EL ORO PARAKEET *Pyrrhura orcesi* **V/R**[10]

This recently described species is restricted to humid forest on the west slope of the Andes in Azuay and El Oro provinces, south-west Ecuador, where it occurs at altitudes between 300 and 1,300 m. It is threatened by habitat destruction, but plans are under way to protect part of its range.

DISTRIBUTION The El Oro Parakeet (see Remarks) seems to be confined to wet forest on the Pacific slope of the Andes in Azuay and El Oro provinces, Ecuador, between the río San Antonio valley at 2°30'S and the Balsas region at 3°45'S, at 300 to 1,300 m elevation, possibly lower. It was discovered in remnant patches of cloud-forest c.9.5 road km west of Piñas, 900 m, in El Oro, at 3°39'S 79°45'W, in August 1980 (Ridgely and Robbins 1988; coordinates – also for the following – read from IGM 1989). Specimens were secured at the same locality in June and early July 1985, and in August 1986 additional specimens were collected east of Naranjal, Azuay, all birds being seen or collected at altitudes ranging from 600 to 1,100 m (Ridgely and Robbins 1988). A further specimen (in BMNH) had been collected in September 1939 at Piedras, 300 m, El Oro, at 3°38'S 79°56'W (Ridgely and Robbins 1988). A flock was heard at an elevation of 1,300 m, above Uzhcurumi, some 30 km north of the type-locality, on the north-western slope of Cordillera de Chilla, El Oro, at 3°23'S 79°32'W in March 1991 (NK). Despite extensive searches, the species was not found north of the Naranjal site (Ridgely and Robbins 1988), i.e. (presumably) north of the río San Antonio valley. There are several recent sightings from the Pacific slope of Azuay, the northernmost being at Manta Real, 600-1,080 m, near río Tigay, 13 road km from Troncal on the road to Shucay, at c.2°30'S 79°17'W, others being along the road under construction from north of Naranjal to Cuenca, near the border of Guayas province, 900-1,200 m, at 2°34'S 79°20'W, and near Escuela San Luis, 600-1,000 m (not located but south-east of Naranjal), along the road that heads east from Hacienda Balao Chica (c.18 road km south of Naranjal) and crosses to the south side of río Jagua, i. e. at c.2°52'S 79°32'W (J. C. Mathéus *in litt*. 1991, NK). It seems possible that the parakeet may range down to the lowest part of the slope where it is forested, i.e. down to 50 m at places in western Azuay such as near río Siete at c.3°05'S (NK). South of the type-locality the bird has never been found despite extensive previous collecting and two recent expeditions (Chapman 1926, Wiedenfeld *et al*. 1985, R. S. Ridgely *in litt*. 1990, B. J. Best *in litt*. 1991).

POPULATION At the El Oro site a highly conservative count gave a total of 55-60 birds, and at the Naranjal site over 20 were encountered (Ridgely and Robbins 1988). On 6 August 1988 over 75 birds (including a flock of 60) were seen at the type-locality, despite significant further loss of habitat (R. S. Ridgely and P. Greenfield *in litt*. 1989), but in April 1989 only small numbers were encountered, so seasonal movements may take place (P. Greenfield *in litt*. 1989) or else a real drop in numbers had occurred. Other counts at the Piñas site are of 40-50 birds at 1,270 m and six at 1,200 m on 13 March 1990 (B. M. Whitney *in litt*. 1991), five flocks of 15, five, four, one and 10 on 25-26 September 1990 (NK), a total of 12 on 15 December 1990 (M. Pearman *in litt.* 1991), two flocks of five and 14 on 1 February 1991 (NK), three flocks of 10, 7-10 and 7-10 on 27 February to 1 March 1991 (B. J. Best *in litt*. 1991) and one flock of seven on 14-16 April 1991 (NK). Along the new Cuenca road five to six flocks, each of 5-6 birds, was seen on 27 September 1990, and a flock of four was seen there on 22 December 1990 (J. C. Mathéus *in litt*. 1991, NK), while at San Luis a flock of four and another of 12 were seen in February 1991 (J. C. Mathéus *in litt*. 1991). The 300-1,300 m zone between Naranjal and Piñas covers c.750 km^2 (read from IGM 1989). As far as can be gathered from satellite photos (LANDSAT 1987) some 50-80% of the forest remains (NK). A probable density of the closely related Maroon-tailed Parakeet *Pyrrhura melanura* would be in the order of 3-30 birds per km^2 (NK), which for *orcesi* would give a total population of c.2,000 birds at worst and 20,000 birds at best.

ECOLOGY The El Oro Parakeet inhabits very humid upper tropical forest (Ridgely and Robbins 1988). At the type-locality, forest canopy height on the more level areas exceeded 20 m, although average canopy height was lower on steeper slopes; trees and the relatively dense understorey were laden with epiphytes; moisture is carried by westerly winds from the Pacific Ocean c.75 km west of the type-locality, and on 4 August 1980, and during investigations in June and July 1985, the forest was usually shrouded by clouds

BirdLife International (1992) Threatened Birds of the Americas.
Cambridge, UK: BirdLife International.

from dawn until about midday (Ridgely and Robbins 1988), and similar or even foggier weather with frequent rain was noted in September and January, while in mid-April clouds hung high above the ridge and no rain fell in three days, and according to a local had not done so for two weeks (NK). The forest at the Naranjal site was very similar to the El Oro site, except that it was even more fragmented by human activity; at both localities the parakeet moved in flocks of 4-12 birds, flocks consisting of adults and young of both sexes (Ridgely and Robbins 1988).

West of Piñas the birds were observed feeding repeatedly at a fig (*Ficus* cf. *macbridei*) and on the fruit of the tiliacean *Heliocarpus popayanensis*, while at the Naranjal site they were observed feeding only on the fruit of a euphorb *Hieronyma sp*. (Ridgely and Robbins 1988). The 40-50 birds at Piñas in March 1990 were feeding on the fruits of several large *Ficus* trees (B. M. Whitney *in litt*. 1992), while in mid-February 1991 small flocks there fed on berries and in *Cecropia* trees (B. J. Best *in litt.* 1991). Three birds were observed drinking from a small bromeliad at the top of a tree in a clearing (M. Pearman *in litt.* 1991).

Given that some fledged young were begging food in late June, the main breeding period was speculated to be from March through to May (Ridgely and Robbins 1988); fledged young were also observed being fed in August 1988 (R. S. Ridgely *in litt*. 1989).

THREATS The natural forest habitat at the type-locality and the Naranjal site has been reduced significantly by human activity; at the El Oro site, between 10 and 15 large trees were being removed daily from a small tract of accessible forest in 1985; typically, once the larger trees are removed, the area is burnt and cattle are brought in (Ridgely and Robbins 1988); this process was still continuing in August 1988 (R. S. Ridgely *in litt*. 1989); another observer judged that 5% of the forest disappeared between visits in April 1986 and May 1987 (M. Pearman *in litt*. 1989), and even in late 1990 there was clear evidence of continuing deforestation (M. Pearman *in litt.* 1991). Although the parakeet was relatively numerous and appears to be thriving in patchy forest now found at the two first known localities, significant further disturbance and fragmentation of the forest may eliminate vital nesting and feeding sites; fortunately there is still extensive, mostly inaccessible forest remaining between the two sites (Ridgely and Robbins 1988).

MEASURES TAKEN None is known, but “Fundación Natura”, an Ecuadorian nature conservation organization, has plans to set up a reserve in the northernmost part of the parakeet's range (P. Greenfield *in litt*. 1989).

MEASURES PROPOSED It has been strongly recommended that a sizeable tract of land within the bird's range be preserved, not only to ensure that a large population is protected, but also to protect other forms that have distributions restricted to this region (Ridgely and Robbins 1988), for an enumeration of which see Remarks under Grey-backed Hawk *Leucopternis occidentalis*.

REMARKS The species is evidently a close relative of the Maroon-tailed Parakeet, but regarded as a distinct species mainly on the basis of the extent and colour tone of its red forehead, even in young birds, as well as differences in the pattern of the underparts (Ridgely and Robbins 1988). Also its calls are considerably higher pitched (NK).