

in a north-westerly direction. In about five to fifteen minutes the process would be repeated with another group coming in from the south-east. The rate of capture was approximately constant throughout the day without the morning and afternoon peaks common to trapping operations.

Probably not more than one in fifteen of the birds to alight in the trapping area was caught. If this estimate approximates the true situation it would mean that during the day about 1,500 birds crossed the trapping area which is about fifty yards wide. If the movements were nearly uniform over the Mayville region, and observations on other parts of the college campus and in other parts of town lead me to believe that we did not have any particular concentration of birds on the trapping area, then across a ten-mile strip about 500,000 birds moved northward on this one day! Assuming a like movement for the general region about three million juncos moved up the sixty mile wide Red River Valley of the North on this one day.—HAROLD C. BURDICK, State Teachers College, Mayville, North Dakota.

**Crippled Birds.**—The notes by Ralph W. Dexter in the July 1942 issue of BIRD-BANDING set me looking through my banding journal for records of injured birds. The following entries were for injuries not incident to banding which had healed or were definitely healing at the time of observation.

No. 140-25375 banded July 17, 1940; adult Bank Swallow with infection in eye which had destroyed the eyeball, feathers of the eyelids and area at the corner of the eye. The infection was discharging at the time of observation.

No. 40-157125 banded Oct. 7, 1940; adult White-throated Sparrow with left tarsus broken about in the middle, healed and set at a slight angle.

No. 41-82437 banded July 10, 1941; adult Bank Swallow with one eye infected, similar to No. 140-25375 but not as extensive when observed.

No. 40-157443 banded Oct. 10, 1941; Harris's Sparrow with tarsus completely broken off about 2/3 distance from proximal end, foot dangling by the tendon. The stump had healed over the end of the tarsus with a slight swelling; there was a small opening just large enough to let the tendon slip back and forth when the muscles of the leg contracted. I clipped the tendon close to the stump and it retracted through the opening. There was no indication of infection.

No. 42-23766 banded April 27, 1943; adult Slate-colored Junco with the hind toe of the left foot injured so that it did not open; the bird rested on the back side of the base of the toe which was slightly swollen. Because of lack of contact and wear the toe-nail had continued to grow. The distance across the arc of the toe-nail was 10 millimeters while the corresponding distance on the other foot was 6 millimeters. The other toes of the foot seemed to function normally.

Probably the most severe crippling that I know was reported to me by a local hunter. This was in a Ring-necked Pheasant. It was shot on the wing and when examined was found to have only stumps for legs. These stumps were brought to me and exhibited to biology classes. One leg had been amputated with about three-quarters inch of the tarsus remaining, the other just above the distal end of the tarsus. The stumps were healed and protected by tough scaly skin. The ends were somewhat enlarged. It seems probable that the bird was caught by a mowing machine just as it flew up. The hunter reported the bird to be in good flesh.—HAROLD C. BURDICK, State Teachers College, Mayville, North Dakota.

**A Method of Banding Bank-nesting Swallows.**—At the suggestion of Prof. O. A. Stevens I first tried capturing bank-nesting swallows at night by use of a flash light. Since the first attempts the technique has been modified so that it seems quite effective. Two hundred and four swallows have been captured and banded in a four hour period. A total of 1,216 swallows has been banded in three years and 38 live returns taken in the past two years.

Banding is done with from two to fifteen cooperators—usually students from biology and nature study classes at the college. We arrive at the colony soon after sundown. The first operation is to block the nest entrances with crumpled paper towels. One of the assistants who has been along several times—or myself—usually perform this operation with as little disturbance as possible, otherwise many of the birds leave the nest before we are ready to take them. This is especially true on bright moonlight nights.

Next we organize for capturing, banding, and returning the birds. Usually two individuals with focusing flashlights capture the birds by flashing the light into the burrow. The birds usually come to the light readily and can be picked up at the edge of the burrow with the bare hand. When one has a flashlight in one hand and catches as many as nine swallows from one burrow in the other hand—he has practiced! Extremely young birds will not come to the light, and brooding females come only with much coaxing, even prodding with a stick or wire.

The "catchers" pass the birds from a single burrow on to the "carriers" who bring them to the "bander." They are banded and the band numbers and family groupings read to the "recorder." The bander then passes the birds back to the carrier, who carries them to the catchers to return to their original burrows and close them in with the paper wad. The last operation of the evening is to remove all paper wads without disturbing the birds.—HAROLD C. BURDICK, State Teachers College, Mayville, North Dakota.

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## RECENT LITERATURE

Reviews by Donald S. Farner

### BANDING

1. **Report of the Bird-Ringing Committee.** A. Landsborough Thomson 1943. *British Birds*, 16: 209-213. In 1942, 4,567 birds were banded as compared to 7,099 in 1941, and 55,817 in 1939. Since 1909, 715,314 have been banded. Species banded in greatest numbers in 1942 were the Starling (*Sturnus vulgaris vulgaris* L.), 444; Greenfinch (*Chloris chloris chloris* (L.)), 197; Song Thrush (*Turdus ericetorum ericetorum* Turton), 349; Blackbird (*T. merula merula* L.), 191; Swallow (*Hirundo rustica rustica* L.), 480; Lapwing (*Vanellus vanellus* L.), 462; Arctic Tern (*Sterna paradisaea* Brünnich), 196. Species which have been banded in greatest numbers since the beginning of the banding program in 1909 are the Starling, 69,882; Greenfinch, 30,118; Chaffinch (*Fringilla coelebs* L.), 33,649; Song Thrush, 68,466; Blackbird, 61,019; Robin (*Erithacus rubecula* (L.)), 23,477; Hedge Sparrow (*Accentor modularis* (L.)), 15,292; Martin (*Delichon urbica* (L.)), 12,313; Manx Shearwater (*Puffinus puffinus puffinus* (Brünnich)), 20,007; Lapwing, 40,135; Common Tern (*Sterna hirundo hirundo* L.), 19,670; Sandwich Tern (*Thalasseus sandvicensis sandvicensis*), 17,987; and Black-headed Gull (*Larus ridibundus ridibundus* L.), 14,112. The largest numbers of returns have been from the Starling, 3,106; Greenfinch, 2,433; Chaffinch, 1,472; Song Thrush, 1,373; Blackbird, 2,933; Robin, 2,268; Hedge Sparrow, 1,419; Mallard (*Anas platyrhynchos platyrhynchos* L.), 1,118; Manx Shearwater, 1,101. The highest percentage of recoveries has been in the following species (at least 500 banded): Greenfinch, 8.1%; Yellow Bunting (*Emberiza citrinella* L.), 7.1%; Robin, 9.7%; Hedge Sparrow, 9.3%; Little Owl (*Athene noctua* (Scop.)), 9.1%; Barn Owl (*Tyto alba* (Scop.)), 10%; Kestrel (*Falco tinnunculus* L.), 10.1%; Sparrow Hawk (*Accipiter nisus nisus* (L.)), 14.0%; Common Heron (*Ardea*