

Natural Sciences Notes

ICHTHYOLOGY

Piezoelectric ear stones

For the first time, scientists have reason to believe that piezoelectricity—the electric force created in some crystals by mechanical force—may be present in living creatures.

Samples of otoliths—calcium concretions in the internal ear—from bony fish have high piezoelectric effects, report Drs. Robert W. Morris and L. R. Kittleman of the University of Oregon.

These tiny otoliths in the fishes' inner ear may constitute a mechanism for depth perception or frequency analysis of sound waves, or both, the researchers report in *SCIENCE*, Oct. 20. It has long been known that pressure changes are in part detected in the ear, but the specific mechanism has not been defined. Most fish have gas bladders and are known to gauge pressure changes by means of a sort of stretch sensor in these built-in balloons.

AGRICULTURE

Woodlands into farms

If certain pastures and woodlands were turned into cropland, the United States could grow more than twice as much corn as it now produces, and more than five times as many soybeans.

Wheat and grain sorghum production could also be increased, says A. A. Klingebiel of the Soil Conservation Service, part of the Department of Agriculture.

With better management, crop yields on many areas now in cultivation could be increased 25 to 50 percent or more, he told the annual meeting of the Agricultural Research Institute at Washington, D.C.

Soils and lands should be evaluated for nonfarm as well as farm uses. Costly mistakes could be avoided if planners and builders used soil maps in determining nonfarm sites for new homes, shopping centers, industrial parks and highways.

PRESERVATION

Restrictions on importing wildlife

Restrictions may be set on importing rare fish or wild animals into the United States when they are in danger of extinction in their native lands.

The Secretary of the Interior would be able to ban the importation of rare animals, either alive or dead under a bill introduced by Representative John D. Dingell (D-Mich.) now receiving support in hearings of the House Subcommittee on Fisheries and Wildlife Conservation.

Many rare species of wildlife are in demand because their skins or feathers provide novelty or decoration in the fashion trade for hats, gowns, shoes and other items. Also many beautiful tropical fish are becoming rare as they are being caught to supply the increasing aquarium market.

Poachers of wild animals have a lucrative business in

many parts of the world, and many nations have been unable to stop the traffic.

Action is also being urged to control the interstate shipment of reptiles, amphibians and other wildlife captured or shot contrary to state law. Some 1,000 alligator poachers are operating illegally in the southern United States.

VETERINARY MEDICINE

Help for pigs' ulcers

Oats help cure the ulcers of a high-strung pig in today's society, but corn makes them worse, according to veterinary researchers at the University of Wisconsin.

Food rations containing 85 percent oats seem to prevent ulcers, but rations containing a substantial amount of corn caused a high incidence of stomach abnormalities in pigs. Pigs have long been known to develop ulcers from the stress of living in close quarters on modern farms.

The work was done by W. G. Hoekstra, R. H. Grummer, and T. Kowalczyk, of the University's Meat and Animal Science and Veterinary Science Departments.

INSECT CONTROL

New moth pest in Hawaii

A moth never before reported in any part of the United States has been causing heavy damage to lawns, football fields and pastures in Hawaii.

This pyraustid moth usually thrives in rice fields and pastures of India, Southeast Asia, Japan, Australia and several island groups in the southwest Pacific. It had earlier been intercepted twice at Hawaii's ports of entry, and destroyed both times.

The larvae of this moth feed on grass and have caused much economic damage, it is reported in the *COOPERATIVE ECONOMIC INSECT REPORT* of the Plant Pest Control Division, Oct. 13.

CONSERVATION

Oregon bans shooting of cougars

Mountain lions are safe from sportsmen's guns for at least one year in Oregon, under a ruling of the Oregon Game Commission.

During the year's respite, state biologists will gather information on the big cats and develop a management program for them, according to the Oct. 13 *OUTDOOR NEWS BULLETIN* of the Wildlife Management Institute.

The change of status from a predator to a game animal sets an animal under full legal protection. Conservationists, apprehensive that the relatively shy cougar might be close to extinction, advocate more protection in other states.

The most intensive research project ever undertaken on mountain lions is underway in the Idaho Primitive Area, as a cooperative effort of the University of British Columbia, University of Idaho, and the Idaho Fish and Game Commission.