

*As a species of primary lowland Atlantic Forest in eastern Brazil, this largely frugivorous bird has suffered serious habitat loss and depends on a few key protected areas for its survival, notably Sooretama, Ilha do Cardoso and those owned by CVRD.*

**DISTRIBUTION** The Black-headed Berryeater is endemic to the Atlantic Forest region of eastern Brazil in one north-eastern state, Alagoas, and from southern Bahia south to Paraná. In the following account, records are given within states from north to south, with coordinates from Paynter and Traylor (1991) unless otherwise stated.

**Alagoas** The only recorded locality is Pedra (“Serra”) Branca, 550 m, Murici (now with forest only at Fazenda Bananeira), where an adult male was obtained in November 1983 (Teixeira *et al.* 1986), a bird was found there in October 1990 at c.520 m (B. M. Whitney *in litt.* 1991), and up to six were seen or heard daily, April 1992, at 450 m (M. Pearman *in litt.* 1992).

**Bahia** Older records are from Pitanga (see Distribution under Fringe-backed Fire-eye *Pyriglena atra*), early in the nineteenth century (Swainson 1820-1823); Cajazeiras (Cajazeira), 14°24’S 39°51’W, on the rio Gongogi, 300 m, June 1928 (specimens in AMNH); Itabuna, July 1919 (Lima 1920, Pinto 1932, 1944); Ilhéus, January 1944 (specimens in MZUSP); Braço Sul do rio Jucuruçu at Cachoeira Grande (untraced), March 1933 (Pinto 1932, 1944). Recent records are only from the CVRD Porto Seguro Reserve, January 1988 (B. M. Whitney *in litt.* 1988) and July 1991 (Stotz 1991), and from Monte Pascoal National Park, June 1990 (Gardner and Gardner 1990b).

**Espírito Santo** Older records are from the Fazenda Boa Lembrança, rio Itaúnas, October 1950 (Aguirre and Aldrighi 1987); rio São José, September and October 1942 (Pinto 1944, specimen in MCZ); Lagoa Juparanã (in one case precisely Santana), September and October 1925 (specimens in MNRJ), November and December 1929 (specimens in AMNH); Linhares, August 1939, October 1941 and January 1942 (specimens in MNRJ); rio Doce, April and September 1906 (von Ihering and von Ihering 1907, Pinto 1944); Colatina, November 1940 (specimen in USNM); Pau Gigante (now Ibirapu) (in one case precisely Lauro Müller), September and November 1940 (specimens in MNRJ, USNM); Santa Cruz (in one case precisely Água Boa), October 1940 (specimens in MNRJ, USNM); Porto Cachoeiro (now Santa Leopoldina), December 1905 (Pinto 1944); Quartel das Barreiras, c.21°10’S 40°55’W (Wied 1820-1821, Pinto 1944). The key site for the species in the state is Sooretama Biological Reserve (one specimen is from Cúpidio, adjacent to present-day Sooretama, August 1939: Aguirre and Aldrighi 1987), with records in September 1945 and October 1967 (Aguirre and Aldrighi 1987), the 1980s (C. E. Carvalho *in litt.* 1987, B. M. Whitney *in litt.* 1987), 1990/1991 (Aleixo *et al.* 1991) and the adjacent CVRD Linhares Reserve, with records since December 1986 (B. M. Whitney *in litt.* 1987, J. F. Pacheco *in litt.* 1987, D. F. Stotz *in litt.* 1988, 1991, G. D. A. Castiglioni verbally 1992). Other recent records are from the Fazenda Klabin (Fazenda São Joaquim) forest (now converted to the Córrego Grande Biological Reserve) in September 1979 (A. Greensmith *per* D. Willis *in litt.* 1988) and October 1986 (Gonzaga *et al.* 1987), and the Duas Bocas State Forest Reserve, west of Cariacica, 700 m, recently (C. E. Carvalho verbally 1987).

**Rio de Janeiro** There is an old record from Nova Friburgo (Burmeister 1856), and two nineteenth-century skins in BMNH labelled simply “Rio de Janeiro”. Recent records are from São Julião (adjacent to Desengano State Park), near Campos, May 1987 (J. F. Pacheco *in litt.* 1987, C. E. Carvalho *in litt.* 1987) and from the Fazenda União, near Rocha Leão, 22°25’ 42°01’W, in July, September and November 1990 (J. F. Pacheco *in litt.* 1991, including coordinates).

**São Paulo** Localities, all in the southern, coastal part of the state, are: Alto da Serra (Paranapiacaba), July 1906 (von Ihering and von Ihering 1907, Pinto 1944, specimen in AMNH); Estação Engenheiro Ferraz (untraced, between São Paulo and Santos), May 1964; ribeirão Fundo, c.24°15’S 47°45’W, July and August 1961, February 1962; Rocha (untraced, north-west of Juquiá), August and September 1961; Alecrim (now Pedro de Toledo), August 1925 (Pinto 1944); Barro Branco, rio Guaraú (untraced, south of Peruíbe), June 1963; Barra do rio Guaraú, May 1963; Onça Parda (untraced, south of ribeirão Onça Parda), October and November 1962; Barra do ribeirão Onça Parda (tributary of the rio Ribeira de Iguape), November 1964; Fazenda Poço Grande, rio Juquiá, May 1940 (Pinto 1944); Sete Barras State Reserve, February and July 1979 (Willis and Oniki 1981a); Tamanduá (untraced, north-east of Sete Barras), rio Ipiranga, September and October 1962; Quadro Penteado (untraced, west of Sete Barras), October and November 1961; Iporanga (north-west of Juquiá [Paynter and Traylor 1991], therefore not as in GQR 1991), November 1961; Icapara, July 1970; Iguape, May 1893 (von Ihering 1898,

Pinto 1944) and recently (D. F. Stotz *in litt.* 1991); Tabatinguara, Cananéia, c.25°01'S 47°57'W, September and October 1934 (Pinto 1944); on the mainland opposite Ilha do Cananéia, July 1991 (B. C. Forrester *in litt.* 1992); Ilha do Cardoso State Park, recently (D. F. Stotz *in litt.* 1988, P. Martuscelli *in litt.* 1991) (where no source before semi-colon, records are from specimens in MZUSP; see Remarks 1).

*Paraná* The species was not included in the state bird list by Scherer Neto (1985), but P. Martuscelli has recorded it on the mainland of northern Paraná (D. F. Stotz *in litt.* 1991) (see Remarks 2).

**POPULATION** Although the relative scarcity of recent records might be a result of the species's unobtrusiveness, as Snow (1982) has suggested (Wied 1831-1833 called it "silent, simple-minded and sluggish"), it has certainly suffered an overall decline in numbers and a fragmentation of populations owing to forest destruction within its range. Early last century the species was considered "very rare" by Swainson (1820-1823), whose hunters had never seen it before when they found it (only twice) near Salvador; but early this century it was found to be locally apparently very common ("seen in large numbers") in the vicinity of the rio Jucurucú at a forest fruiting tree, but since the bird was not found elsewhere it was considered not to be common (Pinto 1932). At present the species's stronghold is probably the Sooretama Biological Reserve and the adjacent CVRD Linhares Reserve in northern Espírito Santo. Scott and Brooke (1985) failed to find it at five study sites in Espírito Santo and Rio de Janeiro, in a survey that included a three-week study through early January 1981 at Sooretama. However, it was considered "still relatively common" in Sooretama, where birds were detected at three points in the reserve (C. E. Carvalho *in litt.* 1987). At the Linhares Reserve it was considered "fairly common", being recorded on four out of five days in December 1986, daily totals ranging from a minimum of three to a maximum of six; a conservative total of 15 birds, invariably located by their voice, was estimated to have been found during this survey (B. M. Whitney *in litt.* 1987). Another fieldworker, who found birds calling throughout the reserve, considered the species "common" at Linhares, with records from 37 days, usually of small numbers (4-6 birds) per day (D. F. Stotz *in litt.* 1988, 1991). At Ilha do Cardoso State Park in southern São Paulo, the species is not as common as at Sooretama/Linhares (D. F. Stotz *in litt.* 1991), and has been judged by a resident observer as "uncommon" (occasionally encountered in appropriate habitat) and declining owing to forest destruction (P. Martuscelli *in litt.* 1991); however, even though there is certainly a reasonable population in the forest along the base of the mountain there, and the species is still reasonably widespread in other areas of coastal southern São Paulo, it is not known whether any significant population remains in the rio Ribeira valley which, on the basis of records under Distribution, was clearly a major centre for the species 30 years ago; so little forest remains that the population may be severely reduced (D. F. Stotz *in litt.* 1988, 1991). There is no evaluation of the remaining populations of the species either in Bahia or Rio de Janeiro. It was considered "not rare" in the forests in north-eastern Brazil (Teixeira *et al.* 1986, M. Pearman *in litt.* 1992), where it has only recently been reported.

**ECOLOGY** The Black-headed Berryeater seems largely confined to lowland forest (see records under Distribution), with the near-threatened Black-hooded Berryeater *Carpornis cucullatus* tending to replace it at higher altitudes and further inland within the Atlantic Forest region (Snow 1982). Birds have been recorded from tall primary forest (Sick 1985, specimens in MZUSP). In the Linhares Reserve, calling birds perched about 8-12 m above the ground in the mid-storey of tall forest, the undergrowth around calling perches being usually rather dense, with many lianas and spiny palms, and the entire area quite dry, on sandy soil, with no water near any of the calling birds located; it appears that the 15 birds, plotted on a map, had grouped into roughly three areas, about five birds in each area, with individuals stationed at least 50 m apart, often 100 m or more, but within earshot and responding vigorously to playback experiments in December, being apparently more vocal in December than in late September-early October; territories appear to be occupied every year, judging from consistent, predictable response to tape playback (B. M. Whitney *in litt.* 1991). Response to the imitation of its voice has been recorded also in southern São Paulo in May and June (specimens in MZUSP).

A bird at Linhares was observed to eat a stick insect about 7 cm long in September/October (B. M. Whitney and J. C. Rowlett *in litt.* 1990), which is evidence against Snow's (1982) speculation that the species of this genus are "apparently exclusively frugivorous", although it is probable that fruits constitute the bulk of their diet. Other food recorded has been given as "always tree fruits, mostly red berries, often also red seeds, apparently *Bixa orellana*" (Wied 1831-1833), "small fruits" (Burmeister 1856, Schubart *et*

*al.* 1965), “large berries” and “berries” (specimens in MNRJ). Birds have been seen at fruiting trees in southern Bahia, March (Pinto 1932), Linhares Reserve (J. F. Pacheco *in litt.* 1991, LPG), and Córrego Grande Biological Reserve (Fazenda Klabin), where one bird arrived in a melastome tree *Henriettea succosa* situated along the margin of Córrego Grande and plucked some fruits from the branches on which it perched; a few minutes after it had departed, the same tree was visited by a Screaming Piha *Lipaugus vociferans*, which fed in the same manner on the berries (Gonzaga *et al.* 1987).

The only data on breeding come from the available records on moult and gonad condition of specimens. Moult records almost exclusively from males show that the (apparently post-breeding) moult begins mainly in September (8) and October (apparently three records), the remainder consisting of one each for May, August, November and December (Snow 1982), while the gonads were not enlarged in two males and a female collected in June or a female in December in Espírito Santo and southern Bahia, and were slightly or half enlarged in two males in December and another in November and a female in June, from the same region (specimens in AMNH). This evidence is apparently consistent with the observed greater vocal activity in December in Espírito Santo (see above), but the moult records are acknowledgedly inconclusive.

**THREATS** The species's apparent dependence on primary lowland forests, most of which has been extensively cleared throughout its range, remains the one significant threat and cause of concern (E. O. Willis *in litt.* 1986, C. E. Carvalho *in litt.* 1987, B. M. Whitney *in litt.* 1987, D. F. Stotz *in litt.* 1988; for a full discussion of this habitat loss see Sick and Teixeira 1979).

**MEASURES TAKEN** The species is protected under Brazilian law (Bernardes *et al.* 1990). It has been recorded from Monte Pascoal National Park, Córrego Grande and Sooretama Biological Reserves, the privately owned CVRD reserves at Porto Seguro and Linhares, Duas Bocas and Ilha do Cardoso State Parks, and possibly also occurs in other protected forest areas within its range, where populations should persist so long as they continue to be preserved.

**MEASURES PROPOSED** Although biological studies of the species are likely to prove difficult, given its evidently retiring nature, they are needed to obtain a clearer picture of its habitat requirements and population dynamics. The Linhares Reserve has been suggested as an ideal place for such studies (B. M. Whitney *in litt.* 1987). Surveys are also needed to locate any new populations of the species, particularly now that its song has been recorded (B. M. Whitney *in litt.* 1987) and could be used to facilitate its detection. The conservation of the Pedra Branca forests at Murici is a self-evident need, this apparently being the largest remaining continuous forest area in extreme north-eastern Brazil (Teixeira 1987) and holding several other threatened birds (see Remarks under Alagoas Foliage-gleaner *Philydor novaesi*).

**REMARKS** (1) E. O. Willis *in litt.* (1986) mentioned this species from four unspecified localities in the state. (2) A record from a locality on the southern coast of Paraná (Snow 1985: 52) has not been confirmed, and may involve a misidentification (Straube 1990).