

## South Sea Birthplace of Eels Found

Zoology

A STURDY little steamer, of only 360 tons, and 138 feet in length, recently berthed at Copenhagen, Denmark, after a record voyage for a ship of her class. The *Dana* had been all the way around the world, via the Panama Canal, many stops in the South Seas, and the Cape of Good Hope, since she weighed anchor in June, 1928.

The object of her long voyage was eels. The scientific expedition she carried was in command of Dr. Johannes Schmidt of the University of Copenhagen, who a few years ago made himself famous by solving the age-old riddle of where eels breed. He found that the freshwater eels of both Europe and America go to the middle of the Atlantic ocean to lay their eggs, and that they never return

to their river homes, the young finding their way unguided.

The present expedition made a similar discovery about the eels of southern Asia, eastern Africa, parts of Australia and some of the oceanic islands. There are six species of eels in their rivers, and five of them go to a spot in the middle of the Indian Ocean to breed. Like their Atlantic relatives, the parent eels never return, and the young ones, or elvers, sort themselves out and find their way back to their proper waters by some instinct or set of reactions of which we are as yet in complete ignorance.

The *Dana* was originally a British boat, built for service in the North Sea, and purchased by the Danish government in 1921.

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## Thinking Insects

Entomology

CAN an insect think? Even while it is an infant in its cradle?

Dr. Frank E. Lutz, of the American Museum of Natural History, has added to the stock of perplexing riddles of insect behavior by a series of experiments performed on the larvae of caddis flies. These infant insects have shown an adaptiveness in their behavior that in some instances looks as though it contained an element of deliberate choice.

Caddis flies are somewhat primitive insects, whose larvae live in the water. They make a cocoon-like case in which they live. The case is spun of silky threads, and in most species is reinforced with various foreign objects which the larva picks up and builds into its walls. Some species use bits of twigs and leaf-stems exclusively; others, living in swifter waters, use small pebbles and grains of sand.

Dr. Lutz deprived a number of larvae of their cases and then put them in vessels of water with building-materials to which they were not accustomed. He gave the steam-users only sand and pebbles and the pebble-users only stems and decayed leaves. Inasmuch as the ancestors of these insects had been using only their preferred materials for millions of years, the larvae were thus suddenly confronted with as severe a problem as though one were to transplant a Hottentot to Greenland and ex-

pect him to build a snow igloo.

The larvae met their problems and solved them, some responding readily, others more reluctantly. But they all

built themselves new houses out of the unaccustomed materials. The stem-building species showed some signs of ancestral habit when they had to work with sand, for they chose the long, cylindrical particles formed from broken sea-urchin spines. But the sand-builders with nothing but leaves to use worked out an entirely new technique. They bit the leaves into suitably sized pieces and then worked these into the walls of their dwellings.

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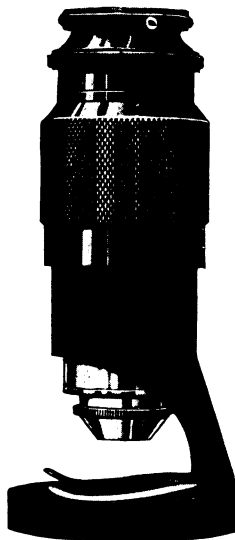
## No Locust Danger

THERE appears to be no real danger that locusts will become a serious pest in Mexico at this time, is the belief of Dr. Alfons Dampf, in charge of technical investigations in pest control work of the Mexican Ministry of Agriculture. Locusts are swarming in Yucatan, but they always exist in that state, Dr. Dampf points out. In the fields they are fought with sprays and oil, while the brush in which they sometimes appear is burned. This type of locust hardly ever goes farther north in Mexico than the states of Jalisco and Nayarit.

Entomology

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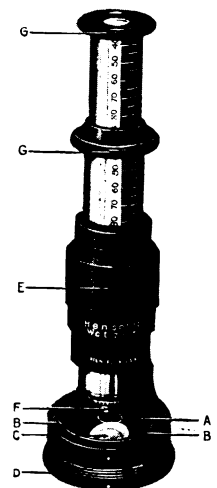
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