

## FIVE NESTING ATTEMPTS BY AN APPARENT PAIR OF EASTERN KINGBIRDS

DOUGLAS B. MCNAIR

*Tall Timbers Research Station, 13093 Henry Beadel Drive  
Tallahassee, Florida 32312-0918*

Eastern Kingbirds (*Tyrannus tyrannus*) are widely regarded to be single-brooded (Murphy 1983a,b, 1986; Robertson and Blancher 1985). One reported case of a second brood in one season is unusual, because three of the four young disappeared soon after fledging, well before the normal termination of parental care (Blancher and Robertson 1982, 1984). Moreover, the female at the second nest did not feed the remaining fledgling, suggesting that she may have been a replacement female (Peck 1984). M. T. Murphy (*in litt.*) noted that one or two pairs of Eastern Kingbirds usually attempt to nest three times each year at his study sites in New York; P. J. Blancher (*in litt.*) noted that several pairs attempted to nest as many as four times within a season in Ontario, although this is rare. This note documents five nesting attempts of one apparent pair of Eastern Kingbirds at Lake Jackson, Leon County, Florida, in 1999.

The breeding site is a small (about 1.5-ha) island that is separated from the nearby mainland by about 30 m of marsh and open water. Habitat on the island was similar to an overgrown old field with scattered shrubs and trees and one copse of buttonbush (*Cephalanthus occidentalis*) and black willow (*Salix nigra*). Only one pair of Eastern Kingbirds occurred on the island. The nearest two pairs were 1.2-1.6 km away (measured from a map).

The pair of Eastern Kingbirds used buttonbushes as nest-sites for all five breeding attempts, two of which occurred in the same bush at the same site (reused nest). All nests were placed on horizontal branches near the top of the tree and close to the canopy edge, in an outer crotch that contained 3-5 twigs which supported the nest. Mean nest placement characteristics ( $n = 4$ ) were: nest height = 2.3 m; tree height = 2.8 m; relative nest height = 0.82 m; distance of nest from center of tree = 1.3 m; distance of nest from canopy edge = 0.5 m; and relative distance of nest from center of tree = 0.72 m. All nests contained feathers.

The nesting chronology for the five breeding attempts of the apparent pair of Eastern Kingbirds based on two visits per week throughout the breeding period was as follows.

*Breeding attempt 1.* I first observed the pair on territory on 10 April. On 1 May, I watched the male attack a Merlin (*Falco columbarius*) which was cruising the shoreline, and found a kingbird nest with two fresh eggs in an isolated tree (10 m from the copse). The nest contained three eggs when I flushed the incubating female on 5 May, but the nest was empty on 8 May and the lining had been disturbed.

*Breeding attempt 2.* The same nest contained no eggs on 12 May. The nest had been relined (including a few fresh feathers) by 15 May, when it contained two fresh eggs. The nest contained four eggs on 19 and 22 May and three eggs on 25 May. The nest was torn down when I found it on the ground below the buttonbush on 31 May.

*Breeding attempt 3.* I found a newly completed empty nest at the edge of the copse on 2 June. The nest contained one egg on 5 June, yet on 9 June one egg was buried in the nest which had been torn and tilted. The pair of kingbirds did not attend the nest.

*Breeding attempt 4.* I found another newly completed empty nest in another isolated tree (50 m from the copse) on 13 June. The nest contained 2 eggs on 17 and 20 June, but was empty on 24 June.

*Breeding attempt 5.* The last new nest was built in yet another isolated shrub (65 m from the copse; 20 m from the tree of nest attempt number four). The nest was three-quarters finished on 24 June. On 28 June, the nest contained one egg, and two eggs from 2-7 July. The nest was empty on 11 July.

The pair of Eastern Kingbirds remained on territory (now centered on the copse) through at least 27 July, although no further nesting attempts ensued. All five attempts failed because of predation on eggs during the incubation stage (cf., Murphy 1983b), with three of five nests failing before half the incubation period of 14 days (in Kansas: Murphy 1983b) had elapsed. A possible predator was the Fish Crow (*Corvus ossifragus*), which decimated a colony of Boat-tailed Grackles (*Quiscalus major*) that nested in the copse (McNair and W. W. Baker pers. obs.).

Eastern Kingbirds have a prolonged period (about 3 weeks) between time of their arrival on territory and initiation of the first clutch, in both warm and cold climates (Murphy 1983a,b; Blancher and Robertson 1985, this study). In colder climates, the breeding season (first egg-laying dates) begins mid- to late-May and usually continues through early July, rarely to mid-July. In Florida, the breeding season may continue beyond mid-July (Stevenson and Anderson 1994), but begins earlier, in extreme late April and early May (Stevenson and Anderson 1994, this study). Despite intense predation, repeated breeding failure, and the rather limited availability of suitable nest-sites, the persistent pair of Eastern Kingbirds in Florida demonstrated strong site fidelity (Blancher and Robertson 1985, Murphy 1996).

Although the pair of Eastern Kingbirds in Florida was unmarked, I believe it is unlikely that either mate may have been replaced (cf., Peck 1984). The most conservative measure of the maximum time between the disappearance of one clutch and the appearance of the first egg of the next clutch ranged from 8-11 days, which is not inconsistent with the mean time of almost six days between nest completion and the initiation of egg-laying of Eastern Kingbirds in Kansas and New York (Murphy 1983b). Thus, I have no compelling evidence from the four inter-clutch intervals that the pair of Eastern Kingbirds in Florida had a slower transition to egg-laying, which is the rule for new pairs (Murphy 1996). The short time intervals between active nests probably precludes the possibility of mate replacement for the pair in Florida. Furthermore, the isolated site, proximity of nests, and presence of a pair of Eastern Kingbirds on territory for a considerable period after the last breeding failure also suggests that a mate was not replaced.

Finally, Eastern Kingbirds rarely have been documented to reuse nests between years (Blancher and Robertson 1985, Bergin 1997), although this probably occurs more often than realized (see Bergin 1997). Breeding attempts number one and two of the pair of Eastern Kingbirds in Florida also confirms that they may reuse nests within a year, although in this case the time interval between the disappearance of one clutch and the laying of the next clutch was apparently not shortened.

In summary, one apparent pair of unmarked Eastern Kingbirds at Lake Jackson, Florida, attempted to breed five times in one season, the maximum number ever documented. All nesting attempts failed during the incubation stage. The larger maximum number of nesting attempts corresponds to a longer breeding season in Florida, compared to other studies.

ACKNOWLEDGMENTS.—I thank P. Conover and M. T. Murphy for reviews of the manuscript.

#### LITERATURE CITED

- BERGIN, T. M. 1997. Nest reuse by Western Kingbirds. *Wilson Bulletin* 109:735-737.  
BLANCHER, P. J., AND R. J. ROBERTSON. 1982. A double-brooded Eastern Kingbird. *Wilson Bulletin* 94:212-213.  
BLANCHER, P. J., AND R. J. ROBERTSON. 1984. Response to Peck. *Wilson Bulletin* 96:142.

- BLANCHER, P. J., AND R. J. ROBERTSON. 1985. Site consistency in kingbird breeding performance: implications for site fidelity. *Journal of Animal Ecology* 54:1017-1027.
- MURPHY, M. T. 1983a. Nest success and nesting habits of Eastern Kingbirds and other flycatchers. *Condor* 85:208-219.
- MURPHY, M. T. 1983b. Ecological aspects of the reproductive biology of Eastern Kingbirds: geographic comparisons. *Ecology* 64:914-928.
- MURPHY, M. T. 1986. Temporal components of reproductive variability in Eastern Kingbirds (*Tyrannus tyrannus*). *Ecology* 67:1483-1492.
- MURPHY, M. T. 1996. Survivorship, breeding dispersal, and mate fidelity in Eastern Kingbirds. *Condor* 98:82-92.
- PECK, G. K. 1984. Comments on Blancher and Robertson's "double-brooded Eastern Kingbird." *Wilson Bulletin* 96:141-142.
- STEVENSON, H. M., AND B. H. ANDERSON. 1994. *The birdlife of Florida*. University Press of Florida, Gainesville.