

OBSERVATIONS ON WATERBIRDS AT JEROME PARK RESERVOIR DURING THE COLD WINTER OF 1976-1977

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The winter of 1976-1977 was among the most severe in recent memory in the northeastern United States. The coldest weather began on December 26, 1976, when, following a three-inch snowfall, the temperature dropped below 32° F., to remain there with few interruptions until February 24, 1977. Strong northwesterly winds abetted the cold, and most of our regional inland waters froze. In Bronx County, the Hudson River was full of ice floes as far as the eye could see, while the Harlem River, the Harlem Ship Canal, and the shallow coves at Spuyten Duyvil were frozen over or motionless in a landscape of jammed ice. Only two places I visited in Bronx County during this period had open water: the Bronx River at 233rd Street and Jerome Park Reservoir.

During this two-month period of arctic weather, the writer made frequent trips to Jerome Park Reservoir, in an attempt to see how the waterbirds responded to these profound changes in their environment. Visits were made to the reservoir on December 26, 1976, and on January 2, 8, 19, February 6, 9, 11, 12, 16, 19, 21, 24, and 27, 1977. On each date counts were made of every species present, and notes were taken on the location of birds within the reservoir and on the behavior of the birds.

Conditions at the reservoir changed during the period of observation. Although the reservoir was open on December 26, by January 2 it was about 80% frozen, with ice covering all but the southwest section; under the west side pumping station all of the ducks were crowded in this small remaining area of open water. The northern half of the reservoir was not only frozen, but covered with snow, which resisted the sun's warmth and retarded melting. The land surrounding the reservoir was also snow-covered. Within the reservoir the limited open water attracted the ducks, while the gulls resorted to the areas of ice. By January 19, open water had been reduced to three small, elliptical pools near the center of the reservoir. From this time on, the amount of open water gradually increased, so that by February 20, just before the ice broke up, about 60% of the reservoir was ice-free.

General Observations

During a normal winter, the ducks feed mainly at night, returning

to the reservoir at dawn. It became apparent that during this severe weather, ducks fed at all hours of the day and night. With the estuaries covered by ice, the ducks were pressed to search out those places where the tide and the wind created transient patches of open water. Typical of such places were sewer outlets, parts of protected bays, and stretches of shoreline temporarily free of ice. The reservoir's ducks took every opportunity to search for food in such places, whatever the time of day.

In contrast, the three common wintering gulls, the Herring, Ring-billed and Great Black-backed, seemed to be scarcely inconvenienced by the low temperatures and high winds. There were, however, two changes from the birds' usual behavior. Although there were areas of open water at the reservoir even on the coldest days, the gulls invariably stayed on the ice. This habit persisted even when large areas of open water were available. This behavior was puzzling, since most of the feeding activities, other than foraging at garbage dumps, is directly related to the water or the littoral. Secondly, a restlessness pervaded the large gatherings of gulls on the ice; small portions of the flock would fly up all at once, circle about at a low altitude, while calling as if disturbed, and then return to the group of resting birds. Such behavior was not noted during a normal winter, and may have been related to the fact that the birds spent far longer resting on the ice. Being surface-feeding birds, gulls were able to exploit smaller areas of open water; this and their greater feeding range evidently made them less vulnerable to the effects of the severe weather.

In addition to the cold and the ice, another hazard was presented to the birds. On February 4, a large barge, the *Ethel H*, struck a shoal in the Hudson River just south of Bear Mountain, Orange Co., and spilled 420,000 gallons of heavy fuel oil into the river. Within days, oil-stained gulls and ducks began to appear at Jerome Park Reservoir.

Species Accounts

Canada Goose (*Branta canadensis*). A single bird, calling, was present on the ice on February 2.

Mallard (*Anas platyrhynchos*). This species is the only waterbird breeding at the reservoir. There was no invasion of large numbers during the frigid weather; numbers remained normal, with up to 29 birds on any one day, throughout the period.

Black Duck (*Anas rubripes*). Daily variations in numbers, ranging from four to 100 birds, suggest that this species moves about readily and is less reservoir-bound than the Mallard. On February

9, with no Black Ducks on the water, a group of eight birds flew across the ice, coming from the direction of Van Cortlandt Park and heading southeast. Perhaps this mobile species, as well as the Mallard, moved to the varied feeding areas at Clason Point and Ferry Point Park, on the southern shore of Bronx County, both favored feeding sites for these species all year. As in the case of the Mallard, the numbers of birds evidently represented local populations, with nothing to indicate any invasion from outside the area.

American Wigeon (*Anas americana*). A flock of six wigeons was seen on February 16, burrowing into deep snow, evidently in search of plant material at ground level.

Northern Shoveler (*Anas clypeata*). Although some winters see good numbers of this species on the reservoir during freezes, there was only a single record, of one bird on January 8, during the period. This may indicate that the species withdrew from the area during the severe weather.

Redhead (*Aythya americana*). This species appeared at the reservoir in unusually large numbers during the severe weather, with at least one bird present on most days, and as many as 34 on February 9. A few birds remained in March. Some of the birds were oil-stained. Even in the severest cold, courtship activity was noted. As in the case of the Canvasback, the ratio of males to females was two or three to one.

Canvasback (*Aythya valisineria*). When the reservoir was almost entirely frozen, this species occupied the small area of open water below the pumping station on the west side of the reservoir, in numbers that varied from 246 to 1026 birds. Here they remained in a single compact flock, with small parties of birds rising from the dense mass of birds, circling the reservoir at low altitude, and then rejoining the resting birds. On February 6, with the widening of the open water, this species, along with American Coots, Mallards and Black Ducks, occupied the east side of the reservoir. The original flock now broke into three flocks of approximately equal size, more or less evenly spaced over the southern half of the reservoir. It was during this period, on February 11, that a maximum of 1560 birds was counted. Several sightings of Canvasbacks away from the reservoir, at Spuyten Duyvil or on the nearby Hudson River, before mid-day, suggested that the population at the reservoir was traveling to these points in pursuit of food. It was

evident that there was a great deal of shifting about within the region, presumably in search of food; besides several flocks seen flying over Riverdale at all times of day, a flock was seen trying to land on the Bronx River at 233rd Street at dusk on February 10, only to be scared off by traffic on the Bronx River Parkway. On February 27, when about 950 birds were resting on the north embankment of the reservoir, I noted that more than ten percent of the birds were oiled.

Greater Scaup (*Aythya marila*). Single males were noted on February 9 and February 27, each time in mixed flocks of ducks.

Lesser Scaup (*Aythya affinis*). This species was not present every day on the reservoir, and when present varied in numbers from a single bird on February 16 to 80 birds on February 9 and 190 on February 11. This species is undoubtedly affected by the condition of the estuaries to the south of the reservoir, and appears to be less dependent on the reservoir as a fresh-water refuge than the Canvasback. The irregular appearances of the Lesser Scaup at Jerome Park Reservoir suggest that the species uses this locality more as a temporary stopover, and resorts to the rivers and estuaries for both feeding and resting.

Tufted Duck (*Aythya fuligula*). A male and a female were present in a mixed flock of diving ducks on February 9.

Bufflehead (*Bucephala albeola*). Single males were seen at the reservoir on February 9 and March 6; this species made very short visits, never staying more than a day or two. Its presence usually coincided with a movement of Lesser Scaup or Canvasback.

Ruddy Duck (*Oxyura jamaicensis*). Twenty-five birds were seen at the reservoir on December 26, and the species was then unrecorded until February 11, when eight birds were present. Thereafter the birds were only occasionally recorded, in numbers less than a half a dozen. It is possible that some birds were overlooked among the large numbers of diving ducks. The numbers and the distribution of records did not differ from that seen in a normal winter.

Red-breasted Merganser (*Mergus serrator*). This species was recorded only once, on February 27, when a bird was seen flying along the eastern side of the reservoir at sunset.

American Coot (*Fulica americana*). Twenty-five birds were present at the reservoir on December 26, before the freeze; one or two birds were recorded occasionally thereafter.

Great Black-backed Gull (*Larus marinus*). This species was present at the reservoir in numbers varying from a single bird on January 8 to 175 on February 9. The Great Black-backed Gull seemed less affected by the severe weather than the Herring Gull. The presence of several oil-stained birds suggested that the Hudson River was a feeding area for at least some of the Jerome Reservoir population.

Herring Gull (*Larus argentatus*). Whether the reservoir was frozen or not Herring Gulls invariably gathered in the center of the reservoir, along the north-south axis. A remarkable high count of about 7000 birds was present on January 19, coinciding with a very cold period, with northerly winds and newly fallen snow; at least half of these birds were in subadult plumages. This may have been a movement of birds from regions of more persistent cold and ice than ours, perhaps of birds in the process of passing through our area in search of milder conditions. The population at the reservoir otherwise varied from about 235, on January 8, to about 1850, on February 11. During the most severe weather, the usual flights of birds to the reservoir from the east and northeast ceased, and birds approached from the south and southwest, presumably coming from feeding areas closeby.

Ring-billed Gull (*Larus delawarensis*). Counts of this species varied from zero, on January 19 and February 6, to 198 on February 9. This variation in numbers reflected the fact that this species had other gathering sites, among them the Parade Ground at Van Cortlandt Park. When present, the Ring-billeds gathered in close flocks either at the extreme southern end of the reservoir or at the far northern end, always separated from the flocks of Herring and Great Black-backed Gulls.

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