

² Z. Krzak, *Stanowisko neolityczne w Grójcu, w pow. opatowskim* [Neolithische Fundstelle in Grójec, Kreis Opatów], "Rocznik Muzeum Świętokrzyskiego", B. 4, 1967, S. 73 f. Derselbe, *Wyniki sandażowych wykopalisk w osadzie neolitycznej w Piaskach Ćmielowskich, woj. Tarnobrzeg* [Die Ergebnisse von Sondierungsausgrabungen in einer neolithischen Siedlung in Piaski Ćmielowskie, Wojewodschaft Tarnobrzeg], "Sprawozdania Archeologiczne", B. XXVIII, 1976, S. 109 f.

³ Z. Krzak, *Osada neolityczna w Podgrodziu, pow. Opatów* [Die neolithische Siedlung in Podgrodzie, Kreis Opatów], "Rocznik Muzeum Świętokrzyskiego", B. III, 1966, S. 59 f. Derselbe, *Sprawozdanie z wykopalisk na górze Gawroniec-Pałyga w Ćmielowie, pow. Opatów, w 1961 roku* [Bericht über die Ausgrabungen auf dem Berg Gawroniec-Pałyga 1961 in Ćmielów, Kreis Opatów], "Sprawozdania Archeologiczne", B. XV, 1963, S. 65 f. Derselbe, *Stanowisko neolityczne...*, S. 73 f. Derselbe, *Wyniki...*, S. 109 f. Z. Podkowińska, *Osada neolityczna na Górze Gawroniec w Ćmielowie, pow. Opatów* [Die neolithische Siedlung auf dem Berg Gawroniec in Ćmielów, Kreis Opatów], "Wiadomości Archeologiczne", B. XVII, Heft 2—3, 1950, S. 119 f. Derselbe, *Village énéolithique de Ćmielów, district Opatów, voivodie de Kielce*, "Archaeologia Polona", B. IV, 1962, S. 98 f.

⁴ J. Bąbel, *Kult topora w neolicie ziem polskich* [Der Beilkult im Neolithikum auf dem Gebiet Polens], "Wiadomości Archeologiczne", B. XLV, Heft 1, 1980, S. 27 f.

⁵ M. Mączkowska, I. Kupczyk, *Sprawozdanie z badań wykopaliskowych przeprowadzonych w 1971 r. na stanowisku 1 w Garbinie, pow. braniewski* [Bericht über die Ausgrabungsforschungen, die 1971 auf der Fundstelle 1 in Garbina Kreis Braniewo, durchgeführt wurden], "Komunikaty Mazursko-Warmińskie", Nr. 1, 1972, S. 201 f. M. Mączkowska, *Sprawozdanie z badań wykopaliskowych przeprowadzonych w 1972 r. na stanowisku 1 w Garbinie, pow. braniewski* [Bericht über die Ausgrabungsforschungen, die 1972 auf der Fundstelle 1 in Garbina, Kreis Braniewo, durchgeführt wurden], "Komunikaty Mazursko-Warmińskie", Nr. 3, 1973, S. 303 f.

Janusz Ostoja-Zagórski, *Przemiany osadnicze, demograficzne i gospodarcze w okresie halsztackim na Pomorzu* [Settlement, Demographic and Economic Changes in the Hallstatt Period in Pomerania], Wrocław 1982, Ossolineum, pp. 219.

Although the need for developing the interest of archeologists in other fields than the *traditional* one of typological and chronological classification has been postulated for a long time, not many serious works, basic to prehistoric studies and concerned with economic and settlement structures of ancient societies, have appeared. J. Ostoja-Zagórski is one of the Polish researchers who is consistent in his work in this field. His latest work is devoted to the Lusatian and Pomeranian cultures from the Hallstatt period in Pomerania. In it the author tries to recreate the basic data on the subject of settlement, its conditions, economy, and the size of the population inhabiting that area. As the aim of this work was

the dynamic approach, the author did not keep exactly to the chronological framework given in the title but, in fact, also included the problems of the Lusatian culture from the late Bronze Age and of the phase of the Pomeranian culture from the older pre-Roman period (La Tène). The source of the studies were 3469 settlement points with greater certainty dated as coming from the epoch with which the author is concerned.

The results of studies presented in J. Ostoja-Zagórski's work are of great importance not only in adding to our knowledge of prehistoric Pomerania but may also help towards explaining the nature and causes of fundamental settlement and cultural changes which can be observed at this time in large areas of Europe. We must stress that the territory being analyzed by J. Ostoja-Zagórski has not been too well excavated. An additional difficulty stems from the fact that several basic problems concerning source materials from this age have not yet been convincingly solved. Despite these shortcomings of the sources, the author's erudition and methodical approach to subject has enabled him to present a fairly complete, cohesive, and logical picture of issues under discussion.

The main part of J. Ostoja-Zagórski's work begins with an extensive description of the geographic environment synthesized on the basis of detailed studies from the various natural sciences. The next chapter (pp. 56—119) contains an analysis of settlement conditions (carried further in his later studies). Five such regions (settlement macroregions) were singled out for the Lusatian culture (Map 1), covering an area of about 11,000 km², and four for the Pomeranian culture (about 16,000 km²). It can be noticed here that two zones with fairly numerous Lusatian culture settlement traces (by the Lower Parsęta and between the Upper Rega and Upper Drawa) have not been distinguished as separate settlement macroregions.

As a result of a keen analysis of the distribution of settlement points from the different chronological phases (Maps 2—4), J. Ostoja-Zagórski determined that the settlement process occurred, in general, in valleys and on the border of valleys, and that settlements were established on the borderline of various soil types (Cf. Maps 5 and 6). However, in the Hallstatt period, especially in the Pomeranian culture, one may see a certain decrease of settlement points situated on flood-lands and in areas of peat-bog soils, more settlements in higher regions of valleys and on podsol soils. There is also a characteristic, gradual increase of Lusatian culture settlement concentrations shown most clearly by the rise of fortified settlements in Ha C and then dispersion of settlements again in the Pomeranian culture. However, the differences, in the situating of settlement points between the Lusatian and Pomeranian cultures are

small, on the verge of statistical insignificance and this raises doubts whether such slight changes can serve as sufficient evidence of essential transformations, caused to a great extent by changes in climate (an opinion expressed by the author), whether such a shift in settlement points did not result mainly from the fact that territories of the Lusatian and Pomeranian culture ecumenes do not coincide. Settlements of the Pomeranian culture are mainly concentrated in the eastern part of Pomerania, where there had previously been very few, in areas characterized by a slightly different morphology. It would, therefore, seem desirable to check the author's thesis, which is based on a macro-scale analysis, through detailed analyses and studies of selected settlement microregions.

The next chapter (pp. 114—133) is devoted to a demographic analysis. Its aim was to obtain approximate data on the size of the population groups inhabiting Pomerania and on the density of population. J. Ostoja-Zagórski made several preliminary assumptions. One was the thesis that the size of the Lusatian culture population did not vary essentially during the period being discussed. A further assumption was that a Pomerania culture cemetery was, on average, in use for $2/3$ of the chronological phase to which it belonged. The number of settlement complexes existing in each of the phases was also determined by doubling the number of known cemeteries and not by an analysis of settlement traces. Additional doubts about the validity of this method stem from the fact that the graves of the two cultures were not constructed in the same way. The Lusatian culture graves were ordinary cinerary ones while those of the Pomeranian culture were in stone chests. As a result, the Pomeranian culture cemeteries are more easily discovered and, therefore, the assumption of identical coefficients for both cultures, when reconstructing the actual number of cemeteries existing in the past, does not seem a correct one.

The author's next assumption seems better founded. He believes that the population density in regions of settlement concentration in the Hallstatt period was similar to that of Great Poland and could number about 3 people per km^2 . Thus we may accept as being approximately correct the author's calculations of the maximum number of inhabitants in the Lusatian culture settlement macroregions (about 30,000 people) and those of the early Pomeranian culture (about 46,000), though the latter figure may be overestimated by the just mentioned (incorrect) preliminary assumptions. More doubts arise when one considers the author's statements concerning the size of human groups in single settlement complexes because of his method of determining the number of these complexes.

The author's these on the subject of economy (pp. 134—182) are, unlike the demographic ones, basically uncontroversial. After comparing

and analyzing direct and indirect data which could be helpful in reconstructing various aspects of economic activity (agriculture, gathering, hunting, fishing, "drafts", exchange), J. Ostoja-Zagórski presented a synthesis of the economic structure. It was most probably characterized by the fact that food was obtained in a variety of ways ("gardening," corn-growing, animal breeding, hunting, gathering, fishing) and that, generally speaking, there was stability in the techniques used, and in the relative importance of the various spheres of activity during the whole period. J. Ostoja-Zagórski assumes that about the time of Hallstatt D, changes in climate and the rise of ground and surface waters, causing the bogging of large areas of intensively cultivated flood-land in the valleys, forced people to move to new ecologically undevastated regions. Another reason may have been the extensive exploitation of lands in those areas where the greatest number of settlements were concentrated. As a result, not only, for instance, slight changes took place in the structure of the crops cultivated but the large economic communities fell apart. The extended family became the basis of the new settlement and economic system as this created more chances of adaptation to the difficult ecologic conditions and gave greater mobility to the settlement groups. The above basic thesis of this work is of great importance not only for studies of Polish prehistory. It may explain the main cause of the deep settlement and cultural changes which occurred at this time in Pomerania and in many other areas of Europe towards the end of the Hallstatt period and at the beginning of the La Tène period. The author's hypothesis seems to account for these changes in a logical and rational way. Certain doubts arise only from the fact that one of his main direct premises on which he based his thesis is the minimal change in frequency of settlement location in flood-land zones of valleys.

The last chapter of the book is entitled "Conclusion" (pp. 183—192) and here the author goes over the main points of his work in brief. The whole is supplemented by a bibliography, a summary in English, and maps.

Evaluating J. Ostoja-Zagórski's work in general, one may say that it contains a very interesting, though at times controversial, approach to problems which are rarely taken up in the work of archeologists, though of great importance for the elucidation of historical processes in prehistoric times. Many of the author's statements, especially those analyzing and recreating settlement processes and their geographic and economic conditions, are undisputable. His work also contains an interesting attempt at working out a methodical and interpretational model for studies of settlement, economic and demographic processes on the basis of rather meagre sources. However, not all the author's proposals can be accepted *in toto*. His conclusions concerning demographic processes are especially controversial as they depend on the accuracy of the author's initial assumptions and

these are disputable. It seems, however, that J. Ostoja-Zagórski's effort should induce archeologists to consider the problem of improving research methods so as to achieve more reliable estimates of population size on the basis of archeological data.

Zenon Woźniak

Jürgen Kunow, *Der römische Import in der Germania libera bis zu den Markomannenkriegen. Studien zu Bronze- und Glasgefäßen*,. Göttinger Schriften zur Vor- und Frühgeschichte, herausgegeben von Klaus Raddatz, Band 21, Neumünster 1983, 208 S. mit 24 Abbildungen, 28 Karten und 10 Tafeln.

Mit der ab dem 19. Jh. wachsenden Zahl der Funde von Erzeugnissen römischer Herkunft in den nördlich der Grenzen des Römischen Reiches gelegenen Ländern, nahm auch das Interesse an Altertümern dieser Art zu¹. Dieses Interesse wuchs noch mehr nach dem Erscheinen der Monographie von H. J. Eggers² im Jahre 1951, der in einem systematisch geordneten Katalog fast das ganze bisher verstreute Material zusammentrug und die Typologie und die Rahmenchronologie von Erzeugnissen des römischen Handwerks, die als industrielle Importe bezeichnet werden, darstellte. Vier Jahre später veröffentlichte er auch die Grundlagen der absoluten Chronologie³. Der Forscher kündigte auch eine Interpretation des gesammelten Materials in Form einer gesonderten Monographie über die Probleme des römisch-germanischen Handels an, die jedoch nie erschienen ist.

Diese Aufgabe übernahm der junge Forscher J. Kunow in Form einer Doktordissertation, die im Marburg an der Lahn beendet wurde, jedoch mit einer erheblichen thematischen und chronologischen Beschränkung. Er befaßte sich nämlich nur mit Bronze- und Glasgefäßen aus der Zeit bis zu den Markomannenkriegen; dies umfaßt den Großteil der entdeckten Bronzegefäße, jedoch in kleinerem Umfang die Glasgefäße.

Da die Zahl der Neufunde inzwischen beträchtlich gestiegen ist, hat der Autor mit der Ergänzung des Katalogs von H. J. Eggers begonnen. Dieser supplementäre Katalog (S. 129—150) zählt 304 Fundkomplexe, die etwa 500 Gefäße umfassen; einen Teil davon stellen frühere, von H. J. Eggers nicht berücksichtigte Funde. Die zahlenmäßig größte Zunahme, auch hinsichtlich der Proportionen des Zuwachses gegenüber dem ehemaligen Quellenbestand, kann die Tschechoslowakei (Nr. 153—279) vorweisen. Beträchtlich vergrößert hat sich auch die Zahl der Neufunde in den beiden deutschen Staaten: BRD (Nr. 32—101) und DDR (Nr. 102—146). Für Polen hat J. Kunow 25 neue Komplexe (Nr. 280—304) notiert. Dies ist weniger,