

Although insect remains occurred in all pellets, only one contained any vertebrate material. That pellet (20% of the sample for burrow A) contained four fragments of anuran skeleton. Other vertebrate remains collected at an entrance to burrow A included a partially decapitated southern toad (*Bufo terrestris*) and five pairs of *B. terrestris* ilia, one skull of the eastern spadefoot (*Scaphiopus holbrooki*), two vertebrae from a perciform fish (probably a centrachid), two lower mandibles from immature cotton rats (*Sigmodon hispidus*) and one tarsometatarsus from an icterid (probably Bobolink, *Dolichonyx oryzivorus*). No vertebrate remains were found at burrow B. These data agree with those of Lewis (1973, Fla. Field Nat. 1: 12-14) who found that Burrowing Owls in central Florida take a general assortment of vertebrate prey, with amphibians being the most frequent. Although no tern remains were found, these Duval County owls did prey on Least Tern (*Sterna albifrons*) chicks later in 1977 (S. Grimes pers. comm.).

Insect remains present in the pellets or scattered about the entrance of burrow A included lepidopterans, dipterans and coleopterans. Coleopterans identified to family included one staphylinid, one curculionid and one hydrophilid or dytiscid. An unidentified gastropod shell also was found at burrow A.

Insect remains in the pellets at burrow B included coleopterans (especially scarabs), one collembolan, one hemipteran, one dipteran and one lepidopteran (family Sphingidae). One scarab was further identified as a nocturnal June bug of the genus *Phyllophaga*. The staphylinid and many of the scarabs found in these samples are ground dwellers. Again, these data correspond well with the findings of Lewis (1973) who described a wide range of invertebrate prey items with coleopterans being the most common (suggesting a high degree of opportunism).

The presence of items such as *Scaphiopus holbrooki*, *Bufo terrestris*, *Phyllophaga* and the sphingid moth as prey indicates nocturnal or crepuscular feeding in these owls. As Dice (1949 Amer. Nat. 79: 385-416) found that individuals of the western subspecies (*Athene cunicularia hypugaea*) were poorly adapted to finding dead prey under simulated nocturnal conditions, perhaps movement and/or sound is required for prey detection in these situations. Other prey items such as some of the beetles and the hemipteran, however, are likely to have been taken during the day. Thus, the Florida Burrowing Owl seems highly flexible in both prey selection and activity period.

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Two more records of the Tropical Kingbird for Florida.—On 12 May 1979 at 0800, we observed a Tropical Kingbird (*Tyrannus melancholicus*) at 15-20 m in good light perched in a mastic tree (*Mastichodendron foetidissimum*) at the south loop of West Atlantic Drive on Hypoluxo Island, Palm Beach County, Florida. A short time later it was seen perched on utility wires. A Gray Kingbird (*T. dominicensis*) and a Great Crested Flycatcher (*Myiarchus crinitus*) were nearby affording comparison of size and color intensity. The bird had a brown tail (both Western (*T. verticalis*) and Cassin's kingbirds (*T. vociferans*) have square-tipped black tails) with a distinct deep notch. There was no white in any of the rectrices. The tail feathers, upon careful study with a scope, showed no signs of wear indicating fresh plumage. The breast, belly and undertail coverts were bright yellow. The throat was white and the head was light gray with a small black mask. There was a faint line of gray between the throat and upper breast and the back was olive. The bird was later seen by many observers and was last reported on 15 May (Gloria Hunter pers. comm.). Brooks Atheron photographed this bird in late afternoon of 12 May (Fig. 1). This black and white photograph was made from a 35 mm color slide which is now on file at Tall Timbers Research Station, Tallahassee. This appears to be the first photograph of the Tropical Kingbird for Florida.

Another Tropical Kingbird was carefully studied twice during the morning of 20 May 1979, on Garden Key, Dry Tortugas, Monroe County, Florida, by Brian Hope, Al and Barbara Liberman and Paul Sykes. All field marks were carefully checked. It was studied at 10 m in company of a Gray Kingbird.



Fig. 1. Tropical Kingbird on Hypoluxo Island, Florida, 12 May 1979. Photo by Brooks Atherton.

Prior to the above sightings, there were five records for *T. melancholicus* for Florida; one from the Panhandle and the rest from the southern part of the State (Stedman and Lohrer 1976, Florida Field Nat. 4: 40-41). Of the seven records, four are in the spring, two in the fall and one in the winter.

Just recently, Traylor (1979, Auk 96: 221-233) presented evidence that the Couch's Kingbird (*T. couchii*), usually considered a subspecies of *T. melancholicus*, is a distinct species (Note: we were unaware of Traylor's paper prior to arrival of the April issue of *The Auk* in early June 1979). The distribution of *couchii* is from southern Texas south to Yucatan Peninsula, northern Guatemala and Belize and *melancholicus* is from southern Arizona south into South America. The two are sympatric from east central Mexico to Belize. The two species can be safely identified under field conditions only by call, thus silent extralimital birds, such as occur in Florida, are a problem. In the hand the two can be distinguished by the wing tip index and bill/wing ratio (Traylor 1979). Specimens are needed from Florida, as both species are likely to occur. Also, visible means of separating *couchii* from *melancholicus* in the field is urgently needed for silent birds occurring out of their usual range. Thus, all the records of the Tropical Kingbird in Florida are in a state of limbo until a voucher specimen is obtained.

We wish to thank Brooks Atherton for permission to use his photograph.—ANN Y. AYERS, 2944 Creek Road, West Palm Beach, Florida 33406, and PAUL W. SYKES, JR. AND WESLEY J. SYKES, 4195 Maurice Drive, Delray Beach, Florida 33445.

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Assemblages of Tree Swallows as information centers.—Tree Swallows (*Iridoprocne bicolor*) are known to have dramatic aerial displays (Jones 1910, Stone 1965). Stone (1965) regarded them as among the most striking avian performances that he witnessed at Cape May, New Jersey. But his descriptions, for the most part, do not include the time of day, the weather, nor any interpretation. It is the aim of this report to describe assemblages that my wife and I observed in Florida and Georgia in 1979, then to suggest that their selective advantage stems from being pre-roosting displays of a type Ward and Zahavi (1973) describe for a