were not baiting particular fish as they do in Japan (Higuchi 1988a, b). The individual that broke a small twig from a dead fallen branch manipulated a substrate, possibly to make a piece of a lure.

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LITERATURE CITED

BOLSTER, D. C. AND S. K. ROBINSON. 1990. Habitat use and relative abundance of migrant shorebirds in a western Amazonian site. Condor 92:239–242.

BOSWALL, J. 1983. Tool-using and related behavior in birds: more notes. Avicult. Mag. 89: 94–108.

HIGUCHI, H. 1986. Bait-fishing by the Green-backed Heron *Ardeola striata* in Japan. Ibis 128:285–290.

———. 1988a. Bait-fishing by Green-backed Herons in South Florida. Florida Field Nat. 16:8–9.

———. 1988b. Individual differences in bait-fishing by the Green-backed Heron *Ardeola striata* associated with territory quality. Ibis 130:39–44.

KEENAN, W. J. 1981. Green Heron fishing with mayflies. Chat. 45:41.

LOVELL, H. B. 1958. Baiting of fish by a Green Heron. Wilson Bull. 70:280–281.

NORRIS, D. 1975. Green Heron (*Butorides virescens*) uses feather lure for fishing. Am. Birds 29:652–654.

PRESTON, C. R., H. MOSELEY, AND C. MOSELEY. 1986. Green-backed Heron baits fish with insects. Wilson Bull. 98:613–614.

SISSON, R. F. 1974. Aha! It really works! Nat. Geogr. 144:142–147.

WALSH, J. F., J. GRUNEWALD, AND B. GRUNEWALD. 1985. Green-backed Herons (*Butorides striatus*) possibly using a lure and using apparent bait. J. Orn. 126:439–442.

WILLARD, D. E. 1985. Comparative feeding ecology of twenty-two tropical piscivores. Pp. 788–797 *in* Neotropical ornithology (P. A. Buckley, M. S. Foster, E. S. Morton, R. S. Ridgely, and F. G. Buckley, eds.). American Ornithologist's Union, Ornithol. Monogr. No. 36, Washington, D.C.

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Carolina Chickadee lays and incubates eggs in two separate nest cups within the same nest box.—From 22 April until 10 June 1993, we observed an unusual Carolina Chickadee (*Parus carolinensis*) breeding attempt in a cedar nest box located directly under a 765,000-volt transmission line in Alum Creek State Park, Delaware County, Ohio (40°11′5″N 82°57′20″W). On 2 May, there were two eggs in a nest cup constructed on one side of the nest chamber. Over the next three days, three additional eggs were laid in a separate cup located on the other side of the box (Fig. 1A). On 9 May, we caught and banded a female chickadee as she incubated two eggs in the first nest cup. On 16 May we caught the same chickadee as she incubated a set of three eggs in the second nest cup. All

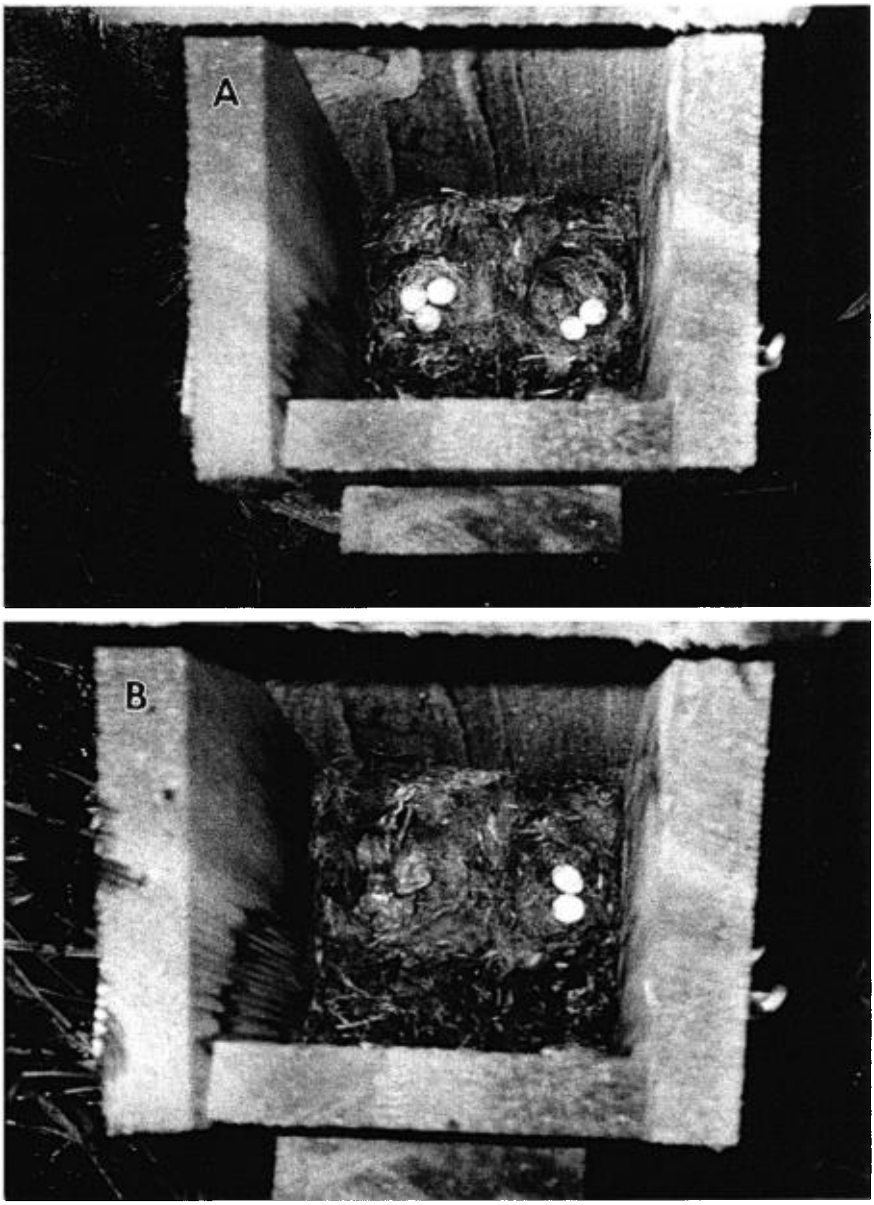

FIG. 1. (A) Two Carolina Chickadee nest cups within the same nest box. (B) Three nestlings in one nest cup, one of which survived to fledging. Neither egg in the other nest cup hatched.

five eggs were warm to the touch throughout the incubation period, an interval during which the box was checked at least every second day. On 18 May, the set of three eggs hatched (Fig. 1B). The set of two eggs never hatched and eventually disappeared on 31 May. Two of the three nestlings disappeared, one six days after hatching, and the other 13 days after hatching. The third fledged 18 days posthatch. A sixth chickadee egg was laid in the nest containing the lone nestling on 2 June, three days before the surviving nestling fledged. This egg disappeared when a House Wren (*Troglodytes aedon*) took over the box on 10 June.

Although Gowaty (Wilson Bull. 95:148–150, 1983) has found two Eastern Bluebirds (*Sialia sialis*) occupying the same nest box, apparently such was not the case here for chickadees. We believe that the same bird laid the aggregate of five eggs in two nest cups because the eggs were laid sequentially, one per day, over a five day period and because the same bird was caught incubating both sets of eggs. Also, except for the female's apparent mate, we never observed any other chickadee around the box.

As the nest box was located directly under the high-voltage line, it is problematical whether the electromagnetic field influenced the bird. During the same breeding season, two other chickadee nests under the powerline were successful (≥ one fledgling) and three nests failed. In a control area nearby, but beyond the powerline's electromagnetic field, no Carolina Chickadee nests were successful and two nests failed. However, only in the one "experimental" nest was the behavior of a female apparently aberrant.

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When is the Common Raven Black?—Adults of the genus *Corvus* typically have plumage similar to that of juveniles, but Wilmore (1977), Coombs (1978) and Goodwin (1986) all state that juvenile Common Ravens (*C. corax*) have "duller" plumage than adults. Kerttu (1973) also describes juveniles as having dull plumage, with only second-year birds acquiring the shiny metallic sheen of adults. However, Witherby et al. (1943) state that in the juveniles the "tail, wings and wing-coverts are much as in the adult, but not so brightly glossed," and then mention that the gloss becomes "almost entirely worn off by the first autumn." Bent (1946) reports that the wings and the tail of juveniles are "much like those of the adult, clear lustrous black with greenish and purplish reflections" and, that at the end of the juvenile molt completed in late summer, "the winter plumage is practically adult, lustrous black." These three conflicting claims could lead to confusion in age determinations so critical in unravelling the social behavior of many corvids (for example, Henderson and Hart 1991).

To distinguish juvenile from adult ravens, Kerttu (1973) delineated three age classes based primarily on palate color. However, palate color is a plastic characteristic in ravens, highly dependent on status and possibly mate-bonding (Heinrich and Marzluff 1992), making it an unreliable indicator of age beyond the first summer. This leaves plumage characteristics as