Proces neolitizacije kot prehod h kmetovanju, prepoznan v mezolitskih kontekstih kraške Dinarske Slovenije?

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Izvleček

Avtor analizira arheološke podatke, na podlagi katerih Mihael Budja pojasnjuje proces neolitizacije in začetek kmetovanja na območju kraške Dinarske Slovenije že v poznem mezolitiku, vendar je tako stratigrafija kot interpretacija gradiva, na kateri temeljijo Budjevi sklepi, negotova.

Abstract

The author has analyzed archaeological data on the basis of which Mihael Budja advanced an explanation of the process of Neolithization and the beginning of farming in the karst region of Dinaric Slovenia as early as the late mesolithic. However the stratigraphy as well as the interpretation of the material on which Budja bases his conclusions are doubtful.

Poleg tujih razprav (Batović 1978; 1979; Biagi *et al.* 1993; Montagnari Kokelj 1993; Müller 1991; 1994), ki obravnavajo problematiko neolitizacije vzhodnega Jadrana, smo končno tudi Slovenci dobili sicer bolj teoretsko delo, v katerem Budja predstavi izredno zanimivo idejo "proces neolitizacije kraške Dinarske Slovenije, da je kot prehod h kmetovanju prepoznaven že v mezolitskih kontekstih" (Budja 1993).[1]

Budja nam za razumevanje tega procesa kot ključne podatke prikaže "najdbe iz mezolitske plasti 13" v Podmolu pri Kastelcu (Budja 1993, 177) in najdbo inciziva domače ovce ali koze iz mezolitskega najdišča Pod Črmukljo pri Šembijah (Budja 1993, 178). Iz mezolitske plasti Male Triglavce se posebej sklicuje na kosti "domače" svinje in "rožene kopače sekirastih oblik," ki "morda celo dokazujejo motično obdelavo zemlje" (Budja 1993, 178).

Ker so na ta način postali ti arheološki podatki nenadoma "zelo" pomembni in aktualni, sem jih sklenil (ponovno!) predstaviti arheološki publiki.

Na tej poti se bom najprej ustavil ob vprašanju mezolitika v spodmolu Podmol pri Kastelcu (Turk *et al.* 1993). Kot mezolitsko-neolitski skupek je bila označena plast 13 (debel ostrorobi grušč s primesjo rdečkaste ilovice), za katero avtorji navajajo, da verjetno predstavlja začetek serije še neraziskanih pleistocenskih sedimentov (Turk *et al.* 1993, 50,72,73).

Iz Acijevega spodmola poznamo plast, podobno plasti 13, ki je označena kot plast 3. Slednja stratigrafsko, z ostro prekinitvijo, sledi holocenski (neolitski) plasti 2 in je označena kot pleistocenska. V plasti 3 ni bil zaznan antropogeni vpliv. Edine najdbe so jelenove kosti (*Cervus elaphus*; Turk *et al.* 1992, 27).

Pleistocensko starost izkazuje podobna, 2 m debela plast iz spodmola pri vasi Črnotiče. V stratigrafskem zaporedju leži ta plast pod debelo nestrnjeno plastjo sige (Dirjec, Turk 1992, 204).

Plasti 13 iz Podmola pri Kastelcu sorodno plast poznamo tudi na Tržaškem krasu v jami Pečina na Leskovcu. "Več metrov debel sloj predstavlja začetek mezolitika v jami (plasti N, M, L, I, G)" (Cannarella, Cremonesi 1967, 291). Sloj se konča (v zaporedju nalaganja plasti) s plastjo G, v kateri so bili najdeni redki kulturni ostanki, ki jih

[1] Dr. Mitji Brodarju, Janezu Dirjecu, dr. Francetu Lebnu, Primožu Pavlinu in Ivanu Turku se najlepše zahvaljujem za pomoč in koristne informacije.

Cannarella in Cremonesi uvrščata v mezolitik (Cannarella, Cremonesi 1967, 286). V sondi iz leta 1961 v plasti G niso našli mezolitskih najdb (Cannarella, Cremonesi 1967, 284). Nad plastjo G je bogata mezolitska plast F; prekriva jo prva plast s keramiko E (Cannarella, Cremonesi 1967, 284,286). Plast E se kulturno navezuje na danilsko kulturo srednjega neolitika v Dalmaciji (Cannarella, Cremonesi 1967, 298; Leben 1967, 61, 77). Posamezni keramični fragmenti iz plasti E kulturno pripadajo impresso razvojni stopnji vzhodnojadranskega neolitika (Cannarella, Cremonesi 1967, 329; Batović 1975, 70, t. 1: 9; 2: 9-13; Leben 1975, 145, 146; Müller 1991, 329; 1994, 141,311).

Če se po tem kratkem uvodu povrnemo k Podmolu pri Kastelcu vidimo, da je tukajšnjo plast 13 mogoče interpretirti kot pleistocensko (Turk *et al.* 1993, 50, sl. 17) ali holocensko, vsekakor pa kot predneolitsko (Budja 1993, 177). Nad njo leži plast 12 brez arheoloških najdb in plast 11 (skupek M) z neolitsko keramiko, med katero sta tudi metličasto okrašena fragmenta (Turk *et al.* 1993, t. 1: 5,7), ki po Budji dokazujeta prisotnost stopnje A impresso kulture vzhodnega Jadrana v Podmolu (Budja 1993, 178).

Budja to sklepa na osnovi podatkov, ki nam jih ponuja Müller (Müller 1991, 317,327, Abb. 8). Iz njegove tabele 8 je razvidno, da je srednja vrednost datacije metličastega okrasa (Kamm- oder Besenstrich) postavljena na prehod iz stopnje A2 v stopnjo B1 impresso kulture vzhodnega Jadrana (Müller 1991, Abb. 8).

Iz jame Gudnja je metličasti okras po Müllerju datiran v stopnjo, ki je paralelna stopnji Zagora A (Müller 1994, 143) oz. stopnji A2, če smo bolj natančni (Müller 1994, 348, Abb. 74), torej vsekakor v zgodnjo impresso kulturo na vzhodnem Jadranu (Müller 1994, Abb. 74).

Nasprotno datira Batović "precej debel" sloj, v katerem je tudi metličasto okrašena keramika iz jame Gudnja, v 3. (najmlajšo) stopnjo impresso kulture na vzhodnem Jadranu (Batović 1979, 508,509).

Z najdišča Pokrovnik poznamo metličasto okrašeno keramiko, ki jo Müller datira v tamkajšnjo stopnjo Pokrovnik 2, kar ustreza stopnji B2 impresso kulture (Müller 1994, 117,119, Abb. 45,52,62,74).

Na najdišču Škarin samograd je tako okrašena keramika datirana v tamkajšnjo stopnjo Samograd 2, ki je "ozko povezana s stopnjo Pokrovnik 2" (Müller 1994, 126,127, Abb. 52,58,62,74). Enaka keramika je prisotna tudi v stopnji Samograd 3, to je v stopnji, ki se vključuje v razvoj danilske kulture na vzhodnem Jadranu (Müller 1994, 127, Abb. 52,62,74).

Na podlagi teh analogij ostaja še vedno odprto vprašanje datacije in interpretacije najdb iz skupka M, plast 11, najdišča Podmol pri Kastelcu na Petrinjskem krasu. O najstarejši stopnji zgodnjega neolitika v Podmolu, kot misli Budja, bi zaenkrat težko govorili (Budja 1993, 178).

Iz Podmola (še) ne poznamo mezolitskih najdb (Turk *et al.* 1993, 74).

Na Tržaškem krasu poznamo impresso keramiko, med drugim (Budja 1993, 175), tudi iz jame Pejca v Lašci (Leben 1967, 65,67, t. 19: 1-10; Leben 1967, t. 19: 11; op. avtorja). Kljub temu, da še vedno ostaja odprto vprašanje, ki ga je načel Korošec, o dvomljivem izvoru impresso keramike iz Pejce v Lašci (Korošec 1960, 8,9; Cannarella 1975-1977, 74; Müller 1994, 310,311), so raziskovalci enotnega mnenja, da lahko to keramiko povezujemo z najstarejšo stopnjo impresso kulture na vzhodnem Jadranu (Leben 1967, 65,67, t. 19: 1-10; Batović 1975, t. 1: 1-7,10,13; Müller 1994, 141). Če primerjam keramične najdbe iz skupka M v Podmolu s to zgodnjeneolitsko keramiko, ugotavljam, da bi bil lahko edini skupen element metličasto okrašen fragment keramike, ki je po mojem mnenju neupravičeno povezovan z "impresso keramiko" iz Pejce v Lašci (Leben 1967, 65,67, t. 19: 9; Müller 1994, 310,311).

Moser pri opisovanju keramike iz (verjetno!) najglobljih keramičnih plasti v Pejci v Lašci omenja tudi keramične fragmente, ki bi lahko ustrezali omenjenemu metličasto okrašenemu fragmentu: "...Einige schlecht gebrannte Gefässe zeigen von aussen deutlich die Spuren des gefransten Holzstäbchens,..." (Moser 1899, 77).

Korošec prvi povezuje metličasto okrašen fragment iz Pejce v Lašci s cardium keramiko (Korošec 1960, 8,9,13,14, t. 4: 7). Toda kljub pozornemu branju Koroščevega teksta, moram priznati, da mi datacija za metličasto okrašen fragment, ki jo ponuja Korošec, ni povsem jasna. Korošec v svojem delu večkrat navaja impreso keramiko, ki naj bi bila najdena v Pejci v Lašci. Najprej vključuje v sklop "cardium keramike" fragmente na tablah 2: 5; 4: 2-7; 5: 1-8,13 (Korošec 1960, 8, 9). Na fragmente s table 3: 2,3,7 je očitno pozabil (Korošec 1960, t. 3: 2,3,7); še več, nekatere izmed njih napačno povezuje s srednjeneolitsko danilsko kulturo (Korošec 1960, 9, t. 3: 2,3). Pri naslednji navedbi impresso keramike Korošec omenja keramične fragmente, ki so okrašeni z odtisi šila, tako da nastajajo vbodi (Korošec 1960, 13, t. 5: 3; 11: 6), odtisi prstov (Korošec 1960, 13, t. 4: 2), s krajšimi bodisi vertikalnimi ali

poševnimi, včasih celo polkrožnimi vrezi ali odtisi kakšnih pripomočkov (Korošec 1960, 13, t. 4: 3, 5,7; 5: 7,8,13), z nekakšno vrsto tako imenovanega ščipanega ornamenta (Korošec 1960, 13, t. 4: 4), z neenakomernimi vrezi v raznih smereh (Korošec 1960, 13, t. 4), z odtisi cardium in pectunculus školjke (Korošec 1960, 13, t. 5: 1,4), z manjšimi vdolbinami in odtisi nohtov ali kakšnega pripomočka, ki daje vtis odtisa nohta (Korošec 1960, 14, t. 5: 5) ter s horizontalnimi vrezi in manjšimi vdolbinami (Korošec 1960, 14, t. 5: 2). Kot "reminiscenca na impresso keramiko v neki mlajši, v našem primeru danilski kulturni skupini" je predstavljen fragment na tabli 2: 4 (Korošec 1960, 14). Kakor se da razbrati iz Koroščevega teksta, je metličasto okrašen fragment keramike iz Pejce v Lašci jasno datiran v impresso kulturo (Korošec 1960, 9,13,14, t. 4: 7). Takšno datacijo (nehote) ovrže sam Korošec, in sicer pri interpretiranju impresso keramičnega fragmenta na tabli 3: 7 (Korošec 1960, 13,21,23; Leben 1967, t. 19: 7; Batović 1975, t. 1: 6). Korošec najprej predvideva, da je fragment s table 3: 7 okrašen v barbotinski tehniki in to tudi izrecno poudari: "...s celo vrsto ornamentiranih fragmentov keramike v tako imenovani barbotinski tehniki, ki sicer pripadajo že bronasti dobi (t. 3: 7),..." (Korošec 1960, 13 op.41). Isti fragment (Korošec 1960, t. 3: 7) še enkrat datira v bronasto dobo in pri tem navaja opombo 111, na podlagi katere je razvidno, da je pravzaprav mislil na metličasto okrašen fragment s table 4: 7, ki temu opisu dejansko ustreza (Korošec 1960, 21,23, t. 4: 7).

Na osnovi nejasne Koroščeve datacije datira Leben po fotografiji sodeč nek drug metličasto okrašen fragment iz Pejce v Lašci, prav tako v impresso kulturo (Leben 1967, 65,67, t. 19: 9).

Müller povzema Koroščevo in Lebnovo datacijo za metličasto okrašen fragment (eden!) iz Pejce v Lašci (po Müllerju gre za "eine schlickgerauhte Scherbe"; Müller 1994, 311) in ga povezuje s podobnim fragmentom najdenim "v stratumu E" v Pečini na Leskovcu (Müller 1994, 141; Cannarella, Cremonesi 1967, fig. 5: 4). Po njegovem predstavljata ta dva fragmenta unikum, ki dokazuje: "...Gerade die (wahrscheinliche) Assoziation der Impresso-Keramik mit schlickgerauhten Scherben in beiden in Betracht kommenden Höhlen deutet darauf hin, daß die Funde anders als weiter südlich zu bewerten sind: Von Istrien bis Albanien findet sich mit zwei Ausnahmen keine schlickgerauhte Ware in Impresso-Fundstellen. Träger solcher Importe könnten z.B. spätmesolithische Gruppen sein, die, laut C^{14}-Daten, gleichzeitig mit dem ostadriatischen Frühneolithikum existieren" (Müller 1994, 142).

Iz upravičenih razlogov, ki jih bom tudi navedel, zavračam povezovanje teh dveh (ali treh?) metličasto okrašenih keramičnih fragmentov z impresso kulturo in tudi z mezolitskimi skupnostmi na Tržaškem krasu, kot to predlaga Müller. Cannarella in Cremonesi pišeta, da je bila metličasto okrašena keramika (bösenstrich) najdena v stratumu C Pečine na Leskovcu (Cannarella, Cremonesi 1967, 294, fig. 5: 4). Srednjeneolitski stratum E leži stratigrafsko pod sterilno plastjo, katero prekriva stratum C, ki glede na stratigrafijo predstavlja eneolitik v Pečini na Leskovcu (Cannarella, Cremonesi 1967, 298). Ustrezno analogijo za takšno metličasto okrašeno keramiko najdemo npr. tudi v eneolitskem sloju Podmola pri Kastelcu (skupek I; Turk *et al.* 1993, 59,74, t. 4: 23). Na podlagi nejasne startigrafije, ki jo predstavi Moser (Moser 1899, 76-78), in dobre stratigrafije v dveh drugih kraških jamah (Pečina na Leskovcu, Podmol pri Kastelcu; Cannarella, Cremonesi 1967; Turk *et al.* 1993) je mogoče sklepati, da je sporni metličasto okrašen fragment keramike (Leben 1967, t. 19: 9) kronološko neupravičeno enačen z impresso keramiko, ki je bila domnevno najdena v Pejci v Lašci.

Za neolitsko metličasto okraševanje posod iz Podmola (Turk *et al.* 1993, t. 1: 5,7,11-13; 2: 4) sem našel ustreznejše analogije v srednjeneolitskih plasteh Trhlovce (Leben 1976, t. 2: 30,31), Mitrove jame (Stacul 1971-1972, 45, fig. 10: 9) in Pečine v Gmajni (Leben 1967, t. 8: 5) ter v neolitskem skupku F v Acijevem spodmolu (Turk *et al.* 1992, t. 1: 22). Avtorji datirajo skupek F v srednji, npr. "danilske" prstanaste noge na posodah, ali mlajši neolitik (Turk *et al.* 1992, 32, t. 2: 3,4).

Iz jame Stenašca pri Nabrežini imamo najstarejše keramične najdbe že v mezolitski plasti 3a. Glede na radiokarbonske datacije, je keramika iz plasti 3a Stenašce mlajša od impresso keramike, "najdene" v Pejci v Lašci. To predpostavko gradim na podlagi primerjave C^{14} datacij impresso A stopnje vzhodnojadranskega neolitika (Müller 1991, 355; 1994, Abb. 75, 346-349) z radiokarbonsko datacijo ognjišča v plasti 3a Stenašce (Biagi *et al.* 1993, 48,49). Za mezolitsko plast 3a je značilna groba lončenina, med katero sodijo tudi deli loncev in skled debelih sten (Biagi *et al.* 1993, 48, sl. 4: 6,7). V Podmolu (skupek M) takšne keramike nimamo (Turk *et al.* 1993, t. 1: 1-7).

Za keramiko iz skupka M, ki je izdelana iz fine temno žgane gline, včasih tudi z glajeno površino (Turk *et al.* 1993, 57, t. 1: 1-4), sem našel

zelo dobre analogije v srednjeneolitski plasti 2a v Stenašci (Biagi *et al.* 1993, 49). Plast 2a stratigrafsko prekriva plast 3 oz. mezolitsko keramično plast 3a v Stenašci (Biagi *et al.* 1993, sl. 2). Keramika v plasti 2a se tudi precej razlikuje od keramike iz plasti 3a. Črna ali temnorjava zunanja površina posod je pogosto glajena. V plasti 2a leži tudi več ognjišč, ki ležijo ena na drugem. Ob najglobljem ognjišču v plasti je bilo najdeno več fragmentov tipičnega danilskega rhytona (Biagi *et al.* 1993, 49, sl. 4: 5).

Analogije za nizko prstanasto nogo ovalne posode iz skupka M v Podmolu (Turk *et al.* 1993, t. 1: 3), ki je narejena iz fine temno žgane gline, najdemo med impresso keramiko iz Smilčića (Batović 1966, t. 38: 7,11,12), ter med srednjeneolitsko keramiko iz Orehove Pejce (Gilli, Montagnari Kokelj 1993, 151,153-155, fig. 21: 202) in Pečine na Leskovcu (Batović 1975, t. 5: 7). Nizka prstanasta noga se po Batoviću pojavlja, sicer v majhnem številu, že na posodju iz 2. stopnje vzhodnojadranske impresso kulture (Batović 1979, 505, sl. 24: 5). Prstanaste noge so številnejše v 3. stopnji impresso kulture, karakteristične pa postanejo šele v danilski srednjeneolitski kulturi (Batović 1979, 509).

Neolitsko metličasto okrašeno keramiko imamo v Podmolu še v plasteh 10 in 8, to je v skupkih L in J, ki sta srednje in mlajšeneolitska (Turk *et al.* 1993, 59, t. 1: 11-13; 2: 4). Prav tako srečamo rdečerjavo keramiko z zunaj glajeno površino v plasti 10, skupek L (Turk *et al.* 1993, t. 1: 8). Mogoče je prisotnost takšne keramike v skupku M zgolj posledica mešanja najdb v Podmolu (Turk *et al.* 1993, 46,47)? Toda kljub takšnim pomislekom in startigrafskemu zaporedju plasti 11, 10 in 8, se mi zdi upravičeno, da na osnovi razpoložljivih keramičnih najdb skupek M iz Podmola datiram, okvirno, v srednji neolitik (Turk *et al.* 1993, 59,74). Na podlagi doslej zbranih podatkov torej lahko interpretiram najdbe iz skupka M, v katerem absolutno prevladujejo domače živali (drobnica, domače govedo), kot občasno postojanko srednjeneolitskih pastirjev (glej še Cannarella 1975, 119,120; Müller 1994, 65,191).

Vrnimo se k plasti 13 v Podmolu. V teji plasti je bilo najdenih 13 fragmentov kosti, od tega 12 vrstno nedoločljivih. Samo en fragment je bil določen za udomačeno ovco ali kozo (*Ovis seu Capra*). Budja za plast 13 navaja, da so bile v njej: "...odkrite živalske kosti udomačene ovce, koze in na pol udomačene svinje" (Budja 1993, 177). Da ne gre za pomoto, se lahko prepričamo v angleškem prevodu, ki sledi slovenskemu besedilu (Budja 1993, 189). V izvirni objavi Podmola pri Kastelcu takšnih podatkov, kot jih navaja Budja, nisem zasledil (Turk *et al.* 1993, 72-74, tabela 5).

Če torej dopustimo možnost, da je kost ovce ali koze (*Ovis seu Capra*) bila v (domnevni) pleistocenski (Turk *et al.* 1993, 50, sl. 17), vsekakor predneolitski plasti (Budja 1993, 177), je presenetljivo dejstvo, da se udomačena ovca ali koza v Podmolu pojavlja tako zgodaj. Da je domneva Ivana Turka o verjetno pleistocenski plasti 13 v Podmolu realna (Turk *et al.* 1993, 50), lahko beremo pri Osoletu: "...Na Krasu, kjer leže paleolitske postaje znatno nižje, med 500 in 600 m nadmorske višine, in so bile precej bolj oddaljene od ledenikov, je bila sedimentacija nekoliko drugačna... Würmska serija sestoji v glavnem iz apnenčevih ostrorobatih gruščev različnih granulacij. Njihov delež v posameznih plasteh je sicer različen, niha pa okoli 50 % v plasteh starejšega in srednjega Würma. Drugo komponento v teh plasteh predstavljajo rdeče do rjave ilovice. Zato so ti deli profilov navadno močno rjavi ali rdeči..." (Osole 1986, 9).

Da bi se izognil morebitnemu nesporazumu, ker je pojav udomačene ovce ali koze v pleistocenu maloverjeten, citiram avtorje: "...Zaradi nagiba plasti in načina dela je prišlo do mešanja najdb iz različnih plasti, kar smo opazili že med izkopavanjem in zato površino sonde razdelili v več delov" (Turk *et al.* 1993, 46,47). Naslednji citat se nanaša na spodnje plasti: "...Tudi tu je prišlo do rahlega mešanja najdb iz različnih plasti in antropogenih nivojev iz že omenjenih vzrokov" (Turk *et al.* 1993, 47).

V vzorcu sedimenta iz profila v plasti 13 je bil analiziran vzorec oglja, za katerega se je izkazalo, da pripada jerebiki (*Sorbus*; Turk *et al.* 1993, 70, 71, tabela 4). Jerebika je skupaj z drenom, rešeljiko ali črnim trnom predstavnik tipično pašniškega rastlinja, torej dokaz o antropogenem vplivu na gozdno vegetacijo (Turk *et al.* 1993, 70).

Iz tabele 4 se lahko razbere, da je prva z vzorci "bogata" plast oz. skupek plast 11 oz. skupek M (Turk *et al.* 1993, tabela 4).

Domnevam, da se je vzorec oglja, ki je bil verjetno "impregniran in precej trd" (Turk *et al.* 1993, 70), infiltriral iz višje ležečih plasti (npr. plasti 11) v nižje ležečo plast 13. O podobnih procesih pišejo, npr. Cannarella in Cremonesi (1967, 284), Cremonesi *et al.* (1984, 37), Turk *et al.* (1993, 46, 47).

Mitja Brodar za primer iz Ovčje jame piše: "...Neverjetna ugotovitev, da sta dva odbitka, ki se zložita in sta torej nedvomno istočasna, ležala v dveh kulturnih nivojih, med katerima je steri-

len sediment, ... Trenutno ni videti nobene sprejemljive razlage za ta doslej, kolikor vemo, enkraten pojav" (Brodar 1990, 46,47).

Opozoril bi še na dejstvo, da se omenjena plast 13 nahaja na relativni globini skoraj 8 m, širina sonde je bila na tem mestu 0,7 m, da o pomankljivi vidljivosti v sicer ne preveč svetlem spodmolu ne govorimo (Turk *et al.* 1993, sl. 7 in ustno I. Turk). Možnosti za napako pri delu torej več kot dovolj.

Najdba inciziva ovce ali koze (*Ovis seu Capra*) v mezolitskem kulturnem horizontu na najdišču Pod Črmukljo pri Šembijah je po besedah Budje tudi eden izmed dokazov, "čeprav je bil obravnavan obrobno, o živinoreji kot domnevno glavni gospodarski dejavnosti v mezolitskih kontekstih na našem Krasu" (Budja 1993, 178). Najdbo omenjenega inciziva v mezolitskem kulturnem horizontu spodmola Pod Črmukljo interpretira Vida Pohar kot infiltriran element, ki je v mezolitski horizont "zašel pri prekopavanju ozemlja" (Pohar 1986, 16). Njena predpostavka ima tudi realno podlago, v zvezi z njo naj citiram Mitjo Brodarja: "...Domačini so namreč v prejšnjih časih na bolj ravnih prostorih pod steno, ki so zaščiteni proti burji, gojili zeljne sadike, ki so jih pozneje presajali na njive" (Brodar 1992, 23). V nadaljnem izrecno pravi: "Ker smo že vedeli, da so najdbe takoj pod površino smo že začeli z vso potrebno previdnostjo" (Brodar 1992, 24).

Srečko Brodar je kosti "ovce" (*Ovis sp.*) našel v Njivicah pri Radečah v 2. (kulturni) plasti skupaj s kostmi jamskega medveda (Brodar 1935, 15). Kako to najdbo interpretirati?

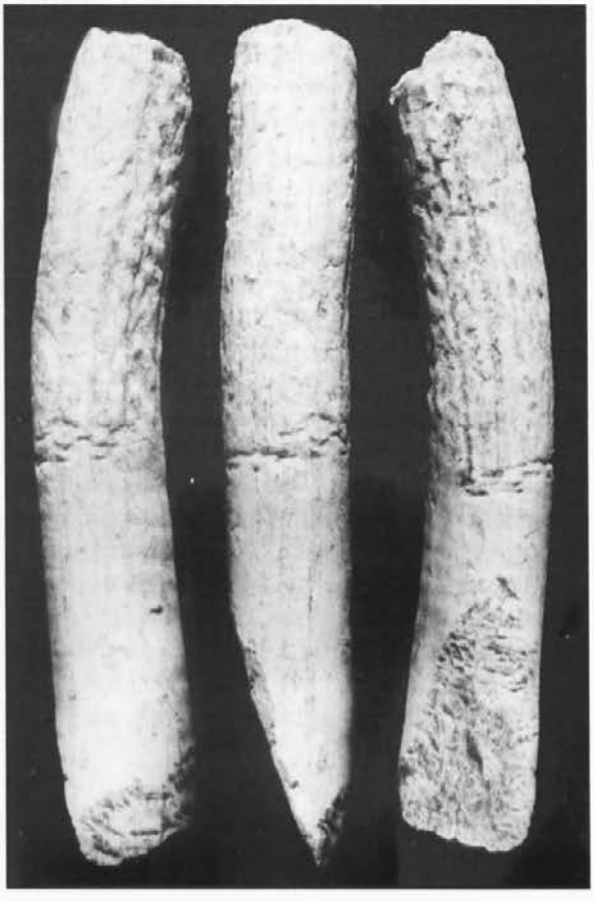
Za naslednji podatek, "pomemben za naše umevanje prehoda k živinoreji in h kmetovanju, ki ga je na kraškem Dinarskem področju (verjetno Slovenije; op. avtorja) mogoče prepoznati v mezolitskih kontekstih," je Budja izrabil domnevo o domači svinji v mezolitskem horizontu Male Triglavce, ki jo je izrazila Vida Pohar (Budja 1993, 178). Poharjeva piše namreč takole: " V Mali Triglavci sem med običajnimi primerki divje svinje odkrila kostne ostanke, ki pripadajo manjši živali od današnje domače svinje. Ker so se kostni ostanki ločili le po velikosti, morfološko pa ne, sem jih pripisala divji svinji vrste *Sus scrofa*. Malo verjetno je, da bi bile te najdbe posledica poskusa udomačitve divje svinje. Doslej najstarejši primerki domače svinje pri nas so znani iz neolitika, odkritega v isti jami. Verjetneje je, da so prebivalci Male Triglavce pač lažje uplenili telesno slabše razvite osebke. Za razjasnitev tega pojava bo treba počakati na izsledke nadaljnih raziskav" (Pohar 1990, 45).

Séfériadès poudarja, da se le na osnovi morfologije neolitskih najdb težko (težje kot pri drugih vrstah) loči divjo svinjo od domače (Séfériadès 1993, 143). Na taksonomske težave pri ločevanju kosti divje svinje od domače opozarjajo tudi Rakovec (1958, 69), K. J. Kozłowski in S. K. Kozłowski (1990, 99) ter Turk *et al.* (1993, 72). Opozoril bi še na izredno pomankljivo primerjalno kostno zbirko, ki jo imamo v Sloveniji, kar onemogoča natančno opredelitev vrste pri kočljivih primerkih (ustno Janez Dirjec).

V mezolitskem horizontu jamskega najdišča Mala Triglavca so našli, poleg že omenjenih kosti "domače" svinje, še za nas pomembne "rožene kopače sekirastih oblik," od katerih so tri objavljene (Leben 1988, 71, t. 1: 1-3).

Budja jih, ne da bi citiral literaturo za te paralele, povezuje s "tipološko primerljivimi" kopačami sekirastih oblik iz Crvene Stijene, mezolitski horizont 4, ter z Vlascem, mezolitskim najdiščem v Železnih vratih (Budja 1993, 178). Na takšen način nas poskuša prepričati, da je sekirasta kopača dokaz o motičnem obdelovanju zemlje v mezo-

Sl. 1: Mala Triglavca, "sekalo" iz mezolitskega horizonta. Foto I. Lapajne. M. = 1:2.
Fig. 1: Mala Triglavca, a "chisel type tool" from the mesolithic horizon. Photo I. Lapajne. Scale = 1:2.



litskih kontekstih kraške Dinarske Slovenije (Budja 1993, 178).

Po natančnem pregledu domnevnih "roženih kopač sekirastih oblik" iz Male Triglavce sem ugotovil, da najlepša in najbolje ohranjena "kopača" sploh še ni bila objavljena (*sl. 1*). Ta "kopača" je orodje iz jelenovega roga. Oblikovalec je lepo modeliral delovni del orodja tako, da ga je zgladil in zaključil z lepo dvostransko oblikovanim sekirastim (dletastim) rezilom (negativi udarcev, ki so nastajali z obdelavo, so odlično vidni). Držalni del je ostal nedotaknjen in se dobro loči od zaglajenega delovnega dela. Prehod iz držalnega v delovni del orodja je dodatno zaznamovan z negativi številnih (pribl. 20; op. avtorja) namenskih udarcev.

Temu kosu so podobni tudi vsi trije že objavljeni kosi (Leben 1988, t. 1: 1-3), le da so enostransko obdelani. Obdelovalec je rog samo preklal. Na orodju (Leben 1988, t. 1: 1) se celo prepozna postopek priprave roga za prečno klanje oz. priostritev (glej Rust 1943, 141-144, t. 23-25; podobno orodje objavlja Broglio 1971, fig. 8). Na dveh orodjih sta na mestu, kjer je bil rog preklan, opazni zaglajeni površini (Leben 1988, t. 1: 2,3).

V primerjavi z doslej neobjavljenim kosom se zdi, da so ti trije kosi le polizdelki, čeprav je to izključeno.

Če ta orodja primemo na način, ki ustreza fiziognomiji roke in roko iztegnemo predse, nastane med telesom uporabnika orodja in rezilom pravi kot (90°). Iz tega sklepam, da ne gre za "kopačo" ali motiko (pri motiki bi se postavilo rezilo vzporedno na telo uporabnika orodja), ampak da gre v vseh štirih primerih za dletasto orodje ali "sekalo" (boljšega izraza nisem našel, izraz "sekalo" pa ni mišljen kot sekira; op. avtorja). Glajeni orodji (Leben 1988, t. 1: 2,3) sta se verjetno še dodatno uporabljali kot gladili.

Predvidevam, da ta orodja lahko razlagamo kot pripomoček za delo po končanem lovu (Batović 1978, 48). Številne kosti (in osebki!) velikih lovnih živali (*Cervus elaphus L., Sus scrofa L.*) iz mezolitske plasti Male Triglavce to domnevo samo potrjujejo (Pohar 1990, razpredelnica 1).

Ustrezne analogije za dvostransko obdelano "sekalo" (*sl. 1*) nisem našel. Tipološko se razlikuje od "sorodnih" najdb iz Vlasca (Letica 1969, t. 4: 2,3; 6: 6,7; 7: 3; 8: 4) in Padine (Jovanović 1969, t. 17: 5). Če sodim po objavah, ne vzdrži tudi povezovanje z roženimi najdbami iz Crvene Stijene - horizont 4 b1 (Benac, Brodar 1958, t. 16: 2; 18: 2). Ostala tri "sekala" pa bi glede na zgoraj omenjene analogije pogojno priznal za "tipološko primerljive". Zadržki, ki jih pri tem imam, so, da se iz objav ne vidi, kako se je posamezno orodje držalo v roki in je tako vsaka tipološka determinacija vprašljiva.

Radiokarbonska datacija oglja iz plasti 3a Brega pri Škofljici (Frelih 1986, 31) je očitno lahko tudi hvaležen predmet manipulacije (Budja 1993, 175). Na neskladje radiokarbonske datacije z rezultati antrakotomskih in pelodnih analiz je opozoril že sam avtor (Frelih 1986, 32,33), nadalje Vida Pohar (Pohar 1990, 46,47) in posredno tudi Ivan Turk (Turk 1989, 56). Antrakotomske in pelodne analize kažejo, "da sodi kulturna plast 3-3a v čas ob koncu preboreala, medtem ko je po radiokarbonski dataciji absolutna starost lesnega oglja iz kurišča v isti plasti 4880 ± 150 B.C., torej odgovarja časovnemu okviru obdobja atlantika" (Frelih 1986, 32,33).

Relativna datacija mezolitskega najdišča Breg pri Škofljici v pozni castelnovien po mnenju nekaterih avtorjev dobro sovpada z radiokarbonsko datacijo (Frelih 1986, 32-36; Josipovič 1992, 39; Budja 1993, 174,175). K temu Josipovič dodaja, da zaradi pomanjkanja paralel k Bregu lahko zaenkrat govorimo le kot o mezolitskem najdišču (Josipovič 1992, 39).

Če z nekaj besedami zaključim to predstavitev, menim, da je popolnoma jasno, da je takšen nekritičen način interpretacije arheoloških podatkov, kot nam ga ponuja Budja (Budja 1993, 177,178), nesprejemljiv. Dejstvo je, da nam v tem trenutku "Slovenska perspektiva" (Budja 1993, 173-178) ne ponuja niti enega podatka, ki ne bi bil tako ali drugače vprašljiv ali dvomljiv. Zanimiva ideja o "v mezolitskih kontekstih kraške Dinarske Slovenije prepoznavnem prehodu h kmetovanju" (Budja 1993, 178) je, kot trenutno kaže, arheološko nedokazljiva. Želim pa si, kakor je že Budja poudaril (Budja 1993, 174), da bi resnično aktualizirala pomen stratigrafskih izkopavanj, tehniko mokrega in suhega sejanja, analizo gospodarskih prostorov, C^{14} datacij, dendrokronološke datacije (op. avtorja), analizo sledov rabe, ki so se ohranili na kamenih orodjih, in seveda analizo paleookolja s posebnim poudarkom na študiju rastlinskih in živalskih ostankov.

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The Transition to the Neolithic as a Process Towards Agriculture: Can It Be Recognized in Mesolithic Contexts in the Karst Dinaric Mountain Regions of Slovenia?

Translation

In addition to foreign discussions of the problems of the process of the introduction of the neolithic in the eastern Adriatic (Batović 1978, 1979; Biagi *et al.* 1993; Montagnari Kokelj 1993; Müller 1991, 1994), Slovenia has finally produced a more theoretical work in which Budja presents the exceptionally interesting idea of "a process of neolithization of the karst region of Dinaric Slovenia, where a transition to agriculture can be recognized as early as in mesolithic contexts" (Budja 1993).[1]

As essential data to understand this process, Budja cites "the finds from mesolithic stratum 13" at Podmol near Kastelec (Budja 1993, 177) and the find of an incisor of a domesticated sheep or goat from the mesolithic site of Pod Črmukljo near Šembije (Budja 1993, 178). He particularly referred to the finds from the mesolithic strata of Mala Triglavca with the bones of "domesticated" pigs and "a horn hoe of an axe-like shape", which "perhaps even proves that the land was worked" (Budja 1993, 178).

As these archaeological data have thus suddenly become "very" significant or rather topical, I have decided to present them (yet again!) to the archaeological public.

I shall first deal with the question of the mesolithic in the rock shelter or abri of Podmol near Kastelec (Turk *et al.* 1993). Stratum 13 was designated as a mesolithic/neolithic entity (thick sharp-edged rubble mixed with reddish loam), for which certain authors noted that it probably represents the beginning of a series of as yet unresearched pleistocene sediments (Turk *et al.* 1993, 50,72,73).

A stratum similar to stratum 13 is known from Acijev spodmol rock shelter, designated as stratum 3. This stratum stratigraphically follows the holocene (neolithic) stratum 2, but with a distinct interruption, and has been classified as pleistocene. No anthropogenic activities were perceived in layer 3. The only finds were red deer bones (*Cervus elaphus*; Turk *et al.* 1992, 27).

A pleistocene age is shown by a similar 2 meter thick stratum from the rock shelter near the village of Črnotiče. This layer is stratigraphically located below a thick layer of calc-sinter deposits (Dirjec, Turk 1992, 204).

A stratum similar to stratum 13 from Podmol near Kastelec is also known from the Trieste Karst region in the cave of Pečina na Leskovcu. "A several meters thick layer represents the beginning of the mesolithic in the cave (strata N, M, L, I, G)" (Cannarella, Cremonesi 1967, 291). The layer ends (in successively deposited strata) with stratum G, in which rare cultural remains were found, classified by Cannarella and Cremonesi to the mesolithic (Cannarella, Cremonesi 1967, 286). Mesolithic finds were not found in stratum G in the trench from 1961 (Cannarella, Cremonesi 1967, 284). Above stratum G was located the rich mesolithic stratum F, which in turn was overlain by the first layer with pottery, stratum E (Cannarella, Cremonesi 1967, 284, 286). Stratum E was culturally related to the Danilo Culture of the middle neolithic in Dalmatia (Cannarella, Cremonesi 1967, 298; Leben 1967, 61,77). Individual pottery fragments from stratum E belong culturally to the Impresso developmental stage of the eastern Adriatic neolithic (Cannarella, Cremonesi 1967, 329; Batović 1975, 70, Pl. 1: 9; 2: 9-13; Leben 1975, 145, 146; Müller 1991, 329; 1994, 141,311).

If after this short introduction we turn again to Podmol near Kastelec, it is visible that its stratum 13 can be interpreted as Pleistocene (Turk *et al.* 1993, 50, Fig. 17) or Holocene, but certainly pre-neolithic (Budja 1993, 177). Above it lies stratum 12 without archaeological finds and stratum 11 (subphase M) with neolithic pottery, among which are fragments decorated with whisk marks (Turk *et al.* 1993, Pl. 1: 5, 7), which according to Budja would prove the presence of stage A of the Impresso Culture of the eastern Adratic at Podmol (Budja 1993, 178).

Budja concluded this on the basis of data offered by Müller (Müller 1991, 317,327, Abb. 8). It is apparent from his table 8 that the central point of the dating of broom-like decoration (*Kamm- oder Besenstrich*) was placed at the transition from stage A2 to B1 of the Impresso Culture of the eastern Adriatic (Müller 1991, Abb. 8).

The whisk decoration from Gudnja Cave was dated according to Müller to a stage parallel to the Zagora A phase (Müller 1994, 143), or more exactly A2 (Müller 1994, 348, Abb. 74), in any case definitely in the early Impresso Culture in the eastern Adriatic (Müller 1994, Abb. 74).

In contrast, Batović dated a "fairly thick" stratum, in which there was also whisk decorated pottery from Gudnja Cave, to the 3rd (latest) stage of the Impresso Culture in the eastern Adriatic (Batović 1979, 508,509).

Whisk decorated pottery is known from the site of Pokrovnik, which Müller dated to the local stage Pokrovnik 2, corresponding to the B2 stage of the Impresso Culture (Müller 1994, 117, 119, Abb. 45,52,62,74).

At the site of Škarin samograd, pottery decorated in this manner was dated to the local Samograd 2 stage, which was "closely related to Pokrovnik 2" (Müller 1994, 126,127, Abb. 52,58,62,74). The same type of pottery is present in the Samograd 3 stage, and this stage is incorporated in the development of the Danilo Culture in the eastern Adriatic (Müller 1994, 127, Abb. 52,62,74).

On the basis of these analyses, the question still remains open about the dating and interpretation of finds from subphase M in stratum 11 at the site of Podmol near Kastelec in the Karst region of Petrinje. It would be difficult to speak about the earliest stage of the early neolithic at Podmol, as conceived by Budja (1993, 178).

Mesolithic finds are (still) unknown from Podmol (Turk *et al.* 1993, 74).

Impresso pottery, among other types, is known in the Karst region of Trieste (Budja 1993, 175), and also from the Pejca v Lašci (Leben 1967, 65, 67, Pl. 19:1-10; Leben 1967, Pl. 19:11; author's note). Despite the fact that the question introduced by Korošec about the dubious provenience of Impresso Pottery from Pejca v Lašci still remains open (Korošec 1960, 8, 9; Cannarella 1975-1977, 74; Müller 1994, 310,311), all the researchers are united in agreeing that this pottery can be

[1] I would like to thank Dr. Mitja Brodar, Janez Dirjec, Dr. Franc Leben, Primož Pavlin, and Ivan Turk for their help and much useful information.

related to the earliest stage of the Impresso Culture in the eastern Adriatic (Leben 1967, 65, 67, Pl. 19: 1-10; Batović 1975, Pl. 1: 1-7,10,13; Müller 1994, 141). If the pottery finds from sub-phase M at Podmol are compared with this early neolithic pottery, it can be established that the only common element would be represented by fragments of pottery with whisk decoration, which in my opinion were unjustifiably related to the "Impresso pottery" from Pejca v Lašci (Leben 1967, 65,67, Pl. 19: 9; Müller 1994, 310,311).

In the description of the pottery from (probably!) the deepest strata containing pottery at Pejca, Moser also mentioned pottery fragments that could correspond to the cited fragment with whisk decoration: "...Einige schlecht gebrannte Gefässe zeigen von aussen deutlich die Spuren des gefransten Holzstäbchens,..." (Moser 1899, 77).

Korošec first related the whisk decorated fragment from Pejca v Lašci to cardium impressed pottery (Korošec 1960, 8,9,13,14, Pl. 4: 7). But despite attentive reading of Korošec's text, I must acknowledge that the dating for the whisk decorated fragment as offered by Korošec is not entirely clear. Korošec cited the Impresso pottery supposedly found at Pejca v Lašci several times in his work. It was first included among the "cardium pottery" fragments on plates 2: 5; 4: 2-7; 5: 1-8,13 (Korošec 1960, 8, 9). He evidently forget about the fragments on plate 3 (Korošec 1960, Pl. 3: 2,3,7), and instead he incorrectly assigned several of them to the middle neolithic Danilo Culture (Korošec 1960, 9, Pl. 3: 2,3). In the following citation of Impresso pottery, Korošec mentioned pottery fragments decorated in various manners: with sharp edged awl impressions (Korošec 1960, 13, Pl. 5: 3; 11: 6), with finger impressions (Korošec 1960, 13, Pl. 4: 2), with short either vertical or oblique lines, at times even semicircular incised lines or the impression of some instruments (Korošec 1960, 13, Pl. 4: 3,5,7; 5: 7,8,13), with some version of the so-called pinched decoration (Korošec 1960, 13, Pl. 4: 4), with irregular incisions in various directions (Korošec 1960, 13, Pl. 4), with impressions of cardium and pectunculus shells (Korošec 1960, 13, Pl. 5: 1,4), with small depressions and the impressions of fingernails or some instrument resulting in marks resembling fingernail impressions (Korošec 1960, 14, Pl. 5: 5), and with horizontal incisions and small depressions (Korošec 1960, 14, Pl. 5: 2). The fragment on Plate 2:4 was presented as "a holdover of impresso pottery in a some later cultural group, in our case, that of Danilo" (Korošec 1960, 14). As can be gathered from Korošec's text, the whisk decorated fragment of pottery from Pejca v Lašci was clearly dated to the Impresso Culture (Korošec 1960, 9,13,14, Pl. 4: 7). Such a dating was (unintentionally) refuted by Korošec himself in the interpretation of the Impresso pottery fragment shown on Plate 3: 7 (Korošec 1960, 13,21,23; Leben 1967, Pl. 19: 7; Batović 1975, Pl. 1: 6). Korešec first noted that the fragment on Plate 3:7 was decorated in the barbotine technique and especially emphasized this fact: "...an entire type of decorated fragments of pottery with the so-called barbotine technique, which otherwise belong to the Bronze Age (Pl. 3: 7)..." (Korošec 1960, 13 n. 41). The same fragment (Korošec 1960, Pl. 3: 7) was once more dated to the Bronze Age and was cited in footnote 111, on the basis of which it was evident that he in fact was referring to the whisk decorated fragment on Plate 4: 7, to which the description actually corresponds (Korošec 1960, 21,23, Pl. 4: 7).

On the basis of this unclear dating by Korošec, Leben dated, judging by the photograph, some other whisk decorated fragment from Pejca v Lašci to the Impresso Culture (Leben 1967, 65,67, Pl. 19:9).

Müller cited the dating of Korošec and Leben for a whisk decorated fragment (one!) from Pejca v Lašci (according to Müller "eine schlickgerauhte Scherbe"; Müller 1994, 311) and related it to a similar fragment found "in stratum E" of Pečina na Leskovcu (Müller 1994, 141; Cannarella, Cremonesi 1967, Fig. 5:4). According to him, these two fragments represent a single entity: "...Gerade die (wahrscheinliche) Assoziation der Impresso-Keramik mit schlickgerauhten Scherben in beiden in Betracht kommenden Höhlen deutet darauf hin, daß die Funde anders als weiter südlich zu bewerten sind: Von Istrien bis Albanien findet sich mit zwei Ausnahmen keine schlickgerauhte Ware in Impresso-Fundstellen. Träger solcher Importe könnten z.B. spätmesolithische Gruppen sein, die, laut C^{14}-Daten, gleichzeitig mit dem ostadriatischen Frühneolitikum existieren" (Müller 1994, 142).

For justified reasons, which I will also cite, I must reject the connection of these two (or three?) whisk decorated pottery fragments with the Impresso Culture and also with the mesolithic communities in the Trieste karst region, as is suggested by Müller. Cannarella and Cremonesi wrote that whisk decorated pottery (*bösenstrich*) had been found in stratum C of Pečina na Leskovcu (Cannarella, Cremonesi 1967, 294, Fig. 5: 4). The middle neolithic stratum E stratigraphically lay below a sterile layer itself covered by stratum C, which, stratigraphically considered, represents the eneolithic at Pečina na Leskovcu (Cannarella, Cremonesi 1967, 298). A corresponding analogy for such whisk decorated pottery can be found, for instance, in the eneolithic stratum of Podmol near Kastelec (sub-phase I; Turk *et al.* 1993, 59,74, Pl. 4: 23). On the basis of unclear stratigraphy as presented by Moser (Moser 1899, 76-78), and the good stratigraphy in two other karst caves (Pečina na Leskovcu, Podmol near Kastelec; Cannarella, Cremonesi 1967; Turk *et al.* 1993), it is possible to conclude that the disputed whisk decorated fragment of pottery (Leben 1967, Pl. 19: 9) has inaccurately been identified chronologically with the Impresso pottery supposedly found at Pejca v Lašci Cave.

For the neolithic whisk ornamentation of the vessel from Podmol (Turk *et al.* 1993, Pl. 1: 5,7,11-13; 2: 4), I found better corresponding analogies in the middle neolithic layers of Trhlovca Cave (Leben 1976, Pl. 2: 30,31), Mitrova jama Cave (Stacul 1971-1972, 45, Fig. 10: 9), and Pečina v Gmajni Cave (Leben 1967, Pl. 8: 5), and in the neolithic sub-phase F at the Acijev spodmol rock shelter (Turk *et al.* 1992, Pl. 1: 22). The authors date sub-phase F to the middle neolithic, such as the "Danilo" ringed pedestals on vessels, or to the later neolithic (Turk *et al.* 1992, 32, Pl. 2: 3,4).

The earliest pottery finds from the Stenašca cave near Nabrežina are known from the mesolithic stratum 3a. In terms of the radiocarbon dates, the pottery from stratum 3a is later than the Impresso pottery "found" at Pejca v Lašci. This hypothesis is based on comparisons of C^{14} dates of the Impresso A stage of the eastern Adriatic neolithic (Müller 1991, 355; 1994, Abb. 75, 346-349), with the radiocarbon date of the hearth from stratum 3a at Stenašca (Biagi *et al.* 1993, 48,49). Coarse pottery is characteristic for the mesolithic stratum 3a, including parts of pots and dishes with thick walls (Biagi *et al.* 1993, 48, Fig. 4: 6, 7). Such pottery is not known from Podmol (sub-phase M) (Turk *et al.* 1993, Pl. 1: 1-7).

For the pottery from sub-phase M, produced from fine darkly fired clay, occasionally also with a polished surface (Turk *et al.* 1993, 57, Pl. 1: 1-4), I found excellent analogies in the middle neolithic stratum 2a from Stenašca (Biagi *et al.* 1993, 49). Layer 2a stratigraphically covers layer 3, i.e. the mesolithic pottery layer 3a at Stenašca (Biagi *et al.* 1993, Fig. 2). The pottery in layer 2a considerably differs from that of 3a. The black or dark brown exterior surface is often polished. Stratum 2a also contains several hearths that lie one above the other. Several fragments of a typical Danilo rhython were found next to the deepest hearth in this stratum (Biagi *et al.* 1993, 49, Fig. 4: 5).

Analogies for the low ring-shaped foot of the oval vessel from sub-phase M at Podmol (Turk *et al.* 1993, Pl. 1: 3), made of fine darkly fired clay, can be found among the Impresso

pottery from Smilčić (Batović 1966, Pl. 38: 7,11,12), and among the middle neolithic pottery from Orehova Pejca (Gilli, Mantagnari Kokelj 1993, 151,153-155, Fig. 21: 202) and Pečina na Leskovcu (Batović 1975, Pl. 5: 7). According to Batović the low ring-like foot also appears, although in small amounts, on vessels of the second phase of the eastern Adriatic Impresso Culture (Batović 1979, 505, Fig. 24: 5). Ringed feet are more numerous in the third phase of the Impresso Culture, and they only become characteristic in the Danilo Culture of the middle neolithic (Batović 1979, 509).

Neolithic whisk decorated pottery can also be found at Podmol in strata 10 and 8, i.e. in sub-phases L and J representing the middle/late neolithic (Turk *et al.* 1993, 59, Pl. 1: 11-13; 2: 4). Red brown pottery with polished exterior surfaces can also be found in stratum 10, sub-phase L (Turk *et al.* 1993, Pl. 1: 8). Could the presence of such pottery in sub-phase M possibly merely be a result of mixing finds from Podmol (Turk *et al.* 1993, 46,47)? Despite such doubts and a stratigraphic succession of strata 11, 10, and 8, it seems justified to me to date sub-phase M at Podmol in general to the middle neolithic on the basis of the available pottery finds (Turk *et al.* 1993, 59, 74). On the basis of the data gathered to date, it is possible to interpret the finds from sub-phase M, in which the bones of domestic animals have absolute predominance (domestic cattle and smaller ruminants), as the periodic camp of a middle neolthic herder (see Cannarella 1975, 119,120; Müller 1994, 65, 191).

Let us return to stratum 13 at Podmol. This stratum contained 13 fragments of bone, 12 of them unclassifiable in terms of type. One, and only one, fragment was determined to be a domesticated sheep or goat (*Ovis seu Capra*). Budja cites that stratum 13 contained: "...animal bones of domesticated sheep, goats, and half domesticated pig" (Budja 1993, 177). The translation in English that follows the Slovenian text with the same data indicates that this was not a simple mistake (Budja 1993, 189). I could not detect such data as are cited by Budja in the original publication of Podmol near Kastelec (Turk *et al.* 1993, 72-74, Pl. 5).

If the possibility is admitted that the bone of a sheep or a goat (*Ovis seu Capra*) was found in a (supposed) pleistocene (Turk *et al.* 1993, 50, Fig. 17), and certainly pre-neolithic stratum (Budja 1993, 177), it would be a surprising fact for domesticated sheep or goats to have appeared at Podmol so early. The supposition of Ivan Turk that stratum 13 at Podmol was probably pleistocene (Turk *et al.* 1993, 50) can be shown to be justified, as in this citation from Osole: "...In the Karst, where the paleolithic camps are located much lower, between 500 and 600 meters above sea level, and which were more distant from the glaciers, the sedimentation was somewhat different... The Würm series is mainly composed of limestone sharp edged rubble with various granulations. Their share in individual strata is otherwise varied, oscillating at around 50% in the early and middle Würm strata. Another component in these strata is represented by red to brown loam. That is why these sections of profiles are usually strongly brown or red..." (Osole 1986, 9).

In order to avoid any possible misunderstanding, as the appearance of domesticated sheep or goats in the pleistocene is unlikely, I shall quote the authors: "...Due to the slope of the strata and the manner of excavation, a certain mixing of finds occurred from various strata, which we noted even while excavating, and thus the surface of the trench was divided into multiple sections or sub-phases..." (Turk *et al.* 1993, 46,47). The following quotation refers to the lower stratum: "...A minor mixing of finds from various strata and anthropogenic levels also occurred here for the already mentioned reasons..." (Turk *et al.* 1993, 47).

A sample of carbon was analyzed in a sample of sediment from the profile in stratum 13, and it proved to come from rowan (*Sorbus*) (Turk *et al.* 1993, 70,71, Table 4). The rowan, together with the cornel tree seeds (*Cornus mas*), mahaleb cherry (*Prunus mahaleb*) or the blackthorn (*Prunus spinosa*) are all typical pasture vegetation, thus proof of anthropogenic effect on forest vegetation (Turk *et al.* 1993, 70).

It is apparent from table 4 that the richest stratum / sub-phase in terms of samples is stratum 11 or sub-phase M (Turk *et al.* 1993, Table 4).

I would suggest that the carbon sample, which was probably "impregnated and fairly hard" (Turk *et al.* 1993, 70), had infiltrated from higher strata into the lower lying stratum 13. Similar processes are discussed, for example, by Cannarella and Cremonesi (1967, 284), Cremonesi *et al.* (1984, 37), Turk *et al.* (1993, 46,47), etc.

Mitja Brodar has written in reference to Ovčja jama Cave: "...It is an unbelievable statement that two flakes that fit together and are thus undoubtedly contemporary were located in two cultural levels separated by a sterile sediment,... At the moment it is impossible to find an acceptable reason for this, as far as we know, unique phenomenon." (Brodar 1990, 46,47).

I would like to draw attention to the fact that the mentioned stratum 13 is located at a relative depth of almost 8 meters, while the width of the excavation trench at this point was 70 cm, and the poor conditions of visibility in the otherwise not too well lit rock shelter need not be emphasized (Turk *et al.* 1993, Fig. 7; verbally, I. Turk). The possibilities of making a mistake during excavation were thus more than sufficient.

The discovery of an incisor of a sheep or a goat (*Ovis seu Capra*) in the mesolithic cultural horizon at the site of Pod Črmukljo near Šembije would also be, according to Budja, one of the proofs, "...although it was discussed only in passing, of stock-raising as a conjectured main economic activity in mesolithic contexts in the Slovenian Karst region..." (Budja 1993, 178). The find of the mentioned incisor in the mesolithic cultural horizon of the rock shelter of Pod Črmukljo was interpreted by Vida Pohar as an infiltrated element that entered the mesolithic horizon "during disturbance of the earth" (Pohar 1986, 16). Her hypothesis also has an actual basis, as can be seen from this quotation from Mitja Brodar: "... In the recent period, the local inhabitants cultivated cabbage plants in the flatter area beneath the rock, where they were protected from the wind, and they were later transplanted into fields..." (Brodar 1992, 23). He further explicitly stated: "As we already knew that the finds were directly below the surface, we began with all necessary caution." (Brodar 1992, 24).

Srečko Brodar found the bones of a "sheep" (*Ovis sp.*) at Njivice near Radeče in the 2nd (cultural) stratum together with the bones of a cave bear (Brodar 1935, 15). How can this find be interpreted?

For the next piece of information "significant for our comprehension of the transition to stock-raising and to agriculture, which can be recognized in mesolithic contexts in the Karst dinaric region", Budja utilized a conjecture about domesticated swine in the mesolithic horizon of Mala Triglavca that had been expressed by Vida Pohar (Budja 1993, 178). Pohar specifically wrote as follows: "At Mala Triglavca, among the usual examples of wild pigs I discovered remains belonging to smaller animals than present-day domesticated pigs. As the osteological remains differed only in terms of size, and not morphology, I attributed them to the *Sus scrofa* species of wild pigs. It is unlikely that these finds could be the result of an attempt to domesticate wild pigs. The earliest known examples of domesticated pigs in Slovenia are known from the neolithic, discovered in this same cave. It is more likely that the inhabitants of Mala Triglavca in fact could more easily capture poorly developed individual animals. The explanation of this phenomenon must await the results of further research." (Pohar 1990, 45).

Séfériadès emphasizes that it is difficult to distinguish wild from domesticated pigs (more difficult than among other species) on the mere basis of the morphology of a neolithic find (Séfériadès 1993, 143). Taxonomic difficulties in distinguishing the bones of wild and domesticated pigs are also noted by Rakovec (1958, 69), Kozłowski and Kozłowski (1990, 99), and Turk *et al.* (1993, 72). I would also like to call attention to the distinct lack of a comparative collection of bones in Slovenia, which prevents the exact classification of species in difficult cases (Janez Dirjec, verbally).

In addition to the already mentioned bones of "domesticated" pigs, the mesolithic horizon of the cave site of Mala Triglavca also contained an important "horn digger with an axe shape", of which three have been published (Leben 1988, 71, Pl. 1: 1-3).

Budja, without citing any literature for such parallels, connects them to "typologically comparative" diggers of axe form from Crvena Stijena, mesolithic horizon 4, as well as with Vlasac, a mesolithic site in the Iron Gates (Budja 1993, 178). In this manner, he wishes to convince us that the axe-shaped digger is proof of working the soil with a hoe-like instrument in the mesolithic context of the Dinaric Karst region of Slovenia (Budja 1993, 178).

After a detailed examination of the supposed "horn diggers of axe form" from Mala Triglavca, I established that the most attractive and best preserved "hoe" had not even been published (*Fig. 1*). This "digger" is a tool made of red deer horn. The craftsman who fashioned it modelled the functional section of the tool in such a manner that he smoothed the lower end and terminated it with a double sided axe (or chisel) like blade (the reactive marks to blows created during the working are quite visible). The handle section remained untouched and is well distinguished from the smoothed tool section. The transition from the handle to the tool section of the implement is additionally marked with the imprints of numerous (approx. 20; author's note) intentional blows.

This example is also similar to all three already published pieces (Leben 1988, Pl. 1: 1-3), only that they are worked on only one side. The craftsman only split the horn. On one tool (Leben 1988, Pl. 1: 1) it is even possible to perceive the process of preparing the horn for splitting or sharpening (see Rust 1943, 141-144, Pl. 23-25; a similar tool was published by Broglio 1971, Fig. 8). Two tools have polished surfaces at the sites where the horn was split (Leben 1988, Pl. 1: 2,3).

In comparison with the example unpublished to the present, these three pieces appear to be only semi-finished products, although this must be excluded.

If this tool is held in the manner appropriate to the physiognomy of the hand, and that hand is extended forward, a right angle (90°) is achieved between the body of the tool-user and the edge. It can be concluded from this that the implement was not a "digging tool" or a hoe (a hoe would have a blade parallel to the body of the user), but rather that in all four examples this was a "chisel type tool" (I could not find a better term, but the expression "chisel type tool" should not be considered as an axe: author's note). Polished tools (Leben 1988, Pl. 1: 2,3) were probably additionally used as elements for polishing.

I would suggest that such tools can be explained as part of the "post-hunting" (not in the chronological sense) activities of the people of this period (Batović 1978, 48). The numerous bones of large animals of the hunt (*Cervus elaphus L.*, *Sus scrofa L.*) from the mesolithic stratum of Mala Triglavca could confirm this (Pohar 1990, Table 1).

Analogies for the double sided "chisel type tool" (*Fig. 1*) could not be found. It typologically differs from "similar" finds from Vlasac (Letica 1969, Pl. 4: 2,3; 6: 6,7; 7: 3; 8: 4) and Padina (Jovanović 1969, Pl. 17: 5). Judging by the publications, the connections to the horn finds from horizon 4 B 1 of Crvena Stijena do not hold true (Benac, Brodar 1958, Pl. 16: 2; 18: 2). In terms of the above mentioned analogies, the other three "chisel type tools" would conditionally be recognized as "typologically comparable". The reservations that I have in this matter refer to the fact that it cannot be seen from the reports how the individual tools were held in the hand, and thus any typological classification is questionable.

The radiocarbon dating of carbon from stratum 3a at Breg pri Škofljici (Frelih 1986, 31) can evidently also be used as a profitable subject of manipulation (Budja 1993, 175). The inconsistency between the radiocarbon dates and the results of anthracothomic and pollen analyses was noted by the original author (Frelih 1986, 32,33), further by Vida Pohar (Pohar 1990, 46,47), and indirectly by Ivan Turk (Turk 1989, 56). Anthracotomic and pollen analyses indicate that "...the cultural stratum 3-3a belonged to the period at the end of the Pre-boreal, while according to the radiocarbon dates, the absolute age of the charcoal from a fire site in the same stratum is 4880 ± 150 BC, thus corresponding to the chronological framework of the Atlantic period" (Frelih 1986, 32,33).

The relative dating of the mesolithic site of Breg pri Škofljici to the late Castelnovian coincides well with the radiocarbon dating according to certain authors (Frelih 1986, 32-36; Josipovič 1992, 39; Budja 1993, 174,175). Josipovič added that because of a lack of parallels with Breg it is possible only to speak of a mesolithic site (Josipovič 1992, 39).

In conclusion, I think it is entirely clear that such an uncritical manner of interpreting archaeological data as has been presented by Budja (Budja 1993, 177,178) is not acceptable. The fact is that at this moment the article on "the Slovenian perspective" (Budja 1993, 173-178) does not offer a single bit of information which would not be questionable or uncertain in this manner or elsewise. The interesting idea about "recognizing the transition to an agricultural economy in the mesolithic context of Karst Dinaric Slovenia" (Budja 1993, 178), is seemingly unprovable archaeologically at the moment. I would like, as has indeed already been stressed by Budja (1993, 174), for the importance of stratigraphic excavation to be truly actualized, as well as the techniques of flotation and sieve recovery of seeds, the analysis of agricultural and work areas, C^{14} dating, dendrochronological dating, the analysis of traces of use preserved on stone tools, and certainly the analysis of the paleoenvironment with particular attention to the study of botanical and zoological remains.

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