

THE STONE IMPLEMENTS OF AUSTRALIA.

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INTRODUCTION.

The study of Australian stone implements has advanced steadily during the past twenty years. At present, however, the position has been reached in which there exist a certain amount of confusion regarding typology and nomenclature and a lack of knowledge among those interested, both here and abroad, of the full range of Australian implement types and their variations. This work is a systematic study intended to clarify these aspects of the subject as far as possible; in addition, the literature on each group of implements is given, and lines are indicated along which the study of Australian stone implements can be developed. The work is not a monograph embodying all known data about Australian stone implements; it is a summary catalogue in which the sources are given where such information is to be found.

Classification.—Previous classifications are too limited in scope for modern application. Most of them are based upon collections from one locality or from restricted areas. Smyth's (1878, I, p. 358) eleven divisions are based upon function. Kenyon and Stirling (1901), and Kenyon and Mahony (1914), based their more comprehensive classifications upon methods of manufacture, function and form, but they considered function to be the most satisfactory basis were it known for all implements. Following Spencer (1899) they believed that types in any area depend largely, if not wholly, upon the kind of stone available, and upon this hypothesis they attempted to explain the variations that exist in Australian implements throughout the continent. Their classification, however, ignores not only various fracturing and abrading processes but also such factors as tradition and requirement, and the unwieldy method of reference by letters and numbers adopted by Kenyon and Stirling militated against the general acceptance of their system. It was, however, slightly modified and followed by Spencer (1901, 1914, 1922) and by Spencer and Gillen (1904, 1927). Roth's (1904) nine divisions for his Queensland material are based on function. Fürer-Haimendorff (1936) in a comparative study followed the major classification of European archaeologists, allied with established Australian terminology. McCarthy (1940-1943) employed a number of factors, embracing function, shaping processes, form, transverse-section, and aboriginal names as criteria of classification of the Australian implements as a whole.

In addition, there have appeared a number of classifications of the trimmed coroid and knapped implements in which considerable interest has been displayed in south-east Australia. Etheridge and Whitelegge (1907) adopted function, Miss Hall (1928) used form and function, and Towle (1935) adopted function, in their classifications of New South Wales material; Towle, it might be noted, divided the implements that he described into conventionalized and unconventionalized groups. Kenyon (1927) classified the geometrical microliths according to their form, which is the most satisfactory method for this group. Hale and Tindale (1930), Tindale and Maegraith (1931), and Tindale (1937) introduced aboriginal names for specialized types of implements and cultures. Howchin (1934) emphasized function, form and material as classificatory factors in his description of the implements from the Adelaide Plains, South Australia. Campbell and Noone (1943), McCarthy (1943), and Noone (1943) all adopted a similar method of classification, employing shaping processes, function and form as their criteria in detailed analyses of local collections. Cooper (1943) followed this method in his description of the large trimmed implements of South Australia.

The classification adopted in the present study conforms with the systems followed in other countries as far as is necessary. It is recognized that processes, material,

tradition, requirement, convergence, substitution, diffusion, and other considerations all play their part in the development of stone implement types and industries. Within the major groups an attempt has been made to classify the implements in the simplest and most illustrative manner, by bringing into service where required such criteria as processes, function, form, size, transverse-section, and aboriginal names to determine the different kinds or species of implements. The employment of one principle of classification, such as function, is unsatisfactory; our aim is to provide simple reference to the known range of types, and this is best accomplished by a system in which each type has a single entry and is not shown in a number of sections because it has several functions. Nor is it possible to divide the whole of the Australian implements into two major groups, prehistoric and recent, because as yet we do not know to which category many of the implements belong.

The difficulty has been encountered of defining limits to the kinds of implements because of the numerous gradations which exist among varieties. This problem can only be overcome when more comprehensive data are available for the whole of the continent or for the district in which a type or group occurs, and the same remarks apply to the question of relationships between types. We are of opinion, however, that the splitting of groups into types is a matter for very careful consideration; an excessive differentiation is not advisable and can be avoided by the adoption of a comparatively broad view of characteristics instead of a narrow interpretation of them.

It has been our aim to classify the known Australian implements in such a way that new types will fall into their correct place, otherwise new subdivisions should be created for them. In other words, the system adopted is a flexible one. This classification is essentially typological, one in which archaeological divisions or cultures are not directly involved, and they have not, therefore, been discussed. On the other hand, it is designed for the analysis of industries, cultures and mixed collections, whether from surface sites or archaeological deposits, and is suitable for both field and cabinet purposes. At the same time, by the segregation of the kinds of implements, the classification is intended to reveal or to indicate relationships and differences, the evolution and specialization of processes and forms, and local variations.

Goodwin (1935, p. 334) summarized the position in South Africa regarding classification as follows: "Briefly, Goodwin and Lowe were categorists. Acting on the advice of Haddon, they sought help from a new classification which would entail the association of groups of artefacts into cultures, then the relation of these cultures into a time-sequence (based on stratification) and finally the correlation of this with the geological background and with African and European time-sequences in general. Heese and van Hoepen led the morphological school. The former was mainly interested in technology and the variations of implement forms represented in various cultures and in different materials. The latter was keen upon classifying implements on a purely technological basis. Hewitt and Stapleton headed the same school of stratification and association within a deposit, while Hardy and Jansen each represented the localized field-worker, who makes it his business to obtain the maximum of scientific knowledge from a small regional field." The situation in Australia at the present time could be described in much the same terms. It is apparent, however, that a commonly accepted typological classification must form the basis of cultural and ethnographical classifications, and these are possible only when full archaeological and geological data are available.

It is also important that common standards be followed in descriptive work. The description of an implement should present a clear word-picture of the morphological characters, and it should be accompanied where necessary by an adequate illustration. Statistical methods of analysis may be found necessary to define specialized types in precise terms by a consideration of the range, mean, modal form and standard deviation of (a) the length, width, thickness and weight, and (b) the angles of the striking-platform of both nuclei and knapped pieces, and of the working faces; such data will also assist in determining the relationship between the material and the knapping technique.