

*The status of this small bird, endemic to Atlantic Forest in south-east Brazil, is confused by its similarity to a much commoner congener, but there seems little doubt that it is genuinely rare, of restricted range, and at some risk from trade.*

**DISTRIBUTION** The Black-legged Dacnis occurs thinly throughout coastal south-east Brazil, chiefly in the lowlands and adjacent mountains from Espírito Santo south to Santa Catarina. Records of this species are relatively few and several appear to involve wandering individuals (Gonzaga 1983). A single record from Lagoa Santa, Minas Gerais (Burmeister 1856), although accepted by some authorities (e.g. Pinto 1944, Meyer de Schauensee 1966, Gonzaga 1983), is probably an error in specimen labelling (Isler and Isler 1987, LPG); nevertheless, records below from Itatiaia National Park, which extends into Minas Gerais, and Quilombo, which is on the São Paulo side of the border, indicate the likelihood of the species being found in the extreme south-east of the state.

*Espírito Santo* The only record (Ruschi 1953) is confirmed by one specimen collected at 850 m at Santa Teresa on 9 November 1942 (Gonzaga 1983).

*Rio de Janeiro* Records (east to west) are from: Santa Maria Madalena (i.e. adjacent to Desengano State Park), 300 m, March 1988 (at least four: J. F. Pacheco verbally 1988); Fazenda União, near Casimiro de Abreu, July 1990 (J. F. Pacheco verbally 1992; see Population); Nova Friburgo, first half of the nineteenth century (ten specimens collected: von Pelzeln 1856); Macaé de Cima (rio Macaé headwaters), October 1985 (one bird seen: J. F. Pacheco *in litt.* 1986); Teresópolis, 1,000 m, October 1916 (specimen in AMNH); Serra dos Órgãos National Park, 1979 (flock of eight on northern limit: A. Greensmith *per* D. Willis *in litt.* 1988), 900 m, April 1984 (flock of five: LPG); foothills of the Serra dos Órgãos near Santo Aleixo, August 1977 and 1981 (Gonzaga 1983, 1986; see Ecology); Petrópolis, May 1953 (specimen in MPEG) and subsequently (the source of captive birds studied in 1978: Gonzaga 1983), and specifically at Samambaia, 800 m, July 1989 (J. F. Pacheco verbally 1992); Tijuca National Park, 500 m, July 1985 and April 1987 (singles seen: J. F. Pacheco *in litt.* 1986, 1987, Pacheco 1988b); Serra do Tinguá, 250 m, once in 1980-1981 (Scott and Brooke 1985), and at c.100 m near Xerém, October 1988 (P. S. M. da Fonseca verbally 1988); Serra das Araras, 600-700 m, Piraí, July 1989 (J. F. Pacheco verbally 1992); Angra dos Reis (at a site for Black-hooded Antwren *Formicivora erythronotos*: see relevant account), October 1988 (P. S. M. da Fonseca verbally 1988) and July 1990 (Gardner and Gardner 1990b); Itatiaia National Park, December 1953 (specimen collected: Gonzaga 1983) and at 1,700 m, October 1987 (pair observed: J. F. Pacheco *in litt.* 1987).

*São Paulo* Records (east to west) are from: several forests near Ubatuba in early August 1984 (Willis and Oniki 1985), and specifically at Fazenda Capricórnio (23°25'S 45°05'W in Willis and Oniki 1988b), 100 m, August 1988 (C. Yamashita *in litt.* 1988); Quilombo, date unknown (Willis and Oniki 1985); Paranapiacaba (750 m), Santo André, July 1966 (Gonzaga 1983); Campo Grande, date unknown (Willis and Oniki 1985); Alvarenga, São Bernardo do Campo, July 1962 (Gonzaga 1983), these last three localities all being on the south-east outskirts of São Paulo city; rio Ipiranga, on the southern coast, September and October 1962 (Gonzaga 1983); Ilha do Cardoso State Park, recently (P. Martuscelli *in litt.* 1991); Fazenda Intervalles, Capão Bonito, 800-1,000 m, January 1989 and February 1990 (Rodrigues and Silva 1991). One specimen, not preserved but seemingly this species, was taken at Ipanema west of São Paulo (von Pelzeln 1868-1871, von Ihering 1898).

*Paraná* The only record (Scherer Neto 1980) is based on a cage bird reported to have been captured in May 1979 near Antonina (Gonzaga 1983).

*Santa Catarina* One specimen from Blumenau (von Berlepsch 1873-1874) and another from Joinville (Hellmayr 1935) seem to be the only records (see Sick *et al.* 1981, Sick and Bege 1984).

**POPULATION** The species has been considered rare (Pinto 1944, Gonzaga 1983), or scarce and local (Isler and Isler 1987), since it is poorly represented in museum collections and almost absent from field reports (Gonzaga 1983), partly owing to its unobtrusiveness and to the great similarity of males to those of the widespread Blue Dacnis *Dacnis cayana* (see Remarks), so that the former can easily be overlooked (Gonzaga 1983, Scott and Brooke 1985, D. M. Teixeira *in litt.* 1987). However, its rarity has been noted

also in Rio de Janeiro cagebird markets, where usually only a few individuals occasionally appear alongside many Blue Dacnises (M. V. Dias verbally 1981, C. E. Carvalho *in litt.* 1987; see Threats). Birds may concentrate locally during certain periods, as at Petrópolis from April to June, when “many” can then be captured on fruiting trees, or in the foothills of the Serra dos Órgãos in winter 1981, when seven specimens were collected “from a much larger group” between 29 July and 2 August, though no trace of the species could be found in the same area one month later, nor in the following year (Gonzaga 1983); near Casimiro de Abreu, July 1990, “hundreds” might have been present (J. F. Pacheco verbally 1992). The five birds seen in the Serra dos Órgãos in April might have been part of such a pre-wintering flock (LPG).

**ECOLOGY** The Black-legged Dacnis has been found in primary or only slightly disturbed Atlantic Forest (Scott and Brooke 1985), as well as in old secondary forest (Gonzaga 1983, J. F. Pacheco verbally 1988, Rodrigues and Silva 1991, LPG), from near sea level up to 1,700 m. One bird from Paranapiacaba was collected in “eucalyptus flowers at the forest edge” (specimen in MZUSP), and a “wintering” pair at Angra dos Reis was watched for 15 minutes feeding towards the top of flowering eucalyptus trees (Gardner and Gardner 1990b). On three occasions at Fazenda Intervalas a pair was observed feeding on fruits of *Clusia*, twice at the edge of second growth and once in scrub vegetation on shallow soil near the summit (Rodrigues and Silva 1991). At Santo Aleixo the species was found in flowering trees *Mabea brasiliensis* near clearings and at forest edge in groups, searching for nectar and insects among the inflorescences in the early mornings, when Blue Dacnises also visited the trees for the same purpose; at mid-morning, the birds joined large mixed-species canopy flocks, in which becards *Pachyramphus viridis*, *P. polychopterus* and *P. validus*, Red-eyed Vireo *Vireo olivaceus*, Chestnut-vented Conebill *Conirostrum speciosum*, tanagers *Hemithraupis flavicollis*, *Tachyphonus cristatus* and *Thraupis palmarum*, and Buff-throated Saltator *Saltator maximus* were often present (Gonzaga 1983). In the Tijuca National Park isolated females were seen in mixed-species flocks that included individuals of Blue Dacnis, Green-headed Tanager *Tangara seledon* and Red-necked Tanager *T. cyanocephala* (J. F. Pacheco *in litt.* 1986, 1987), and each of three other records in Rio de Janeiro also involved birds joining mixed-species flocks (J. F. Pacheco and P. S. M. da Fonseca verbally 1988).

Stomach contents of seven specimens included *Miconia* berries, arillated seeds of *Xylopia*, other unidentified berries, coleopterans (Anthicidae), dipterans (Chloropidae and Sciaridae), hymenopterans (Chalcidoidea), and small caterpillars (Gonzaga 1983). The stomach of one specimen (in MPEG) from Petrópolis contained “insects”. On Ilha do Cardoso in winter the birds eat *Schinus* berries (P. Martuscelli verbally 1991).

There is no information on breeding (Isler and Isler 1987), but the gonadal condition of specimens collected in late July and early August in Santo Aleixo (Gonzaga 1983) and in early July in Paranapiacaba (in MZUSP) indicated that they were not then breeding. It seems that the species moves seasonally or sometimes erratically between parts of its range, having been found in the Majé lowland study area during some winters but not in others, probably the result of irregular wandering in search of certain favourite food-plants; many apparently immature birds join these parties (Gonzaga 1983; see Population). The species is a winter visitor to Ilha do Cardoso in flocks of five or so which use the sand-plain forest for feeding only (P. Martuscelli *in litt.* 1991).

**THREATS** None is known, but the species is little known and could suffer from trapping for the cagebird trade, as it is prized for its rarity value (M. V. Dias verbally 1981). In addition, it seems evident that the periodic concentration of individuals in certain unprotected key areas may greatly enhance the ease with which a large number of birds can be obtained at once (see Population). Captive birds have been reported from Rio de Janeiro (Gonzaga 1983), São Paulo (Willis and Oniki 1985, L. O. Marcondes-Machado verbally 1985), Paraná (Gonzaga 1983) and even Maceió in Alagoas in October 1990 (B. M. Whitney *in litt.* 1991). The extent to which habitat destruction is a problem remains undocumented; however, loss of sand-plain forest on Ilha do Cardoso is considered a threat to the species there (P. Martuscelli *in litt.* 1991).

**MEASURES TAKEN** The Black-legged Dacnis is protected under Brazilian law (Bernardes *et al.* 1990).

It has been recorded from the 5,000 ha Serra dos Órgãos National Park, the 3,000 ha Tijuca National Park, the 30,000 ha Itatiaia National Park, the Tinguá Biological Reserve (the creation of which was called for in Scott and Brooke 1985), the 38,000 ha Intervales state reserve and the 22,500 ha Ilha do Cardoso State Park; it presumably also occurs in the Serra do Mar State Park in São Paulo, which covers 310,000 ha, having been recorded from its borders in the very small Paranapiacaba (state) Biological Reserve, and in the Desengano State Park in Rio de Janeiro (sizes of protected areas from CONSEMA 1985, IBAMA 1989).

**MEASURES PROPOSED** A complete ban on the capture of wild birds for the pet trade has been called for, as any partial controls would be so open to abuse as to be ineffective (Scott and Brooke 1985). Effective protection of already created forest reserves would almost certainly guarantee the survival of this and other bird species along the Serra do Mar, but on current knowledge the identification and protection of stands of even secondary forest in adjacent lowlands and other areas outside of reserves seems to be of equal importance in view of the species's seasonal movements, an understanding of which, through further study, is probably crucial to its long-term conservation. In rather similar need are the Buff-throated Purpleletuft *Iodopleura pipra* and Black-backed Tanager *Tangara peruviana* (see relevant accounts).

**REMARKS** The great similarity in plumage coloration of the males of this species to those of the more widespread and common Blue Dacnis (see Gonzaga 1983) may be a source of misidentification even in museum collections, where several skins of the former have been found that were confused with those of the latter; in the wild it is often easier to detect the species by the presence of females or female-plumaged immature birds among mixed-species flocks, in which both male and female Blue Dacnis are also usually found (LPG).