

probability is very low ($\chi^2 = 5.4$, $df = 2$, $P = 0.07$) that a heterozygote cross, segregating under Mendelian laws, would result in these genotype frequencies.

The electrophoretic results, by themselves, cannot tell us whether more than two females laid the eggs, only that at least two females laid the eggs. However, the length and width of eggs 1, 2, and 5 were very different from those of eggs 3 and 4 (Table 1). Shape of the eggs, as the ratio of length to width, appears to be a stronger discriminator than average dimensions (Table 1). These results, combined with the electrophoretic results, suggest that a single female laid eggs 1, 2, and 5, and that a different, single female laid eggs 3 and 4.

Discussion.—Our data suggest a positive reproductive response to a periodical cicada eruption (as in Nolan and Thompson 1975). This suggests that when a female cuckoo obtains excess food she can increase her clutch-size. For cuckoos, which sometimes have difficulty finding their uncommon food (Bent 1940, Hamilton and Hamilton 1965), such plasticity may be of considerable adaptive value.

Nolan and Thompson (1975) found that nesting anomalies occur with greater frequency during years when extra food resources are available. While we have no data with which to compare years, the anomalies reported here did occur during the period of cicada emergence. Cuckoos have long been supposed to be intraspecifically brood parasitic (Bent 1940, Hamilton and Hamilton 1965, Nolan and Thompson 1975); above we presented evidence which supports this view. Manwell and Baker (1975) and Gowaty and Karlin (Behav. Ecol. Sociobiol. 15:91–95, 1984) also used electrophoretic data to detect intraspecific brood parasitism in House Sparrows (*Passer domesticus*) (where nearly 10% of the clutches examined were of mixed motherhood) and in Eastern Bluebirds (*Sialia sialis*), respectively. From our limited sample of clutches we cannot assess the frequency of such parasitism, or its impact on the host or parasite's reproductive success.

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Bathing behavior of Purple Martins.—A description of Purple Martin (*Progne subis*) bathing behavior is given in Bent (Life Histories of North American Flycatchers, Larks, Swallows, and Their Allies, Dover, New York, New York, 1963:429) from observations made by Audubon: "They are very expert at bathing and drinking while on the wing, when over a large lake or river, giving a sudden motion to the hind part of the body, as it comes into contact with the water, thus dipping themselves in it, and then rising and shaking their body like a water spaniel, to throw off the water."

In August 1980 I observed bathing behavior of Purple Martins near a roost in Ann Arbor, Washtenaw Co., Michigan. Martins arriving in the area prior to entering the roost perched on utility wires 150–200 m away from the site. Martins bathed in a waste water lagoon (ca 0.6 ha) 20–50 m from the utility wires. Martins that were engaged in bathing activity flew from the wires to a height of 2–6 m above the water surface and circled for 30 sec to 3 min before making first contact with the water. After bathing, the birds flew back to the wires

to ruffle their feathers and preen. Bathing activity by a small number of birds attracted others, which resulted in groups of 40 or more circling the lagoon, most in a counterclockwise direction. As this behavior took place over an extended period each day (19:00–20:50), it is likely that newly arriving martins joined in the bathing activity as others left. My observations show the following sequence of events for each “water contact”: (1) the martin flies just above the water surface; (2) brakes slightly by spreading and dropping the tail; while (3) raising the wings to about a 45-degree angle; (4) the forward motion carries the bird onto the breast which “bounces” on the surface showering water onto the back and wings; (5) the bird immediately regains flight speed and flies upward until; (6) reaching a safe height (about 2–4 m) to shake off excess water. Step 6 may not be performed until the bird is wet enough to have water streaming from the plumage; thus, a number of water contacts may occur before shaking takes place.

A bathing episode, timed from first to last contact with the water's surface, is a series of “contacts.” The shortest episode was 10 sec with one contact and the longest was 1 min 31 sec with eight contacts (\bar{x} = 46 sec, SD = ± 27 , N = 13), although one martin had 10 contacts in 1 min 22 sec. The most common number of contacts was three (\bar{x} = 4.2, SD = ± 6.5 , N = 13), representing 61.5% of the observations. The contact rate for the combined observations was one contact for every 10 sec.

I observed a male martin scratching its neck while gliding overhead. This activity proceeded as described by Goodwin (Auk 76:521–523, 1959) for the Bank Swallow (*Riparia riparia*), “While gliding, the head was lowered and turned to the side while the foot was brought forward beneath the wing.” This behavior has not been previously described for this species, but has also been observed by C. R. Brown (pers. comm.) for *P. subis* at his study sites in Texas.

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First breeding record of the Snow Bunting for British Columbia.—The breeding range of the Snow Bunting (*Plectrophenax nivalis*) in North America encompasses arctic habitats from northern Ellesmere Island south to southwestern Alaska and extreme northwestern British Columbia (Am. Ornithol. Union, Check-list of North American Birds, 6th ed., Washington, D.C., 1983). No verification of breeding in British Columbia, however, has previously been published. We reviewed 16 summer records including the first known breeding of this species in British Columbia. All records are from two mountainous areas, extreme northwestern British Columbia, generally referred to as the Haines Triangle, and the vicinity of Mount Edziza/Spatsizi Plateau, about 540 km to the southeast of the first area.

Haines Triangle.—This area is about 150 km northwest of Haines, Alaska, and includes the southern St. Elias Mountains. Snow Buntings were first noted in summer in the province near Mile 60 on the Haines Road by C. J. Guiguet (B.C. Prov. Mus., pers. comm.) on 8 July 1956. On 8 July 1958, R. B. Weeden (Can. Field-Nat. 74:119–129, 1960) collected an adult female in breeding condition in the same area and indicated Snow Buntings were probably breeding nearby. Then in the summer of 1980, a party from the British Columbia Provincial Museum (BCPM) obtained a series of adults and immatures (BCPM 16680–15594) near 1525 m in mountains near Mile 91, along the Haines Road. Two fledglings, obtained on 2 July, 1980, with traces of natal down (BCPM Photo No. 877—see Campbell