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Production of second broods by Northern Bobwhites.—Northern Bobwhites (*Colinus virginianus*) may renest following nest failure if environmental conditions allow (Stoddard 1931), but reports of attempts by unconfined bobwhite females to raise two broods in a single season have not been published. Renesting attempts by captive bobwhites, after hatching initial clutches, have been observed in Missouri (Stanford 1953, 1972) and Texas (Kiel 1976). Francis (1965) described two instances of double-brooding behavior by confined California Quail (*Lophortyx californicus*). Gullion (1956) suggested the occurrence of second broods in wild Gambel's Quail (*L. gambelii*). We describe production of second broods by 2 unconfined female bobwhites.

Reproductive efforts of radio-marked, female bobwhites were monitored from 1 April to 31 October 1984–85 on an area intensively managed for bobwhites in Bullock County, Alabama. Females were fitted with transmitters weighing approximately 4.4 g, in a manner described by Williams et al. (1968). Reproductive behavior was detected near the onset of incubation when telemetry locations indicated relative immobility. Females with broods were located 3 times daily and directly observed at least once weekly to record chick losses and to identify adult-brood association patterns.

Sixteen females that were observed until at least 1 October hatched clutches during 1984–85. Ten of those females hatched clutches after 15 July, but continued associating with their broods and did not incubate again. Broods of 6 other females, whose clutches hatched by 10 July during 1985, disappeared when juveniles ranged from 7 to 35 ($\bar{x}$ = 17) days of age. All first broods that disappeared, except one, were attended exclusively by the female. Immediately after brood disappearance females paired with males, and no association of females with their first broods was subsequently observed.

Four of 6 females, whose first broods disappeared, renested and initiated incubation between 11 August and 3 September 1986. The interval between brood disappearance and renesting, assuming a laying rate of 1.2 days/egg (Klimstra and Roseberry 1975), ranged from 8 to 19 ($\bar{x}$ = 13.5) days. Two females successfully produced second broods, during late September 1985.

It was unclear whether juvenile mortality, brood abandonment (Lehmann 1984), surrogate parenting (Stoddard 1931), or some interaction of the aforementioned was responsible for brood disappearances. Disappearance of entire broods following thermoregulatory independence and after the young were flying suggests that brood abandonment and not mortality may have caused disappearance of some broods. Two unattended broods were observed in close proximity to 2 renesting hens whose first broods disappeared. Lehmann (1984) reported midsummer brood abandonment and the recurrence of adult bobwhites as pairs in southern Texas. Gullion (1956) observed that 60 percent of all Gambel's Quail juveniles were unattended by early July and suggested that brood abandonment facilitated double-brooding.

Our observations raise questions regarding the breeding biology of bobwhites. Must early nesting attempts succeed by mid-July for second brooding to occur as suggested by our data? Does double-brooding contribute significantly to high productivity implied by secondary age ratios during fall? A method for marking bobwhite juveniles is needed to answer these questions.

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Polyandry in a female Northern Mockingbird.—Though the Northern Mockingbird (*Mimus polyglottos*) is thought to be highly monogamous (Laskey 1935), Breitwisch et al. (1986a) and Logan and Rulli (1981) report cases of bigamous males. Here we report the first clearly documented case of a polyandrous female mockingbird.

In spring 1985, two male mockingbirds (M1 and M2), one of which was color banded, occupied adjacent territories on the campus of the University of North Carolina at Greensboro. A single colorbanded female (F1) ranged over both of the territories throughout the 1985 and 1986 breeding seasons. Thirty-two 1-h focal-animal samples were conducted from 14 March 1985 to 3 August 1985. During each observation period the occurrence of six behavioral patterns was recorded. These included conspecific interactions (either between F1 and either male, or between M1 and M2), song, nestbuilding, the feeding of nestlings, F1's perch sites, and incubation.

M1 was observed nestbuilding on 14 March (Fig. 1), but the nest was never completed. On 8 April, M2 was observed nestbuilding, and F1 was seen sitting on the edge of the half-completed nest. The nest, however, was never completed. F1 was observed incubating a nest of 3 eggs in the territory of M1 on 13 April. During the 2 days prior to her laying in the M1 nest, F1 was seen in both males' territories. Both M1 and F1 fed the 3 nestlings that hatched in the M1 nest. During the time she was feeding her nestlings (from 26 April to 3 May), F1 was repeatedly observed in the territories of both males. On two occasions F1 took food from the territory of M2 to feed her nestlings in the territory of M1. The nestlings from the first M1 nest disappeared on 5 May, probably taken by predators. M2 was observed nestbuilding on 10 May, and on 20 May F1 began incubating eggs in the M2 nest. Prior to laying these eggs, F1 was again consistently seen in both males' territories (on