# ACTA TERRAE SEPTEMCASTRENSIS XIV, 2015

# LUCIAN BLAGA UNIVERSITY OF SIBIU FACULTY OF SOCIAL AND HUMAN SCIENCES DEPARTMENT OF HISTORY, HERITAGE AND PROTESTANT TEOLOGY INSTITUTE FOR THE STUDY AND VALORIFICATION OF THE TRANSYLVANIAN PATRIMONY IN THE EUROPEAN CONTEXT

## ACTA TERRAE SEPTEMCASTRENSIS

XIV

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**Sibiu, 2015** 

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### THE OCCURENCE OF THE RAW MATERIALS IN THE TRANSLVANIAN PREHISTORIC LITHIC INDUSTRY

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**Abstract:** The article presents the results of several surveys made in the area of Mureş Valley, Metaliferi, Poiana Ruscă, Anina and Almăjului Mountains, with the purpouse to identifie the sources of the raw materials for the prehistoric chooped tools discovered in the Transylvanian archaeological sites. The article also includes a catalogue of the types of materials that were identified.

**Keywords:** Transylvanian Neolithic lithic industry, in terms of raw material sources identified to the Mure**5** Valley, Metaliferi Mountains, Poiana Ruscă Mountains, Anina et Almăjului. Silex of "Banat" and other siliceous rocks.

The Neolithic "wave" that appeared in Transylvania at the end of the 7<sup>th</sup> millennium – beginning of the 6<sup>th</sup> millennium B.C., as a result of different forms of manifestation and obviously with also many names that were claimed, considering the eponym zones, brings all together the entire experience cumuli with the long disputed movement east-west or south-north.

Clear is that the "threshold", the Danube, would mean for the Romanian archaeology the cropping up of a new evolution step to which were added local features influenced by the new habitation conditions and what is more important by resources.

Some elements are connected with tradition, so that beyon the local resource, no matter the distance, out of inertia, will be brought by different channels traditional objects, pieces that represent change value, elements with funeral character, or with symbolic value, objects that are being spread throw over all Europe.

Lechevalier observed in PPN-Preceramic IB that the blades from the graves are intact, along with three large nucleus and a herminette, displayed as offerings (Lechevalier 1990, 269), in a grave *Tomb 114*, in Mergarh, Pakistan along the flint artifacts (12 pieces of truncated blades, three nuclei, eight trapezium) it was also

displayed a polished axe, so that it was made the hierarchical distinction inside the society (Inizan, Lechevallier 1985, 114-117; Binder, Perlés 1990, 268).

With another connotation, in Bretania were documented five axes from 4<sup>th</sup> millennium B.C, offered to the divinity, discovered in Gonsenheim at Kästrich (Hansen 2012, 28), or a display as offering to gods, repreated seasonal, so that appeared deposits of flint axes (in north-western Zealand, preserved today in Copenhaga National Museum) (Whittle 1996, 280-281).

Having another symbolist or as it still has today, in New Gunee, instead of the coin, such axes were a part of the price paid by men for the future wife (Hansen 2012, 28). Whittle suggests the possession of some artifacts especially finished, as prestige objects, as the flint axes from Krzemionki (Polonia) mine (Lech 1983, 118; Whittle 1996, 276).

In Transylvania there are documented Starcevo-Criş stations, in inhumation graves, lithic artifacts without a usage stigma, which indicates a special destination, or conditions of processing for this purpose only. In Cluj, in an archaeological site, along with the skeleton in the tomb, at the deceased foots were displayed 10 microlithic pieces of yellow fling, a bone awl and a cob axe from amphibolites (Vlassa 1976, 83-84). In Bergheim (Eichstätt) Germany in a early Linear Bandkeramic culture archaeological site, along with the deceased, near the Balkan flint blades, there is also a herminette (Fig. 1), typical for Early Neolithic period (Tillman 1995, 44).



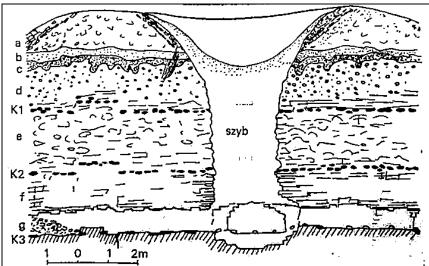
**Fig. 1.** The lithic inventory displayed right beside the deceased Bergheim, (Eichstätt) Early Neolithic (after Tillman 1995, Fig. 12, 44).

Hansen mentioned in Bad Durrenberg Ldkr. Merseburg-Querfurt (Sachsen-Anhal), at a woman tomb, besides the 31 baldes of flint also a stone axe (Hansen 2012, 28). Remembering of the contact from the south side of Carphatian Mountains, in Poland, the same funerary inventory it is being documented in Dziekanovice (Woj. Kielce), along with ceramic vessels, intact flint blades, or other two graves in Kraków-Pleszów, in both cases the skeleton is being posed in crouched position,

typically for the Early Neolithic from Poland, with chooped lihic inventory and polished, intact (Kamieńska, Kozłowski 1990, 40), different of the Middle Neolithic Vinča levels, from Gomolava-Hrtkovci where the blades displayed in the graves present marks of usage or they are fragmented (Kaczanowska, Kozłowski 1986, 103-104).

These examples were ment to suggest the existence, no matter the typology of some artifacts that have a special destination, as offerings, prestige object, exchange value, either the case of chopped and polished artifacts, tradition which imposes the continuity of exploiting this raw materials.

By the sedentariness process, the necessary of raw materials is being enlarged, imposed to the systematic exploitation with galleries (Fig. 2), or surface exploitation (Fig. 3), for the raw materials of the traditional large usage artifacts, but also for the category of artifacts with special destination, mentioned above, justifying the exploitation in the flint mines from Spienne (Belgia) (Mansuelli 1978, 290-291; Binder, Perles 1990, 257-283); the flint from Grimes Graves (Norfolk, Anglia) (Sieveking *et al.* 1973, 183; Darvill 1993, 101); the flint from Gargano (Italia) (Binder, Perles 1990, 257-283); the flint from Jadar (Serbia), the stratified Balkan flint (bandet flint) from Krzemionki (Polonia)(Lech 1983, 118; Whittle 1996, 276); the flint with white spots from Świeciechow (Polonia) (Lech 1983, 124); the flint from Jablines (Franța) (Binder, Perles 1990, 257-283); or the flint exploitation from Grand Pressigny (Franța)(Champion *et al.* 1984, 163; Mansuelli 1978, 251), or the exploitation in pits and shafts from Kriva Reca, Bulgaria (Gurova 2012, 26) and many others



**Fig. 2.** The mine exploitation with galleries for "bandet flint" from Krzemionki-Opatowskjie, (Polonia) (after Lech, 1983, 118).

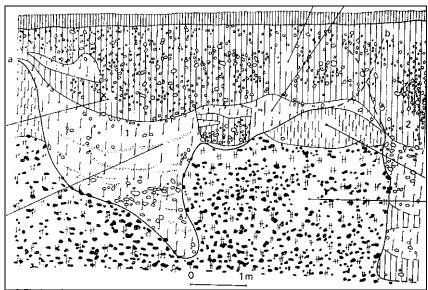


Fig. 3. Surface exploitations, in pits and shafts from Saspów (Polonia)(după Lech, 1983, 118).

At South of Danube there have been documented Balkan flint exploitation centers Nikopole \$\forall i\$ Plevna (Gurova 2012, 19), that ensures a large part of the lithic raw materials for the prehistoric societies from the territory from North of Danube, including Transylvania, where it has been gradually replaced with the local chalcedonies, silicified grindstones, less qualitative, or stratified tuffs.

In the Middle Neolithic, "the Banat" flint (Comṣa 1971, 15-19) became prevalent in the Transylvanian sites, Dealul Cremeniş being known as a exploitations center (Comṣa 1971, 16) (Luca 2005, 64; Luca 2006, 212; Luca 2010, 212-213) in the area, after our latest researched it has been proved the existence of some important exploitations probably since prehistory.

The main raw materials in the case of polished lithic artefacts is the cornea, present in the Early Neolithic settlements as herminetts, than along with the sedentarisation they modify their shape and dimensions, proving as necessary the existence of some sources in this area. Their growing frequency the changes in the econonomy of prehistoric society, adding to this hard raw materials, diorites, gabroues, banatites etc.

The statistic analysis of the lithic chopped artifacts revealed the prevalence of some petrographical categories in accordance with the geographical area, this fact proving the existence of sources near the habitation.

The archaeological Neolithic sites from Brănişca (Hunedoara County), Turdaş (Hunedoara County) or Tărtăria (Alba County), register a different pounder of raw materials from one station to another, in accordance with the proximity of the source.

From the survey, the settlement from Brănişca revealed a pounder of 61% flint from "Banat", compared with thee research from 2010 from Tărtăria (Alba County), level I (Petrești), where the major pounder is being registered by the silicified grindstone in percent of 63%, followed by the flint from "Banat" in proportion of 11%. A special case is being registered in the Starčevo-Criş stations, Cristian I (Sibiu County), where the numerical pounder is being represented by artifacts made of Balkan flint 36%, followed by local materials silicified grindstones and chalcedony with 10% each, and at Miercurea Sibiului II in the Starčevo-Criş III habitation the Balkan flint is being represented in 55%, 12% obsidian, and the local prime materials (jasp, opal), less then 10%.

Considering the presence and frequency of some type of rocks in the archaeological sites from Banat and Transylvania, there is the idea of identifying the sources, the problem of the occurrence of raw materials being one in actuality. The survey project was started by Prof. Dr. Wolfram Schier<sup>6</sup> (Freie Universität Berlin) and it was implemented with the help of colleagues Otis Crandell, geologist Octavian Popescu and pilot Simion Cîmpean, being identified sourced from Almăjului Mountains, Aninei Mountains, Poiana Ruscă Mountains, Metaliferi Mountains, Zarandului Mountains with their valleys and Mureş River Valley. There were studied mountain zones for which already existed information from geology, being evidenced some raw materials sources, from the category of eruptive and sedimentary rocks, either on the river valleys, in quarries, or in large opened spaces, on mountain roads or on access roads eroded by pluvial waters.

In aval from Pietroasa commune, Timiş County, near Fărăşeşti village, there is an entire exploitation area, on Bega River Valley, on "Sodol" meadow, on approximately 700 meters, plateau limited by *Băleasca Valley*<sup>7</sup> (Ursulescu 1999, 169), *Dâmpu Moianului* and Bega river (fig. 6), where there have been documented clogging pits, having variable depths, over 3 meters. The same type of extraction pits are visible, this time very clearly, on the coast of the versants that border this plateau, the entire zone being "disturbed" of this anthropic interventions.

The pits, today being invaded by vegetation, are being displayed on a surface of over one hectare, with an irregular shape, with a distance between them of 50-100 meters, with dimensions of over 15 meters, different as a shape, sometimes superficial, but visible.

The pits, invaded today by vegetation, are being displayed on a surface having over one hectar, irregular shaped, having the distance between them of 50-100 m,

<sup>&</sup>lt;sup>6</sup> We express here, our entire gratitude and cosideration for Professor dr. Wolfram Schier for all his support.

<sup>&</sup>lt;sup>7</sup> Information from the grandmother of Baroni family from Fărășești, "Sodol" meadow being the family's hayfield, the names of this places are probably lost, changed today, being part of the old toponomy. Between Fărășești and Crivina de Sus there was Culmea Vătranului (Ursulescu 1999, p. 168): "vătrani" meaning the fire hook.

with dimensions of overe 15 m length, different as a shape, sometimes superficial, but visible.

Dîmpu Moianului is the versant that limits Sodol's water meadow, at approximately 400 m from Bega River, in the opposite side (coordinates 45°49'20,16''N; 22°21'40,71"E) 224 m from the sea level), displayed on terraces, the first two having in their competency sicious rocks, Balkan flint, silicious grit stones, jasp and chalcedony that are the object of the exploitation, and from approximately 60 m hight, mica-schist of low quality and very rarely quartz.

The base material from here is comprises "Banat" flint, crossed by manganese oxide, silicious grit stones of good quality with chalcedony spots, brow-reddish jasps or silicified wood, silicious concretions characterized by a concoidal crack, in different color-tones of ochre which covers the superior layer of the meadow and side of *Dâmpu Moianului*.



**Fig. 4.** Pietroasa, (Timi**Ș** County, Fărășești village, "Sodol" meadow. a) The enclose of an exploitation pit, boarded by low quality sillicolites; b) silicolite boulder.





**Fig. 5.** Pietroasa (Timi**Ș** County), Fărășești village, *Dâmpu Moianului*, aspect from the area of flint exploitation.

The entire ensemble seems to be an exploitation centre (fig. 4-5). Upstream and downstream this point, at 4-6 km, it was indentified the same silicious material in which pregnant is the chalcedony, the opal crossed by a series of manganese black oxide network, known in archaeology as "Banat" flint (Comşa 1971, 15-19; Comşa 1975, 5-19), identified also in the right side of Bega river, before Pietroasa village, along the valley that tributaries Bega river (fig. 6).

E. Comşa mentioned very well these points, verified by us too, on a direction along Bega river, the entire area being composed, petrographically from the same category of silicolites, that were exploited, according to Comşa even since Paleolithic period Comşa 1971, 18).



Fig. 6. Pietroasa (Timis County). The placement of the zone with "Banat flint".

The petrographic materials identified by groups of mountains were: Almăjului Mountins – freshwater flint, silicolite and black chert, silicified wood; Aninei Mountains – silicious stratiform accidents; Poiana Ruscă Mountains – jasp, diatomit, gheizer chalcedony, brown flit (fig. 7) (Catalogue 13/a) – "replacement silicios slate" – pure quartz (biochemical rock) ) (Ungureanu 2008, 106), "Banat flint", corneus, banatite, andesite; Zarandului Mountains, Glşa Carriere – horned limestone and horned dolomite. A great part of the Vinča culture lithic industry from Tărtăria – archaeological research 2014 – is being configured from brown flint, identified in the zone "Carieră" Silivaşu de Jos (Hunedoara), the same material being present on all over the east versant, but we do not have analysis for attribution of the raw materials.



Fig. 7. Silivașu de Jos (Hunedoara County). The placement of the zone with brown flint (Catalogue 13/a).

#### The catalogue of the identified rocks



1. Poiana Ruscă Mountains, Lugoj Basin, Bulza (Timiş County). Jasp.



2. Poiana Ruscă Mountains, Lugoj Basin, Bulza (Timi**Ş** County). Diatomit.



3. Poiana Ruscă Mountains, Techerău, Bodii Valley. Gheizer calcedonie.



4. Poiana Ruscă Mountains, Valea Nandrului, Hunedoara County, "Ocolul Silvic" Point. Jasp.



5. Poiana Ruscă Mountains, Valea Nandrului, Hunedoara County, "Ocolul Silvic" Point. "Banat flint".



6. Poiana Ruscă Mountains, Valea Nandrului, Hunedoara County, "Ocolul Silvic" Point. Chalcedony (brown flint).



Poiana Ruscă Mountains, Cârjiți, Hunedoara County. Jasp.



8. Poiana Ruscă Mountains, Cherghes, Hunedoara County. with Jasp small leads quartzite.



9. Poiana Ruscă Mountains, Pietroasa, Timis County, Bega Valley, 45°49'16N, 22°21'33E. "Banat flint".



b) a) 10. Poiana Ruscă Mountains, Fărășești village, Timiș County, Bega Valley. a) "Sodol" meadow point, "Banat flint" and b) Izvorul rece.



11. Poiana Ruscă Mountains, Sasca Timiş Montană, County. Silicous accident.



12. Poiana Ruscă Mountains. Silivaşu de Jos, Hunedoara chalcedony. County. Opal, 45°39'43.35"N 22°54'54.34"E.



13. Poiana Ruscă Mountains, Silivașul de Jos (Hunedoara County). "Cariera". a) Brown flint 45°39'43.35"N 22°54'54.34"E b) Opal.



14. Poiana Ruscă Mountains, Ocna de Fier, Caraş-Severin County. Boulder with all the four phases from quartz, opal, chalcedony and hialit.



15. Metaliferi Mountais, south, Banpotoc Valley, Hărău village (Hunedoara County). Silicified sandstone.



16. Almăjului Mountains, "Scamnul Cruşoviței", Caraș-Severin County. Silicolite, fragment from a nodule



17. Almăjului Mountains, "Scamnul Cruşoviței", Caraș-Severin County. Black chert - silicolite.



18. Almăjului Mountains, Căuniței Valley, Caraș-Severin County. Fresh water silicolite (as the Balkan one!).



19. Almăjului Mountains, "Ogașul Cirinii", Caraș-Severin County. Silicolite.



 Almăjului Mountains, Ogaşul Irezni, Sicheviței Valley, Caraş-Severin County. Silicifiedopalized wood.



21. Aninei Mountains, Aninei Valley, Caraș-Severin County. Limestone with silicious stratiforme accidents.



 Zarandului Mountaind, Cariera Galşa, Arad County. Horneddolomite rock.



23. Poiana Ruscă Mountains, Glimboca Valley, Caraș-Severin Couty. In the river's bed. Andesite.



24. Poiana Ruscă, Mountains, Glimboca Valley, Caraș-Severin Conty. In the river's bed. Banatit.

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