Lengthy Pair-bonds in Chickadees and Song Sparrow

Keith L. Dixon
Department of Biology and the Ecology Center
Utah State University
Logan, Utah 84322-5305

Since year-to-year survival in small, temperate-zone songbirds is on the order of 50 per cent (e.g., Ricklefs 1973), the chances of remating are low. However, the prospects are somewhat brighter in sedentary species, e.g., Wren-tit *Chamaea fasciata* (Erickson 1938) and Pygmy Nuthatch *Sitta pygmaea* (Norris 1958). The following cases of unusual pair "longevity" are based upon resighting of color-banded individuals.

Black-capped Chickadee (*Parus atricapillus*). Logan, 1400 m elev., Cache Co., Utah. Riparian cottonwoods and box elders bordered by residential plantings:

102-88351 M, 102-88358 F, were paired in the breeding seasons of 1962, 1963, 1964, and 1965, and associated as a pair during other seasons in this span. The male was HY by scalp incision on 5 November 1961. The female was not sighted after October, 1965, and in 1966 the male paired with a female banded initially in 1963. Only two of 11 other pairs that were sighted at this locality in the nesting season were known to have been paired for as long as two years. Elder and Zimmerman (1983) reported that survival estimates for this species based on resighting were higher than those obtained by other types of encounters.

Mountain Chickadee (*Parus gambeli*). Beaver Mountain Ski Area, Cache Co., Utah. Mixed conifer-aspen site at 2225 m, described by Dixon (1965):

102-88315 M, 106-74706 F. Paired in breeding seasons 1964, 1965, 1966, and 1967, and associated continuously at other seasons. (For example, in 1966 the male was sighted on 17 days representing eight calendar months. He was accompanied by the female on 11 of those days. Trapping disrupted their activities on two of the 17 days, and the female may have been overlooked during encounters with neighboring males on at least two other days.)

113-19584 M, 113-19588 F. Both were banded as newcomers to the study area in February, 1970. They were paired in the breeding seasons of 1973, 1974, and 1976; and were associated as an isolated pair in February, 1975, but not located during single visits in April and June, 1975.

In 19 instances between 1962 and 1976, both members of a breeding pair of Mountain Chickadees survived to initiate the next breeding season. In only one case did a change of mates occur. This involved MA and FB of Minock (1971). The mate of MA (the dominant male) was not sighted after mid-June, 1968; in the following winter the dominant male was paired with FB, and her former mate, the subordinate male of the flock, was accompanied by a female known to be in her first winter. Winkel and Winkel (1980) found that 1 of 45 pairs of Great Tits (*P. major*) and 1 of 27 pairs of Coal Tits (*P. ater*) remained intact for four breeding seasons in West Germany. The sixyear duration of one pair of Coal Tits reported by Lohrl (1978) clearly exceeds that of the cases cited here.

Song Sparrow (*Melospiza melodia*). Logan, 1400 m, Cache Co., Utah (same site as for Black-capped Chickadee):

870-34001 M, 870-34002 F. Paired in the 1982, 1983, and 1984 nesting seasons. Unlike the chickadees, the Song Sparrows did not remain associated beyond the nesting season. The female was not observed between 17 August 1983 and 17 March 1984, although she was captured 150 m upstream in December, 1981. Nice (1937:87) stated of this species ". . . I do not know of any case of remating for three years."

Acknowledgements

Field work was supported in part by grants from the National Science Foundation. Valuable field assistance was rendered by F. N. Folks, D. M. Forsythe, J. D. Gilbert and M. E. Minock. I thank L. R. Mewaldt and M. E. Minock for their helpful comments on the manuscript, M. H. Balph for reports of sightings of banded birds, and Carol Sharp for typing the manuscript.

Literature Cited

- Dixon, K. L. 1965. Dominance-subordination relationships in Mountain Chickadees. Condor 67:291-299.
- Elder, W. H. and D. Zimmerman. 1983. A comparison of recapture versus resighting data in a 15-year study of survivorship in the Black-capped Chickadee. J. Field Ornithol. 54:138-145.
- Erickson, M. M. 1938. Territory, annual cycle, and numbers in a population of Wren-tits (*Chamaea fasciata*). Univ. Calif. Publ. Zool. 42:247-334.
- Löhrl, H. 1978. Brutpaar der Tannenmeise (*Parus ater*) nistet sechs Jahre gemeinsam. J. Orn. 119:463-464.
- Minock, M. E. 1971. Social relationships among chickadees (*Parus gambeli*). Condor 73:118-120.
- Nice, M. M. 1937. Studies in the life history of the Song Sparrow I. Trans. Linnaean Soc. New York 4: vi + 1-247.
- Norris, R. A. 1958. Comparative biosystematics and life history of the nuthatches (*Sitta pygmaea*) and (*Sitta pusilla*). Univ. Calif. Publ. Zoology 56:119-300.
- Ricklefs, R. E. 1973. Fecundity, mortality and avian demography. Pp. 366-437 in D. S. Farner (ed.) Breeding Biology of Birds, National Academy of Sciences, Washington, D.C. ix + 515 pp.
- Winkel, W. and D. Winkel. 1980. Zum Paarzusammenhalt bei Kohl-, Blau-, und Tannenmeise (*Parus major, P. caeruleus* und *P. ater.*) Vogelwarte 30:325-333.

(Western)



The Banders' Forum

Computerizing Bird Band Schedules

*Robert A. and Patricia V. Melville in their article "Birds is for the computer", NABB, Vol. 10, No. 2 April-June 1985, I have reticence.

Bird banding is expensive enough without spending \$1000 to \$2000 for a computer to fill out banding schedules, when a 50¢ pen can do the same.

Every year I buy bird feed, I attend the banding conference, I drive 5000 to 6000 miles to expedite my bird banding. This by the way costs me around \$900. If a computer could solve the following problems I have and get me more recovered birds I would readily purchase a computer.

- 1. In 52 years I have banded 83,000 birds, can the computer tell me how many of my bands are still on living birds?
- 2. How many of my banded bird bands are in a garbage dump? These were due to a finder of a banded bird who had no knowledge of where to report banded birds.
- 3. How many bands are on watch fobs, or lying in a dresser drawer, that have not been reported?
- 4. How many bird bands are lying where they are impossible to find?

Karl E. Bartel 2528 W. Collins St. Blue Island, Ill. 60406