

This is a very poorly known (but small and inconspicuous) species, recorded this century from Rio de Janeiro state and three sites in São Paulo; it inhabits forest, chiefly in hills, but descends to lower levels (perhaps seasonally), and appears to be a victim of widespread habitat loss and fragmentation, although many recent records are from protected areas.

DISTRIBUTION The Brown-backed Parrotlet is confined to south-eastern Brazil from southern Bahia south to southern São Paulo (Ridgely 1981a, Forshaw 1989). There appear, however, to be no records from Espírito Santo, and those from Bahia are at least a century old. Minas Gerais is not listed below but records from the Itatiaia massif, through which the border with Rio de Janeiro runs, indicate its likely occurrence in that part of the state.

Bahia The only locality for the species in Brazil during extensive travels within its range, 1815-1817, was the rio Peruípe at around 18°S (Wied 1831-1833), the precise site being mapped by Bokermann (1957) as around 17°45'S 39°50'W. Two further specimens exist labelled simply Bahia (acquired in 1875 and 1890 by UMZC and BMNH respectively).

Rio de Janeiro The great majority of records stem from Rio de Janeiro city and its immediate environs, including at least three nineteenth-century specimens (two in BMNH; also Fisher 1981): Descourtilz (1854-1856) found it in the Corcovado mountain forests in Rio de Janeiro city; specimens (in CCACS) from Tijuca National Park date from October 1966 (Sick 1969, LPG), seven were observed there in July 1979 (A. Greensmith *per* D. Willis *in litt.* 1988), three in November 1980 (Ridgely 1981a) and one in July 1988 (J. F. Pacheco verbally 1988); there are records from the Pedra Branca State Park, February 1987 at 200 m, and March 1988; the Parque da Cidade on the fringe of Tijuca National Park, October 1985 (one bird), at 50 m; and Xerém, 120 m, June 1987 (two) (J. F. Pacheco *in litt.* 1987, verbally 1991). Elsewhere in the state the species has been recorded from the Serra de Cantagalo (Descourtilz 1854-1856); the Serra dos Órgãos National Park (Ribeiro 1920, Ridgely 1981a), where one pair was seen in July 1991 at 1,200 m (J. F. Pacheco verbally 1991); Teresópolis (Ribeiro 1920); near Desengano State Park (São Julião, near rio Mocotó), May 1987, seven and four individuals at 20 and 120 m respectively (J. F. Pacheco *in litt.* 1987) and again on September 1988 at 150 m (J. F. Pacheco verbally 1991), with further records from the same region (Serra dos Marreiros, near Renascença, 1,000 m, and rio do Colégio, near São Fidélis, 950 m) in April 1989 (J. F. Pacheco verbally 1991); Itatiaia National Park, two males, one female, October 1961, 800 m (LPG; also Sick 1969, 1985), and two there in September 1989 at 1,400 m (M. Kessler *in litt.* 1989), with recent records on the Itatiaia massif at Visconde de Mauá (Maromba), 1,200 m, and Maringá (near Mirantão), also 1,200 m, March 1991 (J. F. Pacheco verbally 1991); and at other unspecified localities in the Serra do Mar (Sick 1969). An old, undated specimen in AMNH labelled "near Freiburg" presumably comes from Nova Friburgo.

São Paulo Descourtilz (1854-1856) reported it from unspecified forests in the state. Confirmed records (east to west) are from: Bananal, on the Serra da Bocaina, 1,000 m, September 1989 (J. F. Pacheco verbally 1991); Praia do Prumirim, Ubatuba, June 1980 (specimen in MNRJ); Iguape, 1898 (three specimens in MZUSP; also von Ihering and von Ihering 1907, Pinto 1938, 1946); and (in fulfilment of a third-hand report of the species still surviving in the "littoral", probably south-west of São Paulo city, in the 1960s: Bertagnolio 1981), the Ilha do Cardoso State Park (P. Martuscelli *in litt.* 1991). In addition, von Ihering (1898) repeated a report that the species appeared in July and August on the rio Iririria; it should occur in the Boracéia watershed reserve in north-eastern São Paulo (Ridgely 1981a); and unidentified parrotlets *Touit* were recorded in Ubatuba Reserve in the late 1970s (Willis and Oniki 1981a), Forshaw (1989) inclining to believe that they were *melanonota*, for unstated reasons; the record from Praia do Prumirim notwithstanding, they could have been Golden-tailed Parrotlets *T. surda* or indeed even both species.

POPULATION In the last century the Brown-backed Parrotlet was quite rare in the forests around Rio de Janeiro, though somewhat more abundant in the Serra de Cantagalo and still more so in São Paulo's forests (Descourtilz 1854-1856). Wied's (1831-1833) record from Bahia involved the collecting of 21 with two shots from a larger flock perched in the crown of a tree. Pinto (1946) thought it was perhaps formerly

common (not “occasionally common” as in Silva 1989a) in the coastal forests of São Paulo, but regarded it now as very rare. Modern commentators have agreed that it is indeed a rare species, but with the proviso that parrotlets of the genus *Touit* seem generally to occur at very low densities, and their inconspicuous habits unquestionably result in their often being overlooked (Sick 1969, King 1978-1979, Ridgely 1981a, Scott and Brooke 1985); indeed, most recent records for Rio de Janeiro state stem from knowledge of the species's calls, after much fruitless fieldwork in the areas involved (J. F. Pacheco verbally 1991). Ridgely (1981a) predicted it not to prove as rare as the Golden-tailed Parrotlet (see relevant account), because more forest remains in the Serra do Mar than in the adjacent lowlands. There have been a few records of small flocks on the Ilha do Cardoso in recent years (P. Martuscelli *in litt.* 1991).

ECOLOGY The species favours humid forests on lower montane slopes, at about 500-1,000 m (Ridgely 1981a). However, the view that it rarely if ever descends to the coastal lowlands, the habitat of the Golden-tailed Parrotlet (Ridgely 1981a), may oversimplify the truth: several records under Distribution are from lowland areas, namely the rio Peruípe in Bahia, the sites in Rio de Janeiro state where altitudes are given, and Praia do Prumirim and Ilha do Cardoso (where at lower levels it occupies “sand-plain forest”, the same habitat as Golden-tailed Parrotlet: see relevant account) in São Paulo; moreover, the Golden-tailed Parrotlet is evidently not in any case an exclusively lowland species, so that ecological separation between the two cannot be attributed simply to altitude.

The species lives in small flocks of 4-10 individuals, keeping constantly hidden in the foliage and feeding on the seeds of large leguminous trees (Descourtilz 1854-1856). The birds remain in or below the forest canopy, creeping along larger branches and not perching in the open (Ridgely 1981a). In the primary forests bordering the Peruípe, the birds had been eating seed kernels and were very fat; at that time of year (June, winter), they wandered more widely and were found both in the interior and at the coast (Wied 1831-1833). In the Itatiaia massif birds have been seen eating the fruits of *Rapanea acuminata* (Pineschi 1990).

There are no breeding data. On the evidence above (and under Distribution: São Paulo), it seems likely that the species undertakes some type of seasonal migration or dispersal, in some areas possibly only over quite short altitudinal distances, but in others perhaps more pronounced (Sick and Teixeira 1979 called it “migratory like other psittacids”). This implies a wider dependence on habitat than might otherwise be apparent, and hence a greater vulnerability (both past and present) to forest loss or modification.

THREATS The fragmentation of the species's range by extensive forest destruction has been and remains the one significant threat (Ridgely 1981a). Habitat destruction is affecting the species on the Ilha do Cardoso (P. Martuscelli *in litt.* 1991).

MEASURES TAKEN The species is protected under Brazilian law (Bernardes *et al.* 1990) and listed on Appendix II of CITES. It occurs in five protected areas in Rio de Janeiro state, namely Tijuca, Serra dos Órgãos and Itatiaia National Parks, and Desengano and Pedra Branca State Parks. In São Paulo state, the Ilha do Cardoso State Park holds this and some 15 other threatened bird species (P. Martuscelli *in litt.* 1991), and is therefore of crucial importance to conservation; and the Ubatuba Reserve is part of Ubatuba Experimental Station (Willis and Oniki 1981a), this being at the foot of the Serra do Mar State Park; for this and other possible protected areas in the state, see below.

MEASURES PROPOSED Silva (1989a), noting that the species is difficult to maintain in captivity and therefore that no trapping should be allowed, called for research into the species's biology and, as “the very greatest priority by the Brazilian government”, the “preservation of remaining forests”. More specifically, there is a strong case to be made for the conservation of forest at Ubatuba in São Paulo state, Ilha do Cardoso must be spared any further tree loss, Boracéia Biological Station, the Serra da Bocaina National Park and the Serra do Mar State Park (all in São Paulo state) need investigation for the species's presence, and fieldworkers in Bahia and Espírito Santo should be primed to look for it at suitable localities (based on the flimsy evidence under Distribution and Ecology). The proposed augmentation of numbers in Tijuca

National Park through introductions (Coimbra-Filho and Aldrichi 1971) was, however, surely supererogatory.