rate of about \$215 a million, or about 46 fry for one cent. Another interesting fact to note is, that, for the entire time up to and including 1882, there were produced 200,000,000 young shad; while, for 1883 alone, the total was over 90,000,000. This indicates that we are certainly approaching a position where the work may be regarded as profitable from a commercial stand-point.

THE COAST TRIBES OF BRITISH COLUMBIA.

Dr. Franz Boas, who visited the tribes of British Columbia in the fall of 1886, gives the following preliminary report (with map) on some results of his journey:—

Vancouver Island and the mainland opposite are inhabited by numerous tribes, which belong to three linguistic stocks, - the West Vancouver tribes, of the outside coast of Vancouver Island; the Selish tribes, which occupy the south-east part of the island as far as the narrows separating it from the mainland, and inhabit the banks of the lower part of Fraser River and the neighboring fiords; and the Kwakiutl tribes, which occupy the northern part of the island, and the mainland as far north as Gardner Channel. The latter tribes surround the territory of the Bilhula of Bentinck Arm and Dean Inlet, a tribe belonging to the Selish stock. Farther north we find the Tsimpshian and Tlingit on the mainland, and the Haida on Queen Chartotte Islands.

The Selish language is divided into a great number of dialects, differing widely from one another. Under the name 'Coast Selish' we include the dialects of Puget Sound and of the Gulf of Georgia, as those dialects are more closely connected with one another than with the Selish dialects of the interior.

Through the descriptions of Swan, Sproat, Krause, and others, the mode of life of these tribes is tolerably well known. Their large wooden houses, their canoes, their fishing-gear and hunting-methods, have been frequently described; but their traditions, religious ideas, and social organization are not known equally well. According to all observers, the principal figure in the mythology of the Tlingit is the raven Yetl, who created the sun, moon, and stars, who gave man the fresh water and the fish, and whose exploits are said to be so numerous that a lifetime is not sufficient to relate them all. Dawson found the same traditions among the Haida; and, according to the Rev. Mr. Duncan, the Tsimpshian tell the same stories of Tghemshen, the man who was able to transform himself into a raven. It is a characteristic feature of the 'raven' legend that the bird did not create all things for the benefit of mankind, but in order to revenge himself. While studying the tribes of Vancouver Island, numerous traces of this legend were found, though only very fragmentary and disconnected. Among these people the raven is not considered the creator of the sun, the water, the trees, etc.; but his adventures, which generally refer to his voracious appetite, and his cheating people and animals in order to satisfy it, are frequently related by the natives.

The most important legends of the Kwakiutl are those referring to Kanikilak. They believe in a supreme being living in heaven, whom they call Kantsoump ('our father,' or, in some instances, 'our elder brother'). He sent down to the earth his two sons Kanikilak and Nomokois, who were born there again of a woman, the wife of the woodpecker. Their mother's blanket contained the salmon, which they liberated by dipping the corner of the blanket into the water. Then Kanikilak travelled over all the world, becoming the friend of all the mighty chiefs whom he met on his way, and transforming all the malignant men into animals. The name, in the Kwakiutl language, of those ancient beings who were neither men nor animals, is Nughnemis. We find the same or a similar tradition belonging to all the tribes from Puget Sound to the district of the Tsimpshian. Among the Selish tribes the name of the son of God is Häls; among those of the west coast the name is Alis. The northern tribes - the Tsimpshian, Haida, and Tlingit - tell of those human-like beings which were transformed into animals during a great flood.

The supreme being spoken of above seems to have originally been the sun, though the identity of both does not appear very distinctly in the traditions of the natives. However, their ancient identity may have been lost in course of time, as among all the tribes legends of different origins are evidently intermixed. In the same way as the raven story has spread south, losing on the way its important place in the mythology of the tribes, the Kanikilak story seems to have spread north; and the traditions, in their present state, seem to consist of elements of at least two different origins. The Skoamish call the sun 'the great wandering chief.' The Nanaimo (Snanaimugh), in speaking of the sun as the supreme being, call it Shimthayith. The Bilhula call their supreme being, besides Taata ('our father'), by the name Sngh, which is evidently connected with songh In the Kwakiutl legends the sun is ('sun'). the father of the mink, and this tradition is so closely connected with others relating to the

supreme being, that the identity of both becomes highly probable. The tribes of the southern part of Vancouver Island ascribe to the mink all the exploits that are told farther north as having been accomplished by the raven, and add a great number of others which belong to the mink alone. The Qomoks of the central part of Vancouver Island relate both traditions separately. Those of the raven refer to its voracious appetite, while those of the mink have a highly erotic character.

The Qomoks, Heiltsuk, and the Bilhula of Bentinck Arm are particularly interesting, as we may observe with them the transferrence of legends from one tribe to another. The Bilhula have a tradition of their own describing the origin of mountains, woods, and animals, which, though influenced by the legends of the Tlingit and Tsimpshian, has a peculiar character. They say that after the raven had created the sun, four men - Masmasalanigh, Yulatimot, Matlapalitsek, and Matlipekoagh -- descended from heaven and created every thing, after which they returned. Masmasalanigh and the raven are said to be identical, and all his works originated in Yulatimot's mind. The same tradition is found among the Heiltsuk. Though they speak a dialect of the Kwakiutl, their customs and their belief are closely allied to those of the Bilhula. They say that two men, Masmasalanigh and Noakaua, descended from heaven and created every thing. Similarly the Qomoks, who belong to the Selish family, have adopted a great number of traditions and customs of the Kwakiutl.

The most important of these is the cannibalism connected with the winter dances. The custom prevails among the Kwakiutl, Tsimpshian, Bilhula, and Qomoks, and is said by some natives to be practised by the Tlingit. According to the Kwakiutl tradition, one of their ancestors descended from heaven, wearing a ring of red-cedar bark, and taught people the cannibal ceremonies. Tsimpshian tell of a man who, in pursuit of a bear, came to a mountain that closed upon him. In the interior he learned the dances connected with the cannibal ceremonies, and taught them to his tribe after his return. This custom has evidently been adopted only by the Bilhula, as none of the Selish tribes except the Qomoks practise it. The latter have adopted only part of the ceremonies, and replace the terrible practice of devouring corpses by eating artificial ones, that are made by sewing dried halibut to a human skeleton.

Among the northern tribes originated the use of the well-known copper plates, which are highly prized, and which increase in value the more frequently they change their proprietor, and the longer their history is. They became known to the Bilhula quite recently, and I am told by old natives that they have never been in use among the Indians at the mouth of Fraser River.

There is a remarkable difference between the social institutions of the Tsimpshian, Tlingit, and Haida, and those of the rest of the tribes. Among the former the children belong to the gens to which the mother belongs: among the latter they follow the father's gens. This fact indicates a close connection between the Kwakiutl and Selish tribes: and, as a consideration of the languages shows some affinity of the two peoples, it is possible that the Kwakiutl are a remote branch of the Selish stock. The animal crest which prevails in the north is not found among the southern tribes. Their gentes derive their origin from a fabulous being which descended from heaven dressed in a bird's skin or in the shape of a man. Members of one gens are not allowed to intermarry, but have to take their wife or husband from another gens. In some of the tribes there are as many as from fifteen to twenty gentes.

Every tribe owns its district for fishing and hunting purposes and for gathering berries. Inside the boundaries of the tribe, each family has its own claim to certain rivers and parts of the coast, which they derive from their ancestor; but we are far from knowing the actual distribution of tribes and gentes. Even their number and names are still doubtful in many of the districts.

The common culture which extends over tribes of a great number of linguistic stocks of the north-west coast is one of the most attractive problems of American ethnology, and one deserving a thorough study. However, the ethnological character of these Indians is disappearing rapidly through their permanent contact with the whites; and within a few years it will be too late to collect the vast material that may readily be gathered at the present time. Puget Sound, the Selish of the interior, the Tsimpshian, are actually unknown, and an explorer may glean ample results by visiting some of these tribes, and contribute new and valuable material to American ethnology.

LONDON LETTER.

THE theory of Prof. G. H. Darwin, enunciated in a recent number of the Fortnightly review, that the actual origin of earthquake-shocks is usually to be traced below the bed of the sea not far from the coast, will probably receive a certain amount of confirmation when all the observations on the recent earthquake in the Riviera are collated and discussed. The steamship Carina, of Cardiff, off Savona, on the morning of the fatal Wednesday,



