

damaged for preparation as a skin, under the television tower on Tall Timber Plantation, northern Leon County, on October 9, 1955.

Although my December bird is by no means a "first" for Florida, it seems nonetheless the first Lincoln Sparrow to be recorded for the Atlantic coastal strip of the southeastern United States.—ROBERT A. NORRIS (*University of Georgia Ecological Studies, AEC Savannah River Plant area*), 535 Powderhouse Road, Aiken, South Carolina, January 31, 1956.

**Breeding record of Brewer Sparrow in northwestern Montana.**—The Brewer Sparrow (*Spizella breweri breweri*) breeds in Montana east of the continental divide (Saunders, 1921. *Pacific Coast Avif.*, No. 14) and in eastern Washington (Wing, 1950. *Auk*, 66:41). This sparrow, however, has not been recorded from the northwestern mountainous region of Montana.

In the summer of 1955, in the course of work carried on at the Flathead Lake Biological Station of the Montana State University, a small breeding population of the Brewer Sparrow was found in sagebrush habitat at 3,000 feet elevation in the valley of the Little Bitterroot River in Sanders County, Montana. This is about midway between the populations of Washington and eastern Montana. Six specimens were collected 5 miles south of Niarada, July 16 to 22. Two of the birds were adult males with testes in breeding condition (7 and 8 mm.). Two were adult females (ova 1.5 and 1.0 mm.), each with a naked brood patch. The other two were juveniles, one still in postnatal molt with rectrices unsheathing (July 16), the other with postnatal molt completed (July 17). It is likely that these juveniles were recently out of the nest and were produced near the locality where they were collected.

The Brewer Sparrows were found mainly on low hillocks and in swales supporting a sagebrush vegetation in which two types of wormwood, *Artemisia ludoviciana* and *A. dracunculus*, occurred and also two species of rabbit brush, *Chrysothamnus viscidiflorus* and *C. nauseosus*. The shrubs were typically one to three feet high. Also snowberry (*Symphoricarpos* sp.) and hawthorn (*Crataegus* sp.) were scattered about, and in a few moister places service-berry (*Amelanchier* sp.), rose (*Rosa* sp.), and willow (*Salix* sp.) occurred. The life zone is Upper Sonoran. Sagebrush habitat is quite limited in northwestern Montana, and this may be why the Brewer Sparrow has been overlooked here.

Associated with the Brewer Sparrow in the dry sagebrush habitat were Vesper Sparrows (*Pooecetes gramineus*), Horned Larks (*Eremophila alpestris*), and Sharp-tailed Grouse (*Pedioecetes phasianellus*), while a greater variety of species was present at interspersed moist or marshy spots, including the Song Sparrow (*Melospiza melodia*), Traill Flycatcher (*Empidonax traillii*), and the Eastern Kingbird (*Tyrannus tyrannus*).—PAUL H. BALDWIN, *Department of Zoology, Colorado A. and M. College, Fort Collins, Colorado, and Montana State University Biological Station, Bigfork, Montana, February 17, 1956.*

**Unusual eggs of the Boat-billed Heron.**—The eggs of the Boat-billed Heron (*Cochlearius cochlearius*) have seldom been described, although the species occupies much of the Neotropical lowlands and is fairly common locally. Belcher and Smooker (1934. *Ibis*, p. 583), apparently the first to publish detailed information, described the eggs as "pale bluish-white, the larger pole being usually faintly spotted or splashed with red. Four average 48.5 × 35.5 mm." Two eggs are considered to comprise a clutch. In Trinidad breeding has been noted in July and August.

Hellebreker's study (1945. *Zool. Meded. Leiden*, 24:243) of 574 (!) *Cochlearius* eggs in the Penard Collection is substantially in agreement with the observations of Belcher and Smooker. The color is described as bluish when fresh, fading to dirty white with age, and very slightly spotted at the large end. Hellebreker reports no unmarked eggs, nor any with "splashes" of color. Measurements (in mm.) of 50 eggs were: average,  $50.25 \times 35.25$ ; minimum,  $44.9 \times 33.9$ ,  $49.1 \times 33.2$ ; maximum,  $57.1 \times 36.6$ ,  $49.4 \times 38.9$ . The breeding season in Dutch Guiana is June and July.

Through the courtesy of Mr. Karl Plath the Chicago Natural History Museum recently acquired four eggs of this heron laid in the Brookfield Zoo by a captive bird that is believed to represent the nominate race. These eggs are unusual in several respects. All four, and two additional eggs (retained by the zoo) laid by the same bird, are pale bluish-white, without the slightest evidence of spotting or other marking. The six eggs were laid from December 20 to January 15, inclusive, as compared with the June-August breeding records of wild birds. Partial verification of the Belcher and Smooker inference that two eggs comprise a clutch is suggested by the paired spacing of the first eggs (December 20, 23; January 5, 9, 12, 15). Measurements of four eggs:  $46.3 \times 36.3$  mm.;  $46.0 \times 35.8$ ;  $44.4 \times 35.7$ ;  $45.2 \times 36.2$ .—EMMET R. BLAKE, *Chicago Natural History Museum, Chicago 5, Illinois, January 30, 1956.*

**The aftershaft in jacamars and puff-birds.**—The presence of an aftershaft in the Jacamars (Galbulidae) and its alleged absence in the closely-related Puff-birds (Bucconidae) has long been used as an important character separating these two piciform families. The supposed absence of the structure in puff-birds apparently originated with the statement by Nitzsch (1840:94-95) who examined the species known today (Peters, 1948) as *Bucco tamatia*, *B. capensis*, *Nystalus chacuru* and *Malacoptila fusca*. Forbes' diagnosis of the family in the monograph by Sclater (1882) also indicated the aftershaft as absent. In subsequent publications Sclater (1891; 1909) used the same diagnosis. Ridgway (1914:371), apparently following Sclater, used "contour feathers without aftershafes" as a character separating the puff-birds from the jacamars. Beddard (1898:189) recorded that in the puff-bird *Malacoptila fusca* "the aftershaft is absent." Beddard's statement is probably the source of Stresemann's (1927-1934:839) notation that *Malacoptila* is without an aftershaft. Stresemann's statement is so worded as to imply that this is the only genus of jacamars and puff-birds entirely lacking an aftershaft.

In an attempt to resolve the seemingly differing opinions as to the occurrence of the aftershaft in the Bucconidae, ventral contour feathers from several species of puff-birds have been examined. Several members of the Galbulidae have been studied for comparison.

In all of the jacamars examined the aftershaft is present and originates as a single shaft from the proximal margin of the superior umbilicus. This single shaft subdivides to form a tuft of approximately 15 (12 to 17 counted) barbs. The barbules lack hamuli and this downy tuft constitutes the vane of the aftershaft. The junction of the hyporhachis with the rhachis of the main feather is discrete and well separated from the proximal barbs of the vane of the main feather.

In the puff-birds the condition of the aftershaft is somewhat different. Instead of arising from a single shaft there is a group of barbs, each arising separately from the proximal margin of the superior umbilicus. That these barbs are homologous to the well-formed aftershaft of the jacamars is indicated by their position, their number (approximately 12) and their direction, namely, parallel to the rhachis of the main feather, not lateral to it as with the barbs of the vane. There is not, however, a