The results of recent research concerning the late La Tène and Roman period in East Pomerania will be presented in this article. They have given a fuller view of the changes occurring in the settlement of Pomerania as well as in the social and economic development.

Investigation comprised the area between the rivers Wieprza and Gwda in the West, Pasłęka and Drwęca in the East, Wisła (Vistula) and Noteć in the South. The chronological limits of the mentioned research include the last century before our era up to the 5th century. In order to figure out the dynamics of settlement transformations of the development of social and economic relations, the period has been divided into 5 phases, according to the chronological analysis applied to particular products of material culture.

The principal basis of research has been the rich archaeological material gathered from some 800 places of East Pomerania; in those we have found over 2,500 associated burial finds originating from about 600 cemeteries, 25 hoards and 55 remains of settlements.

The following direct material data were helpful to the determining of settlement transformations: remains of villages with their workshops, roads, traces of the exploitation of natural riches such as mines, wells, cultivated fields etc. As this kind of information is not very abundantly represented in the material data hitherto obtained, indirect records have also to be considered within a large extent. Therefore cemeteries, placed mostly in the vicinity of settlements in topographically nearly identical places and hoards certifying the presence of humans active within a close neighbourhood, have been used to investigation. The results of research concerning the distribution of cemeteries helped

* This article is a summing up of the results contained in my doctor's dissertation entitled: Osadnictwo ludności kultury grobów jamowych na Pomorzu Wschodnim [Settlement Ascribed to the Culture of Pit Graves in East Pomerania], Poznań 1961 (not published).
to establish the geographical situation of settlement groups. Since the lack of adequate evidence does not allow any certainty as to whether a single cemetery covered the necessities of one settlement only, we have assumed the principle of one cemetery corresponding to a settlement centre which may have consisted of two (settlement + cemetery) or several settlement points.

The problem of any continuity linking the earlier settlers belonging to Pomeranian culture with those of a late La Tène period is very difficult on account of chronological questions still not sufficiently cleared. There is, however no doubt that in settlement transformations occurring in East Pomerania, beginning with a late La Tène period we may observe the inclination to occupying physiographic units not always coinciding with thickly populated areas of the time of the Pomeranian culture. The Baltic coast, especially the Westshoreland, the Vistula valley and the Lakeland of Chelmno belonged — at the time of the Pomeranian culture and in the late La Tène and Roman period as well — to densely inhabited areas. On the other hand the remaining Baltic Lakeland, characteristic at the time of Pomeranian culture for its dense population — shows a very thin population in the late La Tène period and the first phase of the Roman period. It is only during the great settlement expansion, occurring between 150 and 250 that people settle more densely here. However, during the regression of settlement appearing in the 4th and 5th century, the range of inhabited territory diminished and was limited to its starting shape, namely that of the late La Tène period. Also the Kraina Lakeland, very densely inhabited at the time of the Pomeranian culture, presented during all the period under consideration a very faintly populated area, showing all the characteristics of a peripheral land, backward in respect to social and economic development.

In the late La Tène period there appear in East Pomerania settlement groups varying in respect to the dimension of inhabited areas and the density of population. The Westshoreland, known to be a separate settlement unit, was then one of the most intensely inhabited regions. It included low lying territories situated along the Baltic Sea coast, separated from the Lakeland in the south by a distinct territorial stage. The coast line are here narrow sand bars separating shallow lakes from the sea. The east part of the plain falls into small islets divided by large marshy ancient valleys. This area displays in general fertile podsolic soils, also brown and peat soils. When examining the distribution of archaeological sites we may conjecture that the estuaries of the short and rapid rivers of the Baltic Shoreland were not easily accessible. It is true that archaeological sites kept clearly to the rivers' course, but
never reached the coast itself. Obviously, outside the areas of river mouths, many settlement traces are found also on the very coast, in spots convenient to settlement of those times.

On the Westshoreland four settlement groups are clearly distinct. Each of them occupied a large area, exceeding 1,000 sq. km. Settlement points were distributed quite regularly within these groups, namely at a distance of some 5 to 10 km. from each other. The mean population density of those times amounted to 0.7—1.1 man per square kilometer. In the first and second phase of the Roman period occur slight territorial displacements of whole groups, as well as of particular settlement points, and a growing density of the latter in the second phase of the Roman period. It is only in the third phase of this period that more visible changes may be observed in the development of these groups. They consisted in the first place in a considerable decrease of archaeological sites and in a trend to occupy a limited territory, namely the northern part of the Westshoreland. Owing to these changes the former settlement groups do not appear so distinctly. In the fourth phase of the Roman period the tendency to a decrease of settlement points is still stronger.

Territorial displacement of concentrations occurring in the Westshoreland during many centuries indicate no doubt the character of economic activities, especially of agriculture. On account of an unfavourable shaping of the coast line, i.e. a lack of natural harbours and larger rivers constituting further trading routes, there were no advantageous conditions to the forming of large trading centres, such as were formed for instance at the mouth of the Vistula. We find the biggest number of imports in the area of a concentration situated between the rivers Wieprza and Grabowa. The reason of such a state of things was the appearance here of a centre of “ducal” authority that persisted within the area of this concentration from the end of the first century up to the end of the Roman period, while the class of wealthy population having some social importance was not numerous. This fact was no doubt connected among others with the growing importance and leading economic role of the whole of the concentration. The remaining settlement concentrations of the Westshoreland do not considerably differ in respect to a specific economic character or development features.

The formation and further development of settlement concentrations of the Eastshoreland, ant at the Vistula’s estuary was quite different. The Eastshoreland is also a quite different morphological type of land. It surrounds the deeply indented Gulf of Gdańsk, the south part of which is filled by the delta of the Vistula. There are no lakes along the coast and the two long narrow sand bars do not close the inner parts of the Gulf. Further to the east eminent moraine islets approach the
coast in wavy planes, forming steep edges declining towards the sea (the Elbląg elevation), the islets are broken by the Braniewo Lowland. A distinct problem are the alterations of hydrographic conditions within the Vistula’s delta. In those distant times the eastern branch of the river was Vistula Elbląska, while the delta spread on a much smaller area. The open bay — Zalew Wiślany — was linked to the Lake Drużno, reaching far out to the south of Elbląg, which enjoyed then a direct access to the sea. Probably the Nogat estuary was situated a little higher than Malbork. A vast lagoon lake spread south-east from Gdańsk, reaching as far as today’s Pruszcz. This situation throws a different light on the development and economic possibilities of particular settlement concentrations occurring here in the late La Tène period. Contrary to the concentrations of the Westshoreland they form here only small groups composed of several archaeological sites, covering territories not exceeding 100 sq. km., whereas the mean density of population was here about 2,3—3 persons for one square km.

Moreover the concentrations of the Westshoreland did not undergo displacements of territory, but were known to dwell in the same place for long periods of time. Their development was by no means uniform, but had a different aspect within every group. Thus the concentrations lying on the Vistula’s western bank (on the lagoon lake’s shore where the Wierzyca joins the Vistula) kept an important longlasting position of lively trading centres. Quite different was the development of the group dwelling in the area that was then the mouth of the Nogat. Very early, which would be the late La Tène period it was distinguished as an important centre of distant reaching trade, but in the half of the 3rd century it loses its importance and clearly declines. Imports and coins, formerly brought in large quantities to this territory, cease to flow in and a great number of settlement points disappears. On the other hand, the Elbląg Elevation had very scanty settlement in the last century and up to the end of the 1st century and its economic position was quite inferior. However, towards the half of the 2nd century occurs a sudden increase in its development, manifested by a very dense inhabiting of a large area and the establishing of large settlements with lively far outreaching trade. Its further development and permanent importance was undoubtedly due to the new system of trading routes appearing in the 3rd century. This concentration which was one of the largest trading centres along the Baltic South Coast in the late Roman period, is no doubt the precursor of the later Truso. The Nizina Braniewska (Braniewo Lowland) was still later covered with dense settlement. In the third phase of the Roman period a new settlement centre displaying characteristic features of the above discussed Eastshoreland concentra-
tions, is formed in the neighbourhood of Braniewo; this was preceded in
the second phase of the Roman period by a scattered settlement, the
sites of which were placed at a distance of some 10—15 km. from each
other, approximately along the river Pasłęk. In the settlements con-
centrated in this area a higher level of welfare than elsewhere, including
the whole of the society and the existence of a well situated class of po-
pulation has been certified. However, no “ducal” graves have been found
here.

We come finally to the last area, densely settled up to the end of the
Roman period, which is the Chełmno Lakeland. It belongs to the success-
ive landscape zone of Pomerania, stretching to the south of the Baltic
Shoreland — to the Lakeland zone, divided by the Vistula valley. These
are gently mountaineous and undulating areas, much varied in landscape
and characteristic for including a great number of lakes. As this terri-
tory contains the sources of most of the rivers belonging to the Baltic
Shoreland, it is easily accessible along their course. With the exception
of the Chełmno Lakeland and some small enclaves, the Lakelands have
a prevailing quantity of light, sandy, most unfertile soil. On the other
hand, the wide and in places marshy Vistula valley abounds in fertile
alluvial soils.

The Chełmno Lakeland was in the period under consideration a set-
tlement unit having a particular economic and social character and its
development assumed also a different aspect. Besides the settlement
points scattered over all this area, two concentrations are specially
distinct in the first phase of the Roman period, these are a small one
lying near Grudziądz, and a bigger one somewhat exceeding 100 sq. km.
densely populated, situated in the Vistula valley in the neighbourhood
of Chełmno. They are not only very early engaged in far reaching trade
along the amber route, but also in the late La Tène period iron smelting,
founded on the exploitation of local ores becomes here important. In
the first phase of the Roman period appears a centre of “ducal” author-
ity within the settlement centre around Grudziądz. However, no con-
tinuation similar to that noted in the Westshoreland can here be trac-
ed. The reason of decrease of a rising institution of stronger authori-
ty may have been the development of a trading centre in the neighbour-
hood of Chełmno. In the second phase of the Roman period this
concentration becomes scattered, as proved by research carried out here.
It would be difficult to state whether this fact can be connected with
the diminished importance of the amber route, or whether it was due
to other factors, since in the third phase a considerable density of po-
pulation can be observed here. This is followed by a slight shifting
northwards of the population, which is bound to remain within the same
space as far as the end of the Roman period. It is not considered impossible that the scattering of the Chelmno concentration in the second phase of the Roman period was due to its expansion over the left bank of the Vistula, followed by the appearance of a new settlement, rival of the one situated around Chelmno, lying in the neighbourhood of Świcie and tending to master the control over the Vistula crossing, existing here long before. However, the further development of the Chelmno concentration indicates that it may have lost its control over the crossing only for a short time.

Although the Lakelands Kaszuby and Ilawa are distinct settlement units, they possess rather similar settlement features. Both the areas are only weakly populated in the late La Tène period. Archaeological sites are scattered and appear at a great distance, some 10—20 km. from each other. Although the density of population of the Kaszuby Lakeland increases in the first and second phase of the Roman period, no larger settlement concentrations are formed here. In the third phase of the Roman period settlement points become very scarce and in the fourth they nearly disappear as indicated by data hitherto obtained.

On the other hand, in the Ilawa Lakeland the number of archaeological sites, as well as the inflow of Roman imports, increases only in the second phase of the Roman period, in connection with the growing importance of the settlement concentration situated on the Elbląg plateau. It seems also that owing to lively trade contacts and economic connections with the Elbląg group, also the Ilawa Lakeland’s activity did not diminish till the end of the Roman period. It may have been a sort of economic background for the densely populated Elbląg concentration situated on a very small area, but being an important trading centre in the south part of the Baltic Basin. There is a striking convergence in the economic character of the Ilawa Lakeland and the northern part of the Kaszuby Lakeland. Both of them display a lack of settlement concentrations, but their inhabitants participate in far out reaching trade through the intermediary of other groups; their economic standing is also distinctly in accordance with the period of flourish and importance of the given trading centres. Attention should also be drawn to the fact that “chieftain's” graves appear here only in the period of more intense settlement and their equipment is far poorer than that of other graves of a similar type.

The area most weakly populated during the whole period under consideration is the Lakeland of Kraina. The total scattering of settlement points and their frequent shifting is striking. Coins and imports penetrate only occasionally and this takes place only at the time of most lively trading contacts with the Roman Empire. Imports are found only
in the wealthiest graves, even beads so often met and largely wide-
spread, are here an exception. The principle data so far acquired seem
to indicate that this was a peripheral area, economically backward; the
disposition of archaeological sites in small groups (2—3 sites together),
lying at a considerable distance from each other (15—20 km.) suggests
very primitive farming methods, which required much larger areas
of exploitation to provide a living to human groups. It is therefore
obvious that in the late La Tène period in East Pomerania settlement
centres represented socio-economic organization units. In some cases
a number of smaller groups was involved into the system of a superior
organization unit. A certain convergence between distinguished types
of settlement concentrations and their social and economic character
had been observed. Generally densely populated settlements covering
only small areas and not liable to territorial displacement, concentrate
on the Wisła and near her mouth on the Shoreland, assuming the charac-
ter of trading centres. On the contrary, thinly populated concentrations
covering large areas, displacing often their abodes and occurring on the
Westshoreland, are not much engaged in trade. Moreover, in the territo-
rories more densely settled only from the half of the 2nd century — in
the Lakeland’s northern part — no trend to the appearing of compact
settlement concentrations has been observed. Settlement was here scat-
tered, although sometimes rather dense. It is also a striking fact to be
observed here that a considerable density of settlements happens to
accord with periods of lively economic activity within the neighbouring
trading centres. Although it had already been stressed in conceptions
hitherto formed that the intensity of settling in East Pomerania is not
equal for the whole period under consideration, the fact used to be con-
sidered due to ethnical displacements. 15 It is a question here of well
known facts evidencing that the area situated on the Vistula’s western
bank was more densely populated during the last century before our
era and up to the first. It may be also understood that in the 2nd cen-
tury there occurs an equalization of intensity in the settling of both sides
of the Vistula, persisting till the half of the 3rd century. After that
the main gravity point of settlement is shifted to the Wisła’s right bank.
Attention has, however, so far not been drawn to the economic aspect
of these phenomena. Meanwhile, recent research has managed to state
that in the initial phase, i.e. in the 1st century and up to the half of
the 2nd, the trading centres situated in the western part of the Vistula
delta played a more important part in the economic standing of Pome-
rania and still more in its far reaching trading contacts. Along with
their growing development, an always more intense occupation of lands
of the Kaszuby Lakeland, which were till now economically not suffi-
Map 1. Settlement in the late La Tène period. (Des. A. Wawrzyński)
Map. 2. Settlement in the second phase of the Roman period 150—250. (Des. A. Wawrzyński)

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ciently exploited, can be observed. On the other hand, beginning with
the 3rd century, there occurs a rapid development of the trading cen-
tres on the Elbląg elevation and nearly at the same time the Lakeland
of Ilawa becomes intensely settled. Simultaneously the role of con-
centrations having a trading character and situated on the left bank of the
Vistula seems to diminish and the area of the Kaszuby Lakeland becomes
empty. The change of intensity in the settlement of East Pomerania
should rather be considered as a result of changes occurring in the
contemporary economic situation.

As concerns the settlements themselves, they do not mostly display,
as was told in literature,\textsuperscript{16} traces of sudden destruction, but rather
symptoms of settlers abandoning dwelling places after having carried
away everything that could have any value. A second characteristic
feature stated in research carried out on the settlements of East Pome-
rania, are traces of repeated raising buildings on the same spot.\textsuperscript{17} Such
archaeological data are explained in the literature\textsuperscript{18} by periodical aban-
donning and new settling within the same places and are connected with
the system of soil cultivation, namely leaving the fields that became
bairren after long use and laying them fallow for a number of years.
However, in the light of archaeological data hereto known, it is not
possible to state either how many times a given settlement might have
been rebuilt (i.e. the number of settlement levels) or how long each of
them may have lasted; nothing can either be said about the succession
of these settlements, whether the buildings were repaired after deterio-
ration caused by long use, or did they stand empty for longer periods.
We cannot say for certain whether particular settlement levels were
placed on top of each other after longer intervals, which would support
the thesis of transferable settlements existing in Northern Europe in
the Roman period. As concerns East Pomerania we possess, true enough,
premises admitting such a supposition (a different but regular planning
of settlement buildings detectable in particular settlement levels), this
would, however, not be sufficient evidence for the proving of such a
thesis.

Not all of the settlements from that time bear traces of repeated
building in the same place, other data bearing witness that these settle-
ments may have been important centres in the social and economic life
of a determined area.\textsuperscript{19} This allows to presume that in the late La Tène
and Roman period two types of settlement existed in East Pomerania.
One of them would be “multiphase settlements”, prevailing in number,
the specific feature of which are traces of repeated building, therefore
several settlement levels. A second type are “one phase settlements”,
less frequent in Pomerania and displaying only one settlement level.
It should be stressed that obtained data do not allow to consider them as settlements belonging to societies different in respect to their ethnical character. Settlements used to be most often located on not very high sandy eminences, lying directly on the shores of lakes or on higher terraces of large rivers (such as the Vistula). On the other hand, settlements placed on the banks of small rivers or streams keep mostly to their tall bank or higher spots along swampy valleys. Small eminences in the area of the Vistula’s delta and in the marshy regions of the Westshoreland were also inhabited.

An examination of the topography of these settlements shows that they were composed of many dwellings similar to villages with many roads, built according to a relatively regular plan with streets crossing at right angles. The material so far possessed does not evidence settlements having only one farming complex. The settlements used to cover an area of 0,5—4 ha. It has also been stated that at least one of them used to be strengthened by a specific sort of earth-and-timber construction shaped as a rampart 1m. wide, the core of which was a structure made of poles filled in with plaited twigs and clay. Traces of such reinforcement have been discovered at Nicponie, district Kwidzyń. The interior of settlements used to be divided into two parts, one of which contained dwelling houses and probably farm buildings, eventually enclosures raised within a pole structure. It seems very likely that the system of building applied especially on the Vistula’s right bank was that of stringpiece linked to a framework, which was the building’s basis, supporting the walls made out of shingles. The second part can be determined as a “production plant,” containing all sorts of workshops, such as baking ovens, drying houses used also as stores for keeping corn, pottery furnaces and bloomery pits connected with the production of iron. The materials so far obtained do not evidence any departure from the above mentioned rule of a division of settlements into two distinct parts. Contrary to a regularly planned disposition of buildings in the settlement’s dwelling part, the objects designed to different branches of production were placed very much “at will”.

Research so far carried out has not supplied direct data enabling the determination of economic bases maintaining the population inhabiting East Pomerania in the period under consideration. An analysis of the geographical environment allows to suppose that stock breeding was important in this territory’s husbandry. A certain progress in farming is, however, proved here by the appearance of rotation handmills in East Pomerania during the 1st century; these became even widespread in the following centuries, which is well evidenced by recent excava-
tions. The scattering of cemeteries used in those times throws a curious light on the level of contemporary economy: in densely inhabited regions cemeteries occur at a distance of 2.5—3 km. from one another and in other areas some 5—7 km. often lie between. Their disposition is determined by the dimension of the exploited area, sufficient for the keeping of the human group dwelling in its limits. According to the data supplied by the cemeteries their number may have been from 60 to 125 persons. The various density of the cemeteries’ placing is among others a proof of unequal levels and a different character of the economy reached by particular settlement concentrations.

Iron smelting was based in the late La Tène period essentially on the exploitation of local iron bog ore. In the Roman period, however, this exploitation seems to be inhibited. The reason may lie in the fact of a considerable development of mining and smelting of iron ore in South Poland. It should be stressed that most of Pomerania’s trading contacts are at the same time directed also southwards.

We are somewhat better informed about another branch of contemporary economics, i.e. about far outreaching trading contacts. The examination of the quantity of imported objects indicates that the trading relations between Pomerania and the Roman Empire starting in the 1st century were rather scarce at the beginning with the participation of only those groups of East Pomerania’s population that inhabited settlements lying directly along the trading routes. Imported objects are concentrated exclusively on the Vistula banks and the Shoreland; the north-eastern lands of Pomerania did not take part in the above mentioned trade. Beginning with the middle of the 1st century the importance of distant trading contacts greatly increases reaching its climax in the 2nd ad the beginning of the 3rd century. Imports penetrate then into the land’s interior, with minor objects widely spreading throughout the contemporary society. In the 4th century there is a regress in the trading contacts with the Roman Empire, lasting as far as the end of the Roman period. On the basis of an analysis of the quantity and time of the inflow of particular goods coming from the area of the Roman Empire to Pomerania, it seems very probable that certain goods, e.g. beads and definite types of bronze vessels used to be imported on a large scale. In the light of what is said above the importance of coins used as currency to conclude trading transactions with representants of the Roman Empire seems very clearly outlined.

Social conditions of that time evidence considerable differentiation in the degrees of wealth and social position within singular human groups as well as between particular groups. These are more clearly distinct in the degree of development and progress of social conditions
characteristic for particular settlements. It is a striking fact here that in areas where class differentiation was very distinct and the general standard of living rather low, there appears a ruling social organization in the form of “ducal” authority, manifested in the occurring of the so called “ducal” graves. Such a state of affairs has been confirmed all along the Westshoreland and in the Lakeland of Chelmno; however, in the latter case, the development of trading contacts and the general increase of living standards, causes the centre of “ducal” authority which had occurred in Rządż near Grudziądz — to dissolve an fall. On the contrary, in the areas where a large number of well situated people with a majority of meanly wealthy individuals existed from the very beginning, no appearance of a “ducal” authority could be confirmed. The fact that this concerns mainly trading centres allows to presume that development of social conditions took on here a different form, favouring the shaping of a numerous class of wealthy population, keeping in hand the organization and mediation of trade.

What results from the above deliberations is the conclusion that in the period discussed large settlement groups representing territorial, social and economic units, were distinct in East Pomerania; their development assumed, however, a different course in the field of economics as well as in social and political standing. They did not, on the other hand, form distinct groups from the point of view of archaeological culture. In this respect East Pomerania was at the decline of antiquity a uniform area. It is true that certain differences may be observed in archaeological culture, they are, however, not sufficiently sharp to make them understood as separate groups and are by no means identical with particular settlements.

I endeavoured to consider ethnic problems from the angle of a possible distinction of settlement complexes different in that respect; the present stage of research does not, however, allow to grasp such differences. It has only been possible to observe that in the period which had probably seen the invasion of Goths, no visible increase of settlement points occurred in East Pomerania; on the contrary, the number of archaeological sites is fairly equal in the late La Tène and the first phase of the Roman period. This would support the hypothesis that the Scandinavian invasion of that time was not especially numerous. On the other hand, the distinct increase in the number of archaeological sites starting no sooner than towards the middle of the 2nd century should rather be explained by contemporary economic and demographic conditions.
NOTES

1 The late La Tène period — last century before our era 1st phase of the Roman period — 1—150; IIInd phase of the Roman period — 150—250; IIIrd phase of the Roman period — 250—400 (?); IVth phase of the Roman period — 400 (?)—500.

2 One half at least of these settlements has been more or less subjected to excavation research.

3 Most certain data in this respect came from the area of the Vistula delta, where a settlement and a cemetery from the same phase of the Roman period and lying no farther than 0.5—1.5 km. from each other have been discovered in several cases (map 2). This would obviously not prove whether one cemetery would correspond to a single settlement. This question cannot be solved only on the basis of sites occurring near to one another, for it may turn out that there were quite different connections, all the more so that there is a great disproportion in number between the well known cemeteries and settlements; this problem should rather be studied within the framework of research in more determined geographical regions, drawing here attention to the obtaining of definite premises, such as for instance finding identical ceramics in a settlement and a cemetery.


5 The density of population could only be tested in respect to certain regions and to the late La Tène period, on account of a lack of data, this would therefore be the starting point of our study.

6 In the neighbourhood of Sławné two “ducal” graves have been discovered, an older in Postomin (“Monatsblätter der Pommerschen Gesellschaft für Geschichte und Altertumskunde”, Vol. XXXII, 1938, p. 33—34) and a more recent one coming from the 4th century in Białecin (“Baltische Studien”, Vol. XXXVI NF, 1934, p. 333—334 and Vol. XLII NF, 1940, p. 24—51).


9 For instance Myślecin and Czechowo, Elbląg district.


11 A centre of iron smelting appears then in Ołtoczyn, Toruń district. Also a blacksmith’s grave in Rządz, Grudziądz district proves the role and importance of blacksmith’s handicraft (Cf. “Zeitschrift für Ethnologie”, Vol. XII, 1884, p. 466.


13 J. N. Sadowski, Drogi handlowe Greków i Rzymian przez dorzecza Odry, Wisły, Dniepru i Niemna do wybrzeży Morza Bałtyckiego [Greek and Roman Trading Routes Leading through the Basin of Odra, Vistula, Dniepr and Niemen up to the Baltic Sea Coats], “Pamiętnik PAU Wydzały: Filologiczny i Historyczno-

14 K. Godlewski, "Studia nad stosunkami społecznymi w okresach późnołacińskim i rzymskim w dorzeczu Odrzy i Wisty [Studies on Social Conditions in the Late La Tène and Roman Period in the Basins of the Odra and Vistula], Warszawa 1960, p. 92.


16 H. J. Eggert, Der römische Import in freien Germanien, Hamburg 1951, p. 27. These differences are well evidenced in two settlements of Wielkopolska, namely in Stopanowo, where no sudden destruction could be traced and only small fragments of pottery were found (K. Przewoźna, Osada i cmentarzysko z okresu późnołacińskiego i rzymskiego w Stopanowie, pow. Szamotuły [Settlement and Cemetery Dating from the late La Tène and Roman Period in Stopanowo, Szamotuły District], "Fontes Archaeologici Posnanienses", Vol. V, 1955, p. 60—140). On the contrary, in a settlement discovered in Poznań traces of fire were very distinct, a number of objects found within the cottage allowed to determine not only the exact chronology but also the inhabitants' workmanship (K. Chmielewski, K. Przewoźna, J. Żak, Osada z okresu „rzymskiego” w Poznaniu przy ul. Krańcowa 77 [A Settlement from the Roman Period Discovered in Poznań, 77, Krańcowa Street], "Zeszyty Naukowe UAM, Archeologia—Etnografia", Vol. I, 1958, p. 35—96).

17 For instance in the settlement of Jastarnia, Puck district (K. Przewoźna, Osada z 1 w. p.n.e./I w. n.e. z Jastarni pow. Puck [Settlement from the Last Century before our Era — 1st Century from Jastarnia], "Rocznik Gdańskie", Vol. XXXIII, Skowarcz, Gdańsk district (R. Schindler, Germanische Siedlungsfunde am Danziger Höhenrand, "Gothiscandza", 1940, No. 2, p. 44—45).


19 For instance Kleszczewko, Gdańsk district. The rank of this settlement is proved not only by the existence of a big iron smelting centre but also by the system of house building (Cf. R. Schindler, Germanische Siedlungsfunde..., p. 40) strongly contrasting with the far more primitive in this respect dwellings, half-built into the earth and dating also from the 1st century, from the Lakeland of Kraina (Smukała Dolna, Bydgoszcz district); a further example is the well known settlement of Myślecin, where a big settlement, tightly and regularly built has been found; its characteristic is a number of settlement levels reaching from the late La Tène period up to the early Middle Ages; these levels have, however, a very different character reminding the levels of early mediaevalburgs (M. Ebert, Truso, Berlin 1926, p. 22—27). The settlement of Bystrzec, Kwidzyń district may also be ranged among the above. The latter is an exceptional finding among Pomeranian discoveries, having a building with 90 sq. m. surface, containing two rooms joined by a huge stove shaped something like a shallow stone well (W. Heym, Ein Beitrag zum Hausbau während der römischen Kaiserzeit im Gebiet der unteren Weichsel, "Prussia", Vol. XXIX, 1931, p. 177 fol.).

20 a) Mała Słońca, Tczew district; Mózgowo, Susz district; Pruszcz, Gdańsk district; Smukała Dolna, Bydgoszcz district; Szwedy, Kwidzyń district; b) Brok—
wo, Kwidzyn district; Gronowo, Elbląg district; Klecice, Sztum district; c) Bytów (the same district); Dąbie, Bytów district; Elbląg (the same district); Gąbin, Lębork district; Borzęty, Malbork district; Gnojewo, Lichnowy, Malbork district; d) Jastarnia, Puck district; Żarnowiec, Wejherowo district.

21 For instance in the settlement discovered in Jastarnia, Puck district, in Myślecin and Bytów, Elbląg district.

22 The area of the settlement in Jastarnia was 0.5 ha.; the settlement in Smukala Dolina was larger, but not exceeding an area of 1.0 ha. On the other hand the area of settlements in Myślecin, Tychów, Sławnów district and Pruszcz, Gdańsk district, amounted to 3—4 ha.


25 Hearths disposed in halfcirculars in the settlements Kleszczewko, Gdańsk district, and Myślecin, Elbląg district, are an exception.


27 A rotation handmill was found in Mózgowo within the stone casing of a grave dated to the beginning of the 2nd century (W. Heym, Totenhäuser der Goten in Mosgau, Kr. Rosenberg, "Prussia", Vol. XXXIII, 1939, p. 179—191). During recent research carried out in Gdańsk by the Archaeological Museum further handmill stones have been found in the stone casings of stoves in settlements of the Roman period — Pruszcz, Gdańsk district, and Mała Słońca, Tczew district.

28 For instance in the settlement concentration of the Lakeland Chełmno six late La Tène sites have been found over an area of 120 sq. km. When reckoning the capacity of human groups burying their dead in one cemetery (a mean of 60 people) we obtain a density of population amounting to 3 persons per 1 sq. km. A somewhat lower number has been computed for the concentration in the neighbourhood of Malbork, where only 5 sites occur over an area of 150 sq. km., therefore not more than 2.3 persons per sq. km. would have lived there.

29 In the Westshoreland settlement concentrations are characteristic for a great scattering of their settlement points.

30 The dimensions of a human group burying their dead within one cemetery has been computed by comparing the number of burials within cemeteries with the period of their using (K. Godłowski, Studia nad stosunkami społecznymi w okresach późnołacińskim i rzymskim w dorzeczu Odry i Wisły [Studies on Social Conditions in the late La Tène and Roman Period in the Basins of the Odra and Vistula], Warszawa—Wrocław 1960, p. 57 fol.). The mean length of human life for that period has been considered 25 years on the basis of anthropological examination (T. Dzierżykraw-Rogalski, Délka života obyvatel polska v mladší dobe kámenne a v raném středověků, "Zpráva o cinnosti antropologicie společnosti", Vol. VII, 1955, p. 7—8). It would seem, however, that in order to obtain more objective data concerning the dimensions of human groups and further the density of population in the first centuries it would be necessary to certify
whether for later periods fully documented in archaeological records, there occurs regularity between the dimension of a human group computed on the basis of data provided by its cemetery and the virtual dimensions of the group using a given burial ground. Could such a regularity be stated it might be helpful, after applying adequate corrections, to the computing of previous corresponding relations. The records so far availed rather indicate that groups inhabiting one settlement used to be more numerous than are the figures resulting from a calculation obtained on the basis of investigating cemeteries. Similar observations have also been gathered in relation to cemeteries and settlements of Lusatian culture.

In Kleszczewko, Gdańsk district, several bloomery pits and stone pavements adapted to iron smelting discovered there prove the existence of a large centre of iron smelting (Cf. Schindler, Germanische Siedlungsfunde..., p. 51). Bloomery pits have also been found in the settlement of Ołtoczyn, Toruń district, and in a number of other places.


A lively discussion concerning the role of Roman coins in the life of the inhabitants of Polish lands, remarkable in the recent years, has been summed up in the work of S. Tabczyński, Z dziejów pieniądza na ziemiach polskich w okresie lateńskim i rzymskim [The History of Money in Polish Lands in the La Tène and Roman Period], “Archeologia Polski”, Vol. II, 1958, p. 33–35.