

*This poorly known parakeet is confined to upper tropical rainforest in three small areas of south-eastern Ecuador, where its numbers appear to be fairly low and where habitat destruction is beginning to have an effect.*

**DISTRIBUTION** The White-necked Parakeet (see Remarks 1) is known from three general areas – in and around Podocarpus National Park, in the Cordillera de Cutucú, and in the Cordillera del Condor – in south-eastern Ecuador. Altogether 12 specimens (in AMNH, ANSP, MECN, WFVZ and ZMUC) have been collected, and there are recent sightings from all three areas (Ridgely 1981a, Robbins *et al.* 1987, Bloch *et al.* 1991, Krabbe in prep., M. Marin verbally 1991, C. Rahbek verbally 1992).

**Podocarpus area** The type and two other specimens (one with a lost label, but presumably from the same locality since taken at the same time: Chapman 1926) were collected at “610 m” (see Remarks 2) at Zamora, Zamora-Chinchipec (previously Loja) province, south-east Ecuador, on the eastern slope of the Andes, October 1913 (Chapman 1914a). In February and March 1980, flocks were seen on the slope above Zamora at 1,000-1,600 m (Ridgely 1981a), in February 1988 a few birds were seen there (P. Greenfield *in litt.* 1989), in May 1989 10-50 birds flying upstream were recorded daily at Río Bombuscará Visitors' Center (Podocarpus National Park), c.940 m, on the slope south-west of Zamora (Bloch *et al.* 1991), and birds were studied at this last site in August/September 1990 (Toyne and Jeffcote 1992); in March 1990 at least 18 birds were found in three flocks in the río Jamboe valley (east of the Bombuscará drainage) at 1,120-1,250 m (B. M. Whitney *in litt.* 1991); in late 1991 and early 1992 birds were found at Romerillos, 1,600-1,900 m (untraced but also inside Podocarpus National Park) (C. Rahbek verbally 1992; also Toyne and Jeffcote 1992); in December 1989 a flock of at least 10 was seen along the Loja–Zamora road (C. S. Balchin *in litt.* 1990); in March 1990 a flock of six was seen in the río Zamora (río Sabanilla) valley at c.1,330 m (B. M. Whitney *in litt.* 1991); in December 1990 several small flocks (maximum five) were seen on a 5 km stretch of the road between 1,700 and 1,800 m, in two cases below Sabanilla (M. Pearman *in litt.* 1991), and birds were seen there at c.1,600 m in January 1992 (C. Rahbek verbally 1992). Records around Podocarpus are thus from much of the year; the species's apparent absence in June (NK) and July (Ridgely 1981a) may be illusory, especially if the evidence of local breeding (see Ecology) obtained in September is accepted.

**Cordillera de Cutucú** Two specimens were collected in this range, Morona-Santiago province, Ecuador, one at 1,200 m (specimen in AMNH), and one at 2,000 m (specimen in ANSP), both in December 1940. In April 1984 a male (now in ZMUC) was collected from a flock of about eight birds on the western slope of the central part of the cordillera at 1,250 m; it was in extremely worn plumage, and the testes had apparently been recently enlarged, suggesting that it had just finished breeding, presumably locally (NK). In June and July 1984 several flocks of 4-10 birds each were encountered on the same slope, at 1,200 to 1,700 m, one bird being collected (Robbins *et al.* 1987; see Remarks 1). Definite records from these mountains are thus from 1,200 to 1,700 m, in the months of December, April, June and July.

**Cordillera del Condor** In August 1989, at 1,000 m and again in September 1990, at 1,700 m, the species was found in the central part of this cordillera, at c.4°00'S 78°34'W, and three specimens (now in ANSP, MECN and WFVZ) were taken (M. Marin verbally 1991, Krabbe in prep.). Another, previously unpublished specimen in WFVZ was taken in the cordillera in c.1988 (M. Marin verbally 1990). The species has not been recorded in the southern (Peruvian) part of this range (Robbins *et al.* 1987).

**POPULATION** In Cordillera del Cutucú the White-necked Parakeet is uncommon (Ridgely 1981a, Robbins *et al.* 1987, NK). At a site in Cordillera del Condor where a bird was collected in c.1988, only one flock of c.5 birds was found in an area of about 1 km<sup>2</sup> (M. Marin verbally 1990). Near Chinapinza in the central part of Cordillera del Condor, a flock of five was resident in an area of 2 ha, and two other flocks, one of 12 and one of five, briefly visited the area a few times over 16 days in September 1990 (Krabbe in prep.); the specimen taken nearby at 1,000 m in August 1989 was collected from a flock of 18-20 birds (M. Marin verbally 1991). In Podocarpus National Park in 1990 flocks were usually of 5-8 birds, with 3-13 the extremes in size, except for a possible sighting of 25 (Toyne and Jeffcote 1992). The total population of the species may comprise a few thousand individuals.

**ECOLOGY** The few definite observations of the species suggest that its ecology is fairly similar to

congeners. It travels in small groups of 4-20 individuals, and forages in fruiting trees in primary forest and clearings (Ridgely 1981a, Bloch *et al.* 1991, Krabbe in prep.). Its altitudinal range is c.900 to 2,000 m (see Distribution). The adult male collected in April 1984 kept watch from an open branch while the rest of the flock fed in adjacent trees (NK).

On five occasions in September 1990 in Cordillera del Condor the food plant of the species was identified, always the inflorescences of the slender, woody, composite vine *Piptocarpha* cf. *poeppigiana* (a widespread species in both eastern and western Ecuador: B. Ølgård verbally 1990); two specimens taken there had their stomachs crammed with these flowers, one of them also a small unidentified seed (Krabbe in prep.). *Piptocarpha poeppigiana* climbs young trees, and in some cases the parrots would descend as low as 1-2 m above the ground to feed on its flowers; at this locality the species was very confident, allowing approach as close as 3 to 4 m, and because it was only vocal in flight it could go undetected for long periods while feeding, even when close to humans (Krabbe in prep.). Other studies during the same period in Podocarpus National Park identified four food sources, the seeds of *Mollia gracilis* (much favoured), fruits of *Ficus* aff. *mutisii* and *Miconia* cf. *punctata*, and the flowers of the liana *Mikania leiostachya*, with drinking noted from rainwater in epiphytic plants (Toyne and Jeffcote 1992).

All 22 individuals seen in Cordillera del Condor in September 1990 were adults (NK), and the one taken in Cordillera de Cutucú in April appeared to have just finished breeding (see Distribution). However, in Podocarpus National Park a juvenile was observed being fed by an adult in early September, and breeding was assumed to have occurred in May–July (Toyne and Jeffcote 1992).

**THREATS** Although the upper tropical zone is being cleared along the east slope of the Andes at an alarming rate (NK; also P. Greenfield verbally 1986), much forest of the subtropical zone is still intact within the parrot's range. However, the Podocarpus National Park is under severe pressure (see Threats under Bearded Guan *Penelope barbata*); in the valley of the Jamboe there is little undisturbed habitat below 1,100 m, and clearance of forest is proceeding upwards (B. M. Whitney *in litt.* 1991). Moreover, Shuar Indians of the Cutucú region, in order to claim their land legally, are forced to clear at least part of it for agriculture, and some clearance of subtropical forest there has already begun (NK). In Cordillera del Condor the subtropical forest is largely intact, being inhabited only by gold prospectors and used for hunting by Shuar Indians; in contrast the upper tropical zone forest has been almost completely felled for timber up to 1,000 to 1,200 m, at least along the central part of the range, and eventually this cutting will expand into the subtropical zone and threaten the species (NK). Thus the main threat is habitat destruction, but two of the birds in MECN, which both died in 1989, had been purchased in the cagebird market in Quito (P. Greenfield *in litt.* 1989), and two other captive individuals were encountered in Ecuador in 1990, suggesting a small but continuing pressure from internal trade (Toyne and Jeffcote 1992).

**MEASURES TAKEN** The Cordillera de Cutucú is a reserve for the Shuar Indians, who traditionally build no more than two or three houses together, with some 2 km to the next settlement, thus ensuring enough forest as hunting grounds for each family; the Shuars generally hunt and do very little farming, which so far has left the Cutucú mountains one of the least disturbed forested regions in Ecuador (NK); but see Threats. If the White-necked Parakeet breeds at the type-locality, it may be safe on the lower eastern slope of the Podocarpus National Park, Loja, which stretches almost to Zamora; but again see Threats.

**MEASURES PROPOSED** As the Cordillera de Cutucú apparently represents the breeding grounds for a number of local or otherwise uncommon, scarce or rare species of bird (Robbins *et al.* 1987), including the Spot-winged Parrotlet *Touit stictoptera*, it is of the utmost importance to preserve the forest in its present condition (Ridgely 1981a, NK). The Shuar policy of not letting non-Shuars into the Cutucú region without permission should be encouraged, and laws obliging them to clear forest in order to claim land should be revoked (NK). The Shuars need to know the significance of the White-necked Parakeet, and to report immediately any attempts by trappers to obtain specimens; indeed, monitoring of internal trade in the species must be developed. However, perhaps the major task is to assure the long-term future of Podocarpus National Park (see equivalent section under Bearded Guan).

**REMARKS** (1) There is some question over the taxonomic status of the White-necked Parakeet. In the Cordillera de Cutucú, some flocks encountered between 1,000 and 1,200 m appeared to be either mixed

flocks of *Pyrrhura albipectus* and Maroon-tailed Parakeet *P. melanura berlepschi* (previously considered a distinct species, Berlepsch's Parakeet *P. berlepschi*: see Ridgely and Robbins 1988), or were possibly hybrids between the two, as some individuals had white to yellow breasts which had only faint dark barring or completely lacked it; one specimen was collected, and most closely matches *P. m. berlepschi* (Robbins *et al.* 1987). However, all 22 individuals seen in Cordillera del Condor in September 1990 were adult *albipectus*, showing no sign of hybridization with *melanura* (Krabbe in prep.). (2) The altitude of 610 m recorded for the Zamora specimens is undoubtedly erroneous, as the nearest place at that altitude is 70 km north-east of Zamora (IGM 1981), so presumably these birds were collected above Zamora at the same altitudes (1,000-1,600 m) as those seen there in recent years (NK).