

GENERAL SCIENCE

Finds Dry Summers Influence Fish and Animal Abundance

Birds Eat Young Fish When Streams Are Low and Clear; Royal Society Hears of Living Fossil That Heat Kills

SCARCITY of salmon in the Atlantic is probable this year and the next, Dr. A. G. Huntsman of Canada's Biological Board told the Royal Society of Canada at its annual meeting at the University of Toronto.

Dryness and wetness of the summers is linked by Dr. Huntsman to the abundance and scarcity of not only salmon but other forms of wild life as well. There is a periodic recurrence of scarcity every 9.6 years shown in the records of both animals and fish, but until Dr. Huntsman's researches its cause has been a mystery.

Studying salmon statistics Dr. Huntsman came to the conclusion in 1931 that the unknown influence which caused these fish to be scarce every 9 or 10 years must have been acting upon them while they were still small and living in their rivers before going to the sea. The reason for this conclusion was the fact that, in localities where the salmon were the fewest years in the sea before being caught, the scarcity came correspondingly earlier, and where the salmon were longest in the sea, there the scarcity came last.

Dr. Huntsman has now found from other records of the past what the previously unknown influence must be. It proves to be one that can act also on the fur-bearing animals of the Northwest.

Food for Birds

On that well-known salmon river in Cape Breton, the Margaree, the young salmon were found to be the chief food of the fish-eating birds, kingfishers and mergansers, when rearing their young along the river during the summer. In rainy weather, with the river high and murky, the young salmon are comparatively safe, but in dry summers, with the water low and clear, the birds can remove them very thoroughly.

Dry summers should thus be followed by a scarcity of salmon as many years later as the salmon remain in the sea before being caught. If dry summers were

responsible for the periodic scarcity of salmon on the average every 9.6 years, they would have to occur the proper number of years before each periodic scarcity.

The last one of these for the Margaree was worst in 1928 and the daily records of river height showed that the summers from 1923 to 1925 were dry as would be expected from the theory. Records of rainfall, if numerous enough, would give proof of dryness of the summers. Such as are available do show comparative dryness in the proper years, even back to the seventies of the last century, to explain the most pronounced scarcity of salmon that has been recorded, that centered in the year 1880.

Wet Kills Animals

There are indications that the wet summers that alternate with the dry ones are likely to be the cause of the periodic scarcity of the animals of the interior of the continent, such as rabbits and grouse,

by making them more liable to disease. Dr. Huntsman now intends to see whether predictions can safely be made of the abundance or scarcity of all these animals through precise (*Turn to Next Page*)

ASTRONOMY

Rotating-Dome Observatory Built Entirely by Students

A COMPLETE astronomical observatory with telescope and rotating dome housing has been constructed by students of the Edgewood School, Greenwich, Conn.

Beneath the copper rotating dome that weighs nearly a ton is a concrete foundation, cinder block walls and an eight-inch reflecting Newtonian type telescope. All work on the entire observatory, including the removal of boulders weighing three tons each, was accomplished by the students. The only outside help was in the fabrication of the floor.

Stanley Reynolds, now a student at the University of Chicago, ground the mirrors of the telescope and designed the observatory. Alan Tucker built the copper dome. The project was directed by John L. Wallace, head of the shop.

Dr. Harlan T. Stetson, astronomer of Massachusetts Institute of Technology and former director of Perkins Observatory, and Dr. Orestes H. Caldwell, president of the Amateur Astronomers Association, spoke at the dedication.

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PUTTING UP THE DOME

The boys of Edgewood School have constructed their own astronomical observatory containing a telescope of their own manufacture.