presence of calcium carbonate and silicified organic remains, both characteristic of soils from the general region west of the Missouri. These characteristics taken together make it probable that this dust could not have originated east of the Mississippi River.

The fall at St. Johnsbury, Vermont, was estimated by observers at ten tons to the square mile. At Keene and Peterboro, New Hampshire, it was considerably less and the dust particles were much finer. The Peterboro sample showed an ignition loss of 15 per cent., which probably means that it is largely colloidal. This deduction is also indicated by microscopic examination. It would appear that there was considerable air elutriation or mechanical separation by air currents during the passage of the dust cloud toward the northeast.

The silt of the Wells River sample apparently contained as much or more lime than the colloidal matter. A fall of ten tons to the square mile amounts to 1,080 pounds of lime for that area. It can thus be seen that the quantity of plant food elements transferred long distances by dust storms may be considerable.

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OCEAN SUNFISH IN HABANA WATERS

DURING the night of March 24, 1936, a large pointed-tailed sunfish (*Masturus lanceolatus*) was captured in Habana. It had entered the Almendares River a distance of 200 yards and was in a deep pool from which it could not escape when discovered. It was harpooned and gaffed and after a struggle of three hours was finally landed. The carcass was placed on exhibition, where it remained four days. Before being removed and disposed of it was opened and dismembered. There were no ossified bones in the skeleton. The substance of the skull and the spinal column resembled a hard stiff jelly or the meat of a ripe coconut. The rib, fin and tail bones were cartilaginous. The intestines were empty, except for a single fragment of seaweed and a small amount of dark fluid resembling thin mud. Both the intestines and the surface of the liver were infested with parasites. The same observation was recorded by Howell. A sucker-fish was found in the rear part of the buccal cavity. The fishermen are familiar with the sucker-fish that attach themselves to the surface of other fish, and they stated that the one found in the sunfish was different from any they knew.

The animal was 8 feet 6 inches long, 4 feet 3 inches deep in front of the dorsal fin and 8 feet 3 inches high through the dorsal and ventral fins. The dorsal fin was 2 feet 10 inches long and the ventral fin 2 feet 4 inches. The weight was estimated to be 1,200 pounds.

This is the second reported occurrence of the pointed-tailed sunfish in Habana waters. The other was reported by Howell[1] in 1934.

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SPONGE CONSERVATION

ON a recent visit to Tarpon Springs, Florida, I had an opportunity to see the sponging industry in that place, which is the largest of its kind in the world. Here is a sponge exchange to which are brought the catches for auctioning to the sponge buyers. I listened to the owner of the exchange addressing our group on sponging methods and was particularly impressed with his statements about the age of the industry, which he claimed had prospered in his native land, Greece, for more than two thousand years. I was still more impressed with the little change that had taken place in the sponging industry through these centuries. The only improvement that seems to have been made is in the use of gear to enable one to obtain from the deeper reaches of the sea the harvest that he seeks.

The wastefulness of the methods used to-day is the same as that in the ages gone by, and in this time of conservation it has occurred to me that scientific methods should be employed in the gathering of sponges.

Sponge culture, such as was carried on on Chase's Key in Florida prior to the war, showed that cuttings of sheepswool sponges an inch in size would grow to marketable size in from two to four years, depending on the species in question, and that method was there employed for cultivating or, let us say, growing sponges under controlled conditions.

To-day spongers merely rip the animals from their moorings, then haul them out on the beach to die, returning them to the sea long enough to macerate them and until the minute marine organisms clear away the flesh, leaving the spongy fiber, which is then carried to the so-called market or sponge factory, where the base with its attached bit of hard bottom is trimmed away and cast out, and the rest packed for further treatment. In other words, every time a sponge is ripped up the entire colony is destroyed.

The suggestion that I wish to offer is that the laws of the governments interested in sponge industry should be modified to require the spongers to cut the sponge from its mooring, leaving a small portion of the animal intact, or, if hauled aboard, to cut off the base and cast this back into the sea. By so doing, the animal will be able to regenerate the lost parts in due time. The gathering of the sheepswool sponge would then be comparable to the shearing of a sheep instead of killing and fleecing it, as is done at present. By this method a continued crop would be assured.

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[1] Howell, *Mem. Soc. Cub. Hist. Nat.*, Vol. 8, p. 338, 1934.