

INSTITUTE FOR FISHERIES RESEARCH
DIVISION OF FISHERIES
MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

W

ALBERT S. HAZZARD, PH.D.
DIRECTOR

ADDRESS
UNIVERSITY MUSEUMS
ANN ARBOR, MICHIGAN

April 14, 1938

REPORT NO. 456

FRESHWATER SWORDFISH?

J. W. Leonard

Institute for Fisheries Research

The accompanying photograph depicts the embalmed body of a strange denizen of one of Michigan's ponds. It first attracted attention when, with several hundred fellows, it was placed in an aquarium at the University's Museum of Zoology, where some experiments on fish were being conducted by staff members of the Institute for Fisheries Research. As soon as the fish had become accustomed to their new home, it was observed that two individuals were carrying themselves with something of an air. When food was thrown into the tank, this pair did not join in the common rush, but held themselves aloof. At the same time it was noticed that each of the two fish wore a conspicuous horn, giving them the appearance of piscine unicorns. It was considered improbable that any marine swordfish had taken up residence in Michigan. There was, in fact, only the horn to distinguish these fish from their fellows, which were --- goldfish.

In the interests of Science one of the fish was dehorned, an operation from which it failed to recover completely. The mystery of the horn was then apparent. It proved to be the spiny seed pod of a species of Bidens, a common, yellow-flowered weed known by such names as "beggar-tick" and "Spanish Needle." The burrs of this weed bear at one end a variable number

of sharp, stiff spines armed with minute barbs which, as frequenters of the fields well know, enable them to adhere to skin or clothing "like Grim Death supplied with fish-hooks." The goldfish apparently had run head-on into a floating burr, striking it with sufficient impact to drive the spines deep into the snout. Once embedded, the tiny barbs held it in place securely.

Whether or not fatal infection would have been set up in the wound eventually is not known. While examining a collection of fishes from a northern Michigan lake, Dr. Hubbs, Museum Ichthyologist, once found a minnow with a long, conical snout. Dissection showed that a burr stuck in the snout was completely imbedded in a growth of flesh and skin which had healed over the wound and covered the burr. On another occasion, some aquarium fish were once found wearing similar burrs after their tanks had been filled with unfiltered river water. Eleven years ago, Robert Fortney, District Supervisor of Fisheries Operations, noticed that some young rainbow trout at the Baldwin Rearing Station were starting to die in alarming numbers. Examination revealed that each of the fish had a burr stuck in the snout, and that infection and fungus had entered the wound. As soon as the Spanish Needles were cut away from the shores of the pond, the mortality ceased. It would be interesting to know how frequently such accidents occur in Nature.

INSTITUTE FOR FISHERIES RESEARCH

By J. W. Leonard
Assistant Aquatic Biologist