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**First record of the Grey-chinned Hermit (*Phaethornis griseogularis*) west of the Colombian Andes, with notes on the displays of the species.**—The range of the Grey-chinned Hermit (*Phaethornis griseogularis*) covers western Venezuela, northwestern Brazil, eastern Colombia (Deptos. de Meta, Caquetá, Putumayo), eastern Ecuador and Peru (Meyer de Schauensee 1964). The westernmost record of the species from El Cauca in northwestern Colombia (08°10'N, 73°24'W) is questioned by Meyer de Schauensee (1949). Olivares (1969) reported a more widespread distribution for this hermit in Colombia, but this is not supported by sight records.

*Distribution.*—In July and August 1976 and January and February 1977, I carried out extensive field work on the altitudinal distribution of hummingbirds in the western Andes near Cali (Depto. del Valle), in southwestern Colombia. In both years, the mountains around Lago Calima (03°55'N, 76°30'W), a fresh-water reservoir, were the westernmost localities where data were collected. Time was spent mainly in the transitional zone between tropical and subtropical forests along the mountain ridge “Vereda el Remolino” (altitude 1350 m). Here, hermits (Phaethornithinae) were represented by White-tipped Sicklebills (*Eutoxeres aquila heterura*), Tawny-bellied Hermits (*Phaethornis syrmatorophorus syrmatorophorus*), and Grey-chinned Hermits. The rufous-orange belly clearly distinguishes the latter species from the closely related trans-Andean subspecies of the Little Hermit (*Phaethornis longuemareus subrufescens*), which has ochre-yellow underparts. *P. l. subrufescens* was also present in the valleys around Lago Calima below 600 m, and was restricted to semiarid vegetation. To my knowledge, the Grey-chinned Hermit has never been reported in central and western Colombia, and this record does not fit into the presently known zoogeographic cis-Andean pattern of the species. It is hard to believe, however, that birds found in the mountain range around Lago Calima represent an isolated population, as the external morphology and biometrical data agree perfectly with those obtained for the eastern Andean population (N = 17 males, 41 females). The only explanations I have at hand are that either the species was overlooked in the field or has been mistaken for the subspecies of the Little Hermit. This opinion is supported by a communication from C. Hinkelmann, presently in Bogotá, stating that 2 males of the Grey-chinned Hermit, misidentified as Little Hermits, are in the scientific collection of the Universidad Nacional de Colombia, Bogotá, both originating from the Depto. de Nariño, southwestern Colombia, namely from Juanambu (01°35'N, 77°25'W) (collection No. 7951), and from Valle del Patia (02°13'N, 78°40'W) (collection No. 7956). Three specimens (ZFMK Nos. 86.001, 86.002, 86.003) of *Phaethornis griseogularis* from “Vereda el Remolino,” Lago Calima, are deposited in our collection.

*Behavior.*—In January 1977, I discovered a lek of 6 male Grey-chinned Hermits at an altitude of 1200 m. The display ground, covering an area of approximately 60 m<sup>2</sup>, was along an exposed southwestern slope of sparse secondary vegetation shaded by primary forest. Males attended the assembly during most of the day, with peak singing activity in the early morning (08:00–10:00) and in the afternoon (15:00–16:00). Males sang from horizontal perches 40–60 cm above the ground. When displaying, each male uttered a high-pitched rapid “warbling” song (*tzee, weeh-weeh-tzee-dee*), first ascending in pitch, and then descending. While vocalizing, the males held their bills upright and slightly open, exposing their black and yellow lower mandible, and wagged their tails constantly.

An individual singer's territory within the lek comprised an area of approximately 10 m<sup>2</sup> and included 3–5 traditional perches. It was surrounded by low (approximately 1 m) scattered shrubs, and males could hear but not see their neighbors.

As display territories within the lek had a patchy distribution, I decided to study the courtship behavior of 2 males (males A and B). Both birds were observed from a blind, 3



FIG. 1. (A) Frontal aerial display of *Phaethornis griseogularis*, (B) rapid flight display, (C) pre-copulatory approach.

m away from the main singing spot for a total of 8 h during 2 days (3 h in the early morning, 5 h in the afternoon). During the time of observation, a total of 13 visits by intruders was recorded for both display grounds. In 9 cases intruding individuals were spontaneously driven out of the courtship territory by the owner. Sexes are alike, and I assumed that intruders were males. Aggressive encounters between males A and B were not observed. Conspecifics allowed to land on the song perch of the owner presumably were females, as courtship display was immediately performed. Male A received a total of 9 visits, 3 of which led to copulation; male B had 4 visits, one of which led to mutual displaying, but not to copulation. In the morning the mean presence of male A on the lek was  $21 \pm 8$  min [SE] while his mean absence was  $15 \pm 9$  min. The corresponding data of male B are  $20 \pm 5$  min and  $18 \pm 8$  min, respectively. Similar data were not recorded during the afternoon.

Males displayed when a female landed on the singer's perch. Normally, the stationary male directed his song towards the arriving bird, keeping his bill upright and exposing his black and yellow mandible. Thereafter, 3 phases of aerial display occurred (Fig. 1). Males took to the wing, wafting in front of the female, and executed a horizontal arc (Fig. 1A). Once airborne, they fanned their tails upright while holding their feet in front of their bodies. Their wings beat against the upright rectrices, producing a mechanical sound that amplified the humming of the wing beats. During this stage of frontal courtship, males sang (subdued warblings), sometimes protruding their tongues. This display lasted up to 2 min, but was often less than 1 min. Males then flew rapidly back and forth about 10 cm above the perched female (Fig. 1B), producing sharp snapping sounds and spreading apart the rami of their lower mandibles, to almost twice that of the closed bill (not shown in Fig. 1). During this maneuver, the male's bill was only slightly open and pointed down towards the female, who watched his flight. The yellowish mouth lining seen when opening the species' bill by hand was not exhibited during the display. Males repeated their maneuvers 4–6 times, whereupon they reduced their flight speed and hovered above the female's back (Fig. 1C). The female

then lowered her wings and exposed her back, indicating her readiness for mating, and the male landed dorsally on the perched female.

Published records on the courtship display of members of the genus *Phaethornis* are available only for *Phaethornis superciliosus*, *P. guy*, *P. longuemareus*, and *P. ruber* (Davis 1934, 1958; Skutch 1951; Arp 1957; Snow 1968, 1973, 1974; Mobbs 1971; Stiles and Wolf 1979). Here, I restrict discussion to a comparison of mutual display of *griseogularis* with the species most closely allied to it, namely *P. longuemareus* and *P. ruber*. Perching display: Stretching and yawning-like movements observed by Snow (1973) and Davis (1934) in *P. ruber* and *P. longuemareus* were not witnessed in *P. griseogularis*. Aerial display: In all 3 species the male, tail erected, hovers in front of the stationary female. *P. ruber* and *P. griseogularis* sing towards the potential mate, whereas singing in *P. longuemareus* was not observed. In the latter, more elaborate stages of aerial displays were noted (e.g., backward and up-and-down rotations) (Skutch 1951, Arp 1957). In the subsequent phase, rapid flicks or quick flight movements with gape display are exhibited by all 3 species; variations of certain postures (e.g., tongue protrusion) were observed in *P. ruber* (Davis 1958, Mobbs 1971). Similar flight patterns are known in larger hermits, (e.g., *P. superciliosus*, *P. guy*) (Snow 1974, Stiles and Wolf 1979), suggesting relatively stable interspecific courtship components. Thus, the male courtship display of *P. griseogularis* is intermediate in form between *P. ruber* and *P. longuemareus*, linking the behavior of the 3 species.

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