

This cloud-forest hummingbird has been poorly recorded throughout its small range in Nariño, Colombia, and north-west Ecuador, but has recently been found not uncommon in suitable habitat. It is threatened by deforestation, and a cross-border biosphere reserve would greatly enhance its chances of long-term survival.

DISTRIBUTION The Hoary Puffleg is known from southern Nariño department, Colombia, and Carchi, Imbabura and Pichincha provinces, Ecuador (see Remarks), where localities (with coordinates, unless otherwise stated, from Paynter and Traylor 1977, 1981) are as follows:

Colombia above Junín (along the Pasto–Tumaco road), where the bird can apparently be found (Hilty and Brown 1986); Ricaurte (east of the previous locality, but along the same road), where 12 birds were collected at 1,190 m during April–May 1941, five at 1,500 m in June 1957, and eight between 2,100 and 2,500 m during April–May 1958 (specimens in ANSP, FMNH, LACM, USNM; also Meyer de Schauensee 1948-1952, Orejuela *et al.* 1982); Piguale (untraced, but apparently near Ricaurte), where three birds (in WFVZ) were collected in July 1959; San Pablo (1°06'N 78°01'W; at 1,400 m) (Meyer de Schauensee 1948-1952); and La Planada Nature Reserve (1°10'N 78°00'W), where birds have been regularly seen (between 1,750 and 1,900 m) in recent years (Orejuela *et al.* 1982, F. R. Lambert *in litt.* 1989, M. Pearman *in litt.* 1991; coordinates from Restrepo 1990);

Ecuador (*Carchi*) “2-3 km west of Maldonado” (c.0°53'N 78°09'W; coordinates read from IGM 1982), apparently in or near the Awá Indigenous Forest (see Measures Taken), where a bird was seen between 1,700 and 1,800 m during July 1983 (O. Læssøe *in litt.* 1984); in the río Cumbe valley, where birds were observed between 1,900 and 2,100 m in 1980 (R. Bleiweiss *in litt.* 1992); (*Imbabura*) Intag (c.0°24'N 78°36'W), where an undated specimen (in MCZ) was collected; (*Pichincha*) Nanegal (0°07'N 78°46'W), whence come two males (in BMNH) taken at 1,525 m; río Saloya, near Mindo (c.0°01'N 78°57'W), where a male (in ANSP) was collected in June 1948; Mindo (0°02'S 78°48'W), where a male (in BMNH) was taken at 1,830 m in January 1914, and from where there are numerous recent sightings (P. Greenfield verbally 1991); “Quito”, whence comes the type-specimen (Meyer de Schauensee 1948-1952); Santo Domingo de los Colorados (0°15'S 79°09'W), where a bird (in ANSP) was taken in 1911; near Chiriboga (0°15'S 78°44'W; km 59 from Quito on the Santo Domingo de los Colorados road), where the species was seen at 1,900 m in 1980 and September 1986 (Evans 1988b, R. Bleiweiss *in litt.* 1992).

POPULATION The paucity of records by Orejuela *et al.* (1982) in Nariño, and the suggestion by S. L. Hilty (*in litt.* 1986) that it exists in very low numbers, appear to indicate that the Hoary Puffleg is both local and rare. However, K.-L. Schuchmann (*in litt.* 1986) reported that the bird was not rare in imports into (West) Germany until 1984, and information from the various series of skins collected also suggests that the species was locally common, e.g. at least 34 specimens collected in “Ecuador” last century (in ANSP, BMNH, FMNH, MNHN), while in Colombia 12 were taken in two months at Ricaurte in 1941, five there during one month in 1957, and eight there over two months the following year (see above).

Recent observations at La Planada Nature Reserve, Nariño, tend to confirm the impression of its local commonness: in October 1990, M. Pearman (*in litt.* 1991) found it locally common between 1,750 and 1,900 m, and in fact suggested that at this time the species appeared to be the commonest hummingbird present; 15 birds were banded in July 1991, when it was considered common in secondary growth (F. G. Stiles *in litt.* 1992); and during August and September 1991 several individuals were mist-netted at La Planada, and again the bird was deemed to be fairly common (Barlow *et al.* 1992).

The birds at La Planada are easily observed in secondary habitat, whereas generally they occur singly, feeding low inside forest where they are difficult to find (Hilty and Brown 1986, Barlow *et al.* 1992, F. R. Lambert *in litt.* 1989; see below); however, R. Bleiweiss (*in litt.* 1992) found them in some numbers in Carchi and Pichincha during 1980, and suggested that their apparent scarcity may be due to retiring habits.

ECOLOGY The Hoary Puffleg has been recorded between 1,190 and 2,500 m in Colombia and from 1,525 to 2,100 m in Ecuador (see Distribution). The species inhabits humid and wet premontane forest (cloud-forest), where it usually feeds singly in the lower storey of the forest interior (Hilty and Brown 1986). However, birds have also been recorded at forest borders (Hilty and Brown 1986), and in La Planada Nature Reserve they have been observed in 2-6 year old secondary forest and scrub, especially in the large shrub-dominated grassy clearing bordering the reserve buildings and adjacent forest (F. R. Lambert *in litt.* 1989, Barlow *et al.* 1992). In the primary forest at this reserve birds are seen mostly at small clearings (breaks), along streams and on ridge-tops, only rarely in unbroken forest (F. G. Stiles *in litt.* 1992). In Carchi and Pichincha, R. Bleiweiss (*in litt.* 1992) found that this species favoured the “darkest reaches of thick vegetation growing along rocky, fast-flowing streams within very wet lower montane forest”. Birds usually feed in the understory, taking nectar at small groups of flowers (e.g. *Palicourea*, and species of Marantaceae) or by gleaning from leaves (Hilty and Brown 1986, R. Bleiweiss *in litt.* 1992), although they also feed at flowering shrubs (e.g. *Besleria* sp.) in open areas at La Planada (F. R. Lambert *in litt.* 1989, M. Pearman *in litt.* 1991).

THREATS In Ecuador at least, extensive deforestation within the range of this species (IUCN TFP 1988b) has almost certainly affected its population (J. I. Hernández Camacho verbally 1991). The situation in Nariño, Colombia, is different in that extensive, apparently suitable habitat exists from the Pasto-Tumaco road south to the Ecuador border (M. G. Kelsey verbally 1992), although records in this region are from an extremely small area, and the species must be considered threatened until its distributional status is more thoroughly known. The report that it has been traded internationally (see Population) is also worrying, and any continuing commerce may well present an additional threat on a local scale.

MEASURES TAKEN In Colombia, most recent records come from La Planada Nature Reserve, which is a 3,200 ha private reserve, now officially declared a forest protection zone by INDERENA, and for which there is a long-term management and development plan (Barlow *et al.* 1992; also Orejuela 1987b). Adjacent to this area, in Carchi province, Ecuador, is the Awá Indigenous Forest Reserve, covering an area of 101,000 ha (IUCN 1992), apparently in or very near which one of the most recent Ecuador records was made (see Distribution). Also in Ecuador is the Cotacachi-Cayapas Ecological Reserve, which now covers an area of 204,000 ha (IUCN 1992) and includes apparently suitable areas for this species; and the Centro Científico Las Palmas (incorporating the Chiriboga locality), which preserves at least some suitable habitat (R. Bleiweiss *in litt.* 1992). Around Mindo, this species occurs in several areas receiving at least temporary protection as “Bosque Protector” (NK).

MEASURES PROPOSED It is essential that surveys are carried out to assess better this species's population, distribution, and ecological requirements (especially its ability to survive in secondary habitats).

La Planada Nature Reserve is relatively small and protects an insufficient area to maintain viable populations of most of the species present (Barlow *et al.* 1992): as such, the proposed creation of an international biosphere reserve joining the Awá reserve in Ecuador and La Planada Nature Reserve in Colombia (Poole 1990) is an initiative that must be strongly encouraged, as this would protect the poorly known and still relatively untouched areas in southern Nariño, and therefore populations of this and probably other threatened species such as Plumbeous Forest-falcon *Micrastur plumbeus*, Yellow-eared Parrot *Ognorhynchus icterotis* (at higher elevations), Banded Ground-cuckoo *Neomorphus radiolus*, Tanager-finch *Oreothraupis arremonops* (at higher elevations) and Scarlet-breasted Dacnis *Dacnis berlepschi* (see relevant accounts), as well as near-threatened species such as Chestnut Wood-quail *Odontophorus hyperythrus*, Tooth-billed Hummingbird *Androdon aequatorialis*, Black-thighed Puffleg *Eriocnemis derbyi*, Blue-whiskered Tanager *Tangara johanna*, Long-wattled Umbrellabird *Cephalopterus penduliger* and Beautiful Jay *Cyanolyca pulchra*. Any conservation actions in this area should seek to take note of the requirements of all of these loosely sympatric species.

Haplophaedia lugens

REMARKS Old records from eastern Ecuador, i.e. Papallacta (Oberholser 1902), Baeza (specimens in BMNH collected by C. Buckley) and “río Pastassa” (Cory 1918) are undoubtedly based on mislabelled specimens, all recent Ecuadorian records being from the west slope of the Andes, and sympatry with the closely related Greenish Puffleg *Haplophaedia aureliae* being unlikely (NK).