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CHARACTERISTICS AND ANALOGIES IN VĂDASTRA POTTERY FOUND SOUTH OF THE DANUBE

Abstract: Prezentul articol reprezintă un studiu dedicat ceramicii aparţinând culturii Vădastra. Sunt analizate piesele descoperite în sud-vestul României şi nord-vestul Bulgariei. Ceramica din lotul analizat, provine din siturile de la Borovo "Magaritsata", Borovo "Chakmak tepe", Brenitsa, Novgrad, Bistrentsi, Altimir, Iasen, Todorovo, Ripiti, Baniska, Hotnitsa "Orlovka", Hotnitsa "Kaya bunar" and Hotnitsa "Kashlata" (Bulgaria), Slatina "Crişana II", Fărcaşu de Sus, Vădastra, Hotărani "La turn", Cruşov, Rast, Piatra Sat "Nucet". Ceramica aparţinând fazei timpurii a culturii Vădastra a fost împărţită în 3 grupe tehnologice (A, B şi C), în funcţie de pastă, maniera de tratare a suprafeţei vaselor şi tehnicile de decor. În faza târzie a culturii Vădastra se mai întâlnesc doar două din grupele tehnologice din prima fază (B şi C). Descoperirea în aşezările de la Altimir şi Brenitsa (nord-vestul Bulgariei) a ceramicii Vădastra în asociere cu ceramică Boian-Giuleşti demonstrează interferenţele culturale existente între populaţiile de la sudul şi nordul Dunării, dar şi sincronismul cronologic dintre cele două fenomene culturale.

Keywords: neolithic, Vădastra culture, Bulgaria, Romania, poterry, forms, decoration technique.

According the archeological studies the area of spreading of Vădastra culture includes the Valley of Olt River (Oltenia region, Romania) and separate zones in Northern Bulgaria. There were two timing periods suggested for this culture in the scientific literature. The first one is based on the stratigraphic observations in the eponym settlement and includes 2 phases (Mateescu 1959: 2; Morintz, Cantacuzino 1963: 3). The second divides the evolution of Vădastra societies in 4 phases (Berciu 1961: 51; Nica 1971: 5-33), where the last two are testified in Hotărani "La turn" și Piatra Sat "Nucet".

So far no distinguished lodging layers were found in the cultural stratifications, which would reflect the separate phases of evolution in the studied settlements in Bulgaria. Because of this, according the characteristics, the established analogies and the cultural context in which it's found, we split in two main chronological groups the Vădastra pottery discovered on Bulgarian territory.

The first one called "early Vădastra" unites the materials from 12 settlements (Fig.1). Five of them – Borovo "Magaritsata", Borovo "Chakmak tepe", Novgrad, Bistrentsi and Baniska² the real settling of Vădastra societies to the South of Danube. In the settlement near Koprivets (North-East Bulgaria), Hotnitsa "Orlovka", Hotnitsa "Kaya bunar" and Hotnitsa "Kashlata" (Central North Bulgaria, Yantra River) the pottery of Vădastra type appears in the context of Hotnitsa culture (Katchitsa culture according Stanev 1996: 56). Similar materials are known from the Devetashka cave, Suhindol "Kalinkata" and Ostrov (Fig.1).

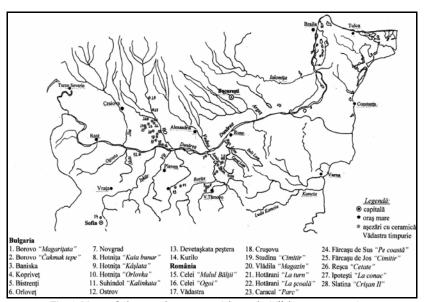


Fig.1 Map of the settlements with early Vădastra ceramics.

There are archeological excavations made in Borovo "Magaritsata" (1992), Koprivets (1990) and Devetashka cave (1952, 1999). The cultural stratum at Borovo "Magaritsata" is one-layered and almost destroyed by terrain tilling (Popov 1996: 37). There were pottery materials with decoration of Vădastra type found in a lodging, burned to the ground, from the 3-rd stratigraphic layer — Hotnitsa phase II (Popov, Mateva 1993: 23-24). In Devetashka cave they descend from lateneolithic stratum (Mikov, Djambazov 1960: 47-49; Gergov, Hristov 2001: 15). There are only a few fragments known from this settlement and there is still no material published about the pottery from the new studies (1999).

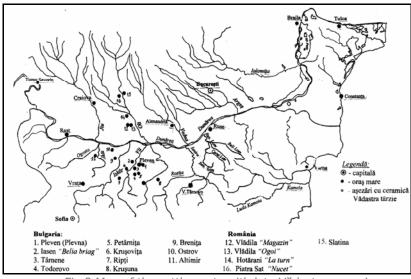


Fig.2 Map of the settlements with late Vădastra ceramics.

According outer surface cultivation and decoration technique, we divide the early Vădastra pottery in 3 technological groups – A, B and C.

Group A represents roughly polished surface or covered with barbotine, sometimes decorated with embossed strips. It was evidenced in the pottery materials from Borovo "Magaritsata". The rough utensils from this settlement are baked in a reduction-oxidation atmosphere – there is dark middle in the profile, outer and inner oxidized layer. They are made from a paste with vegetal ingredients (Popov 1996: 48).

Group B unites pottery with incised decoration. Here we delimit two subgroups - B_1 and B_2 . Pottery from B_1 subgroup has polished or smoothed surface, covered with a fine coat of blunged clay. It often appears near Borovo "Magaritsata", Borovo "Chakmak tepe" and Devetashka cave. The utensils with incised decoration from Borovo "Magaritsata" are similar with the rough utensils by the paste ingredients and way of baking (Popov 1996: 48). Those from Borovo "Chakmak tepe" contain vegetal ingredients (chaff) and sand and have red-brown color (Mikov 1932-1933: 364; Gaul 1948: 213-214). To subgroup B_2 we can assign some pottery fragments found in Ostrov. They are distinguished by their smoothed surface with out a fine coat of blunged clay, with tile-red or grey-brown color. In the paste ingredients chaff or send can be found (Naidenova 2000: 28-31).

Group C includes fine pottery with polished surface with flutings. The dominant color is grey-black (Ostrov, Borovo "*Magaritsata'*").

The chaff and the sand are main ingredients in the paste of Vădastra I, II from Oltenia (Vădastra, Fărcaşu de Sus, Hotărani "La turn") (Mateescu 1962: 188-189; Nica 1971: 9-10). For utensils with rough surface the main color is tile-red, while for the fine pottery it is grey or grey-black (Hotărani) (Nica 1971: 9-10). The data for pottery decorated with incision are scarce.

Amongst Borovo "Magaritsata" and Novgrad pottery we found utensils with the following forms: conical with profiled outside orifice (Fig.3/1), conical with rounded sides (Fig.3/2), semispherical with straight orifice (Fig.3/3-6), bi-conical with shorter upper part and profiled orifice (Fig.3/8-10), cylindrico-conical with or without protruding arm (Fig.3/7, 11), spherical with short neck (Fig.3/15-16), utensils with rounded (Fig.3/12) or strongly bulged body (Fig.3/13-14) and depository utensils with high cylindrical or conical neck.

Some of the presented forms – conical, semispherical (Fig.4/1-2), cylindrical-conical with profiled arm and utensils with bulged body (Fig.4/4) – are also met in the ceramic complex from the settlement from Hotnitsa culture at Koprivets. There are other forms (Fig.4/3, 5), with analogies in Vădastra I, I-II pottery from Oltenia (Fig.5/5-6), which are met at Koprivets, fact which proves the simultaneousness of Hotnitsa and Vădastra societies.

For decoration of early Vădastra pottery are used basically seven techniques – barbotine, relief, surface incision, deep and wide incision, excision, printed (concaved) flutings.

Very typical for this culture are incised and excised ornaments, as well as the white incrustation. By using surface incision are realized mainly steps-like, zig-zag like and spiral patterns (Ostrov, Borovo "Magaritsata") (Fig.6/1-3). Deep and wide incision is often used, where the dominating are patterns with outlined bands, in combination with an incised net or background, filled with incised oblique lines. In the decoration of the pottery from Borovo "Magaritsata" and Borovo "Chakmak tepe" the bands are positioned step-like (Fig.6/4), zig-zag like (Fig.6/6) or they are

broken (Fig.6/7-8). Pottery fragments with motifs from step-like bands, combined with incised net were founed at the settlement Hotnitsa "*Kaya Bunar*" of the Hotnitsa culture (Katchitsa) (Fig.6/5). Common for the pottery from settlements Novgrad and Hotnitsa "*Orlovka*" are patterns with bands, forming right angles at some places and interconnected (Fig.6/9-11). Typical for Early Vădastra motifs are the spiral patterns (Fig.6/12-15) and patterns with rows of squares and rectangles, combined sometimes with a net (Borovo "*Magaritsata*", "*Chakmak tepe*", Devetashka cave) (Fig.6/16-17).

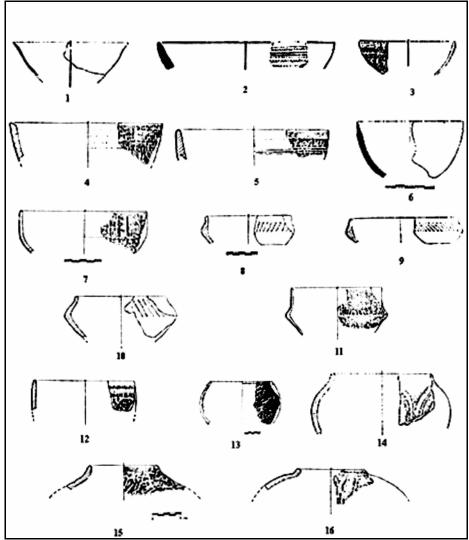


Fig.3 Ceramics type early Vădastra found to the south of the Danube. Forms: 1, 3-16. Borovo "Magaritsata", 2. Novgrad (after Popov and Krauß).

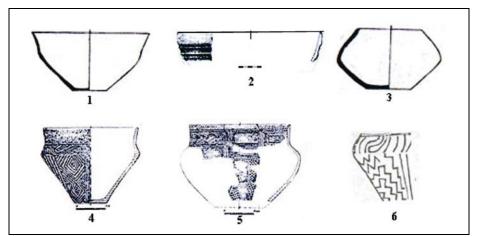


Fig.4 Ceramics from the settlement of the Hotnitsa culture near Koprivets (after Popov and Mateva).

In a lot of cases together with the deep incision is used the technique of excision. After realizing the excised grooves rows of rhombs and jagged bands from preserved surface are formed (Fig.7/1-8). Similar type of decoration is established in most of the examined settlements, both from North-East and Central North Bulgaria. For one of the pottery fragments coming from Novgrad a wide jagged band can be seen, in the center of which are small excised rhombs (Fig.7/9). Spiral and meander as if patterns are also met (Novgrad) (Fig.7/9, 13); rectangled with jagged sides (Borovo "Magaritsata") (Fig.7/11) and patterns with excised background and rows of squares and rectangles (Borovo "Magaritsata", Novgrad) (Fig.7/10, 14). On the orifice part of most of the utensils can be seen availability of red paint (Novgrad) (Krauß 2003).

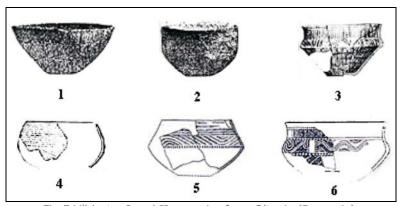


Fig.5 Vădastra I and II ceramics from Oltenia (Rumania). Forms. Vădastra I: 1-2 Vădastra, Fărcașu de Sus, Hotărani "La turn"; Vădastra I-II: Hotărani "La turn" (after Berciu and Nica).

The fine pottery is decorated with oblique, horizontal and spiral fluttings (Borovo "Magaritsata") (Fig.7/15-17). For some utensils under the orifice and the

line of maximum diameter are laid rows of circular or oval printouts (concaves) (Fig.7/18).

The comparison analysis shows that regarding decoration, dominant are similarities with the pottery from the phases Vădastra I and Vădastra I-II, according M. Nica timing (Hotărani "La turn", Slatina "Crişan", Fărcaşu de Sus). In percentage proportion, following are the materials from Vădastra II phase (C. Mateescu and M. Nica) (Vădastra, Cruşovu, Hotărani "La turn") (Fig.8). From the common decorational patterns we mention the step-like and the ones forming right angles and the incised spirals, combined with a net (Fig.8/1-6), rows outlined with incised squares and rectangles (Fig.8/7-8), jagged bands and rows of rhombs, made through excision (Fig.8/9-12). White incrustation and red paint are also present in the decoration of pottery from Oltenia (Mateescu 1959: 68; 1961: 59).

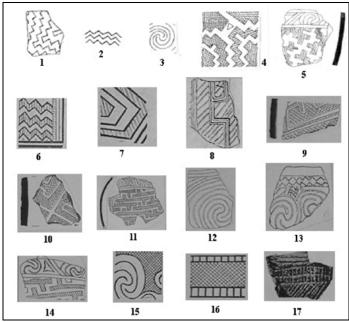


Fig.6 Ceramics type early Vădastra found to the south of the Danube. Decorative designs. 1 — Ostorv; 2-4, 6-7, 15-16 — Borovo "Magaritsata"; 5 - Hotnitsa "Kaya bunar"; 9-10 — Novgrad; 12-13 -Borovo "Chakmak tepe"; 11, 14 - Hotnitsa "Orlovka"; 17 — Devetashka cave (after Popov, Krauß, Mikov, Ilceva and Naidenova).

Pottery fragments with similar incised and excised decoration are founed together with pottery of type Hotnitsa II and Bolintineanu at Koprivets settlement (Fig.4/2, 6) (Popov 1996: 91, 264). Among the pottery materials from Borovo "*Chakmak tepe*" published by J. Gaul we can notice a fragment with deciration typical for Boian-Giuleşti/Greaca societies (Gaul 1948: Fig.LXV/11).

From the presented data and analogies we can admit the following synchronous links: *early Vădastra South of Danube – Hotnitsa II (Katchitsa B according P. Stanev) (North east and Central North Bulgaria) – Vădastra I and II – Bolintineanu and Boian-Giulești/Greaca (Romania).*

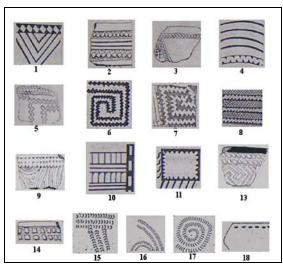


Fig.7 Ceramics type early Vădastra found to the south of the Danube. Decorative designs. 1, 4, 6, 8, 10-11, 15-18 – Borovo "Magaritsata"; 2, 9, 13-14 – Novgrad; 3, 5 – Borovo "Chakmak tepe"; 7 – Hotnitsa "Orlovka" (after Popov, Krauß, Mikov, and Elenski).

In the second defined by us chronological group, called "late Vădastra" we include pottery material from 11 settlements, located West of Yantra River: Krushuna, Pleven, Yasen "Beliya Bryag", Krushovitsa, Tarnene, Todorovo, Petarnitsa, Ruptsi (Central North Bulgaria, basins of Osam and Vit Rivers), Brenitsa, Altimir (North West Bulgaria, basins of Iskar and Skat Rivers) and Ostrov (at Danube's shore) (Fig.2). The archeological excavations were made in Pleven, Yasen, Brenitsa and Altimir. In the first 3 settlements Vădastra pottery can be found under stratums of Gradeshnitsa culture, where only for Brenitsa settlement is established that it can be dated to the phase Gradeshnitsa I. In Brenitsa and Altimir the pottery materials of type late Vădastra are appearing together with pottery of type Boian-Giuleşti/Aldeni.

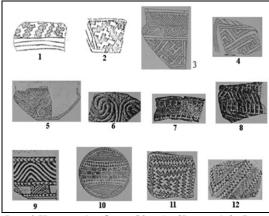


Fig.8 Vădastra I and II ceramics from Oltenia (Rumania). Decorative designs. Vădastra I: 1 – Slatina "Crişana II"; 2-4 Fărcaşu de Sus; 6-8 – Vădastra. Vădastra I – II: 5, 11, 12 – Hotărani "La turn". Vădastra II: 9 - Hotărani "La turn"; 10 - Cruşov (after Christescu, Mateescu and Nica).

The pottery from these settlements is completely different from early Vădastra pottery. We distinguish only two technological groups B and C, in the bounds of which can be established subgroups. We don't have information about the rough pottery with uneven surface or covered with barbotine found in the settlements of Central North Bulgaria. From the materials descending from Brenitsa and Altimir we include in the analysis only those, who carry the typical for Vădastra culture decoration.

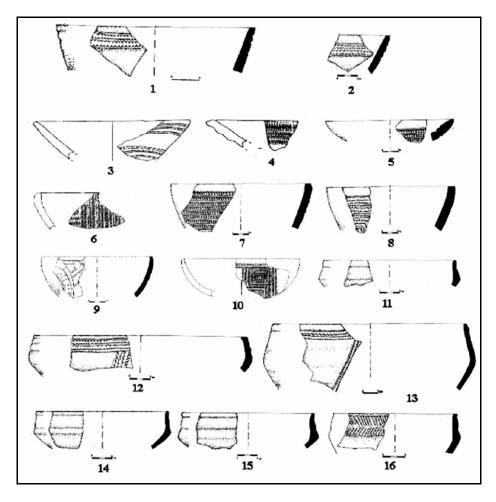


Fig.9 Ceramics type late Vădastra found to the south of the Danube. Forms. 1, 16 – Ostrov; 2, 12 – Iasen; 3, 9 – Tarnene; 4, 6, 10-11, 13-15 – Krushovitsa; 5, 7-8 - Brenitsa (after Ghergov).

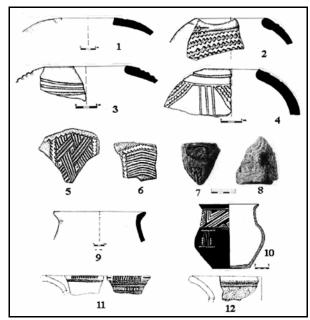


Fig.10 Ceramics type late Vădastra found to the south of the Danube. Forms. 1, 11-12 – Krushovitsa; 2, 5-6 – Ostrov; 3-4 – Altimir; 9 – Iasen; 10 - Brenitsa (after Ghergov and Nikolov).

Group B is presented by pottery with smoothed or polished surface, decorated with excision technique or with pinning; with wall thickness between 10 and 15 cm. In the clay paste are added send, chamotte, limestone particles and chaff – in different quantities and combinations. According the extent of surface cultivation and the decoration, the following subgroups are distinguished: B1 – pottery with smoothed surface and excised decoration; B2 – with smoothed surface, but without decoration or decorated with incised patterns and pinning; B3 – polished pottery with incised ornaments or without decoration and B4 – with polished surfaced and excised decoration.

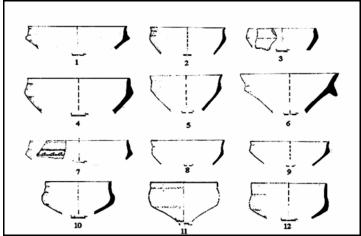


Fig.11 Ceramics from the settlement near Brenitsa.

From *group C* are the fine utensilswith wall thickness between 6 and 9 cm. They are manufactured of well refined paste, which contains in a lot of cases fine grinded chaff and chamotte. The fine pottery, which is not decorated or has flutings decoration is divided in two subgroups: C1 – with polished surface and C2 – with smoothed surface.

Comparing the pottery materials Vădastra with those from Boian-Giuleşti, found in Brenitsa, we establish obvious similarities. Both types have covered with a fine coat of blunged clay, polished surface. The color is varying between brown, gray and gray-black. The same ingredients are used for the clay paste. These observations raise the problem for the connections between the societies Vădastra and Boian and their cultural proximity. Brenitsa population has united in a unique way the cultural elements, typical for the societies, living to the North of Danube.

Vădastra III and Vădastra IV pottery from Oltenia (Hotărani "La turn", Piatra Sat "Nucet") contains send and rarely chaff. Chamotte is also missing (Nica 1971: 8-18).

Typical forms for late Vădastra are the conical utensils with straight or upprofiled orifice and walls bias from 35° to 70° (Ostrov, Tarnene, Yasen, Krushovitsa, Brenitsa) (Fig.9/1-8), semispherical (Fig.9-10) and different types of bi-conical utensils (Krushovitsa, Tarnene, Ostrov) (Fig.9/9-16), spherical utensils with diameter of the orifice between 9 and 12 cm and some with diameter of 20 cm (Krushovitsa, Altimir) (Fig.10/1-4), utensils with high legs, which are often with rectangular form (Ostrov, Ruptsi) (Fig.10/5-8), big utensils with conical upper part and bent out orifice (Yasen, Krushovitsa, Brenitsa) (Fig.10/9-12). Analogies for most of the cited forms are found in Vădastra III and Vădastra IV pottery from the settlements Piatra Sat "*Wucet*" and Hotărani "*La turn*", Romania (Fig.13/1-7). There are missing correspondences for the semispherical and bi-conical forms, but we emphasize that these conclusions are preliminary and are based only on the published in the Romanian literature information.

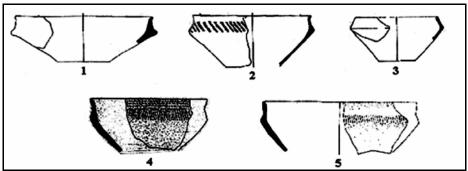


Fig.12 Ceramics from Slatino (1-3) and Hotnitsa "Kaya Bunar" (4-5) (after Elenski and Čohadjiev).

The big utensils with profiled outside orifice and conical upper part have analogies in the pottery from Rast (Fig.14/1-6). A number of forms from the fine ceramics of Brenitsa (Fig.11/5-12), which is typical for the settlement, are also met in the Rast materials (Fig.14/7-10), as well as in the eneolithic ceramics Vincha C1 from Banat (Borias, Sanandrei, Hodoni) (Fig.14/11-15). From another side, some forms registered at Brenitsa can be defined as Neolithic (Fig.11/1-4), having

correspondences in Slatino (Western Bulgaria) (Fig.12/1-3), Hotnitsa "Kaya bunar" and Hotnitsa "Kashlata' (Fig.12/4-5). It supports our opinion, that lower cultural stratums of Brenitsa settlement are presenting a transitional period to the eneolithic epoch are the beginning of the eneolithic epoch itself with some preserved Neolithic traditions.

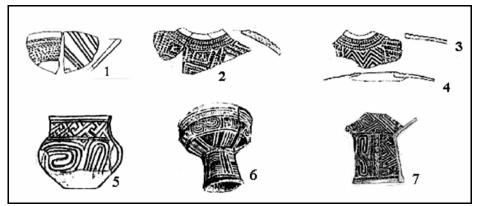


Fig.13 Ceramics Vădastra III and IV from Oltenia (Romania). Forms. Vădastra III: 1, 5 – Piatra Sat "Nucet"; 6 – Hotărani "La turn". Vădastra IV: 2-4, 7 - Hotărani "La turn" (after Nica).

Decoration of late Vădastra pottery is embossed, incised, excised, pinned and flutings. Surface incision and the net typical for early Vădastra pottery are entirely missing. Embossed decoration is with lowest persantage. For some utensils with well smoothed surface is registered smooth embossed band (Krushovitsa). The technique of deep incision is usually combined with pinning. Incised circles and bands can be met, filled with pinned dots (Pleven, Todorovo, Ostroy, Tarnene, Petarnitsa). The excised decoration is dominant. In a lot of cases it is combined with white incrustation. Jagged and excised, differently laid bands are typical (Fig. 10/2-4). As main motifs for the pottery from all settlements we can indicate horizontal jagged bands under the orifice and jagged bands, organized in straight angles or forming a meander. In the decoration of the utensils from Krushina, Ostrov and Krushovitsa are emphasized the spiral patterns, realized by excised bands. In Krushovitsa and Brenitsa are found ceramics fragments, decorated with parallel and oblique laid out excised bands. We draw your attention on swastika motif from Altimir, as well as on the painting of the orifices of some utensils from Brenitsa with red paint.

The flutings for the thin-wall pottery are fine, wide about 2 mm, laid out oblique (Yasen, Ostrov, Krushovitsa). It is typical for the pottery materials from Brenitsa are the barely visible, very fine flutings, which cover the upper half of the utensils.

The established analogies with Vădastra III and Vădastra IV pottery from Oltenia (according M. Nica's timing) prove the later dating of the materials, found at the basins of the rivers Osam, Vit, Iskar and Skat. According to our data, the similarities with Vădastra IV are dominant. From the comparison analysis, we can conclude that to the east of river Iskar the influences of Vădastra are stronger and we can admit a real presence of this societies here.

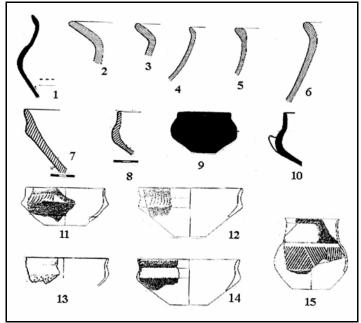


Fig.14 Ceramics from Rast (1-10) and type Vinca C1 from Banat (11-15) (after Dumitrescu and Draşovean).

The appearance of late Vădastra pottery, together with that of type Boian-Giuleşti/Aldeni at Brenitsa and Altimir from one side reflects a complex process of cultural interferention, and from other side testifies for partial synchrony between these two phenomenons. More observations and discoveries are necessary in order to answer convincingly to the question – is there a mixing and cultural unity of the societies Vădastra and Boian-Giuleşti at some point of their evolution. We mention the hypothesis of E. Comşa, according which at the beginning of Giuleşti phase; Boian societies are penetrating in South-Eastern Oltenia, creating a local variant of Boian culture, called Vădastra culture (Comşa 1998-2000: 302).

In the decoration of Gradeshnitsa pottery from Brenitsa, we also notice the availability of the jagges bands of type Vădastra. This fact lets us admit, that the upper bound of the appearances of late Vădastra in Bulgaria could dated to the chronological level early halcolith, synchronous with the first phase of Gradeshnitsa culture. Vădastra materials from later period are not found on Bulgaria territory.

At the contemporary stage of the researches we suggest the following synchronizations: *Brenitsa I (lower levels) – Boian-Giuleşti/Aldeni late stage, Vădastra III and partially Vădastra IV – Vincha B2 final and beginning of Vincha C1; Brenitsa II (upper levels) – Gradeshnitsa I – Rast – Vincha C1 – Vădastra IV late stage.*

B. Nikolov and V. Gergov admit that materials, similar to Vădastra from settlements at Brenitsa, Yasen and Krushovitsa are dated before Gradeshnitsa I (Nikolov 1992: 20-21; Ghergov 2000: 397-400). Unfortunately, Gradeshnitsa and Yasen pottery are not published. It is possible that some settlements with late Vădastra pottery like those at Ostrov, Krushuna and Krushovitsa to have more prolonged evolution, synchronous with the phase Gradeshnitsa I.

The appearance of Vădastra type pottery on the territory of Northern Bulgaria testifies for intensive cultural contacts between the prehistoric societies from both sides of Danube in a prolonged period of time.

Notes

- 1. After performed terrain searching in 2000, R. Krauß assumes that V. Mikov has marked his studies wrongly countryside near Borovo with the name "Chakmak tepe" (Mikov 1932-1933: 363). In his opinion it is a settlement from the countryside "Magaritsata" (Krauß 2003).
- The settlements at Bistrantsi and Baniska are mentioned by V. Popov, but the materials found there were not published.

References

- Berciu, D. 1939. Arheologia preistorică a Olteniei. Arhivele Olteniei XVIII: 37-49.
- Berciu, D. 1961. *Contribuții la problemele neoliticului în România în lumina noilor cercetări*, București.
- Christescu, V. 1927-1932. Les stations préhistoriques de Vădastra. *Dacia* N.S. III-IV: 167-225.
- Čohadjiev, S. 1997. *Слатино праисторически селища,* Велико Търново.
- Draşovean, Fl. 1996. Cultura Vinča târzie (faza C) în Banat, Timişoara.
- Dumitrescu, VI. 1980. *The Neolithic Settlement at Rast.* BAR International Serias 72, London.
- Djambazov, N., Şişkov, N. 1962. Едно праисторическо селище в Плевен. *Археология* 2: 49-53.
- Gaul, J 1948. The neolithic Period in Bulgaria. *Bulletin of the American School of Prehistoric Research* 16:64-78.
- Ghergov, V. 2000. Селища от късния неолит в Плевенско. *Палеобалканистика и старобългаристика. Втори есенни международни четения*, Велико Търново: 397-409.
- Gergov, V., Hristov, M. 2001. *Археологически разкопки в деветашката пещера през 1999 г.,* Археологически открития и разкопки през 1999-2000, XL национална археологическа конференция, София.
- Elenski, N. 1998. *Материали на прехода от късния неолит към ранния енеолит,* произхождащи от землището на с. Хотница, Великотърновско. Известия Исторически музей Велико Търново XIII: 53-65.
- Ilceva, V. 2002. Hotniţa, vol.I, Sofia.
- Krauß, R. 2003. *Die prähistorische Besiedlung am Unterlauf der Iantra*, Dissertation in Berlin
- Mateescu, C. 1957. Săpăturile arheologice de la Cruşovu. *Materiale și Cercetări Arheologice* III, p.103-114.
- Mateescu, C. 1959. Săpături arheologice la Vădastra. *Materiale și Cercetări Arheologice* V: 61-73.
- Mateescu, C. 1961. Săpături arheologice la Vădastra. *Materiale și Cercetări Arheologice* VII: 57-62.
- Mateescu, C. 1962. Săpături arheologice la Vădastra. *Materiale și Cercetări Arheologice* VIII: 187-192.
- Mikov, V. 1932-1933. Материали от предисторическата епоха в България. Новокаменна и каменномедна епоха. Горна Манастирица. *ИБАИ* VII: 363-364.

- Mikov, V., Djambazov, N. 1960. Деветашката пещера, София.
- Morintz, S., Cantacuzino, G. 1963. Die Yungsteinzeitlihen Funde in Cernica. *Dacia* N.S. VII: 27-53.
- Naidenova, E. 2000. Câteva date despre așezarea culturii Vădastra de la Ostrov, punctul "Gârloto", jud. Vraţa, (Bulgaria). *Oltenia. Studii și comunicări* XII: 28-31.
- Nica, M. 1970. Asupra originii și dezvoltării culturii Vădastra de la Fărcașele (jud. Olt). *Historica* I: 31-51.
- Nica, M. 1971. Evoluția culturii Vădastra pe baza descoperirilor de la Hotărani Fărcașele (jud. Olt). Historica II: 5-33.
- Nica, M. 1991. La culture Vinča en Olténie. *Simpozionul internaţional "Cultura Vinča rolul și legăturile sale"*, Reşiţa –Băile Herculane- Timişoară, 12-17 mai 1991: 305-322.
- Nica, M. 1997. Unitate și diversitate în culturile neolitice de la Dunărea de Jos. *Pontica* XXX:105-116.
- Nikolov, В. 1986. Селище от късния неолит при Бреница, Врачански окръг. *Археология* 4: 5-17.
- Nikolov, В. 1992. Периодизация на неолитните култури в Северна България от Янтра до Тимок. *ИМСЗБ* 18: 11-21.
- Popov, V. 1996. *Периодизация и хронология на неолитните и халколитните култури от поречието на р. Русенски Лом*, Русе.
- Ророv, V., Mateva, B. 1993. *Неолитно селище при с.Копривец. ГМСБ* XIX: 21-25. Stanev, P. 1996. Технология, типология, генезис и синхронизация на керамиката от терасното неолитно селище Качица, Велико Търново. *Известия на Исторически музей В. Търново* XI: 41-86.