

just from walking around, fishing, or perhaps canoeing without making the park into a motorized, man-made playground.

For an even longer-ranged view of the area, I see the lake itself and the life in and around it as being in just a temporary, emerging vegetation stage--that is, with certain plants such as cattails breaking the surface of the water and starting to fill in around the edges and towards the center. Then after many more years, the lake as we know it will only be wet when it rains, and even later in time it will be a forest. By then the Red Pine stand should be a climax forest of beech and maple, and also be more conducive to wildlife because of more diversity of the surrounding vegetation. Not forever will the loud "pumping" of the Bittern (or, Stake-driver) be heard echoing across the lake on an April dawn. But for now, it sounds just fine.

WATERFOWL BREEDING SUCCESS IN 1977

by Theodore H. Atkinson, Billerica

The waterfowl breeding grounds survey conducted this past spring by the U.S. Fish and Wildlife Service, the Canadian Wildlife Service, and various state agencies noted a marked reduction in breeding-ground conditions throughout western Canada and bordering areas of the United States. Alberta, Saskatchewan, Manitoba, the Dakotas, Montana, and Minnesota normally produce 50 to 75 per cent of the North American duck population. This region is post-glacial, with many lakes and potholes, but it also receives a highly variable annual rainfall which results in frequent periods of drought.

The deterioration of conditions in these areas was due to a major drought that has affected most of western Canada and the United States since the summer of 1976. Last autumn and winter were mild, with record high temperatures that increased evaporation of ground water. Precipitation over the drought area was 50 per cent below normal, and some areas reported the driest conditions ever recorded. In May heavy rains provided only temporary relief.

In southern Manitoba, Saskatchewan, and Alberta the breeding duck population was down 25 to 50 per cent, and Montana and North Dakota conditions were similar. Though South Dakota's water levels were up this year, the duck population was down. In contrast, Minnesota's duck population was somewhat higher than last year, despite a decrease in water area.

Dismal as the picture was in traditional breeding areas, stable water conditions to the north attracted a large number of ducks by early May. Nevertheless, these northern areas have traditionally produced poorer breeding results.

However, the total duck breeding population appears to be less than in 1976. Traditionally the most numerous species, the Mallard, decreased 5 per cent from 1976; other breeding populations fared as follows: Gadwall +5 per cent; American Wigeon -1; Green-winged Teal +6; Blue-winged Teal -8; Northern Shoveler -11; Pintail -18; Redhead -27; Canvasback +2; and scaup +7. Overall, the breeding populations of these 10 species declined an average of 4 per cent.