

ASOCIAȚIA ROMÂNĂ DE ARHEOLOGIE

STUDII DE PREISTORIE

7/2010



**Editura Renaissance
București
2010**



ASOCIAȚIA ROMÂNĂ DE ARHEOLOGIE

STUDII DE PREISTORIE 7

COLEGIUL DE REDACȚIE

Redactor șef: Silvia Marinescu-Bilcu

Membri: Douglass W. Bailey, Adrian Bălășescu, Constantin Haită, Marcel Otte, Valentin Radu, Anne Tresset.

Coperta: Idol de marmură aparținând culturii Hamangia descoperit în peștera *Lilieilor* (Cheile Dobrogei).

Colegiul de redacție nu răspunde de opiniile exprimate de autori.

Manuscrisele, cărțile și revistele pentru schimb, orice corespondență se vor trimite Colegiului de redacție, pe adresa Șos. Pantelimon 352, sc. C, ap. 85, sector 2, București sau prin email: ara.romania@gmail.com; aroarh@yahoo.com; costel@arheologie.ro

Descrierea CIP a Bibliotecii Naționale a României

Marinescu-Bilcu Silvia

Studii de Preistorie nr. 7 / Marinescu-Bilcu Silvia

Douglass W. Bailey, Adrian Bălășescu, Constantin Haită, Marcel Otte, Valentin Radu, Anne Tresset
București, Editura Renaissance, 2010.

ISSN 2065 - 2526

SPONSORIZĂRI ȘI DONAȚII

Editura *RENAISSANCE*

Actual research status of the Chalcolithic cultures Polyanitsa and Boian

Evgenia NAYDENOVA*

To Mrs. Silvia Marinescu-Bilcu, with many thanks for confidence and for the continuing support provided during the scientific coordination in the period of the preparation of my PhD thesis.

Abstract: Archaeological researches in the '70s of the XX century from North-Eastern Bulgaria lead to definition of the Chalcolithic culture Polyanitsa. The development of this culture has been divided into 4 phases and the last one is related to the middle Chalcolithic period. On the North of river Danube, culture Boian has been registered in same period, with its phases Vidra and Spanțov. After 1990 the researches continue, and during the last decade the field work on more spots and objects stretches to the valleys of the rivers Yantra and Golyama Kamchiya in Bulgaria. In the period 2000-2010, archaeological excavations taken place in Hotnitsa, Petko Karavelovo, Dzhoulunitsa "Smurdesh", Orlovets "Erendzhika" sites (Veliko Turnovo region), Lovets "Ereklik", Lovets "Zmiyskiyat ostrov" and Ivanovo "Banyata" (Shoumen region). They all contribute to enrich the information about the material and spiritual life of the Polyanitsa communities. Unfortunately on the territory of Romania new researches on Boian Vidra and Boian Spanțov have not occurred. The discussion focused on the similar elements between Chalcolithic cultural phenomena Polyanitsa and Boian is still in progress. We assume that in the beginning of these period, contacts between inhabitants living North and South from Danube tend to be more active and exchanges between them becoming more intense. As a result from their dynamic interactions, both cultures get closer culturally and thus they form a new larger community with many common characteristic features. We have defined the above community as cultural complex Polyanitsa-Boian. This cultural complex is composed of local groups with their own characteristics, marked by traditions inherited and also by close contacts with other cultures.

Rezumat: Cercetările arheologice din anii '70 ai secolului XX, care au avut loc în nord-estul Bulgariei au dus la definirea culturii eneolitice Polyanitsa. Aceasta a fost împărțită în 4 faze și ultima este legată de mijlocul eneoliticului. La nord de Dunăre în aceeași perioadă contemporană se întâlnește cultura eneolitică Boian cu fazele Vidra și Spanțov. După 1990, cercetările arheologice au continuat și în ultimul deceniu munca de teren s-a desfășurat de-a lungul văilor râurilor Yantra și Golyama Kamchiya în Bulgaria. În perioada 2000-2010, săpături arheologice au avut loc în Hotnitsa, Petko Karavelovo, Dzhoulunitsa "Smurdesh" și Orlovets "Erendzhika", toate în regiunea Veliko Tarnovo, precum și în Lovets "Ereklik", Lovets "Zmiyskiyat Ostrov", Ivanovo "Banyata", toate în regiunea Shoumen. Aceste cercetări au contribuit la îmbogățirea informațiilor despre viața materială și spirituală a comunităților Polyanitsa. Pe teritoriul României cercetări noi asupra culturii Boian, fazele Vidra și Spanțov nu au mai avut loc. Discuția privind elementele similare între culturile eneolitice Polyanitsa și Boian sunt încă în curs de desfășurare. Presupunem că la începutul epocii eneolitice contactele dintre locuitori care trăiesc la Nord și la Sud de Dunăre tind să fie mai active, schimburile dintre ele devenind mai puternice. Ca rezultat al interacțiunilor lor dinamice, ambele culturi se apropie între ele și astfel, ele formează o nouă comunitate mai mare, cu multe trăsături comune caracteristice. Am definit această comunitate ca fiind complexul cultural Polyanitsa-Boian. Acest complex cultural este format din grupuri locale cu propriile lor caracteristici, marcate de tradițiile moștenite și contactele strânse cu alte culturi.

Keywords: Polyanitsa, Boian Vidra, Boian Spanțov, Early Chalcolitic, Middle Chalcolitic, archaeological researches, excavations 2000-2009.

Cuvinte cheie: Polyanitsa, Boian Vidra, Boian Spanțov, eneolitic timpuriu, eneolitic dezvoltat, cercetări arheologice, săpături arheologice 2000-2009.

* Museum of History, Oryahovo, Bulgaria; evgenia_ar@abv.bg

Results from systematically excavated *Tells* in South-Eastern Bulgaria (at the regions of Targovishte, Shoumen, Razgrad), held in the 60s - 70s of the last century, give reason to the research workers (H. Todorova, I. Angelova, T. Ivanov) to define a Chalcolithic culture, named "Polyanitsa". The explorers divide its historical development by four phases. First three phases (Polyanitsa I-III) are related to Early Chalcolithic, and the last one is connected to Middle Chalcolithic (H. Todorova 1986, p. 104-107). To Chalcolithic culture also belongs Hotnitsa *Tell* from Central-Northern Bulgaria (horizons XIV – IX), researched through sounding by N. Angelov in 1956-1957 (tab. 1) (H. Todorova 1986, p. 78). In this way, the Western border of Chalcolithic culture spreads to the valleys of the rivers Yantra and Rossitsa.

Archaeological researches on the territory of Muntenia, northern from river Danube (tab. 2), lead to defining culture Boian (the title is primarily used by Ion Nestor in 1928). Completely different options of timing provide D. Berciu, E. Comşa, S. Morintz and Vi. Dumitrescu (tab. 3), accepting that development of Boian societies started in Neolithic and lasted until Middle Chalcolithic.

Corresponding phase of Polyanitsa I-III is the Boian phase "Vidra"; of Polyanitsa IV is Boian Spantov (according to Vi. Dumitrescu, 1972-1973) or "transitional phase" (according to E. Comşa, 1987).

The similarities defined mainly in the discovered Pottery material Boian and Polyanitsa, suggest different standpoints, described in scientific literature from the '80s in the XX century. According to E. Comşa during the last phase Boian culture representatives came from south and inhabited vast territory situated between river Zhiu, Black Sea and Aegean Sea (E. Comşa 1987, p. 41-45). H. Todorova discounts the possibility of spreading inhabitants from North accepting that both cultures are ethnoculturally similar but they have only 5-10% similar elements in Pottery (H. Todorova 1986, p. 14). During that period most important discoveries in the spreading area of Chalcolithic societies Boian are made in Vlădiceasca (1980-1983) and Radovanu (1985-1986). Followed by excavation in Căscioarele – "D' aia parte" (1991-1996) (tab. 2).

Culture Polyanitsa research works continue in the last two decades (1990-2009) via new excavations and constant analysis of the information obtained. Archeological materials discovered in Shtraklevo, Pepelina and in horizons XVI- XVII from *Tell* Ruse, region of Ruse (tab. 1) are classified by V. Popov as types Boian Vidra and Boian Spantov (V. Popov 1992, p. 22-28; 1996, p. 38). In his monography "Periodisation and chronology of Neolithic and Chalcolithic cultures from the valley of river Rusenski Lom" Popov marks that the cultures Polyanitsa and Boian have been assimilated thus they have been fully integrated in the last IV phase (V. Popov 1996, p. 108). Field work on the terrain has been restarted several years later by D. Chernakov. During archeological envelopings in 2004-2005 in Bey Chiflik terrain and rock formation shelter "Vodna" by village Tabachka some Pottery objects have been collected, very similar to Boian materials. Soundings have been held in the rock formation shelter "Vodna" and "Tamno" cave. In the cultural layers scientists did not distinguish clear stratigraphy. Pre-historical Pottery material from the complex Vodna-Tamno is correspondent to Vidra phase of the culture Boian. Similarities are being found in Tangăru, Spantov and Bogata - Romania, they also could be observed more or less in *Tells* Petko Karavelovo and Dzhouliunitsa from the valley of river Yantra. Conclusion can be made, that there is some influence from the North (D. Chernakov 2008, p. 159-167).

On the territory of Veliko Tarnovo district after N. Angelov, archeologists P. Stanev and V. Ilcheva start working. Saving excavations have been held in the village Katchitsa (1972-1979) and Dzhouliunitsa *Tell* (1983-1984) (tab. 1). In Kachitsa there have been discovered Early Chalcolithic materials, equal to Polyanitsa II, III (in II horizon, squares VI and VIII). In the *Tell* they distinguish horizons from both periods Polyanitsa III (IX-VII horizons) and Polyanitsa IV (VI- IV horizons) (P. Stanev 1982, p. 8; 1997, p. 68-71). According to P. Stanev there is cultural continuum between Late Neolithic and Early Chalcolithic periods. The culture presented hereby, is enriched with elements, came from Thrace. This culture finds its equivalent in Polyanitsa (P. Stanev 1997, p. 68-71). V. Ilcheva processes and publishes pottery materials from Hotnitsa *Tell*, as well as those from villages Hotnitsa "Gorno selishte" and Hotnitsa "Salkova krivina" (V. Ilcheva 2000, p. 93-100; 2002, p. 22-25).

In the beginning of XXI century, after prolonged interval, scientists continue researching Chalcolithic objects from the valley of Yantra river. In 2000 excavations in Hotnitsa *Tell* are being restarted led by St. Chohadzhiev and lasting 10 years already. In 2004 a scientific research of N. Angelov's stratigraphic sounding is made, which is of great matter to the problematics observed hereby. On the depth 5.50-5.90 m. Pottery is being found with characteristic features typical for Early-Chalcolithic Age. (St. Chohadzhiev *et alii* 2005a, p. 54-55). During the excavations in Neolithic village Dzhouliunitsa "Smurdesh" from 2001-2002 close to Dzhouliunitsa *Tell*, N. Elenski discovered

Early-Chalcolithic cornfield (N. Elenski 2003, p. 17-18). In 2005 the observations and conclusions are to be confirmed. In sounding XV, on the depth of 1.80-2.00 m. pottery materials from the last period of the Early Chalcolithic age were discovered. In sounding XVII, Early Chalcolithic layer is situated on the depth of 1.70-2.70 m. Several levels are being observed there, as well as one dug-in piece of equipment (N. Elenski, P. Leshtakov 2006, p. 36-39). A problem appears to be solved: about inhabitation of outer-*Tell* places. P. Leshtakov, when analysing the Early Chalcolithic village model, defines these places as "suburbs" of the *Tells*, where dwellings were built together with productional and agricultural structures (P. Leshtakov 2005, p. 38). The same results have been observed into a project research made by large archaeological group and experts of interdisciplinary researches in the area of *Tell* Podgoritsa, region Targovishte. During gradiometrical measurements around, scientists localise 9 archaeological complex and 6 other ribbon-shaped structures crossing the *Tell* or connected with it which were categorized as animal shelters (pens) and water-supply system. Outside-*Tell* soundings made in the same year: 1995 (tab. 1) provide remains from architecture complex with similar size to the dwellings. These discoveries are important evidence of exploitation the area around the *Tell* (D. Bailey *et alii* 1998, p. 373-396).

Great contribution to enrich the Early-Chalcolithic dwelling architecture reports in the valley of Yantra river have the archaeological excavations from 2003 and 2004 in *Tell* close to village Petko Karavelovo, local area "Srednik". A massive two-storey dwelling has been researched, sunken in the sterile terrain. On the second floor researchers find oven and pieces of clay-bearing architecture fragments (St. Chohadzhiev *et alii* 2004a, p. 33; 2005b, p. 53-54). In the same period 2003-2004 saving excavations in the discovered village Orlovets "Erendzhika" have been made (tab. 1). On this place consecutively existed three Middle-Chalcolithic villages. Scientists completely researched ground dwelling from I horizon with walls painted white on red foundation. Numerous pottery vessels have been found in closed complex terrains (St. Chohadzhiev *et alii* 2005c, p. 52). The Orlovets Village is situated on small space, up to 250 square meters. Researchers assume that maximum 2-3 up to 4 dwellings could have been built upon it and also find similarity to small village types "hamlet", typical for Predbalkan region during the Bulgarian Renaissance (St. Chohadzhiev *et alii* 2004b, p. 29). Small villages can be satellite to the *Tells*, i.e. they both develop at the same time (P. Leshtakov 2005, p. 41-42). In 1999-2000 and 2004 during terrain envelopments a similar type small villages have been registered: Lesitcheri "Markov kamak", Elena "Milankini" and others (N. Elenski 1999, p. 100-101; 2002, p. 138; St. Chohadzhiev *et alii* 2005d, p. 51-52). Envelopments from 2004 are part of long-term project for researching Neolithic and Chalcolithic cultures in the valley of Yantra. 10 *Tells* have been localized. The borderline of *Tells* spreading in the Danube river Valley has been strictly clarified: on the line of the villages Musina - Paskalevets (St. Chohadzhiev *et alii* 2005d, p. 51-52). Envelopments from 2006 in the valley of Rositsa, contribute for marking of the borderline between cultures Polyanitsa and Gradeshnitsa on the water-shed of the rivers Osam and Yantra. Several technologies, typical for culture Polyanitsa have been researched upon pottery discovered in pre-historic villages of culture Gradeshnitsa by river Rositsa. The fact itself gives reason to Leshtakov to define the region as contact zone between both cultures (P. Leshtakov 2008, p. 153).

In region Targovishte, after great archaeological expeditions in Ovcharovo and Polyanitsa, significant researches have been held in the 80s. In Shumen region A. Raduncheva researches *Tell* Vinitza (1965-1969). The beginning of XXI century is a landmark for ground works in Chalcolithic terrains: Targovishte (1980-1981) and open village Drinovo "Reservata" (1985-1988) (I. Angelova 1997, p. 38-42), where stages Polyanitsa III and IV are presented (tab. 1). In the 90s scientist work mainly in Podgoritsa executing the above mentioned project. Except interdisciplinary research works, a sounding is made in the *Tell* to the depth of 0.30 m. The scientists discover remains from Polyanitsa - constructed dwellings (D. Bailey *et alii* 1998, p. 392). In the next decades research works in the regions have not been organised.

In Shumen region A. Raduncheva observes *Tell* Vinitza (1965-1969). The beginning of XXI century is a landmark for ground works in Chalcolithic terrains. In 2006 a sounding in *Tell* Ereklia by village Lovets is made. The goal was to clarify the stratigraphy and cultural affiliations of the village, and the goal was achieved. The *Tell* is low, with approximate depth of the cultural layer 4.20 m. It has been peopled during Neolithic-periods Karanovo II, II-III and III and during Early Chalcolithic - phase Polyanitsa III (St. Chohadzhiev, S. Venelinova 2007, p. 59-61). Next year saving archaeological research works have been held in other *Tell*: "Zmiyskiyat ostrov" by village Lovets, situated on the North-West coast of Dam Ticha. When the dam is full of water, the *Tell* is surrounded in water and gradually destroyed. During the excavations researchers find burned destructions, rammed dwelling floors, wooden spot remains, stone clusters and fragmentary pottery vessels. In cultural layers

(4.10 m) are distinguished eight villages from Early and Last Chalcolithic periods. Archaeologists find also the necropolis on 50 m west from the *TeII*. Three graves have been researched (St. Chohadzhiev, S. Venelinova 2008a, p. 72-74). There is no published data about their historic period. In 2008 special saving excavations are made in *TeII* from the spot "Banyata" by village Ivanovo, and soil for building purposes is taken from it (tab. 1). A stratigraphic profile of the destroyed part is created. There are six building levels. In front of the central profile archaeologists find 24 holes from stakes. Three of them are situated underneath the biggest layer researched and trace the area of the palisade from the earliest village. On depth of 5.38-6.20 m, in the southern profile, a layer of green clay with seven wooden stripes is being reached. In front of it, there is a construction of woods, laying parallel in rows. The research leader S. Venelinova assumes that 16 from the holes found, together with the wooden construction and the clay-striped ground are connected with a palisade from dwelling horizon from later period of time. The clay layer is seen as a filling of the fortification equipment. The archaeological material is a characteristic feature of culture Polyanitsa III and IV (S. Venelinova 2009, 2010b in press). In 2009 the excavations on the same ground continue. They have gradual character, situated Western and Southern from the previous sounding. Of great interest to the researchers is the newfound wooden-clay building on the depth of 2.28-2.92 m which size is 2.80x3.30 m (square J8, horizon B2). It consists of 20 woods, laying parallel in eight rows South-West oriented. On the opposite side lay fortifying woods and thin stakes. On several spots the woods and stakes are laid on two levels, this fact shows that there was a two-layer building. Above the wooden construction and under it there are clay layers. To the same cultural layer researchers find also three stake-holes in front of the northern profile of the square. The interpretation of the discovery is discussed. There are two possible explanations about the function of the building described above- floor platform of a dwelling or a dwelling wall (S. Venelinova 2009, p. 80-83; 2010b in press). In 2008-2009 there were ground researches held around the coast of Ticha dam, the valley of river Golyama Kamchiya and its smaller tributaries, named commonly "Expedition Kamchiya". The archaeological map is enriched with new spots, and six of them are pre-historic ones. They are lands situated in the territory of the villages Kyolmen, Mengishevo, Malomir and are Middle or Late-Chalcolithic aged (S. Venelinova, K. Konstantinov 2009, p. 767-768; S. Venelinova 2010a, p. 638-639). In 2007-2008 scientists have researched 13 graves from necropolis near *TeII* by village Sushina, on the left coast of river Golyama Kamchiya (St. Chohadzhiev, S. Venelinova 2008b, p. 118-120). One of them probably dates back from Middle Chalcolithic, the other ones date back from the Late Chalcolithic period. There are materials found in the *TeII*: Polyanitsa IV and Kodjadermen - Gumelnița - Karanovo VI (data by S. Venelinova)

In 2001 part of pottery from Dzhoulunitsa *TeII* was processed (R. Peikov 2001) but the information was not officially published. The problems connected with the characteristic features of Polyanitsa culture have been described in E. Naydenova's thesis (E. Naydenova 2005). In his publication from 2010, P. Leshtakov analyses the pottery complex from Early-Chalcolithic dwelling from terrain Katchitsa, Veliko Tarnovo, showing the similarity of the materials of almost all terrains from the valley of river Yantra. He also shows parallels in XVII-XVI side horizons from *TeII* Ruse, in IV-V side horizons of Ovcharovo *TeII* and further similarities with Boian Vidra Pottery. Leshtakov relates the complex to the last period of III phase of culture Polyanitsa or to the beginning of IV. He assumes that in early Chalcolithic, in the valleys of both Yantra and Rusenski Lom rivers there used to be a regional type of culture Polyanitsa (P. Leshtakov 2010 in press). When comparing Pottery materials from different villages, the author of the present article suggests also the formation of regional groups in the valleys of the rivers Danube, Yantra, Golyama Kamchiya, and Beli Lom (E. Naydenova 2005, p. 213 - 245, 275). From the analysis of the researches done in the last decade, there are active works mainly in Central North and North-Eastern Bulgaria. The amount of discoveries related to culture Polyanitsa increases. Their similarities with materials from Vidra and Spanțov of Boian culture stand as a matter of discussion between scientists. These similarities show that there were intensive relationships between inhabitants living on the North of Danube river and those living on the South of Danube. From the beginning to the middle period of the Chalcolithic age contacts between these inhabitants tend to get dynamic and constant, they begin to trade with goods, materials and new techniques. Thus cultural exchange and unification in different aspects from the material and spiritual life begins. There are many similarities between the characteristic features in the pottery producing (in terms of forms and ornaments), in building of the dwellings (wooden-clay construction, wall-painting), in terms of tools, burials (inhumations in necropolis, with bodies bent over, many funeral objects in, and ruddle inside) also in plastic processing (several types anthropomorphous figures and models of dwellings). Thus we can assume that gradually in time a new bigger community was being formed, which we can name cultural complex Polyanitsa-Boian.

In this complex there exist regional groups with their own characteristic features, resulted by local traditions from the previous period and relations with surrounding societies. On the territory of Bulgaria we can differ three groups: next to river Danube (Ruse, Vodna) with closer analogs in Munteniya; in the valley of Yantra river (Hotnitsa, Katchitsa, Djuliunitsa, Djuliunitsa-Smardesh, Petko Karavelovo, Orlovets-Erendjika) and the villages located on the river valleys of Goliama Kamchiya and Beli Lom (Polyanitsa, Ovtcharovo, Targovishte, Podgoritsa, Radingrad, Vinitza, Lovets-Ereklik, Ivanovo). Group four consists of villages Boian Vidra and Boian Spanțov north from river Danube (Boian A, Tangâru, Radovanu, Bogata, Spanțov). St. Chohadjiev finds the existence of similar Early-Chalcolithic cultural complex in other zone - Western Bulgaria (on the West of river Osum) and Aegean Sea Region (between rivers Struma and Mesta), and the complex is named Gradeshnitsa- Slatino- Dikilitash (St. Chohadzhiev 1997, p. 62).

Future excavations, processing and publishing of the archaeological data from most terrains will contribute for clarifying various issues related to prehistoric problems. They will also confirm or deny various hypotheses and scientific notions, and they will uncover new facts about cultural phenomena and processes.

Bibliography

- I. Angelova 1997 Предварителни резултати от археологическо проучване на праисторическо селище „Резервата“ при с.Дриново, *Попово в миналото*, II, p. 38-42.
- D.W. Bailey *et alii* 1998 R. Tringham, J. Bass, M. Stefanović, M. Hamilton, H. Neumann, I. Angelova, A. Raduncheva, Expanding the Dimensions of Early Agricultural Tells: The Podgoritsa Archeological Project, *Journal of Field Archaeology*, vol. 25, nr. 4, p. 373-396.
- D. Chernakov 2008 Раннохалколитна керамика от скален комплекс Водна-Тъмно, община Иваново, Русенска област, *Праисторически проучвания в България: Новите предизвикателства*, София, p. 159-167.
- St. Chohadzhiev 1997 *Слатино – праисторически селища*, Велико Търново, 264 p.
- St. Chohadzhiev *et alii* 2004a St. Chohadzhiev, A. Chohadzhiev, P. Leshtakov, Спасителни археологически проучвания на селищната могила в м.Средник край с.Петко Каравелово Великотърновска област, *Археологически открития и разкопки през 2003 г., XLIII Национална археологическа конференция*, София, p. 33-35.
- St. Chohadzhiev *et alii* 2004b St. Chohadzhiev, P. Leshtakov, A. Chohadzhiev, Археологически проучвания край село Орловец, м.Еренджика, Великотърновска област, *Археологически открития и разкопки през 2003 г., XLIII Национална археологическа конференция*, София, p. 28-30.
- St. Chohadzhiev *et alii* 2005a St. Chohadzhiev, P. Leshtakov, A. Chohadzhiev, Археологически проучвания на селищната могила край село Хотница, *Археологически открития и разкопки през 2004 г., XLIV Национална археологическа конференция*, София, p. 54-56.
- St. Chohadzhiev *et alii* 2005b St. Chohadzhiev, A. Chohadzhiev, P. Leshtakov, Спасителни археологически проучвания на селищната могила в м.Средник край с.Петко Каравелово Великотърновска област, *Археологически открития и разкопки през 2004 г., XLIV Национална археологическа конференция*, София, p. 53-54.

- St. Chohadzhiev
et alii 2005c St. Chohadzhiev, P. Leshtakov, A. Chohadzhiev, Археологически проучвания в местността Еренджика край Орловец, Великотърновско, *Археологически открития и разкопки през 2004 г., XLIV Национална археологическа конференция*, София, р. 52-53.
- St. Chohadzhiev
et alii 2005d St. Chohadzhiev, A. Chohadzhiev, P. Leshtakov, Теренни археологически издирвания в басейна на Янтра, *Археологически открития и разкопки през 2004 г., XLIV Национална археологическа конференция*, София, р. 51-52.
- St. Chohadzhiev,
S. Venelinova 2007 Археологически проучвания на селищната могила в м.Ереклик, с.Ловец, Шуменско, *Археологически открития и разкопки през 2006 г.*, София, р. 59-61.
- St. Chohadzhiev,
S. Venelinova 2008a Спасителни археологически проучвания на селищна могила „Ловец-Змийският остров“ в чашата на язовир Тича, *Археологически открития и разкопки през 2007 г.*, София, р. 72-74.
- St. Chohadzhiev,
S. Venelinova 2008b Аварийни археологически проучвания на халколитен некропол в м. Чанаджик - с.Сушина, Шуменска област, *Археологически открития и разкопки през 2007 г.*, София, р. 98-99.
- E. Comşa 1987 *Neoliticul pe teritoriul României. Considerații*, București
- VI. Dumitrescu
1972-1973 În legătură cu o nouă sinteză despre neo-eneoliticul sud-est și central est-european, *Memoria Antiquitatis*, 4-5, р. 25-47.
- N. Elenski 1999 Праисторически селища в Еленската и Тревненската котловини, *Старопланински проучвания*, 1, р. 100-111.
- N. Elenski 2002 Праисторически селища в средния басейн на Янтра (резултати от теренните обхождания на българо-британската експедиция 1999/2000, *Римският и късноантичният град. Международна научна конференция*, Велико Търново, 26-30.07. 2000г., р. 138-143.
- N. Elenski 2003 Сондажни проучвания на раннонеолитното селище с.Джулюница-„Смърдеш“, Великотърновско, през 2002, *Археологически открития и разкопки през 2002 г.*, София, р. 17-18.
- N. Elenski,
P. Leshtakov 2006 Сондажни проучвания на раннонеолитното селище Джулюница – Смърдеш, Великотърновско, *Археологически открития и разкопки през 2005 г., XLV Национална археологическа конференция*, София, р. 36-39.
- V. Iltcheva 2000 Три енеолитни селища в землището на с.Хотница, Великотърновско, *Тракия и съседните райони през неолита и халколита*, София, р. 93-100.
- V. Iltcheva 2002 *Хотница. Стари селища и находки*, vol.I, Велико Търново, 211 р.
- P. Leshtakov 2005 Някои аспекти на раннохалколитния селищен модел в басейна на р.Янтра, *Известия на Регионален исторически музей – Велико Търново*, XX, р. 34-44.
- P. Leshtakov 2008 Нови сведения за границата между културите Градешница и Поляница: по данни от керамиката, *Праисторически проучвания в България: Новите предизвикателства*, София, р. 149-155.
- P. Leshtakov 2010
(in press) Керамичният комплекс на раннохалколитно жилище от обект Качица, Велико Търново, ВТУ и Археологията.
- E. Naydenova 2005 *Culturile Vădastra și Boian din sudul Dunării*, Doctoral Thesis, 334 р.
- R. Peikov 2001 *Типология на керамиката от IV-IX хоризонти от селищната могила до с.Джулюница*, Бакалавърска дипломна работа, Велико Търново.
- V. Popov 1992 Култура Боян на юг от Дунава, *Археология*, 4, р. 20-28.
- V. Popov 1996 *Периодизация и хронология на неолитните и халколитните култури от поречието на р. Русенски Лом*, Русе.

- P. Stanev 1982 Стратиграфия и периодизация на неолитните обекти и култури по басейна на р. Янтра, *Годишник на музеите от Северна България*, VIII, р. 1-15.
- P. Stanev 1997 Генезис и хронология на халколитните култури във Великотърновския регион, *Дни на културата '97*, Великотърновски клон на съюза на учените в България, р. 68-71.
- H. Todorova 1986 *Каменномедната епоха в България*, София.
- S. Venelinova 2009 Аварийни археологически разкопки на селищна могила Иваново – Банята, общ. Върбица, *Археологически открития и разкопки през 2008 г.*, София, р. 80-83.
- S. Venelinova, K. Konstantinov 2009 Теренно археологическо проучване по брега на язовир Тича, долината на Голяма Камчия и по-малките ѝ притоци Вардун дере, Палиска, Герила и Върбишка река, in *Археологически открития и разкопки през 2008 г.*, София, р. 767-768.
- S. Venelinova 2010a Теренно археологическо проучване в община Върбица, област Шумен, *Археологически открития и разкопки през 2009 г.*, София, р. 638-639.
- S. Venelinova 2010b (in press) Археологически проучвания на селищната могила при Иваново през 2008-2009 година, in *Пътуване към България*.

Village	Years of excavations	Research workers	Stratigraphy
Hotnitsa <i>Tell</i>	1956 2000-2009	N. Angelov St. Chohadzhiev <i>et alii</i>	h XIV: Polyanitsa II, III h XIII-IX: Polyanitsa IV h VIII-I: KGK VI
Vinitza <i>Tell</i>	1965-1969	A.Raduncheva	h I: Polyanitsa IV h II-V: KGK VI
Ovcharovo <i>Tell</i>	1971-1972	H. Todorova <i>et alii</i>	h I-III: Polyanitsa III h IV: Polyanitsa III-IV hV-VII: Polyanitsa IV h VIII-XIII: KGK VI
Polyanitsa <i>Tell</i>	1970, 1973-1975	H. Todorova <i>et alii</i>	h I-IV: Polyanitsa II, III h V-VII: Polyanitsa IV h VIII: KGK VI
Kachitsa	1972-1979	P. Stanev	h V-VII: Neolithic h II: Polyanitsa II, III (according to Stanev) h I: Iron Age
Radingrad <i>Tell</i>	1974-1977 1980	T. Ivanov	h I: Polyanitsa III h II-III: Polyanitsa IV h IV-V: KGK VI
Targovishte <i>Tell</i>	1980-1981	I. Angelova	h I-II : Polyanitsa IV h III-IV : KGK VI
Dzhouliunitsa <i>Tell</i>	1983-1984	P. Stanev, V. Ilcheva	h IX-VII: Polyanitsa III h VI-IV: Polyanitsa IV h III-I : KGK VI
Drinovo	1985-1988	I. Angelova	h I-II: Neolithic h III: Polyanitsa III
Ruse <i>Tell</i>	1989-1990	V.Popov	h XVIII: Boian Giulești h XVII-XVI: Boian Spantov (according to Popov); h XV-I: KGK VI
Podgoritsa <i>Tell</i>	1995	I. Angelova, A. Raduncheva, D. W. Bailey	the depth of 0.30 m Polyanitsa IV
Vodna "Tamno"	2004-2005	D. Chernakov	Boian Vidra (according to Chernakov)
Dzhouliunitsa "Smurdesh"	2001-2005	N. Elenski, P. Leshtakov	S. XV the depth of 0.60-1.80 m: Late Chalcolithic 1.80-2.00 m: the last period of the Early Chalcolithic S. XVII the depth of 0.90-1.70 m: Late Chalcolithic 1.70-2.70 m: Early Chalcolithic
Petko Karavelovo <i>Tell</i>	2003-2004	St. Chohadzhiev <i>et alii</i>	Late Chalcolithic Early Chalcolithic
Orlovets "Erendzhika"	2003-2004	St. Chohadzhiev <i>et alii</i>	h 0 the depth of 0.30: Late Chalcolithic h I -II: Polyanitsa IV
Lovets "Ereklik"	2006	St. Chohadzhiev, S. Venelinova	the depth of 0.30-1.00/1.20: Early Chalcolithic Polyanitsa III 1.00/1.20-4.20: Neolithic Karanovo II, II-III, III
Lovets "Zmiyskiyat ostrov"	2007	St. Chohadzhiev, S. Venelinova	In cultural layers (4.10 m) are distinguished eight villages from Early and Last Chalcolithic periods
Ivanovo "Banyata"	2008-2009	S. Venelinova	horizons A1,2; B1,2; C, D, E: Polyanitsa III, IV

Tab. 1. Chronology of archaeological excavations related to culture Polyanitsa and stratigraphy of the objects researched (h - horizons; KGK VI - Kodzhadermen-Gumelnița-Karanovo VI complex).
Cronologia săpăturilor arheologice legate de cultura Polyanitsa și stratigrafia siturilor cercetate (h - orizonturi culturale; KGK VI - complexul cultural Kodjadermen-Gumelnița-Karanovo VI).

Village	Years of excavations	Research workers	Stratigraphy
Boian A	1923-1925	V. Christescu	Boian Vidra
Vidra	1931-1934 1958	D.V. Rosetti D.V. Rosetti, S. Morintz	Boian Vidra, Gumelnița
Glina	1926-1927 1943-1947 1969-1970	I. Nestor M. Petrescu- Dâmbovița M. Petrescu- Dâmbovița, E. Comșa	Boian Vidra, Gumelnița
Pietrele	1943, 1948	D.V. Rosetti	Boian Spantov (transitional phase)
Tangâru	1934, 1955-1958	D. Berciu	Boian Vidra, Gumelnița
Petru Rareș	1933, 1935, 1957	D. Berciu	Boian Spantov (transitional phase)
Spantov	1952, 1956, 1958-1959	S. Morintz	Boian Vidra, Boian Spantov (transitional phase)
Bogata	1956	E. Comșa	Boian Vidra
Andolina	1958-1961	E. Comșa	Boian Vidra
Izvoarele	1961	E. Comșa	Boian Spantov (transitional phase)
Hârșova	1960-1978	D. Galbenu	Boian Vidra, Boian Spantov
Vlădiceasca	1972, 1978, 1980-1983	B. Ionescu, D. Șerbănescu	Boian Spantov (transitional phase)
Radovanu	1960-1973 1985-1986	E. Comșa	Boian Vidra Boian Spantov
Măriuța	1988	M. Șimon	Boian Vidra, Gumelnița
Căscioarele – <i>D'aia parte</i>	1991-1996	D. Șerbănescu	Boian Spantov (transitional phase), Gumelnița

Tab. 2. Chronology of archaeological excavations related to culture Boian, phases Vidra and Spantov, and stratigraphy of the objects researched.

Cronologia săpăturilor arheologice legate de cultura Boian, fazele Vidra și Spantov și stratigrafia siturilor cercetate.

D. Berciu 1961	E. Comșa 1974	S. Morintz 1963	VI. Dumitrescu 1973
Boian I	Bolintineanu	Boian I - Bolintineanu	Bolintineanu
Boian II a, b, c	Giulești - Greaca, Aldeni	Boian II - Giulești	Giulești
Boian III a, b, c	Vidra - Gălățui, Vărăști	Boian III - Vidra	Vidra
Boian IV a, b, c	transitional phase - the stage Spantov	Boian IV - Spantov	Spantov
Boian V a, b, c	transitional phase - the stage Fântânele		

Tab. 3. Comparison of different culture Boian periodization proposed by researchers. Compararea diferitelor periodizări ale culturii Boian de către diferiți cercetători.