

This rare hummingbird is restricted to two areas of western and central Panama in the Serranía de Tabasará above 750 m, where it is unprotected and poorly known, in terms of both status and ecology.

DISTRIBUTION The Glow-throated Hummingbird is endemic to Panama, where it is known from very few localities in the Serranía de Tabasará of eastern Chiriquí and Veraguas (see Remarks); coordinates below are from OG (1969).

This species was first recorded in eastern Chiriquí during March 1924 when two males (in AMNH) and a female were collected on Cerro Florés (8°28'N 81°44'W) at 1,100 m (Wetmore 1968). Ridgely and Gwynne (1989) noted that it is found regularly above Cerro Colorado (8°28'N 81°45'W), evidently very close to the collecting locality on Cerro Florés. In Veraguas, specimens were taken (in the late nineteenth century) at Castillo (8°13'N 81°03'W), and Calovévora (presumably "Pico Calovevora" just north of Santa Fé, but still on the Pacific slope, as shown on the map in Salvin 1870) (Salvin and Godman 1888-1904). Other localities, whence come a number of recent records, are: Santa Fé (c.8°31'N 81°05'W; presumably near Calovévora – see above) and the road above (Wetmore 1968, Ridgely and Gwynne 1989), i.e. Cerro Tute (8°29'N 81°06'W) (Stiles 1983, F. G. Stiles *in litt.* 1991, B. M. Whitney *in litt.* 1991).

POPULATION Ridgely and Gwynne (1989) considered this species to be "uncommon", which by their definition implies it has been seen on "less than half of trips in proper habitat", although they noted that it is apparently seen regularly above Cerro Colorado, with a few seen on occasion along the road above Santa Fé (the bird was apparently relocated at Santa Fé during the 1980s, almost 100 years after its first being found there: see Wetmore 1968, Ridgely 1981b, Ridgely and Gwynne 1989). These two localities (i.e. Cerro Colorado/Cerro Florés and Santa Fé/Cerro Tute) represent the only areas where the species has been recorded during the twentieth century (see Distribution). As an indication of abundance near Cerro Tute, B. M. Whitney (*in litt.* 1991) saw just one male in 2.5 days during January 1982, F. G. Stiles (*in litt.* 1991) also seeing just one bird there in January 1984. Ornithologically, the Serranía de Tabasará is among the least known areas in Panama (Stiles 1983) and this is reflected in the paucity of specimens, observations and distributional, population and ecological data available on this bird (see below).

ECOLOGY The Glow-throated Hummingbird apparently inhabits the shrubby second-growth of clearings and forest borders in foothills and lower highlands (750-1,800 m) (Ridgely and Gwynne 1989; also AOU 1983). An adult male seen by B. M. Whitney (*in litt.* 1991) was perched about 4 m above the ground under the forest canopy, but near the edge. At Santa Fé in the east, the species seems to range mainly at higher elevations, and it has been suggested by F. G. Stiles (*in litt.* 1991) that birds may well be more abundant at higher elevations or at least on mountain-crests. Its habits are not well known, but its basic behaviour (and no published information currently exists: Stiles 1983) is probably similar to Scintillant Hummingbird *Selasphorus scintilla* (Ridgely and Gwynne 1989; see Remarks).

THREATS R. S. Ridgely (*in litt.* 1986) indicated that the range of the Glow-throated Hummingbird is largely undisturbed. However, this range is minute and poorly known, the bird's ecological needs are almost totally unknown, and it is seemingly both uncommon and unprotected, and in such circumstances it qualifies as a threatened species (see below).

MEASURES TAKEN None is known. Neither of the two main localities is currently under protection.

MEASURES PROPOSED It is clear that the Serranía de Tabasará is poorly known (see Population), so it is essential that a broad-based survey is undertaken to assess both the actual distribution and habitat needs of the species, as well as to estimate relative abundance levels and status of suitable remaining habitat. In the meantime, protection is vital for both the Cerro Florés and Santa Fé areas, both for this species and the many other species endemic to the Chiriquí/Veraguas highlands (see, e.g., ICBP 1992, Crosby *et al.* in prep.).

REMARKS There has been much confusion over the identification of the *Selasphorus* group of species, many specimens from Costa Rica (e.g. in AMNH, ROM) still labelled as *S. ardens* when they clearly refer to another member of the genus: all such records have been disregarded in this account. Stiles (1983), in reviewing the taxonomic status of Glow-throated Hummingbird and its close relationship to Scintillant Hummingbird, remarked that “while closely related, *scintilla* and *ardens* differ from each other considerably more than do any two members of the *flammula* complex. Especially considering the lack of information on... *ardens*, I think it wisest to continue to recognize them as distinct species. Together *scintilla* and *ardens* might comprise a superspecies”.