

Nature Note

Cattails

➤ **THESE ARE** the cats that love to stand in water. The strange cylindrical flower spike of the cattail, *Typhaceae latifolia*, can be found thriving in streams, ponds and lakes.

These are the hydrophytes, or plants that "love water," and are so gregarious that they form immense cattail marshes, with their shoulder-high ranks of ribbon-like leaves and cattail stalks growing so densely that few creatures can push through them. The red-winged blackbirds make their homes in these dense water weeds, and frogs and fish move among their stalks in shallow water. Muskrats sometimes eat the base of the leaves and stems where starch is stored.

The plush-like, reddish-brown spikes are actually the flowers of this perennial marsh herb. Each spike, about five or six inches long, is crowded with hundreds of microscopic flowers, none of which has the petals or sepals usually associated with flowers.

The flowers along the upper portion of the spike are staminate—that is, they produce the golden-yellow pollen grains. The tiny brown flowers crowded into the cushiony cylinder are pistillate and contain the ovaries which become fertilized and in late summer produce the seeds that are dispersed by the action of winds and roving boys who like to tear them apart.

Cattails have the unusual system of bearing their seeds on the outside, with the silky vehicle for their dispersal on the inside. Thus, when the hard brown sheath of the seed is split or broken, the fluff of the seed pops out like ripped mattress stuffing.

METEOROLOGY

Heat Peak Coming

➤ **BY ALL** indications the world is approaching the peak of a heat wave, after which it will enter a period of bitter cold. The date for the switchover is either 2400 or 2500 A.D., depending on whether you believe Swedish or Russian authorities.

This forecast came from Martin Slessers, of the U.S. Naval Oceanographic Office, Washington, D.C., who has been translating Russian, Swedish and German scientific texts for the past ten years.

Mr. Slessers told **SCIENCE SERVICE** that the European experts confirm that the world is warming up, much as it did in the early centuries preceding 600 or 700 A.D.

Then, after a peak, it began to get cold, reaching a depth in 1433.

Historical records of this early cycle, plus information from oceanographers and other scientists on present-day conditions, add weight to the theory of a 900-year heat-cold cycle.

Russian reports hold that during a

heat wave, the level of the Caspian Sea falls, Mr. Slessers said. Sixth century cities built along the sea were inundated during the Middle Ages. They are now being uncovered and their city walls exposed. Fishing villages operating only 40 to 50 years ago are now some 30 miles from the sea.

This correlates with information from Swedish oceanographers concerning ice conditions in the Atlantic Ocean and Baltic Sea, Mr. Slessers noted.

The son of a Latvian fisherman, Mr. Slessers has poured over Viking chronicles, ship logbooks, newspaper reports and ancient writings for signs of the early heat-cold wave. Among them were Viking reports of green pastures and settlements in Greenland. Some of those settlements are now being discovered by archeologists, he said.

Among the theories accounting for the large scale "weather rhythm" are variations in sunspots and a change in the earth's axis.

Mr. Slessers believes probably one or both of these explanations contain truth.

CONSERVATION

Pesticides Must Be Safe For Man and Beast

➤ **PESTICIDE APPLICATORS** were urged to refrain from applying DDT and other persistent insecticides on or in close proximity to lakes, streams and forest areas to prevent possible harm to fish and wildlife.

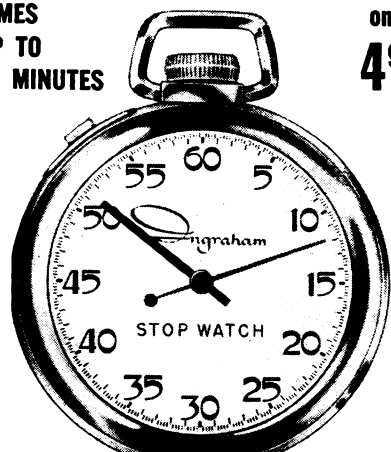
The plea came from Walter W. Dykstra of the U. S. Fish and Wildlife Service who spoke at the 49th annual meeting of the Florida Entomological Society in Jacksonville.

Dykstra said although present detectable pesticide levels are not considered harmful to fish and wildlife, these same levels could be dangerous to some of the more sensitive lower forms of animal life. He said his agency is studying the matter.

W. M. Fifield of the Florida Agricultural Research Institute in Gainesville said pesticide manufacturers face many complicated procedures in meeting human welfare responsibilities. These include adequate testing of the pesticide for its effect on plants and compatibility with other materials. He pointed out that pesticide manufacturers must comply with many state and federal regulatory measures.

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