

Photo: Peabody Museum, Harvard University
Kadaraadar, ivory image of the Aleut deity, found in excavation of Chaluka, Umnak Island, 1948.

A NEW VIEW OF THE HISTORY OF THE ALEUTIANS

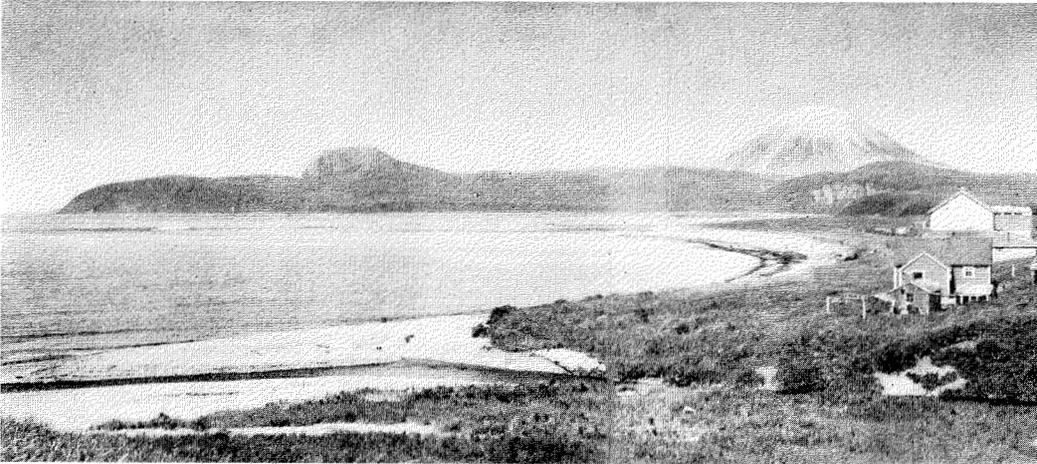
W. S. Laughlin and G. H. Marsh

THE unique position of the Aleutian Islands, forming a chain between two major continents, Asia and the New World, has resulted in much discussion on the origin and affinities of the Aleuts. The paucity of sound anthropological data together with the tantalizing proximity of the Komandorskie Ostrova, some 180 miles from the westernmost of the Aleutian Islands and only 90 miles from Kamchatka, have permitted the suggestion that the Aleuts followed this route from Asia to their present home.

The early Russian fur traders, following Bering's discovery of the Aleutians in 1741, found a friendly and knowledgeable population. These people, later named Aleuts, were Mongoloid in appearance and lived in semi-underground houses not unlike those of Kamchatka. To the Russians the Aleuts were no more unlike the Kamchadals than many other Asiatic peoples and without good evidence to the contrary they naturally assumed that the Aleuts were of Kamchadal or other Asiatic origin and that they must have crossed the sea to the western islands from Asia. Bishop Ioann Veniaminov, who lived in Unalaska from 1824 to 1834 and converted many of the Aleuts to the Orthodox Church, encouraged this view by interpreting a local Unalaska Aleut tradition of having arrived from a "big land" in the west to indicate that they came from Asia. European scholars generally accepted this theory.

The first traveller to suggest that the Aleuts came directly from the American continent was Captain P. Zaikov who visited the islands in 1772-8. Again in 1821 Lieut. Otto von Kotzebue remarked, "This people has evidently wandered from the American continent westwards, to the islands" (1821, Vol. 3, p. 313). The American scientist Dr. W. H. Dall gave the first scholarly support to this theory in the latter part of the nineteenth century (1877a), and the Russian-born Professor Waldemar Jochelson, after two years of archaeological and anthropological investigations in the Aleutians and further study on Kamchatka, reaffirmed this view (1925).

Sound interpretation of the prehistory and racial, cultural, and linguistic affinities of the Aleuts has been hindered by a dearth of accurate information. During the past three summers parties of anthropologists, archaeologists and medical workers, sponsored by the Arctic Institute of North America, the Peabody Museum of Harvard University, the U.S. Office of Naval Research, the Viking Fund, now the Wenner-Gren Foundation for Anthropological Research, and the University of Oregon, have collected a large body of new material on these people. This research, which was made possible by the assistance and transportation provided by the U.S. Coast Guard and the three



Nikolski village, Umnak Island, 1950: to the left, Nikolski Bay with Mount Vsevidof in the background
Orthodox church

Services, has led to a new interpretation of the history of the Aleutians, of which the general conclusions are presented in this paper.

The field work in physical anthropology was carried out by W. S. Laughlin, University of Oregon, and Stanley M. Garn, Harvard University; in archaeology by Alan G. May, Wenatchee, Washington, Charles I. Shade, Harvard University, Fred Milan, University of Alaska, James W. Leach, University of Oregon, W. S. Laughlin, and G. H. Marsh, Columbia University; in ethnology by W. S. Laughlin, Charles I. Shade, and G. H. Marsh; in linguistics by G. H. Marsh; and in human biology by Fred Alexander, cardiologist, Massachusetts General Hospital, and C. F. A. Moorrees, orthodontist, Forsyth Dental Infirmary, Boston. Work was concentrated on three main areas: the villages of Nikolski, on Umnak Island, and Atka, on Atka Island, and St. Paul Island in the Pribilofs.

PHYSICAL ANTHROPOLOGY

The early travellers, using such external features as hair and eye colour, variously linked the Aleuts with the coast-dwelling Siberian Paleo-Asiatics or with the Japanese. The first craniometric study was published in 1859 by K. E. von Baer (pp. 263-7) who measured 6 eastern Aleut skulls and 2 from Atka and noted that the latter were narrower, shorter, and higher in the forehead. In the 1870's Dall collected 27 adult skulls from various islands (1877b, pp. 66-8), but did not draw any precise deductions from his measurements. Next, Mrs. Jochelson, who accompanied her husband, measured the heads of 138 living Aleuts and 50 skulls from several islands. Ignoring sex and geographical distribution Mrs. Jochelson derived a cephalic index of 84.0 (1925, pp. 115-6), which does not correspond to indices for Eskimo from Greenland, northern Alaska, or Siberia; for Paleo-Asiatics—Koryak, Kamchadal, and Yukaghir; or for the Alaskan Indians—Tlingit and Tsimshian. It was Dr. Ales Hrdlicka who first made an anthropometric study of Aleut skeletal remains, following



in the foreground, the salmon stream leading to the fresh water lake; to the right, the Russian and salmon trap.

his excavations during the summers of 1936 to 1938 (1945). His most significant finding was the existence of two distinct populations in the Aleutians characterized by quite different headform; this had first been observed by von Baer but ignored by later workers. Hrdlicka noted that the earlier population was oblongheaded and was possibly related to the Sioux Indians, and the later population roundheaded and resembled the brachycranial variety of Siberian Tungus. Unfortunately, Hrdlicka divided the skulls from all the islands into Pre-Aleuts and Aleuts on the basis of morphology, regardless of excavated depth or geographical distribution. As a consequence he was not able to secure a clear picture of when in time, or where in the Aleutian chain, the newer population supplanted the older population, nor of the relative numbers, or extent of the mixture between the two populations.

Our physical anthropological work clearly identifies the Aleuts as part of the Eskimo stock. This thesis is not new and has in fact long been held by Dr. Diamond Jenness, who has classed these people as "Aleutian Eskimo". In common with all other Eskimo-speaking peoples the Aleuts have a large head, large face and lower jaw, tall relative sitting height, medium to submedium stature primarily due to short legs, small hands and feet, and a generally Mongoloid physiognomy particularly noticeable by the epicanthic fold, straight black hair, scanty beard, and narrow nasal root.

The blood groups of the Aleuts also identify them as Eskimo and serve to distinguish them from Indians and from the few Asiatic peoples for whom figures are available. Blood groups are among the most reliable indicators of racial affinities because they are not susceptible to environmental influences as is the morphology, they are inherited independently of sex, they do not change with age, and their exact mode of inheritance is known.

The gene frequencies for the blood groups of the Aleuts as a whole are almost identical with those of Nanortalik, Greenland (Fabricius-Hansen, 1939, quoted in Wiener, p. 299), where European admixture is known to be slight.

The essential characteristic of the blood group distribution among the Eskimo stock is that a larger proportion of the population has blood group A than group O, usually more than 50 per cent, with group B varying from 2 to 12 per cent. European blood increases the percentage of O and decreases the A, at the same time usually raising the B. The western Aleuts, relatively the least mixed, have 50 per cent group A, 45.2 per cent group O, 2.4 per cent group B, and 2.4 per cent group AB. The eastern Aleuts, having had greater contact with Europeans, have 46.3 per cent group A, 44.4 per cent group O, 7.4 per cent group B, and 1.8 per cent group AB (Laughlin, 1950). This same shift in the blood group distributions with admixture has been amply demonstrated in Greenland. Eskimo can be distinguished from North American Indians as the latter are generally completely lacking in group B and have more O than A, though the amount of A is highly variable. Among the Eskimo the group B percentage is appreciably lower than among Asiatic Mongoloids, thus permitting a distinction, but its presence indicates that they have arrived from Asia more recently than the Indians.

The blood types M and N may be used to identify the Aleuts as Eskimo to the exclusion of all Asiatic Mongoloids for whom data are available, but do not distinguish Eskimo from Indians. The Aleuts as a whole have 2.8 per cent type N, but in the 41 western Aleuts typed there was no type N. European peoples and Asiatic Mongoloids, such as the Japanese and Tungus, have around 21 to 25 per cent type N. This large difference provides another reliable clue to admixture. All New World peoples, Indians and Eskimo, have very low amounts of N, and since the Eskimo, who are distinguished from Indians in so many other respects, share this same low frequency of type N, it suggests that a similar low N area may exist among the Paleo-Siberians of northern Asia. The Aleuts, like all other Eskimo and Indians, are 100 per cent Rh positive. The subtypes of Rh may eventually distinguish Eskimo and Indians but at present there are insufficient data.

In order to compare physical measurements of the Aleuts with those of other Eskimo groups it is necessary to adopt a different perspective from that of earlier workers. Professor A. L. Kroeber, using population estimates based on the work of James Mooney for the period of early contact with Caucasians, wrote: "Nearly a third of all the Eskimo lived on open Pacific Ocean frontage—27,300 Aleut, Kaniagmiut, Chugachigmiut, and Ugalakmiut, out of 89,700. From the Malemiut south, that is, roughly, in Alaska from Bering Strait south, were almost 60 per cent of all members of the stock—53,000 out of 89,700" (1939, p. 157). On the basis of our measurements the Aleuts appear to be most similar to the Eskimo of Bristol Bay, for whom there are only a few figures. These latter are for the most part roundheaded Eskimo and have broader and lower vaults than the Central and Greenland Eskimo who have long been used as the "type" for Eskimo. The roundheadedness of the Aleuts (breadth of head 82 per cent or more of the length) does of course distinguish them from Greenland Eskimo, who are more nearly longheaded (breadth of head 77 per cent or less of length), but it does not distinguish them from other western Eskimo. It is therefore most important to recognize a graded series

of headforms for the Eskimo stock, from the relatively longheaded Eskimo of Greenland and Arctic Ocean coasts to the more roundheaded Eskimo of the Bering coast to an extreme of roundheadedness in the eastern Aleutians and the south coast of Alaska. The roundheadedness of these western Eskimo has often been used as a criterion of admixture with Indians. There have however never been large enough numbers of adjacent Indians materially to affect the racial composition of the great populations of western Eskimo. A consideration of all available data indicates the polymorphic condition of the Eskimo, seen most clearly in the headform.

The polymorphic condition of the Eskimo stock in the Aleutians and on Kodiak Island was demonstrated by Hrdlicka. In both these areas a long-



Women of Nikolski village showing facial differences between western and eastern Aleuts. From left to right, Mrs. Pauline Krukoff and Mrs. Eva Chercasen, both eastern Umnakers, and Mrs. Virginia Krukoff, western Attuan.

headed population preceded a comparatively recent influx of roundheads. What Hrdlicka missed, that we have been able to show, is the existence of the descendants of the earlier longheaded population in the western Aleutians. The last remnants of the central and western Aleuts, the people of Atka and Attu islands, are even now relatively longer-headed than the eastern Aleuts of Umnak and Unalaska. The male eastern Aleuts have a cephalic index of 84.62, whereas the male western Aleuts have an index of 82.50, and the divergence between the females is even more marked (Laughlin, 1951). Thus, Hrdlicka's "Pre-Aleuts", whom we have found it more useful to term Paleo-Aleuts, have left their imprint on the contemporary population; while the later "Aleuts", or Neo-Aleuts, never migrated west of the Fox Islands in sufficient numbers to obliterate the physical distinctions between the two populations. The differences between eastern and western Aleuts is not confined to headform. Dr. Moorrees found differences in the fissural patterns and in the number of cusps of the teeth as well as in other dental characters.

It is therefore inaccurate to speak of the Aleuts as a single, homogeneous population. They constitute two major breeding isolates. Earlier observers

noticed the narrower face breadth of the western Aleuts which is now substantiated by our measurements. It appears that the Russian-American Company was aware of these two basic isolates, and the accompanying cultural differences, when it established two administrative districts in 1826—eastern and western—for the chain, and when it transported only groups of eastern Aleuts to the Pribilof Islands and groups of western Aleuts to the Komandorskie Ostrova.

Thus the blood groups and the general morphology both serve to identify the Aleuts as Eskimo, while certain of the measurements distinguish two breeding isolates within the Aleutian area of occupation.

ARCHAEOLOGY

The first excavations in the Aleutians were made by Dall in the early 1870's, and consisted of samplings from various sites on different islands. Dall's work was haphazard and incomplete, but from his material he concluded that the Aleuts had left traces of three stages of culture, represented by a Littoral Period, a Fishing Period, and a Hunting Period (1877b, p. 49). More recently another traditional three-period succession has been suggested (Quimby, 1948, p. 78), but like that of Dall, based on artifacts not scientifically excavated. Jochelson, after eighteen months of careful excavation in several sites on four major islands: Unalaska, Umnak, Atka, and Attu, concluded that there were no changes in culture succession sufficient to warrant division into periods (1925). Hrdlicka's excavations in 1936 to 1938 in various islands of eastern, central, and western parts of the chain are the only other work preceding our own investigations begun in 1948. He unfortunately did not keep accurate records of the artifacts removed, nor of the depths at which they were found, and he consistently separated the cultural remains from the skeletons with which they were associated. Thus, while he first demonstrated the presence of two distinct physical variants, he made no reliable observations on the history of Aleutian culture. The few sites excavated by Jochelson which we have been able to revisit indicate that he excavated primarily in sites of the later period and consequently did not secure enough of the Paleo-Aleut skeletons or artifacts to permit recognition.

Our main archaeological work was concentrated on making a cross section of a very large and old village site adjacent to the present Aleut village of Nikolski, on the southwest end of Umnak Island in the Fox Island group. This was supplemented by a small excavation on Murder Point on Attu Island, to provide us with a point of reference in the extreme western end of the chain, and by small excavations at various other sites. Mr. Afenogin Ermeloff, who had excavated for Jochelson in 1912, aided us in retesting some of Jochelson's sites.

The mound at Chaluka, the old Aleut name for Nikolski, is approximately 700 feet long, 200 feet wide, and 21 feet deep; it is composed of shell detritus, fish, bird, and mammal bones, loose rocks, and minor amounts of earth and volcanic ash. Owing to its size and advantageous site, on a sheltered bay with fresh water lakes behind, with a stream where salmon run and a large reef

rich in shellfish, it promised to be one of the oldest sites in the Aleutians, a promise confirmed by carbon-14 tests. It was here that Hrdlicka had found the Paleo-Aleut skeletons underlying the Neo-Aleut.

Excavation at this site has made two useful contributions to the anthropology of the Aleutians: first, a detailed sequence of the material culture represented in 4,000 artifacts of ivory, bone, and stone, and second, the earliest known date for occupation in the Aleutians, or in any Eskimo site. An age of 3,000 years was determined by Dr. W. F. Libby of the Institute for Nuclear



Mound at Chaluka, the old site of Nikolski, showing excavation, 1950.

Studies, University of Chicago, for samples of burned wood taken from a hearth one metre above the natural floor of the site; the lowest level must therefore be several hundred years older.

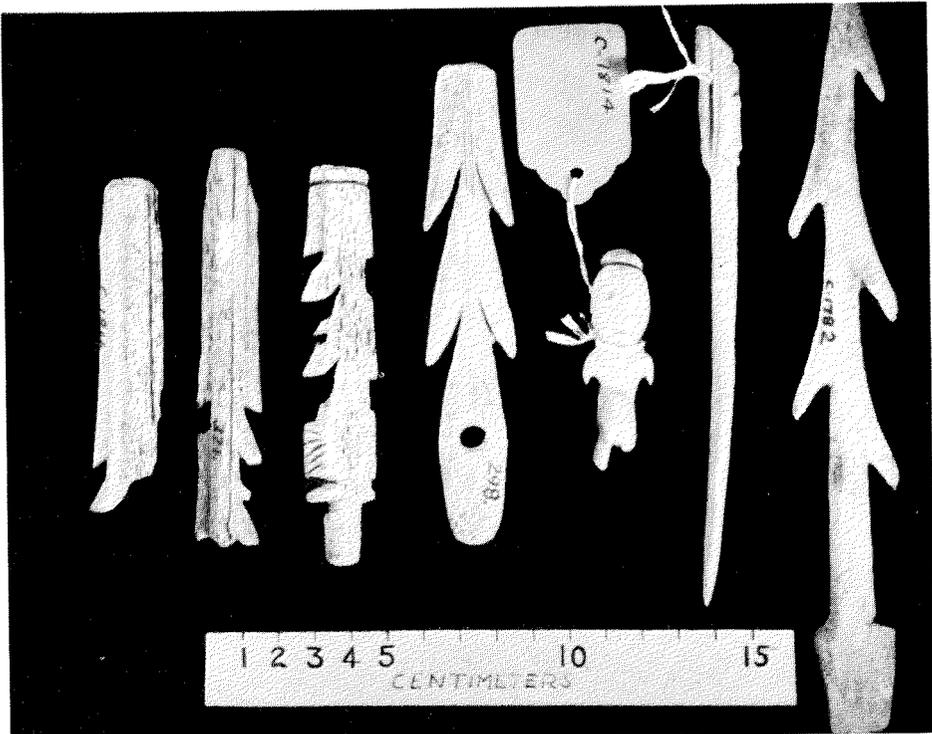
The sequence of artifact types is best seen in the numerous barbed harpoon and spear heads, usually made of whalebone, occasionally of ivory. There appear to be some thirty classes of harpoon heads, each with usually more than one style. Only one of these appears throughout the entire occupation. Though the average duration for each class is one to two metres in depth, with five to ten classes coexistent at any one time, there is no clear break occurring simultaneously between more than one or two classes. Thus it is not possible to divide the prehistory into the traditional three periods. The earliest missile heads are characterized by imbalanced barbs (those on one side being larger and different in design), fluted shafts, rectangular as well as circular line-holes, and compass-drawn circle-and-dot design. The latest weapon heads are elaborately barbed, often symmetrically, with a greater number of barbs, more decoration and possibly ownership marks, and an end basin for inseting stone tips together with the slot insert which was the only method employed in the older harpoon heads. In the surface levels the

socket receiver, a long piece of heavy bone usually made of the jawbone of a whale, with a socket in the forward end for insertion of a bone or ivory point, replaces the older foreshaft-receiver made of two flat halves lashed together. Significantly, the Aleut name for the new type of socket still retains the dual number which referred to the older two-piece socket. This type of socket, used for sea otter hunting in Russian and American times, has not been recovered from our excavation but picked up from the surface of the site or collected as ethnological specimens from the Aleuts who have inherited them from their fathers and can still manufacture them.

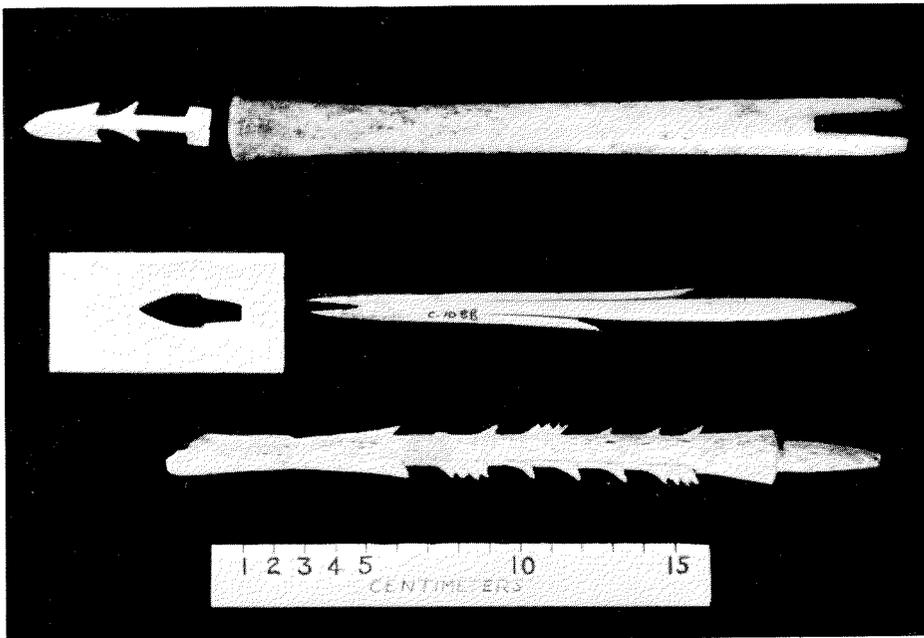
Stone lamps, used for heat and light, are found from the lowest levels to the surface, the latest forms being flat, shallow, and more elaborately worked. Two types of larger stone vessels were used, a cooking stove and a cooking bowl; although they occur early no sequence is as yet recognizable for these vessels. No pottery is found and there is no tradition of pottery making among the Nikolski Aleuts. Lamellar flake tools which are very common in the earliest levels disappear later. Other stone tools show few changes until the recent introduction of ground slate knives; ground stone tools are found in the earliest levels. Chipped stone knives with one curved edge, similar to those of the Dorset culture, are found in all levels in quite large numbers. Two ivory household images of the deity were found, one in the lower levels and one in the recent levels. The modern people, though Christians for over a hundred years, retain memory of the name and its use (which they now consider to be the work of the devil). The image was hung inside the house from a string kept in place by a groove in its head, and the head of the household prayed to it, especially before going to sea. Among the recent artifacts are ivory ear-spools adorned with concentric circles drawn by compass.

The artifacts brought back from the mummy caves on Kagamil Island correspond in date to the superficial layer at Chaluka, represented in such things as ground slate knives, shallow flat stone lamps, and single-piece socket receivers. This recent date ties in with the Russian glass beads and canvas, and the bone lesions suggesting syphilis, also found in the caves. Thus, mummification of the dead of certain outstanding families cannot have long preceded the advent of the Russians. Actual names of some of the mummified Aleuts from Kagamil Island are still known to the Nikolski people. This custom, undoubtedly introduced by the Neo-Aleuts, never reached the people of Attu and Agattu islands at the western end of the chain. The Attuans still report that they considered it a wicked practice.

In summary, the new archaeological picture shows an Eskimo people pushing out into the Aleutians from the mainland over 4,000 years ago, with an open-sea culture, possessed of such typical Eskimo artifacts as stone lamps, labrets, eyed needles, chipped stone side-blade knives, a variety of barbed harpoon heads including toggle heads, and bolas. The styles of some of these utensils change intermittently throughout the period of occupation. The skeletons manifest a people of Eskimo morphology and indicate the arrival in the last third or quarter of the period of a new Eskimo population having a somewhat different morphology. The artifacts fail to show a sudden change



Paleo-Aleut artifacts from various levels. Left, three harpoon-head fragments with routed shanks, imbalanced barbs, and slotted tips for stone point insert; centre, one harpoon head with large compass-drawn circle-and-dot decoration; right, a household image of the deity in sperm whale tooth ivory, an ivory bodkin with carved faces on butt, and early style harpoon head with alternating barbs.



Neo-Aleut harpoon and spear heads. Top, bone foreshaft and ivory point of modern sea otter harpoon (given by present inhabitants); middle, fish spear excavated complete with stone point (similar to Ipiutak); bottom, multi-barbed foreshaft for war spear with spoon-depression in tip for stone point insert.

with the new arrivals, from which one may judge that the two populations had similar cultures and that whatever innovations the new people brought filtered west more rapidly than the population itself. Thus, though there are no sharply marked periods in Aleut prehistory, there are two periods in the sequence of population in the eastern sector of the Aleutian Islands, which are less noticeable in the western Aleutians.

ETHNOLOGY

The first useful ethnological information comes from the writings of Bishop Veniaminov, who learned the language and attempted to preserve knowledge of the pre-Russian beliefs and customs (1840). The only strictly ethnological investigation antedating our own is that of Jochelson (1925, 1933). Here we will present only those things not previously discussed by Jochelson or Veniaminov. Fortunately, the Aleuts have sufficiently conserved their language and many other customs, as well as the memory of many more now abandoned, for it to be possible to compile an adequate picture of their pre-contact life with some of the east to west differences.

In common with other members of the Eskimo stock mechanical innovations have played a major part in the remarkably successful adaptation of the Aleuts to their environment. In their case this has often been the result of deliberate comparative experiments. Their culture is directed toward the development of self-sufficient individuals within the framework of a highly cooperative group. The system of a First, Second, and Third Chief which has been cited as evidence of social stratification comparable with that found among the North Pacific Coast Indians, was introduced by the Russians for more effective control of the villages. In the pre-Russian organization the village was under the leadership of a headman whose principal function was to coordinate all the cooperative efforts of the village, including warfare. He achieved his position by virtue of superior strength and wisdom, and was dispossessed if found wanting in either attribute. He was known as *tuku* "the wealthy one" or *agnaka* "the master" or "owner". The many accounts of Aleut headmen are most similar to those of the headmen or "strongmen" among the Maritime Chukchi. The position of headman was neither inherited nor possessed of special rewards other than the personal satisfaction of dominating the village and leading the men in exploits of valour. His training was that of a "strongman", a rigorous training given to all who were going to be hunters.

The belief in the potential danger of power is seen most clearly in the customs of joint binding and dismemberment. Till quite recently a young woman at menarche was isolated for forty days, and confined to a dark room, formerly a separate hut. It was recognized that she was possessed of great curative powers, and men were brought to her to be treated for a variety of pains, illnesses, and significantly, seasickness. She was attended by her mother or other female who had been through the same ceremony. At the beginning of confinement each of her joints—wrist, elbow, shoulder, ankle, knee, waist, neck—and head were bound with a waxed cord. Failure to bind the joints would bring premature senility and joint disease to the woman, and harm to the village's food and water supply. For five months after confinement she

could not go upon the sea. The belt she wore about her waist retained curative powers and was preserved for future treatments. Previously overlooked was the fact that a widowed man or woman undergoes the same isolation and joint binding. The belt of the widow is even more powerful than that of the pubescent girl.

Dismemberment is also related to the same theme of control of supernatural power in the body as is joint binding. The killer of an enemy dismembered him to ward off certain dangers, principally joint disease. Throughout the old tales dismemberment of a demon slain by a famous "strongman" occurs with great regularity, often augmented by burning and burying. Within the memory of persons now living in Nikolski, an Aleut man was dismembered in order to protect his killer. Common to these practices is the belief that great power resides in even the dead body and is not dissipated by death. Thus the most potent charm used by the Aleuts was a "piece of dead man" (taken from a mummy) carried as an amulet, which endowed its owner with all powers, but brought him early death or blindness. Mummification or preservation of the body intact with its powers was the opposite of dismemberment. Thus, recognition of the cultural theme of a belief in supernatural power resident in the body explains those patterns connected with its control and its use: joint binding, dismemberment, and the use of mummies.

A most fascinating cultural achievement of the Aleuts was the development of an incredibly thorough knowledge of human anatomy, much of which still survives. A note in the writings of Veniaminov prompted us to investigate this neglected aspect of Aleut ethnology, "The Aleutians have a very extensive anatomical vocabulary. Reference is not made to words like liver, heart, intestines and the like but to several terms, the use of which presupposes familiarity with the details of the structure of the body. . . . Entire ignorance of anatomical terms makes it impossible for me to translate all of them" (foreword in Geoghegan, 1944, p. 19). We not only collected their anatomical terms and system of classification, but checked them by asking the Aleuts to name the parts of dissected seals and excavated human skeletons. The detailed knowledge of the Aleuts may be indicated, for example, by their classification of muscles. The word *kayu* indicates a muscle as a motor organ and a source of strength and is applied primarily to the biceps humeri and the quadriceps femoris. The term *sayuti* refers mainly to a flat muscle and possibly indicates the muscle as a structure of the flesh. A long, stringy muscle is called *igaci* "something fastened at the end", which is the same name for tendon or sinew. Names are also given to the particular muscles in each class, for example the *M. brachioradialis*, an outside muscle of the forearm, is named *cam angalii* "the daylight of the hand" because a sharp rap across it will incapacitate the hand and lower arm, a fact used by the Aleuts in wrestling and fighting. The Aleuts give the dual ending to the entire jaw of animals and humans, and the singular ending to each half, recognizing that in humans the two halves become fused at the mandibular symphysis.

Investigation of the sources of their knowledge revealed the existence of true comparative anatomy and dissection of the dead. Aleut doctors

dissected the sea otter because it was most similar to human beings in morphology and, in fact, is the only sea mammal to preserve a pronating and supinating forearm, to have flat, grinding molars, and several other similarities. A former resident of Nikolski is considered to be the last of the Aleuts to participate in the dissection of a human, being a woman she watched while the men carried out the autopsy. Other sources of information were provided by the extensive use of animal parts (for example, the pericardium for a water bag), also health and medical practices, and the preparation of mummies.

The beliefs surrounding the manufacture and use of the kayaks and umiaks illustrate not only the Eskimo cultural heritage of the Aleuts, but also their specialized interest in anatomy and the power which resides in the body.

LINGUISTICS

Since 1819 when the Danish linguist Rasmus Rask wrote down some two hundred words spoken by two Aleut brothers brought to St. Petersburg and pronounced Aleut an Eskimo language, those dealing with this language, namely Veniaminov, Dall, Thalbitzer, and Jochelson, have held the same view.

<p>ГѸспѸдакз! и ГннѸ ТхннѸ и тѸ ГннѸ са да. Г днмѸ. ГѸмѸнннѸ Ѹ да кз п)! ѸмѸнѸ акѸхѸтхннѸ и</p>	<p>Господи, помилуй насъ. Трижды. Отче нашъ, Иже еси на небесѸхъ! да святится</p>
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The opening phrases of the Lord's Prayer in Aleut left, and Russian right, from p. 9 of 'Aleutskiy Bukvar' ('Aleut Primer') by I. Veniaminov, the first printed Aleut book.

In fact this contention of the linguists has been one of the chief reasons for the thesis that the Aleuts are Eskimo, which caused Hrdlicka to fulminate while trying to prove that racially they were not: "It is only the professional linguists who class the Aleuts as Eskimo, even though there are many known examples of peoples who through circumstances have changed their language . . ." (1945, pp. 543-4). These professional linguists never proved their case because they knew Aleut too poorly and worked chiefly with superficial comparisons. However, we can now show that the fundamental structure and some of the basic vocabulary corresponds in the two languages. The percentage of basic vocabulary correspondence in Aleut and Eskimo indicates that these two branches of the common language, proto Aleut-Eskimo, separated some 4,000 years ago (Marsh and Swadesh, 1951). The Aleuts have been greatly aided in retaining their language by the existence of the Aleut alphabet specially adapted for their use from the old Cyrillic alphabet by Veniaminov ('The life and work of Innocent', 1897, p. 10).

Although Aleut is not mutually intelligible with Eskimo its three dialects are all mutually intelligible among themselves. Confirmatory evidence of the westward drive of the Aleuts is seen in the dialect distribution. Veniaminov notes that around 1830 the Aleuts of Umnak Island spoke the Atka dialect.

Today, they speak the Fox Island dialect, but place names at the northern end of the island are still in the Atka dialect.

We thus find that the linguistic evidence further corroborates the proof from our recent physical, archaeological, and ethnological research that the Aleuts and Eskimo are members of the same stock. Likewise the linguistic chronology confirms the period of separation of the Aleuts from proto Aleut-Eskimo, which is independently indicated by the archaeological evidence.

CONCLUSION

In retrospect we see in the Aleuts a population of the same stock as the Eskimo with the oldest dated prehistory and longest continual residence in the area of their occupation. Their history is that of two successive Mongoloid peoples pushing out into the Aleutian Islands from the Alaskan mainland, bringing with them all the traits and implements of an extensive open-sea economy. The first wave of migration must have started over 4,000 years ago, while the second was well within the last 1,000 years and was continuing at the time of Russian discovery. Some of the physical traits of the first population persist among the remnants of the central and western Aleuts. The physical traits of the second people dominate most completely the eastern third of the chain. Judging from our Nikolski finds, the culture of this entire span of occupation was continuous in sequence. Changes in the styles of weapons occurred frequently. Other implements present but few and slight variations, until the very recent introduction of ground slate knives and ground shallow lamps.

The great numbers of the Aleuts and other Eskimo in southwestern Alaska may have arisen through a "population explosion". The ecological picture is clearly that of an area rich in those natural resources that could support many more people than any region to the north. When the first proto-Eskimo came south along the west coast of Alaska and found an area incredibly abundant in sea mammals, fish, fowl, and wood (driftwood), they were able to expand their numbers relatively rapidly. With a proportionately larger population than any of the neighbouring peoples they were in a position to diffuse traits of the culture that they elaborated here to adjacent areas. Recognizing the Alaskan south coast, Kodiak Island, the eastern Aleutians, and the west coast to the Kuskokwim River as a climax for the western Eskimo may be useful in explaining traits from this area among Indians to the south and among other, and later, Eskimo.

A conservative estimate of the pre-Russian Aleut population places their number at 16,000 (Kroeber, 1939, p. 157), an estimate well supported by the quantity and size of old village sites. Thus, the twenty-two village sites of Umnak Island probably had a total population of over 2,000; Amchitka Island has forty recorded village sites, and modern Attuans tell of a tradition of 3,000 inhabitants in the Near Islands. Of that vast Aleut population but some 1,200 remain, over half of whom reside outside their aboriginal homeland, in the Pribilof Islands and in the Komandorskie Ostrova. Since the appearance of the Europeans the basis of the economy has been seriously affected through the

slaughter of sea mammals, reduction in numbers of fish, and grazing off of the vegetation. In addition, diseases, together with the early massacres, reduced the population. The decline of the Aleut population is unfortunately continuing. Nikolski village at the turn of the century had some 125 inhabitants, in 1938 only 85, and in 1950 but 59. Introduction of refined foods has resulted in much dental deterioration, most marked when the teeth of the present inhabitants are compared with the teeth of the skeletons, but also seen in the poorer teeth of the younger people as compared with the older living Aleuts. Dr. Alexander (1949) found tuberculosis, venereal diseases, scabies, refractive errors of the eyes, and trachoma the most prevalent diseases, but an interesting absence of hypertension. With proper attention, medical and social, the Aleuts could be made vigorous and enabled to make more extensive use of the vast economic resources of the Aleutian Islands which were so successfully exploited by their ancestors.

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