

This bark-gleaning insectivore occupies a wide range in interior north-eastern Brazil but has become extremely local through the widespread and continuing clearance of its semi-deciduous woodland habitat. A reserve has been proposed in Minas Gerais for one subspecies, but another is needed, perhaps in Maranhão.

DISTRIBUTION The Moustached Woodcreeper (see Remarks 1) is endemic to central and interior north-east Brazil, being known from a scatter of localities in the states of Maranhão, Piauí, Ceará, Paraíba, Pernambuco, Bahia, Minas Gerais (race *franciscanus*) and Goiás.

Maranhão Records are from Cocos (south of Codó), June 1924 (Hellmayr 1929a; hence presumably the reference to “the banks of the middle Itapicuru” in Snethlage 1927-1928: 509); “As Mangueiras, Flores” (= Timon), i.e. opposite Teresina (Piauí), May 1926 (four specimens in AMNH), also near Teresina but inside Maranhão, June 1926 (specimen in AMNH); Fazenda Leão, Presidente Dutra (BR 226 at km 48), recently (F. C. Novaes *in litt.* 1987: specimen in MPEG); São Francisco (now São Francisco do Maranhão), July 1925 (Hellmayr 1929a); Sambaíba, recently (J. M. C. da Silva *in litt.* 1988).

Piauí Specimen records are from Amarração (now Luís Correia), May/June 1906 (F. C. Novaes *in litt.* 1987: specimen in MPEG); Ibiapaba, on the upper rio Poti, at the foot of the Serra de Ibiapaba, January 1925 (Hellmayr 1929a); São Gonçalves (now Amarante), August 1903 (Reiser 1926, Hellmayr 1929a); Belo Horizonte (or Teresina), May and June 1926 (two specimens in AMNH); Parnaguá, 300 m, June 1927 (specimen in AMNH); Corrente, 450 m, May and June 1927 (two specimens in AMNH); and the untraced locality Os Umbús (in the vicinity of Lagoa de Parnaguá), May 1903 (Reiser 1926, Hellmayr 1929a). One bird was observed in Manoel Emídio (Fazenda Bom Recreio) in July 1987 (P. Roth *in litt.* 1987; also Roth 1987c, 1989b). Hellmayr (1929a), for unstated reasons, suggested Oeiras as the type-locality, not indicated in the original description (von Spix 1824).

Ceará Specimens are from Ipu, May 1910 (in MNRJ; also Snethlage 1926); Açudinho, Baturité, August 1958 (Pinto and de Camargo 1961; in MZUSP); Juá (near Iguatu), August and September 1913 (Hellmayr 1929a); and Juazeiro do Norte, 550 m, December 1926 (in AMNH). One sight record is from Guaramiranga, in the Serra de Baturité, March 1987 (R. Otoch *in litt.* 1987).

Paraíba Two females from Curema (Coremas), June 1957 (Pinto and de Camargo 1961) represent the only record.

Pernambuco A female from Fazenda Campos Bons (c.38 km north of Floresta), June 1971 (in MZUSP), is the only record.

Bahia Specimen records are from the rio Preto at Santa Rita de Cássia (in one case specifically Maracujá, c.10°52'S 44°32'W), May and August 1927 and April 1958 (Pinto and de Camargo 1961; specimens in AMNH, LACM, LSUMZ), and the untraced localities Cantinho (possibly Coutinho), Os Mosquins (Moquins) and Fazenda da Porteira on the rio Preto, April 1903 (Reiser 1926); and Fazenda Formoso, Coribe, where nine birds were taken in May and June 1988 (da Silva 1989) (see Remarks 2).

Minas Gerais Records are from Brejo-Januária (not Brejo S. Januário as in Sick 1985; now Brejo do Amparo: de Andrade *et al.* 1986), the holotype of *X. franciscanus* (see Remarks 3), June 1926 (Gonzaga 1989); and Fazenda Olhos d'Água, Itacarambi, July and October 1985, November 1986 (M. A. de Andrade *in litt.* 1986, de Andrade *et al.* 1988, specimens in CGTM), and October 1987, when eight birds were collected (da Silva 1989).

Goiás The only record is one undated specimen in MNRJ obtained by R. Pfrimer in Posse, north-east of the state (not “southern Goiás” as in Teixeira *et al.* 1989, nor “south of Goiás” as in Teixeira 1990; see Remarks 4).

POPULATION Although distributed over a relatively large area, the Moustached Woodcreeper is evidently quite local and its overall numbers have certainly declined as a result of habitat destruction. In Maranhão the species is “distributed only locally and always seems to be uncommon where it occurs” (D. C. Oren *in litt.* 1988). Likewise, a single recent record of the species in the Serra de Baturité, Ceará, seems to indicate that it is not common there either (R. Otoch *in litt.* 1987). In the southern portion of its range the species remained known for over 50 years only from the type-specimen of the race *franciscanus*, although it was observed several times at the type-locality by the original collector (Snethlage 1927), but following its rediscovery, when another specimen was obtained and several other birds were observed (de Andrade *et al.* 1986, 1988), the bird was found to be quite common at both Itacarambi and Coribe,

surprisingly so for a woodcreeper that size; a census was performed at Coribe, but the data have not yet been analysed (J. M. C. da Silva *in litt.* 1988).

ECOLOGY The Moustached Woodcreeper has been recorded from semi-deciduous forests (Oren 1988, J. M. C. da Silva *in litt.* 1988, Teixeira 1990), wooded caatinga (Teixeira 1990), and riverine woods (Reiser 1926, Sick 1985). In the region of Manoel Emídio, Piauí, it occurs in the taller forests of depressions (“baixões”), usually wetter than neighbouring areas (P. Roth *in litt.* 1987). Typical trees of semi-deciduous forests in Minas Gerais are amburana *Bursera leptophloeos*, aroeira *Astronium urundeuva*, barrigudas *Chorisia venticosa* and *Cavanillesia arborea*, umbuzeiro *Spondias tuberosa*, jatobá *Hymenaea martiana* and pau-preto *Schinopsis* sp. (de Andrade *et al.* 1986, 1988). Snethlage (1927-1928) considered the species one of monsoon forest, growing in small patches in gorges amidst the hills of Ceará and Piauí, and of dry palm woodland, which he encountered only on the middle Itapicuru in Maranhão (evidently at Cocos: see Distribution). Birds were observed in the forest interior, in groups of 3-6 individuals; sometimes singles were found; other members of the family found in the same areas were Planalto and Scaled Woodcreepers *Dendrocolaptes platyrostris* and *Lepidocolaptes squamatus*; birds forage also on the ground, taking insect larvae, ants, beetles and snails (de Andrade *et al.* 1986, 1988; M. A. de Andrade *in litt.* 1986). Birds collected in Coribe, May/June 1988, were in post-breeding condition (J. M. C. da Silva *in litt.* 1988), and, while the gonads of nine of 11 specimens in AMNH from May and June were not enlarged (two in May were slightly), and those of a specimen in LSUMZ from Santa Rita, August 1927, were not enlarged, two males from Itacarambi, October 1985 and November 1986, had testes enlarged, the former showing a brood patch (specimens in CGTM), and a male in AMNH from December had testes fairly enlarged. A female from near Fazenda da Porteira had a gut parasitic infestation (Reiser 1926).

THREATS Extensive destruction of semi-deciduous forests for charcoal, timber, cultivation and cattle-farming, which has taken place throughout the species's range, is a general concern (de Andrade *et al.* 1986, 1988, R. B. Cavalcanti *in litt.* 1987, G. T. de Mattos *in litt.* 1987, R. Otoch *in litt.* 1987, P. Roth *in litt.* 1987, D. C. Oren *in litt.* 1988, J. M. C. da Silva *in litt.* 1988). In Coribe, Bahia, the species was recorded from an area which “is being converted to irrigation lands with wholesale deforestation, so the record is likely to be of historic value soon” (D. C. Oren *in litt.* 1988). The obvious trend is that the already isolated forests where the species persists, with a distinct population in each, will be greatly reduced in number and size by the end of the century, and no reserve has been created so far to protect this habitat (J. M. C. da Silva *in litt.* 1988, verbally 1991).

MEASURES TAKEN Both *Xiphocolaptes falcirostris* and *X. franciscanus* are protected under Brazilian law (Bernardes *et al.* 1990).

MEASURES PROPOSED The creation of a protected area in the southern portion of the species's range, in the Januária region in Minas Gerais (see Remarks 3), which has been under consideration by governmental organizations (de Andrade *et al.* 1988) and by the non-governmental Fundação Pró-Natureza (J. M. C. da Silva *in litt.* 1988), is an urgent need (G. T. de Mattos *in litt.* 1987, J. M. C. da Silva *in litt.* 1988). However, as regulation of reserves is often poorly implemented, a programme of environmental awareness is also needed and should be directed at landowners, local communities and schools (de Andrade *et al.* 1988). A reserve in the north of the species's range, also embracing a population of Pectoral Antwren *Herpsilochmus pectoralis* (see relevant account), is highly desirable, and in this regard it is worth noting that these two birds were singled out as characteristic of palm woodland found in the middle Itapicuru, Maranhão (Snethlage 1927-1928).

REMARKS (1) Pinto (1952, 1978) suggested that Snethlage's Woodcreeper *X. franciscanus* could be a subspecies of White-throated Woodcreeper *X. albicollis*. Despite this, *X. franciscanus* has been kept separate (e.g. Pinto 1978, Meyer de Schauensee 1966, 1982, Sick 1985, Teixeira and Luigi 1989, Sibley and Monroe 1990), but there now seems to be little doubt that it should rather be treated as a race of *X. falcirostris* (D. C. Oren *in litt.* 1988, da Silva 1988, 1989, Teixeira *et al.* 1989, Teixeira 1990, Willis and Oniki 1991, LPG). (2) *Xiphocolaptes albicollis villadenovae* (*sic*) (Lima 1920), from Villa Nova (now Senhor do Bonfim; see Pinto 1945) in Bahia was considered a synonym of *X. falcirostris* (Cory and Hellmayr 1925, Pinto 1938), but this view has not persisted (Pinto and de Camargo 1961, Pinto 1978). (3)

Brejo-Januária is also the type-locality of the threatened Minas Gerais Tyrannulet (see relevant account) and the Januária region is also important for the isolated race of the Caatinga Black-tyrant *Knipolegus (aterrimus) franciscanus*, which deserves consideration as a full species (da Silva 1989). Any reserve must seek to encompass populations of these birds also. (4) Teixeira and Luigi (1989) referred to this specimen as from the “vague locality of Posse, Goiás (probably upper Tocantins [river])”, but there seems to be no doubt about this precise location, which was indeed among the places visited by R. Pfrimer in Goiás (see da Silva 1989: 22-23).