hoes possess a well-developed poetry. In a supplementary paper by Professor J. C. Fillmore the characteristics of Navahoe music were described, which showed that in this case also harmony is the underlying principle of primitive music.

Dr. Robert Bell, the indefatigable explorer, to whose zeal we owe much of our knowledge of the topography and geology of northern Canada, related five Algonquin myths which he collected in the region between Ottawa River and Hudson Bay. These have their close analoga among other tribes of the same stock. Magic and medicine came in for a considerable share of attention in the papers read on the first day of the proceedings. Mr. Stanbury T. Hagar treated the Micmac of Nova Scotia from this point of view, while Dr. J. H. McCormick described the medicine myths of the Cherokee, and Mr. Heli Chatelain made an interesting contribution on the customs of the natives of West Africa.

On the second day a number of papers were read referring to current superstitions of the whites in America. Mr. Robert M. Lawrence presented a vast amount of information on the folk-lore of the horseshoe, in which he dwelt upon the superstitions, referring to its form and material, and those referring to the place at which the horseshoe is used in order to secure good luck. Mr. W. W. Newell contributed a review of a collection on moon superstitions in America made by Mrs. Fanny Bergen. Dr. D. G. Brinton showed how the tendency to displace sacred words by others has led to a curious development of 'cuss words' in America.

A very comprehensive review of the customs of the Spanish in the Rio Grande Valley was presented in a paper by Captain John Bourke on 'Arabic Survivals in the Rio Grande Valley.' Dr. F. Boas discussed the dissemination of tales in America, basing his argument on a comparative study of the myths of the Indians of the North Pacific Coast. A noteworthy myth of the Navahoes was told by Dr. Matthews, in which the principle underlying the secret societies of this tribe was brought forward most clearly. This seems to be identical among all the tribes of North America: An ancestor of the Indians is taken away by certain supernatural beings and is taught by them the secrets and particularly the songs of the society. In conclusion, Dr. McCormick read a paper on negro folk-lore in America.

The work of the Folk-lore Society has shown a marked advance of late years. Although the membership has not as much increased as might be desired, the Society has been able to publish, in addition to its journal, a number of supplementary volumes dealing with special subjects, and has thus succeeded in making valuable contributions to the study of American folk-lore. This work is being carried on as energetically as possible, and in the coming year the Society expects to publish two new volumes, one on current superstitions among the English speaking people of North America, by Mrs. Fanny Bergen, and a second one, a full collection of Navahoe myths, by Dr. Washington Matthews. The Society derives much of its support from local societies which are being organized in a great number of the larger cities of our continent, but most of its success is due to the unflinching perseverance of its Secretary, Mr. W. W. Newell.

The officers elected for the coming year, are: Captain John Bourke, President; Mr. Stewart Culin, First Vice-President; Dr. F. Boas, Second Vice-President. The next annual meeting will be held in the Christmas week of this year, in Baltimore, Md.

F. B.

ALASKA AS IT WAS AND IS, 1865–1895.

(Concluded.)

AT the time of my first visit and until very recently the sole productive industry

of the Aleut people consisted in the sea-otter hunting and the fur-seal fishery. Much of their subsistence was and is obtained from the natural products of the region—fish, wild fowl, and the flesh of marine mammals. The custom of preparing clothing from the skins of birds and animals has long been abandoned. The Aleut and his family now dress in clothing of wool or cotton, burn kerosene in an American lamp, and cook their food on an iron stove. The barábora or native hut, built of sod and stones, has been generally replaced by a frame cottage, and the means for supplying these artificial wants has been obtained from the income derived from the seal and sea otter. Now that these animals are approaching extinction, at least from a commercial standpoint, the question how to provide even the modest income needed for these people is a serious one. While it is not yet settled that the half-starved Eskimo of the northern coast will adopt the new mode of life necessitated by the care and maintenance of large herds of tame reindeer, and the success of that experiment is still questionable, there is no doubt in my mind that the introduction of the deer into the Aleutian chain is not only perfectly practicable, but that it offers the only solution of the problem of providing for the Aleuts which seems to possess the elements necessary for success. There are no predacious animals to molest the deer, like the wolves of the mainland; there is an abundant supply of forage, and the climate and conditions are those that the animal is known to thrive in. A herd introduced a few years ago into Bering island, on the Russian coast, and simply let alone and protected from dogs, has increased very much in number and will soon afford skins and tallow for export. There is no obvious reason why on most of the Aleutian Islands equally good results should not be obtained. Some few deer were introduced upon the island of Amaknak, in the bay of Unalashka, a few years since, but they were the property of whites, not natives, were not protected from the numerous dogs of an adjacent settlement, and have not thriven.

When the time comes, and it seems not far away, when the natives realize that they must depend on the deer to replace the vanishing fur animals as a source of income, and when they can acquire property in deer, I believe the result will be all that could be wished.

In closing this summary of early conditions in the Territory and of the events which enabled them to be observed, it may not be out of place to summarize also the results of the scientific work of those years. Of course, only the more important points can be alluded to. As the Western Union Telegraph Expedition ended by a withdrawal from the country, and was the occasion of a large expenditure of money with no return to its promoters, no general report was ever officially prepared, and the work of the scientific corps was made known piecemeal in various technical journals. The published results were associated in the minds of students with the individual authors rather than with the expedition as a whole. The subsequent work under the auspices of the Coast Survey, which in fact grew out of the work done or attempted in the earlier exploration, has been, so far as it was geographical, regarded very naturally as incidental to the usual work of that bureau, and so far as it has been of other sorts has not been connected in the public mind with any organization in particular. The fact that the Revenue Marine, the Army and Navy, the Signal Service and several unofficial organizations or individuals have carried out praiseworthy explorations with most excellent results has led to the further obscuration of the earlier work as a connected whole. I believe no one of those engaged in it has yet attempted to

enumerate the results, either general or scientific, directly or indirectly consequent upon the expedition. The present summary may therefore serve a useful purpose.

The most important result which indirectly came about from the explorations by our parties was the acquisition of Alaska by the United States. While the transfer might have been proposed and the question discussed if there never had been any telegraph expedition, yet I believe, in view of the opposition which existed in Congress and the cheap ridicule of part of the daily press, that if it had not been for the interest excited by the expedition and the information which its members were able to furnish to the friends of the purchase the proposition would have failed to win approval.

But, leaving such questions apart and considering merely the scientific results, the expedition made weighty additions to geographical knowledge. To it we owe the first mapping of the Yukon from actual exploration, adding to the list of American rivers one of the largest known. Old maps of North America made the Rocky mountains extend in nearly a straight line northward to the Polar sea. Our explorations showed that the mountains curved to the westward, leaving a gap to the northward through which the Canadian fauna reached to the shores of the Pacific and Bering sea. The general faunal distribution of life at this end of the continent in its broader sense was settled then and there. A general knowledge of the country, till then practically unknown except to a few fur traders, was obtained and made public. To the Coast Survey work of 1871–'74 we owe some forty charts, a large proportion of which are of harbors or passages never previously surveyed. In preparing a Coast Pilot of southeastern Alaska, while that part of it useful to navigators was in the nature of things rapidly superseded, yet the work, being conscientious and thorough in the matter of names, practically settled the geographic nomenclature of that region for all time. The myth of a branch of the Kuro Siwo or Japanese warm current running north through Bering sea and strait and producing open water in the Polar sea still lingers in some dark corners of geographic literature; but our researches, covering actual observation, the whole literature, and scores of old manuscript logbooks, conclusively show that there is no such current as that referred to, and that the currents which do exist have no connection whatever with the Japanese stream. Meteorological observations were kept up in all those years, and afterward a complete synopsis of all the recorded meteorological data for that region was prepared and issued by the Coast Survey with abundant illustrations. One of the results of the magnetic observations made by our party, in the endeavor to correct the discrepancies between the variation of the compass needle as shown on the charts of Bering sea and strait and those observed by present navigators, was the discovery that the needle had reached its easternmost elongation and had for some time been receding in the amount of its variation. In gathering confirmatory data during 1874 and 1880 more than forty stations in all parts of the Territory were occupied. As in the case of the meteorology, the literature and all practicable sources were ransacked for magnetic records,* and these, with our own observations, were utilized in the excellent discussions of Alaskan magnetism by Dr. C. A. Schott.

In geology we were tutored before sailing in 1865 by Prof. Agassiz and carried with us a written schedule of observations to be made on the glaciers. Our explorations showed that north of the Alaskan moun-

*This work was almost entirely done by Mr. Marcus Baker.

tains, as in some parts of Siberia, there are no glaciers, and there has been no glaciation in the ordinary sense, but that in its stead we have the singular phenomenon of the Ground ice formation, a state of affairs in which ice plays the part of a more or less regularly interstratified rock, above which are the clays containing remains of the mammoth and other animals, showing that they became extinct not because of the refrigeration of the region, but coincidently with the coming of a warmer climate.

In anthropology, in addition to large collections obtained from the living tribes, vocabularies, etc., the names and boundaries of all the tribes were obtained for the first time, the Eskimo were shown to exist on the Asiatic coast as immigrants driven by war from America, and a very ancient confusion of these people with the Asiatic Chukchi was definitely cleared up. The data obtained in regard to the various branches of the Eskimo stock brought welcome confirmation to the theory of Rink on the origin of this people—a theory which would probably have been by this time more widely known if it had been more sensational and less scientific.

The patient examination of many village sites, shell heaps, and middens throughout the Aleutian chain resulted in the discovery that the successive strata, judged by the implements found in them, showed a gradual progress in culture from that of the lowest, a crude Eskimo type, to that of the uppermost stratum, which contained the evidences of Aleut culture of the type immediately before their subjugation by the Russians. This was, I believe, at that time the first instance in which the paleontologic method, if I may call it so, had been applied to the study of American shell-heaps.

In biology the first object of the work planned by Kennicott had been the determination of what constituted the fauna and flora, and from that knowledge the determination of the relations between the Asiatic and American assemblies. This was accomplished in essentials, though it need not be said that the details will still supply an opportunity for study for many a year to come. The enumeration of the greater part of the population of mammals, birds and fishes has been accomplished and the plants have been fairly well collected, so that we know that the fauna and flora, deduction being made of circumboreal species, are essentially American and not tinctured to any marked extent with Asiatic ingredients. Among the lower animals the brachiopods, hydroid zoöphytes and corallines; part of the sponges; the limpets, chitons and nudibranchs among the mollusks, have been monographically studied. The crustacea, insects, and a large part of the the mollusks yet remain to be worked up in a similar manner.

To close the record of achievement, I may mention the biblography of Alaskan literature, prepared by Mr. Baker and myself, which, up to May, 1879, when it went to press, comprised 3,832 titles in eleven languages. Since it was published by the Coast Survey nearly as many more have been accumulated, and the list probably will continue to increase from year to year.

Since my field work closed, in 1880, Alaskans have not been idle. The prospector has invaded the recesses of the land, and surveys, explorations and mountaineering have been almost constantly carried on. The tourist has discovered the country and written books which, although they have the resemblance of one pea to another, have nevertheless carried tidings of Alaska to most corners of the Union. Alaska in one sense is no longer unknown, and she is even beginning to be understood and appreciated. The missionary has been up and down in the land, and has done much good in many ways, not without occasional mistakes.

It was, therefore, with curiosity as well interest that I returned to the Territory last May, after an absence of fifteen years. In looking back on the summer's experiences, a comparison between the Alaska of 1865 and that of 1895 naturally suggests itself. I was rash enough twenty-five years ago to indulge in prophecy as to the future of the Territory. I did not count on the inertia of Congress or the stupidity of officials, as I might now. Nevertheless progress has been made, and a summary of present conditions, perhaps even a peep into the future, is not inappropriate at this time.

Since 1865 the fur-seal fishery has risen, produced its millions, and declined to a point where its close in a commercial sense may almost be predicted. The first fisherman sought the cod in that year, and a modest fleet has kept the business going ever since, with more or less fluctuation in the catch. The salmon canner was then unknown, but has since invaded nearly every important fishing site. The placer miner has developed and exhausted the gold of the Stikine region, and pushed on to the head waters of the Yukon and its affluents. The clink of the drill and the monotonous beat of the stamp mill are familiar sounds on the quartz ledges, which in 1865 lay peacefully under their blankets of moss. The whaling fleet has laid its bones on the sandy bars of the Arctic coast, while the innovating steam whaler has pushed its way past Point Barrow into the very fastness of the ice at Herschel island, to find, in its turn, its occupation gradually passing away. The imperial sea otter is on the way to becoming a memory, and the Aleuts, his persecutors, are not unlikely to follow him.

As regards the inhabitants of the Territory, a complete change is conspicuous. Some thousands of white fisherman, hunters, miners and prospectors are now scattered along the coast and rivers, on the whole a hard-working, orderly set, with here and there a rascally whisky smuggler or a stranded gentleman. Apart from a few mining camps, the parasites who live by the vices of others are few. A country where he who would live must work is not attractive to them. Cut off from direct contact with the rest of the United States, Alaska is really a colony and not a frontier territory in the sense usually understood. As such, its needs should have been the subject of study and appropriate legislation, the neglect of which by Congress so far is bitterly and justly resented by the entire population. Into political matters I shall not enter, but must observe that among the numerous ill-paid officials few are well prepared to handle all the difficult questions presented in such a community, and the executive, such as it is, is without the legal authority or the proper facilities for governing or even visiting the greater part of the region it is supposed to control. The state of the law is uncertain, the seat of authority obscure, divided illegitimately between naval officers, the revenue-cutter service, and a powerless Governor, who, whatever his wishes and intentions, is not permitted by the law to control anything. If it were not for the orderly character and good sense of the white population, the Territory might easily become a pandemonium. This condition of things is disgraceful, and reform is urgently needed.

The change in the native population of southeastern Alaska is very marked. In a general way a similar change has taken place all over the Territory. The primitive condition of the natives has almost wholly disappeared. The turf-covered hut has given way to frame shanties; log houses are rarely built; the native dress has disappeared, replaced by cheap ready-made clothing; native manufactures, utensils, weapons, curios, all are gone, or made only in coarse facsimile for sale to tourists; the native buys flour and tea, cooks his salmon in a frying pan, and catches his cod or hali-

but with a Birmingham hook and a Gloucester line. In the whole of southern Alaska, thanks to the schools, the children and many young people speak fairly good English. If the present influences continue, another generation will see the use of English universal and the native languages chiefly obsolete. The day of the ethnological collector is past. Southeastern Alaska is swept clean of relics; hardly a shaman's grave remains inviolate.

In other parts of the Territory the same is more or less true. The native population is focusing about the commercial centers. The people gather where work and trade afford opportunities, and I have seen more than one pretentious church standing empty among the abandoned houses of a formerly prosperous village. There is some admixture of blood in marriages between the often attractive 'Creole' women and the incoming settlers. These marriages are often very fruitful, but the pure-blooded natives seem to be diminishing. The Aleuts, whose census is accurately made annually by the Greek Church, are distinctly losing ground, and will doubtless pass away in a few generations. The same is probably true of the Tlinkit people. As we approach the Arctic region, changes of all sorts are less marked and civilization has had less effect. Here the subsistence of the natives presents serious and increasing difficulties. Their natural food supply has been practically destroyed by the whites and by repeating firearms, of which the natives have many. The whales are almost extinct, and the whaling fleet itself is nearly so. The walrus preceded the whale, and the hair seal has never been sufficiently abundant in this region for a sole resource. The chief salmon streams are or soon will be monopolized by the whites near the sea, and the natives of the upper Yukon will go hungry. The present law allows unrestricted fishing to the natives and a close time of one day a week for the whites. The latter hire the natives to fish during the prohibited day, and so the salmon have no close time. Where a salmon stream is monopolized by one firm, they do not usually cut their own throats by taking all the salmon, but where there are several competing firms there is little respite for the fish.

The cod fishery was for some years carried on by two competing firms, who have now composed their differences. They had salting stations on shore, and bought fish at so much a thousand from fishermen, who used small sailing vessels or dories and fished near shore. Now it is found cheaper and, for other reasons, preferable to return to the older system of fishing in the open sea from a sea-going vessel, as on the banks at the East. The preparation of the Alaska fish has often been hasty, careless and inferior to that done in the East; so Alaska codfish, originally of equal quality, are less esteemed commercially than the Eastern cod. For some reason I do not understand the Pacific Ocean at best offers but a small market for fish under present conditions, and so I look to see the codfishing industry develop slowly and perhaps be the last, as it is, in my opinion, the most substantial and important of the resources of the Territory. At present the salmon are commercially more important, but unless more effectively supervised and regulated they will meet with the same fate as the fisheries of California and the Columbia river. There should be a resident inspector at every important fishery, and as the business is carried on for at most two or three months in the year, a vigilant inspection by a cutter or fisheries vessel told off for this especial work would counteract any tendency to bribe the resident inspector. I have seen 3,500,000 pounds of canned salmon taken in one season from one small stream, representing at least 5,000,000 pounds of eatable

fish, and it seems that an annual supply of the best fish food like that is worth preserving; but if the work is to be put into the hands of the lowest class of political appointees, instead of intelligent experts, making the offices will not save the fish.

In the matter of furs we may regard the fur seal fishery as doomed. It is probable that few of the pelagic sealers will pay expenses after this season, and two or three years are likely to see the end of the business. It is costing us much more than the catch is worth now, and the most sensible way of ending the matter is generally felt to be the destruction at one fell swoop of all the seals remaining on the islands and the abandonment of the business.

The continental furs, owing to competition between traders, are now selling for nearly their full market value, and little profit can be expected from them. They are also growing more and more scarce, as the high prices stimulate trapping. The natural and satisfactory offset to this would be the establishment of preserves, such as the 'fox farms,' of which mention has been frequently made in the daily press. Many of these have been started, and the multitudinous islands offer opportunities for many more; but the business is hazardous, since there is no protection against poachers, and a very ill-judged attempt has been made by the Treasury, I am informed, to impose, in addition to the annual sum for which the island is leased, a 'tax' of $5 on each fox killed over twenty from each 'farm.' It is doubtful if the Treasury is entitled to tax anybody without the explicit authority of Congress, and a tax of 50 per cent. on the gross value of the product not only is oppressive and exorbitant, but will put a stop to a business which should be encouraged.

The timber of Alaska, though by no means insignificant, is not likely to be much sought for, except for local purposes, for many years. I may point out, however, that there are millions of acres here densely covered with the spruce best suited for wood pulp, and plenty of water power for pulpmills, so that this resource is not without a future.

A forthcoming report of the United States Geological Survey will treat of the existing and prospective mining industries.

To sum up, it may be said that the whaling and sealing industries of Alaska are practically exhausted, the fur trade is in its decadence, the salmon canning in the full tide of prosperity, but conducted in a wasteful and destructive manner which cannot long be continued with impunity. The cod and herring fisheries are imperfectly developed, but have a substantial future with proper treatment. Mineral resources and timber have hardly been touched. No business-like experiment with sheep or cattle on the islands has been tried by competent hands, while the introduction of reindeer, though promising well, is still in the experimental stage. Socially, the Territory is in a transition state, the industries of the unexploited wilderness are passing away, while the time of steady, business-like development of the more latent resources has not yet arrived. The magnificent scenery, glaciers and volcanoes make it certain that Alaska will in the future be to the rest of the United States what Norway is to western Europe—the goal of tourists, hunters and fishermen. Agriculture will be restricted to gardening and the culture of quick growing and hardy vegetables for local use. The prosecution of most Alaskan industries being in untrained hands, failures and disapointment will no doubt be frequent, but when the pressure of population enforces more sensible methods, the Territory will support in reasonable comfort a fair number of hardy and industrious inhabitants.

WM. H. DALL.