

Colonial-type nesting in Yellow-shafted Flickers as related to staggering of nesting times. Yellow-shafted Flickers (*Colaptes auratus*) are territorially aggressive early in the breeding season (Kilham, L., *Wilson Bull.*, 71: 323-336, 1959), and in 12 years of observation in the mostly wooded country of Lyme, New Hampshire, I have found that their nests are generally many hundreds of meters apart. As with all other species of woodpeckers known to me (Kilham, Ms), their aggressiveness becomes increasingly restricted to the vicinity of the nest stub, once excavation is under way. At the time of egg-laying the birds become quiet and one usually sees few or no signs of agonistic behavior during the incubation period of 11-12 days (Sherman, H. R., *Wilson Bull.*, 22: 135-171, 1910) and subsequent brooding of small nestlings unless an intruder comes close to the nest hole itself. These findings are in general agreement with Lawrence (*Ornithol. Monogr.* No. 5, 1967). Flickers therefore have a period of wide territoriality followed by one that is restricted.

It is a thesis of this report that if a second pair of Flickers attempts to nest close to a pair already established, its chances of success will be greater if it arrives during this second period of restricted territoriality. Observations supporting this hypothesis made in June and July 1973 were as follows:

On 23 June I found three pairs of Flickers (A, B, and C, Fig. 1) nesting within full view of each other in stubs arising from the water of a small beaver pond. All were feeding young. Although amicable with each other, they were aggressive toward a fourth pair of Flickers that persisted, without success, in attempts to nest in a fourth stub (D, Fig. 1) throughout the period of observations.

In watching the Flickers, I, or my wife and I, spent from 40 minutes up to 3 hours daily between 23 June when the situation was first discovered until 18 July when the last of the young Flickers, those of pair C, were fledged. Pair A, B, and C all raised their young to the fledgling stage. The nest stub of Pair A, however, fell into the water on a night of heavy rains on the very date, 29 June, that I had expected the young to leave. Assuming that they may or would have done so, then the days of nest departure for the three pairs were 29 June, 9 July, and 18 July. It is clear from these dates that the nestings of the three pairs must have been close to 10 days apart. This would have permitted Pair B to have become established when Pair A, 16 m away (see Fig. 1), was in the quiet, incubation stage; and a similar situation would have applied to Pair C in relation to B 10 days later.

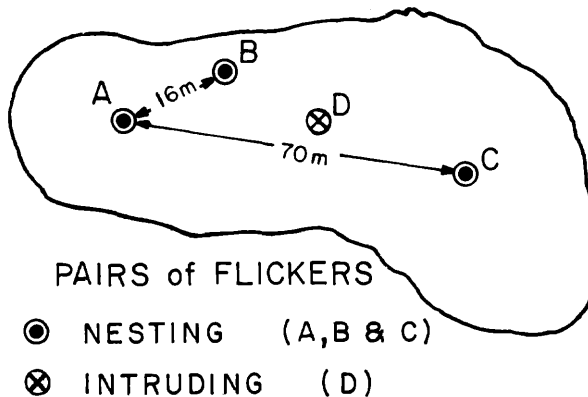


FIGURE 1. Locations of nesting stubs of three pairs of Flickers (A, B, and C) that nested, and of Pair D that tried to nest, in a beaver pond.

This concept of staggering of nesting times as allowing a greater proximity of nests than would otherwise seem possible may be one that applies to a variety of avian species. Meyerriicks (*Publ. Nuttall Ornithol. Club*, No. 2, 1960), for example, in his account of the Green Heron (*Butorides virescens*), describes the

male, arriving in spring, as first establishing a large, aggressively-defended territory and then, after a mate arrives, gradually changing from hostile to sexual behavior as the two birds center activities on a nest. Under these conditions other males, arriving at successively late intervals, are able to establish themselves on his original domain, in what becomes a colonial type of nesting.

Dennis (*Bird-Banding*, 40: 290-308, 1969), in his account of Flickers nesting on Nantucket Island, a highly favorable habitat, considered them as being an adaptable species that, in a peak year, achieved a density of 19.5 pairs per 100 acres, two nests having been only 7 m apart. In the present case described for the beaver pond, three pairs were able to nest in an area of less than one acre. An ability to nest under such relative crowding would seem to have survival value from several view points. One is that suitable nest stubs, if one can judge from the efforts of Flickers to find them, are in short supply in central New Hampshire. This shortage is aggravated by competition from Starlings (*Sturnus vulgaris*). Flickers excavate holes, only to have them taken away as they near completion. The nesting season is thus broken up and a staggering of subsequent nesting times is the result. This may have its benefits, however, in permitting different pairs of Flickers to nest relatively close together, where special conditions, such as flooding by beavers, has led to a concentration of nest stubs. Flickers continue to hold their own in spite of competition from Starlings and this may be one mechanism by which they are able to do so.

Once Flickers are feeding older nestlings, like other species of woodpeckers they again become territorially aggressive over a wider area and increasingly so as nestlings approach the time of fledging. This was seen at the beaver pond where the males of Pairs B and C, although tolerant of each other, persistently attacked the later appearing male of Pair D. Although these attacks usually consisted of bill-waving dances (Kilham, op. cit.), on 14 July Male C made persistent direct attacks on Male D, knocking him from the stub where he and his mate were trying to establish themselves. Pair D failed to nest. The failure of this pair gave further indication that staggering can only be a value in permitting a colonial-type of nesting when it involves the relatively quiet time of incubation and brooding small young.—LAWRENCE KILHAM, *Department of Microbiology, Dartmouth Medical School, Hanover, New Hampshire 03755*. Received 11 August 1973, accepted 5 September 1973.

REQUEST FOR INFORMATION

We are undertaking a study of molt and other features of the Painted Bunting and initiated a color-banding project of the species in 1973. We are asking southern banders to be on the lookout for the color-banded birds during migration, at wintering sites, and on the breeding grounds next spring. Observers should write and tell us the color-band combination and state of the plumage. SAMUEL R. AND ISABEL H. TIPTON, *Star Route 2, Box 780, Southport, N. C. 28461*.