BLACK-HEADED GROSBEAK AT ATLANTA, GEORGIA

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On 10 April 1973, I received a telephone call from Mrs. Molly Curlee of Atlanta, informing me of the presence of a Black-headed Grosbeak (*Pheucticus melanocephalus*) at her home. On 11 April the bird returned and observations were made at the home of Mr. and Mrs. Jack Curlee, 5342 Saffron Drive, Atlanta, Georgia.

The single, male grosbeak was observed by Mrs. Curlee, Ray Simons, photographer for Fernbank Science Center, Georgann Schmalz, Ginny Chatelain and myself, biologists at Fernbank Science Center. The grosbeak was viewed from Mrs. Curlee's kitchen window which was approximately 35 ft from the feeder. This observation was made at 2:45 p.m. under clear skies; wind, 0–5 mph. The duration was 1 hr.

The bird flew from a nearby tulip poplar tree to one of Mrs. Curlee's feeders, aggressively running off Brown-headed Cowbirds (*Molothrus ater*), Pine Siskins (*Spinus pinus*), American Goldfinches (*Spinus tristis*), Chipping Sparrows (*Spizella passerina*), and Cardinals (*Cardinalis cardinalis*).

Ray Simons made photographs with a Nikon F, 35 mm camera with 300 mm lens on Kodachrome II at ASA 25. Shutter speed was 1/125th of a second, at F 6.3 (these photographs were examined by the Editor).

Black-headed Grosbeaks are fairly common west of the Rocky Mountains, rarer in Oklahoma, Kansas, and Louisiana. It has been an "accidental" in New York State and Massachusetts according to Peterson (A field guide to the birds, Houghton Mifflin Co., Boston, 1947).

To my knowledge this is the first documented sighting of the Black-headed Grosbeak in Georgia.

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SECOND NESTING OF BROAD-TAILED HUMMINGBIRDS

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Through the years, R. J. Niedrach and I have observed, in the foothills of Colorado, female Broad-tailed Hummingbirds (*Selasphorus platycercus*) which we considered as having successfully raised one brood, but which were, within a few days, incubating eggs in a new nest. Although the presumed second nests were in close proximity to the first, the females were not marked and there was no way we could identify them.

Subsequently, on 11 July 1972, I received a telephone call from Mrs. Charles W. Urmy, 1401 East Dartmouth Avenue, Denver, to the effect that she had two nests of hummingbirds 6 ft apart in the bases of the two ornamental lamps on her patio.

That afternoon Mrs. Bailey and I observed the two rather fragile nests which seemed identical in structure. One contained two young (about 15 days old) that were so large it was evident they would be fledging shortly. A female was on the second nest which had been built 5 days before, 6 and 7 July. We flushed her from the nest, and as we watched from a distance, she alighted on a small stick which had been placed as a perch over the young. She was motionless for a few moments, then flew down and fed the larger of the two nestlings. She then returned and settled on the new nest, which contained one egg.

No doubt many observers have noted parents, especially males, of various bird species feeding young in and out of nests, while the females were incubating a second set of eggs some distance away. Female hummingbirds assume both the feeding and incubating responsibilities. A strong reproductive instinct must cause them to build new nests at least a week before their first broods are ready to fly.

On 15 July, one of the young was out of its nest but perched nearby. Ornithologist Donald Thatcher saw the adult on the nest feed both young and then return to incubate. One egg in the second set hatched 27 July and the other hatched the following day.

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ECOLOGICAL SEGREGATION OF SWAINSON'S AND HERMIT THRUSHES ON LANGARA ISLAND, BRITISH COLUMBIA

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Morse (1971, 1972) has discussed habitat selection and ecological segregation in forest thrushes in coastal Maine. He has suggested (1972) that while Swainson's (*Catharus ustulatus*) and Hermit (*C. guttatus*) Thrushes utilize habitats somewhat differently, with the former being a more arboreal forager than the latter (see also Dilger 1956), a considerable spatial relief appears necessary for their coexistence. In spruce forests on large islands and on the mainland, Morse (1972) found that Swainson's Thrushes usually inhabited denser growth than the Hermit Thrush. He considered such habitat segregation to be the result of the Swainson's Thrush being socially subordinate to the Hermit Thrush.

Four species of thrushes, American Robin (*Turdus migratorius*), Varied Thrush (*Ixoreus naevius*), Hermit and Swainson's Thrushes, nest regularly on the Queen Charlotte Islands, British Columbia (Osgood 1901; Darcus 1930; pers. observ.).

On Langara Island, at the northwestern corner of the Queen Charlotte Islands, both Hermit and Swain-

TABLE 1. Breeding phenologies of thrushes on Langara Island, British Columbia, 1971.

Species	Date first seen in spring	Date fledged young first seen
Hermit Thrush	16 April	20 June[a]
Swainson's Thrush	6 June	11 July
Robin	25 March	—
Varied Thrush	26 March	21 June

[a] Fledged young Hermit Thrushes were first observed in 1970 on 12 June.

son's Thrushes forage along the upper beaches and nest, usually within 500 m of the beach, on stumps and tree trunks in a mixed forest of western hemlock (*Tsuga heterophylla*) and western red cedar (*Thuja plicata*). Robins and Varied Thrushes also forage along the upper beaches and nest along the periphery of the island but place their nests higher than those of Hermit and Swainson's Thrushes. Ecological segregation among these thrushes there, particularly between Hermit and Swainson's Thrushes, is achieved primarily by their different breeding phenologies (table 1).

The Hermit Thrush returns to Langara Island about 6 weeks earlier than the Swainson's Thrush and the former's young have begun to fledge by about the time the Swainson's Thrush arrives in mid-June. Adult and young Hermit Thrushes forage along the beaches until at least mid-August (when my observations ceased in 1971); adult Swainson's Thrushes and their young, after mid-July, also foraged along these beaches but had dispersed from the island by the end of July. I do not know whether both species took the same prey items. A similar differential timing of breeding also occurs on Forrester Island, Alaska (Willett 1915; Bailey 1927), some 70 km N of Langara Island.

These observations were made during ecological studies of seabirds on and near Langara Island from 6 May to 10 July 1970 and from 17 March to 10 August 1971.

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GENETIC STRUCTURE OF TWO POPULATIONS OF WHITE-CROWNED SPARROWS WITH DIFFERENT SONG DIALECTS

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INTRODUCTION

Intraspecific geographic variation in passerine bird song over ranges of a few miles or less has been described in several species (Marler and Tamura 1962; Lemon 1966; Nottebohm 1969). The occurrence of several males singing similar songs in the same local area has produced the concept of dialect populations. In some cases it has been shown experimentally that such a dialect is learned during the early ontogeny of the individual (Thorpe 1958; Marler and Tamura 1964; Dittus and Lemon 1969; Marler 1970).

Over a decade ago Marler and Tamura (1962) argued that "The stereotypy and stability of the song 'dialects' suggest that little exchange of individuals between populations occurs after the song patterns have been learned. Thus in this case there may be a potential relationship between song 'dialects' and the genetic constitution of populations, either indirect, if young birds simply do not wander far, or direct, if they wander but are attracted to breed in areas where they hear the song type which they learned in their youth."

The effects of this pattern of occurrence and acquisition of song on social behavior and genetic structure of the species have just begun to be explored (Verner and Milligan 1971; Nottebohm and Selander 1972).

The most general evolutionary question we wish to be able to answer is what is the function of song dialects? This question is improper without some qualification since dialects are culturally acquired. It is the ability to acquire a song by copying a model heard during early life that can be selected for and not the dialect. Thus, it is the method of song attainment that may be an adaptation. The research hypothesis being examined in this and subsequent reports is that song dialects in White-crowned Sparrows (*Zonotrichia leucophrys*) act as behavioral barriers to gene flow. We also ask what are the genetic consequences of such an island population structure.

Data on dispersal, mate selection, and possible selection differentials between populations are currently being accumulated. A preliminary examination of the genetic constitution of two dialect populations has been completed and is the subject of this report. The results cannot discriminate between the island model and isolation by distance.

MATERIALS AND METHODS

Subjects. In the fall of 1971, White-crowned Sparrows (*Zonotrichia leucophrys nuttali*) were captured live from two locations in the coastal chaparral belt