

relative amount of each present in the waters where the birds had been feeding. When this is done the wild celery appears as much the most important. As explained above the celery would cover possibly ten acres, the *Myriophyllum* would certainly cover over 600 and the *Potamogeton heterophyllus* probably 100-200 acres; that is, although there was sixty times as much *Myriophyllum* and ten to twenty times as much of the *Potamogeton* neither on the whole formed such an important article of food.

Two of the varieties, viz: the Whistler and the Hooded Merganser contained substantial quantities of animal food, but there was absolutely no fish in the seven Whistlers examined and only an insignificant amount of fish in the five Mergansers. This was not because they were not obtainable, as the waters where these ducks were killed are teeming with small fish. The writer has on previous occasions examined the gizzards of many Whistlers and Hooded Mergansers without finding fish, although fish remains would be easily recognizable. In the Report of Ontario Game and Fish Commission, 1892, (p. 341), in describing the Whistler this appears: "It feeds on fish, shellfish, molluscs, marine vegetables and seeds. Its flesh is consequently fishy and almost unfit for food." This Report ignores the Hooded Merganser, and states that the Buffle Head's flesh is fishy and that its food consists of small fish. All these birds, the gizzards of which were examined were in fine condition and of excellent flavor. No doubt they will take fish if they cannot find anything else they like better, as we would eat hard-tack if we could not get bread.

The food of the small Merganser was shown to be almost exclusively animal, but it was insects, not fish. Both the Whistler and the Hooded Merganser are important for Northern Ontario as they are probably the most usual and widespread varieties there now. Their taste for animal diet should give them an advantage in the quest for food. They are certainly well worth propagating.

#### IMPORTANCE OF VARIETY IN FOOD.

The fact that human beings crave for variety in food and that the system revolts against a diet of any single thing is known to everyone. Domestic fowl show the same taste. If the liking for variety has anything to do with the intelligence, then the duck should show it more than other birds. It is impossible to study the *detailed* analyses of each of the thirty gizzards given by Mr. Thomson (not published) and come to any other conclusion. Of this number only two had been feeding on one thing exclusively, in both cases *Vallisneria* seed. Of the eighteen Bluebills and Buffle Heads all but one contained some *Potamogeton heterophyllus* seed, several gizzards were more than half filled with this material, but none of them contained that alone, although any one of these birds could have easily found enough of this seed to form its sole diet. In addition to this the different plants offer their most attractive food at different times of the year: probably, also, in some seasons the growth of certain of the varieties would be more or less a failure. Those interested should therefore try to offer a variety of food for the ducks. From the descriptions and illustrations anyone can identify the various plants and transfer them from one lake to another according to directions given and put them in a suitable depth of water. With the introduction of wild celery and any other deep water plants which may be found suitable to the northern lakes, the number of the deep water feeders will be increased. As shown before, these varieties are the most suitable for the north. A widespread planting of members of the *Lemna* family in suitable places would improve the means of supporting marsh ducks.