

and eagles could not be ascertained from cursory short-term observations but it appeared to be minimal. Damage to raptor nests from natural erosion or strong winds undoubtedly occurs each year, but we have no baseline data to document such events. While damage to nests resulting from ground motion associated with Project Rio Blanco might have occurred, in time, from natural causes, the Project likely accelerated the frequency of occurrence. Although the overall impact of Project Rio Blanco on cliff nesting raptors appeared quite small, we recommend that future nuclear fracturing experiments not be conducted during the nesting season and that they be carefully monitored to ascertain all possible environmental impacts.

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Natal pterylosis of *Sporophila* finches.—Finches of the genus *Sporophila* (Emberizidae) are a familiar part of the avifauna of many parts of the Neotropics. The only information on the natal pterylosis of these finches is confined to unquantified statements for the Variable Seedeater (*S. americana*) which is reported as having "sparse gray down" (Skutch, Pac. Coast. Avif. 83:1-448, 1951) or "Dark Neutral Gray (down) blending to Lighter Neutral Gray at the tips" (Gross, Auk 69:433-446, 1952) present in 6 tracts. This paper presents data on the natal pterylosis of 4 of the approximately 30 species presently included in this genus: the Ruddy-breasted Seedeater (*S. minuta*), Yellow-bellied Seedeater (*S. nigricollis*), Gray Seedeater (*S. intermedia*), and Dull-colored Seedeater (*S. obscura*). Hopefully it will stimulate similar studies of additional species. As noted earlier (Collins, Bird-Banding 34:36-38, 1963; Bull. Br. Ornithol. Club 93: 155-157, 1973) absence of the details of the natal down distribution patterns unfortunately is typical for most Neotropical species.

We examined the following fluid-preserved specimens: 2 *S. minuta* and 1 each of *S. nigricollis* and *S. obscura*. The specimens of *S. minuta* were collected (by CTC) on 17 August 1964 near Cacandee Village, Caroni Co., Trinidad. The specimens of *S. nigricollis* and *S. obscura* were collected respectively on 8 and 13 October 1966 near Estación Biológica de Rancho Grande, Est. Aragua, Venezuela by Paul Schwartz. All 4 individuals were newly hatched (Stage A, Wetherbee, Bull. Am. Mus. Nat. Hist. 113:339-436, 1957) and presumably had not lost any neossophtiles through abrasion. The nestling of *S. obscura* unfortunately was badly damaged when its container leaked and the specimen desiccated. We could see that it had a sparse complement of neossophtiles involving only 2 tracts, although the exact arrangement of these downs in the spinal tract could not be determined. In 1974 Paul Schwartz made observations on an additional 8 nestlings of *S. nigricollis* near Rancho Grande, 2 nestlings of *S. intermedia* near Guanare, Est. Portuguesa, and 9 nestlings of *S. obscura* at El Limon, near Maracay, Est. Aragua.

The downs of *S. minuta* and *S. nigricollis* ranged in total number from 80 to 134. Their

TABLE 1
DISTRIBUTION OF NEOSSOPTILES IN *SPOROPHILA* FINCHES

Tract	<i>S. minuta</i>		<i>S. nigricollis</i>	<i>S. intermedia</i> ^a	<i>S. americana</i> ^b	<i>S. obscura</i>
Coronal (right)	5	6	5	+		0-3 (1)
(left)	5	6	5	+	+	0-2 (1)
Occipital (right)	3	3	4	+		2 1-3 (2)
(left)	3	0	3	+	+	2 1-3 (2)
Spinal (upper)						
(right)	2	0	5	+		2-4 (3)
(left)	3	2	4	+	+	10 2-4 (3)
Spinal (lower) ^c	8	1	9	+		0-2 (1)
Scapular (right)	5	4	2	+		0-4 (2)
(left)	5	4	5	+	+	1-4 (2)
Femoral (right)	6	4	8	+		
(left)	6	7	8	+	?	
Ventral (right)	7	0	11	+		
(left)	0	4	9	+	+	
Crural (right)	4	3	7	+		
(left)	4	3	9	+	+	
Rectrices (right)	6	6	6	?		
(left)	6	6	6	?		
Greater Secondary Coverts						
(right)	8	8	8	+ ^f		
(left)	6	6	8	+		
Middle Secondary Coverts						
(right)	6	4	6	+ ^f		
(left)	5	3	6	+		
Totals	103	80	134	?	?	14 ^c 11-23 (17) ^d

^a Downs reported for these tracts, but no counts. (Schwartz, see text).
^b Downs recorded for these tracts but no counts. (Gross 1952:443).
^c Data may not be complete; damaged specimen (see text).
^d Range and average number for 6 nestlings (see text).
^e Unpaired tract along midline; all others paired.
^f Downs present on some coverts but it is uncertain which set was involved.

color in life is medium to light gray for *S. minuta* and pale or smoky gray with a buffy brown tint for *S. nigricollis* (Schwartz, pers. comm.). The distribution of these neossophtiles is given in Table 1. The nestlings of *S. nigricollis* examined by Schwartz (pers. comm.) had neossophtiles present in the same tracts indicated in Table 1. Approximately 164 neossophtiles were present on a recently hatched nestling; a late stage embryo had only 100 neossophtiles excluding those of the crural tract which could not be counted. The 2 nestlings of *S. intermedia* had neossophtiles (color in life: light gray with rufescent brown tint) present on the same tracts as others of the genus (Table 1) although exact counts were not made. The small number of specimens as well as the variation among individuals makes it unwise at present to propose a typical number or distribution pattern for the genus *Sporophila*. Even so the total number of neossophtiles is smaller than the numbers reported for most temperate zone finches (Wetherbee, loc. cit.). As a reduced number of neossophtiles also seems to be characteristic of other Neotropical groups (Collins unpubl.) it may represent a trend in latitudinal variation. This will have to be confirmed when more specimens of more species have been studied.

The single specimen of *S. obscura* we examined had appreciably fewer neossophtiles present and only on the occipital and spinal tracts (Table 1). Schwartz stated (pers. comm.) that this paucity of downs (color in life: pale gray with buffy or brownish tint) is typical of *S. obscura*. Of the 9 individuals of *S. obscura* he observed in 1974, exact counts of neossophtiles were made on 2 preserved and 4 living nestlings. Total neossophtile counts ranged from 11 to 23, average 17, and usually also included the coronal and scapular tracts (Table 1). Observations made by M. Dale Arvey (pers. comm.) of *S. obscura* nestlings in Colombia also indicate that neossophtiles in this species are sparse and confined to the "capital tract and a few long filamentous feathers on the dorsal tract." As these data are in general agreement, it is apparent that the number of neossophtiles is substantially reduced in *S. obscura* compared with the other *Sporophila* finches examined thus far.

That *S. obscura* has a reduced complement of neossophtiles is important because it has been suggested by Schwartz (Acta IV Congr. Latin. Zool. 1:207-217, 1970; and in Paynter and Storer, Checklist of Birds of the World, Mus. Comp. Zool., Cambridge, 1970:141) that *S. obscura* should be transferred from *Sporophila* to *Tiaris*. Hatchlings of the Black-faced Grassquit (*T. bicolor*) in Venezuela have a very sparse natal down covering rather similar to that noted for *S. obscura*. Two nestlings and a late stage embryo of *T. bicolor* from Cata, Est. Aragua had sparse complements of neossophtiles on the coronal, occipital, spinal (upper and lower), scapular, and femoral tracts as well as rectrices and some wing coverts. The total number of neossophtiles were 32 and 64 for the 2 birds examined in detail. Field observations by Arvey (pers. comm.) in Colombia of *Tiaris* nestlings also indicated that the pattern of neossophtiles is highly similar to that noted here for *S. obscura*. This is further confirmed by Arvey's notes on aviary-raised young of the Yellow-faced Grassquit (*T. olivacea*) which had only "very sparse, elongated down feathers" on the capital and spinal tracts. Skutch (op. cit.) reported that *T. olivacea* hatchlings are "utterly devoid of natal down." Similarly, the absence of downs has been recorded for aviary-raised young of *T. olivacea*, *T. bicolor*, and the Cuban Grassquit (*T. canora*) by Goodwin (Avic. Mag. 65:131-134, 1959) and for 6 newly-hatched young of *T. canora* by Luis Baptista (pers. comm.). This apparent difference within *Tiaris* may simply be the result of individual variation (e.g., Schwartz, pers. comm. informs us that hatchlings of the Blue-black Grassquit, *Volatinia jacarina* may have very sparse natal down, as noted for *S. obscura*, or lack it completely). Arvey, in his field studies of *S. obscura*, and in captive-raised *T. olivacea*, also notes that sometimes the neossophtiles "disappear in a matter of 2-3 days after hatching", presumably by abrasion. However, 2 nestlings

of *S. obscura* examined by Schwartz on day 1 and again on day 5 showed the loss of but a single neossoptile. Early losses of natal downs to abrasion have not been considered significant by other workers.

These data on the number and distribution of neossoptiles are in agreement with the suggestion that *S. obscura* should be included in *Tiaris* and not *Sporophila*. A complete analysis of the relationship of *S. obscura* is in preparation by Schwartz. More information on additional species of *Sporophila* is needed before an exact pattern of neossoptile distribution can be established for this genus. *Tiaris*, on the other hand, seems to be typified by a sparse complement of neossoptiles (sometimes none) frequently confined to the occipital and spinal tracts, but variably present also on the coronal, scapular, and femoral tracts, and wing coverts.

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Cedar Waxwing feeding from spider web.—On 12 September 1974 at 08:40 C.D.T. we noticed a lone Cedar Waxwing (*Bombycilla cedrorum*) near the top of a dead, leafless tree on the Goose Pond Audubon Refuge, Columbia Co., Wisconsin. The bird landed on a limb, and hopped to another directly in front of a vertically-oriented spider web in which numerous specks, presumably insects, were visible. While perched the bird removed 8 of these specks with 8 pecks. The bird then flew about 2 m to another part of the same tree, perched by another spider web, and removed 2 specks from it. The bird last flew to a perch by a third web, and pecked once into the web. The waxwing never hovered by a web, and we never observed a spider on any web.

Between pecks the waxwing sat with its body's long axis 20° forward of vertical, the head, body, and tail aligned, the wings folded at the sides. When pecking toward the spider web the body rotated forward an additional 25° and the tail was raised 30° putting it slightly above the long axis of the body; then the head was thrust forward 0.5–1 cm. The peck and recoil involved the neck only; the wings were not moved nor were the feet. During each bout the pecks occurred at about 1/sec.

In a search of relevant literature we found no previous accounts of Cedar Waxwings or other passerines feeding from spider webs. McAtee (Roosevelt Wildlife Bull. 4:68, 1926) notes that waxwings very occasionally consume spiders and more frequently feed on tent caterpillars (Lasiocampidae). DuBois (*in* Bent, U.S. Natl. Mus. Bull. 197:91, 1950) observed waxwings seize geometrid caterpillars (Geometridae) that hung from twigs on gossamer thread. These observations suggest that waxwings may be preadapted to searching for prey in insect silk. However, many passerines consume spiders (e.g., Wetmore, U.S. Dept. Agr. Bull. 326:1–133, 1916) or use spider silk for nest construction (e.g., Bent, U.S. Natl. Mus. Bull. 203:1–734, 1953). Therefore one might expect clepto-parasitic web-feeding to be widely used by passerines, especially since such behavior obviates the need to capture prey. The apparent rarity of web-feeding may be due to the difficulty of discovering webs or the difficulty in extracting prey from the web without the bird's becoming entangled itself. However, the ease with which the waxwing picked