Disposal of Fecal Sacs in Water by Common Grackles

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Welty (1975:345) stated that swallows and martins dropped fecal sacs over water, and that a Lyrebird (Menura superba) may submerge the fecal sac under water in a stream or may dig a hole and bury it underground. Welty did not cite the original sources for this information, and I have not been able to find them.

On 28-29 May 1975, I observed the Common Grackle (Quiscalus quiscula) defecating and dropping fecal sacs into the water of a lake at Leroy Percy State Park, Washington County, Mississippi. These activities usually occurred as soon as the bird was over water in its flight from the surrounding woods and before crossing the lake. Some birds flew out over the water, dropped the sac, and returned to the shore and woods of the same side of the lake, indicating that a special trip had been made to the lake for this purpose. Others dropped the sac and flew across the lake where most of the food gathering occurred. These activities were verified by dozens of observations.

Such disposal of the feces in water or underground at some distance from the nest may serve to conceal the location of the nest.

Literature Cited

Welty, J. C. 1975. The life of birds. 2nd edition. Philadelphia: W. B. Saunders Co. Pp. xvi + 623.

Observations on the Nesting Habitat and Nest Design of the Mockingbird

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As part of a study on nest site selection in the Mockingbird (Mimus polyglottos) I collected data on nest design and placement. A total of 45 nests were located before the start of the nesting season in and near Starkville, Mississippi during 1975. Nest height, placement, condition, and tree species were recorded.

Nesting habitat.- Of the 45 nest locations, 32 (71.4%) were in sugarberry (Celtis laevigata), 3 (6.7%) each in water oak (Quercus nigra) and Japanese magnolia, and 1 each (2.2%) in osage orange (Maclura pomifera), holly (Ilex sp.), firethorn (Pyracantha coccinea), apple (Malus sp.), pear (Pyrus sp.), plum (Prunus sp.), honeylocust (Gleditsia triacanthos), and viburnum viburnum sp.). Mean height of

the nests was 2.47 m with a range of 1.8 to 5.0 m. All nest locations were in young short trees or in trees and shrubs with a low growth profile. In general the nests were near the central axis of the young trees, nearing the periphery in the relatively older trees. In all cases the nests were located where branching occurred.

The actual nest site locations found in this study seemed to have further restrictions that merely sites where branching had occurred. Nest placement appeared to be influenced so that the nest was concealed. For example, in young trees the nests were located near the center axis of the tree while in older trees the nests were located in peripheral sites. In both cases, the site chosen allowed maximum concealment from above. This would appear to be an adaptation to avoid potential predators. Laskey (1962) observed that Mockingbirds first breed in shrubs while late nesters use trees. Concealment would be maximum later (May to June) in trees and earlier (March to April) in evergreen shrubs. In addition to selection for concealment of the nest, nest site placement appears related to protection of the eggs and young from adverse weather (i.e., central sites in young trees are more secure and better protected than peripheral sites).

Nest design and material.- The Mockingbird nest is fundamentally a 3-layered cup, each layer blending into the next. The outermost layer is composed primarily of twigs, some with barbs. The middle layer is made up of stripped bark, a number of different grasses, horse hair, leaves, and small twigs. Within this layer I found a number of man-made objects (e.g., fishing line, plastic wrappings, knitting yarn etc.). The innermost layer was made up of leaves and, what appeared to me as, unraveled and frayed pieces of grass and bark. One nest weighed 42 g.

The type of nest design employed by the Mockingbird is known as statant (Pettingill 1970) with the nest having form (e.g., it is cup-shaped), and is supported from below. Statant design is shown by the majority of passerine species. As described, the Mockingbird nest is basically three layers structurally which can be classified to function as well. The outermost layer, constructed from twigs, gives the support necessary for the nest. The use of twigs with thorns is most likely for (1) stability (i.e., the thorns keep the nest from moving on the branch during periods of high winds) and (2) as a deterrent to potential predators. The middle layer, composed of stripped bark, completes the cup and functions as insulation and support. The innermost layer, constructed from frayed bark and leaves, serves as insulation and as a "cushion" for the eggs. The overall design of the Mockingbird nest allows for considerable stability and support (evidenced by the relatively long life of the nest after its use during the breeding season) as well as providing adequate thermal insulation for the eggs and young.

Literature Cited

Laskey, A.R. 1962. Breeding biology of Mockingbirds. Auk 79:596-606.
Pettingill, O. C. 1970. Ornithology. 4th ed. Burgess Publ. Co. Minneapolis.