

THE INCREASE OF THE FOOD SUPPLY FOR DUCKS IN NORTHERN ONTARIO.

In a previous pamphlet published by the Game and Fisheries Department of Ontario, entitled "The Possibilities of Northern Ontario as a Breeding Ground for Ducks," it was shown that there were probably 2,800,000 acres in the lakes and rivers of that territory on which edible water plants would grow. Since that time the district of Patricin, with a total area of about 150,000 square miles or six-sevenths the size of Northern Ontario as it existed before this addition, has been included. No definite information is available of the percentage of water-covered area in this district. From the maps published, the proportion covered by water probably is somewhere between that existing in the part east of Port Arthur and north and south of the height of land respectively, or from 2 to 10 per cent. On the basis explained in above mentioned pamphlet this would mean an addition of from 450,000 to over 2,000,000 acres available for the growth of edible water plants. In any case it must constitute a most important increase to the duck breeding possibilities.

As the idea is to propagate plants which furnish food for ducks not only in the fall but throughout the entire season during which the waters are open, we are confined to plants which have a continuous growth, and have parts other than the seed which are edible. In the following descriptions and illustrations only some of the important ones are dealt with, others might form matter for further investigation and description at a later time. As it was desirable to have the aid of a skilled botanist, Mr. R. B. Thomson, Associate Professor of Botany, in the University of Toronto, was asked to collect and illustrate the plants in question. The specimens were taken from Whitewater Lake, near Sudbury, about the middle of September last year.

Of the plants described wild celery (*Vallisneria spiralis*) is perhaps the most important, as it provides food at all times of the year, the roots being available always, while the leaves are edible in the early part of the season and the seed pod forms a favorite morsel in the fall. In addition to this it is probably able to grow in a greater depth of water than the other edible plants and consequently can thrive over a greater area. To grow in ten feet depth is nothing unusual for the wild celery, and it will thrive in water as shallow as three feet. The means it has of propagating itself are moreover very efficient—both by seed and sending out suckers—so that it is in all ways a most desirable plant to introduce. All the varieties described here are indigenous in Northern Ontario except the wild celery.

EXPERIMENT WITH WILD CELERY IN NORTHERN ONTARIO.

That this plant will readily grow in Northern Ontario can be seen by the results in above mentioned lake. The first attempt to cultivate wild celery in this water was in 1909 when about half a bushel of pods was obtained from Lake Erie and some plants from Lake Ontario. The method used in planting was to wrap the pods in balls made of clay and drop them in water of the proper depth, viz: about four feet. The following year about two bushels of pods were introduced, and in 1911 about three bushels. By 1912 the wild celery had spread in a surprising manner. In many cases it was found half a mile or more from where any