

SIRARJENJE V PLANINAH V KAMNIŠKO-SAVINJSKIH ALPAH V LUČI ARHEOLOŠKIH NAJDB IN ZGODOVINSKIH VIROV

TONE CEVC

Razprava obravnava začetke izdelave sira v Kamniško-Savinjskih Alpah. Analizirane so arheološke najdbe (lončena torila in posode) in pisni zgodovinski viri (urbarji). Odprto je ostalo vprašanje, ali so v antiki v planinah tudi sirili. Gornjegrajski urbar iz leta 1426 in reformirani urbar zgornjekamniškega gospostva iz leta 1571 dokazujeta sirarstvo v visokem srednjem veku.

Ključne besede: paša v visokogorju, sirarstvo, posode za sir.

The paper looks at the beginnings of cheese making in the Kamnik and the Savinja Alps. Analyzed are archaeological artefacts (cheese moulds, clay vessels for milk) and written historical sources (land registers). The question whether in antiquity the shepherds who were grazing cattle on mountain pastures also processed cheese remains unanswered. Land registers, for instance the 1426 land register of Gornji grad and the reformed land register of the Upper Kamnik seignury from 1571, contain more data on the cheese making tradition in the High Middle Ages.

Key Words: mountain pasturage, cheese making, cheese moulds (»torila«).

UVOD

V razčlenitvi pripovednega izročila o ujetem divjem možu se je Ivan Grafenauer lotil tudi mikavnega kulturnozgodovinskega vprašanja, kdaj in kje so se naučili Slovenci izdelovati trd sir iz presnega mleka. Ime »sir« namreč kaže, da so naši predniki ob naselitvi v Alпах znali izdelovati le mehke sir iz kislega zasirjenega mleka, tako kot Germani in Kelti [Grafenauer 1952–1953: 143–144]. Dodatno osvetlitev tega vprašanja želi prispevati pričujoči sestavek.

Gradiva za razpravo* sem imel razmeroma malo na voljo, zlasti pisnih zgodovinskih virov. Med temi naj omenim dva: gornjegrajski urbar iz leta 1426 in reformirani urbar zgornjekamniškega gospostva iz leta 1571. S pridom je bilo mogoče uporabiti arheološko gradivo, najdbe iz dveh poznoantičnih najdišč na Pohorju [Ciglencečki 2000: 83–88] in iz

* Za ljubezno pomoč pri pridobivanju arheološkega gradiva se iskreno zahvaljujem arheologinjam dr. Jani Horvat (ZRC SAZU), Miheli Kajzer Cafnik (ZVKD Maribor), Vesni Koprivnik (Pokrajinski muzej Maribor) ter Miri Strmčnik Gulič (ZVKD OE Maribor), ki so mi tudi dovolile objaviti fotografije in risbe fragmentov antičnih cedil. Zahvaljujem se Ireni Porekar - Kacafura in Francetu Steletu za fotografske posnetke, Barbari Štemberger pa za odlične kopije antičnega torila in srednjeveške zajemalke. Nazadnje se iskreno zahvaljujem dr. Kristijanu Jezerniku iz Preserij, ki mi je prepustil v strokovno obdelavo najdeno srednjeveško cedilo spod Rogatca, prav tako tudi arhitektu Vlastu Kopaču za posojeni velikoplaninski torili in Marici Kešnar iz Krivčevega, ki je izdelala več vrst kravjega sira v raziskovalne namene. Primerjalno gradivo iz Švice mi je ljubezno posredoval dr. Bruno Furrer iz Zuga in se mu za to iskreno zahvaljujem.

antičnega Ptuja, kakor tudi gradivo, pridobljeno z izkopavanji v planinah v Kamniško-Savinjskih Alpah v letih 1996–2003 [Cevc idr. 1997]. Etnološko terensko gradivo s kamniškega ozemlja je javljivo za primerjavo z današnjimi in zgodovinskimi spoznanji.

ZAČETKI SIRARSTVA V ALPAH

Udomačitev drobnice in goveda v starem veku je napravila iz lovca živinorejca in poljedelca, navezanega na stalno naselje. V tisočletjih naseljevanja in kultiviranja Alp so se v tem gorskem prostoru menjavala ne samo etnično različna plemena, pač pa tudi različne kulture, ki so vtisnile Alpam poseben kulturni in etnični značaj [Haid 1992: 33–96], kar velja tudi za Vzhodne Alpe, ki se končujejo s Kamniško-Savinjskimi Alpami in Pohorjem. Za gojitev živine in njihovo pašo so v Alpah naravne razmere izjemne ugodne, saj je ponekod v Alpah pastirska tradicija izpričana že v bronasti dobi pred približno 4000 leti [Gleirscher 1985; Mandl 1996: 157–159] v Kamniških Alpah pa pred več kot 3000 leti [Horvat 2002].

Z rejo drobnice in goveda je povezana predelava mleka v različne mlečne izdelke. Začetke sirarjenja iščejo raziskovalci na Bližnjem vzhodu, na kar opozarjajo besedila iz Svetega pisma stare zaveze [Toussaint - Samat 1996: 115–116]. S preselitvijo ljudstev z vzhoda v Alpe se je udomačilo sirarstvo tudi v predalpskem in alpskem svetu [Haid 1992: 72]. V Alpah so predelovali mleko v kisel sir že v bronasti dobi [Gutzwiller 1937]. Narav-



Slika 1: Pastirica z Velike planine z rokami oblikuje *trnič* (foto/photo: T. Cevc, 1970).

Figure 1: Shepherdess from Velika planina hand shaping a *trnič*.

no skisano in sesirjeno mleko so odcedili, nastali kisli sir pa so oblikovali z rokami v kepe, ki so se osušene v dimu ohranile daljši čas (sl. 1).

Tudi začetki predelave mleka v sladek sir z dodanim siriščem segajo na Bližnji vzhod in od tam s posredovanjem Grkov na vplivno območje grško-rimske kulture [Ränk 1972–1973: 551].

O več kot dvetisočletni tradiciji izdelovanja sladkega trdega sira v grško-rimskem svetu pričujejo literarna in zgodovinska dela grških in rimskih piscev. Sirarili so skozi vse leto, v mestih in na podeželju, v vili rustici, v pastirski koči v gorah, v zasilnem zavetišču ali na prostem, najintenzivneje pa od srede maja do oktobra. Sir so napravili preprosto tako, da so v sveže namolženo mleko pomočili ovčjo vato, prepojeno s sokom fige, ali pa so za sirišče uporabili posušen žledček mladega prežvekovalca. S segrevanjem mleka je nastal sir, ki so ga zajeli iz posode in ga preprosto oblikovali z rokami v kepe, pri zahtevnejšem oblikovanju pa so ga stresli v lončene okrogle modele (*torila*) ali pletene košarice in te obtežili s kamnom, da je odteklo več tekočine iz sira. Nato so hlebčke stresli iz modela na police, ga tam posolili z raztopljeno kamnito soljo in posušili na soncu. Hlebce so polivali s soljo še nekaj dni, nato so jih zložili na police v temno in hladno klet in jih pustili zoreti več tednov [Herdi 1918: 27–38].

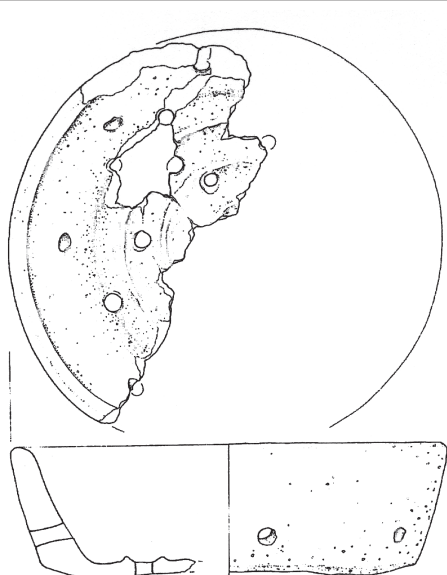
Antično tradicijo sirarjenja so v srednjem veku v alpskih deželah prevzeli samostani [Bitterli-Waldvogel 1999: 106], medtem ko se je prebivalstvo na podeželju in v planinah ukvarjalo z manj zahtevnim izdelovanjem mastnega kislega sira. V Švici omenjajo srednjeveški viri dve vrsti: kisel sir *Ziger* (lat. *serum lactum*) in sladek sir *Käse* (lat. *caseus*). Mastni kisli sir (*serum lactum*) so pripravili iz sveže namolženega mleka, ki so ga segrevali v kotlu (loncu) in mu dodali sesirjeno sirotko. Sir, ki je pri tem nastal, so v torilu stiskali, sirčke pa prekadili v dimu. Od konca 15. stoletja so izdelovali tudi pust kisel sir (nem. *mager Käse*); naredili so ga lahko le iz posnetega kravjega mleka, saj z ovčjega mleka ni mogoče posneti smetane. Ko se je mleko v skledi skisalo, so posneli smetano, nato pa preostalo mleko ob zmerni toploti kuhali, dokler se ni gosto usedlo na dnu. Sir so nato pobrali iz lonca, ga odcedili v torilu in nato pustili nekaj časa zoreti na polici. Iz posnete smetane so v pinji metli maslo. Trd sladek sir, *Käse* (lat. *caseus*), so v zgodnjem srednjem veku izdelovali, kakor smo že omenili, le v samostanih [Bitterli-Waldvogel 1999: 106–108].

ANTIČNO SIRARSTVO V PETOVIONI, NA POHORJU IN V KAMNIŠKO-SAVINJSKIH ALPAH

Antično sirarstvo je temeljilo na predelavi presnega mleka v trd sladek sir [Herdi 1918: 31]. V naših krajih je izpričano z redkimi arheološkimi najdbami okroglih glinastih posod – cedil z luknjami, ki so jih uporabljali za oblikovanje sira v hlebce. Lončena torila so podobna nizki, komaj 6 cm visoki okrogli posodi, s premerom približno 20 cm. V luknjičavem dnu so majhni žlebiči za odtekanje sirotke iz modela (sl. 2–6).



Slika 2: Odlomek pozno-antičnega lončnega modela, 5. stoletje, Ančnikovo gradišče pri Jurišni vasi (Pokrajinski muzej v Mariboru; foto/photo: I. Porekar - Kacafura, 2003).
Figure 2: Fragment of late antique clay mould, 5th century, Ančnikovo gradišče pri Jurišni vasi.



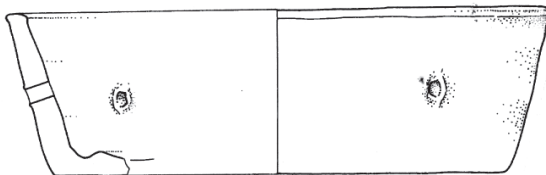
Slika 3: Poznoantični lončni model, 5. stoletje, Ančnikovo gradišče pri Jurišni vasi [Ciglencečki, 2000, slika 98: 8], M 1:3.
Figure 3: Late antique clay mould, 5th century, Ančnikovo gradišče pri Jurišni vasi [Ciglencečki 2000, figure 98: 8], M 1:3.



Slika 4: Fragment pozno-antičnega lončnega modela, Brinjeva gora nad Zrečami (Pokrajinski muzej v Mariboru; foto/photo: I. Porekar- Kacafura, 2003).
Figure 4: Fragment of late antique clay mould, Brinjeva gora nad Zrečami.

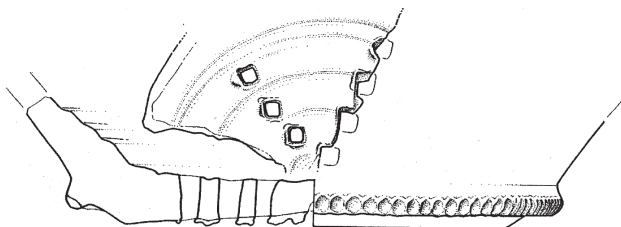
Slika 5: Poznoantični lončeni model, Brinjeva gora nad Zrečami [Ciglenečki, 2000, slika 94:11] M 1:3.

Figure 5: Late antique clay mould, Brinjeva gora nad Zrečami [Ciglenečki, 2000, figure 94:11] M 1:3.



Slika 6: Lončeni model, 2.–3. stoletje (Ptuj, inv. št. 43 567, neobj.; risala T. Korošec in M. Lavrič, M 1:3.)

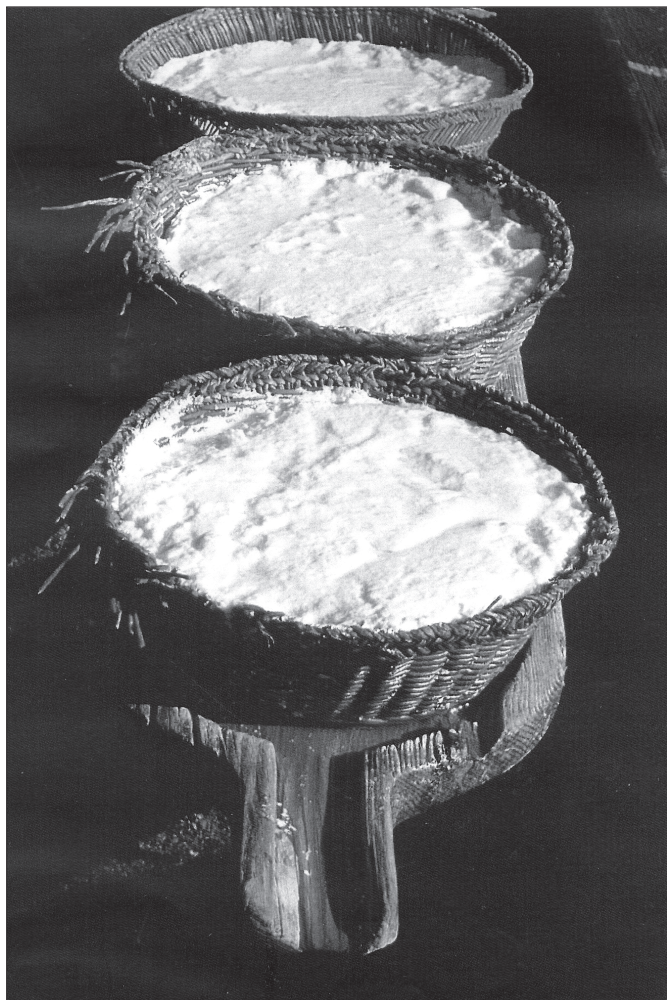
Figure 6: Clay mould, 2nd to 3rd century (Ptuj, inv. no. 43 567, unpublished: drawn by T. Korošec -Lavrič, M 1:3).



Takšne modele so našli v antičnem Ptuj [ustni podatek J. Horvat], v višinskih poznoantičnih postojankah na Brinovi gori pri Zrečah in pri Ančnikovem gradišču pri Jurišni vasi na Pohorju [Ciglenečki 2000: 85, 90]. Pohorskim so podobni modeli iz antičnega Cambodunuma – Kemptna na Bavarskem [Weber 2000: 117].

Ob najdbah modelov za oblikovanje sira na Pohorju in Ptuj se lahko vprašamo, ali so v času rimske zasedbe naših krajev predelovali presno mleko v trd sir tudi v planinah v Kamniško-Savinjskih Alpah? Antična in poznoantična pastirska poselitev planin v Kamniških Alpah je arheološko izpričana v času med 1. in 6. stoletjem v Veliki planini, Rzeniku, Vodotočniku, Veži (Čohavnica), v planini pod Kamniškim sedlom, v Ovčariji v Kalcah, v Krvavcu, Dolgi njivi in Korenu [Cevc idr. 1997: 25–95; Horvat 2002: 193–202]. Med raziskanimi fragmenti antičnih in poznoantičnih glinastih posod iz planin Dolga njiva in Na stanu pod Kamniškim sedlom ni bilo takšnih, ki bi jih lahko prepoznali kot modele. Seveda to še ne dokazuje, da v antičnih planinah niso sirili. Pomisliti bi smeli na to, da so lahko oblikovali sir kar najpreprosteje z rokami, ali pa so uporabljali za odcejanje in oblikovanje sira pletene košarice (*fiscinae*), kakršne pogosto omenjajo antični grški in rimski pisci [Herdi 1918: 34–38]. Podobne pletene košarice (sl. 7) so uporabljali še do nedavna pastirji v planinah na Korziki [Hubatschek 1996: 72].

Na sirarjenje opozarjajo tudi najdbe okroglih kamnitnih plošč. Z njimi so obteževali (stiskali) sir v modelu. Ali smemo med sirarska obtežila uvrstiti najdeno apnenčevo ploščo rumenkaste barve, veliko 25 x 20 cm in debelo 3 cm, ki so jo našli ob ognjišču v rimski pastirski koči ob arheoloških izkopavanjih v planini Dolga njiva, je odprto vprašanje. Med prepričljivejše najdbe se uvrščajo okrogle skriljaste plošče s premerom 30 cm, ki so jih našli v razvalinah poznosrednjeveških stavb na višini 1900 m v Müllerenhütte, Melchsee-Frutt in so jih brez dvoma uporabljali za stiskanje sira [Obrecht idr. 2003: 173–174].



Slika 7: Iz trsja spletene košarice »cascaghja«, napolnjene s sirom, Korzika [Hubatschek 1996, slika 142].

Figure 7: Basket »cascaghja« woven from vines, filled with cheese, Corsica [Hubatschek 1996, figure 142].

Morda pritrjuje misli, da so sirarili v antičnih planinah v Kamniško-Savinjskih Alpah tudi to, da so v planinah živele pastirice, kar dokazujejo najdeni predmeti v planini Na stanu pod Kamniškim sedlom. Najdeni sta bili dvogumbni noriški fibuli, značilni za spenjanje ženske noše na ramenih, in fragmenti ženske ogrlice iz 2. stoletja [Cevc 1998: 12–13]. V antičnem pastirstvu so imele ženske pomembno vlogo. Opravljale so različna dela, skrbele pa so tudi za živino [Grassl 1999: 63–67]. V švicarskih planinah so v srednjem veku predelovale mleko v sir pretežno planšarice, šele z modernizacijo sirarstva v začetku novega veka naj bi bili planšarice zamenjali izšolani sirarji [Meyer idr. 1998: 411].

Glede na dosedanje raziskave in pomanjkanja materialnih pričevanj o sirarstvu v antičnih planinah v Kamniško-Savinjskih Alpah, se vprašamo, kakšni bi lahko bili vzroki za to, da v teh planinah ne bi predelovali mleka v sir? Raziskave v dachsteinskih štajerskih planinah so pokazale, da je antično planinsko pašno gospodarstvo verjetno še vedno temeljilo na nomadskem pašništvu. Pastirji naj bi bili odhajali v planine nad drevesno mejo,

da so tam prepasli živino. V bazni postojanki naj bi postavili pastirsko kočo (prim. pri nas pastirsko kočo v planini Dolga njiva). Od tam naj bi odhajali s čredami na višje ležeče pašnike, kjer so si poiskali naravna zavetišča v jamah ali zijalkah, če pa teh ni bilo, so si postavili zasilna zavetišča [Mandl 1996: 158–159]. Na podobno nomadsko obliko paše in bivanje pastirja v zasilnih naravnih zavetiščih, spominjajo sodobne selitve solčavskih pastirjev iz planine v planino, ki so jih opustili šele po drugi svetovni vojski [Cevc 1977: 103–106]. Ali so pastirji tudi sirili, ne vemo, domnevati pa je mogoče, da je pri nomadski obliki pašništva manj mogočnosti, da bi pastirji predelovali mleko v sir, saj sta za sirarska opravila potrebna čas in primeren stalen prostor za kuhanje in shranjevanje sira.

SIRARSTVO V ZGODNJEM IN VISOKEM SREDNJEM VEKU V PLANINAH V KAMNIŠKO-SAVINJSKIH ALPAH

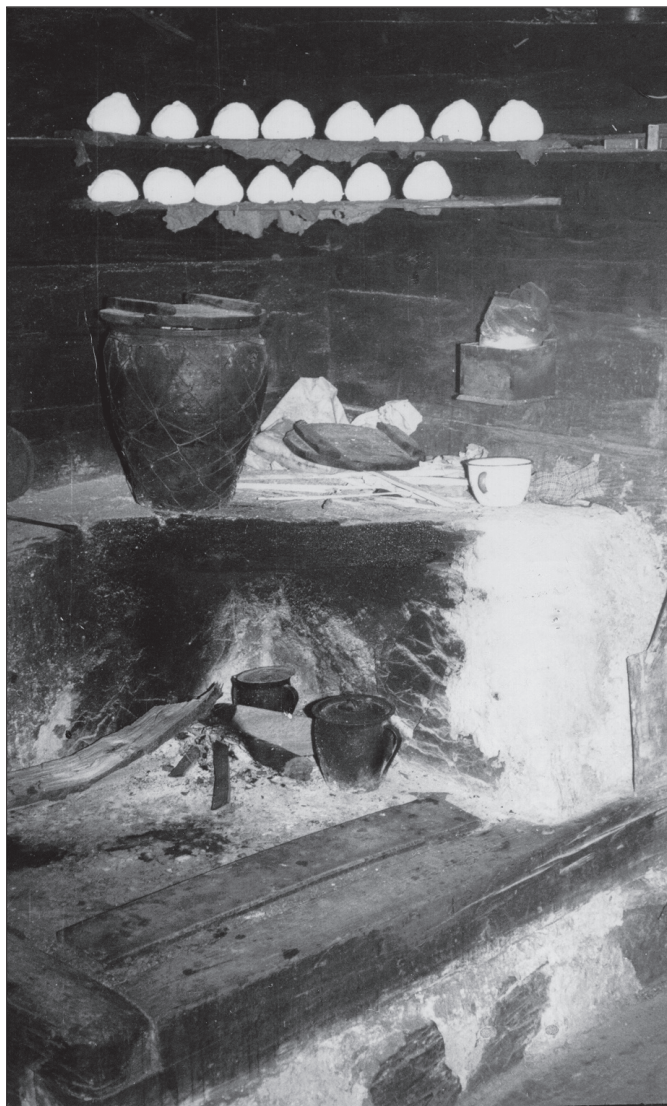
Pomanjkanje materialnih pričevanj o sirarstvu v antičnih planinah v Kamniško-Savinjskih Alpah me usmerja k sklepu, da tudi v zgodnjem srednjem veku med 7. in 10. stoletjem v planinah niso predelovali mleka v sir.

O planšarstvu v današnjem pomenu besede – z zanj značilno sezonsko selitvijo živine iz stalnega naselja v občasno obljudeno visokogorsko selišče v planini in predelavo mleka v različne mlečne izdelke (sir, maslo, skuta) – lahko govorimo šele v srednjem veku [Mandl 1996: 159]. O sirarjenju v zgodnjem srednjem veku (7.–10. stoletje) v planinah v Kamniško-Savinjskih Alpah, nimamo na voljo otipljivih dokazov, ker zgodnesrednjeveška najdišča pod planinskim domom v Krvavcu [Cevc 2003] in v Veliki planini na Gradišču in Za plečam, še niso arheološko raziskana [Cevc 2000b: 113].

Na zgodnesrednjeveško sirarstvo v Kamniško-Savinjskih Alpah bi smeli morda pomisliti, ker se je na kamniškem ozemlju ohranila vrsta kislega sira, imenovana *trnič* (sl. 8).

Za kisle sire trniče je značilno, da so jih oblikovali z rokami v kepo. Arhaični način obdelave jih uvršča v zgodnji srednji vek, če ne še dlje v antiko in v predrimski svet. Trniče so še do nedavna delali gorjani v zaselkih pod kamniškimi gorami. V dimu prekajene so dajali koscem za jed, iz nstrganih trničev pa so kuhali okusno *mobantovo jubo* (Krivčevo v dolini Črne). V Veliki planini so izdelovali okrašene sire trniče. Z rokami oblikovane trniče so z lesenim modelom v paru okrasili in jih podarili domačim, ko so se vrnili s planine v domačo vas.

Za razmišljanja o zgodovini sirarstva je pomembno osvetliti etimologijo besede *trnič*. Eno novejših hipotez je prispeval jezikoslovec Marko Snoj, ki je nastanek besede razložil iz praslovanskega glagola »tvoriti«, tj. oblikovati. Izpeljanka besede *trnič* je hipotetični »tvornič« v pomenu »majhen oblikovan sir«, ki se v vzhodnogorenskem narečju izgovarja kot *trnič*. Trniču soroden je poljski in ruski *tvorog*, kisel sir, in slovensko »tvorilo«, v vzhodnogorenskem narečju izgovorjeno kot *torilo*, okrogla lesena posoda z luknjami v dnu, namenjena oblikovanju sira v hleb [Snoj 2003: 28–29]. Po načinu izdelave in vrsti sira je trniču

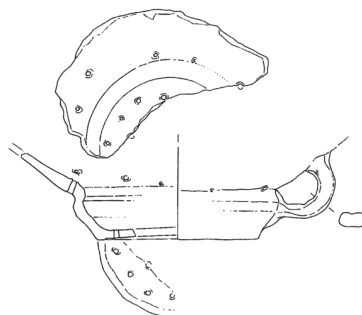


Slika 8: Notranjščina pastirske bajte z odprtim ognjiščem, kjer se na policah sušijo v dimu kepasti sirčki – *trniči*, Velika planina (foto: Zavod za varstvo kulturne dediščine Kranj).

Figure 8: The Inside of a shepherd's hut with an open fireplace and with lumpy small cheeses – *trniči* – curing in the smoke, Velika planina (photo: ZVKD Kranj).

podoben bohinjski *ožemček*, sirček, oblikovan z rokami v kroglasto obliko in prav tako lepo opisan z vžganimi okrasi.

Sladek trd sir je zgodovinsko izpričan v Kamniško-Savinjskih Alpah šele v visokem srednjem veku. To zvmemo iz gornjegrajskega urbarja iz leta 1426, kjer je popisanih 30 *švajg*, visokogorskih kmetij gornjegrajskega samostana. Srednjeveške švajge so bile kmetije, postavljene na gornjo mejo žita, in so se v glavnem ukvarjale z živinorejo. Te planinske kmetije so nastajale med 12. in 15. stoletjem, potem ko so bile doline že gosto naseljene. Kmetije so se po naravnih dajatvah delile v kmetije, ki so plačevale dajatve 300 hlebov kravjega sira moškemu samostanu v Gornjem Gradu (*Herrenkäse*, *caseus vaccinus*) in v kmetije, ki so plačevale dajatve 300 hlebov ovčjega sira ženskemu samostanu (*Nonnenkäse*) v



Slika 9: Odlomek srednjeveške lončene zajemalke z ročajem, najdene na opuščeni švajgi pod Rogatcem (foto: F. Stele, risba B. Hofman, M 1:4).

Figure 9: Fragment of a medieval clay ladle with a handle, found at an abandoned *švajga* beneath Rogatec (photo: F. Stele, drawing B. Hofman, M 1:4).

Gornjem Gradu [Gstirner 1937: 64]. Latinsko ime kravjega sira *caseus* dokazuje, da so ga izdelovali iz sladkega mleka z dodanim siriščem [Bitterli-Waldvogel 1999: 108; Gstirner 1937: 40]. Ovčji sir je bil masten [Gstirner 1937: 47], ne vemo pa, ali so ga izdelovali s siriščem ali pa kot kisel sir? V Švici imenujejo masten kisel sir *Fettkäse* [Bitterli-Waldvogel 1999: 108]. Masten ovčji sir je bil dolga stoletja značilen izdelek srednjega veka predvsem v planinah v Alpah [Meyer idr. 1998: 407]. Hlebček gornjegrajskega kravjega sira je tehtal približno 1–1,5 kg. Precej manjši hlebček ovčjega sira je tehtal polovico manj [Gstirner 1937: 50]. Masten ovčji sir je bil v srednjem veku bolj cenjen od kravjega, kar potrjujejo tudi švicarske raziskave sirarstva [Meyer idr. 1998: 407].

Na predelavo mleka v gornjegrajskih švajgah opozarja tudi naključna najdba fragmenta lončene zajemalke z ročajem iz 14.–15. stoletja. (sl. 9).

Našli so jo po naključju v zemlji na opuščeni švajgi pri Gornjem Špehu (1160 m) pod Rogatcem. Luknjičasto dno meri približno 8 cm, na vrhu pa približno 16 cm. Prvotno sem domneval, da je to torilo [Cevc 2000a: 19, sl. 12], opravljeni poskus oblikovanja kislega mastnega sira (gl. pogl. Oblikovanje sira v kopijah toril) v kopiji lončene posode z ročajem je pokazal, da z zajemalko niso oblikovali sira v hlebček, ampak so ga z njo pobirali iz kotla. Podobne lesene zajemalke so uporabljali v Švici v 17. stoletju [Meyer 1998: 409].

SIRARSTVO V NOVEM VEKU V PLANINAH V KAMNIŠKO-SAVINJSKIH ALPAH

Konec srednjega veka se je gospodarjenje v planinah v Alpah precej spremenilo. Povečalo se je število goveje živine, kar je odločilno vplivalo tudi na sirarstvo. Namesto kislega mastnega ovčjega sira so začeli izdelovati sladke kravji sir, maslo in pust kisel sir. Vzroke za te spre-

membe lahko iščemo v uveljavitvi hlevske živinoreje in v povečanju trgovine z govejo živino in mlečnimi izdelki [Meyer idr. 1998: 406–407; Bitterli-Waldvogel 1999: 101].

Do sprememb v planinskem gospodarjenju je prišlo tudi v Kamniško-Savinjskih Alpah. Do konca srednjega veka je prevladovala na paši drobnica, tako kot drugod v Alpah [Meyer idr. 1998: 410], dosti manj je bilo goveje živine in konjev. Postopoma je drobnico na paši začela spodrivati goveja živina, med mlečnimi izdelki je postalo vse pomembnejše maslo. Namesto mastnega kislega ovčjega sira so začeli izdelovati pust kisel sir *mobant*. Na te novosti v predelavi kravjega mleka opozarjajo namnožene najdbe fragmentov nizkih skled z izvihanimi ali pokončno izoblikovanimi ustji od 16. stoletja (sl. 10), ki so jih uporabljali za kisanje mleka [Cevc 2000a: 32–54]. Značilen primer novim razmeram prilagojene planine je Velika planina, ki je na začetku 16. stoletja imenovana *gross ross albenn*, tj. Velika konjska planina, nekaj pozneje pa samo še Velika planina. Najpozneje konec 16. ali na začetku 17. stoletja so začeli postavljati za to planino značilne ovalne *bajte* s pastirjevo izbo v sredi in obdajajočo jo lopo za govedo. V 4 x 4 m veliki pastirski koči je stalo v kotu odprto ognjišče, ob steni pa police z skledami, v katerih so kisali mleko [Cevc 2000a: 10–31; Horvat 2002: 200].

Na predelavo mleka v (pust?) kisel sir in skuto v Kamniško-Savinjskih Alpah opozarja zapis v urbarju zgornjekamniškega gospostva iz leta 1571. V nemško pisanem urbarju so našete po imenih planine Jezerca, Gola dolina (današnji Krvavec), Šebesovo na Krvavcu, Koren, Ovčarija v Kalcah, Njiva, Ovčarija v Mokrici in Dolga njiva.

Vsak, ki je gnal živino na pašo v planino, je moral oddati letno graščini v Kamniku toliko sira (Käse) in skute (Schotten), kolikor ju je pridelal v enem dnevu od živine,



Slika 10: Plitva lončena latvica za kisanje mleka, 17. –18. stoletje, planina Vodotočnik (foto: F. Stele).

Figure 10: Shallow clay milk bowl for souring milk, 17th to 18th century, Vodotočnik dairy mountain (photo: F. Stele).

ki je bila na paši v planini,« je zapisano na koncu popisa planin. [Cevc 2000a: 14–15]

Omemba sira in skute v urbarju kaže, da so tudi po reformi srednjeveškega urbarja leta 1571 kmetje še vedno plačevali dajatve za pašo v planini v naturalijah. Mikavno bi bilo ugotoviti, kakšno živino so gnali na pašo v planine kmetje iz okolice Kamnika sredi 16. stoletja, kakšen je bil sir, ki so ga oddajali gosposki v Kamniku, kako veliki in težki so bili hlebčki sira, ki so jih izdelovali v planini?

Žal iz urbarja ni mogoče izluščiti omenjenih podatkov, ki bi osvetlili zgodovino planšarstva na kamniškem ozemlju. O omenjenih vprašanjih je mogoče sklepati posredno z arheološkimi najdbami ostankov kosti živali, fragmentov glinastih posod in ostankov pastirskih koč.

Za osvetlitev razmer pašnega gospodarstva v različnih zgodovinskih dobah so izjemno poučne stavbe v planinah. Tlorisi pastirskih koč s konca srednjega in začetka novega veka (Dolga njiva, Koren, Kriška planina, Mokrica), kažejo, da so v Kamniško-Savinjskih planinah tedaj postavljali na kamnitnih temeljih lesene pastirske kočice velikosti 3 x 2,5 m (sl. 11). V kočah te velikosti je bilo mogoče predelovali mleko v masten kisel sir, za kar je zadoščal že minimalni prostor z odprtim ognjiščem in nekaj posode za shranjevanje mleka in kuhanje sira, medtem ko kleti za zorenje sira niso potrebovali [Meyer 1998: 406–407]. Za predelavo mleka v masten, kisel ovčji sir so uporabljali večje lončene lonce, v katerih so

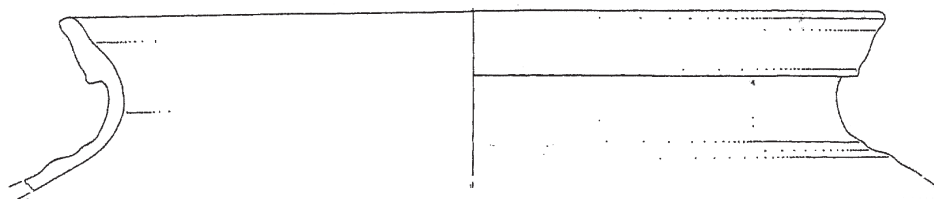


Slika 11: Razvaline temeljev poznosrednjeveške pastirske kočice, Ovčarija v Mokrici (foto: F. Stele, 1995).

Figure 11: Ruins of the foundations of alate medieval shepherd hut, Ovčarija on the Mokrica (photo: F. Stele, 1995).

na odprtem ognjišču segrevali mleko in pridobivali kisel sir (sl. 12); namolzeno mleko so shranjevali v visokih skledah (sl. 13) ali latvicah z ročaji (Lepa glava nad Petkovo njivo, Ovčarija v Kalcah). Plitvih skled, primernih za kisanje mleka, so v 15. stoletju uporabljali precej manj [Bregant T. 1977: 113–120; Cevc T. 2000a: 82–123].

Kako veliki so bili hlebi (kislega ali sladkega?) sira, ki so jih oddajali najemniki planin graščini v Kamniku, ne vemo. To bi lahko ugotovili, če bi bili bolj ohranjeni fragmenti dveh lončenih toril (sl. 14, 15) iz planine Ovčarije v Kalcah (15.–16. stoletje). Za model so uporabili kar lonec in vanj na dnu izvrtali (s koničastim kamnom?) več 6–7 mm velikih lukenj. Ker je mogoče določiti samo velikost dna (15 cm), višine in premera modela pa ne



Slika 12: Odlomek lonca sirovnika iz 15. –16.stoletje, planina Lepa glava nad Petkovo njivo (risala B. Hofman, M 1:2).

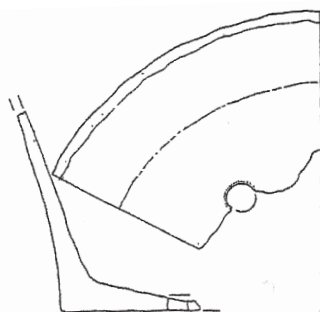
Figure 12: Fragment of cheese pot from the 15th to 16th century, Lepa glava above Petkova njiva (drawn by B. Hofman, M 1:2).



Slika 13: Skleda za mleko, 16. –17. stoletje, Brzič pod Presedljajem (foto: F. Stele, 1999).

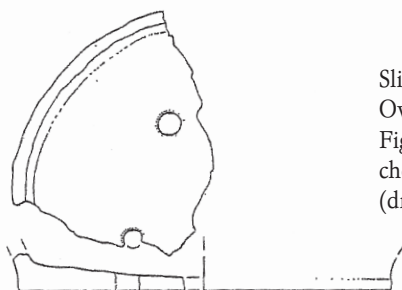
Figure 13: Milk bowl, 16th to 17th century, Brzič dairy mountain beneath Presedljaj (photo: F. Stele, 1999).

[Cevc 2001: sl. 66 in 67], ostaja neznana tudi velikost sirov, ki so jih odcejali v torilih. O teži sirov je mogoče sklepati posredno po omembi sirov v gornjegrajskem urbarju iz leta 1426 [Gestrin F. 1952–1953: 482, op. 61]. Tehtali naj bi 1–1,5 kg.



Slika 14: Odlomek lončnega torila, 16. stoletje, planina Ovčarija v Kalcah (risala B. Hofman, M 1:2).

Figure 14: Fragment of a clay mould (*torilo*) for straining sour cheese, 16th century, Ovčarija dairy mountain in Kalce (drawn by B. Hofman, M 1:2).



Slika 15: Odlomek lončnega torila, 16. stoletje, planina Ovčarija v Kalcah (risala B. Hofman, M 1:2).

Figure 15: Fragment of a clay mould for straining sour cheese, 16th century, Ovčarija dairy mountain in Kalce (drawn by B. Hofman, M 1:2).

Ali so uporabljali v planinah v poznem srednjem in zgodnjem novem veku tudi lesene modele, ne vemo, čeprav bi to misel lahko potrjevala torila z Velike planine in okoliških planin [Cevc 1993: 51]. Z občutkom za likovne nadrobnosti jih je popisal Vlasto Kopač:

Lesena torila so okrogle, pičel pedenj široke in do pol pednja globoke, iz enega kosa lesa izdobljene ali izstružene skodele z nekoliko navzven nagnjenim obodom in naluknjanim dnom. Vanj je čez luknjice vrezan še ta ali oni simbol [sl. 16], ki ga je izrezovalec olepšal z okraski v zarezovalni tehniki. [Kopač 1974: 155]

O uporabi toril pa je zapisal:

Ko so pobrali sesirek iz lonca sirovnika, so ga nadevali v torilo in postavili na lesno, položeno čez škaf, da se je sir odcedil. Naslednji dan so po dve torili z odcejenim sirom povezni vkup, da se je vsebina spoprijela vkup. Do konca odcejeni sir so nazadnje postavili na liste šisernika na polico. [Kopač 1974: 155–163]

V nedeljo pa so sire odnesli v dolino domači, ki so tedensko prinesli pastirju hrano.

Omemba skute v reformiranem urbarju zgornjekamniškega gospostva pa nas vabi, da se vprašamo, ali se današnja priprava skute ujema z izdelki iz srede 16. stoletja? V Veliki planini pripravljajo danes skuto iz sirotke, ki ostane pri kuhanju pustega kislega sira, in iz pinjenca, tekočine, ki ostane pri metenju masla v pinji. Sirotko in pinjenc grejejo v loncu



Slika 16: Leseno torilo z okrašenim dnom, Velika planina (zasebna zbirka V. Kopača, foto: F. Stele, 2004).

Figure 16: Wooden mould (*torilo*) with decorated bottom, Velika planina (private collection of V. Kopač; photo: F. Stele, 2004).

na ognju nekaj minut in gosto stresejo v *skutenco*, platneno vrečko, da iz nje odteče tekočina. Gosto, ki ostane, imenujejo skuta [Cevc 1993: 52]. Podobno pripravijo *Schotte* v štajerskih planinah v Dachsteinu [Haiding 1962: 81–82].

Kako so pripravljali skuto ob koncu srednjega in na začetku novega veka, lahko samo ugibamo. Skuta je srednjeveški izdelek [Hoops 2000: 160]. V antiki skute niso znali izdelovati; sirotko, ki je ostala ob kuhanju mastnega sladkega sira, so zavrgli ali pa so z njo hranili pse [Herdi 1918: 44]. Na srednjeveški izvir skute opozarja etimologija besede. Ime je povzeto iz srednjeveške latinščine *excocta*, v pomenu »s kuhanjem raztopiti« [Snoj 1997: 577]. Iz povedanega lahko sklenemo, da so na začetku novega veka verjetno pripravili skuto iz sirotke, ki je ostala pri izdelavi (pustega?) kislega sira. Sirotki so dodali *medenc*, ki je ostal pri medenju masla, ali pa presno mleko, in to mešanico segreli v loncu na ognju, da se je izločilo gosto – skuta, ki so jo z leseno zajemalko pobrali iz lonca in stresli v vrečo *skutenco*, da se je odcedila. Tako pridobljeno skuto so oddajali v skledi kot naravno dajatev gosposki v Kamniku.

OBLIKOVANJE SIRA V KOPIJAH TORIL

Za dopolnitev podobe o sirarjenju v planinah v Kamniško-Savinjskih Alpah je bil napravljen vabljev preskus: oblikovali smo hlebčke sira v kopijah rimskega lončenega modela in srednjeveške zajemalke in v izvirnem lesenem torilu iz novega veka. Lončarka Barbara Štemberger iz Voklja na Gorenjskem je izdelala kopijo rimskega modela in srednjeveške zajemalke, arhitekt Vlasto Kopač pa je iz svoje zasebne zbirke posodil dvoje lesenih velikoplaninskih toril. Pastirica Marica iz Krivčevega v dolini Črne je z veliko prizadevnostjo iz kravjega mleka naredila sladek trd sir, masten kisel in pust sir. V kopiji antičnega lončenega modela (prim. sl. 2) je oblikovala sladek trd sir (sl. 17), v narečju imenovan *laški sir*. V »srednjeveški« lončeni zajemalki (prim. sl. 9) je oblikovala masten kisel sir (sl. 18) in v dveh lesenih torilih (prim. sl. 16) izdelala pust kisel sir (sl. 19). Hlebce sira smo izmerili in stehali in dobili takšne izsledke:

- 1: V »rimskem« torilu oblikovan hlebec trdega sladkega sira je meril v premeru 18 cm, visok je bil 6 cm, tehtal je 1,30 kg. Dobro so vidni okrogli odtisi z dna posode.
- 2: V »srednjeveškem torilu« z ročajem (pozneje se je pokazalo, da gre za zajemalko) ni bilo mogoče oblikovati hlebčka mastnega kislega sira. Uporabljali so jo za zajemanje sira iz kotla.



Slika 17: Hlebec trdega sira, oblikovan v antičnem modelu (kopija) (foto: F. Stele, 2004).

Figure 17: Wheel of hard cheese, shaped in an antique mould (copy) (photo: F. Stele, 2004).



Slika 18: Srednjeveška zajemalka (kopija), v njej masten, kisel sir (foto: T. Cevc, 2004).
 Figure 18: Medieval ladle (duplicate) with fatty, sour cheese (photo: T. Cevc, 2004).



Slika 19: Hlebček pustega, kislega sira, oblikovan v torilu (foto: F. Stele, 2004).
 Figure 19: Wheel of nonfat sour cheese, shaped in a wooden mould (photo: F. Stele, 2004).

3: V velikoplaninskem lesenem torilu oblikovan hlebec pustega kislega sira mohanta je meril v premeru 17 cm, visok je bil 11 cm, tehtal pa je 1,30 kg. V siru so bili vidni odtisi z dna torila.

Iz dobljenih izsledkov je mogoče povzeti, da so v antiki in tudi pozneje trde in mehke sire oblikovali v okrogle hlebce. Hlebca sira iz antike in novega veka se po teži nista bistveno razločevala, pač pa po trdoti in okusu. Za transport je bil antični trd sir primernejši od pustega kislega sira iz novega veka.

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CHEESE MAKING IN THE KAMNIK AND THE SAVINJA DAIRY MOUNTAINS IN THE LIGHT OF ARCHAEOLOGICAL FINDS AND HISTORIC SOURCES

INTRODUCTION

When analyzing the oral tradition on the captured wild man, Ivan Grafenauer also tackled an interesting cultural and historical question of when and where Slovenes learned how to make hard cheese from fresh milk. The Slovene word for cheese – »sir« – indicates that before settling in the Alps our ancestors knew, much as the German and Celtic tribes, only how to make soft cheese from sour milk. [Grafenauer 1952–1953: 143–144]. The present treatise hopes to throw additional light on the matter.

The available data on the subject, and especially written historical records, are scarce. Among the most important are the Gornji grad land register (urbar) from 1426 and the reformed land register of the Zgornji Kamnik seigneurie from 1571. Archaeological artefacts from two late antiquity finds on the Poborje [Ciglencečki 2000: 83–88] and from antique Ptuj (Petovio), in addition to the material obtained from the digs in the Kamnik and the Savinja Alpine dairy mountains during the period between 1996 and 2003 [Cevc et al. 1997], were extremely useful. Ethnological field research data from the Kamnik region is likewise very helpful for a comparison between modern and historical findings.

THE BEGINNINGS OF CHEESE MAKING IN THE ALPS

The domestication of sheep, goats and cattle in antiquity transformed the hunter into a shepherd and farmer, tied to a permanent settlement. During the millennia of settlement and cultivation of the Alps this mountai-

nous region saw not only ethnically diverse tribes but also different cultures, which imprinted the Alps with a unique and original cultural and ethnic character [Haid 1992: 33–96]. This also holds true for the Eastern Alps, which end with the Pohorje and the Kamnik and the Savinja Alps. The natural conditions for raising and grazing livestock are exceptionally favorable in the Alps, the tradition of shepherding is attested to in some regions of the Alps already in the Bronze Age, approximately 4000 years ago [Gleirscher 1985: 116–124; Mandl 1996: 157–159], and in the Kamnik Alps more than 3000 years ago [Horvat 2002: 193–202].

The manufacture of dairy products from milk is closely linked with raising livestock. Researchers seek the beginnings of cheese making in the Middle East, where it is also attested in texts from the Old Testament [Toussaint-Samat 1996: 115–116]. With the migration of peoples from the east into the Alps cheese making became a natural part of life in the Alpine world [Haid 1992: 72]. In the Alps, sour cheese made from milk was made already in the Bronze Age [Gutzwiller 1937: 95–100]. Naturally soured and curdled milk was strained and the remaining sour cheese was shaped by hand into lumps which were then preserved by drying in smoke (figure 1). The first sweet cheeses manufactured from milk, with the addition of rennet also came from the Middle East, and with the Greeks into the area of Greco-Roman cultural influence [Ränk 1972–1973: 551]. The more than two thousand year-old tradition of sweet cheese manufacture in the Greco-Roman world is borne witness to in the literary and historical works of Greek and Roman writers. Cheese was produced throughout the year, in cities and in the countryside, in *vila rustica*, in shepherd cottages in the mountains, in provisional shelters or in the open, and most intensively from mid May to October. Cheese was made either by simply dipping wool soaked with fig juice into fresh milk, or by using the dried stomach of a young ruminant as rennet. When the milk was beaten cheese formed, which was scooped from the vessel and hand shaped into small beaps. When more demanding shaping was called for the cheese was shaken into round clay moulds (*torilo*) or woven baskets and weighted with a rock to drain excessive liquids. The small wheels of cheese were then shaken from the mould onto shelves, where they were salted with rock salt and dried in the sun. Salt was poured on the wheels for several more days. Later they were set on shelves in dark and cool cellars where they were left to ripen for several weeks [Herdi 1918: 27–38].

The ancient tradition of cheese making was later taken over by monasteries in the Alpine regions [Bitterli-Waldvogel 1999: 106], while the rural population living in the countryside or on dairy mountains used the less demanding procedure for manufacturing sour cheese with high fat contents. In Switzerland, medieval sources mention two types of cheese: the sour cheese- *Ziger* (Lat. *serum lactum*) and sweet cheese *Käse* (lat. *caseus*). Fatty sour cheese (*serum lactum*) was prepared from fresh milk beaten in a cauldron (*pot*) with curdled whey. The cheese which formed in the process was squeezed into a wooden vessel (*torilo*); the shaped small cheeses were then cured in smoke. From the end of the 15th century nonfat sour cheese (Ger. *mager Ziger*) was also manufactured. It could only be made from skimmed cow milk, as the cream could not be skimmed from sheep milk. When the milk in the bowl soured, the cream was skimmed and the remaining milk was cooked at moderate temperature until the denser matter settled on the bottom. The cheese was then taken from the pot, moulded in the *torilo* vessel, and left to ripen on a shelf. Skimmed milk was then churned into butter. As has been already mentioned, hard sweet cheese (*Käse*, Lat. *caseus*) was manufactured only in monasteries in the early Middle Ages [Bitterli-Waldvogel 1999: 106–108].

ANTIQUE CHEESE MAKING IN PETOVIO, ON THE POHORJE AND IN THE KAMNIK AND THE SAVINJA ALPS

Antique cheese making was based on the manufacture of hard sweet cheese from fresh milk [Herdi 1918: 31]. In our regions it is attested to by rare archaeological finds of round clay vessels – colanders with holes used for shaping cheese into wheels. The clay moulds (fiscellae) are similar to shallow, barely 6 cm high round bowls, measuring approximately 20 cm in diameter. Inside the perforated base are small grooves for draining off whey from the mould (figures 2–6). Such moulds were found in antique Ptuj/Petovio [oral information by J. Horvat], in late antique dairy mountain strongholds on Brinova gora by Zreče, and by Ančnik's fort by Jurišna vas on the Pohorje [Ciglencečki 2000: 85, 90]. Moulds from antique Cambodunum - Kemptn in Bavaria are similar to those found on the Pohorje [Weber 2000: 117].

Because of the finds of moulds on the Pohorje and in Ptuj we can well ask ourselves if, in the time of the Roman occupation of our regions, hard cheese had been made from fresh milk in the dairy mountains of the Kamnik and the Savinja Alps. The antique and late antique shepherd settlement of the dairy mountains in the Kamnik Alps has been archaeologically confirmed from the 1st to 6th centuries in Velika planina, Rzenik, Vodotočnik, Veža (Čobavnica), the dairy mountain under the Kamniško sedlo, Ovčarija in Kalce, Kravec, Dolga njiva and Koren [Cevc 1997: 25–95; Horvat 2002: 193–202]. Among the researched fragments of antique and late antique clay vessels from the Dolga njiva dairy mountain and Na stanu under the Kamniško sedlo dairy mountain none were recognized as moulds. This, of course, does not prove that cheese making did not exist in the antique dairy mountains. We may well imagine that cheese was shaped simply by hand, or that small woven baskets (fiscinae) often mentioned by antique Greek and Roman writers [Herdi 1918: 34–38], were used for straining and shaping the cheese. Similar small woven baskets (figure 7) were used until recently by shepherds in the dairy mountains of Corsica [Hubatschek 1996: 72].

Finds of stone slabs also indicate cheese making. They were used to weight (press) cheese in a mould. It is an open question whether a yellowish limestone slab, measuring 25 by 20 cm and 3 cm thick, which was found by the fireplace inside a Roman shepherd's hut during archaeological excavations on the meadow Dolga njiva, can be considered a cheese weight. Round slate slabs, 30 cm in diameter, found in the ruins of late medieval buildings at an elevation of 1900 m in Müllerenhütte, Melchsee-Frukt, rank among the more convincing finds and were without a doubt used for pressing cheese [Obrecht, Meyer, Reding 2003: 173–174]. Shepherdesses also lived on the dairy mountains, as evidenced by items found on the dairy mountain Na stanu under Kamniško sedlo, which perhaps speaks in favor of the notion that cheese was made on the antique dairy mountains in the Kamnik and the Savinja Alps. Two-buttoned Noric fibulas, typical for tying female dress on the shoulders, and fragments of women's necklace from the 2nd century were found there [Cevc 1998: 12–13]. In antiquity, female cheese makers had an important role. They performed various tasks and took care of the livestock [Grassl 1999: 63–67]. In Swiss dairy mountains in the Middle Ages it was primarily the dairymaids who manufactured cheese from milk, and it was only with the modernization of cheese making in the early modern times that schooled cheese makers presumably replaced the dairymaids [Meyer et al. 1998: 411].

In light of the research to date and due to the lack of material evidence of cheese making in the antique dairy mountains of the Kamnik and the Savinja Alps, we may ask ourselves about the possible reasons for not making cheese from milk in these dairy mountains. Research on the Dachstein Steiermark dairy mountains

has shown that the antique pastoral economy was still based on nomadic pastoralism. In order to graze their livestock, shepherds presumably left for the dairy mountains situated above the tree line. At a base post they set up a shepherds' but (an example in these parts is the shepherds' but in the Dolga njiva dairy mountain). From there they would leave with their herds for higher elevation pastures, where they sought natural shelters in caves or rock shelters, or set up makeshift shelters [Mandl 1996: 158–159]. A similar, nomadic form of pastoralism, with shepherds residing in provisional natural shelters, could be perceived in the more contemporary migrations of the Solčava shepherds from one dairy mountain to another; this custom was abandoned only after the Second World War [Cevc 1977: 103–106]. Whether the shepherds also made cheese is unknown, but we may surmise that with a nomadic form of pastoralism there are fewer opportunities for shepherds to manufacture cheese, as cheese making demands time and a suitable, permanent space for cooking and storing the cheese.

CHEESE MAKING IN THE EARLY AND HIGH MIDDLE AGES IN THE DAIRY MOUNTAINS OF THE KAMNIK AND THE SAVINJA ALPS

The lack of material evidence for cheese making in the dairy mountains of the Kamnik and the Savinja Alps in antiquity leads to the conclusion that even in the Early Middle Ages, from the 7th to the 10th centuries, cheese had not been produced in these mountains.

We cannot speak of Alpine herdsmen in the contemporary sense of the word – with the typical seasonal movement of livestock from the permanent settlement to the temporarily inhabited posts in the dairy mountains for the production of dairy products (cheese, butter, cottage cheese) – before the Middle Ages [Mandl 1996: 159]. There is no definite material evidence of cheese making in the Early Middle Ages, from the 7th to the 10th centuries, when the Slavs had already settled the Alpine region of the dairy mountains of the Kamnik and the Savinja Alps; the early Middle Age sites beneath the Alpine but on Kravac [Cevc 2003: 7–19], in Velika planina on Gradišče and Za plečam, are still awaiting archaeological research [Cevc 2000b: 113]. We may, however, consider the possibility of Early Middle Age cheese making in the Kamnik and the Savinja Alps, as a type of sour cheese named *trnič* is still produced in the Kamnik area (figure 8). *Trnič* is typically hand-shaped into lumps. This archaic working method places its origin in the Early Middle Ages, if not even further back, in the Ancient and pre-Roman period. Until recently, *trnič* was produced in the small villages under the Kamnik Mountains. Cured in smoke, it was eaten by mowers and reapers. When grated, *trnič* was used to cook the savoury »mobant's« soup (Krivčevo in the Črna valley). Decorated *trnič* cheese was made in Velika planina. Hand shaped *trnič* balls were shaped by pressing the cheese into a wooden mould and were given to the family when the shepherds returned to their villages. For a reflection on the history of cheese making it is important to highlight the etymology of the word *trnič*. One of the newer hypotheses was put forward by linguist Marko Snoj, who explained the development of the word from the old Slavic verb *tvoriti* – to shape. The derivative of the word *trnič* is the hypothetical *tvornič*, meaning a »small shaped cheese,« which is pronounced *trnič* in the East Gorenjska dialect. Related to *trnič* is the Polish and Russian *tvorog*, a sour cheese, and the Slovenian *tvorilo*, pronounced »torilo« in the East Gorenjska dialect, a round wooden vessel with holes in the bottom, used for shaping cheese into a wheel [Snoj 2003: 28–29]. Similar to the *trnič* cheese in manufacture and type is the *ožemček* from Bobinj, a small cheese shaped by hand into a spherical shape and equally beautifully decorated.

The production of sweet hard cheese is historically recorded in the Kamnik and the Savinja Alps only in the

High Middle Ages. Entries can be seen in the Gornji grad land register from 1426, where 30 dairy mountain farms (called švajga) of the Gornji grad monastery are recorded. These farms from the Middle Ages, whose owners mostly raised livestock, were set on the upper wheat-growing limit. They first appeared in the period between the 12th and the 15th centuries, after the valleys had already been densely settled. The farms were divided according to the tribute in kind they had to pay. Some of them tributed 300 wheels of cow cheese to the male monastery in Gornji grad (Herrenkäse, caseus vaccinus), others tributed 300 wheels of sheep cheese to the female monastery (Nonnenkäse) in Gornji grad [Gstirner 1937: 64]. The Latin name for cow cheese, »caseus,« shows that it was made from fresh milk with added maw [Bitterli-Waldvogel 1999: 108; Gstirner 1937: 40]. Sheep cheese had a high fat contents [Gstirner 1937: 47], but we do not know whether it was made with maw or as a sour cheese. In Switzerland, such fatty sour cheese is called Fett Ziger [Bitterli-Waldvogel 1999: 108]. For many centuries, fatty sheep cheese was a typical product of the Middle Ages, especially in the dairy mountains of the Alps [Meyer et al. 1998: 407]. A wheel of the Gornji grad cow cheese weighed approximately 1 to 1.5 kg. The much smaller wheel of sheep cheese weighed about half as much [Gstirner 1937: 50]. Swiss researchers of cheese making [Meyer et al. 1998: 407] confirmed the theory that in the Middle Ages, fatty sheep cheese was preferred to cow cheese.

The chance find of a fragment of a perforated clay pot with a handle from the 14th to 15th century (figure 9) indicates the production of cheese in the Gornji grad švajga farms. The fragment was dug up at an abandoned švajg by Gornji Špob (1160 m) beneath Rogatec. The perforated base measures approximately 8 cm and about 16 cm at the top. The peculiarity of this perforated clay pot is its handle [Cevc 2000a: 19, figure 12]. An experiment of straining sour fatty cheese in a copy of the clay vessel with a handle showed that it had not been used for moulding sheep cheese into wheels, but merely to scoop the cheese from a cauldron.

CHEESE MAKING IN THE DAIRY MOUNTAINS OF THE KAMNIK AND THE SAVINJA ALPS IN THE MODERN TIMES

At the end of the Middle Ages the economics of the Alpine dairy mountains changed considerably. The number of cattle increased greatly, which also had a decisive influence on cheese making. Instead of sour fatty sheep cheese people started producing sweet cow cheese, butter and nonfat sour cheese. The reasons for these changes were the introduction of stables for livestock and the increased trade in cattle and dairy products [Meyer 1998: 406–407; Bitterli-Waldvogel 1999: 101].

Changes also occurred in the economy of the Kamnik and the Savinja Alps. Until the end of the Middle Ages, the dominant livestock pastured were sheep and goats, as elsewhere in the Alps [Meyer 1998: 410]. Cattle and horses were much less numerous. Later on, sheep and goats were gradually replaced by cattle, and butter became an important dairy product. Nonfat sour cheese, the so-called mohant, replaced the fatty sour sheep cheese. More numerous fragmentary finds of shallow vessels with furled or upright openings from the 16th century onwards (figure 10), used for souring milk, further confirmed the introduction of these novelties [Cevc 2000a: 32–54]. A typical example of the dairy mountain adapted to the new conditions is Velika planina, which was named »gross ross albenn« – Large Horse Dairy Mountain (Velika konjska planina) – in the early 16th century. Somewhat later, its name was changed to Velika planina (Large Dairy Mountain). At the latest at the end of the 16th or at the beginning of the 17th century, oval butts (bajte), which are typical for this mountain, started being erected. The butts had a shepherd's room in the center, surrounded by

a sback for the cattle. The 4 x 4 m shepberd's but had an open fireplace in the corner and shelves with bowls for souring milk along the walls [Cevc 2000a: 10–31; Horvat 2002: 200].

A note in the 1571 land register of the Upper Kamnik seignury describes the processing of milk into sour cheese and cottage cheese. The register, written in German, lists the names of the following dairy mountains: Jezerca, Gola dolina (now Kravac), Šebesovo on the Kravac, Koren, Ovčarija in Kalce, Njiva, Ovčarija in Mokrice, and Dolga njiva. »Anyone who wanted to graze cattle on a dairy mountain had to pay for this privilege in cheese, and pay the Kamnik manor a yearly fee of as much cheese (Käse) and cottage cheese (Schotten) as can be obtained in a single day from the cattle grazing on the mountain,« states the conclusion of the list of the dairy mountains [Cevc 2000a: 14–15].

The mention of cheese and cottage cheese in the land register shows that, even after the reform of the medieval land register in 1571, the peasants were still obliged to pay tribute in kind for pasturing their livestock in the dairy mountains. It would be interesting to learn what kind of livestock the peasants from Kamnik and its vicinity pastured in the dairy mountains in the mid-16th century, what the cheese paid to the lords in Kamnik looked and tasted like, how large and heavy were the wheels of cheese made in the dairy mountains.

It is unfortunately not possible to answer these questions. It is, however, possible to make an indirect inference with the help of archaeological discoveries of animal bone remnants, of fragments of clay pots, and of the remnants of shepberd buts.

Dairy mountain dwellings clearly illustrate the conditions of the pastoral economy in different historical periods. The ground plans of shepberd buts from the end of the Middle Ages and the early modern period (Dolga njiva, Koren, Kriška planina, Mokrica) show that in this period wooden shepberd buts about 3 x 2.5 m in size were built on stone foundations (figure 11) in the Kamnik and the Savinja dairy mountains. In buts of this size it was possible to manufacture fatty sour cheese, which required only minimal space with an open fireplace and several pots for storing milk and cooking cheese, while cellars for ageing the cheese were not necessary [Meyer 1998: 406–407]. For producing fatty, sour sheep cheese shepberds used larger clay pots in which they beated milk on an open hearth and thus made sour cheese (figure 12). Fresh milk was stored in high bowls (figure 13) or in milk bowls with handles (Lepa glava above Petkova njiva, Ovčarija in Kalce). Shallow bowls, suitable for souring milk, were seldom used in the 15th century [Bregant 1977: 113–120; Cevc 2000a: 82–123].

We do not know the size of the wheels (sour or sweet?) cheese that the renters of the dairy mountains had to tribute to the manor in Kamnik. This could have been established had the fragments of the two clay moulds (figures 14 and 15) from the Ovčarija v Kalcah dairy mountain (15th to 16th century) had been better preserved. To make a mould, shepberds simply used a pot and drilled in it (with a pointed rock?) a number of holes to make 6–7 mm holes. Since it is possible to determine only the size of the base (15 cm) and not the height or diameter of the mould [Cevc 2001, illustrations 66, 67], the size of the cheeses strained in the moulds remains unknown. It is possible, however, to infer this size from the records in the 1426 Gornji grad land register [Gestrin 1952–1953: 482; footnote 61]. Presumably they weighed from 1 to 1.5 kg.

Whether wooden moulds were also used in the dairy mountains in the late Middle Ages and in the early modern times remains equally unknown. This theory could be supported by the wooden moulds (torilo) from Velika planina and the surrounding dairy mountains [Cevc 1993: 51]. Vlasto Kopac had described these moulds with an appreciation for artistic detail:

The wooden moulds are round, a scant span wide and as much as half a span deep, hollowed or turned vessels from a single piece of wood with a somewhat outward sloping rim and perforated bottom. Across the perforations are depictions of different symbols (figure 16) which the carver embellished with decorations using the encising technique.

Regarding the use of these moulds V. Kopač wrote:

When the coagulate was taken from the cheese pot it was placed into the mould and set on a board set over a bucket for the cheese to strain. The following day the cheese maker tied the moulds with the strained cheese two by two in order to press two cheese wheels together. The completely strained cheese was then placed on a bed of leaves and stored on a shelf. [Kopač 1974: 155–163]

On Sundays, the cheeses were taken into the valley by the family that had brought weekly food supplies to the shepherd grazing their livestock. The mention of cottage cheese (skuta) in the reformed land register of the Zgornji Kamnik seigneurie invokes the question whether the cottage cheese prepared today matches the products from the mid-16th century. The cottage cheese made on Velika planina at present is prepared from wbej, which remains after the cooking of nonfat sour cheese, and from pinjenec, the liquid that remains in the churn after the butter has already been churned. The wbej and the pinjenec are beaten in a pot over fire for several minutes, whereupon the denser curds are shaken into the skutenica – a canvas bag which drains the excessive liquid. The remaining curds are called skuta (cottage cheese) [Cevc 1993: 52]. Schotte is prepared in a similar way in the Steiermark dairy mountains of Dachstein [Haiding 1962: 81–82].

*How cottage cheese was prepared at the end of the Middle Ages and in the early modern times can only be guessed at. Cottage cheese is a medieval product [Hoops 2000: 160]. In antiquity people did not know how to make cottage cheese; the wbej that been left over after cooking fatty sweet cheese was thrown away or used to feed dogs [Herdi 1918: 44]. The etymology of the Slovenian word for cottage cheese – skuta – also attests to its medieval origins. The name derives from medieval Latin *excocta*, meaning »dissolved by cooking« [Snoj 1997: 577]. It may be concluded that in the early modern times cottage cheese was probably prepared from the wbej left over from the production of nonfat sour cheese. The medenc, which was left over from the making of butter, was added to the wbej and beaten in a pot over fire, until the denser matter – cottage cheese – separated from the mixture. It was then taken out of the pot with a wooden ladle and put into a bag, skutenca, for straining. The cottage cheese produced in this way was then placed in a bowl and paid as tribute in kind to the lords in Kamnik.*

THE DUPLICATION OF THE ORIGINAL CHEESE-MAKING METHOD

To determine the process of cheese making in the dairy mountains of the Kamnik and the Savinja Alps the following experiment was carried out: cheese wheels were moulded in duplicates of a clay Roman mould and with the help of a medieval ladle and an original wooden torilo mould from the modern times. Potter Barbara Štemberger from Voklje na Gorenjskem made a duplicate of a Roman mould and a medieval ladle, while architect Vlasto Kopač lent two wooden moulds from Velika planina from his private collection. Shepherdess Marica from Krivčevo in the Črna valley assiduously produced sweet hard cheese, fatty sour cheese, and nonfat cheese, all from cow milk. In the duplicate of the antique clay mould (comp. figure 2) she

shaped a sweet hard cheese (figure 17), named *laški sir* in the local dialect. In the »medieval« ladle (see figure 9) she shaped a fatty sour cheese (figure 18) and in the two wooden moulds (see figure 16) she made a nonfat sour cheese (figure 19). By measuring and weighing the wheels of cheese the following results were obtained:

1: The wheel of hard sweet cheese shaped in the »Roman« mould measured 18 cm in diameter, 6 cm in height and weighed 1.30 kg. Round imprints are clearly visible on the bottom of the vessel.

2: In the »medieval« mould with a handle (as it turned out later on, this was really a ladle) it would have been impossible to shape a small wheel of fatty sour cheese. The ladle had been used for scooping cheese from a cauldron.

3: The wheel of nonfat sour cheese, the *mohant*, which was shaped in a mould from *Velika planina*, measured 17 cm in diameter, 11 cm in height and weighed 1.30 kg. The imprints from the base of the *torilo* mould were clearly visible in the cheese.

These results indicate that hard and soft cheeses were shaped into round wheels. Antique and modern cheeses did not differ greatly in weight, but rather in hardness and taste. The antique hard cheese was more suited to transportation than the modern period nonfat sour cheese.