PALE-HEADED BRUSH-FINCH *Atlapetes pallidiceps* **E/Ex**[4]

This finch is known from southern Ecuador, where it inhabits oases in the arid intermontane valleys at elevations ranging from c.1,500 to 2,100 m. The human pressure on areas with water in this region is great, and if it is not extinct the species survives only in small patches of shrubbery bordering streams and irrigated farmland.

DISTRIBUTION The Pale-headed Brush-finch (see Remarks 1) is known from c.24 specimens, taken at five different localities in Azuay and Loja provinces, southern Ecuador. The four Azuay localities are in the upper río Jubones drainage, while the one Loja site appears to be in the drainage of the río Catamayo, an affluent of río Chira. Localities (from north to south, coordinates unless otherwise stated from Paynter and Traylor 1977) are:

Azuay Girón, 2,100 m, río Girón drainage, at c.3°10'S 79°08'W (specimen in ANSP collected in June 1939: Meyer de Schauensee 1948-1952); Yunguilla valley, 1,500 m, río Yunguilla drainage, at c.3°18'S 79°18'W (one specimen in ANSP and two in MECN, collected in July 1939, also two specimens in MCZ collected in August 1955 and in April 1961: Meyer de Schauensee 1948-1952); 10 km north-north-west of Oña, 1,900 m, río León drainage, at c.3°27'S 79°11'W (nine specimens in MCZ collected in November 1965: Paynter 1972a); Guishapa, Oña, 1,830 m, the type-locality, untraced (see Remarks 2), but presumably near Oña, which is in the río León drainage, at 3°32'S 79°10'W (three specimens in BMNH collected in May 1899: Sharpe 1900, Chubb 1919, Hellmayr 1938);

Loja Casanga valley, río Casanga drainage, a tributary of río Catamayo, at c.3°57'S 79°36'W (two specimens in AMNH and four in MECN, collected between 31 December 1968 and 6 January 1969: coordinates estimated from IGM 1989). If the specimens from Casanga valley are correctly labelled (see Remarks 1), then the species may also occur in the intermediate valley, the upper drainage of the río Puyango (an affluent of the río Tumbes) in Loja and adjacent western El Oro provinces.

POPULATION The species was found to be fairly common in a small patch of habitat in 1965 (Paynter 1972a): however, suitable habitat is scarce in the dry interandean valleys of southern Ecuador (NK), so even if this species is confirmed to range south to the Casanga valley, the total population must be very small. Recent searches in the Oña region and near Abdon Calderón and Santa Isabel along the río Jubones, as well as a brief search (at too low an elevation) in the Casanga valley, have been in vain but are inconclusive (R. S. Ridgely *in litt*. 1990, NK): for example, B. M. Whitney (*in litt*. 1991) searched the Oña areas of the río León drainage in March 1990, as did B. J. Best (*in litt*. 1992) in February 1991 and L. F. Kiff (*in litt*. 1991) in March 1991, all three expeditions failing to find any evidence of the species. Most recently (March 1992), M. B. Robbins (*in litt*. 1992) searched in relatively good stands of *Acacia* scrub, the two best areas being in quebradas above the río León (below and to the north of Oña) at 1,950 and 2,100 m: one of these areas was very likely the same quebrada where Paynter (1972a) found the species fairly common in November 1965, and the understorey in both quebradas seemed dense enough to support several pairs of *Atlapetes*: every bird species encountered in this area was singing (i.e. breeding or had just finished), yet no *Atlapetes* were vocalizing in the areas covered (M. B. Robbins *in litt*. 1992). An extensive *Acacia* scrub woodland, continuous from 1,500 to 1,800 m, c.2 km west-north-west of Catacocha in the Casanga valley, was searched in April 1992, and as in the Oña area all birds were vocalizing, yet only White-winged Brush-finch *A. leucopterus* and, lower down, White-headed Brush-finch *A. albiceps* were recorded (M. B. Robbins *in litt*. 1992): it seems likely therefore that this brush-finch is not present in the Casanga valley or indeed near Oña, at least during the normal breeding period.

ECOLOGY In 1965 the species was found in an oasis where a few hectares of artificially irrigated fields were interlaced with shrubs, and where some low trees and humid scrub bordered a brook; there was little thick undergrowth present, and the species occurred mainly in "tree-sized acacias"; it is not known whether it normally frequents trees or was forced to be more arboreal than congeners because of the absence of thickets (Paynter 1972a). Although shy, it was fairly conspicuous as it flew from tree to tree: it usually occurred singly, sometimes in pairs, and only on one occasion were three seen together (Paynter 1972a). A single bird was seen on the ground in an area with coffee bushes and shade trees, and appeared to be turning dead leaves with its bill (Paynter 1972a).

Paynter (1972a) examined the stomachs of eight individuals: all contained a good deal of sand, which at times made up almost half of the material in a full stomach; insect remains were found in six,

varying from very little to 25% of the recognizable material; most birds had relatively large pieces of what appeared to be endosperm from a big seed, the outer coating of which was never attached, and it seems likely that the seed was cracked before ingestion and the endosperm extracted in chunks; a few very small seeds (2 mm or less) of several types were also noted; and a minute cocoon (2x5 mm) and tiny (3x8 mm) larval coat of something like a fly larva were found in one specimen.

The only information on breeding is from specimens: of four taken in early January three males had small testes, while one female had a medium to large ovary, one of them (a male) being in fresh plumage, the others worn (skins in MECN); one taken in June or July is immature (Meyer de Schauensee 1948-1952), as is one (in MECN) collected in July 1939 (see Remarks 3). Skull ossification appears to be slow in the species, as all eight November specimens examined for this feature had incompletely (though almost fully) ossified skulls (MCZ label data).

THREATS The species is critically threatened (if still extant) by habitat destruction. The intensive cultivation wherever water is available in these arid valleys has presumably already forced it into marginal habitat. Large numbers of goats have stripped almost the entire valley of vegetation, leaving an eroded, desert-like landscape (NK). Nevertheless, apparently suitable patches of *Acacia* scrub were found north of Oña along two quebradas in March 1992 (M. B. Robbins *in litt*. 1992), and indeed B. M. Whitney (*in litt*. 1991) noted patches of woodland with "tree-sized acacias", other trees and woody shrubs (*Tillandsia*-covered) and a healthy understorey growth, totalling an estimated c.100 ha, in this area: an extensive area of *Acacia* scrub woodland was also found in the Casanga valley in April 1992 (M. B. Robbins *in litt*. 1992: see Population).

MEASURES TAKEN None is known.

MEASURES PROPOSED An intensive search for the species should be started immediately in order to establish its current status, identify its precise ecological requirements and evaluate the status of its preferred habitat, and any threats it may face. Searches should be undertaken in the apparently suitable habitat that remains near Oña (see Population), preferably in November, or at least prior to the wet season and the onset of the breeding season in this area (searches in February–March drew blank, yet the last records there stem from November). It is likely that the species's rediscovery would have to be followed immediately by an intensive programme of habitat conservation in close liaison with local communities.

REMARKS (1) Paynter (1972a) regarded the Pale-headed Brush-finch as a close relative of the smaller White-winged Brush-finch, which occurs as three subspecies: nominate *leucopterus* at 600-2,900 m on the interandean plateau and west slope of the Andes in Ecuador from Imbabura province south to western Azuay, *paynteri* at 1,700-2,200 m in southernmost Cordillera del Condor and the Huancabamba region, Cajamarca and Piura departments, Peru, and *dresseri* at 700-2,500 m on the Pacific slope from south-west

Cajamarca, Peru, north to Cerros de Amotape, Cordillera Larga, Cordillera de Alamor, Cordillera de Celica, and Casanga valley, north-west Peru and south-west Ecuador (Chapman 1926, Paynter 1972a, Fitzpatrick 1980). Paynter (1972a) believed *pallidiceps* to be restricted to the upper río Jubones drainage, and argued that its isolation in this valley undoubtedly prevented it from being absorbed into the population now constituting *A. leucopterus dresseri*. Chapman (1926) suggested that *pallidiceps* might be albinistic examples of the White-headed Brush-finch, which is found at 250-1,500 m from west-central Cajamarca in northern Peru north to the Casanga valley in south-west Ecuador (Paynter 1972a). Paynter (1972a) treated *albiceps* in the same species-group as *pallidiceps*. In view of the close relationship between these species, it is of considerable interest that *pallidiceps* has been reported from the Casanga valley, where *albiceps* and *leucopterus dresseri* also occur, and a study to prove the authenticity of *pallidiceps* at this locality, as well as a study of the interactions and possible hybridizations between the three species there, would be desirable; however, given the fact that the Olallas have a reputation for mislabelled specimens, the presence of the Pale-headed Brush-finch in the Casanga valley (all specimens of which were collected by M. Olalla) must be questionable (M. B. Robbins *in litt*. 1992).

(2) According to Brown (1941) Guishapa is the same as Paguishapa, a subtropical station (at 2,400 m) on the trail from Cuenca to Loja, where it follows the río Jubones at c.3°21'S 79°21'W. Paynter (1972a) inquired in the town of Oña, and found no-one with any knowledge of a locality named Guishapa; he suggested that it was either a hacienda, now gone, or an incorrect transliteration from the Quechua, the suffix -shapa or -chapa, meaning "sentry", being common in placenames in the region.

(3) Since Meyer de Schauensee (1948-1952) referred to this immature as being in AMNH, where it can no longer be found, it is conceivably the same as the July 1939 immature from Yunguilla, now in MECN.