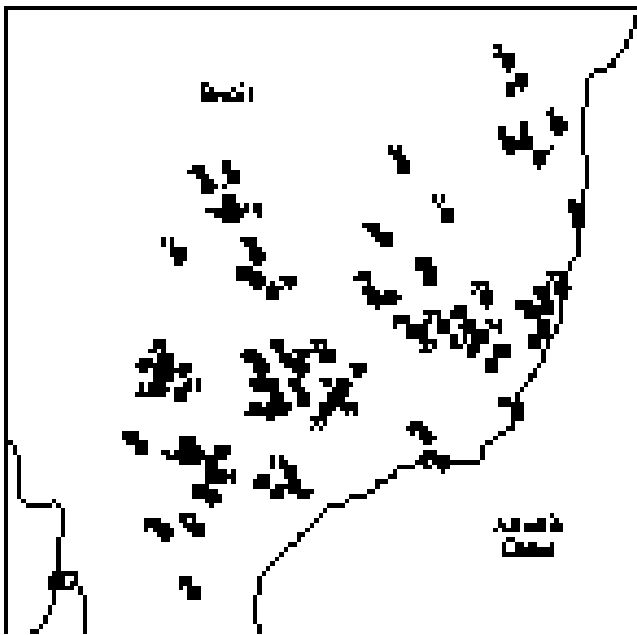


Although occupying a wide range in central-eastern Brazil from Bahia and Goiás south to Paraná (one record from adjacent Paraguay), the Golden-capped Parakeet has become extinct in many regions and extremely local in others, owing to the loss of its forest habitat and, perhaps, the impact of national trade levels; much survey and biological work is needed as well as the continued or new protection of key sites, notably in Minas Gerais.

DISTRIBUTION Apart from a single citation for Paraguay, at Puerto Bertoni¹ (Podtiaguin 1941-1945), 25°38'S 54°40'W in Paynter (1989), close to the Paraná border, the Golden-capped Parakeet is endemic to central south-eastern Brazil, from eastern and central-southern Bahia and eastern Goiás through Minas Gerais to Espírito Santo (no records since 1950), Rio de Janeiro (one recent record), São Paulo (two recent records) and northern Paraná (one recent record). Nominate *auricapilla* is confined to northern and central parts of Bahia; birds from southern Bahia tend to be intermediate between this race and *aurifrons* (see Pinto 1935); the race *aurifrons* occupies the rest of the range given (see, e.g., Forshaw 1989; also Remarks).

Ridgely (1981a) cited Santa Catarina as “reportedly” in the species's range, and Forshaw (1989) included it as the southernmost state, but there seems to be no evidence for this; moreover, a dubious nineteenth-century record for Rio Grande do Sul is not acceptable (Belton 1984-1985), and neither state was included in the species's range by Pinto (1978). However, the records from Ilha Solteira, Itapura and Nova Independência on the banks of the rio Paraná in São Paulo (see below) suggest the possibility of its occurrence across the river in Mato Grosso do Sul.



Bahia Localities (from north to south) include: Santo Amaro area², late 1970s; Lençóis (400 m), February 1989 (one pair); Macaco Seco, near Andaraí, November 1913; Iracema³ (mapped in Naumburg 1930; now Iramaia), October 1927; rio Gongogi at Cajazeiras⁴, June 1928, and at the confluence with rio Novo, December 1932; Conquista⁵ (now Vitória da Conquista) and nearby Porcos⁶ (Wied 1831-1833; see Bokermann 1957); Verruga⁷, rio Pardo, July 1921; in and around Monte Pascoal National Park⁸, late 1970s (specimens in AMNH, FMNH, MCZ, MZUSP; also Hellmayr 1929a, Pinto 1935, Ridgely 1981a, J. F. Pacheco verbally 1991).

Goiás Localities (north to south) include rio das Almas⁹, Jaraguá (Fazenda Thomé Pinto), August

1934; Goiás city¹⁰, recently (C. Yamashita *in litt.* 1987); “Fontas”, Inhumas¹¹, November 1962; Trindade¹², March 1967; Goiânia¹³ (in one case specifically “Campo-limpo”), November 1962, September 1963, February and April 1966, April, May and November 1967; Rio Verde¹⁴, April 1940; Caldas Novas¹⁵, March 1945 (unless otherwise stated, all records are based on specimens in CMN, MNRJ, MNHN, MZUSP; also Pinto 1936, Ridgely 1981a).

Minas Gerais Localities (north to south, apart from those west of 46°W: see further below) include: Januária¹⁶, rio São Francisco, November 1931; Fazenda Ramaiana¹⁷, Joaima, March 1970; Pirapora¹⁸, January 1937; mouth of rio Indaiá, rio São Francisco, Morada Nova¹⁹, September 1947 (Aguirre and Aldrichi 1983); Barra de Paraopeba²⁰, May 1930; Dom Joaquim²¹, October 1968; Lagoa Santa²² (Reinhardt 1870) and Pedro Leopoldo²³ and Lagoa Santa, 1971-1973 (A. Brandt *in litt.* 1987); Caratinga Reserve²⁴ (Fazenda Montes Claros), October 1986 (M. A. Brazil and D. R. Waugh *in litt.* 1986), September and October 1987 (A. Brandt *in litt.* 1987), July 1988 (S. G. D. Cook *in litt.* 1988) and October 1990 (R. S. Ridgely *in litt.* 1991); rio Doce on the lower Piracicaba, right bank, August 1940, and on the lower Suaçuí²⁵, September 1940; Rio Doce State Park²⁶, 1977 (Ridgely 1981a), 1981 (A. Brandt *in litt.* 1987); Raul Soares²⁷, June 1949 and July 1957; Casa Queimada, Serra do Caparaó²⁸, August 1929 (where no source before semi-colon, records are from specimens in AMNH, FMNH, LACM, MCZ, MNRJ, MZUFV, MZUSP, UFMG). Records west of 46°W are from the rio (= ribeirão) Jordão near Araguari²⁹, June 1901 (Hellmayr 1906c) and several localities along the rios Araguari and Quebra Anzol³⁰, February to November 1987 (A. Brandt *in litt.* 1987); between Piumhi and Vargem Bonita, May 1990 (Gardner and Gardner 1990b); Serra da Canastra National Park³¹, October 1983 (LPG); Carmo do Rio Claro³², February 1959 (specimen in MNRJ); Monte Belo³³ (Fazenda Monte Alegre) and Conceição de Aparecida³⁴ (J. F. Pacheco *in litt.* 1986, C. E. Carvalho *in litt.* 1987). A record for Itatiaia is given under Rio de Janeiro.

Espírito Santo Localities include: rio Itaúnas (in one case specifically Conceição da Barra³⁵), September and October 1950; rio São José³⁶, September 1942; São Domingos³⁷, August 1940; Lagoa Juparanã³⁸, December 1929 (specimens in AMNH, MNRJ, MCZ and MZUSP; also Aguirre and Aldrichi 1983).

Rio de Janeiro Wied (1831-1833) found it on the lower reaches of the rio Paraíba³⁹; BMNH has two skins labelled “Rio de Janeiro”⁴⁰ received in 1895; MCML had five of which at least one was from Rio de Janeiro (Forbes and Robinson 1897); and a flock was seen at Valença⁴¹ in December 1990 (J. F. Pacheco verbally 1991). A turn-of-the-century sight record (in Pinto 1951, 1954) from middle altitude on the forested slopes of the Serra de Itatiaia (part of which is in Minas Gerais) must now (given the area's relatively high observer coverage) be doubted.

São Paulo Localities in the northern half of the state (west to east) are: Itapura⁴², October 1938 and January 1957 (and indeed the entire lower Tietê⁴³ at the end of the nineteenth century); Nova Independência⁴⁴, February 1957; Ilha Solteira⁴⁵, August 1990 (group of eight); Ilha Seca⁴⁶, February 1940; Valparaíso⁴⁷, June and July 1931; Avandhandava, November 1903; Fazenda Varjão, Lins, January and February 1941; Barretos⁴⁸, no date; Silvania⁴⁹, December 1937; Fazenda Tres Barras⁵⁰, Pitangueiras, September 1945; Pontal⁵¹ (a small resident population), 1991; Ituverava⁵², May and August 1911; Franca⁵³, no date; Fazenda São Miguel⁵⁴, Cajuru, May 1943; Caconde⁵⁵, May 1900; localities in the southern half (west to east) are (all but the last three) in the Paranapanema valley at: Porto Marcondes⁵⁶, east of Teodoro Sampaio, May 1945 (site now submerged by the Taquaruçu dam: LPG); opposite the rio Tibagi (Tibaji) confluence⁵⁷, May 1945; Corredeira das Flores⁵⁸, Assis, rio Paranapanema, September 1943; Fazenda Palmira (south of Assis), September 1943; Fazenda Cayoá⁵⁹, Salto Grande, rio Paranapanema, August 1903; Itapetininga⁶⁰, nineteenth century; Ipanema⁶¹ (“Campo de Guarapiranga”), July 1820; and Tejuco⁶², evidently close to present-day Campinas, November 1822 (specimens in AMNH, CM, FMNH, LACM, MCZ, MZUSP, YPM; also von Pelzeln 1868-1871, von Ihering 1898, Hellmayr 1906c, von Ihering and von Ihering 1907, Pinto 1932, 1938, 1945, Aguirre and Aldrichi 1983, C. Yamashita *in litt.* 1990, J. F. Pacheco verbally 1991).

Paraná Localities (north to south) include: rio das Cinzas⁶³, May 1903; Jacarezinho⁶⁴, March 1901 (von Ihering and von Ihering 1907 used “Ourinho”, which is the old name: see Pinto 1945: 273); Fazenda Monte Alegre⁶⁵ (i.e. presumably “Castro” in Pinto 1938), August 1907 (Pinto 1932, 1935); rio Baile and Cândido de Abreu⁶⁶, November 1929 (same day and collector) (specimens in AMNH, FMNH, MZUSP, USNM; see corresponding section under Vinaceous Amazon *Amazona vinacea*); and the banks of the rio Jordão close to its confluence with the rio Iguaçu⁶⁷, c.30 birds, June 1987 (Straube 1988).

POPULATION In general the Golden-capped Parakeet has become rare, although where it can still be found it may sometimes prove common (see below); the area over which it is or was distributed is massive, and it is clearly likely that some populations (possibly major ones) remain to be discovered, but Ridgely's (1981a) conclusion – fully supported by Forshaw (1989), who pleaded for the species's listing “as rare in the *IUCN Red Data Book*” – that a very substantial decline must have occurred in recent decades, cannot be disputed, except inasmuch as the decline may have been in progress for two hundred years. Wied (1831-1833) apparently found it common on the Paraíba in Rio de Janeiro state, since he referred to its being rare further north until he penetrated the hinterland of Bahia around Vitória da Conquista, when it “again” became common, with “many flocks” consisting of 12-20 birds; the Paraíba population has evidently now almost gone, apparently along with all those in Espírito Santo, while there has been no indication of the species's continuing abundance anywhere in Bahia (see Distribution, Ridgely 1981a). In what must now be considered the core of its range, Minas Gerais, it was common in almost all remaining forest fragments surveyed from February to November 1987, but uncommon in secondary growth and pastureland with interspersed trees and palms in the same region; it was always seen in groups of 2-15 individuals (A. Brandt *in litt.* 1987); over 40 birds were seen in the Caratinga Reserve in 1988 (S. G. D. Cook *in litt.* 1988). In Goiás there is no evidence that it occurs in large numbers (C. Yamashita *in litt.* 1987). In two areas of São Paulo state (Itapetininga municipality and the lower rio Tietê) the species was reported to be common in the 1890s (von Ihering 1898), which clearly no longer obtains. The 1987 and 1990 records from Paraná and Rio de Janeiro are encouraging but presumably refer to small, isolated and doubtless diminishing populations.

ECOLOGY The Golden-capped Parakeet is clearly not a typical Atlantic Forest species, yet its distribution shows it to reach or have reached the Atlantic Forest borders, while extending through generally much drier inland regions in semi-deciduous forest. Ridgely (1981a) noted that, unlike the other two members of the Sun Parakeet *A. solstitialis* superspecies, the Golden-capped is a forest-based bird (in fact the Jandaya Parakeet *A. jandaya* is also a woodland bird, but of less humid formations: C. Yamashita verbally 1991); thus while the Golden-capped favours fringes and small clearings, at least a patch of forest must be nearby. In southern Minas Gerais it occurs in the same areas as Peach-fronted Parakeet *A. aurea* and inhabits the canopy of forest patches alongside Maroon-bellied Parakeet *Pyrrhura frontalis* (J. F. Pacheco *in litt.* 1986); in the north of the state it occurs alongside Blue-chested Parakeet *P. cruentata* (de Mattos and de Andrade 1988; see relevant account). Descourtilz's (1854-1856) view that it is rarely found in virgin forests, but frequently seen in extensive secondary growth, may be based on its use of forest edge (even in 1822 at Tejuco in São Paulo it was recorded at the edge of forest in dry trees: von Pelzeln 1868-1871); the evidence under Population concerning its relative abundance in forest and second growth certainly suggests the importance of primary habitat. There seems to be no altitudinal constraint on the species, which was recorded at 2,180 m in the Serra do Caparaó (specimen in AMNH).

Food is fruits and seeds: an undated specimen in UFMG had eaten guaiabo (okra) seeds; one in MNRJ from March contained corn and seeds; and one in MZUSP from September held fruits (and had been taken in capoeira). The species likes maize (Wied 1831-1833), and in the last century at least was notorious as a pest in corn plantations, which were visited by large flocks, these birds favouring any soft sweet fruit (Descourtilz 1854-1856).

Breeding is poorly documented; of eight specimens (in AMNH) collected in June (two), August (two), October (one) and December (three) whose gonads were examined, only one from June had them slightly enlarged, the others being dormant; however, an October specimen in UFMG had developed testes, and birds were in pairs, November (von Pelzeln 1868-1871).

THREATS Extensive land clearance in the south-eastern parts of the species's range has clearly had a major impact, and its present distribution is now heavily fragmented; moreover, most of the last forest patches in this region continue to be cut (Ridgely 1981a; also Forshaw 1989). The impact of this fragmentation will depend on the carrying capacity of remaining protectable forests, their distance from each other, and the dispersive ability of the species; it is possible that some populations can stay in contact through the use of riverine forest corridors.

There appear to be no records of human persecution of this species in response to its depredation of crops, but it remains exploited for trade: it is relatively common in illegal markets in Brazil, being offered for sale in lots of up to 15 birds (C. E. Carvalho *in litt.* 1987). The situation at the international

level is confused by the similarity in both appearance and scientific name of the Peach-fronted Parakeet (also known, even more confusingly, as the Golden-crowned Parakeet, e.g. in Low 1972), and there are consequently no reliable data on levels of trade in the past decade (see Inskipp *et al.* 1987); however, it is known that *auricapilla* was imported into West Germany “in hundreds” in the early 1980s (R. Wirth verbally 1992).

MEASURES TAKEN The species has been recorded from several protected areas, namely the Monte Pascoal National Park in Bahia and the Rio Doce State Park, Fazenda Montes Claros (Caratinga Reserve), Serra da Canastra National Park and (presumably) Serra do Caparaó National Park in Minas Gerais; it has also been found in or very close to the Chapada Diamantina National Park in Bahia (at Lençóis and Andaraí), but the high observer coverage in recent decades has failed to confirm it in Itatiaia National Park.

MEASURES PROPOSED Despite its extensive range, this species needs to be comprehensively surveyed and studied. A research programme into its population dynamics and dispersive capacity, and a detailed analysis of its habitat and feeding requirements at various sites where it occurs in Goiás, Bahia, Minas Gerais and São Paulo, should partner a general review of its status in these states (making every effort to locate major new populations and define the limits of its range). Certain sites for the species in eastern Minas Gerais deserve particularly urgent investigation since they appear also to hold populations of other threatened birds (including parrots): the Rio Doce State Park and the Caratinga Reserve are two crucial localities. The record of the flock from Valença in Rio de Janeiro is notable as this area also holds a small population of Vinaceous Amazon (see relevant account); further study there is to be encouraged. The species is not protected by Brazilian law, and this should be rectified.

REMARKS The Golden-capped Parakeet has been regarded as a subspecies, *A. solstitialis auricapilla* (Pinto 1978, Sick 1985). However, we follow Ridgely (1981a) in tentatively regarding *A. jandaya*, *A. solstitialis* and *A. auricapilla* as members of a superspecies. There is a zone of contact between *A. auricapilla* and *A. jandaya* in northern Goiás, but hybrids are uncommon, typical *jandaya* being found only 40 km north of Brasília; there is an ecological separation between them in Formosa in that region, *jandaya* occurring in less forested areas on calcareous soil (C. Yamashita *in litt.* 1986).