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NEOLITHIC AND BRONZE AGE FINDS FROM THE HIGH BIESZCZADY MOUNTAINS AND ITS SURROUNDINGS

Znaleziska neolityczne i z epoki brązu z Bieszczadów Wysokich i ich otoczenia

Abstract: Archaeological investigations in the High Bieszczady Mts. begun in 2012. Up to 2016 more than 80 sites, most of them dated to the Late Neolithic and Bronze Age, were discovered in the high landscape zones of Połonina Wetlińska, Połonina Caryńska, Mała and Wielka Rawka, Dział and Bukowe Berdo massifs, between 1000 and 1300 m a.s.l. The sites are represented by single finds of stone artefacts and small assemblages of them. They correspond with the pollen record of animals herding. These finds confirm transhumant pastoralism performed by Neolithic and Bronze Age (probably mainly Early Bronze Age) people on this area.

Key words: Neolithic, Bronze Age, Carpathians, mountains archaeology, chipped artefacts, transhumance.

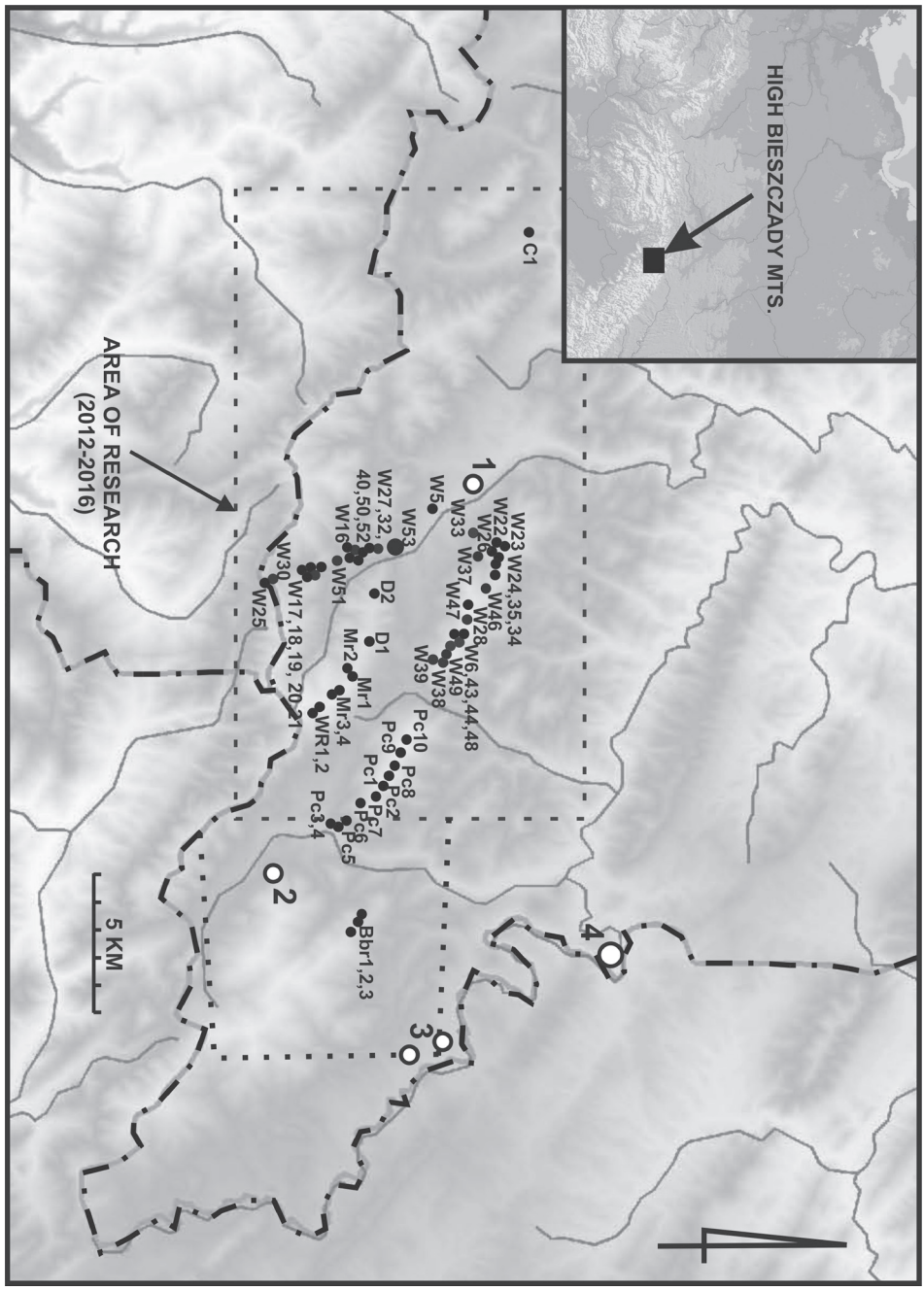
Introduction

Inspiration for archaeological research in the High Bieszczady Mountains came from information about human activity recorded in pollen diagrams from surroundings of Tarnawa, Wołosate and Smerek (Ralska-Jasiewiczowa 1980). There, the first such signals are dated to the ca. 3000 BC and can be connected with the Late Neolithic groups of Funnel Beaker and Corded Ware cultures people. Moreover, oldest pollen records of human activity reflects only animal herding, and up to the end of the Bronze Age there were not pollen record of sedentary settlements and plants cultivation in these diagrams. Unfortunately, and surprisingly, up to 2012 there were not archaeological conformation of presence of the Neolithic and Bronze Age People on this area (Valde-Nowak 1988). The only find dated to the Neolithic or Early Bronze Age was an artefact made of black menilite hornstone discovered in 1976 on the Połonina Caryńska massif (Valde-Nowak 1991).

Archaeological researches in the High Bieszczady Mts. were undertaken in 2012. They consist of field prospections and collecting information about accidental discoveries of archaeological artefacts on this area. Up to 2017 the surveys resulted in discovery of more than 80 sites, including 60 dated to the Neolithic and Bronze Age periods (Fig. 1). All the sites are known on the base of material discovered on the surface of the ground. None of them was excavated yet. They are located in high landscape zones on the ridges of Połonina Wetlińska, Połonina Caryńska, Mała and Wielka Rawka, Dział and Bukowe Berdo massifs. Detailed information about the sites themselves as well as on the archaeological material were already published (Pelisiak 2014a; 2016a; 2017a; 2017b; 2018a; 2018b; Pelisiak, Maj 2013; Pelisiak, Maj, Bajda 2015).

This paper contains complete list of Neolithic and Bronze Age sites from High Bieszczady Mountains. Most of them are located on the area of Bieszczady National Park. Due to concerns of their safety we do not publish detailed geographical coordinates of the sites, as well as photos of their location and surroundings.

Fig. 1. / **Ryc. 1.** Archaeological sites discovered in the High Bieszczady Mts. dated to the Neolithic and Early Bronze age / Stanowiska archeologiczne odkryte w Bieszczadach Wysokich, datowane na okres neolitu i wczesnego brązu: C1 – Cisna, site 6/stanowisko 6; W5 – Wetlina, site 5; Połonina Wetlińska: W6 – Wetlina, site 6, W22 – Wetlina, site 22, W23 – Wetlina, site 23, W24 – Wetlina, site 24, W26 – Wetlina, site 26, W 28 – Wetlina, site 28, W33 – Wetlina, site 33, W34 – Wetlina, site 34, W35 – Wetlina, site 35, W37 – Wetlina, site 37, W38 – Wetlina, site 38, W39 – Wetlina, site 39, W43 – Wetlina, site 43, W44 – Wetlina, site 44, W46 – Wetlina, site 46, W47 – Wetlina, site 47, W48 – Wetlina, site 48; Moczarne: W16 – Wetlina, site 16, W17 – Wetlina, site 17, W18 – Wetlina, site 18, W19 – Wetlina, site 19, W20 – Wetlina, site 20, W21 – Wetlina, site 21, W27 – Wetlina, site 27, W32 – Wetlina, site 32, W40 – Wetlina, site 40, W50 – Wetlina, site 50, W51 – Wetlina, site 51, W52 – Wetlina, site 52, W53 – Wetlina, site 53, W53 – Wetlina, site 53; Przełęcz pod Czerteżem: W25 – Wetlina, site 25, W30 – Wetlina, site 30; Dział: D1 –Dział, site 1, D2 –Dział, site 2; Mała Rawka: Mr1 – Mała Rawka, site 1, Mr2 – Mała Rawka, site 2, Mr3 – Mała Rawka, site 3, Mr4 – Mała Rawka, site 4; Wielka Rawka: WR1 – Wielka Rawka, site 1, WR2 – Wielka Rawka, site 2; Połonina Caryńska: Pc1 – Połonina Caryńska, site 1, Pc2 – Połonina Caryńska, site 2, Pc3 – Połonina Caryńska, site 3, Pc4 – Połonina Caryńska, site 4, Pc5 – Połonina Caryńska, site 5, Pc6 – Połonina Caryńska, site 6, Pc7 – Połonina Caryńska, site 7, Pc8 – Połonina Caryńska, site 8, Pc9 – Połonina Caryńska, site 9, Pc10 – Połonina Caryńska, site 10; Bukowe Berdo: Bbr1 – Bukowe Berdo, site 1, Bbr2 – Bukowe Berdo, site 2, Bbr3 – Bukowe Berdo, site 3. White points – pollen diagrams/ białe punkty – miejsca skąd pochodzą diagramy pyłkowe : 1 – Smerek, 2 – Wołosate, 3 – surroundings of/ okolice Tarnawa Wyżna, 4 – Zakole.


HIGH BIESZCZADY MTS.
AREA OF RESEARCH (2012-2016)
C1
1
2
3
4
5 KM
W5
W53
W27,32, 40,50,52
W16
W30
W25
W51
W17,18,19, 20,21
W23
W22
W24,35,34
W26
W33
W37
W47
W46
W28
W6,43,44,48
W49
W38
W39
D2
D1
Mr2
Mr1
Mr3,4
WR1,2
Pc10
Pc9
Pc8
Pc1
Pc2
Pc7
Pc6
Pc5
Pc3,4
Bbr1,2,3

Archaeological finds dated to the Neolithic and Bronze Age

(C1) Cisna, site 6, Cisna commune.
Location: the archaeological material was found on the area of about 150 m^2 in the vicinity of the menilite hornstone natural deposits located in the bottom of Solinka river valley and in Solinka riverbed about 20–30 m from the site about 510 m a.s.l.
Finds: archaeological material collected within an area of processing site Cisna 6 during the surface surveys carried out in 2015 contains 53 pieces of raw material (menilite hornstone) and 25 artefacts made of menilite hornstone and one artefact made of siliceous sandstone.
Chronology: Late Neolithic.
References: Pelisiak 2017a.

(W11) Wetlina, site 11 (Wetlina–Stare Sioło, site 1), Cisna commune.
Location: in Wetlinka valley, on a small plateau about 3 m above the present bed of Wetlina river, at the west end of Wetlina village, near the old ford in Stare Sioło, about 600 m a.s.l.
Material: 1 mid part of blade made of quartzite, one edge worked-out with irregular "use" retouch, length: 31 mm, width: 32 mm, thickness: 4 mm.
Chronology: Late Neolithic.
References: Pelisiak, Maj 2013, Fig. 2: 1.

(W22) Wetlina, site 22 (Orłowicz Pass, site 1), Cisna commune.
Location: on the Orłowicz Pass, about 1080 m a.s.l.
Material: 1 fragment of irregular flake made of menilite hornstone in a shape similar to knife-like tool with natural back, unretouched, working edge with irregular "use" retouch on the opposite side to the back, length 34 mm, width 22 mm, thickness 5 mm.
Chronology: Late Neolithic or Bronze Age.
References: Pelisiak, Maj 2013, Fig. 2: 2.

(W15) Wetlina, site 15 (Moczarne, site 1), Cisna commune.
Location: near the Beskidnik stream, inside a small pass between Szypowaty Mt. and another local elevation on the altitude of about 770 m a.s.l.
Material: 1 irregular bipolar made of menilite hornstone with one front sharp, and second front blunt, length 55 mm, width 23 mm, thickness 23 mm.
Chronology: Late Neolithic or Bronze Age.
References: Pelisiak, Maj 2013, Fig. 2: 3.

(W16) Wetlina, site 16, Cisna commune.
Location: on the high terrace in Górna Solinka river valley, about 700 m a.s.l.
Material: 1 crushed piece of obsidian, largest dimension: 18 mm; 1 crushed

fragment of core made of menilite hornstone; 2 bipolar-like pieces of menilite hornstone, largest dimensions: 22, 16 mm; 1 bipolar made of siliceous sandstone, dimensions 23 x 19 x 7 mm; 1 pebble of flysch radiolarite with two edges irregularly retouched, one of them partly with bifacial retouch, dimensions: 34 x 47 x 11 mm; 1 backed flake knife-like tool made of siliceous sandstone, one edge partly retouched, back is natural and flat – probably fragment of half-product of the Krummesser, dimensions: 54 x 33 x 12 mm; 1 knife-like tool made of piece of siliceous sandstone, one edge with bifacial retouch, dimensions: 43 x 45 x 18 mm; 1 retouched flake made of black menilite hornstone, dimensions: 16 x 18 x 9 mm; 1 fragment of crushed bipolar made of black menilite hornstone, dimensions: 18 x 9 x 8 mm.

Chronology: Early Neolithic (e.g. artefact made of obsidian), Late Neolithic, Bronze Age (e.g. *Krummesser*, backed flake knife-like tool), Neolithic or Bronze Age (other).

References: Pelisiak 2016b; Pelisiak 2017b, Fig. 8: L, M, N.

(W17) Wetlina, site 17, Cisna commune.

Location: left-side terrace of Górna Solinka and Beskidnik valley, about 740 m a.s.l.

Material: almost discoidal, single platform flake core made of siliceous sandstone with natural platform, dimensions 37 x 27 mm; edge angle about 900; the base of the core is crushed, flaking surface is 28 mm and bears negatives of 7 detached flakes, biggest one of size 24 x 18 mm.

Chronology: Bronze Age or Late Neolithic.

References: Pelisiak 2014a, Fig. 2: 1, 2.

(W18) Wetlina, site 18, Cisna commune.

Location: left-side terrace of Beskidnik stream (above 740 m a.s.l.).

Material: flake core with changes orientation and natural platforms made of siliceous sandstone. Two striking platforms are opposed to each other, third one is located on the side wall of the core. One platform is almost rectangular of dimensions 45 x 37 mm. Opposite platform (50 x 47 mm) in a final stage of core exploitation was used as a flaking surface. The core bears negatives of 8 detached flakes, biggest of them of dimension 37 x 23 mm.

Chronology: Bronze Age.

References: Pelisiak 2014a, Fig. 2: 3, 4.

(W19) Wetlina, site 19, Cisna commune.

Location: right-side low terrace of Beskidnik stream, about 70 m to the south of the Wetlina site 18, about 740 m a.s.l.

Material: single platform flake core made of siliceous sandstone; dimensions: 78 x 68 mm, sides and base natural, edge angle about 700. 4 flakes were detached

from the striking platform, one from the side of the core. Negative of the biggest detached flake is 44 x 43 mm in size.
Chronology: Bronze Age.
References: Pelisiak 2014a, Fig. 3: 1, 2.

(W20) Wetlina, site 20, Cisna commune.
Location: low, left-side terrace of Górna Solinka and Beskidnik valley, about 50 m to S from Wetlina site 17 (ok. 740 m a.s.l.).
Material: piece of siliceous sandstone (dimension 61 mm) with obliterated traces of flaking.
Chronology: Bronze Age.
References: Pelisiak 2014a.

(W21) Wetlina, site 21, Cisna commune.
Location: low left-side terrace of Górna Solinka and Beskidnik valley, about 280 m N of Wetlina site 17, 740 m a.s.l.
Finds: 1 flake core with changed orientation made of table-like piece of siliceous sandstone. Two natural striking platforms (both 78 x 58 mm in size) are opposed to each other. Flaking surface is 38 mm high. Negatives of 6 detached flakes are visible on this core. 1 flake core with changed orientation made of siliceous sandstone, dimensions 48 x 29 x 42 mm.
Chronology: Bronze Age.
References: Pelisiak 2014a, Fig. 3: 3, 4.

(W25) Wetlina, site 25 (Czerteż Pass, site 1), Cisna commune.
Location: local plateau near the border state border on the altitude of about 900 m a.s.l.
Material: 1 mid part of irregular blade made of raw material similar to so called Bircza flint, one edge unretouched, used-up, opposite edge is wide and makes natural and unretouched back, length 43 mm, width 18 mm, thickness 8 mm.
Chronology: Late Neolithic.
References: Pelisiak, Maj 2013, Fig. 2: 4.

(W27) Wetlina, site 27, Cisna commune.
Location: within Górna Solinka river valley (about 730 m a.s.l.
Material: double platform flake core made of table of siliceous sandstone; natural platform of size 72 x 34 mm and 68 x 39 mm; height of flaking surface: 31 mm. Sides and back of the core are natural.
Chronology: Bronze Age.
References: Pelisiak 2016b.

(W28) Wetlina, site 28 (Połonina Wetlińska massif), Cisna commune.
Location: on the ridge of Połonina Wetlińska, near Srebrzysta Pass, about 1200 m a.s.l.

Material: chip made of Cretaceous flint.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2016b.

(W30) Wetlina, site 30, Cisna commune.
Location: on the local plateau, on NW slope, below the Pod Czerteżem Pass, about 880 m a.s.l.
Material: changed platform flake core made of tablet of siliceous sandstone, maximal dimensions 64 x 37 x 29 mm; striking platforms are natural, from one of them 3 flakes were detached (maximal size 21, 22 and 42 mm), from the second – one flake of 37 mm width.
Chronology: Bronze Age.
References: Pelisiak 2016b, Fig. 2: 1.

(W31) Wetlina, site 31, Cisna commune.
Location: on the flat, low part of the Górna Solinka valley terrace, about 730 m a.s.l.
Material: one partly cortical piece of lithic raw material (dimension: 32 mm) with negative of one detached flake.
Chronology: Bronze Age.
References: Pelisiak 2016b, Fig. 2: 2.

(W32) Wetlina, site 32, Cisna commune.
Location: on the flat part of the low terrace of Górna Solinka river valley, about 670 m a.s.l.
Material: tip fragment of the Krummesser or fragment of half-product of Krummesser made of siliceous sandstone. Edge near a tip was retouched on one side, back is partly prepared. Dimensions of preserved part: length; 53 mm, width: 43 mm, maximal thickness 20 mm.
Chronology: Early Bronze Age.
References: Pelisiak 2016b, Fig. 2: 3.

(W33) Wetlina, site 33 (Połonina Wetlińska massif), Cisna commune.
Location: on the small plateau on SW slope of the Połonina Wetlińska massif, about 760 m a.s.l.
Material: 65 items made of light-brown hornstone, black menilite hornstone and siliceous sandstone. *Siliceous sandstone:* 1 unidirectional flake with natural butt, straight in profile, one edge partly retouched on dorsal face, dimension: 14 x 13 x 5 mm. *Light-brown hornstone*: 1 bipolar made of natural piece of raw material, length; 15 mm, width 17 mm, thickness: 12 mm; 1 transverse bipolar, dimensions: 18 x 17 x 8 mm; 1 fragment of bipolar; 1 one crushed piece of raw material, maximal dimension 26 mm; 3 natural pieces of raw material, maximal dimensions; 23, 19 and 18 mm. *Black menilite hornstone*: 2 fragments

of bipolars, 17 pieces of raw material with traces of elaboration or fragments of bipolars, dimensions: 32, 26, 23, 21, 20, 19, 19, 19, 19, 17, 17, 15, 14, 14, 13, 13, 13 mm; 22 natural pieces of raw material, dimensions from 20 to 5 mm in size. *Unidentified lithic raw material:* 8 unprepared pieces of raw material, dimensions: 31, 24, 22, 20, 19, 18, 17, 13 mm. *Overburned, unidentified raw material*: 1 unidirectional flake with edge-like butt, dimensions: 15 x 8 x 4 mm; 1 fragment of unidirectional flake with cortical butt, dimensions: 12 x 16 x 4 mm; 1 fragment of unidirectional flake, with partly natural surface and prepared, flat butt, dimensions: 18 x 13 x 5 mm; 1 flake with natural surface and edge-like butt, dimensions: 16 x 10 x 4 mm; 1 small fragment of flake; 3 chunks, dimensions: 22, 21 and 19 mm.

Chronology: Late Neolithic/Bronze Age.

References: Pelisiak 2016b, Fig. 2: 4–6.

(W34) Wetlina, site 34 (Połonina Wetlińska massif), Cisna commune.

Location: Orłowicz Niżna Pass, 1070 m a.s.l.

Material: King's Jan Kazimierz coin (boratynka).

Chronology: XVII century.

(W35) Wetlina, site 35 (Połonina Wetlińska massif), Cisna commune.

Location: Orłowicz Niżna Pass, 1070 m a.s.l.

Material: bipolar made of flake of menilite hornstone, one tip partly crushed, opposite one – broken off, one side-edge is partly retouched on one face, dimensions: 26 x 14 x 7 mm.

Chronology: Late Neolithic or Bronze Age.

References: Pelisiak 2016b, Fig. 2: 7.

(W36) Wetlina, site 36 (Połonina Wetlińska massif), Cisna commune.

Location: Orłowicz Niżna Pass, about 1050 m a.s.l.

Material: partly destructed bipolar made of flake of brown hornstone, tips are sharp, dimensions: 24 x 16 x 5 mm.

Chronology: Late Neolithic or Bronze Age.

References: Pelisiak 2016b, Fig. 2: 8.

(W37) Wetlina, site 37 (Połonina Wetlińska massif), Cisna commune.

Location: small plateau on the S slope of the Połonina Wetlińska massif, about 1000 m a.s.l.

Material: 50 items made of quartzite, lithic raw material similar to the Bircza flint, light-brown hornstone, black menilite hornstone and siliceous sandstone. *Quartzite:* 1 fragment of initial core made of natural piece or raw material, dimensions: 21 x 20 x 12 mm; 1 unidirectional flake with one edge retouched on one side, dimensions: 20 x 13 x 4 mm; 1 natural piece of raw material, dimension: 16 mm. *Lithic raw material similar to the Bircza flint*: flake with natural surface and unprepared edge-

like butt, dimensions: 22 x 15 x 9 mm; 1 chunk with traces of flaking, dimensions: 20 x 14 x 8 mm. *Light-brown hornstone*: 1 flake core in a last stage used as a bipolar with sharp fronts, dimensions 17 x 20 x 9 mm; 2 chunks with traces of flaking, dimensions: 21 and 18 mm. *Black menilite hornstone*: 1 knife-like tool with retouched back and edges made of metric blade, dimensions: 33 x 16 x 8 mm; 1 fragment of flake with partly retouched one edge, dimensions: 16 x 18 x 9 mm; 1 chunk with one edge partly retouched, dimensions: 24 x 14 x 6 mm; 1 two-pole bipolar with sharp poles, dimensions: 16 x 15 x 7 mm; 2 fragments of bipolars, dimensions: 10 chunks, dimensions: 22, 20, 20, 20, 16, 16, 14, 13, 11, 10 mm; 20 natural pieces of raw material, dimensions from 33 to 13 mm. *Siliceous sandstone:* 1 bipolar with sharp poles, bifacial retouch on both edges, dimensions: 15 x 21 x 7 mm; 5 flaked chunks, dimensions: 31, 28, 26, 20, 13 mm.

Chronology: Late Neolithic or/and Bronze Age.

References: Pelisiak 2016b, Fig. 2: 9–11.

(W38) Wetlina, site 38 (Połonina Wetlińska massif), Cisna commune.

Location: wide ridge of the Połonina Wetlińska massif, 1200 m a.s.l.

Material: 2 flaked chunks of menilite hornstone, dimensions 20 and 15 mm; 1 natural piece of menilite hornstone, dimension: 9 mm.

Chronology: Late Neolithic/Bronze Age.

References: Pelisiak 2016b.

(W39) Wetlina, site 39 (Połonina Wetlińska massif), Cisna commune.

Location: plateau on the on the culmination of the Połonina Wetlińska massif, about 1180 m a.s.l.

Material: 1 flaked chunk made of black menilite hornstone, dimension: 19 mm.

Chronology: Late Neolithic/Bronze Age.

References: Pelisiak 2016b.

(W40) Wetlina, site 40, Cisna commune.

Location: high terrace of the Górna Solinka river valley, about 700 m a.s.l.

Material: 1 fragment of flake core with changed orientation made of brown hornstone, dimensions: 41 x 55 x 34 mm.

Chronology: Late Neolithic/Bronze Age.

References: Pelisiak 2016b.

(W41) Wetlina, site 41 (Połonina Wetlińska massif), Cisna commune.

Location: on the plateau on a wide ridge of Połonina Wetlińska massif, between Hnatowe Berdo and Osadzki Wierch, about 1150 m a.s.l.

Material: irregular blade made of quartzite with irregular retouch on one edge, dimensions: 98 x 36 x 13 mm.

Chronology: Late Neolithic.

References: Pelisiak 2016b, Fig. 2: 12.

(W43) Wetlina, site 43 (Połonina Wetlińska massif), Cisna commune.
Location: plateau on the wide ridge of Połonina Wetlińska massif, near the Srebrzysta Pass, about 1200 m a.s.l.
Material: heart-shaped arrow-head made of Volhynian flint formed with bifacial retouch, dimensions: 21 x 19 x 3 mm.
Chronology: Late Neolithic, Corded Ware culture.
References: Pelisiak 2016b, Fig. 2: 13.

(W44) Wetlina, site 44 (Połonina Wetlińska massif), Cisna commune.
Location: the ridge of Połonina Wetlińska massif, near the Roh, about 1200 m a.s.l., in a close vicinity to the place where arrow-head were found on the sites Wetlina 6 and 43. All the finds are located on the small plateau about 80 m long, about 20 m to NE and 10 m above spring of fresh water exist. The area where the sites are located is the best naturally protected from the wind place on the ridge zone of Połonina Wetlińska massif.
Material: fragment of crushed blade made of black menilite hornstone, with edge partly retouched on the ventral face and a distal part retouched on a dorsal face, dimensions: 40 x 19 x 11 mm.
Chronology: Late Neolithic.
References: Pelisiak 2017b, Fig. 8: 0.

(W46) Wetlina, site 46 (Połonina Wetlińska massif), Cisna commune.
Location: wide ridge of Połonina Wetlińska massif in a part called Szare Berdo, about 1100 m a.s.l.
Material: multidirectional flake made of black menilite hornstone, dimensions: 13 x 12 x 4 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(W47) Wetlina, site 47 (Połonina Wetlińska massif), Cisna commune.
Location: wide ridge of Połonina Wetlińska massif between Osadzki Wierch and Hnatowe Berdo, about 1150 m a.s.l.
Material: 1 chip made of undetermined siliceous rock, dimension: 9 mm; 1 chunk with traces of flaking made of black menilite hornstone, dimension: 13 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(W48) Wetlina, site 48 (Połonina Wetlińska massif), Cisna commune.
Location: plateau on the ridge of Połonina Wetlińska massif, in a close vicinity of Wetlina, sites 6, 43 and 44; about 1180 m a.s.l.
Material: 1 flake made of black menilite hornstone, dimensions: 15 x 15 x 4 mm. 1 chip made of black menilite hornstone, dimension: 7 mm; 1 retouched flake made of black menilite hornstone, dimensions: 16 x 13 x 3 mm; 3 chunks

with traces of flaking made of black menilite hornstone, dimensions: 13, 11 and 11 mm; 1 double-poles bipolar with retouched both poles, made of siliceous sandstone, dimensions: 35 x 46 x 20 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: P.

(W49) Wetlina, site 49 (Połonina Wetlińska massif), Cisna commune.
Location: the top part of the wide ridge of the Połonina Wetlińska massif, about 1190 m a.s.l.
Material: 1 chip, dimension: 9 mm, and 2 chunks made of black menilite hornstone, dimensions: 12 and 13 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(W50) Wetlina, site 50, Cisna commune.
Location: on the W slope of the Górna Solinka river valley, about 700 m a.s.l.
Material: 1 knife-like tool made of siliceous sandstone with natural back and the edge retouched on both faces, dimensions: 28 x 27 x 13 mm.
Chronology: Early Bronze Age.
References: Pelisiak 2017b, Fig. 8: R.

(W51) Wetlina, site 51, Cisna commune.
Location: on the SW slope of the Górna Solinka river valley, about 750 m a.s.l.
Material: a flake core made of the plate of brown flysch radiolarite, both platforms are natural, wide of the core (wide of striking surface): 17 mm, width: 41 x 29 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: S.

(W52) Wetlina, site 52, Cisna commune.
Location: on SE slope of the Górna Solinka river valley, about 700 m a.s.l.
Material: double platform flake core made of the plate of siliceous sandstone, 44 mm thick, both platform are natural, dimensions: striking surface height: 44 mm, width: 70 x 68 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: T.

(W53) Wetlina, site 53, Cisna commune.
Location: on the W slope of the Górna Solinka river valley, about 690 m a.s.l.
Material: 1 pre-core or piece of quartzite with traces of flaking, dimensions: 42 x 30 x 19 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: U.

(Bbr1) Bukowe Berdo, site 1, Lutowiska commune.
Location: in NW part of wide ridge of the Bukowe Berdo massif, about 30 m to SE from the small group of rocks, about 1120 m a.s.l.
Material: 1 piece of black menilite hornstone, one surface natural, on the second face negative of one detached flake, narrower wall retouched in a form of the crest, all the edges are crushed, dimensions: 23 x 17 x 9 mm.
References: Pelisiak 2017b, Fig. 8: A.

(Bbr2) Bukowe Berdo, site 2, Lutowiska commune.
Location: on the wide ridge in the NW part of the Bukowe Berdo massif, in a close vicinity of a group of rock, about 1150 m a.s.l.
Material: 1 chunk of black menilite hornstone, with partly preserved natural surface with negatives of single flakes detached on both walls; one edge with micro-retouch, dimensions: 29 x 15 x 7 mm; 1 double-poles bipolar made of black menilite hornstone with sharp and rounded poles and retouched side edges, dimensions: 19 x 17 x 10 mm; 1 flaked chunk made of raw material similar to Bircza flint, dimensions: 18 x 18 x 13 mm.
Chronology: Late Neolithic/Bronze Age.

(Bbr3) Bukowe Berdo, site. 3, Lutowiska commune.
Location: on the top part of the ridge of Bukowe Berdo, about 1120 mm a.s.l., about 250 m to the NW from Bukowe Berdo, site 1.
Material: double-pole bipolar made of black menilite hornstone, one pole sharp, second rounded, dimensions: 26 x 24 x 10 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: D.

(D1) Dział, site 1, Lutowiska commune.
Location: top part of the wide ridge of the Dział, about 1190 m a.s.l.
Material: flaked piece of black menilite hornstone, dimensions: 28 x 17 x 15 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(D2) Dział, site 2, Lutowiska commune.
Location: top part of wide ridge of the Dział, about 1000 m a.s.l.
Material: flaked chunk of black menilite hornstone with retouched edges, dimensions: 26 x 15 x 13 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(Pc1) Połonina Caryńska, site 1, Lutowiska commune.
Location: ridge of the Połonina Caryńska massif.
Material: fragment of blade made of black menilite hornstone.

References: Valde-Nowak 1991.

(Pc2) Połonina Caryńska, stan. 2, Lutowiska commune.
Location: soft SE slope of the wide ridge of Połonina Caryńska massif, 1130 m a.s.l.
Material: 1 flake made of black menilite hornstone, dimensions: 22 x 12 x 5 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: G.

(Pc3) Połonina Caryńska, site 3, Lutowiska commune.
Location: SE slope of wide ridge of Połonina Caryńska, about 1130 m a.s.l.
Material: flaked piece of black menilite hornstone, maximum dimension: 22 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(Pc4) Połonina Caryńska, site 4, Lutowiska commune.
Location: on the terrace of Wołosaty stream valley, in the Ustrzyki Górne, about 650 m a.s.l.
Material: the sample of finds were gathered from the area of the site: 1 fragment of flake made of brown flysch radiolarite, both edges with irregular retouch on one face, dimension: 24 x 15 x 6 mm; 1 end-scraper made of chunk of black, the front with steep and semi-steep retouch, dimensions: 18 x 20 x 10 mm; 3 fragments of bipolars made of black menilite hornstone, dimensions: 20, 12 and 12 mm; 1 flaked chunk of dark-brown hornstone, dimensions: 26 x 17 x 7 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: I.

(Pc5) Połonina Caryńska, site 5, Lutowiska commune.
Location: on the terrace up to the influence of nameless stream to the Wołosaty stream, about 660 m a.s.l.
Material: sample of artefacts were gathered from the site: 1 distal part of the blade from single platform core with retouch of one edge, dimensions: 16 x 10 x 3 mm; 1 irregular double-poles bipolar with retouched sharp poles, dimensions: 53 x 29 x 19 mm; 4 chunks with traces of flaking, dimensions: 32, 16, 16 and 15 mm; 2 natural pieces of raw material, dimensions: 37 and 21 mm. All items made of black menilite hornstone.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: J.

(Pc6) Połonina Caryńska, site 6, Lutowiska commune.
Location: on the slow SE slope of Połonina Caryńska ridge, about 900 m a.s.l.
Material: 1 unidirectional flake made of dark-brown raw material similar to Bircza flint, dimensions: 29 x 18 x 6 mm.

Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: K.

(Pc7) Połonina Caryńska, site 7, Lutowiska commune.
Location: wide ridge of Połonina Caryńska ridge, from NE protected by the Kiński ridge, near the fresh water spring, about 1150 m a.s.l. This part of Połonina Caryńska offered natural protection from the wind and heavy rain.
Material: flaked piece of black menilite hornstone with irregular retouch of one edge, dimensions: 17 x 14 x 9 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(Pc8) Połonina Caryńska, site 8, Lutowiska commune.
Location: wide lowering on the Połonina Caryńska ridge, from NW shielded by the local culmination of the ridge, from NW by the wall of rocks, which protect this place from the wind and rain, about 1220 m a.s.l.
Material: 1 fragment of flake made of dark-brown siliceous raw material similar to the Bircza flint, dimension: 8 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(Pc9) Połonina Caryńska, site 9, Lutowiska commune.
Location: on the ridge of Połonina Caryńska, on a palace covered from the SW by rocky wall about 4 m high, near the fresh water spring, 1230 m a.s.l.
Material: 1 fragment of double-poles bipolar fragment made of black menilite hornstone, one pole sharp, second one rounded, dimensions: 21 x 8 x 8 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(Pc10) Połonina Caryńska, site 10, Lutowiska commune.
Location: wide ridge of the Połonina Caryńska massif, about 1240 m a.s.l.
Material: 1 end-scraper made of chunk of raw material similar to the Bircza flint, the front is irregular and rounded, dimensions: 15 x 21 x 7 mm; 1 flaked chunk of black menilite hornstone, dimension: 17 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(Mr1) Mała Rawka, site 1, Lutowiska commune.
Location: wide ridge of Mała Rawka massif, about 1250 m a.s.l.
Material: one piece of quartzite, maximal dimension: 15 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(Mr2) Mała Rawka, site 2, Lutowiska commune.
Location: wide ridge of Mała Rawka massif, about 1260 m a.s.l.

Material: 1 crushed piece of black menilite hornstone with a traces of flaking, dimension: 28 mm; 1 piece of black menilite hornstone with one side and edge crushed, maximal dimension: 30 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: E.

(Mr3) Mała Rawka, site 3, Lutowiska commune.
Location: near the top of Mała Rawka, about 1270 m a.s.l.
Material: 1 fragment of flake made of siliceous rock with one edge partly retouched on one face, dimensions: 22 x 18 x 4 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: F.

(Mr4) Mała Rawka, site 4, Lutowiska commune.
Locations: on the ridge in the top zone of the Mała Rawka, about 1250 m a.s.l.
Material: 1 fragment of flake or blade made of black menilite hornstone, dimensions: 18 x 13 x 6 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(WR1) Wielka Rawka, site 1, Lutowiska commune.
Location: top zone of the ridge of Wielka Rawka massif, about 1300 m a.s.l.
Material: 1 patinated retouched flake made of undetermined raw material, dimensions: 27 x 37 x 9 mm.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b.

(WR2) Wielka Rawka, site 2, Lutowiska commune.
Location: on the wide ridge on the top zone of Wielka Rawka, about 1300 m a.s.l.
Material: 1 fragment of flaked chunk with one edge retouched on one side, dimensions: 30 x 18 x 12 mm; 1 fragment of flake partly with natural surface, dimensions: 15 x 13 x 5 mm. Both items made of black menilite hornstone.
Chronology: Late Neolithic/Bronze Age.
References: Pelisiak 2017b, Fig. 8: W.

Conclusions

Upper parts of eastern Polish Carpathians (areas located above 500 m a.s.l.) were not settled by the Neolithic and Early Bronze Age communities. On the other hand, numerous single finds of lithic artefacts were recorded there (Pelisiak 2018a; Valde-Nowak 1988). Most of the sites found in the High Bieszczady Mts. are located in the high zones of landscapes, mostly on the wide ridges of the highest massifs above modern tree line. Almost all of them are represented by sin-

gle artefacts or small groups of artefacts made of local and non-local lithic raw material (Pelisiak 2016a). The finds were frequently registered near the fresh water springs and/or near salt water springs. Typologically these artefacts refer to the so-called Orava-type, recognized and defined on the base of stone inventories found in western Polish Carpathians (Kopacz, Valde-Nowak. 1987; Valde-Nowak 1986a; 1986b). These finds was primarily dated to the Early Bronze Age. Later their wider chronology was suggested including Late Bronze Age, but even the Iron Age was not excluded (Valde-Nowak 2003).

The artefacts discovered in the eastern part of Polish Carpathians including those found in High Bieszczady Mts played important role in the study on various forms of human activity and were an archaeological base for reconstruction of transhumance pastures performed during Late Neolithic and Early Bronze Age (Pelisiak 2013; Pelisiak 2014b; Pelisiak 2016c). They were also strong argument in the discussion on the climate impact on the human activity in the Late Neolithic (Pelisiak 2014b).

Transhumant pastoralism was also recognized in the other European mountains (e.g. Kienlin, Valde-Nowak 2002; Pelisiak, Nowak, Astaloş 2018; Valde-Nowak, P., Kienlin, T. L. 2002; Valde-Nowak, Weismüller 1994). In the French Alps transhumant pastoralism is archaeologically reflected also by stone structures dated to the III and II millennium BC (Walsh, Mocci 2011; Walsh, Mocci, Palet-Martinez 2007; Walsh, Richer, de Beaulieu 2006). The impressive confirmation of human entering in the high European mountains is discovery of naturally mummified human body – so called Ötzi – found in 1991 on the Tisenjoch area in Ötztal Alps on the altitude of 3210 m a.s.l. (e.g. Bezinge, Curdy 1994; Fleckinger 2007). This famous mummy is dated to about 3200 BC. Its dating is similar to the chronology of first pollen records of human activity in the High Bieszczady (Kruk 1980; Pelisiak 2005; 2018a; Ralska-Jasiewiczowa 1969, 1980). This chronological convergence placing finds from the Bieszczady Mts. in wide European context of human activity in the mountains, and has an almost symbolic meaning.

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Streszczenie

Inspiracją do podjęcia badań archeologicznych w Bieszczadach Wysokich były informacje palinologiczne o aktywności człowieka na tych terenach, pochodzące z diagramów pyłkowych z okolicy Tarnawy oraz z Wołosatego i Smereka. Najstarsze informacje palinologiczne dotyczą wypasów zwierząt. Są datowane na późny neolit. Aż do końca epoki brązu brak palinologicznych potwierdzeń stałego osadnictwa na tych terenach połączonego z uprawami zbóż.

W 2012 roku rozpoczęto w Bieszczadach Wysokich badania archeologiczne. Ich część źródłowa składa się z prospekcji powierzchniowej terenu oraz gromadzenia informacji o znaleziskach przypadkowych. Do 2017 roku odkryto w Bieszczadach Wysokich ponad 80 stanowisk archeologicznych, w tym 60 datowanych na neolit i epokę brązu. Stanowiska te, w zdecydowanej większości, są reprezentowane przez pojedyncze przedmioty wykonane z różnych skał krzemionkowych oraz przez niewielkie ich zbiory. Są ulokowane głównie

w wysokich strefach krajobrazu powyżej obecnej granicy lasu, na grzbietach głównych masywów Bieszczadów Wysokich: Połoniny Wetlińskiej, Połoniny Caryńskiej, Małej i Wielkiej Rawki, Działu oraz Bukowego Berda, na wysokości pomiędzy 1000 a 1300 m n.p.m. Większość z nich odkryto w sąsiedztwie źródeł wody oraz słonych źródeł. Materiały te można łączyć z sezonowymi (letnimi), górskimi wypasami zwierząt. Podobne znaleziska są również znane z innych gór europejskich.