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Longevity of Saskatchewan Birds

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After 42 years of banding, an unexpected satisfaction has been the accumulating records of bird longevity. To get such worthwhile results, banding must be selective. From my experience, I would like to offer words of both encouragement and caution to younger banders. First, as has been said by many others, the "ring and fling" technique of banding any and every bird that one can catch, in an unplanned and haphazard fashion, is of no benefit to science. Such banding just clogs up the big computer in the banding office at Patuxent Refuge, and provides no long-term satisfaction to the bander.

I admit that I began as just such a "promiscuous" bander, but I hasten to add that this adjective does not apply to my marital life. Indeed my wife Mary is my longest-serving subpermittee. While we mist-netted for a few years and banded hundreds of thrushes and warblers, we failed to receive a single recovery from these birds. On the other hand interesting recoveries kept coming in from birds of prey, from waterfowl, and from colonial birds.

We gradually changed our emphasis and thereby increased the value of our banding, as we reduced the number of species banded from a yearly high of 94 species to a low of 33 species. We have now had 2440 recoveries to the end of 1984, from 87,056 birds of exactly 200 species banded until that time. Repeats and returns are not included in these figures. Since the raptors and colonial birds are banded as flightless young, their exact point of birth is known, making subsequent recoveries more valuable in a scientific sense.

The recovery rate for Great Horned Owls, Golden Eagles, Red-tailed Hawks, Northern Goshawks and Ospreys runs over 6% as do the rates for American White Pelicans and Double-crested Cormorants. Gulls banded in Saskatchewan run at 2% with Common and Caspian Terns close to 1%. Some winter birds such as Bohemian Waxwings and Black-capped Chickadees, Purple Finches, and Evening Grosbeaks also run in the neighborhood of 1%. Some of these rates will rise slightly as older birds are reported in future years. Mary continues to band virtually all the Tree Swallows and Mountain Bluebirds raised in the 250 houses forming our part of the Prairie Bluebird house trail, but here the results are measured in returns, not recoveries.

Banders usually wait only a few years to learn where many of their birds go. But to learn how long birds live, a bander must wait considerably longer. And the number of banded birds remaining alive is meanwhile decreasingly inexorably. In the last 12 years I have received an unusual number of recoveries that help flesh out the right hand side of life tables where numbers are always small. Some hold the longevity record for their species. I wish to tell of each in turn.

My Great Horned Owl 508-0890, banded at Bredenbury, Saskatchewan on 17 May 1959 and caught in a trap at Roblin, Manitoba on 4 December 1972, at 13 years 6 months was the oldest record of this species for 4 years. Then an owl banded by D. Seal of Rockford, Illinois was found freshly dead 17 years and four months after banding.

A computer printout from Patuxent in November 1984, brought word of three remarkably old Great Horned Owls in one mail. I contacted each finder at once to confirm the bird's exact date of death, without giving any intimation that longevity was my concern. 518-60341 had been banded in its nest near Saskatoon on 10 May 1967 and was found freshly dead near Delisle, Saskatchewan on 17 June 1984 was 17 years, 1 month old. 518-60395 was banded near St. Benedict on 14 May 1967 and was hit by a motor vehicle near Hendon on 30 July 1983. It was 16 years, 2 months old and had moved only 60 miles (90 km) southeast. 518-60767 had been banded near Lepine Siding on 4 May 1968. It was found freshly dead on a snowdrift beside Max Hackl's barn near St. Benedict on 23 March 1984, at the age of 15 years, 10 months. This owl, preserved in the farmer's deep freeze, was autopsied at the Western College of Veterinary Medicine. It was emaciated and apparently had starved to death.

In 1973 I learned that Black-crowned Night Heron 547-24244, banded as a nestling on 7 July 1956 near Craven, had been found on a fence apparently unable to fly near the Cape Romain Wildlife Refuge, Awendaw, South Carolina. It died that night at the age of 16 years, 7 months, and 8 days. This was a short-lived record, and was eclipsed before I could publish it. Less than five months later on 9 July 1973 a Black-crowned Night Heron, banded as a nestling near the southwest corner of Lake Erie, was collected for pesticide analysis within 30 miles of its banding place. It had been banded on 6 June 1952 and was slightly more than 21 years old.

In a single mailing from Patuxent in March 1977 I was informed of three Ring-billed Gulls from Redberry Lake which had met their ends after 10, 11 and 16 years, respectively. Since one must confirm the exact date of death and make sure the band had not merely been in a drawer for 10 years, I phoned the finder of the 16-year-old gull, Mrs. Florence Fyson of Struan, Saskatchewan. I had banded nestling 545-95992 on 27 June 1960 and the Banding Office had quoted it as "54" (death from striking a stationary object) on 26 June 1976. Mrs. Fyson indeed had watched the gull strike a telephone line and fall on that very day. She rushed to find that it had a bleeding broken wing. It died in her hands.

In the same mail of November 1984 that brought my three oldest owls, was word of another Ring-billed Gull banded at Redberry Lake on 1 July 1966 which was found freshly dead on the highway near Fielding, Saskatchewan in July 1983, my oldest gull at 17 years, though the current record is 25 years.

In 1978, I learned of Swainson's Hawk 637-97348 which I had banded at Floral, just east of Saskatoon on 13 July 1967, and which had been caught alive in a weakened state at Laboulaye, Cordoba, Argentina on 18 December 1978 when 11 years and 5 months old. Neal G. Smith has studied the massive migrations of this species, following the thermal air currents along the Continental Divide in Panama and showing no excreta beneath their communal roosts. After the 7200 mile (11,500 km) flight from Saskatchewan, without any food at some stops, these birds are sometimes so weak they can be picked up by hand. This bird was older than any yet published but I had to write back and forth to Argentina several times, using as my Spanish translator a doctor from South America. During the interval, Russell Wall of Wymark, Saskatchewan topped the record by finding a freshly dead Swainson's Hawk beneath a fence near Wymark. Jack Millar of the Canadian Wildlife Service had banded the bird just 9 miles (14 km) north and 8 miles (13 km) east of where it had been found by Wall, 16 years after the calculated date of hatching.

Double-crested Cormorant 508-08880, banded as a nestling on Redberry Lake on 1 July 1966 was found dead at Inks Lake, Texas on 30 March 1984. I wrote at once to the wildlife officer who reported the bird, since if freshly dead it would have eclipsed the published longevity record by 1 month. The cormorant was decomposing and had probably been dead for a month or two so it fell just short of being a record.

My greatest contribution to the knowledge of longevity of any species ironically developed from what began as promiscuous banding. When reaching into clumps of bristly gooseberry, *Ribes setosum*, to pull out an unbanded

gull or pelican one could sometimes seize an incubating, slow, clumsy, adult female White-winged Scoter before she could become airborne. Two graduate students, Patrick W. Brown and Pat Kehoe, have since studied the scoters on the islands of this lake, capturing about half of the nesting females each year. As a result, the five oldest White-winged Scoters on record are from Redberry Lake. Three scoters have now been caught on their nest 10 years after banding, one 11 years after banding, two 12 years after banding, and one 13 years after banding when at least 15 years of age. (This species does not breed until two years of age). Of distant recoveries, the oldest is 637-97350 banded at Redberry Lake on 16 July 1967 and found freshly dead on 22 January 1981 at Comox, British Columbia. This was 13½ years after her first and only capture on her nest, so this female must have been at least 15½ years of age.

Although I believe that I have banded more Bohemian Waxwings (4537) than any other bander, I was surprised to read in the recent summary of longevity records by Klimkiewicz and colleagues that my five-year-old bird, 52-183313, held the longevity record for this species. It was banded as an adult in our yard in Saskatoon on 19 February 1968 and was killed when it flew into a picture window in Vernon, British Columbia in April 1973.

Nor would I have expected to hold the longevity record for Black-billed Magpies since some individuals must surely live longer than five years in the wild. I band them only as a diversion when banding nearby nestling raptors and have banded 654 individuals. A nestling, 524-81846, which I banded near Speers, Saskatchewan on 23 June 1967 was shot nearby on 20 June 1972 when 5 years of age.

Other Saskatchewan banders have contributed other duck records in the published summaries to date: A 17-year-old Gadwall banded at Mortlach by Floyd Thompson and a 14-year-old Common Goldeneye banded at Kazan Lake for Ducks Unlimited by the late Thomas E. Randall.

The Common Goldeneye exemplifies nicely how yearly banding can produce useful life history data. Maureen DuWors and I have recently published a table based on 94 Common Goldeneye females banded on their nests at Emma Lake between 1973 and 1982, yielding two 8 year old birds and a calculated annual survival rate of nearly 58%.

In summary, if circumstances permit a bander to choose species with relatively high recovery rates, useful longevity data may accumulate after many years and add a new dimension to the bander's satisfaction.

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(Inland)

Characteristics of American Woodcock Wintering in Eastern North Carolina

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Introduction

The American Woodcock (*Scolopax minor*) is a migratory bird that breeds in eastern North America and winters in the southeastern United States (Sheldon 1971). Beginning in 1975, studies surveyed the sex and age structure, and determined the migratory habits, of North Carolina's wintering population of woodcock (Stamps and Doerr 1976, Connors and Doerr 1982). Connors and Doerr (1982) found (1) that juvenile males made up the largest percentage of the winter population and (2) that these wintering birds came from numerous places in the Atlantic flyway throughout the northeastern U.S. and southeastern Canada.

This paper expands on the results of earlier studies which reported results from 1975 to 1978. We report additional information on the population structure and migratory habits of birds banded in Hyde County, North Carolina, during the period 1975-1982. The changes in the age and sex structure of a wintering population over time and how this population structure differs from that revealed by South Carolina data are discussed. We also present new information on the migrational habits of woodcock wintering in North Carolina. Finally, this paper presents infor-

mation, based on band recoveries and radiotelemetry data, showing daily and annual site fidelity demonstrated by this wintering population. A cautionary note on the radio-transmitter harness is also included.

Methods

Woodcock detected by eyeshine in soybean fields at night using a 6-volt headlamp were captured with long-handled nets (Glasgow 1958). Fields were systematically searched by a pair of workers moving perpendicular to the cultivation rows. The sex and age of each captured woodcock were determined by wing plumage characteristics (Martin 1964) and its weight and field location were also recorded. Each bird was banded with a U.S. Fish and Wildlife Service band and released.

Woodcock weights were analyzed as an index body condition using Analysis of Variance and Duncan's Multiple Range procedures. Sex and age structures of the population between years were analyzed using a chi-square contingency table. All analyses were conducted at the 0.05 level of significance using the Statistical Analysis System (Helwig and Council 1979).

Five woodcock were outfitted with radio-transmitters to determine the distance woodcock traveled when moving between nocturnal and diurnal habitat and to determine the daily regularity of these movements on the study area. The location of each bird was determined before and after crepuscular periods each day and at midpoints between these periods. Woodcock locations were plotted on large-scale aerial photographs and later surveyed on the ground.

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