Book Reviews

The Eskimos. Kaj Birket-Smith. Translated from the Danish by W. E. Calvert. Foreword by C. Daryll Forde. Methuen, London; Humanities Press, New York, rev. ed., 1960. xiv + 419 pp. Illus. $6.50.

The Story of a Tlingit Community: A Problem in the Relationship between Archeological, Ethnological, and Historical Methods. Frederica de Laguna. Smithsonian Institution, Washington, D.C., 1960 (order from Supt. of Documents, GPO, Washington 25). vii + 254 pp. Illus. $2.

An Eskimo Village in the Modern World. Charles Campbell Hughes. Cornell University Press, Ithaca, N.Y., 1960. xiv + 419 pp. Illus. $6.75.

As favorite subjects of science and literature for over five centuries, the Eskimos have become a physical and cultural benchmark for studies of other members of our species. This revised edition of Birket-Smith's classic work, first published in English in 1936, is a convenient survey of the Eskimo-Aleut stock and the vast scientific literature about them. His study benefits from his own diverse anthropological researches among Eskimos in southern Alaska, northern Canada, and Greenland. After the foreword by C. Daryll Forde, the major categories of history of discovery, ecology, physical characteristics, language, economy, cultural adaptations to cold, social structure, psychology, archeology, cultural history, and changes contingent upon contact with European cultures are reviewed. This treatment affords an excellent syllabus for courses on the Eskimo-Aleut stock.

There are some seven recurrent themes whose revision would justify a third edition:

1) For *Eskimo* the reader must frequently read *Eskimos of northern Canada and Greenland*. The author's greatest descriptive concern lies with the "typical" impoverished minority of arctic Eskimos, scrabbling for a meager existence amid ice, snow, and dogs, while the "atypical" and less gelid majority luxuriate in the subarctic regions, contaminating their culture by trafficking with Indians to the south or by smuggling alien traits in through Russia. It should be reiterated that less than 10 percent of the stock have ever seen a snow house, three-fifths of them live south of Bering Strait, and the majority have always lived in the subarctic.

2) The splendid chapter, "Fighting the cold," contains no reference to the many physiological studies of cold adaptation, or to such things as childhood training aimed at inuring them to cold, which is practiced by several thousands of Eskimos and Aleuts who risk the hazard of hypothermia involved in the extensive use of kayaks in cold water, not in ice or snow.

3) Regional variations are minimized, especially contrasts between east and west. These include important major differences in population size, length of life, and cultural complexity, all of which are substantially greater in the western area and especially in southwestern Alaska and the eastern Aleutians.

4) The consequences and correlates of population size, genetic or cultural, are not elucidated. Complex and rich cultures are not possible without numerous and permanent villages and large numbers of people. Therefore they cannot exist in the absence of suitable ecological foundations. The central arctic has long been an extremely difficult place to make a living and has had only a sparse population. Here the use of dogs is a vital necessity. Dependence on the dog has involved an interacting series of commitments, so that there is some question of whether the dogs work for the Eskimos or vice versa. Dogs eat large amounts of the same food the Eskimos eat. To work effectively, a sled dog must be fed daily, whereas a kayak, at most, "takes only a little water."

5) Similarities with inhabitants of the Northwest coast are automatically considered to be evidence of diffusion from Indians to Eskimos, rather than either diffusion from Eskimos to Indians or derivatives of an older stratum common to larger areas.

6) Remote areas are frequently suggested as possible sources for traits, and connections with Sumer and the Upper Paleolithic of western Europe are maximized at the expense of local cultural history and the well-known inventiveness of the Eskimos and Aleuts.

7) An important equation, "Arctic coast culture proper . . . is actually the typical Eskimo culture," leads to the suggestion that this adaptation took place in the central arctic, and that the subarctic Eskimos and Aleuts (some 64,600) and the high arctic culture (less than 300 Eskimos) are later offshoots.

Better evidence has existed for some time now, and was cited as early as 1871 by Lewis H. Morgan, for a major dichotomy between Eskimos and Indians in both physical traits and culture, and for archeologically derived similarities in material culture between the coastal areas of northern Japan and Siberia and the eastern shores of the Bering Sea and the Pacific Ocean. All of the following indicate that much of the synthesis of the Eskimo-Aleut culture took place in western Alaska: linguistic diversity; early carbon-14 datings; the early appearance of lamps, labrets, boats, bird spears, and so forth; and Mongoloid skeletons found in western Alaska, as well as the greater ecological wealth and the broader population base and, therefore, population size (deep, stratified village cites indicating permanence and continuity). Certainly one major area was the triangle between Nunivak Island, Kachemak Bay, and Umnak Island in the Aleutians.

Concerning omissions and errors, there is no reference to J. B. Jørgensen's excellent studies of the Eskimo skeleton, or to W. Goldschmidt's studies of culture change, particularly of revisions in the criminal code in Greenland. Part of the notable success of the Danes in administering the Eskimos of Greenland lies in the combination of good scholarship with good will. One factual error is the statement that all Aleuts were evacuated to the Alaskan coast prior to

the Japanese invasion of the Aleutians. In fact, the entire village of Attu was captured and removed to northern Japan. After liberation the American authorities did not permit them to return to their home but installed them in Atka. Few books on the Eskimos deserve more serious study than this one by Birket-Smith.

Tlingit Culture

Frederica de Laguna's critical examination of the history of Angoon, a Tlingit Indian community in southern Alaska, employs carefully collected archeological, ethnological, and historical data; it is a superb study in method with the immediate application of the methods of analysis and criticism. The over-all aim of de Laguna's studies, made over a period of several years, has been to trace the development of Tlingit culture from the earliest period represented by discoverable remains down to the present and to provide not only a descriptive history but insight into cultural dynamics. This monograph provides a comprehensive statement of all that she and her colleagues have learned about the archeology of the Angoon area and that part of the ethnographic information that bears upon the archeology. Although the basic data for this study were gathered during the summers of 1949 and 1950, the author also draws upon data which she and her long-standing colleague, Birket-Smith, collected as early as the 1930's in southern Alaska.

The special character of this work derives from the combination and analysis of archeological, ethnological, and historical data (and this gathered by one person), together with a lucid discussion of premises and procedure. Sources of bias, including sample errors, to which archeologists and ethnologists are variously prone receive prominent attention. The first 23 pages could well be reprinted and carried by all such investigators as part of their field equipment, regardless of the geographical area being investigated. (But it would be preferable to read it before entering the field.)

An initial assumption is that certain continuities of pattern, distinctively Tlingit, can be traced historically; another is that exploration of the relationship between archeology and ethnology could be accurately perceived only through concern with the culture as a totality. The most distinctive assumption, uncommonly rare and rarely hinted at in contemporary studies of culture change concerned with the breakdown of old cultures, is that the Tlingit themselves are as much responsible for their own culture and its history as any of the people who have influenced them. Even today these Indians are not passive recipients of foreign teachings, rather, "It has been Tlingit character, interests, and orientations that have determined how these importations were re-interpreted to fit Tlingit ethos and adjusted to Tlingit culture" (page 8). Accordingly, it was necessary to secure the Tlingit point of view—their concepts of history, geography, and systems of explanation. Further, it was necessary to secure a record of actual behavior as manifested in what the Tlingit have actually done in particular situations and what they have done it with, as shown by the artifactual record. The ever-recurring problem of assessing verbal behavior is treated throughout, but it is especially well illustrated by the story of the alarm aroused when a family of bears moved into the neighborhood. This provoked much excitement and many expressions of serious concern, but despite the abundant verbal expression of anxiety, the children bicycled and the women and children gathered berries in the bear haunts.

When de Laguna cites generic characteristics of the Tlingit—such as their reserve and shyness, their lack of interest in the customs of other tribes, their limited interest in certain aspects of anatomy, their great concern with their own individual ancestors and not just famous Tlingits, their orientation about sibs, the cleanliness of the villages, and their concern with specific locations rather than areas—the reader will find convincing evidence as tangible as that of the stone and bone artifacts. It is interesting to note that the artifactual record is somewhat meager. No large sites have ever been reported from the Tlingit area, and the total body of evidence suggests that the story of Angoon may be contained within the last 160 years. The problems common to archeologists and ethnologists obviously consist of much more than the verification of native stories by use of the spade. A thorough description is given of village sites, forts, and temporary sites, as well as information concerning artifacts, food resources, and the physical situation; there is an analysis of the Tlingit names and accounts of events which took place in the immediate area. Such information provides excellent material for the archeologist, ethnologist, historian, and traveler, as well as for those interested in methods of analysis and criticism of such data.

Social Change

Various trends related to the impact of the industrialized world on a small nonindustrialized community constitute the principal object of Hughes' study of Gambell, which is situated on the northwest corner of St. Lawrence Island in the Bering Sea. "The general theme underlying all these trends forms the most important focus for the present study: the nature of the relationship between the small sociocultural world and the mainland." Comparisons are made with the condition of the village in 1940; and the assumption is made that Gambell was an Eskimo village in that year, whereas by 1955 the dominant culture had become that of the mainland world of the white man.

A large amount of useful data—on village social organization, interpersonal relations, contact with Europeans, government agencies, health problems, food consumption, and the economy—is presented along with a relatively large number of quotations from European authors concerned with social problems and social pathologies. Analyses of the culture as such, of the intellectual world of these Eskimos, or of many parts which would require conversancy with the Eskimo language or linguistic analysis, are not a primary concern. Inclusion of the actual corporate genealogy of Gambell and of Angoon (studied by de Laguna), including numbers of living and dead children of each mating, would have made possible genetic analyses, as well as analyses of aspects of differential fertility and would also have permitted comparison of the formal kinship system against the actual biological matrix on which the village is constructed.

The reader may involuntarily recall A. L. Kroeber's generic permanent review of such studies: "Acculturation studies in particular, at any rate as they are conducted in America, seem particularly monotonous and depressing, equally so whether the acculturees are ethnic minority immigrants or ethnic remnant aborigines. These unfortunates always emerge from the process as bot-

tom-level members of our own society and culture. . . . Yet each study appears to be the repetition of a principle akin to the one that when a bulldozer meets the soil that nature has been depositing for ages, the bulldozer always and promptly wins" ("What ethnography is," vol. 47, No. 2, University of California Publications in American Archaeology and Ethnology, University of California Press, Berkeley, 1957). Hughes illustrates the last 15 years of this bulldozing operation, and in his final chapter, "The broken tribe," offers a suitable obituary.

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La Culture des Tissus Végétaux. Techniques et réalisations. R. J. Gautheret. Masson, Paris, 1959. iv + 884 pp. Illus. F. 10,500.

For 30 years I have been a friend and a friendly rival of the author whose work is under consideration. Under these circumstances, a completely objective treatment of the work is scarcely possible, and it is with much hesitation that I have accepted the task assigned to me.

This book is not a handbook. It is an encyclopedia. In its six sections—"Techniques"; "Morphogenesis"; "Polarity and induction"; "Physiology"; "Cultivation of isolated cells"; and "Pathology"—Gautheret brings together in one volume much of the important work on the in vitro cultivation of plant tissues, up to 1958. These sections are all treated in detail, with a wealth of illustrations and specific citations. All represent fields in which the author or his students have made important contributions. With its bibliography of 986 titles, this will be an indispensable reference for all workers in the field for many years to come. It stands as a monument to Gautheret's leadership.

Perhaps the strongest parts of the book are the sections on morphogenesis and polarity, in which are found imaginative and exhaustive analyses of tissue relations, both in primary explants and in established strains; of the effects of the various growth substances; and of the differences between species, between types of organs serving as sources of explants, and between materials associated in different ways. This is the type of work in which the author is most at home, and it is excellent.

Yet, having given this praise, I must confess to an uneasy feeling that the treatment is so personal that the book lacks much of the objectivity one expects in a general treatise. True, the author warns us when he says, in his introduction to chapter 1: "We do not propose to describe all the techniques employed in the cultivation of plant tissues but to emphasize the procedures used in our own laboratory or developed by our pupils" (page 10). These limitations extend to much more than technique; they permeate the entire work.

Nowhere is there a clear definition of what is or is not to be considered a "plant tissue culture." There is no historical section which might serve to place this question in perspective. Nor does the treatment itself help. Cultures of roots, stem tips, embryos, pollen-mother-cells, and other organized materials are brought in only when they have served as sources of disorganized masses. This results in the omission of much that has contributed to the development of the field.

On the other hand, large parts of the sections on morphogenesis, polarity, physiology, and pathology deal with phenomena which can only be effectively studied in primary explants, masses which may or may not give rise to permanent cell cultures but which often produce roots and stem tips and are capable of serving as sources of complete plants—that is, as cuttings. Inclusion of such materials expands the term "tissue culture" far beyond that usually accepted. The feeling emerges that to Gautheret a "tissue culture" is anything studied in his laboratory, and that anything studied elsewhere is important only so far as it supplements his own work.

This chauvinism crops out repeatedly. Gautheret attributes the "establishment" of tissue culture to Alexis Carrel (page 733), an idea which would certainly be opposed by the proponents of Ross Harrison. He describes and illustrates (page 283, Fig. 143), as if it were an original discovery (1934), the disorganization of cultivated root tips as a result of injury, ignoring Chamber's earlier description (1925) and my discussion and illustration of the same phenomenon (1932), although he cites both of these papers elsewhere. He states that Heller's nutrient is "of almost universal use" (page 15); this may be true for France, but it is certainly not true for many laboratories in America, Asia, and Europe (elsewhere than in France). This is a French work, a Parisian one, but not a well balanced international one.

There are some curious statements. Gautheret says that dry sterilization of glassware should be avoided since it renders the surfaces alkaline (page 82); this is certainly untrue of clean Pyrex, which is used extensively elsewhere. He says, "Petri dishes must not be used for subcultures" (page 63), although such use is quite extensive. He says that aluminum foil should never be used for capping tubes (page 64); this method is widely approved. On the other hand, none of the watch-glass methods are described, nor is the method of cultivation in pharmaceutical bottles of various sorts, developed, especially in Riker's laboratory, because of its cheapness. The only shake-culture method described is the relatively complicated one introduced by Steward; the simpler ones of Riker and of Nickell are ignored.

In his introduction to the chapter on cultivation of single cells (page 722), Gautheret seems to have missed completely the real significance of Haberlant's reason for suggesting the cultivation of plant cells (1902). And because of the resulting limited concept of the objectives of single-cell cultures, he misunderstands (pages 727–28) the nature and significance of Steward and Schantz's observations on the organization from disaggregated cells, first of cell masses and then of roots and stems; these observations, by the way, were made many years before, though under less well controlled conditions, by both Nobécourt and Levine.

The proof reading is generally excellent, but there are several curious slips. On page 774, in discussing Braun's tobacco teratoma studies, the word *feuilles* is used twice where I am sure *tiges* is meant. On page 278 *Iris* should be *onion.* And on page 290 (the caption for Fig. 146, last line) *bas* should evidently be *haut.*

One of the sections which most raised my hackles was the discussion of growth regulators (page 653). Here the author says: "Since the first attempts of Robbins and of White with yeast extract, the study of the activity of natural products has made little progress. . . . Attempts to extract active components contained in such products have failed. . . . These investigations have led to a situation comparable to that of the