

A CURIOUS INHABITANT OF THE SARGASSO SEA AND ITS NEST.

What is generally known as the Sargasso Sea is the vast area of 260,000 square miles, more or less, to the west and southwest of the Azore Islands, reaching to the Bahamas westward, and finding its northern and southern boundaries in the 36th and 19th degrees of latitude. Other areas, notably that in the Pacific, five hundred miles E. S. E. of New Zealand, and, again, one thousand miles west of San Francisco, possess the same characteristics, but the former is the best known and defined. The great Atlantic currents form a gigantic eddy, thus collecting the algæ that forms its component parts. The vegetable fauna is generally comprehended in the two genera, *Fucus* and *Sargassum*, of the latter two species, namely, *vulgare* and *bacciferum*.

The disconnected masses of weed that make up the "Sargasso Sea" are usually "from a couple of feet to two or three yards in diameter, sometimes much larger; we have seen, on one or two occasions, fields several acres in extent, and such expanses are probably more frequent nearer the center of its area of distribution. They consist of a single layer of feathery bunches of the weed (*Sargassum bacciferum*), not matted, but floating nearly free of one another, only sufficiently entangled for the mass to keep together. Each tuft has a central brown thread-like branching stem studded with round air vesicles on short stalks, most of those near the center dead and coated with a beautiful netted white polyzoon.

After a time vesicles so incrustated break off, and where there is much gulf weed the sea is studded with these little separate white balls. A short way from the center, toward the end of the branches, the serrated willow-like leaves of the plant begin; at first brown and rigid, but becoming, further on in the branch, paler, more delicate, and more active in their vitality. The young fresh leaves and air vesicles are usually ornamented with the stalked vases of a *Campanularia*. The general color of the mass of weed is thus olive in all its shades, but the golden-olive of the young and growing branches greatly predominates. This color is, however, greatly broken up by the delicate branching of the weed, blotched with the vivid white of the incrusting polyzoon, and riddled by reflections from the bright blue water gleaming through the spaces in the network. The general effect of a number of such fields and patches of weed, in abrupt and yet most harmonious contrast with the lanes of intense indigo which separate them, is very pleasing."

The animal life of this area is characteristic and has certain peculiarities well worthy the attention of the student. It consists of shellless mollusks, as the *Scillaea pelagica*, a short-tailed crab, the *Nautilograptus minutus*, quantities of membranipora, and a peculiar fish, the subject of our illustration, known as the *Antennarius marmoratus*. The writer was fortunate in observing the latter on the outskirts of this vast area. It forms one of the most interesting examples of the many creatures that find safety in protective resemblances. As above mentioned, the weed as it floats assumes all shades of olive, and the fish in color is its exact prototype, flecked with irregular patches of darker and lighter shades. Not only in color does it mimic the weed, but in general appearance, the head and fins being dotted here and there with fantastic barbels of flesh that to the ordinary observer seem bits of weed growing upon it. Even the white polyzoon growing on the algæ is imitated, and a careful examination is necessary to distinguish the fish from its surroundings. It was oftener found lying in among the weed, but where the patches were small, was frequently seen lazily swimming around in clear water. Its nest, seen in the accompanying illustration is, no less a curiosity. It is a round or oval ball of weed, intertwined and wound together in a most complicated manner by an invisible viscid secretion from the fish. The pieces of weed are first roughly caught together, and the eggs deposited among the branches; then the invisible bands are wound around, gradually drawing them into the oval form, about as large as a base ball. The instinct, and its peculiar endowment by nature, place this fish among the most interesting of the finny tribe.

The Number of Botanical Species.

Dr. Muller, of Geneva, has recently made the following calculation as to the total number of existing botanical species: We have at present described in our books about 130,000 species; and if we suppose that, in round numbers, 30,000 belong to countries like Europe and North America, where there are hardly any species, excepting some cryptogamic ones, to be discovered, the remainder, or 100,000, representing exotic plants, more or

less tropical and southern, we may double the latter for new species, giving 200,000 for these less known regions, and altogether 230,000 for the whole globe, with the exception of countries still quite unknown botanically. Adding only 20,000 species for the latter, we reach a minimum sum of 250,000 species of plants.

SEVRES VASE.

We give an engraving of a vase from the manufactory at Sèvres. It is of the *pâte dure* variety, and has all the



SEVRES VASE.

finish and beauty for which the productions of the Sèvres factory are noted.

The Musk Ox as a Geographical Clew.

Until recently it has been supposed that Wrangell Land—where Lieut. De Long hoped to spend the first winter of the Jeannette expedition—had never been visited by civilized man. It has now come to light that a German trader, Capt. E. Dallmann, made two landings there in the summer of 1866. His neglect to claim public credit for his discovery till now would appear to be due partly to his ignorance of

the geographical significance of Wrangell Land, and partly to the fact that he has been away from Europe since that region came into prominence in connection with the Jeannette expedition.

On his first visit Captain Dallmann landed in latitude about 70° 41' north and longitude 178° 30' west. The land formed on the southern side a rather deep, wide, open bay, lying west of a ridge about five hundred feet high. To the eastward of this ridge the land stretched more to the northeast. The land, as far as he could see, had a narrow and level beach, like the northeastern coast of Siberia, behind which it rose to heights of from five hundred to one thousand feet, the last named elevation, however, occurring rarely. He saw no signs of human habitations, but found a great many tracks of animals, apparently those of polar bears, foxes, and musk oxen.

Speaking of the reference to the last named animal, and of the statement made elsewhere by Captain Dallmann, that he purchased the horns of musk oxen from native hunters in Northern Siberia, Mr. George Keunan (who is soon to lead a government expedition to the north coast of Alaska) says:

"The musk ox is a native of Arctic America and Greenland, and is entirely unknown in Siberia. If, therefore, that animal exists on Wrangell Land, the fact points to an extension of that land across the Pole, or to its junction with Arctic America at some point north and east of Point Barrow. The fact, so far as it goes, tends to corroborate other evidence, or at least indications, which we have, that the Arctic Ocean north of Behring Strait and east of Wrangell Land is a partially inclosed sea, with Wrangell Land and perhaps a chain of islands for its western and northern boundaries. The fact that natives of the North Siberian coast were in possession of the horns of musk oxen is significant in still another way, since it shows that those natives must have crossed Long's Strait and hunted the animals where Captain Dallmann saw their tracks, viz., on Wrangell Land. Finally, Captain Dallmann's statements, taken in connection with that of Captain Long, of the bark Nile, prove that during two consecutive seasons—1866 and 1867—the southeastern coast of Wrangell Land was easily accessible, and the adjacent sea entirely free from ice."

Lethe and the Gardens of the Hesperides.

At the recent meeting of the American Geographical Society in this city, Lieutenant Commander Gorringe read an entertaining paper entitled "A Cruise along the Northern Coast of Africa." Describing a trip from the Gulf of Gabe to the site of the proposed "Inland sea"—a desert area of about 3,000 square miles, which the French talk of flooding by means of a canal, over a hundred miles long, through the Chotts of Algeria—the reader said:

"In the neighborhood of Benghazi the surface of the ground is frequently broken by precipitous chasms, fifty or sixty feet in depth; at the bottom there is invariably a surface of rich soil, and also an abundant supply of moisture. The change from the arid and barren surface of the surrounding desert to these spots of luxuriant vegetation is very striking. The gardens of the Hesperides are believed to have been in the vicinity of Berenice, and many are of the opinion that these fertile spots at the bottom of the chasms are what remains of them. In one of the chasms, about seven miles from Benghazi, is the entrance to a cave which leads to an extensive sheet of water, believed to be identical with the river Lethe. I transported a boat across the desert on the backs of two donkeys side by side, and launched it on the waters of this famed river, which we found clear and cool and fresh as if constantly supplied by springs. It appears to run through a series of chambers, with very narrow passages connecting them, in which we observed a sensible current. The walls of the chambers are in part at least artificial, and on them are engraved many inscriptions. No extended exploration of this curious subterranean stream has ever been made; no one knows where it comes from or where it goes to, and it would be very interesting to find out, and instructive to copy the inscriptions, some of which are believed to be in Punic characters. I can very well understand the extravagant terms in which the ancients described the Lethe. In the spring there prevails along this coast a hot air blast—it cannot be called a wind—that comes from the great desert further south. The air is laden with insects and fine particles of sand, and is hotter and drier than any one who has not experienced it can conceive of. I have observed a temperature of 131° Fahr. in the shade during one of these blasts, called by the natives *oibels*.



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