

TEN YEARS AND A YEAR: THE FALL WATERFOWL CENSUS AT FRESH POND, CAMBRIDGE, 1984-93, 1994

by James H. Barton

Since 1984 I have been conducting a fall census of waterfowl at Fresh Pond Reservation for the Cambridge (Massachusetts) Water Department and the Cambridge Conservation Commission. The Conservation Commission has been using the data for the administration of wetlands protection laws, which include wildlife values as a "protected interest." Both the Water Department and the Commission will use the data in making decisions about riparian habitat management and the construction and siting of a possible new water treatment plant, now under study.

Just as importantly, the database is being used to help educate the many people who visit the reservation on its significance for wildlife and to build public support for wise management of the reservation as a resource for many constituencies. For example, on seeing myself and others counting birds, people who come to walk around the pond stop to ask us what the birds are, how we tell them apart, where they come from, what they eat, how long they will stay, where they will go, how well they are faring as species, and what the results of our counts at Fresh Pond mean. And they always want to know whether we are seeing "anything special," to which I always answer "They're all special."

The following sources of data appear throughout the text of this article: Barton (1989) for 1984-1988 Fresh Pond data; Bellerose (1980) for discussion of continental and regional nesting areas and migration patterns; *Ducks Unlimited* (1994) and *Flightlines* (1994) for discussion of continental nesting areas, nesting success, population trends, and the 1994 nesting season; Terres (1980) to supplement Bellerose (1980); and U.S. Fish and Wildlife Service (1994) for continental populations of selected species.

Conduct of the Fresh Pond Waterfowl Census

The census normally begins on October 1 and ends on December 15. Data from a total of eleven years are presented in this article; sometimes, I present data for the ten-year period of 1984-1993 and then discuss the 1994 data separately.

I go to Fresh Pond as often as I can during the peak of the migration between October 16 and November 15. I covered 27 days during this 31-day period in 1994, 21 days in 1989, 19 days in 1992, and 12 to 15 days in other years. I make at least three counts per 15-day period between October 1 and 15, November 16 and 30, and December 1 and 15.

The data presented in this article reflect well over 300 daily counts, mostly conducted solo between 7:00 to 9:00 AM, except on Wednesday mornings,

when I am regularly joined by a small group on trips that I lead for the Conservation Commission. We make a complete 2.25-mile circuit of the pond at least once, and often two to three times. Using binoculars and spotting scopes, we study large, active, and confusing concentrations of birds several times from several vantage points to arrive at a reliable count number. We often count separately and then cross-check with each other.

Results of the Fresh Pond Waterfowl Census

Thirteen species have visited Fresh Pond every year of the 1984-1994 census period: Pied-billed Grebe, Canada Goose, Mallard, American Black Duck, American Wigeon, Ruddy Duck, Canvasback, Ring-necked Duck, Greater Scaup, Lesser Scaup, Bufflehead, Hooded Merganser, and American Coot. For ten of these annually occurring species, Tables 1-5 show the average of the three high counts for each two-week interval for which sufficient data exist; narrative summaries are provided for the three other species (i.e., Pied-billed Grebe, Bufflehead, and Hooded Merganser).

I provide narrative summaries for each of twenty-two additional species seen at least once during the 1984-1994 census period.

Initials appear in the text to identify observers who discovered and reported birds to me that I did not first see or subsequently see myself on the day they were found. Otherwise, I am personally responsible for all the identifications and numbers reported here.

Loons, Grebes, and Cormorants

Common Loon (*Gavia immer*). Common Loon is infrequent at Fresh Pond. Single birds were recorded December 30, 1984, and December 1, 1985. A single bird was seen on seven occasions between November 23 and December 11, 1986. A single bird was seen November 2 and 3, 1993.

Red-necked Grebe and Horned Grebe. Our only sighting of Red-necked Grebe (*Podiceps grisegna*) was October 26, 1992. Horned Grebes (*Podiceps auritis*) are irregular. Single birds were recorded on November 9, 14, and 18, 1984, from November 21-23, 1986, and on December 14, 1987. On October 14, 1992, two birds were present. In 1993, one was recorded October 28-30 and on November 3, 4, and 9.

Pied-billed Grebe (*Podilymbus podiceps*). From one to three individuals are normally present at Fresh Pond continuously from early October through the middle of December. The birds can survive the winter locally (Veit and Petersen 1993). Maximum daily counts for 1984-1993 were nine and six in 1993. The 1994 maximum was four on November 30.

Great Cormorant (*Phalacrocorax carbo*). Single Great Cormorants were recorded on November 16, 17, and 19, 1985. On November 24, 1985, two individuals were seen. Single birds were recorded October 3 and November 23,

25, and 27, 1987. On November 5, 1988, 53 birds were briefly present following a ferocious windstorm, and a single bird was recorded on five occasions thereafter, between November 6 and 23, 1988. Single individuals were recorded November 30 and December 9, 1989, and October 25, 1994.

Double-crested Cormorant (*Phalacrocorax auritus*). Double-crested Cormorant is irregular at Fresh Pond in the fall. Only one or no birds were seen in six of the eleven census years; the maximum number of individuals seen on any single count was three (October 11, 1989, and October 19, 1994).

Swans and Geese

Mute Swan (*Cygnus olor*) is rare at Fresh Pond, probably because the water is too deep for it to reach the vegetation on the bottom even with its very long neck. Sightings include one bird on December 15, 1989, one on November 1, 1992, and seven on November 11, 1992. The only sighting of **Snow Goose** (*Chen caerulescens*) occurred in 1990.

Canada Goose (*Branta canadensis*) (Table 1). Continentally, Canada Goose includes fourteen geographical races according to some authorities, twelve according to others (Bellerose 1980; *Flightlines* 1994; Todd 1979). The birds that we see every year are mostly Atlantic Canada Geese. Originating in Newfoundland and the Labrador Peninsula, migrating Atlantic Canada Geese move down the New England coast to Massachusetts during October, November, and into December. Then they continue south across Long Island to New Jersey, Maryland, and North Carolina. At Fresh Pond the migratory geese join a growing resident, nonmigratory population. The data show that their numbers have increased greatly in recent years. How do we know who's who and how many of which we're looking at? Ornithologists are looking for answers. The maximum daily count for the 1984-1993 period was 246. The high count for 1994 was 390.

Dabbling Ducks - Genus *Anas*

Mallard (*Anas platyrhynchos*) (Table 1). Groups totaling 20-40 birds are normally present throughout the fall on one or more of the shallow ponds. Numbers can vary widely from two-week interval to two-week interval and also from day to day in response to local conditions. For example, when rains leave water standing in a marsh that has been developing on part of the golf course, 100 additional birds can appear overnight, as happened November 19 and 20, 1994. The maximum daily counts of Mallards during the 1984-1993 period were 247 and 230 in 1985, when water levels in Fresh Pond were exceptionally low. The maximum count in 1994 was 121 on November 20.

American Black Duck (*Anas rubripes*) (Table 2). Birds of the pale, nonmigratory local variety nest at Fresh Pond. Occasionally we see the very dark, brick chocolate black ducks that follow the major Atlantic coast migration

Table 1. Canada Goose and Mallard

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|
| Canada Goose | | | | | | | | | | | |
| Oct 1-15 | 9 | 6 | 21 | 1 | 85 | 6 | 35 | 133 | 25 | -- | 151 |
| Oct 16-31 | 2 | 88 | 22 | 10 | 135 | 8 | 159 | 30 | 103 | 55 | 247 |
| Nov 1-15 | 0 | 90 | 1 | 12 | 187 | 0 | 194 | 33 | 105 | 197 | 173 |
| Nov 16-30 | 0 | 1 | 5 | 12 | 127 | 4 | 170 | 77 | 53 | 197 | 167 |
| Dec 1-15 | 1 | 22 | 1 | 39 | 23 | 0 | 12 | 33 | 179 | 198 | 220 |
| Mallard | | | | | | | | | | | |
| Oct 1-15 | 1 | 33 | 27 | 18 | 52 | 6 | 32 | 158 | 58 | -- | 11 |
| Oct 16-31 | 5 | 181 | 32 | 2 | 57 | 57 | 40 | 97 | 29 | 76 | 50 |
| Nov 1-15 | 10 | 169 | 35 | 24 | 91 | 66 | 22 | 98 | 24 | 27 | 15 |
| Nov 16-30 | 8 | 23 | 7 | 31 | 12 | 26 | 18 | 36 | 23 | 23 | 90 |
| Dec 1-15 | 9 | 2 | 2 | 32 | 4 | 23 | 9 | 27 | 34 | 36 | 28 |

Numbers represent the average of three high counts per two-week interval.

-- no observations

corridor from the Maritimes south, but they greatly prefer the salt water of Boston Harbor, where thousands can still be seen in winter despite a drastic decline in the continental numbers from 1.3 million during 1952-1954 to 300,000 in 1984-1994 (Bellerose 1980; Batt 1994). Competition with the Mallard and loss of nesting and wintering habitat have all been factors contributing to the decline of black ducks generally (*Ducks Unlimited* 1995). Numbers have been stable continentally from 1985-1994, but have continued to decline at Fresh Pond. Maximum daily counts of black ducks occurred in 1985 (fifty-seven and fifty-four), when water levels in Fresh Pond were exceptionally low. The maximum count for 1994 was eleven.

Gadwall (*Anas strepera*). Sightings of Gadwall on Fresh Pond included one bird on October 31, 1986; three birds on October 20, 1990; two birds on October 12, 1992; and one bird on November 16, 1993.

Green-winged Teal (*Anas crecca*). A single Green-winged Teal was recorded in 1985. The species was not seen again until 1989, but the species has been recorded every year since then, possibly reflecting the steady growth of tangled riparian vegetation around Fresh Pond and adjacent shallow ponds. From 1989-1993, up to five Green-winged Teals were recorded on one or two census dates. In 1994 the species was seen on ten census dates, with a maximum count of six birds.

American Wigeon (*Anas americana*) (Table 2). American Wigeon return to Fresh Pond early from their nesting grounds in central Canada. A small flock of ten to thirty birds is normally present throughout the fall, but numbers can vary widely from day to day as the birds move about in the Arlington, Belmont, and Cambridge areas. The species has been regular in recent years on a small, new artificial pond on the golf course. Note the high average numbers for 1994. The maximum daily count for 1984-1993 was fifty-six in 1991, and the maximum daily count for 1994 was fifty-five.

Northern Pintail, Northern Shoveler, Blue-winged Teal. Sightings of Northern Pintail (*Anas acuta*) include one bird on November 8 and 16, 1985, and one on October 18, 1992. The only sighting of Northern Shoveler (*Anas clypeata*) was of three individuals on October 6, 1989. Our only Blue-winged Teal (*Anas discors*) was seen from October 7-11, 1991.

Stiff-tailed Ducks - Genus *Oxyura*

Ruddy Duck (*Oxyura jamaicensis*) (Table 3). Ruddy Ducks have been increasing steadily at Fresh Pond during a decade when conditions on their major midwestern U.S. and Canadian prairie breeding grounds have been poor. The Fresh Pond data do not show the wide fluctuations from year to year that are typical of major midwestern migration areas (Bellerose 1980). The maximum daily counts from 1984-1993 were 213 and 190 in 1992. The maximum daily count for 1994 was 137.

Table 2. American Black Duck and American Wigeon

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|----------------------------|------|------|------|------|------|------|------|------|------|------|------|
| American Black Duck | | | | | | | | | | | |
| Oct 1-15 | 1 | 14 | 5 | 8 | 18 | 7 | 1 | 12 | 8 | -- | 6 |
| Oct 16-31 | 3 | 39 | 18 | 5 | 16 | 15 | 11 | 9 | 5 | 7 | 6 |
| Nov 1-15 | 6 | 52 | 19 | 15 | 20 | 12 | 15 | 3 | 7 | 7 | 5 |
| Nov 16-30 | 7 | 28 | 19 | 16 | 10 | 11 | 6 | 9 | 2 | 3 | 5 |
| Dec 1-15 | 24 | 6 | 5 | 9 | 6 | 11 | 3 | 2 | 5 | 2 | 1 |
| American Wigeon | | | | | | | | | | | |
| Oct 1-15 | 1 | 5 | 11 | 3 | 16 | 3 | 6 | 49 | 11 | -- | 31 |
| Oct 16-31 | 15 | 21 | 16 | 1 | 12 | 15 | 10 | 19 | 7 | 10 | 27 |
| Nov 1-15 | 22 | 22 | 10 | 9 | 22 | 23 | 18 | 14 | 13 | 10 | 27 |
| Nov 16-30 | 7 | 23 | 23 | 10 | 17 | 0 | 4 | 4 | 2 | 5 | 47 |
| Dec 1-15 | 23 | 6 | 0 | 8 | 0 | 0 | 0 | 6 | 6 | 8 | 45 |

Numbers are average of three high counts per two-week interval.

-- no observations

Perching Ducks - Genus *Aix*

Single Wood Ducks (*Aix sponsa*) were recorded October 28-30, 1988, and October 26, 1993. In 1993 a family of five Wood Ducks was present in September, well before the formal census began. In 1994 Wood Ducks were more frequent and in greater numbers than in all previous years combined: one drake among gulls on October 12 (RP), nine individuals in flight on October 13, one female grazing on the golf course with Mallards and American Wigeon on October 18-21, and three individuals on the pond on October 27 (LL).

Diving Ducks - Genus *Aythya*

Canvasback (*Aythya valisineria*) (Table 3). Canvasback numbers at Fresh Pond rose steadily from 1984 through 1988. The average high count for the November 1-15 period was 233 in 1984, 267 in 1985, 390 in 1986, 555 in 1987, and 938 in 1988, when eleven-year maximum daily counts of 865, 1045, and 903 were recorded on November 4, 5, and 6. During this same period, the continental breeding population was falling by sixteen percent because of generally poor nesting conditions.

In 1989, Canvasback counts dropped back to 1984 and 1985 levels, where they have tended to remain through 1994. In 1994 continental nesting conditions were reported to be "the best in several decades" (*Flightlines* 1994), but Canvasback numbers at Fresh Pond showed no significant increase over numbers in recent years. Why was Fresh Pond different from the continental patterns? I am inclined to agree with a current hypothesis that "most Massachusetts Canvasback represent arriving and departing winter residents" rather than birds traveling long migratory routes (Veit and Petersen 1993). In other words, I believe that at Fresh Pond we have been observing fluctuations in small regional populations of Canvasback whose numbers are responding to breeding and wintering conditions far too local for U.S. and Canadian government agency studies of continental populations and conditions to take into account.

Redhead (*Aythya americana*). Redhead has been an irregular, generally solitary visitor, typically a female or young male in very enigmatic plumage. As such the bird can be very difficult to identify unless you get a good look at the whole of its head, not always possible when the bird is resting among dark female Canvasback and dark young male and female scaup. The species is regular in Massachusetts but can be difficult to find because most of the population migrates directly south down the middle of the continent in fall (see Bellerose 1980 for a very illuminating map). In Massachusetts Redhead are often found at the same few selected locations like Fresh Pond that Canvasback favor.

Table 3. Ruddy Duck and Canvasback

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|
| Ruddy Duck | | | | | | | | | | | |
| Oct 1-15 | 0 | 1 | 2 | 4 | 23 | 23 | 5 | 12 | 72 | -- | 10 |
| Oct 16-31 | 3 | 4 | 2 | 22 | 82 | 42 | 41 | 94 | 196 | 88 | 121 |
| Nov 1-15 | 1 | 0 | 9 | 61 | 86 | 20 | 38 | 98 | 102 | 72 | 110 |
| Nov 16-30 | 2 | 1 | 10 | 72 | 43 | 3 | 9 | 61 | 20 | 44 | 41 |
| Dec 1-15 | 1 | 0 | 1 | 57 | 0 | 0 | 0 | 0 | 1 | 3 | 7 |
| Canvasback | | | | | | | | | | | |
| Oct 1-15 | 0 | 0 | 0 | 5 | 6 | 8 | 4 | 0 | 13 | -- | 0 |
| Oct 16-31 | 57 | 250 | 175 | 145 | 265 | 222 | 75 | 150 | 259 | 166 | 113 |
| Nov 1-15 | 233 | 267 | 390 | 555 | 938 | 182 | 269 | 181 | 278 | 301 | 252 |
| Nov 16-30 | 193 | 297 | 572 | 631 | 381 | 16 | 232 | 167 | 167 | 240 | 319 |
| Dec 1-15 | 54 | 250 | 138 | 521 | 3 | 0 | 25 | 66 | 110 | 109 | 96 |

Numbers are average of three high counts per two-week interval.

-- no observations

Redhead was recorded in seven of eleven census years, and in five years, one to three individuals were seen. The maximum daily count was four individuals on November 11 and 19, 1986.

Ring-necked Duck (*Aythya collaris*) (Table 4). Most of the Ring-necked Ducks in Massachusetts probably nest in northeastern Canada and in Maine and New Hampshire, areas unaffected by agricultural development and the long drought that has affected the prairies so adversely. This would help account for the fact that the local migratory population has been increasing steadily (e.g., Veit and Petersen 1993), a trend the Fresh Pond data reflect. Numbers surged in 1994. For the 1984-1993 period, the maximum daily counts were 248 and 274 in 1992. Maximum daily counts for 1994 were 386 and 479.

Greater Scaup (*Aythya marila*) and **Lesser Scaup** (*Aythya affinis*) (Table 5). The U.S. Fish and Wildlife Service does not attempt to distinguish Greater Scaup from Lesser Scaup when conducting its counts. Combined continental numbers show a decline for the 1984-1994 period. At Fresh Pond, groups of ten to twenty Greaters have typically been present through mid-November, while one to three Lessers have been present through mid-December. Most Lesser Scaup winter far to the south of Greater Scaup, with major concentrations in Louisiana, Florida, and Mexico, and take a direct route south that bypasses Massachusetts, so we see far fewer Lessers than Greaters. Maximum daily counts of Greater Scaup during 1984-1993 were thirty-four and forty-one in 1985. Maximum daily counts for Lesser Scaup during 1984-1993 were seventeen and twenty-seven, also in 1985. Maximum daily counts for 1994 were twenty-three Greater Scaup and seven Lesser Scaup.

Sea Ducks - Genus *Melanitta*, *Clangula*, and *Bucephala*

Sightings of **Black Scoter** (*Melanitta nigra*) include two females on November 27, 1987; one female on October 14-24, 1988; and one female on October 16, 1992. Sightings of **White-winged Scoter** (*Melanitta fusca*) include one female each on October 7, 1988, and October 11 and 13, 1989; one young male on October 23-25 and December 5, 1992; and one young male on October 26, 1993. Sightings of **Surf Scoter** (*Melanitta perspicillata*) include one female on November 4, 1985; two females on October 12-14 and October 17, 1988; and three females on October 19 and 20, with one remaining until October 28.

Single **Oldsquaw** (*Clangula hyemalis*) were seen November 22, 1984, November 5, 1988, and October 24 and November 10, 1989. All individuals were males.

Common Goldeneye (*Bucephala clangula*). From one to six Common Goldeneyes were present on forty-five dates during November and December 1984, 1985, and 1986. Since then, the species has been scarce. No birds were seen from 1990 to 1994.

Table 4. Ring-necked Duck and American Coot

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Ring-necked Duck | | | | | | | | | | | |
| Oct 1-15 | 29 | 24 | 35 | 67 | 45 | 88 | 38 | 90 | 125 | -- | 140 |
| Oct 16-31 | 47 | 53 | 92 | 119 | 111 | 154 | 108 | 206 | 195 | 210 | 305 |
| Nov 1-15 | 59 | 76 | 95 | 111 | 146 | 17 | 130 | 210 | 226 | 190 | 406 |
| Nov 16-30 | 15 | 104 | 95 | 108 | 29 | 0 | 12 | 17 | 12 | 58 | 89 |
| Dec 1-15 | 1 | 2 | 1 | 40 | 0 | 0 | 0 | 9 | 0 | 2 | 1 |
| American Coot | | | | | | | | | | | |
| Oct 1-15 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | -- | 4 |
| Oct 16-31 | 7 | 1 | 4 | 0 | 5 | 2 | 0 | 2 | 7 | 5 | 48 |
| Nov 1-15 | 11 | 6 | 15 | 5 | 5 | 2 | 1 | 2 | 7 | 5 | 58 |
| Nov 16-30 | 13 | 14 | 11 | 9 | 5 | 1 | 0 | 4 | 4 | 8 | 20 |
| Dec 1-15 | 8 | 6 | 1 | 9 | 2 | 1 | 0 | 0 | 4 | 4 | 1 |

Numbers are average of three high counts per two-week interval.

-- no observations

Bufflehead (*Bucephala albeola*). Bufflehead has been present every year in small numbers. From one to six were recorded on twenty-one occasions in 1984-1987. Nine birds were seen October 31, 1985, and an eleven-year high count of thirty-seven birds was recorded on November 6, 1987.

From one to ten birds were recorded on thirty-seven dates in 1988-1994. On November 2, 1989, a flock of sixteen birds was seen.

Mergansers - Genus *Mergus*, *Lophodytes*

Common Merganser (*Mergus merganser*). Open water on Fresh Pond during February and March attracts up to 200 Common Mergansers, but relatively few are seen earlier, even in years when the pond does not freeze over in January. Apparently, the birds do not like to move south from the Canadian Maritimes until they have to (Bellerose 1980); however, the scarcity of records for December at Fresh Pond may be due partly to the fact that the formal fall census has generally ended December 15.

Sightings have been as follows: one bird on November 2, 1984; one bird on November 20, 24, and December 1, 1985; four birds on November 11 and 23, 1986; four birds on November 2, 1988; one bird on November 6, 16, 23, and 30, 1988; one bird on December 5, 1990; twenty-seven birds on December 23, 1992; six birds on December 17, 1993. In 1994, up to twenty-three birds were seen during the last two weeks of December.

Red-breasted Merganser (*Mergus serrator*). Large numbers of Red-breasted Merganser can be seen along our seacoasts by the middle of November, but few visit Fresh Pond on migration. The following sightings have been recorded: one bird on October 31, 1984; one bird on October 28 and two birds on October 30, 1985; three birds on November 3, 1986; one bird on November 13, 1988; one bird on October 31, 1991; five birds on December 23, 1992; two birds on December 15, 1993; and one bird on October 25, 1994.

Hooded Merganser (*Lophodytes cucullatus*). Hooded Merganser nests locally in Massachusetts and not far to the north of us in New Hampshire and Maine. However, they nest primarily in an ill-defined area around the Great Lakes on both sides of the border. The Hooded Merganser has been present every year at Fresh Pond, but only in 1984 and 1993 were more than a few birds present for any length of time. October sightings of Hooded Mergansers at Fresh Pond have occurred only four times during the eleven years of observation. Maximum daily counts of eleven and nine birds were made in 1993.

Gallinules and Coots - Genus *Gallinula*, *Fulica*

Common Moorhen (*Gallinula chloropus*). A Common Moorhen (MP) was discovered on the pond October 24, 1993, by one of the regular participants in our census on a day when we were not officially doing the count. The bird was subsequently recorded on the census on October 29 and 30 by MP and JHB.

Table 5. Greater Scaup and Lesser Scaup

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|
| Greater Scaup | | | | | | | | | | | |
| Oct 1-15 | 3 | 8 | 8 | 12 | 7 | 18 | 15 | 5 | 9 | -- | 8 |
| Oct 16-31 | 17 | 35 | 17 | 27 | 21 | 6 | 20 | 9 | 17 | 15 | 20 |
| Nov 1-15 | 14 | 30 | 17 | 26 | 11 | 1 | 13 | 9 | 2 | 13 | 16 |
| Nov 16-30 | 1 | 7 | 5 | 1 | 3 | 1 | 2 | 1 | 3 | 1 | 19 |
| Dec 1-15 | 7 | 15 | 4 | 16 | 1 | 0 | 4 | 6 | 1 | 10 | 8 |
| Lesser Scaup | | | | | | | | | | | |
| Oct 1-15 | 0 | 1 | 8 | 1 | 1 | 2 | 1 | 2 | 3 | -- | 0 |
| Oct 16-31 | 1 | 7 | 5 | 0 | 3 | 0 | 2 | 1 | 3 | 1 | 3 |
| Nov 1-15 | 3 | 17 | 8 | 5 | 4 | 0 | 1 | 1 | 3 | 1 | 4 |
| Nov 16-30 | 2 | 9 | 4 | 3 | 1 | 0 | 1 | 2 | 0 | 2 | 5 |
| Dec 1-15 | 6 | 3 | 1 | 1 | 0 | 0 | 2 | 1 | 0 | 1 | 1 |

Numbers are average of three high counts per two-week interval.

-- no observations

American Coot (*Fulica americana*) (Table 4). Like many species of ducks, American Coots nest in freshwater prairie marshlands and wetlands, habitats devastated during the 1980s by agricultural development and drought. Average high counts at Fresh Pond went from fifteen for the November 1-15 period in 1986 to one for the same period in 1990, and from fourteen for the November 16-30 period in 1985 to no birds for the same period in 1990.

In 1994 we were hoping for a Canvasback show because of the good Canvasback nesting success mentioned earlier in this article. What we got was a coot show. Four birds were seen on October 24; eleven on October 25; forty-three on October 26; forty-eight on October 27; fifty-three on October 28; and eighty on November 6. Our previous high daily counts had been seventeen in 1985 and twenty-three in 1986.

Conclusion

We have created and continue to build a database that we can use confidently to describe use patterns of Fresh Pond by waterfowl in fall, evaluate long-term population trends, compare present-day status with historical data, and use for management and educational purposes. For example, in 1989 I suggested in a report to the Cambridge Conservation Commission that Canvasback and other waterfowl are attracted to Fresh Pond not just because of aquatic plants but also because an eight-foot chain-link fence keeps people and dogs off the shore and out of the pond at locations where the birds feed and rest. In other words, the birds benefit significantly from the protection the city gives to its water supply. As a result of doing this census, I know that my suggestion was correct. On several occasions, birds have taken flight from Fresh Pond when Cambridge Water Department staff have gone out on the pond in rowboats to perform routine maintenance on structures on the bottom.

Temporary surges in populations of Mallards and American Black Ducks probably reflect episodic flooding of the golf course by heavy rains and occasional Water Department decisions to draw down the pond. The erratic long-term behavior of Mallard numbers at Fresh Pond is likely due to movements of a local population choosing among many feeding areas.

What are some differences between our time and that of William Brewster, who wrote of the birds of Fresh Pond in his *Birds of the Cambridge Region of Massachusetts* (Brewster 1906)? Brewster's largely anecdotal species accounts appear to indicate that sea ducks visited Fresh Pond more frequently and in greater numbers than they do today, while the diving ducks that today are Fresh Pond specialties appeared rarely or infrequently and in far smaller numbers. What might account for such historical differences in usage? In Brewster's day, the nearby Charles River was tidal; hence more sea ducks would have likely visited the pond. In addition, hunting pressure on fresh water ducks was severe, and federal legislation to protect migratory waterfowl, first proposed in 1904

and bitterly opposed by states' rights partisans, did not become law until 1916 and did not take effect until 1918 (*Ducks Unlimited* 1995). With migratory fresh water ducks and geese protected today by law and by fencing, visitors can enjoy many more of them at Fresh Pond.

References

- Barton, J.H. 1989. Fresh Pond Bird Study. Cambridge Conservation Commission, Cambridge, Massachusetts.
- Batt, B.D.J. 1994. Black Duck Dilemma, *Massachusetts Ducks Unlimited Call*, Alstead, New Hampshire.
- Bellerose, F.C. 1980. *Ducks, Geese and Swans of North America* (Third Edition). Harrisburg, PA: Stackpole Books.
- Brewster, W. 1906. *The Birds of the Cambridge Region of Massachusetts*. Cambridge, MA: The Nuttall Ornithological Club.
- Ducks Unlimited*. 1994. Volume 58: No. 4, 5, 6. Memphis, TN: Ducks Unlimited.
- Ducks Unlimited*. 1995. Volume 59: No. 1. Memphis, TN: Ducks Unlimited.
- Flightlines*. 1994. Volume 1, No. 1, Memphis, TN: Ducks Unlimited.
- Terres, J.K. 1980. *The Audubon Society Encyclopedia of North American Birds*. New York: Alfred A. Knopf.
- Todd, F.S. 1979. *Waterfowl*. San Diego, CA: Sea World Press.
- U.S. Fish and Wildlife Service. 1994. *The 1994 Status of Waterfowl and Fall Flight Forecast*.
- Veit, R.R., and W.R. Petersen. 1993. *Birds of Massachusetts*. Lincoln, MA: Massachusetts Audubon Society.

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TRI-STATE BLUEBIRD SOCIETY

The Tri-State Bluebird Society, dedicated to environmental and conservation concerns for cavity-nesting birds in Massachusetts, Rhode Island, and Connecticut, will have its Grand Opening from 12 to 8 PM, March 11 and 12, 1995, at the Reflections of Nature Gallery, 1460 Fall River Avenue, Seekonk, MA 02771. Educational and membership information will be available at the opening. Wildlife photographs by nationally acclaimed photographer, Terry Dickinson, will also be featured. If you are unable to attend, call 800-769-BIRD for more information on the Tri-State Bluebird Society.