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THE VISTULA IN PREHISTORIC TIMES

More than 50 years ago, Józef Kostrzewski, in a paper read during the 7th International Congress of Historians in Warsaw (1933, pp. 189f), published in an extended form with maps two years later, wrote very aptly (1935, p. 62): "As far as the Vistula is concerned, it could be assumed in advance that, flowing through the middle of the Polish lands, it played an important role in their history. Its waters spring from sources near the Moravian Gate, through which passes a convenient and important route linking Poland with Czechoslovakia and the Hungarian Lowland, a natural sally port for various immigrations from the south. The upper Vistula flows through the rich loess soils of Little Poland, while the lower course of the river passes through the fertile black earth lands of Kuyavia and Chełmno. The river banks are mostly dry and easily approached. Near the upper Vistula there are rich deposits of excellent flint, the river estuary is not far from the amber shores of Sambia, opposite rocky Scandinavia, which often sent its surplus and enterprising population overseas and which already Jordanis very aptly termed officina gentium." The above characterization includes the main elements of the Vistula’s role as a migratory and trade route and axis linking settlement points located in places most advantageous for a given group. These places varied depending on the socio-economic conditions of the society in question.

It omits to mention one of the most significant factors increasing the river's importance all through prehistoric times, the fact that it flows through areas rich in salt springs, i.e. containing a mineral prized then as high as gold. One must agree with Kostrzewski's overall opinion that "in fact, a closer examination of the role played by Poland's main river in the country's prehistory proves that it was a very significant role." This can be substantiated by analysing the functions fulfilled by the Vistula in various periods. It should also be remembered that at the time when the river was unpolluted it
served as a great reservoir of drinking water and was rich in freshwater fauna.

It is possible that some groups of primitive men lived in the Polish lands since very long ago. However, traces of this species were most probably totally erased during the so-called Cracovian glaciation (Mindel) which covered the whole country. It is quite probable that such groups were to be found here during the great interglacial period, so-called Mazovian (Mindel-Riss). At this time the network of northward flowing rivers was in the process of forming, and in the Little Poland Upland most of the rivers returned to their old valleys (S. Z. Różycki 1972, p. 144 ff). If this assumption is confirmed, then the remains discovered at sites along the Odra (possibly Clactonian) and Bug (W. Chmielewski 1975, p. 26) would suggest that similar finds may also be expected along the upper Vistula. Unfortunately, excavated in secondary deposits, they allow us to talk only hypothetically about the river’s role in population processes and about its exploitation.

The oldest unmistakable evidence of human groups existing in Poland is connected with the Central Polish glaciation (Riss). The location of one certain site in the Jaskinia Ciemna (Dark Cave) at Ojców, which can be dated as coming from this period, and several possible sites (including one very probably from this time at Piekary II, near Cracow) shows the undoubted significance of the Vistula in these millennia. The discovery of the bones of arctic animals (in the Jaskinia Ciemna, among others, the bones of reindeer, wolverine and cave bear) suggests hunter groups of the time existed in the cold environment. At the same time, lying in the foreland of the glaciation, they illustrate, in comparison with other European sites, pioneer settling of the cold zone. Culturally they are connected with the Acheulian tradition (W. Chmielewski 1975, p. 27 ff).

We have at our disposal a much more abundant collection of sources from the Middle Paleolithic, known also as the period of early hunting specialization, from the Eem interglacial period (more than 80,000 years ago) and from the early Würm glaciation (i.e., up till about 32000 B.C.). Hunters specialized in one species during a hunt and chose not only young animals but also mature individuals, sometimes very dangerous ones, such as mammoths, elephants, cave bears or wild horses. Single specimens were not scorned, as proved by a pit with mammoth bones discovered in an Eem peat-bog in the vicinity of Skaratki near Łowicz. At the same time, we see a progressive cultural differentiation. In Poland this process is illustrated by sites with features of the Levallois-Mousterian, Micoquian-Prądnikian and Preseleitian cultures. A large number of these sites have been partly excavated. The map (Fig. 1) shows that most were located in and near Cracow from where groups moved north (Skaratki) and probably up the Warta as far as Poznań.
Fig. 1. Archaeological sites from the Eem interglacial and early Würm glaciation in Poland and neighbouring countries. Acc. to W. Chmielewski (1975)

A — areas raised over 500 m above sea level; B — contour line 200 m above sea level; C — a site of the Levalloisian-Mousterian culture; D — a site of the Micoquian-Pradziadian culture; E — a site of the pre-Selejien culture; F — site of undetermined culture
Several tens of sites were excavated or recognized in Poland from the early millennia (from c. 38—12000 B.C.) of the Upper Paleolithic (i.e., Middle and Upper Würm). They are connected with remains belonging, among others, to the following cultures: Jerzmanowice (which I consider a cultural group), Aurignacian, east-Gravettian (together with the proto-Magdalenian and Kostienko-Willendorfian). Their location (Fig. 2) clearly indicates the role of two rivers, the Odra and the Vistula. The finds, among others in Cracow (Spadzista Street), of large amounts of great mammal bones (including those of mammoth, a fact linked in literature on the subject to shelters built using the bones of these animals) are proof that specialized hunting flourished. The situating of encampments near river gorges, the watering places of game, made mass hunting easier and also explains why numerous camps from this period can be found in Poland along two of our great rivers, the Odra and Vistula, in their upper regions (W. Chmielewski 1975, p. 156 ff). Settlement areas were limited by the borders of the glaciation. In the areas of Poland referred to here, especially in the Cracow region, favourable conditions existed for the use of caves, both as places for setting up camps and for mass hunting of cave bears, practised by the Jerzmanowice groups (37000—27000 B.C.). The glaciation also limited the use of the Vistula as a communication route to the north, since it reached down to about Plock. Besides links with territories lying to the south of the Carpathian Mountains, there were also important latitudinal routes, for instance between present-day Little Poland and the Ukraine.

As the glaciers retreated in the late glacial period (Oldest Dryas, Bølling, Older Dryas, Allerød, Younger Dryas), the time of the Final Paleolithic (from c. 11000—8300 B.C.), conditions arose for the extension of the ecumene and the movement of man’s ecosphere to the north. This led to the increased importance of the Vistula as a settlement and communication route. At this time the Vistula changed its course (e.g. in the region of Warsaw). Evidence of such changes taking place during the younger glacial period has been found in Całowanie near Otwock (R. Schild 1975, p. 196). The extent of the settlement changes which took place at the time can be seen when we compare two maps (Figs 3 and 4). They illustrate the Vistula’s growing role as a factor influencing settlement processes. Settlements were concentrated in its vicinity and the river itself facilitated the movement of human groups and served as a communication route allowing various minerals (especially salt and flint) to be distributed. In this period, beside the Upper Vistula regions, the middle part of the river plays a growing role in processes of culture formation and as a centre around which encampments were concentrated. This is especially evident in the Mazovian group of cultures which were originally concentrated in the region of Warsaw (Fig. 4), from where they diffused over nearly
Fig. 2. Archaeological sites from the Middle and Upper Würm in Poland and, connected with these, the more important sites from neighbouring countries. Acc. to W. Chmielewski (1973)

A — areas raised over 500 m above sea level; B — contour line 200 m above sea level; C — site of the Aurignacian culture; D — site of undetermined culture; E — site of the Jerzmanowice culture; F — site of the Sekcion culture; G — site of the East Gravettian culture (together with the proto-Magdalenian and Kosierki-Willendorfian cultures)
Fig. 3. Archaeological sites of complex with backed bladelets and Tarnovian scrapers, and so-called Magdalenian from the Late Paleolithic. Arrows show imported raw materials. Acc. to R. Schild (1975)
Fig. 4. The location of sites of the Mazovian cycle and related (Younger Dryas and the beginning of the Pre-Boreal phase).

Acc. to R. Schild (1975)

1-8 denote the various sizes of inventories or flint concentrations; 9 - cave sites; 10-13 various types of remains
Fig. 5. Chocolate flint, obsidian and jasper imports at archaeological sites of the Mazovian and related cycles. Acc. to R. Schild (1975).

Arrows denote only obsidian and jasper imports and do not show the export routes of these raw materials:

1 — lack of data (regarding items from Fig. 5); 2 — lack of chocolate flint; 3 — chocolate flint present but no quantitative data available; 4—6 — various amounts of flint chocolate artifacts; 7 — flint workshops.
Fig. 6. Distribution of mesolithic sites in Poland. Acc. to S. K. Kozłowski (1972)
A — sites along the lower stretch of the Middle Warta River; B — sites in Mazovia; C — Sites of the Nide Syncline
all of Poland and beyond its borders. From Little Poland (from the Świętokrzyskie Mountains) chocolate flint of excellent quality was brought in for tool production. In Świdry Wielkie, near Warsaw, a large hoard of this flint was discovered, additionally supporting the assumption that it was transported by river (J. Kostrzewski 1935, p. 62). The great importance of this route is illustrated in Fig. 5.

The large number of dunes along the river, forests rich in small game and fowl, an abundance of drinking water and water fauna were some of the reasons why the Vistula continued to play an important role in attracting various nomadic tribes to the area during the whole Mesolithic Age, i.e. till about the middle of the 5th millennium B.C. Then, too, it served as a route of communication. With reference to some of the cultures of this period, the main concentrations of nomadic groups continue to lie along the left bank of the Upper Vistula and right bank of the middle part of the river. This is clearly illustrated by the map (Fig. 6) and the one showing the distribution of cultures in the 7th millennium B.C. (Fig. 7), both drawn up by S.K. Kozłowski (1972).

Some of the Mesolithic tribes survived in Poland to at least the beginning of the Neolithic, dated as lasting from 4500—1800/1600 B.C. (without calibration). They were, however, displaced or absorbed by tribes of farmers, of which the oldest arrived here from the south. The character of their lifestyle caused them to settle down in areas with loess soil and Kuiavian blackearth. One of the main settlement axes for them was the Vistula. This refers both to the oldest (Engraved Linear Pottery culture) and youngest (Baden culture) representatives of the Danube cultures. The penetration of settlements connected with these cultures down the Vistula is very much in evidence (as it is in the case of the Odra). This is attested by the location of sites of, for instance, such cultures as the Engraved Linear Pottery (Fig. 8), Ströked Pottery, Lengyel and Tisza cultures (Fig. 9) and the Baden culture (Fig. 10). Elements of this last culture occurred in Kuiavia only fragmentarily (Z. Sochacki, 1970, p. 318). It is therefore not surprising that the oldest, fairly well examined “linear” settlements were situated in the Cracow region (eg. Olszanica, Nowa Huta). Evidence of salt production in the vicinity of Wieliczka is also connected with these cultures (A. Jodłowski 1976, p. 144). As in the case of other raw materials, salt from Wieliczka was distributed in various directions and undoubtedly here too the river route was resorted to.

The Vistula also played an important role in the life of tribes whose cultural features were at least partly formed in the Polish lands, or at least developed here. Here we include tribes of the Funnel Beaker culture (eg. J. Kowalczyk 1970, p. 144 ff). The focal point for settlements of its two groups, the eastern and southern, was the Vistula (Fig. 11). The beginnings of the striped flint mine in Krzemionki near Opatów are
Fig. 7. Archaeological cultures at the beginning of the 7th millennium B.C. in Poland and Europe. Acc. to S. K. Kozłowski (1972)
1 — Fosna culture; 2 — units of Maglemose tradition (G — Gudena, S — Svaerdborg, A — Agerød); 3 — Haltern culture;
4 — Duvensee culture (D — classical, F — Fien group); 5 — Komornica culture; 6 — Janislawice culture (Maksimonys group);
7 — Kunda culture (K — classical, L — Lithuanian group); 8 — units of Tardenois circle; 9 — range of Ancyus Lake
connected with this culture. One of its best known settlements is to be found in Bronocice, Kielce voiv., on the bank of the Nidzica, a left tributary of the Vistula. This five-phase extensive settlement (at one period fortified) existed between 3100 and 2200 B.C. It contributed numerous stationary and movable remains. One of the vessels found has engraved on it the oldest known in Europe image of a four-wheeled cart. We can suppose that such carts, pulled by oxen (S. Milisauskas, J. Kruk 1978, p. 48) were used for land transport along the Vistula. The river played a similar role in the diffusion of traits of the Globular Amorphae culture (eg. T. Wiślański 1970). From one of the centres, located in Kuyavia, peoples
Fig. 9. The spread of younger Danubian cultures in Poland and Europe. Acc. to J. Kamieńska and J. K. Kozłowski (1970)
1 — the culture of Stroked Pottery, Lengyel culture; 2 — Tisza culture

of this culture migrated in waves, mainly up the Vistula (Fig. 12). In the younger period of the Globular Amphorae culture’s existence practically the whole Vistula valley was the main settlement axis of its so-called Polish group. Northward, down the river, must have come elements of the Bell Beaker culture, which reached this area through the Moravian Gate in the final phase of the culture’s existence. Small groups of this people settled along the Odra River in Silesia and along the Upper Vistula in Little Poland (J. Kamieńska, A. Kulczycka-Leciejewiczowa 1970), from where splinter groups reached as far as Kuyavia (Fig. 13). The migration of this people is usually explained by their search for raw materials. If so, then the reason for their journeys down the Vistula was probably the need to gain information about possible raw materials available in Kuyavia. The River Vistula was utilized for travel in both directions by tribes of the Corded Ware culture (eg. J. Machnik 1970),
still in existence at the beginning of the Bronze Age. During the second phase of the Bronze Age some particularly important centres formed on the Upper Vistula (Fig. 14). The good ecological conditions of the Vistula region were also exploited by a people from the north-east, whose characteristic feature was a comb- and pit-marked pottery, and whose main occupation was hunting and fishing (E. Kempiesty 1970). They dwelt mostly on the dunes between the Vistula and Bug rivers (Fig. 15), though when exactly has yet been determined. Various groups of this people led a nomadic life in this region during practically the whole of the Neolithic.

Above I have mainly dealt with the Vistula's role in settlement processes of the later Stone Age. With these processes was linked of course the river's role as an axis facilitating the penetration of various human groups
Fig. 11. The spreading of the Funnel Beaker culture in Poland and Europe. Acc. to K. Jażdżewski after J. Kowalczyk (1970)
1 — western group; 2 — northern group; 3 — eastern group; 4 — southern group

and, with them, also of cultural influences. The uneven distribution of cultural resources meant that the Vistula could also serve as a route for those who wished to obtain various raw materials, or sought after artefacts. Along the Baltic, to the east of the Vistula, lay rich deposits of amber, because of its varied properties rightly known as the “gold of the north”. Amber artefacts are to be found among the remains of many Neolithic cultures in Poland. The distribution of some of these artefacts clearly shows that amber must also have been transported south down the Vistula. During the Neolithic Age flint continued to be the dominant raw material for tool and weapon production. If possible the best kinds of flint were used, but these were not everywhere available. There was a special concentration of flint between Ćmielów and Zawichost (eg. B. Balcer 1975, p. 147). There is much evidence that flint was exploited here, with mining as one of the methods of obtaining the stone (Fig. 16). The Vistula played an important role in the distribution of raw material, semi-finished
products and flint artefacts (Figs 17—18). It played a similar role in the distribution of black flint from the Bug river area (mainly spearheads). Such spearheads can be found practically along the whole Vistula, among other places also in Rzucewo (J. Kostrzewski 1935, p. 64, Fig. 4). Through the Moravian Gate obsidian was also imported in the Neolithic. The
Vistula also played a certain role in the transport of copper products (J. Kostrzewski 1835, p. 65, Fig. 6), and evidence of local foundries has been discovered in the river valley at settlements in Złota, near Sandomierz and Ćmielów, near Opatów (eg. W. Hensel 1973, p. 85). The first of these settlements was inhabited by tribes from the “Little Poland” group of the Lengyel culture and the second by people from the southern group of the Funnel Beaker culture. This is an indication that the Vistula served not only as a way to transmit knowledge of the metal itself but also knowledge of how to work it.

In the past there were differing opinions as to the Vistula’s function in the next prehistoric period of the Polish lands, i.e. in the Bronze Age. These varying opinions were partly the result of not taking into account that Eneolithic processes lasted longer in certain parts of Poland. They also came from mistaken convictions as to the genesis of certain early Bronze Age cultures and from the omission of the Trzciniec culture as an important factor in the process of formation of the “Lusatian” culture. Gaps in available source-material also played a role here. That is why Józef Kostrzewski (1935, p. 65) could write, though in the form of a hypothesis, that the importance of the Vistula decreased “as, instead of movements
of peoples from the south to the north, down the river and back, we have in this age an expansion of the pre-Lusatian and Lusatian culture from the west in an easterly direction.” However, most important was the fact that the Odra river zone was subject to other cultural configurations (archaeologically speaking) than the Vistula zone. Within the boundaries of these differing structures both rivers did not lose their earlier importance. Therefore, during Bronze Age I (c. 1800/1600–1400 B.C.) the Vistula was an axis binding Neolithic-type settlements and, at the same time, an axis of one of the peripheral groups of the Unětice culture (Fig. 19). We should add that in this period a special role in the settlement processes was played (eg. J. Machnik 1977) by regions lying mainly on the left side of the river, in the area along the Upper Vistula and in Kuiavia (Fig. 20).
map drawn up by Tadeusz Sulimirski of various Mediterranean artefacts clearly indicates the role of the river in this sphere about the middle of the second millennium B.C. (Fig. 21). Its role in the distribution of amber is also unquestionable. This is shown by amber finds in the Strzyżów group of the Corded Ware culture, which arose in the Final Neolithic but flourished in the Bronze Age I period. From the area where this culture occurred also come most of the black or dark gray spearheads of Volhynian Cretaceous flint (Fig. 22). Again, the Vistula valley served
as the main distribution route. Certain reservations have to be made here since, as I have already mentioned, there is no certainty as to the exact chronology and cultural affiliation of many artefacts made of flint from the River Bug area. It seems that these occurred in a wider chronological-cultural horizon, which included the Corded Ware culture both in the Neolithic and Early Bronze Age (eg. J. Głosik 1968, p. 54).

The Vistula was of considerable importance in the Bronze Age II period, especially in the formation process of "Polish" groups of the Trzciniec culture from various southern and local elements. The close contacts of tribes belonging to this culture with groups of the Mogila culture are evidenced, for instance, by imports of Koszider-type metal artefacts, which are mostly the products of Plin culture workshops. Through the territory of this culture ran one of the more important trade routes connecting the Hungarian-Transylvanian metallurgical centre with the Upper and Middle Vistula river basin (J. Miśkiewicz 1978, p. 195). These were, at the same time, the main settlement areas in Poland of the Trzciniec culture people (Fig. 23). Because of the probable participation of the Trzciniec complex in the crystallization of the Balto-Slavonic or Proto-Slavonic group of languages, we may assume that the Vistula played a large role in the processes of language integration taking place at this time in at least part of the Polish lands (c. 1400—1200 B.C.).
During the Bronze Age III period the archaeological "Lusatian" culture dominated a large part of our country. It lasted nearly 1,000 years (from c. 1250/1200 to 300 B.C.). In the Vistula valley, on both sides of the river, some local groups of this culture formed. In the Bronze Age III period the upper reaches of the river form the east boundary of the Upper Silesian-Little Poland group. The Konstantynów group settled along the Upper and Middle Vistula and the Kuiavia-Chelmno group in Kuiavia and the Chelmno land, while near its mouth the river served as a boundary between the Pomeranian and West-Balt cultural groups (eg. J. Kostrzewski, W. Chmielewski, K. Jażdżewski 1965, p. 147, Fig. 31). During Bronze Age IV (c. 1000—800 B.C.), together with the development of "Lusatian" settlements, the importance of the Vistula also increases (Fig. 24). The Upper Silesian-
Fig. 18. The spreading of Świecechów flint within the Funnel Beaker culture in Poland. Acc. to B. Balcer (1975)
Little Poland group, remains in the same region as in the earlier period, but the Konstantynów group, whose settlements were fairly dispersed, is superseded by four new ones: the Tarnobrzeg group in the vicinity of the town of Tarnobrzeg, the central Polish group between the Warta and Vistula rivers, the Mazovian-Podlasie group between the Vistula and Bug, and the north Mazovian group in the northern part of Mazovia. The Kuyavia-Chełmno group of tribes still inhabit the same area but the Lower Vistula is no longer the boundary for the "Lusatian" settlements, which are displaced by the West-Balt elements (the Sambian Barrows culture), forming their own Warmia and Mazury group (J. Dąbrowski 1979, Fig. 36). The distribution of these groups indicates that different stretches of the river served either a binding or limiting function for settlement processes.
Fig. 20. The more important Early Bronze Age sites in Poland. Acc. to J. Machnik (1977)
Fig. 21. The spreading of Mediterranean imports in the second half of the 2nd millennium B.C. through Central-Eastern and Eastern Europe and possible routes of diffusion acc. to T. Sulimirski. After W. Hensel (1974)

1 — faience products and early blue glass beads; 2 — swords and other products; 3 — local products with Mycenian ornamentations; 4 — Unetice imports in the Fatjanov culture

There are few changes in this arrangement right up to the Early Hallstatt period (Fig. 25) and even to the Late Hallstatt period (500—400 B.C.) when, on the foundations of the Vistula, and partly, the West and East Great Poland groups of the “Lusatian” culture, the Wejherowo-Krotoszyn culture formed, thus narrowing the area in which the “Lusatian” culture occurred in the Vistula valley (Fig. 26).

At this time the Vistula and its tributaries formed the backbone for various groups and served an important function in settlement processes, but the river seems to have lost some of its significance as a communication route connecting Poland with the south of Europe. It is interesting to note for instance that its participation in the distribution of Italian and east-Alpine imports is practically nonexistent. Their finds are concentrated solely in the Dunajec river valley (L. J. Łuka 1959, p. 84 and maps), which would indicate that they were brought into Poland through the Carpathian passes. The main route for these imports was the Odra and its tributaries. This, however, does not mean that the Vistula was not used at all for transporting raw materials and products. In the Late Bronze Age some Hungarian metal imports were brought down the Vistula as far as Pomerania, among
them bronze swords (J. Kostrzewski 1935, p. 66, Fig. 7). The lower stretch of the river served to transport amber to the south (Fig. 27). In the Late Hallstatt period certain bronze artefacts of the Kuyavia-Chelmno group found their way up the river (J. Kostrzewski 1935, pp. 67—68, Figs 8—9). The Vistula was also one of the routes along which Scythian-type products spread through Poland. They were brought about the middle of the 1st millennium B.C. from Hungary over the Carpathian passes, in part by bands of warriors. They also arrived here together with or through the intermediation of some Scyto-Thracian tribes, or even Thracians (Fig. 28), a possibility popular of late in literature on the subject (eg. M. Dušek 1979, passim), though also questioned by some (eg. Z. Bukowski 1979, passim). The nail-type earrings of the Scythian-culture circle, found in the Chelmno province, were brought there down the Vistula from the Ukraine, though probably not as imports but as an element of cultural diffusion (eg. W. Hensel 1973, p. 271, Fig. 243). All in all, the Vistula
Fig. 23. The range of the Trzciniec-Komarów-Sośnica cycle cultures with occurrence of local groups. After J. Miśkiewicz (1978)

- dispersed sites; 1 — the zone of the mixing of the Tumulus and Trzciniec cultures; 2 — Łubna group; 3 — Opatów groups; 4 — Lublin group; 5 — Mazovia-Podlasie group; 6 — Kiev group; 7 — Równo group

was one of the three main routes bringing Scythian elements to Poland (Z. Bukowski 1979, p. 202 f).

Basic changes in the cultural scene in Poland occurred during the early and middle La Tène period (c. 400—150 B.C.). In the case of the Vistula valley the remains of the "Lusatian" culture survived up to about 300 B.C. Basically the whole river was dominated by the Krotoszyn-Wejherowo culture (with the Cloche Graves culture group). Wejherowo-Krotoszyn elements in this part of Poland moved up the river (Fig. 29) and, as in the rest of the country, this was due less to migrations than to cultural diffusion. A typical Vistula-type cultural group is the Cloche Graves group, which developed along both sides of the river from the Dunajec to the Drwęca rivers. It is rightly suggested that its initial centre was in Mazovia from where it spread, among other places, up the Vistula (T. Węgrzynowicz 1979, p. 171 and Fig. 91).
During the early La Tène period (after 300 B.C.) small groups of Celts began to move over the Kłodzko Pass into central Silesia. A second wave of invaders came through the Moravian Gate in about the 2nd c. A.D., taking over certain parts of Upper Silesia and Little Poland. The Celts were greatly outnumbered by the local population and in western Little Poland had, by the beginning of our era, fused with the earlier settlers. However, they left their mark not only on the culture of those regions which they conquered, but also on those areas to which their power did not extend. Some Celtic products must have reached the Lower Vistula areas already by the 3rd and 2nd c. B.C. (Fig. 30), but the river's significance increased most in the last century B.C. (Fig. 31) and in the
Fig. 25. The range of cultures and cultural groups in the Older Hallstatt period (Hallstatt C) in Poland and neighbouring countries. Acc. to J. Dąbrowski and Z. Rajewski (1979) Lusatian culture (1—9, 11—16): 1 — West-Pomerania group; 2 — Kaszuby group; 3 — Masuria-Warmia group; 4 — Górze group; 5 — Chełmno group; 6 — Western Great Poland group; 7 — Eastern Great Poland group; 8 — Middle Poland group; 9 — Mazovia-Podlase group; 11 — Middle Silesia group (with painted pottery); 12 — Głubczyce group; 13 — Upper Silesia-Little Poland group; 14 — Tarnobrzeg group; 15 — Ulków group; 16 — Slovakian group; 10 — Bialowie group; 17 — Wysocko culture; 18 — Holihrdy culture

beginning of our era. Probably this was the road taken by small groups of Celts who reached Kuiavia, where an important settlement centre arose with Przeworsk and La Tène features. On the Upper Vistula, near Cracow, were to be found manufacturing centres which utilized the achievements of this culture in their products. There were even places where Celtic coins were minted. The Vistula was therefore, at this time, an important artery along which not only imports but also new cultural achievements and elements of Celtic beliefs were brought into the country. For a large part of Poland the river also became the main axis of changes which took place at the beginning of our era, a time known as the period of Roman influences, which lasted up to the 5th/6th c. A.D.
Fig. 26. The range of cultures and cultural groups in the Younger Hallstatt period (Hallstatt D) in Poland and neighbouring countries. Acc. to J. Dąbrowski and Z. Rajewski (1979) Lusatian culture (1–4, 6–12): 1—West-Pomerania group; 2—Górzycy group; 3—Chelmno group; 4—Eastern Great Poland group; 5—Białowice culture; 6—Middle Poland group; 7—Głubczyce group; 8—Upper Silesia-Little Poland group; 9—Tarnobrzeg group; 10—Mazovia-Podlasie group; 11—Slovakian group; 12—Middle Poland group; 13—West-Baltic Barrows culture; 14—Cloche Graves culture; 15—Milohrady culture; 16—Wysocko culture; 17—Jastorf culture; 18—Wejherowo-Krotoszyn culture

It is also striking that precisely in the period when Celtic influences were on the rise in Poland, great centres of iron metallurgy arose in the Vistula valley, in the Świętokrzyskie Mountains area (Fig. 32), near Warsaw and in southern Great Poland. The Vistula must have played an important role in the distribution of this metal. It was probably the main route for transporting pottery. A large centre of pottery manufacture was situated in Cracow. Development of agriculture, animal breeding, the crafts and trade, processes in which the Vistula's role was significant, caused that in some groups of the Przeworsk-Oksywie culture, for which the Vistula was a kind of binding agent, socio-political changes were
Fig. 27. An attempted reconstruction of the more important amber routes running south from the southern Baltic coast in the "Lusatian" period, acc. to T. Malinowski. The arrows denote routes with a more detailed documentation. After W. Hensel (1973)
accelerated and conditions even arose for the formation of higher organizational structures rather like proto-states. Two centres in particular developed in this direction, one on the Upper Vistula and the other in Kuyavia. In the first of these regions, which centred around Cracow, there most probably formed, during the “Roman” period, one of the most important proto-state organizations (or else the beginnings of a proto-state), which fact greatly influenced Poland’s whole later development.

In the amber trade with the Roman provinces, of prime importance was the route running through Calisia-Kuyavia-the Lower Vistula to Sambia. The communication route which ran along the right bank of the Vistula
kept close to the river for longer. It connected the mouth of the river with the Black Sea (Pont) and was open nearly up to the beginning of the early Middle Ages (Fig. 33). The Germanic tribes of Goths and Gepids probably used this road when they moved from the north to the south-east through Poland in the 2nd and 3rd c. B.C. These routes also served various purposes in the other direction. Along them different products from the Roman provinces were brought to Poland. In the middle of the 5th c., through passes in the Carpathians, the Huns made their way from Hungary into Little Poland. Their main centre of power was to be found here, generally speaking, in the vicinity of Cracow. The grave of the local governor of a Hun ruler was discovered in Jakuszowice near Pińczów. We have, so far, few finds from the end of the Roman period. However, a map showing their distribution (J. Kostrzewski, W. Chmielewski, K. Jażdżewski 1965, p. 286) suggests that also at this time, the Vistula played
Fig. 30. Older imports and imitations of La Tène culture artefacts in Poland. Acc. to Z. Woźniak (1970)

- finds of older Celtic coins; c — the range of the La Tène culture in the 3rd—2nd c. B.C.

an important role as an axis for settlement processes and as a communication route.

In spite of the still incomplete excavation in Poland of sites from the very beginning of the early Middle Ages (from the 5th/6th—7th c. A.D.), the maps which have already been drawn up indicate that the areas lying along the Upper Vistula and the region of Kuyavia had not lost their significance as centres of settlement concentration. Favourable ecologic conditions and a growing population increased the Vistula’s importance in the next centuries, with the first culminating point occurring in the 8th and 9th c. At least two large organisms, each incorporating one and later several tribes, developed along the river: the Vistula River tribes (Wisłanie) and the Lake Gopło tribes (Goplanie). Apart from the communication function it served for
early Polish tribes, the Vistula possibly also served as a route for transmitting in the 7th c. (or rather in the 8th c.) cultural influences from the Hungarian Lowland to Balt Prussia (P. Urbańczyk 1979, p. 127).

At the beginning of the early Middle Ages the Vistula was an axis binding and dispersing settlements in a north-south direction. However, the latitudinal arrangement of its tributaries was also important, as it allowed for a more equal distribution of the settlement network horizontally. On the one hand, these rivers were the lines of the network and, on the other, together with elements of the geographic environment (such as forests, risings and marshalands), they formed settlement regions and microregions. This could already be seen in prehistoric times, but became even clearer at the beginning of the early Middle Ages. Conditions were favourable for the rise of
various tribal groups. From these groups two higher organizations were formed, those of the Vistula and Lake Gopło tribes. Their formation was the result of favourable environmental conditions, cultural traditions and the transfer of people and goods from other regions, a process facilitated by the Vistula River. It is interesting to note that in different centuries of prehistoric times, in both these areas we find similar cultural features and discover that the Vistula served to transmit influences either from the south to Kuiavia, or else from Kuiavia to Little Poland. This was especially clear during the period of Celtic domination. Let us now imagine that these contacts, among other things, caused the following probable situation in the 2nd half of the 9th c. — the forming of a kind of alliance between the Vistula River and Lake Gopło tribes, which was to serve as a counter-balance for the agreement between the Great Moravia and Polan tribes. This ended in defeat for the first two groups as Moravia took over the land of the Vistula river tribes, which at that time was one of the richest in the Slavonic world, and the Polan people conquered the Lake Gopło tribes, thus creating the basis for the formation of the Polish state. Unfortunately we do not know whether the hoard of iron coins, discovered in Cracow in 1979, and weighing several tons, which in those
times meant enormous riches, belonged to the Vistula river tribes or else comes from the period when they had already been conquered by the peoples of Great Moravia. Nevertheless, its discovery is one more argument supporting the hypothesis (eg. W. Hensel 1974, p. 293) that the main state centre of the Vistula river tribes was not in Wislica but in Cracow.

The above outline tells us that both prehistoric peoples and early Polish tribes at the beginning of the early Middle Ages skilfully utilized the ecologic attributes of the Vistula valley and its advantages as a communication and trade route. Having differing socio-economic structures, they chose those parts of the Vistula river valley which facilitated development. It is therefore often possible to observe how starting from lower positions they attained a higher level. The transfer of various cultural goods in
both directions along the river served an important culture-forming function. We can therefore talk of the great role played by the Vistula in prehistoric Poland and in the early Middle Ages, in developing socio-economic, political and cultural relations. Its significance also went beyond the borders of the Polish lands as it was one of the arteries connecting southern Scandinavia with central and southern Europe.

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