

Dry woodland in the heavily populated interior of north-east Brazil is the habitat of this apparently very local and little known mid-storey bark-gleaner, which is presumably suffering from land clearance.

DISTRIBUTION The Great Xenops (see Remarks 1) is known from a few localities thinly scattered over a large area in interior north-eastern and central Brazil. The assumption that it occurs in “probably all the caatinga region of northeastern Brazil” (Vaurie 1980: 325 and map 55) is in need of further supporting evidence, but it is certainly true that very recent records have hugely extended its known range.

Ceará A specimen was collected in March 1925 at Várzea Formosa, near Ipueiras, on the eastern escarpments of the Serra da Ibiapaba (Hellmayr 1929a). Sight records of this bird are known from Chapada do Araripe, recently (Vaurie 1980, Teixeira *et al.* 1989, J. F. Pacheco and B. M. Whitney *in litt.* 1991, M. Pearman *in litt.* 1992), Quixadá in 1982 and Tauá in 1983 (R. Otoch *in litt.* 1986).

Piauí The type-material was two specimens collected in June 1903 on the trail from Parnaguá to Olho d'Água (untraceable); several other specimens were shot (but not conserved) at the same place on the same day (Reiser 1926). There is a sight record from near Manoel Emídio in July 1987 (P. Roth *in litt.* 1987; also Roth 1987c, 1989b). The species is well represented in Serra da Capivara National Park (Olmos *in press*). Six specimens (in AMNH, CM) were taken over two days at Parnaguá, 300 m, in June 1927 (see Remarks 2).

Pernambuco A specimen was collected on 2 August 1980 at the border of the Serra Negra Biological Reserve, 1,100 m (8°37'S 30°02'W) (A. G. M. Coelho *in litt.* 1986).

Bahia Eleven specimens (in AMNH, ANSP and LSUMZ) were obtained at “Santa Ritta”, 490 m, between May and August 1927, and three (in AMNH) at “Sincorá”, 460 m, in mid-October 1927 (also Naumburg 1928; see Remarks 3). There is a sight record from Orobó (12°16'S 40°26'W: see map in Naumburg 1935) in 1927 (Vaurie 1980) and another of a singing bird at Fazenda Brasileira, not far from Serrinha, in June 1991 (D. Willis verbally 1992).

Minas Gerais The species has been recorded in the far north and east of the state, near Mocaminho (c.15°05'S 44°00'W), August/September 1990 (Teixeira *et al.* *in press*, whence coordinates); on the rio Urucuia at Buritis, February 1989; in the Paracatu region, 1973; and in the Chapadão do Bugre, Uberaba, 1972 (these last three all from de Mattos *et al.* 1990).

Distrito Federal The species was recorded at an unstated locality, recently (Negret *et al.* 1984).

POPULATION Numbers are not known, but the small number of records from an area which has been relatively well explored ornithologically is an indication that the species must be very local, given that its main collector could “hardly understand how such a very conspicuous bird could have been overlooked by former collectors” (Vaurie 1980: see Ecology). It is fairly common in Serra da Capivara National Park (Olmos *in press*; see Remarks 4). One current opinion is that the species is so much commoner than was once believed that its inclusion on the official list of Brazilian threatened fauna (see Measures Taken) was premature (Teixeira *et al.* *in press*). That the species may not be rare where it occurs can be judged from the number of specimens obtained at certain places (see Distribution), and indeed in the Chapada do Araripe in September 1991 it was found to be fairly common in 1991 (J. F. Pacheco and B. M. Whitney *in litt.* 1991). Nevertheless, at this same locality it took two observers three days to locate birds even with the advantage of tape playback, April (M. Pearman *in litt.* 1992); moreover, some collectors who have explored the region and visited the known localities have failed to detect it (see Pinto and de Camargo 1961), as have field workers who looked for the bird during expeditions to the region in the 1970s (R. S. Ridgely verbally 1987, H. Sick verbally 1987; see also Sick *et al.* 1987).

ECOLOGY Very little is known about the Great Xenops, which was first discovered in sandy caatinga woodland (Reiser 1926) and seen again in such habitat near Manoel Emídio in 1987 (Roth 1989b), but was observed in fairly dense woodland in the Chapada do Araripe, where trees were perhaps 8-15 m in height, and probably also in dry forest near Orobó (Vaurie 1980). Gallery forest and dry semi-deciduous forest have been indicated as habitat in the Federal District (Negret *et al.* 1984) and in Minas Gerais (de Mattos *et al.* 1990). Sneath (1927-1928) considered the bird one of “upland forest”, which he found only on the Ceará plateau and in central Piauí, and which recalled capoeira (secondary forest), being relatively low and dense, deciduous, and rich in both epiphytes and lianas. In the Serra da Capivara National Park it has been found in all types of caatinga, including low bushes in burnt areas (Olmos *in press*). It may be found

alone, in groups of up to three, or in mixed-species flocks (Teixeira *et al.* in press).

An illustration (in Reiser 1926, who believed the species to be a woodcreeper Dendrocolaptidae) of a bird climbing a tree in the manner of a woodpecker Picidae was considered misleading, judging from the reports of other observers and from the structure of the bird's tail and feet (Vaurie 1980). One bird observed briefly in the Chapada do Araripe was clambering around in medium-sized branches about 3-5 m above ground; it hung under twigs or perched low across them, and inserted its bill under flakes of bark to separate these from the trunk and peck out little insects hiding underneath; other observers reported that this bird picks ants and other insects like an antbird Formicariidae (Vaurie 1980). At the same locality in September 1991 birds were singing shortly before dawn and again toward dusk, travelling in pairs through the day and foraging with mixed-species flocks, staying mostly in the mid-storey 3-8 m up on major limbs and occasionally trunks; foraging was very reminiscent of *Xenops*, involving probing bark and dead branch ends, hanging from and climbing up vines, and sometimes hammering at a crevice with the bill (J. F. Pacheco and B. M. Whitney *in litt.* 1991). The stomach of the bird from Várzea Formosa contained insects (specimen in FMNH).

Fourteen specimens collected between May and August had dormant gonads, while of three taken in mid-October one had slightly enlarged ovaries, another had testes half enlarged and the third (another female) showed no development (specimens in AMNH, CM, LSUMZ). There is no other data on breeding in this bird, other than a note of its singing activity in September (see above); its nest seems to be unknown (Vaurie 1980). Although foraging in all types of caatinga, it may be dependent on taller, arboreal vegetation for nesting (Olmos in press).

THREATS None is known, but within the range of this bird there is much general forest loss and degradation owing to pressure of human numbers on the environment (see equivalent section under, e.g., Hyacinth Macaw *Anodorhynchus hyacinthinus* and Moustached Woodcreeper *Xiphocolaptes falcirostris*). The extent to which the perceived patchiness of the species is the result of some undefined habitat requirement or of the impact of man remains unknown.

MEASURES TAKEN The Great *Xenops* is protected under Brazilian law (Bernardes *et al.* 1990). The species was collected on the border of the small Serra Negra Biological Reserve, and an apparently good population occurs within the Serra da Capivara National Park in Piauí.

MEASURES PROPOSED Any general ornithological work in the areas from which the species is known, or where it might be expected, should where possible be extended to include searches to locate it, to provide information on its ecology, and to assess its conservation status. Reserves in north-east Brazil have been proposed for the Moustached Woodcreeper in Minas Gerais and Maranhão, in both cases with the proviso that other species also be considered (see relevant account); it is worth noting that the Great *Xenops* has been found sympatric with this woodcreeper at Manoel Emídio (Piauí) and Santa Rita de Cássia (Bahia). From the evidence gathered to date, the Chapada do Araripe emerges as a key site for the *xenops* and should be considered for protection. The species should be looked for in the Aiuaba Ecological Station (6°38'S 40°13'W) in Ceará and in the Grande Sertão Veredas National Park in Minas Gerais (LPG).

REMARKS (1) This species is the only one in its genus and has no near relatives (Vaurie 1980), although it had been assumed that *Megaxenops* and *Xenops* are very closely related (e.g. Cory and Hellmayr 1925, Hellmayr 1929a). (2) Despite the statement that specimens “were taken at Corrientes in southern Piauí not far from Paranagua (*sic*)” (Naumburg 1928), no specimen in E. Kaempfer's collection is known to be labelled from that locality, nor has this indication been followed by subsequent authorities (e.g. Vaurie 1980). (3) Most of Kaempfer's specimens from Bahia are labelled “Santa Ritta”, i.e. “Santa Rita do Rio Preto” (see Naumburg 1928, 1935, Pinto 1978, Vaurie 1980) which in more recent maps appears as Santa Rita de Cássia on the left bank of the rio Preto (see Pinto and de Camargo 1961), and which in turn is called Ibipetuba by Paynter and Traylor (1991). On the map showing localities visited by Kaempfer in Bahia (Naumburg 1935), an altitude of 950 m is indicated for Sincorá (13°25'S 41°33'W on this map), while the altitude indicated on the labels of the three specimens (in AMNH) from this locality is “1,500 feet”, i.e. 460 m. (4) The voice (presumed song) of the species is loud and distinctive (Olmos in press *contra* Teixeira *et al.* 1989), although not necessarily often used (M. Pearman *in litt.* 1992).