

were shot. The average distance travelled by these birds during this time interval was 51.3 miles.

Bellrose (*Bird-Banding*, 29:75-90, 1958) found that wild Mallards released on clear days in unfamiliar terrain headed north no matter what time of the year they were released. The data reported here support these findings. They also indicate that this phenomenon may be shown by hand-reared birds as well as pure wild Mallards, and that this may be a long distance as well as an immediate orientation.—JAMES J. ZOHRER, *Department of Wildlife Ecology, University of Wisconsin, Madison, Wisconsin. 2 August 1969.*

Trumpeter Swan carrying young.—This observation describes a Trumpeter Swan (*Olor buccinator*) cygnet riding on the back of an adult. Although Delacour and Mayr (1945) as quoted in Banko (*The Trumpeter Swan, its history, habits and population in the United States. N. Amer. Fauna, No. 63, 1960*) state that Mute (*Cygnus olor*) and Black-necked Swans (*Cygnus melancoriphus*) generally carry young on the back and other swans have this habit, Banko added that this behavior has not been reported in Trumpeter Swans.

Trumpeter Swans were transplanted from Red Rock Lakes National Wildlife Refuge, Montana to Lacreek National Wildlife Refuge, South Dakota in 1960 (Monnie, J. *Wildl. Mgmt.* 30:691-696, 1966). Two cygnets were produced in 1963 and reproduction increased to 15 cygnets reaching flight age in 1968.



FIG. 1. Trumpeter Swan carrying cygnet.

On 8 June 1969 at 18:30 a pair of Trumpeter Swans with five cygnets was surprised in a narrow borrow ditch adjoining a 531-acre marsh in which the pair had nested. Cygnets swam between the adults as the brood progressed down the ditch. Soon after, one cygnet swam around to the anterior end of an adult and climbed onto its back. The cygnet quickly turned around, sat down and began preening. Both adults were alerted to my presence and disregarded the preening cygnet (Fig. 1). Four other cygnets remained in the original swimming position. The swans were motionless in the water watching me or were swimming down the ditch during the next 15 minutes. The riding cygnet continued preening for five minutes and then returned to the other cygnets swimming between the adults. An opening in dense cattail provided an escape route allowing the brood to swim out of view a few minutes later.—DONALD A. HAMMER, *Lacreek National Wildlife Refuge, Martin, South Dakota, 2 September 1969.*

Notes on the foods of juvenile Black-bellied Tree Ducks.—Studies of waterfowl food habits traditionally emphasize the diet of adult game ducks (cf. Cottam, Tech. Bull. 643, U.S. Dept. Agr., 1939; Martin and Uhler, Res. Rept. 30 (reprinted), U.S. Fish and Wildl. Serv., 1951). Only more recently, however, have the diets of juvenile waterfowl been emphasized in the literature. Chura (Trans. N. Amer. Wildl. Conf. 26:121-134, 1961), for example, described the diet of maturing juvenile mallards (*Anas platyrhynchos*). Similarly, Bolen and Forsyth (Wilson Bull. 79:43-49, 1967) reported only the foods of adult Black-Bellied Tree Ducks (*Dendrocygna autumnalis*), and until now, even scant records were unavailable for young birds of this species.

Individual foods from both the crops and gizzards of two Black-bellied Tree Duck broods were examined volumetrically to determine basic trends in the diets of the young birds. The birds' ages were estimated from linear measurements of the middle toe, exposed culmen, and tarsus length following criteria developed by Cain (in press). These broods and other tree ducks were collected in 1966 and 1967 at Lake Mathis (= Lake Corpus Christi) in Live Oak and San Patricio Counties, Texas.

The foods of five 21-day old ducklings primarily consisted of *Echinochloa colonum* seeds; this food occurred in all of the gizzards and crops (100 per cent frequency within the brood) and with an average volume of 5.4 cc (crops) and 2.5 cc (gizzards). *Eclipta alba* (= *Verbesina alba*) seeds occurred in all of the crops and in 40 per cent of the gizzards; its volume was 0.1 cc or less in each case. Animal matter was found only in the crops (100 per cent frequency) and averaged 0.5 cc per bird.

The crops and gizzards of six 35-day old ducklings each contained *Sagittaria* tubers; the average volume for this food was 0.8 cc (gizzards) and 7.0 cc (crops). Trace amounts of *Heteranthera dubia* seeds occurred in some of these samples. Measureable amounts of animal matter were again largely limited to the crop samples; the average amount per crop was 0.6 cc.

The overall percentages of plant and animal materials in the diets of these broods are compared with similar data for a larger sample of adults in Table 1. The two adults tending the 21-day old brood contained only trace amounts of animal matter whereas the adult collected with the 35-day old brood lacked any evidence of animal food in its digestive tract.

The nature of the animal matter seems significant. Specifically, the animal foods taken by the younger brood included insects, spiders, snails (*Physa anatina*), and in one instance, a bivalve (*Sphaerium securis*). Of these, only the insects and spiders were