THE MAGDALENIAN PERIOD IN POLAND AND NEIGHBOURING AREAS

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Abstract

Thanks to up-to-date research on Magdalenian Culture in Poland we can now identify three settlement provinces: Upper Silesia, Małopolska and southeast Poland. Magdalenian settlements in Poland existed from Dryas I till Alleröd. Polish Magdalenian is a part of the Central Europe Cultural Province. Very interesting is Maszycka cave, where new material from different European territory was found.

Key words: Magdalenian, Late Pleistocene, Upper Palaeolithic, raw materials, Poland, Carpathians, Central Europe.

Magdalenian Culture certainly belongs to the most important cultures of the late Pleistocene. Originating in southwest France circa 18,000 years ago, it spread in a relatively short period of time to wide areas of Europe, reaching in the east to Moravia and southern Poland. Poland marks the northeastern border of the Magdalenian range. Up-to-date research on Magdalenian Culture allows us to identify three “settlement provinces” (Fig. 1): Upper Silesia-Dzierżysław (Połtowicz 2000; Ginter et al 2002), Cyprzanów (Ginter 1974), probably Sowin (Furmanek, Rapiński 2003), Małopolska, in the Kraków region-Maszycka cave (Kozłowski et al 1993), Brzoskwinia (Ginter 1974a; Kozłowski 1987), the cave in Zalasie (Kozłowski, Pettit 2001), southeast Poland, Klementowice-Kolonia (Jastrzębski, Libera 1988), Hłomcza (Valde-Nowak, Muzyczuk 2000; Łanczont et al 2002), Przemyśl (Kozłowski 1987). Magdalenian sites are also known from the Carpathians, Sromowce Wyżne-Kąty (Kozłowski 1987), Uście Gorlickie (Valde-Nowak 1998) and from the northern edge of the Grzybowa Góra uplands (Schild 1965, 1975), Mosty (Cyrek 1986). Magdalenian settlement in Poland falls in fairly long period of time: fundamentally from the end of late Dryas-Dzierżysław (Ginter, Połtowicz 2000), Hłomcza? (Lanczont et al 2002), Wilezyce? (spoken information from R. Schild, citation from B. Ginter, M. Połtowicz, forthcoming), through Bölling-Klementowice-Kolonia, Brzoskwinia (Kozłowski 1987), to Alleröd-Mosty (Cyrek 1986), Grzybowa Góra (Schild 1959). Apparently earlier traces of settlement in Maszycka cave are chronologically isolated: they are dated to 14250+/−240 years BP (Kozłowski et al 1993) and are almost 1,000 years ahead of the other Magdalenian remains in our lands.

Polish Magdalenian is a part of the Central Europe Cultural Province and appeared due to the gradual influx of this cultural complex into the Uplands. It is worth asking in what way this settlement arrived in Polish lands, and with which neighbouring areas it is most connected. An analysis of a few elements, in particular the occurrence of raw materials and their typology in connection with the chronology of the sites, can be helpful in answering the above questions.

Local rocks, or rocks coming from the nearest available sources, constitute the largest amount of used raw material in the Polish sites, as in almost all the sites. It is principally visible at the Krakowsko-Czestochowska Jura sites; for example Maszycka cave, where local Jurassic flint composes about 95% of the used raw material; the largest number was obtained within a 20-kilometre radius of the site (Kozłowski et al 1993). In Brzoskwinia it is almost only local flint, intended for “export”, which is obvious, taking into account the fact that workshops were found in this site (Ginter 1974a; Kozłowski 1987), just as in Wołowice (Dagnan-Ginter 1976). Also, the inventories from Puchaczka cave (Kowalski et al 1965) and hunting sites from the surroundings of Mnikowo (Kozłowski 1987) are based on the local raw material. Besides, in the inventories of Mników, a particular differentiation of Jurassic flints can be observed, as some of them come from somewhat further areas of the Jura.

A similar situation is observed in other Polish regions. In Dzierżysław in Upper Silesia, almost all the inventory is made from high-quality erratic flints, whose bassets can be found within a radius of a few to a dozen or so kilometres from the camp. In Sromowce Wyżne-Kąty, in the Pieniny Mountains, manufacturers based themselves mainly on the local radiolarite (Kozłowski 1987). In Hłomcza, in southeast Poland, practically all the inventory was made of Bircza flint, consequently the most available raw material (Lanczont et al 2002).
A different situation can be observed at the Alleröd site in Grzybowa Góra (Rydno II/59). Only about 20% of the inventory was made of “chocolate” flint, of which bassets can be found about 20 kilometres to the northeast; most of the artefacts were made of local-Kraków Jurassic flint, of which deposits can be found up to a distance of over 100 kilometres to the south (Schild 1965; Kozłowski 1987). These two kinds of flint were used willingly also in Mosty, located close to Grzybowa Góra (Cyrek 1986), but here “chocolate” flint predominates over Jurassic (61.5% and 36.6% respectively).

The biggest differentiation of the raw material is observed in southeast Poland, and is undoubtedly connected with the biggest difficulties in obtaining high-quality raw material. However, here also manufacturers tried to use rocks possibly found close to the sites. For example, in Wilczyce, near Sandomierz, turonian, “chocolate” and Świeciechów flint were mainly used, so the raw material was obtained at a distance of 20 to 30 kilometres from the site (Fiedorczuk, Schild 2001).

In Klementowice-Kolonia, turonian-Świeciechów flints were used first of all (36.5%), of which bassets in the neighbourhood of Świeciechów can be found at a distance of about 50 kilometres northwest, and “chocolate” flint (22%), of which bassets can be found on the southern edge of the Świętokrzyskie Mountains, about 70 kilometres southwest. Erratic flint of worse quality available here was used little (15.1%) (Jastrzębski, Libera 1988).

A large differentiation in the raw material can be observed at the not published site discovered by A. Lubelczyk, excavated by the same author and P. Mitura, in Grodzisko Dolne near Rzeszów. Bircza, erratic and Volynian flint were mainly used there. The large variety of raw material can be explained by the lack of high-quality rocks near these sites, and the necessity to obtain them from other sources.

1 I would like to thank Antoni Lubelczyk for his consent to use the material from the site in Grodzisk Dolny.
The above-mentioned sites are good examples of a typical raw material economy. They also reflect the directions of migrations of relatively short distances, although part of the raw material was obtained from considerable distances.

An analysis of the raw material imports coming from more distant areas is fundamental for researching the routes of interregional migrations. These raw materials, mainly represented by single artefacts, are a very important clue allowing us to trace the migrations’ directions or contacts between groups of people (Fig. 2).

Maszycka cave is the site from which the most varied imported raw materials come. In the inventory, besides the local raw materials, raw material also from the Pieniny Mountains (85km south), the Tatras, probably Upper Silesian flint (80 km west) and Upper Danubian flint (700km southwest), the so-called Platensilex (660km west), and flint from southwest Germany can be found. Raw material coming from the east of the site is represented by “chocolate” flint (140km northeast), Dniestr flint (340km east) and Volynian flint (350km east) (Kozłowski 1992; Kozłowski et al 1993). There are no raw materials from the southern side of the Carpathians. It is very characteristic that imported raw material comes from distant areas, as much from the west as from the east of the site.

Imported raw materials found at other sites are less numerous and differentiated. The raw material most often found is radiolarite coming from the Pieniny Mountains, and even more often from western Slovakia.

Radiolarite is known from a few Magdalenian sites in Poland, dated to different phases, from Dryas I to Allerød, such as Dzierżysław (Ginter, Połtowicz, forthcoming). Brzoskwinia (Kozłowski 1987), Mosty (Cyrek 1986) and Wilczyce (Fiedorczuk, Schild 2001). There are always only a few artefacts. All these radiolarites, except those from uncertain Wilczyce, come from Slovakia, thus from south Carpathian areas, over 100 or even several hundred kilometres from the sites (Mosty, over 300km, Brzoskwinia about 200km, Dzierżysław over 100km). These sites represent every “settlement province” of Polish Magdalenian.

The second most important imported flint is Volynian flint. This raw material, apart from the above-mentioned Maszycka cave, is known first of all from sites in eastern Poland. Such sites as Klementowice-Kolonia (two artefacts) (Jastrzębski, Libera 1988), Hłomcza (one artefact) (Lanczot et al 2002) and Grodzisko Dolne, where this raw material is represented by a few artefacts, should be mentioned. The precise sources of its origin are unknown. According to S. Jastrzębski and J. Libera (1988), Volynian flint from Klementowice-Kolonia can come a distance of 80 kilometres (the Rewie Fabryczny area), or the Middle Bug, from the area of Sarniak and Mielnik, which is located about 100 to 120 kilometres to the east.

Sometimes “chocolate” flint, eg in Brzoskwinia or Maszycka cave, can be acknowledged as an import from the north; bassets of this raw material are about 140 kilometres distant from those sites. The contacts can be confirmed by the often numerous, above-mentioned, near-Kraków Jurassic flints known from Grzybowa Góra or Mosty.

Basing ourselves on a few, but significant raw material imports, it can be seen that Magdalenian migrations or contacts concerned mainly the south and east. Also, migrations from the south to the north, reaching the northern border of the southern Polish uplands, are confirmed. Most important and intensive are the relations with areas south of the Carpathians. Besides radiolarites, this is confirmed by numerous findings of haematites in the Dzierżysław camp. J. Trąbska assumes (spoken information) that they originate in Moravia. Fragments of similar haematites have been found, among others, in Pekarna cave in Moravian Karszt. Moravian sites also gave other evidence of contacts with the present Polish lands. In the inventories of a few sites, imported raw materials, coming from Poland, can be found: mainly near-Kraków Jurassic flint in Kulna, Ochoczka, Adlerova, Byci Skala and Pekarna caves. Imports of “chocolate” flint come from Pekarna and Byci Skala, and single artefacts made of Świeciechów flint from Pekarna and the third layer of Kulna (Kozłowski 1992; Valoch 2001). All these raw materials are represented by very few artefacts, usually débitage and tools. However, they confirm undoubtedly the existence of contacts with very distant areas on the northern side of Moravia Gate, also near the northern border of the Magdalenian complex. It is worthy of mention that bassets of radiolarite found in Poland and Moravia are located in western Slovakia, in areas where Magdalenian settlement has not been identified so far. At the Slovakian site, Toporec imports of Bircza flint, willingly used by Magdalenian manufacturers living in southeast Poland, were found (Vlade-Nowak, Muzyczuk 2000). It is conceivable, particularly in the face of more and more numerous finds in southeast Poland, that the eastern borders of Magdalenian settlement should also be moved to the southern side of the Carpathians.

I would like to thank Dr. Inż. Joanna Trąbska for her consent to publish her research concerning the origin of the haematites from Dzierżysław.
Similar reflections can emerge because of Volynian flint finds. Their imports can suggest that Magdalenians at least penetrated terrains located relatively far to the east in search of raw material. These hypotheses, of course, can only be confirmed by inventories identified as Magdalenian.

The issue of contacts with areas west of the Polish borders is completely different. At the Polish sites, apart from Maszycka cave, there are no imports from the present German lands. Similarly, German sites did not yield imported raw materials from Poland, apart from a blade made of Sowieciechów flint, discovered in Oelknitz (a distance of 500km) (Kozłowski 1987). Two artefacts made of near-Kraków Jurassic flint were identified in Gudenus cave in Austria (Cyrek 1986a). Nevertheless, it is possible to connect them with migrations from north to south, although the distance dividing the site from the raw material basin is much bigger than the one dividing Moravian sites from the flint sources.

It is worth paying attention to one more very significant detail. Very important differences are observed between the kinds and origin of the imported raw material from Maszycka cave and the remaining Magdalenian sites in Poland. Maszycka cave is the only site where such a numerous variety of imported raw material has been identified. Moreover, it is the only site at which the imports come from such a vast area, including west of Odra. There are also raw materials from areas far to the east (Volynian flint) and to the north (“chocolate” flint). The more so as it is worth underlining the fact that there are no trans-Carpathian raw materials, namely those represented at the younger sites.

The occurrence of imports can be evidence of the physical shift of the Magdalenians, their contacts with other groups, or of the territory penetrated by them (Kozłowski et al 1993). Regardless of which version is the most probable, preserved imports show that in Polish Magdalenian we can observe at least two routes for the influx, either people or the Magdalenian tradition:

I – older, represented by the inventory from Maszycka cave, from west to east across Germany and the south Polish uplands

II – younger, used from the end of Dryas I to Alleröd, from south to north across Moravian Gate and Carpathian passes.

It seems that except for the first, the earlier phase of Magdalenian influx, the route from France through Germany to Poland across the uplands on the northern side of the Sudetes and the Carpathians was not used. In the younger phases of Magdalenian settlement expansion, two routes joining the north with the south...
through the Sudetes and the Carpathians were of great importance. Between these two phases there is a big chronological difference. The inventory from Massycka cave is dated to 14520+/−240 years BP, a period preceding the next phases of settlement of about 1,000 years (Kozłowski et al. 1993). There is no single site from this time either in Poland or Moravia. There are also no traces of such early settlement in Germany, apart from the far removed Munzingen site, probably also very early but whose chronology comprises a long period of time (Pasda 1998; Street 2000). Sites analogous to the Polish ones are known only from France (eg La Garenne, Arly, Roc de Marcamps) and are dated to the period between 15500 and 14000 BP (Allain et al. 1985). Moravian settlement corresponds chronologically then with younger settlement in Poland. It is quite obvious, as in this period, first of all in the Bölling part, we can talk about a culminating point of Magdalenian settlement in Central Europe (the more so as it is interesting that from this time there are no traces of contacts with the German areas). The only problematic issue is the beginning of this second phase of settlement, and, connected with it, the question of contact and the possible direction of migration (from north to south or from south to north?). There are three sites known in Poland which can be dated to the period preceding the beginning of Bölling. The site in Dzierżysław is dated by the AMS method to 13500–13220 BP (Ginter et al. 2002). The inventory from Hłomcza is dated by the TL method to Dryas (Łanczont et al. 2002), and the material from Wilczyce can probably be dated also to this period (spoken information from R. Schild, citation from B. Ginter, M. Poltowicz, forthcoming). There is no good evidence for the beginnings of the Magdalenian in Moravia. Nova Dratenicka cave has one radiocarbon date of earlier than 13000 BP. However, two dates younger than 13000 years come from this site (Valoch 2001). Layer “i” from Pekarna cave is dated to Dryas I on the basis of geological dates (Svoboda et al. 1994), and the inventory from Hranice can be connected with the period preceding Bölling on the basis of typological dates (Neruda, Kosthrun 2002). It seems that the existence of the “raw material” relations between Dzierżysław and the area of western Slovakia and probably Moravia might be the next indication allowing us to shift back the beginnings of the settlement in Moravia to Dryas I. Similarly, a certain indication of the Dryas chronology in Hranice, and at the same time of the beginnings of the settlement in Moravia, can be a near resemblance of the typological analogies in the inventory from this site and the inventory from Dzierżyslaw.

Fig. 3. Relations between Magdalenian sites in Poland and the neighbouring areas on the basis of typological analogies
A comparison of the inventories from Central European sites is undoubtedly helpful in the analysis of inter-regional relations. This analysis shows that typological analogies between the inventories comprise areas much wider than those in which relations are confirmed by raw material imports.

The inventory from Maszycka cave refers clearly to the facies à navettes known from France. The origin of the manufacturers of this inventory is not a matter of argument: the terrains of departure of the population that finished its migration in Jura Krakowska can undoubtedly be found in France (Allain et al. 1985; Kozłowski et al. 1993). Their route to the east was also evidenced by imports of German raw material. Particular analogies with the western areas can be found in the inventories from Hłomcza (Vlade-Nowak et al. 2000; Lanczont et al. 2002) and Wilczyce (Fidorczuk, Schild 2000); here, those relations are based mainly on the presence, in both of the inventories, of burins of the Lacan type, characteristic particularly of the Magdalenian in Western Europe, and very rarely found in Moravia (Demars et al. 1976). In the Hłomcza inventory also a characteristic form of Zinken (Zinken mit Schlagkante), known from Orp in Belgium, was uncovered (Valde-Nowak et al. 2000). These two sites' direct relations with Western Europe are not so plain as with Maszycka cave, the more so as burins of the Lacan type can be found from time to time also in Moravia (e.g. Pekarna, Malomice-Borky, Valoch 1963, 2001). There is no evidence in the form of raw material imports either. It is therefore underlyingly, however, that a certain connection with the western areas is represented by the sites that with great probability can be dated to the period preceding interstadial Bölling, and that both of them are located in the eastern part of Poland.

The third of the sites, the site in Dzierżysław, dated to Dryas I, has very good analogies with the site in Hranice, located on the southern side of Moravia Gate (Neruda, Kosthrun 2002) and Kniegrotte in Turingen (Höck 2001). The basic element that allows us to link these sites is evidently a triangle. The characteristic of the remaining tool groups from Dzierżysław suits better the inventory from Hranice.

These two directions, namely Moravia and eastern Germany, are the regions that give analogies for almost all the remaining Magdalenian sites in Poland. For almost all of them we can find references on the southern side of Moravia Gate and west of Odra, as well (Fig. 3). It is quite obvious, because Poland, Moravia, Czechia and Germany belong to the same Central-European Magdalenian cultural province. The more so as important factors in making a study of these directions of expansion are dates obtained on the basis of the presence of raw material coming from sources beyond local ones. The lack of exchange between the east and the west indicates that despite the distinct typological or stylistic relations between Polish and German complexes, the primary Magdalenian habitats, at least of those who had populated Polish lands from Bölling, should not be searched for in Germany, but rather in the south. If we want to mark out the route of human migrations, we should rather lead them from Germany through Czechia and Moravia to southern Poland, and further to the border of the south Polish uplands where the culture is not changed typologically. Additionally, this thesis can be confirmed by the fact that if there is no exchange of raw material between Poland and Germany, it is corroborated between Germany, Moravia and western Slovakia (Weniger 1987; Kozłowski 1992).

This study is only the next step in approximating the issue concerning the interregional contacts of the Magdalenians in Central Europe. The thesis presented is based on a limited number of sources, and it will be possible to confirm or verify them in the course of further research. The intensification of the search near the eastern borders of the range of Magdalenian Culture seems to be a particularly important issue.

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References


MADLENO PERIODAS
LENKIOJE IR KAIMYNINÊSE SRITYSE

Marta Połtowicz

Santrauka
Iš kitų Madleno paminklų išsiskiria Maszyckos urvas, kur aptiktą itin įvairios importinės žaliavos iš Peninų (85 km į pietus), Tatrų, Aukštutinės Silezijos (80 km į vakarus) kalnų, Dunojaus aukštupio (700 km į pietvakarius), Pietvakarių Vokietijos (660 km į vakarus). „Šokoladinis“ titnagas šią vietovę pasiekė iš šiaurės rytų (140 km), Dnestro titnagas – iš rytų (340 km), Volynės titnagas – iš rytų (350 km). Šis paminklas atskleidžia ankstvajį Madleno skverbimosi laikotarpį, kelią iš Prancūzijos per Vokietiją ir per Sudetų bei Karpatų šiaurinį pakraštį. Maždaug 1000 m. vėlesnis, trukęs nuo ankstyvojo diario pab. iki aleriodo, antrasis Madleno skverbimosi etapas sietinas su migracija iš Centrinės Europos, Moravijos per Moravijos vartus ir Karpatų perėjas.