 22; T. 3: 4–6, 9–10, while for similar Mesolithic tools, cf. Brodar 1992: T. 5: 27 and *passim*; Miracle *et al.* 2000: 302, fig. 5/e-k.



Slika 5. Dio ribljih kostiju iz sloja br. 12 (foto: D. Cetinić, 2004).

Figure 5. A part of the fish bones from stratum no. 12 (photo: D. Cetinić, 2004).

od nadenih školjaka, za koje je poznato da žive samo na većim dubinama, iz čega proizlazi da su vladali i vještinom ronjenja. U sloju br. 10 evidentirane su i kosti dupina.

Školjkaši i morski puževi (prije svega priljepci i ogrci) redoviti su u svim naslagama, a u nekima sudjeluju sa do znatnih 3,5 % njihova ukupna volumena (v. tab. 1 i 2). Može se reći da su školjkaši i puževi redovit i važan dio mezolitičke prehrane,⁴ ali pretežit dio hrane ipak čine ribe. Količina ribljih ostataka mjeri se doslovce tisućama komada kostiju. Dio pripada krupnim primjercima, ali velika većina tek su ribice (sl. 5).

Velika su većina kopnenih puževa iz svih naslaga *Eobania vermiculata* (Müller 1774), koji se na Korčuli i danas jedu. Njima je vrlo sličan, ali znatno manji i malobrojniji *Cerneuella virgata* var. Samo tridesetak primjeraka znatno je krupnijega *Helix secernenda* (Rossmässler 1847), za kojega mi nije poznato da danas obitava na otoku. Tom pužu više odgovaraju vlažnija submediteranska klima i nešto veće nadmorske visine, pa je zanimljivo spomenuti da se *Helix secernenda* javlja gotovo isključivo u predneolitičkim naslagama, što može biti jedan od

Among the food remains, the most numerous are fish bones and sea- and snail shells, which indicates absolute predominance of sea-food over land-based foods. The warty crab (*Eriphia spinifrons*) from stratum no. 10 indicates that the Mesolithic population was aware of and consumed practically all available edible marine organisms, including certain shellfish that are known to live only at considerable depths, which means that they had also mastered diving techniques. Dolphin bones were also registered in stratum no. 10.

Shellfish and sea-snails (above all limpets and turbanes) are regular in all sediments, and in some they account for a significant 3.5% of their total volume (see tables 1 and 2). One can say that shellfish and snails were a regular and important component of the Mesolithic diet,⁴ although most of this diet nonetheless consisted of fish. The quantity of fish remains can be counted in the literally thousands of fish bones. Some are larger examples, but the vast majority were only small fish (Fig. 5).

By far most of the land snails from all sediments are *Eobania vermiculata* (Müller 1774), which are still eaten on Korčula today. Similar to these, albeit con-

⁴ Vrlo slična situacija zabilježena je i u sloju D lokaliteta Sidari na Krfu (Sordinas 1968: 402–405). Autor navodi i povezanost s nizom lokaliteta na Apeninskom poluotoku, posebno na njegovu južnome dijelu, pa se može razmišljati o istome kulturnom krugu. Sordinas u oblikovanju života tijekom sloja D vidi presudan utjecaj "pomoraca" koji dolaze s Jadrana ili iz južne Italije (*ibid.*: 405).

⁴ A very similar situation was recorded in stratum D at Sidari site on Corfu (Sordinas 1968: 402–405). The author cites links with a series of sites on the Apennine Peninsula, particularly its southern part, so that one can think of the same cultural sphere. Sordinas sees "seafarers" from the Adriatic or southern Italy as having a crucial influence on the formation of life during stratum D (*Ibid.*: 405).

indikatora promjene klime. Koristeći naziv *Helicogena secernenda* njegov opis i rasprostranjenost dao je još Spiridon Brusina (1995: 287–288).⁵

Suprotno od morskih stanovnika kopnene životinje zastupljene su malim brojem, i to isključivo sitnim životinjama poput srne i zeca te jednom jedinom jelenjom kosti iz sloja br. 11. Zasad se ne može naći razlog zašto u mezolitičkim naslagama nedostaju ostaci većega broja lovnih životinja. Osim u promjeni klime, podizanju razine mora i u nestanku staništa do tada brojnim divljim govedima, jelenima i divljim konjima, odgovor valja tražiti u povremenu korištenju lokaliteta, vezanu uz sezonski ribolov ili uz prekojadransku plovidbu.

Posebno naglašavamo manji broj ostataka ovce ili kože u sloju 9, o čemu će više biti rečeno u daljnjem tekstu. Iznimku među kopnenim životinjama čine sitne zvijeri: kune, divlje mačke i lisice, od kojih ove posljednje, promatramo li samo mezolitičke naslage, u ukupnom udjelu kopnenih životinja u svim istraživanim sondama sudjeluju s oko ili iznad 50 % (Čečuk & Radić 2005: 30, T. 6; Kužir *et al.* 2005: 295, grafikon 3). Zasad još uvijek ne znamo je li riječ o životinjama lovljenima radi krzna ili o onima koje su Vela spilu koristile kao stanište u vrijeme kad u njoj nisu boravili ljudi. Tijekom mezolitika čest su plijen lovaca i razne ptice.

Vjerojatno je upravo okrenutost hrani iz mora jedan od razloga malena broja kremenih alatki, jer je njihova velika količina, kako je to vidljivo tijekom paleolitika, povezana s lovom na krupne životinje (Čečuk & Radić 2005: 25–30).

Naslage od br. 15 do br. 9 neposredno prethode *impresso*-neolitiku i uvodnome mu razdoblju, kulturno smo ih odredili u mezolitik, njegov gornji ili mlađi dio. Geološki bi bile istodobne s borealom, kad vlada topla i vlažna klima, donekle slična današnjoj, a i razina Jadrana tek je nešto niža od sadašnje.⁶

GROB IZ SLOJA 12

Prema analizi M. Šlausa osoba iz groba u sloju br. 12 (sl. 4) bila je muškoga spola, a procijenjena starost u trenutku smrti iznosila je od 35 do 40 godina (Šlaus 2005). Isti autor analizirajući promjene na kostima zaključuje kako je osoba za života bolovala od više bolesti, posebno od onih vezanih uz promjene na

siderably smaller and less numerous, is the *Cernuella virgata* var. There are only roughly thirty examples of the much larger *Helix secernenda* (Rossmässler 1847), which, to the best of this author's knowledge, do not live on the island in the present. This snail is more suited to the moister sub-Mediterranean climate and somewhat higher elevations, so it is interesting that *Helix secernenda* appear almost exclusively in pre-Neolithic sediments, which may be an indicator of climate change. Using the name *Helicogena secernenda*, Spiridon Brusina described and determined the range of this species (1995: 287–288).⁵

In contrast to marine animals, there is only a small number of land animals, and these are exclusively smaller species such as roe and hares, while the only deer bone was found in stratum no. 11. For now no reason can be discerned for the lack of remains of a larger number of wild game in the Mesolithic sediments. Besides climate change, the raising sea level and the disappearance of habitats for the until then numerous wild cattle, deer and horses, the answer should be sought in the only occasional use of the site, tied to seasonal fishing or trans-Adriatic navigation.

Particular stress should be accorded to the smaller number of sheep or goat remains in stratum 9, of which more will be said later. The exception among land animals are smaller species: martens, wildcats and foxes. The latter, when considering only the Mesolithic sediments, account for an approximately or over 50% of the total share of land animals in all examined test pits (Čečuk & Radić 2005: 30, T. 6; Kužir *et al.* 2005: 295, table 3). For now it is still uncertain as to whether they were hunted for their pelts or they inhabited Vela Spila at times when people did not reside there. During the Mesolithic various birds were also the frequent prey of hunters.

The preference for food from the sea is probably one of the reasons for the small number of flint tools, because their quantity, as seen during the Paleolithic, is associated with hunting big game (Čečuk & Radić 2005: 25–30).

Sediments no. 15 through no. 9 immediately precede the Impressed Ware Neolithic and its introductory period and have been culturally designated as the Mesolithic, its upper or more recent portion. Geologically, it is coterminous with the Boreal climatic period, marked by warm and moist weather, somewhat similar to the present, while the level of the Adriatic Sea was only slightly lower than today.⁶

⁵ Na pomoći pri analizi zahvaljujem Vesni Štamol iz Hrvatskoga prirodoslovnog muzeja u Zagrebu.

⁶ Shackleton *et al.* 1984: 310–311, T. 3, 4. Ovi, kao i ostali, autori smatraju da je tijekom boreala morska obala niža za tridesetak metara, što zbog konfiguracije terena, odnosno dubine morskoga dna, ne utječe značajnije na izgled obalne crte i izvora hrane koji su stajali na raspolaganju tadašnjim stanovnicima ovoga dijela Dalmacije.

⁵ I thank Vesna Štamol from the Croatian Natural History Museum in Zagreb for helping in this analysis.

⁶ Shackleton *et al.* 1984: 310–311, T. 3, 4. These, and other, authors believe that during the Boreal climatic period the sea level was about thirty meters lower than today which, due to the configuration of the terrain and the depth of the sea-floor, did not considerably influence the appearance of the coastline and sources of food at the disposal of the residents of that part of Dalmatia at that time.

kralješcima i drugim kostima (blaga kifoza i skolioza, blagi, ali i jaki, degenerativni osteoartritis...), iz čega zaključuje da su spomenute bolesti vjerojatno povezane s prekomjernim i kontinuiranim fizičkim radom. Zanimljiva je vrlo izražena abrazija krune svih zubiju (mandibule, jer maksila nije nađena). Zubi su bili potpuno istrošeni (zubna caklina u potpunosti nedostaje) što upućuje na specifičan način prehrane i na vjerojatnost korištenja zubiju kao "treće ruke".

Tlo u kojem se nalazi grob u sloju 12 crvenica je miješana s malo kamenja (10–15 %) i brojnim organskim ostacima. Sloj ispod, onaj br. 13, sastoji se od pepela nejednake debljine, također pomiješana s ostacima prehrane. Radi se doslovno o nebrojeno mnogo dijelova ribljih kralježaka i drugih usitnjenih ribljih kostiju, o ljušturama morskih i kopnenih puževa, školjkaša..., a lovnih je životinja razmjerno malo. Među ribljim kostima prevladavaju one koje su pripadale primjercima manjih dimenzija (ostaci ribica dužine 15–20 cm), ribe znatne dužine samo su sporadično zastupljene. Nije bilo moguće točno odrediti pripada li neki od tih brojnih ostataka prehrane popudbini pokojnika, a isto je i s dosta čestim, uglavnom probušenim pužićima *Columbella rustica* te dijelom jedne Tritonove trube.

Temeljem rezultata iskapanja kao vjerojatne nameću se pretpostavke:

- pokojnik je ukopan u razmjerno plitkoj raki iznad sloja pepela u dijelu špilje u kojem su i prije ukopa intenzivno odbacivani ostaci prehrane,
- nakon ukopa isti se prostor (označen većim kamenom koji se na tom mjestu vjerojatno otprije nalazio) i dalje nastavio koristiti kao prostor za odbacivanje otpada,
- nalazi više pužića *Columbella rustica*, prilagođenih za nošenje oko vrata, kao i nalaz srneće kosti na mjestu pored pokojnikove glave, upućuju (možda) na dijelove obreda.

Počevši od 1986. u mezolitičkim naslagama Vele spile nađeno je ukupno pet ljudskih kostura (usp. Čečuk & Radić 2005: 53–55). Pripadaju djeci ne starijoj od 3,5 godine, a najmlađi fetusu staru tek od 7 do 9 lunarnih mjeseci (Šlaus 2003). Skelet iz groba u sloju 12 jedini pripada odrasloj osobi. Zanimljivo je spomenuti da su sve osobe nađene u zgrčenu položaju, i to ponekad položene na desno, a ponekad na lijevo rame. Redovno su blizu ili vrlo blizu špiljske stijene. O postojanju arhitekture teško je govoriti, iako na njezine tragove upućuje raspored većega kamenja razbacana u širem prostoru oko grobova. Mezolitičke naslage inače obiluju većim kamenjem pa se, možda, radi samo o grubu raščišćavanju terena. U slučaju groba iz sloja 12 situacija je jasnija, jer je jedini kamen u okolini groba

GRAVE IN STRATUM 12

According to an analysis conducted by M. Šlaus, the person in the grave in stratum no. 12 (Fig. 4) was male, and the estimated age at time of death was 35 to 40 years (Šlaus 2005). This same researcher, after analysing the changes in the bones, concluded that during his life this person suffered from a number of illnesses, particularly those associated with changes in the vertebrae and other bones (mild kyphosis and scoliosis, mild, but also intense degenerative osteoarthritis...), and he concluded that these ailments were caused by excessive and continuous physical labour. The very prominent abrasion of the crowns of all teeth (on mandible, maxilla was not found) is interesting. The teeth were entirely worn down (there is no enamel) which indicates a specific diet and the probability that the teeth functioned as a "third hand".

The soil in which the grave is situated in stratum 12 is red soil mixed with some rocks (10–15%) and numerous organic remains. The stratum just below it, no. 13, consists of ash of uneven thickness, also intermixed with food remains. There are literally countless portions of fish spines and other crumbled fish bones, sea and land snail shells, and those of other shellfish, while there are relatively few remains of wild game. Among the fish bones, those of smaller fish predominate (remains of fish 15–20 cm long), while considerably longer fish only appear sporadically. It was not possible to accurately determine if any of these numerous food remains were the provisions of the deceased, and the same holds for the quite frequent, generally pierced *Columbella rustica* shells and partially one trumpet shell.

Based on the results of excavation, the following assumptions are probable:

- the deceased was buried in a relatively shallow pit above a layer of ash in a part of the cave that was heavily used to discard food waste prior to the burial,
- after interment, the same area (marked with a large stone that was probably there even before) continued to be used as a place to discard waste,
- the discovery of several *Columbella rustica* shells made to be worn around the neck, and the roe bones next to the head of the deceased, indicate possible components of a ritual.

Beginning in 1986, a total of five human skeletons were found in the Mesolithic strata of Vela Spila (cf. Čečuk & Radić 2005: 53–55). They belonged to children no older than 3.5 years, and the smallest skeleton is that of a foetus no older than 7 to 9 lunar months (Šlaus 2003). The skeleton in the grave in

oveća gromada (70 x 60 x 30 cm) smještena tako da s istočne strane definira prostor ukopa.

SLOJEVI 8 I 7

Svojstva kremenih predmeta iz nalazima siromašnih naslaga br. 8 i 7 (od -435 do -411 cm) nisu takva karaktera koji bi omogućavao njihovo sigurno kulturno određenje. Nađeno je samo jedno sječivo trapezasta presjeka potpuno neolitičkog izgleda (T. 2: 12), a ostali litički materijal sastoji se od različitih otpada i malobrojnih odbojaka, redovito slabije kvalitete. Većina artefakata – oblikom, bojom i kvalitetom sirovine – još uvijek u potpunosti odaje mezolitičku tradiciju izradbe i korištenja. Ipak, u naslagama br. 8 i 7 postupno dolazi do prestanka uporabe rožnjaka slabije kvalitete, jer izradba dugih sječiva od dotadašnjih manjih i nekvalitetnijih jezgara nije bila moguća. Rožnjak slabije kakvoće nalik onom iz ležišta na Maloj Palagruži uobičajen u slojevima od 13 do 9 postaje rijedak, a u još mlađim naslagama nije ni nađen.

Posebno zanimljivo pitanje predstavlja ulomak “monokromne” keramike iz sloja 7. Riječ je o predmetu koji se izgledom ne razlikuje bitnije od kvalitetne *impresso*-keramike, ali taj i njemu slični ulomci redovno su dobra sirovinskoga sastava, glatkih, tj. pažljivo izglaćanih, stijenka i optimalne temperature pečenja. I tijekom ranijih kampanja na stratigrafski istome položaju (najdonji keramički sloj i sloj u kojem se miješaju pojedina neolitička i mezolitička svojstva) nalaženi su dijelovi iste ili vrlo sličnih posuda. Radi se ukupno o svega nekoliko posuda, jednostavnih oblika, uglavnom dubokih zdjela. Redovito su odlično izrađene, homogena presjeka, bez ukrasa, a površina i boja vanjske stijenke za tu su vrstu keramike dosta jednolične (sl. 3). Na površini nije sačuvan trag bilo kakva ukrašavanja pa spomenuto upućuje na uporabu termina “monokromna keramika”, odnosno nameće se sličnost s istoimenom često spominjanom, ali nikad na istočnojadranskim lokalitetima sa sigurnošću potvrđenom keramičkom vrstom (Prendi 1990: 401–403).⁷ Sloj C/donji dio, na lokalitetu Sidari (Sordinas 1968: 401, 406 i dalje), u kojem nalazimo jednostavnu i pretežito neukrašenu keramiku, debelim je sterilnim slojem odvojen od sloja C/gornji dio, s *impresso*-materijalom, a položaj otoka Krfa upućuje na mogući put kojim ova keramika dolazi do Korčule bez obzira na to je li riječ o plovidbi duž istočne ili apulijske obale. Ulomci iz

stratum 12 is the only one that belongs to an adult. It is interesting to note that all persons were found in a crouched position, sometimes placed on their right shoulder, and sometimes on the left. They are regularly near or very near the cave wall. It is difficult to speak of the existence of architecture, although the arrangement of larger stones scattered in the wider area around the graves suggest this. Mesolithic strata are typically abundant in larger stones, so these may only indicate clearing of the surface. In case of the grave in stratum 12, the situation is clearer, because the only stone near the grave is a large one (70 x 60 x 30 cm) placed so that it marks the burial site from the east.

STRATA 8 AND 7

The properties of the flint items found in the sparse sediments no. 8 and 7 (from -435 to -411 cm) did not facilitate an unambiguous cultural attribution. Only one blade with trapezoidal cross-section and a completely Neolithic appearance was found (T. 2: 12), while the remaining lithics consist of various refuse and a few flakes of generally poor quality. Most artefacts—in terms of shape, colour and quality of materials—still entirely reflect the Mesolithic tradition of crafting and use. Nonetheless, in sediments no. 8 and 7 the use of poor-quality chert gradually ceases, because the production of long blades made of the previous smaller and lower-quality cores was not possible. The low-quality chert such as that from deposits on the island of Mala Palagruža customary in strata 13 through 9 becomes rare, while in even more recent sediments it was not even found.

Particularly interesting is the question raised by the fragment of “monochrome” ceramic in stratum 7. This is an item whose appearance does not deviate greatly from the quality of Impressed Ware ceramics, but this and similar fragments regularly have a good material composition, with smooth (carefully polished) sides and optimum baking temperatures. Even during earlier work at the stratigraphically same site (the lowest ceramic stratum and the stratum in which individual Neolithic and Mesolithic properties intermingle), the same or very similar pottery was found. This encompasses only a few vessels, with simple shapes, generally deep bowls. They are exquisitely made, with homogenous cross-section, no decoration, and the surface and colour of the external sides are very uniform for this type of pottery (Fig. 3). No signs of any decoration have been preserved on the surface, so this dictates use of the term “monochrome ceramics”, i.e. it strongly suggests a similarity with the eponymous ceramic

⁷ Müller (1988a: 120) uz monokromnu keramiku s prostora Grčke (Tessalija – Krf) povezuje “čepić za uši” iz Vrbice (v. Brusić 1995: 8–9, 18) te monokromnu keramiku iz sloja I u Škarinu Samogradu. Za Škarin Samograd i raspored lokaliteta s monokromnom keramikom v. Müller 1988: 220, T. 1 (označeno trokutom) i 233–234.

Vele spile odlično su očuvani jer uvjeti čuvanja u špilji neusporedivo su bolji od onih na otvorenome lokalitetu kao što je to Sidari. Ukupna količina ulomaka u slojevima br. 8 i 7, pa i u sloju br. 6 (tab. 1), upućuje na postupnost i dugotrajnost procesa prihvaćanja keramike.

Ulomak monokromne posude iz sloja 7 ne znači da je keramika u životu ove populacije igrala važniju ulogu. Prije će biti da se radilo o procesu spora prihvaćanja novoga medija, a postoje i pretpostavke o prvobitnoj uporabi keramičkih posuda u druge, ne čisto praktične svrhe.⁸

Razlike u ostacima materijalne kulture iz naslaga od 16 do 9 u usporedbi s onima iz naslaga 8 i 7 očituju se prije svega činjenicom da u mlađim slojevima dolazi do postupna prodora nove, neolitičke tehnologije cijepanja kamena i sporadične uporabe keramičkih posuda. Promjena je na većem broju primjeraka zapažena tek u sloju 6, odnosno 5 i 4, a dotad je bila prisutna samo na pojedinim predmetima pomiješanim s onima znatno brojnijima, izrađenima ranijom tehnologijom. Na taj se način slojevi 8 i 7 pokazuju kao poveznica, svojevrsan uvod u neolitik, odnosno prijelazno razdoblje između dotadašnje (zasad) slabo definirane mezolitičke proizvodnje kremenog oruđa i dobro poznate, razmjerno bogate neolitičke produkcije karakteristične prije svega po izradbi dugih sječiva trapezasta presjeka.

Uloga slojeva 8 i 7 kao razdoblja tijekom kojeg dolazi do postupne afirmacije neolitičkoga modela gospodarstva, a istodobno i do napuštanja onoga starijeg, svojstvenoga mezolitiku, vidljiva je i po ostacima namirnica životinjskoga porijekla. Dosad su iz spomenutih slojeva osim brojnih ribljih kostiju izdvojeni i ostaci nekoliko lisica, više srna te u obama slojevima i manji broj kostiju ovaca ili koza. Prije je spomenuto da je barem jedna kost kože ili ovce nađena i u sloju br. 9, vjerojatno u njegovu gornjem dijelu, tj. neposredno iznad "podnice".

Bez obzira na malu istraženu površinu i nevelik uzorak zanimljivo je uočiti da se za prehranu u slojevima 8 i 7 školjkaši i puževi rabe znatno rjeđe nego u starijem razdoblju, ali ipak znatno češće nego u *impresso*-neolitiku (v. tab. 2). Konstantno smanjivanje broja školjkaša i puževa, ali i riba, uz istodobno postupno povećanje udjela pripitomljenih životinja upućuje na promjenu strukture prehrane i načina pribavljanja hrane, tj. na proces napuštanja mezolitičkoga ribolovno-lovno-sakupljačkog gospodarstva i prihvaćanja stočarstva zasnovana na domesticiranim životinjama.

⁸ Bailey 2000: 78–82, zaključci se uglavnom temelje na istraživanjima K. D. Vitelli najdubljih keramičkih naslaga špilje Franchthi.

type frequently mentioned, but never authoritatively confirmed at eastern Adriatic sites (Prendi 1990: 401–403).⁷ Stratum C/lower portion, at the Sidari site (Sordinas 1968: 401, 406 ff.), where simple and largely undecorated ceramics were found, is divided from stratum C/upper portion, with Impressed Ware materials, by a thick sterile layer, while the position of the island of Corfu suggests a possible route whereby these ceramics came to Korčula, regardless of whether it is a navigation along the eastern or Apulian coasts. The fragments from Vela Spila are exceptionally well-preserved, as conditions for their preservation in the cave are incomparably better than those at open sites such as Sidari. The total quantity of fragments in strata no. 8 and 7, and even in stratum no. 6 (table 1), imply the gradual and long-lasting acceptance of ceramics.

The monochrome vessel fragment from stratum 7 does not mean that ceramics played an important role in the life of this population. It is more likely evidence of the process of slow acceptance of a new media, and there are hypotheses on the original use of pottery for other, not entirely practical purposes.⁸

The differences between the remains of material culture in sediments 16 through 9 and those in sediments 8 and 7 appear primarily in the fact that in the more recent strata there is a gradual advance of the new, Neolithic technology of knapping stone and sporadic use of ceramic vessels. A change in a larger number of examples was only observed in stratum 6, and in 5 and 4, whereas previously it was only present in individual items intermixed with those more numerous, made using earlier technology. In this manner, strata 8 and 7 are a link, something of an introduction to the Neolithic, i.e. the transition period between the previously (for now) poorly defined Mesolithic production of flint implements and the well known, relatively rich Neolithic production characterised primarily by long blades with trapezoidal cross-sections.

The role of strata 8 and 7 as a period in which a gradual affirmation of the Neolithic economic model emerged with the parallel casting off of the older model, characteristic of the Mesolithic, is apparent even in the food remains of animal origin. So far, besides numerous

⁷ Müller (1988a: 120) ties the monochrome ceramics from Greece (Tesalia – Corfu) with the "ear-plug" from Vrbica (see: Brusić 1995: 8–9, 18) and the monochrome ceramics from stratum I in Škarin Samograd. For Škarin Samograd and the arrangement of the sites with monochrome ceramics, see: Müller 1988: 220, T. 1 (marked with triangle) and 233–234.

⁸ Bailey 2000: 78–82, conclusions largely based on the research of K. D. Vitelli into the deepest ceramic sediments of the Franchthi cave.

Kvalitetno objašnjenje vrlo niska stratigrafskoga položaja ostataka ovaca ili koza (počevši od sloja br. 8, čak i od sloja br. 9) još nam nije potpuno poznato. Nalaz kostiju ovce u Veloj spili 1998. g. (sonda jug: Čečuk & Radić 2005: sl. 7) u nedvojbeno mezolitičkim naslagama pokušao se, prema sugestijama autora ovoga rada, objasniti posljedicom: “nepreciznog iskapanja ili propadanja iz neolitičkog sloja...”, ali je ostavljena i “mogućnost da se na samom kraju mezolitika uzgajala ovca” (Kužir *et al.* 2005: 297). Nakon saznanja dobivenih analizom materijala iz sonde *h x 5–7* čini nam se da je nalaz kostiju ovce u pred-*impresso*-naslagama neupitan. Razlog se može kriti u procesu lokalnog (istočnojadranskog) prihvaćanja tih životinja već tijekom mezolitika (usp. Malez 1975: 160), ali u isto vrijeme manja količina kostiju koza i/ili ovaca u predneolitičkim slojevima može upućivati na rezultate razmjene, konzumiranje (za mezolitičku populaciju) prestižnih prehrambenih proizvoda, ili na određen način čak i na posjedovanje statusnih simbola (Zvelebil & Lille 2000: 65).

Postavlja se i pitanje datacije i vremena trajanja slojeva 8 i 7. U naslagama Vele spile jasno su definirana sva tri *impresso*-razvojna stupnja i mlađi mezolitički stupanj, a među njima nije uočen prekid kontinuiteta naseljavanja ni izrazitije slabljenje intenziteta života (Čečuk & Radić 2005: 49–108). Sadržaj slojeva br. 8 i 7 sugerira potrebu preciznijega definiranja točke dodira dviju epoha, odnosno napuštanje nekadašnjega kriterija prema kojem se pojava keramike redovito izjednačavala s početkom neolitika. Iz naslaga koje bi prema dosadašnjem mišljenju odgovarale vremenu kraja mezolitika postoji samo nekoliko C^{14} -datuma. Prvi među njima je VERA br. 2340, drveni ugljen, 7200. ± 30 BP (*ibid.*: 60), a uzorak za analizu uzet je iz tzv. podnice (*ibid.*: 51), koja odgovara slojevima br. 8 i 9 iz sonde *h x 5–7/2004*. Iz perspektive sonde *h x 5–7* postoji znatna vjerojatnost da je uzorak uzet ne iz najgornjega mezolitičkog sloja, nego iz sloja “prijelaznoga razdoblja”, pa bi se spomenuti kalibrirani datum (6170–6130. BC, 12,9 % i 6100–5990. BC, 82,5 %) donekle uklapao u ostale poznate datume iz tog razdoblja. Drugi uzorak iz istoga sloja dao je praktično isti datum (VERA br. 2342, životinjska kost, 7175. BP, odnosno 6160–5920. BC). Na isti način valja promatrati i datum (Zg. br. 1967, 7300. ± 120 BP) (*ibid.*: 62: n. 2), jer je uzorak za analizu uzet iz najdonjega sloja u kojem se pojavio ikakav keramički ulomak. Datum koji najbolje odgovara početku *impresso*-neolitika na ovome dijelu Jadrana prema našem mišljenju bio bi onaj sa Sušca (ETH-22912; 6925. ± 65 BP) (v. Bass 2004). Na tom otoku nađeni materijal odgovara ako ne samomu početku, onda u svakom slučaju rano-me stupnju *impresso*-kulture.

fish bones in these strata, the remains of a few foxes, several roes and a smaller number of sheep and goat bones in both strata have been discerned. Previously it was noted that at least one goat or sheep bone was found in stratum no. 9, probably in its upper portion, immediately above the “floor”.

Regardless of the small researched surface and the limited sampling, it is interesting to note that shellfish and snails as a dietary component in strata 8 and 7 are used much less than in earlier periods, but nonetheless more than in the Impressed Ware Neolithic (see table 2). The constant decline in the number of shellfish, snails and also fish, accompanied by the gradual increase in the share of domesticated animals, shows a change in the dietary structure and methods for procuring food, i.e. a process of abandoning the Mesolithic fishing-hunting-gathering economy and acceptance of livestock husbandry based on domesticated animals.

There still is no complete, quality explanation for the very low stratigraphic position of the remains of sheep or goats (beginning with stratum no. 8, and even with stratum no. 9). The discovery of sheep bones in Vela Spila in 1998 (south test pit: Čečuk & Radić 2005: fig. 7) in unambiguously Mesolithic sediments has been, based on the suggestions of this author, subject to an attempted explanation as a consequence of: “... imprecise excavation or penetration from the Neolithic strata...”, even though the possibility has been left open “...that sheep were raised at the very end of the Mesolithic” (Kužir *et al.* 2005: 297). After the knowledge gained from the analysis of materials from test pit *h x 5–7*, it would appear that the find of bones in the pre-Impressed Ware sediments cannot be doubted. The reason may lie in the process of local (eastern Adriatic) acceptance of these animals already during the Mesolithic (cf. Malez 1975: 160), even though the simultaneously smaller quantity of goat and/or sheep bones in the pre-Neolithic sediments may indicate the results of exchange, consumption of prestige (for a Mesolithic population) food products, or, in a certain way, possession of status symbols (Zvelebil & Lille 2000: 65).

The question also arises of dating and the duration of strata 8 and 7. All three Impressed Ware developmental stages and the later Mesolithic phase have been clearly defined in the Vela Spila sediments, and no interruption in the continuity of habitation nor any reduction in the intensity of life between them have been observed (Čečuk & Radić 2005: 49–108). The content of strata no. 8 and 7 suggests the need to more precisely define the point of contact between the two epochs, i.e. the abandonment of the former criteria whereby the appearance of ceramics is equated with the beginning of the Neolithic.

Prijelazno (ili uvodno) razdoblje moglo je trajati i relativno dugo, jer kontakt najvjerojatnije nije ostvaren seobama, a more je sprečavalo neposredan doticaj, pa je nekoliko naraštaja minimalan period za postupno prihvaćanje većine elemenata potpuno nova gospodarskog modela. Vrijeme potrebno da se neolitički utjecaji prošire od lokaliteta Sidari (Krf) do Vele spile (oko 500 km) temeljem postojećih C¹⁴-datuma procijenjeno je na oko 100 godina (usp. Forenbaher & Miracle 2005: 521).

Smjer kojim tekovine neolitika dolaze na Korčulu još uvijek nije do kraja definiran. Tijekom proučavanja ovoga problema postojalo je više inačica rješenja, pa čak i ona po kojoj je najraniji neolitik u Apuliji istočnojadranskoga podrijetla. Ipak, brojni C¹⁴-datumi dobiveni u nekoliko zadnjih desetljeća daju određenu, prije svega kronološku, prednost južnoj Italiji, Krfu, odnosno istočnoj obali Otranta (usp. Müller 1994: 195–203, karta na str. 234; Brusić 1995: 10; Bass 2004: 54–55; Forenbaher & Miracle 2005: 519–524) te se na taj način kao najvjerojatnija nameće morsko-kopnena ruta Krf – Apulija – Gargano – Palagruža – Sušac – Korčula.⁹ Novija istraživanja na otočićima Palagruži i Sušcu samo potkrepljuju ta saznanja, a poznato je da su morski putovi i inače uobičajen način širenja *impresso*-neolitika Sredozemljem (Price 2000: 11, i više radova u istom zborniku).

Zanimljivo je razmatranje položaja Vele spile u procesu neolitizacije istočne obale Jadrana, odnosno način kako se neolitik, nov način proizvodnje i društvenih odnosa, širi na istočnu obalu. Teorija poznaje i razlikuje dva pristupa i cio niz modela,¹⁰ a zbog sve većega broja recentnih istraživanja okvirni rješenja ipak se naziru sve jasnije (usp. Forenbaher & Miracle 2005).

Mezolitičko stanovništvo Sredozemlja vladalo je pučinskom plovidbom. U prilog tomu spomenimo samo opsidijan s Melosa u špilji Franchthi te poznate činjenice da su mezolitički pomorci naselili Cipar, Sardiniju, Korziku, Baleare... Razmjerno stabilna i dugotrajna mezolitska populacija Vele spile egzistencijalno je usko povezana s morem, odakle dobiva većinu hrane (v. tab. 2). Pučinska plovidba, pa i navigacija između dviju jadranskih obala, znatno je starija od vremena početaka neolitizacije (Radić & Lugović 2004), a u prilog tomu ide i činjenica da je u sondi *h x 5–7* nađeno više ulomaka palagruškoga rožnjaka.

⁹ Drugi vjerojatan pravac neolitizacije jest onaj morskim putem uz albansku obalu pa dalje uz istočnu obalu Jadrana, a određenu ulogu je mogao imati i smjer iz pravca Grčke, preko albanskih planina do Jadrana. Više o toj temi v. kod Forenbaher & Miracle 2005.

¹⁰ Kratak pregled kod Budja 1993; Barnett 2000: 99–101 i dalje; Tringham 2000: 31 i dalje; Zvelebil & Lille 2000: 62 i dalje; Spataro 2002: 13–15; Forenbaher & Miracle 2005: 523–524.

There are only a few C¹⁴ dates from the sediments which, according to current views, correspond to the end of the Mesolithic. The first among them is VERA no. 2340, charcoal, 7200 ± 30 BP (*Ibid.*: 60), and the sample for analysis was taken from the so-called floor (*Ibid.*: 51), which corresponds to strata no. 8 and 9 from test pit *h x 5–7/2004*. From the perspective of test pit *h x 5–7* there is a high probability that the sample was taken not from the uppermost Mesolithic stratum, but rather from the “transition period” stratum, so that the aforementioned calibrated date (6170–6130 BC, 12.9% and 6100–5990 BC, 82.5%) somewhat corresponds to the other known dates from this period. Another sample from the same stratum generated practically the same date (VERA no. 2342, animal bone, 7175 BP, or 6160–5920 BC). The date should be considered in the same manner (Zg. no. 1967, 7300 ± 120 BP) (*Ibid.* 62: n. 2), because the sample for analysis was taken from the lowest stratum in which any kind of ceramic fragment appeared. The date that best corresponds to the beginning of the Impressed Ware Neolithic in this part of the Adriatic would be, in this author’s opinion, that from Sušac (ETH-22912; 6925 ± 65 BP) (see: Bass 2004). On this island the material found corresponds, if not to the very beginning, then in any case the early stage of Impressed Ware culture.

The transitional (or introductory) period may have lasted for a relatively long time, because contacts probably did not occur during migrations, while the sea prevented direct contacts, so several generations is the minimum period for acceptance of a majority of the elements of an entirely new economic model. The time required for Neolithic influences to expand from the Sidari site (Corfu) to Vela Spila (approximately 500 km) based on the existing C¹⁴ date has been estimated at 100 years (cf. Forenbaher & Miracle 2005: 521).

The direction whence Neolithic aspects arrived on Korčula has still not been entirely determined. During study of this problem, there were several theories, even one whereby the earliest Neolithic in Apulia is eastern Adriatic in origin. Nonetheless, numerous C¹⁴ dates obtained in recent decades accord a certain, primarily chronological, preference to southern Italy, Corfu, or the eastern coast of Otranto (cf. Müller 1994: 195–203, map on p. 234; Brusić 1995: 10; Bass 2004: 54–55; Forenbaher & Miracle 2005: 519–524) so that in this manner the most probably route is Corfu–Apulia–Gargano–Palagruža–Sušac–Korčula.⁹ More recent research

⁹ Another probable Neolithisation route is via the Albanian coast and on to the eastern Adriatic coast, while a certain role may have been played by the route from Greece, across the Albanian mountains to the Adriatic. For more on this theme, see: Forenbaher & Miracle 2005.

Čini nam se stoga opravdanim pretpostaviti da su drevni pomorci iz Vele spile, u širem smislu s istočne obale, dobro poznavali i bar povremeno posjećivali zapadnu obalu. U trenutku kad se u Apuliji pojavljuju prvi počeci neolitika, odnosno tehnologija i način gospodarenja svojstven neolitiku, ti se kontakti ne prekidaju, naprotiv mezolitički pomorci aktivno sudjeluju u procesu postupna preuzimanja i prenošenja neolitičkih tekovina. Za najranijih doticaja, u "prvome valu", njih zanima prije svega nov, sofisticiran način cijepanja kamena, a usputno na istočnu obalu prenose i poneku keramičku posudu, odnosno njezin nama danas nepoznat sadržaj.

Snažnijom neolitizacijom same Apulije, ali i "otočnoga mosta", mezolitičke tradicije postupno nestaju, pa u "drugome valu", npr. odlično prezentiranu na Sušcu (Bass 1998) i u našem sloju 6, na istočnu obalu prelazi čitav "neolitički paket", tj. sve u starijem neolitiku na tim prostorima uzgajane domaće životinje, *impresso*-keramika, glačano oruđe, a vjerojatno i poljodjelstvo.¹¹ Može li se u spomenutome procesu vidjeti i seoba pojedinaca, odnosno skupina nositelja *impresso*-kulture koji bi sa zapadne na istočnu obalu prenijeli cjelovit "neolitički paket", zasad je još uvijek teško pretpostaviti. Vjerojatnija je mogućnost da mezolitičko stanovništvo postupno, tijekom nekoliko naraštaja, u potpunosti preuzima tekovine neolitika. Takva teorija, potpomognuta mogućom razmjenom nevjesta, tj. egzogamnim brakom, čini nam se vjerojatnijom (usp. Zvelebil & Lille 2000: 65).

SLOJEVI OD 6 DO 4

Naslage na dubini od -411 do -374 cm, ukupne debljine 37 cm, pripadaju starijem neolitiku, odnosno *impresso*-kulturnoj skupini.

Nađena keramika različite je debljine stijenki (od 0,4 do 1,4 cm), a struktura i izgled presjeka u potpunosti odgovaraju posudama s ostalih lokaliteta *impresso*-kulture. Temeljna supstanca miješana je s grubo mljevenim dodacima, odnosno s kamenčićima promjera 0,1–0,3 cm, iznimno i više centimetara, ulomci su čvrsti, homogeni i dobro očuvani. Vanjska je stijenka redovito premazana, donekle zaglađena, ali i kroz tako obrađenu površinu mjestimice proviruju kamenčići, posebno na unutra-

¹¹ Analize ugljena i analize polena su u tijeku, obavlja ih Metka Culiberg iz Instituta za biologiju, SAZU, Ljubljana, a rezultati možda mogu pokazati vrijeme početka poljodjelstva, odnosno odgovoriti na pitanje jesu li počeci ratarstva istodobni s počecima uzgoja domaćih životinja ili su nešto kasniji. U širem prostoru Vele spile, prije svega u polju Blato, postoje solidni uvjeti za poljodjelstvo.

on the islets of Palagruža and Sušac has only bolstered this knowledge, and it is known that maritime routes were otherwise a customary way for dissemination of the Impressed Ware Neolithic throughout the Mediterranean (Price 2000: 11, and several other papers in the same proceedings).

It is interesting to consider the location of Vela Spila in the process of Neolithisation of the eastern Adriatic coast, and the manner whereby the Neolithic, entailing new production methods and social relations, spread on the eastern coast. The theory recognises and distinguishes between two approaches and an entire series of models,¹⁰ and thanks to the increasing number of recent research, the contours of the solution are becoming increasingly clear (cf. Forenbaher & Miracle 2005).

The Mesolithic population of the Mediterranean had mastered oversea navigation. Evidence of this is the obsidian from Melos in Franchthi Cave, and the fact that Mesolithic seafarers settled Cyprus, Sardinia, Corsica and the Balearic Islands. The relatively stable and long-lasting Mesolithic population of Vela Spila was closely existentially linked to the sea, whence they derived most of their food (see table 2). Oversea navigation, and even navigation between two Adriatic islands, is considerably older than the beginnings of Neolithisation (Radić & Lugović 2004), and this is backed by the fact that in test pit *h x 5–7* several fragments of Palagruža chert were found. It therefore seems justifiable to assume that the ancient seafarers from Vela Spila, and from the eastern coast in the broader sense, were familiar with and at least visited the western coast. When the very beginning of the Neolithic appeared in Apulia, i.e. when the technology and economy characteristic of the Neolithic appeared, these contacts did not end. On the contrary, Mesolithic seafarers actively participated in the process of gradual assumption and transfer of Neolithic advances. In the earliest contacts, in the "first wave", they were above all interested in the new, sophisticated method of knapping stone, and incidentally carried an occasional ceramic vessel, and its today unknown contents, to the eastern coast.

With the more intense Neolithisation of Apulia itself, and also the "island bridge", Mesolithic traditions gradually disappear, so in the "second wave", that is, for example, so exquisitely presented on Sušac (Bass 1998) and in our stratum 6, an entire "Neolithic package", i.e. everything of the earlier

¹⁰ For a short overview, see: Budja 1993; Barnett 2000: 99–101 and *passim*; Tringham 2000: 31 and *passim*; Zvelebil & Lille 2000: 62 and *passim*; Spataro 2002: 13–15; Forenbaher & Miracle 2005: 523–524.

šnjoj stijenci. Boja je dosta ujednačena, prevladavaju smeđi tonovi. Presjek je u dijelu bližem vanjskoj strani uglavnom svjetliji, a unutrašnji je tamniji, sive ili crne boje. Prepoznate su samo inačice širokih i dubokih (poluloptastih) zdjela, a dio ulomaka pripada standardnim dubokim loncima. Zanimljivo je da je keramika iz starijih naslaga pažljivije izrađena, čvršća i općenito kvalitetnija od one mlađe. Količina ulomaka znatno je veća u mlađim slojevima, a u onima starijima zastupljena je slabije (v. tab. 1).

Ulomci ukrašeni kombiniranjem uboda i ureza (T. 1: 3) te onaj ukrašen kombiniranjem ureza i utisaka (T. 1: 2) svojstveni su samome završetku *impresso*-kulture. Kod ovog drugog fragmenta do izražaja dolazi ukrasni motiv organiziran u metopama ispunjenim vodoravno posloženim nizovima traka od kojih je svaka nastala ponavljanjem kratkih, okomitih ureza.¹² I ostali ulomci iz sloja 4, svojim izgledom i ukrasom uklapaju se u završni *impresso*-stupanj.

Često korištenje tehnike urezivanja (T. 1: 4–5), ali i vodoravnih traka nastalih nizanjem kratkih okomitih utisaka (T. 1: 6–7), odrednice su srednjega starijeneolitičkog stupnja, iako se slični gusti utisci mogu javiti i nešto ranije (Čečuk & Radić 2005: 74–76).

Oštećen, 3,2 cm dug, model životinjskoga tijela cilindrična oblika (T. 1: 8), bez stražnjih noga i bez cijela prednjega dijela (većine prednjih noga te glave s vratom) pripada dosta realnome plastičnom prikazu neke životinje, možda svinje. Kao koincidenciju valja spomenuti da je među osteološkim materijalom u sloju br. 4 nađen i dio svinje. Životinjske figurice ili općenito plastične izrađevine dosad u Veloj spili nisu nalažene, a nisu nam poznate ni na ostalim istočnojadranskim lokalitetima *impresso*-kulture.

U starijeneolitičkim slojevima (od 6 do 4) nađeno je sedamdesetak kremenih predmeta, od čega su velika većina krhotine, odbojci i sitan otpad. Prepoznato je i 11 ulomaka neolitičkih sječiva (noževa), češće trapezasta, a rjeđe trokutasta presjeka. Jedno takvo sječivo nađeno je i u sloju br. 8 (T. 2: 12). Tragovi obradbe tek su sporadični, a tragovi korištenja vrlo česti (sjaj i mikrofrakture na rubu alatke). Od ostalog oruđa treba spomenuti dvije strugalice te osobito tri alatke strmo obrađenih bočnih stranica (T. 2: 5–7). Ti predmeti izrazito strme, izgleda mjestimično i suprotne obradbe, završavaju šiljatim vrhom pa odgovaraju svrdlima, ali nije isključena ni neka druga namjena. Takve alatke dosad su vrlo rijetke u istočnojadranskome ranom neolitiku, a treba istaknuti njihovu sličnost Sipontiano-tipu obradbe kamena korištenu tijekom starijeg apulijskog neolitika,

¹² Motiv je vrlo sličan kao kod Čečuk & Radić 2005: T. 23: 2–4, 6, T. 26: 14, ali na ulomku T. 1: 2 dosta je pojednostavljen i tehnički slabije izveden.

Neolithic in this region, crossed over to the eastern coast: breeding of domesticated animals, Impressed Ware ceramics, polished implements, and probably agriculture as well.¹¹ Currently it is still difficult to speculate as to whether this process can also be seen as a migration of individuals or groups of carriers of Impressed Ware culture who conveyed a comprehensive “Neolithic package” from the western to the eastern coast of the Adriatic. A more likely possibility is that the Mesolithic population gradually, over several generations, entirely assumed the achievements of the Neolithic. Such a theory, supplemented by the possibility of exogamous marriages, seems probable (cf. Zvelebil & Lille 2000: 65).

STRATA 6 TO 4

Sediments at depths from -411 to -374 cm, with a total thickness of 37 cm, belong to the earlier Neolithic, i.e. the Impressed Ware culture group.

The ceramics found have sides of varying thickness (from 0.4 to 1.4 cm), while the structure and appearance of the cross-sections completely correspond to other Impressed Ware culture sites. The basic substance is mixed with coarsely ground additions, i.e. stones with diameters ranging from 0.1 to 0.3 cm (with some larger exceptions); the fragments are firm, homogenous and well preserved. The external side is regularly coated, and somewhat polished, even though small stones protrude at places on this surface, especially on the inside. The colour is quite uniform, brown tones tend to predominate. The cross-section is generally lighter at the portion near the external side, and darker near the internal side, either grey or black. Only variants of broad and deep (semi-spherical) bowls have been recognised, and part of the fragments are from standard deep pots. It is interesting that the ceramics from the older sediments are carefully made, firmer and generally higher quality than those from later sediments. The quantity of fragments is considerably greater in the more recent sediments, and lower in the older sediments (see table 1).

Fragments decorated by a combination of punctures and incisions (T. 1: 3) and by a combination of incisions and imprints (T. 1: 2) are characteristic only of the end of Impressed Ware culture. On the second

¹¹ Analysis of charcoal and pollen are under way; it is being conducted by Metka Culiberg from the Biology Institute, Slovenian Academy of Arts and Science, Ljubljana, and the results may show the time at which agriculture began, i.e. it may answer the question of whether the beginnings of agriculture coincided with the beginning of livestock breeding or if it came somewhat later. In the wider area around Vela spila, in Blato field above all, sound conditions for agriculture exist.

odnosno specifičnim “kremenim šiljcima” iz lokaliteta Coppa Nevigata (Batović 1966: 126–127; Puglisi 1955: 26–35, T. 6–8). Kao jedan od razloga razvijene transjadranske plovidbe spominje se nabava, odnosno razmjena sirovine i gotovog oruđa. Stanje na prometno važnom otoku Sušcu, s tisućama kremenih i opsidijanskih artefakata te dijelovima glačanih sjekirica i drugih kamenih alatka razasutih po površini, ide u prilog toj tezi, a bogata apeninska ležišta – npr. samo na Garganu poznato je 26 rudnika kремена, od kojih se La Defensola iskorištava barem od šestog milenija (Spataro 2002: 11) – čine je smislenom. J. Robb i R. Farr (Robb & Farr 2005: 28 i dalje) srednju Dalmaciju uključuju u zonu kojom cirkulira garganski kremen i liparski opsidijan. Uzimajući u obzir blizinu Gargana i poznavajući razvijenu transjadransku plovidbu tijekom starijega neolitika, ali i ranije,¹³ pojava elemenata Sipontiano-obradbe kamena na našoj obali sasvim je očekivana (usp. Bass 1998: 171, sl. 4).¹⁴

Glačani predmeti zastupljeni su jedino kalupastim klinom (3,5 x 1,2 x 0,9 cm). Zelene je boje, sječivo je dobro sačuvano, a nedostaje gornji dio odlomljen uslijed udaranja po čelu oruđa (T. 2: 1).

Od koštanih oruđa poznate su samo dvije fino obrađene igle (T. 1: 9–10).

Prehrana stanovništva u neolitiku u odnosu na onu poznatu iz paleolitika i mezolitika doživljava znatne, a u nekim segmentima i sveobuhvatne promjene. Školjkaši, morski i kopneni puževi svode se na redovito korištene, ali u sastavu prehrane kvantitativno sasvim sporedne namirnice (tab. 1 i 2). Slično je i s ribama, čiji su ostaci u naslagama od br. 4 do br. 6 vrlo rijetki, odnosno ribe su poznate, ali također slabo korištene namirnice.

Lovne životinje u prehrani starijega neolitika sudjeluju samo simbolično, zapravo njihovi ostaci u naslagama od br. 6 do 4. u sondi h x 5–7 nisu ni nađeni, pa se može reći da lov zauzima još minorniju ulogu od one naslijeđene iz mezolitika. Iznimka su ostaci nekoliko lisica i više ptica koji ne utječu bitnije na strukturu prehrane. Razlog je toj situaciji apsolutna dominacija uzgajanih životinja, ponajprije koza i ovaca, a u sloju br. 4 zabilježena je i jedna svinja,

¹³ Novija terenska istraživanja autora ovoga članka i kolege Z. Perhoča pokazala su da se u radijusu od 3–4 km od Vele spile nalaze barem tri ležišta mahom vrlo kvalitetne sirovine, za neke od kojih smo sigurni da su bila korištena tijekom mezolitika i neolitika. Očekujemo da će buduća istraživanja Z. Perhoča donijeti više spoznaja o korištenim ležištima na širem prostoru i alatima napravljenim od sirovina iz tih ležišta.

¹⁴ U naslagama Vele spile nije nađena veća količina školjaka *cardium* i sličnih, za koje se u Coppa Nevigati pretpostavlja da su povezane uz kremene šiljke, ali ovi su se mogli upotrebljavati za otvaranje kamenica ili za desetke drugih korisnih radnja.

fragment, the prominent decorative motif consists of metopes filled with horizontal rows of lines of which each emerged through the repetition of short, vertical incisions.¹² The remaining fragments from stratum 4 also correspond to the final Impressed Ware phase in terms of appearance and decoration.

The frequent use of incision techniques (T. 1: 4–5), and horizontal lines made by rows of short vertical imprints (T. 1: 6–7), is a feature of the middle Early Neolithic phase, although similar dense imprints may have appeared somewhat earlier (Čečuk & Radić 2005: 74–76).

The damaged, 3.2 cm long, model of an animal body with cylindrical form (T. 1: 8), lacking hind legs and missing the entire front portion (most of the front legs and the head and neck) is a rather realistic sculpted depiction of an animal, perhaps a pig. Coincidentally, part of a pig was found among the osteological materials in stratum 4. Animal figurines or sculpted items in general were not otherwise found in Vela Spila, and neither are any known from other eastern Adriatic Impressed Ware sites.

In the Early Neolithic sediments (from 6 to 4), approximately seventy flint items were found, of which by far most are débitage, flakes and tiny refuse. Also recognised were eleven fragments of Neolithic blades (knives), with trapezoidal (more common) and triangular (rarer) cross-sections. One such blade was found in stratum no. 8 (T. 2: 12). Traces of production are only sporadic, and traces of use are very frequent (shine and micro-fractures on edge of implements). Among the remaining implements, worth mentioning are two scrapers and, in particular, three tools with steeply retouched lateral sides (T. 2: 5–7). These items are exceptionally steep, with the appearance of converse retouching at places, and they end with a sharp tip, so that they correspond to bores, although other uses cannot be excluded. Such tools are so far very rare in the eastern Adriatic Early Neolithic, and it is worthwhile emphasising their similarity to Sipontiano-type stonework used during the earlier Apulia Neolithic, i.e. the specific “flint picks” from the Coppa Nevigata site (Batović 1966: 126–127; Puglisi 1955: 26–35, T. 6–8). Trade, involving the exchange of raw materials and finished implements, is mentioned as one of the reasons for development of trans-Adriatic navigation. The situation on the vital transit island of Sušac, with thousands of flint and obsidian artefacts and parts of polished axes and other stone tools scattered over the surface, confirm this theory,

¹² The motif is very similar as in Čečuk & Radić 2005: T. 23: 2–4, 6, T. 26: 14, but on fragment T. 1: 2 it is quite simplified and technically more poorly rendered.

| Sloj | ogrci | Priljepci | kamenice | kopneni puževi | dagnje | mušule | volak kvr. | vretenača | kokica | Ukupno | Ostalo |
|----------------|------------------|-------------------|-----------------------|------------------|-----------------------|------------------|--------------------------|---------------------------|---------------------------|--------------|--------------------------|
| <i>Stratum</i> | <i>Trochidae</i> | <i>Patellidae</i> | <i>Ostrea edulisi</i> | <i>Helix sp.</i> | <i>Mytilus gallo.</i> | <i>Arca Noae</i> | <i>Phillonotus trun.</i> | <i>Cerithium vulgatum</i> | <i>Columbella rustica</i> | <i>Total</i> | <i>Other</i> |
| 4 | 10 | 21 | 9 | 2 | 2 | 0 | 0 | 6 | 0 | 50 | |
| 5 | 7 | 16 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 31 | 1 tulpa lurida |
| 6 | 38 | 81 | 1 | 4 | 2 | 0 | 4 | 23 | 0 | 153 | |
| 7 | 40 | 95 | 2 | 5 | 0 | 0 | 2 | 20 | 0 | 164 | |
| 8 | 128 | 202 | 1 | 4 | 1 | 0 | 8 | 22 | 1 | 367 | |
| 9 | 575 | 978 | 9 | 40 | 18 | 9 | 19 | 86 | 12 | 1746 | 1 spondilus 1 periska |
| 10 | 287 | 318 | 0 | 71 | 5 | 7 | 5 | 13 | 0 | 706 | 1 kadium 1 grmalj |
| 11 | 190 | 302 | 1 | 105 | 5 | 11 | 3 | 11 | 1 | 629 | |
| 12 | 183 | 276 | 0 | 742 | 12 | 1 | 4 | 0 | 1 | 1219 | 1 tritonova truba |
| 13 | 120 | 162 | 0 | 208 | 16 | 0 | 0 | 1 | 0 | 507 | |
| 14 | 10 | 10 | 0 | 49 | 2 | 0 | 0 | 0 | 1 | 72 | |
| 15 | 18 | 17 | 0 | 43 | 5 | 0 | 0 | 0 | 0 | 83 | |
| 16 | 1 | 6 | 0 | 9 | 6 | 0 | 0 | 0 | 0 | 22 | |
| 17 | 1 | 3 | 0 | 10 | 0 | 0 | 0 | 0 | 1 | 15 | |
| 18 | 2 | 1 | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 16 | |
| 19 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 1 kadium (s rupom) |
| | 1610 | 2489 | 23 | 1306 | 80 | 28 | 46 | 184 | 27 | 5783 | |

Tablica 2. Školjkaši, morski i kopneni puževi razvrstani prema sloju u kojem su nađeni. Analiza je preliminarna pa nalazi uglavnom nisu razdvajani unutar obitelji kojoj pripadaju, npr. Trochidea, Patellidae, Helix sp. itd." (autor: D. Radić).

Table 2. Shellfish, sea and land shells classified by the stratum in which they were found. Analysis is preliminary so the finds are generally not classified within the families to which they belong, e.g. Trochidea, Patellidae, Helix sp., etc. (by D. Radić).

odnosno konstatiramo da koze i ovce, u slojevima 8 i 7 zastupljene manjim udjelom nego u sloju 6, čine pretežit dio prehrane.

Sloj br. 4 neposredno preslojava (u ovome radu neobjavljen) sloj br. 3, odnosno 2 i 1, u kojima se nalazi isključivo materijal starijega srednjoneolitičkog stupnja. Među njima nema miješanja (ni stratigrafskog ni keramografskog), ali moguće je uočiti određenu sličnost u izradbi posuda, i to isključivo onih grublje fature.

while the rich Apennine deposits—for example, twenty-six stone quarries are known in Gargano alone, and La Defensola has been in use since at least the sixth millennium BC (Spataro 2002: 11)—make this likely. J. Robb and R. Farr (Robb & Farr 2005: 28 and further) include central Dalmatia in the zone in which Gargano stone and Lipari obsidian circulated. Taking into account the proximity of Gargano and cognisant of developed trans-Adriatic navigation during the earlier Neolithic, and even before,¹³ the appearance of Sipontiano elements of stonework on the Croatian coast is entirely expected (cf. Bass 1998: 171, Fig. 4).¹⁴

¹³ More recent field research by this author and Z. Perho^ć has shown that within a 3-4 km radius from Vela Spila there are at least three deposits of largely high quality raw materials, and we are certain that some of these were used during the Mesolithic and Neolithic. We expect future research by Z. Perho^ć to produce more knowledge on the deposits used in the wider area and tools made from the materials from these deposits.

¹⁴ No significant quantity of cockle or similar shells were found in the sediments in Vela spila, which are associated with flint *picks* in Coppa Nevigata, but they may have been used to open oysters and for dozens of other useful tasks.

The only polished item is a mould-shaped wedge (3.5 x 1.2 x 0.9 cm). It is green, the blade is well preserved, although the upper portion, broken off by a blow to the implement, is missing (T. 2: 1).

Among the bone implements, there are only two finely retouched needles (T. 1: 9–10).

The diet of the population during the Neolithic, in comparison to what is known of the Paleolithic and Mesolithic, underwent considerable, and in some segments comprehensive change. Shellfish, sea and land snails were reduced to regularly used, but quantitatively entirely secondary foods (tables 1 and 2). The situation is similar with fish, as their remains in sediments no. 4 through 6 are very rare, i.e. they are a known, but also rarely used food item.

There is only a symbolic share of wild game in the diet of the earlier Neolithic; actually, in sediments no. 6 through 4 in test pit *h x* 5–7 their remains were not even found, so one can say that hunting played an even more minor role than that inherited from the Mesolithic. The exception is the remains of several foxes and several birds, which do not essentially influence the overall structure of diet. The reason for this situation is the absolute domination of domesticated animals, primarily goats and sheep, while one pig was even recorded in stratum no. 4. Goats and sheep, represented in a smaller share in strata 8 and 7 than in stratum 6, were the predominant component of the diet.

Stratum no. 4 is directly covered by strata no. 3, 2 and 1 (not analysed in this work), in which the finds exclusively encompass materials from the earlier Middle Neolithic. There is no intermingling among them (neither stratigraphic nor ceramographic), but it is possible to observe some similarity in the production of pottery, exclusively with coarse facture.

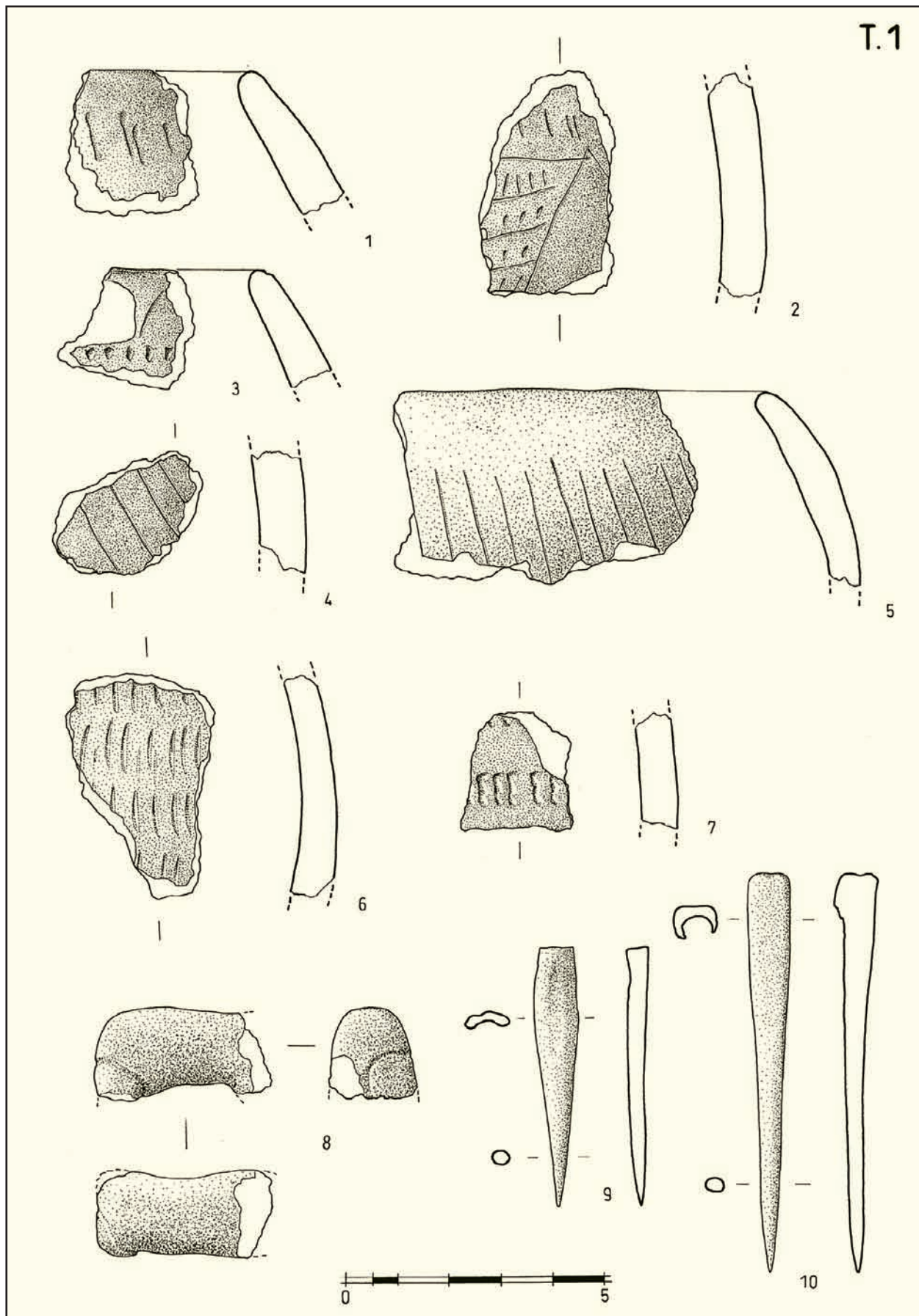


Tabla 1. (crtež: M. Perkić, 2005).

Plate 1. (drawing by M. Perkić, 2005).

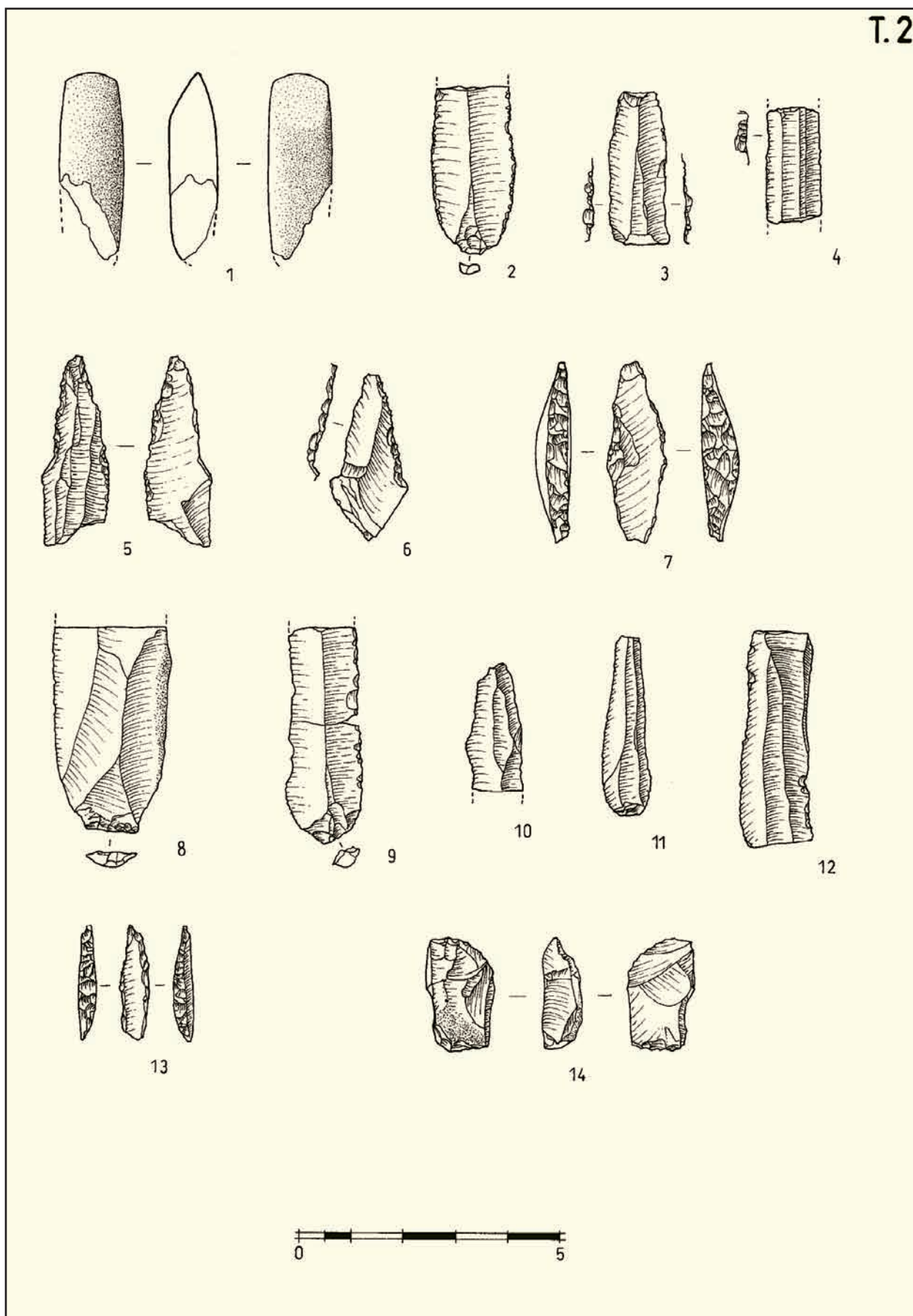


Tabla 2. (crtež: M. Perkić, 2005).

Plate 2. (drawing by M. Perkić, 2005).

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