

page 13. A map (Figure 1) allows the reader to see where various specimens came from but it is not a "Map of polar bear range" as it is titled. Verbal explanations of taxonomic measurements are usually subject to various interpretations, and Manning's use of skull diagrams to show how he has taken the measurements is commendable, for it enables other workers to replicate them almost exactly. The 10 statistical tables are easy to use, and Brenda Carter's vivid cover sketch of a polar bear is an attractive precursor to the text.

It is sometimes said that the best taxonomist is the most experienced one. Manning has had a great deal of experience as can be seen from his previous work on caribou, red-backed voles and other arctic mammals. Besides this experience he has a fine feeling for statistics. In this case his care in choosing appropriate tests (e.g. co-variance analysis and Duncan's multiple range tests to discern geographical differences in skull shape) and his lucid, cautious manner of interpreting the results add much to the weight of the study. A work of this kind has been long overdue, and through it, Manning has made a substantial contribution to arctic biology.

C. R. Harington

**HISTORIC SETTLEMENT PATTERNS IN THE NUSHAGAK RIVER REGION, ALASKA.** BY JAMES W. VANSTONE. *Fieldiana: Anthropology, Volume 61. Chicago: Field Museum of Natural History, 1970. 9¼ x 6½ inches, 149 pages. \$7.00.*

This report is the fifth of a series of six in which VanStone has projected coverage of the Eskimo people of the Nushagak River region of southwestern Alaska. This particular monograph has as its stated aim the description of historic archaeological sites in the region, with a reconstruction of changing settlement patterns of the nineteenth and twentieth centuries, and the assessment of factors responsible for the change.

The introductory chapter provides the geographic, ethnic, and historical background, and includes a brief discussion of some approaches to settlement pattern studies. The refreshing aspect of the present work is that it takes concepts originally developed for the analysis of prehistoric material and makes use of them with actual historical documentation of factors thought to influence patterns of settlement. Although perhaps a minor point, I nevertheless do find myself somewhat uncomfortable as the author forces the Nushagak people into the classificatory

framework devised by Richard Beardsley and others, terming the southwestern Alaskan natives "central based wandering" people, which serves to place them in a category with, for instance, nomadic horticulturalist-hunters who eke out an oftentimes precarious existence in the Amazon basin. But the Alaskans are people of a mature transhumance who at least in recent times have dispersed for a portion of the year to stable fishing and hunting camps which frequently consist of permanent dwellings, which may be owned by families and transmitted by inheritance, and to which they regularly travel by boat or dog sled transporting a very substantial kit. The Beardsley classification, which is oriented towards the evolution of agriculturally based civilizations, simply does not contain a category suitable for sedentary hunters and fishermen of the sort found in southwestern Alaska. Other frameworks — also used by the author in the present work to parallel that of Beardsley — seem much more satisfactory for his purposes. In the same chapter there is apparent confusion when the term *yupik* is used to denote a dialect of the Western Eskimo language; *yupik* is, in fact, a designator of that same language itself, of which the dialect found around Bristol Bay has been termed *yuk*.

There follow six chapters that present the descriptions of 61 sites that were located by boat and aerial survey and by interviews of native informants, during five field seasons that began in 1964. Three of these sites were excavated by the author, and an additional site was tested by Helge Larsen in 1948; the results represent all the excavated information available, with additional physical information derived from surface examination only. Historical documents referring to the area, including the vital statistics records of the Alaska Russian Church and some of the records of the Russian-American Company, were surveyed. Thus each site is described physically (commonly with the aid of a sketch map) and an attempt is made to date its occupation variously by means of such excavation data as exist, by informant contact, and by historical documentation. Population estimates are also made.

The final chapter presents summary, analysis, and conclusions. In brief, nine settlements scattered throughout the drainage system are known from documents to have been occupied before the middle of the nineteenth century. This number is concluded to have increased dramatically near the turn of the present century; in fact, no fewer than 57 sites are at least tentatively concluded to have been occupied for some portion of the period

between 1880 and 1920. By 1950 the occupied sites were again reduced, this time to seven, with all of them concentrated towards the sea coast.

The twentieth-century decline in number of settlements is attributed to the development of the salmon industry in Bristol Bay, and to a substantial population loss from epidemic disease, especially influenza. The proliferation of settlements inferred for the late nineteenth century is explained tentatively as the result of some largely unspecified influence of increasing commercialism on the lower Nushagak, together with a decline in the integrative effects of the *kashgee* — the men's house and ceremonial centre of south-western Alaskan Eskimos — thought to result from the encroachment of Christianity.

The late decline in settlements is a major conclusion of the study and its demonstration is convincing; but I feel that the data presented for the nineteenth century do not necessarily serve to confirm the earlier apparent dramatic increase in total number of settlements. There are two reasons for this.

First, all sites located that were not covered by trees (only one was covered) were presumed from that circumstance to date from no earlier than the nineteenth century. Yet across Bristol Bay on the Alaska Peninsula, it has been found that forest cover has encroached consistently only upon those sites dating from before about A.D. 1000. The single Nushagak site that was tested by Larsen (Dil 26) yielded a number of artifacts; all of them were aboriginal and he concluded that the site was prehistoric. An additional seven or eight sites were found by VanStone not to have been occupied during the memory of informants, and not to be mentioned in historical documents; that is, there is no evidence of record that they are not prehistoric. Yet on the basis of surface appearance, these unrecorded sites, including that tested by Larsen, are concluded to be probably of the nineteenth century, and all but two of them are tentatively dated so that a portion of their occupation falls between 1880 and 1920.

Second, a majority of the rest of the sites that appear as a proliferation between 1880 and 1920 are dated on the basis of infor-

nants' memory alone; they do not appear in historical documents. Most of them lack remains of obvious *kashgees* and are relatively small. Only seven of them, all on Nushagak Bay itself, are confidently attributed to seasonal commercial fishing operations; the others presumably reflect an aboriginal pattern of residence. Thus they may well be the remains of seasonal but permanently established fishing and hunting camps. Although the author himself suggests that many of these sites are seasonal, he does not conclude from this that a longer memory span on the part of his informants might lead both to the extension farther into the past of the dates attributed to some of those now known, and to the identification of additional, earlier seasonal sites. As it stands, therefore, much of the apparent proliferation of settlements late in the nineteenth century could result simply from the length of informants' memories. Significantly, major areal centres of population, as opposed to quantity of counted sites, did not fluctuate much until well into the twentieth century.

I therefore find that I am not completely convinced that the report does exactly what it aims to do; that is, some of the sites described may be prehistoric rather than historic, and some historic sites may not be adequately dated, and so it remains possible that nineteenth century settlement patterns did not change exactly as the author has concluded.

Nevertheless what is probably the major point of the monograph — that dealing with twentieth-century change — is completely convincing: shifts in settlement occurred in response to commercial conditions on Bristol Bay, aggravated by imported disease. And the book as a whole is a stimulating and innovative attempt to handle settlement data in a way that permits social inferences important to the period of VanStone's special interest — that time when archaeology and ethnology overlap in southwestern Alaska. Its appearance is welcome as another addition to his impressive series of reports on Alaskan native life of that period. We may wish that all workers could boast of a record equal to VanStone's in the prompt and effective presentation of their results.

D. E. Dumond

#### Editor's Note

*Without the help of Mr. Richard Ragle prompt publication of this issue of the journal would not have been possible. I am most grateful to him for carrying on as Editor during my absence.*

*Mr. Ragle, Staff Scientist, Washington Office, and Director of the Ice Field Ranges Research Project, is well known to members of the Institute.*

Anna P. B. Monson