

PACIFIC OCEAN SHOULD YIELD BILLION ANNUALLY

A billion dollars annually. That is the wealth that the Pacific Ocean should yield to man provided man takes the trouble to properly conserve and regulate the utilization of the natural resources of the Sea. According to Dr. Barton Warren Evermann, director of the museum of the California Academy of Sciences, the only way in which this income from the sea can be obtained is through the restoration of the fur-seal herds of the south Pacific and Antarctic. And this is to be accomplished by an international agreement among the maritime nations of the world.

"The aquatic natural resources of the Pacific are many and enormously valuable," Dr. Evermann explained. "They consist of the marine mammals of which there are between forty and fifty species, including fur-seals, whales, and sea otters; the food fishes, such as salmon, cod, herring, halibut and tuna; the invertebrates, such as oysters, clams, possessing great possibilities, and a great multitude of miscellaneous animals and plants, as sea turtles,

"The aggregate annual product of these various resources can easily be made to reach fully one billion dollars, when proper fishery methods and conservation measures are enforced. The fisheries for many of these resources are carried on outside of the three mile limit where there can be no restriction except through international agreement. The result has been that many of these resources, such as fur seals, sea otters, whales, and others have in many places been already reduced to commercial extinction.

"In the north Pacific are three species of fur seal, -- one belonging to Japan, one to Russia, and one to the United States. The Alaska or ³/₄American herd is the most important. When the United States came into possession of this herd in 1867, there were probably 3,000,000 seals in it. Our government gave to the Alaska Commercial Company the exclusive right to kill the seals. The fur seal is highly polygamous; one male to every 40 or 50 females is all that is necessary for breeding purposes. As the young are equally divided between the sexes it is evident that for every forty males born thirty-nine are not needed for breeding purposes and can therefore be killed for their skins.

Under the lease of the Alaska Commercial Company they were able to kill about 100,000 of these surplus males every year without diminishing the size of the herd. So long as this selective killing was done the herd remained normal in size.

"But in the early eighties certain people from Victoria and elsewhere discovered that they could go out in boats, intercept the seals in their return migration, and kill enough to make the business very profitable. They could not select the males for killing; the majority of those they killed were females and that meant the killing of the breeding stock. As a result, the herd decreased rapidly so that by 1912 there were only about 127,000 left. The herd had almost reached commercial extinction.

"Subjects of Great Britain and Japan were the ones chiefly engaged in killing seals on the high seas, and the United States appealed to those countries to enter into a treaty with the United States by which pelagic sealing would be unlawful. To induce those countries to do that, the United States offered them each fifteen per cent. of all the seals we would kill on our islands. They

accepted the offer, signed the treaty, and pelagic sealing stopped in 1912. Since then the herd has increased from 127,000 in 1912 to over 700,000 in 1924, and the government is now able to kill 25,000 to 40,000 surplus young males every year worth from one to two million dollars annually. This shows how rapidly a once dwindling resource can be restored under proper international agreement.

"In the southern Pacific and the Antarctic are remnants of more than a score of fur-seal herds which have long been commercially extinct, but which can be restored to vast commercial importance as has the Alaska fur-seal herd,"

WOMAN BOTANIST CLIMBS HIGH BRAZILIAN PEAKS

Penetrating a desert to see a waterfall as great as Niagara, climbing the highest peaks in eastern Brazil, botanizing over ground where no collector has been since the time of Napoleon, were features of the scientific explorations of Mrs. Agnes Chase, botanist of the U.S. National Herbarium, just returned from seven months in the wilds of the South American republic.

"Many people have the idea that Brazil is a country of unbroken jungle," said Mrs. Chase. "As a matter of fact, most of the eastern plateau that makes up the great eastern 'shoulder' of South America on the map is too high and dry for forests, and is either grassland or what we would call in this country 'high scrub' or chaparral. Since I was looking especially for species of grasses, it was into this region that I went.

"I went first into the upland country back of Pernambuco. This is a poor, barren land, semi-desert, and rapidly being turned into complete desert by heavy over-grazing. There is no transportation here except on donkey-back, and the large numbers of animals required to do a little work are simply eating the country bare. It was in this region that I saw the great Paulo Alfonso falls, a cataract as great as Niagara, in the midst of a barren desert. Near these falls I picked up some shells, which I am told are a new species of snail.

"Then I went southward, into the more temperate province of Minas Geraes. This is a more fertile, better settled region, with rolling hills like Nebraska; only the grass is long and high instead of short as on our prairies. It was down in this southern country also that I did my mountain climbing. I ascended the two highest peaks in Brazil east of the Andes, both of them nearly ten thousand feet in elevation. One of them was pretty easy, but the other was a really difficult climb.

"In this richer region, collecting of course was much better. I got the larger number of specimens here. My entire collection amounts to something like 2,000 specimens, including some 500 grasses. We haven't examined them all yet, but there will probably be several new species; and there are many that I found growing abundantly that were known before from only a single specimen."

The North Pole does not remain in the same place, but may move as much as 60 feet in a few months. It usually remains, however, within a square 60 feet on a side.
