

RUFOUS-SIDED PYGMY-TYRANT *Euscarthmus rufomarginatus* I⁷

This flycatcher is known from a small number of widely scattered localities in the cerrado region of central Brazil, from Maranhão south to São Paulo, with an outlying population in southern Surinam; it has recently been found in pristine, shrubby grasslands in western Mato Grosso and eastern Santa Cruz, Bolivia, but remains severely threatened by habitat destruction.

DISTRIBUTION The Rufous-sided Pygmy-tyrant is known from very few sites extending over a vast area in interior Brazil, with one locality in Surinam and one in Bolivia.

Surinam A population in the Sipaliwini savanna (2°06'N 56°02'W in Stephens and Traylor 1985) in the south of the country was discovered in the 1960s and distinguished for its marginally smaller size under the subspecific name *savannophilus* (Mees 1968).

Brazil Localities for the species (north to south, coordinates from Paynter and Traylor 1991) are as follows:

Maranhão Ponto, c.6°10'S 45°10'W, August 1924 (specimen in FMNH; also Cory and Hellmayr 1927, Hellmayr 1929a);

Piauí Correntes, 8°13'S 45°33'W, on the rio Parnaíba, a pair in July 1903 (Reiser 1926; also Hellmayr 1929a);

Pará Serra do Cachimbo, a female in November 1955 (Pinto and de Camargo 1957);

Federal District Brasília National Park, March 1989 (J. F. Pacheco verbally 1992);

Mato Grosso Chavantina, November and December 1946 (Pinto and de Camargo 1948); Pindaíba, September 1946 (specimen in AMNH); Serra das Araras Ecological Station (c.200-700 m) west of Cuiabá, July 1987 (Willis and Oniki 1990) and December 1988 (Teixeira *et al.* in press);

Mato Grosso do Sul Passo do Lontra, August 1991 (J. F. Pacheco verbally 1992); Campo Grande, June and July 1930 (Pinto 1940); Campo Grande, Serra do Norte, without date (Pinto 1940);

São Paulo Calção do Couro (adjacent to rio Santa Maria) and Rio das Pedras on consecutive days in April 1823 (von Pelzeln 1868-1871), these both being in or near Ituverava (see Threats).

Bolivia A population was found in June and October 1989 at two localities in the Serranía de Huanchaca (c.600-700 m) in extreme north-eastern Santa Cruz, Bolivia (Bates *et al.* 1992).

POPULATION For a species with such an enormous range, this bird is remarkably poorly known and patchily distributed, and hence has been considered “rare” (Pinto and de Camargo 1948). However, birds in the Sipaliwini savanna, Surinam, were frequently (“veelvuldig”) found (Mees 1968) and, although data are lacking, the population in the Serranía de Huanchaca of eastern Bolivia may number in the thousands: the top of the serranía inside Noel Kempff Mercado National Park encompasses c.900,000 ha of campo and cerrado habitats, and at one locality in the park at least four territorial pairs were found in a campo sujo area of c.30 ha (TAP). A few additional pairs were located in the Serra das Araras Ecological Reserve in western Mato Grosso (Parker and Willis ms). It seems unlikely that the species survives in São Paulo state (see Threats).

ECOLOGY The observer of the first specimens (J. Natterer) found them on low bushes in grassland (von Pelzeln 1868-1871). Reiser (1926) found his birds hard to collect as they hid in thick grass. Sneath (1927-1928) simply recorded it (in Maranhão) from “savanna woodland”. The habitat on the Serra do Cachimbo was described as if entirely forested (“the entire region is covered in great forests still to be cleared” (Pinto and de Camargo 1957), but there must have been natural grassland openings where the specimen was collected. Sick (1985) reported it in Mato Grosso (he collected the 1946 skin in AMNH) from open cerrado with little vegetation but with many termite mounds (i.e. campo sujo), either low in bushes or hopping on the ground. At Serra das Araras the habitat in one case was semi-open cerrado on grassland (i.e. campo sujo) (Willis and Oniki 1990) and in another open cerrado and campo sujo, where the species was observed foraging on the ground and in the foliage of low and medium shrubs, and singing

from the tops of shrubs and small trees (Teixeira *et al.* in press). The pristine campo sujo where this species was studied in the Serranía de Huanchaca, Bolivia, was a level, well-drained area (at 620 m) covered by tall grasses, sedges, and numerous but widely spaced small bushes and trees; the diversity of woody vegetation at this site (which had not been burnt in at least three years) appeared to be great and included shrubby melastomes, dwarf palms, and a variety of small trees including a *Byrsonima* sp., *Curatella americana*, *Eriotheca gracilipes*, and *Tabebuia ochracea* (Parker and Willis ms; see Eiten 1983 for additional description of this habitat). The flycatchers foraged close to the ground in the thick cover of grasses and small bushes, gleaning small insects from the grasses and foliage, occasionally making short sallies to vegetation: three different individuals fed on the small, dark fruits of a shrub and later regurgitated the seeds, and it may therefore be that fruit is important in the species's diet and may partially determine its ecological distribution (Parker and Willis ms). Fruits and small insects were in the stomach of a bird from Serra das Araras, December, whose gonads were not enlarged (Teixeira *et al.* in press). A bird in April, São Paulo, was in heavy moult, while two others were together as a pair (von Pelzeln 1868-1871). Birds in Surinam were always in pairs (Mees 1968).

THREATS Although there appears to be extensive suitable habitat for this species in other protected areas in central Brazil, careful searches by several observers have failed to reveal additional populations (TAP). Destruction of cerrado habitats for agriculture has been massive, and especially at risk are species (such as this) that prefer relatively pristine campo sujo habitat (see Threats under Lesser Nothura *Nothura minor*). Campo sujo habitat that is protected from annual fires is becoming increasingly rare: one area where this species was found in the Serranía de Huanchaca of eastern Bolivia had not burnt for at least three (and possibly many more) years (TAP); but in any case the more subtle habitat changes of the kind caused by intervals between fires are overshadowed in central Brazil by outright conversion of grasslands to farmlands or living space. The campos where Natterer collected the type-series at Calção do Couro and rio das Pedras in São Paulo state have long since been destroyed: the stream that passes through Calção do Couro is now a concrete storm sewer in modern Ituverava, and the rio das Pedras area nearby to the west has been ploughed under except for a small buriti marsh and cerrado at its junction with rio do Carmo (E. O. Willis *in litt.* 1990). Recent fieldwork by Willis and Oniki (1988b) failed to reveal any significant unmodified campo-cerrado vegetation, let alone populations of Rufous-sided Pygmy-tyrant, in the state of São Paulo.

MEASURES TAKEN Although seemingly suitable habitat for this flycatcher may occur in any or all of the six national parks and several smaller reserves in central Brazil, the Rufous-sided Pygmy-tyrant has only been found in one of them, Brasília National Park, despite coverage by numerous field ornithologists. It has recently been reported from only two other protected areas, the Serra das Araras Ecological Station in western Mato Grosso, Brazil, and Noel Kempff Mercado National Park in eastern Santa Cruz, Bolivia. In Surinam the species presumably finds sanctuary in the Sipaliwini Savanna Nature Reserve, which covers 100,000 ha (see Schulz *et al.* 1977).

MEASURES PROPOSED Unreported populations of this and other campo endemics should be searched for in northern Mato Grosso before all of the remaining campo-cerrado vegetation there is destroyed or thoroughly degraded, and areas should be identified for protection. The mountaintop grasslands on the serras of northern and western Mato Grosso should support populations of some these species (proven in the case of the present species by the record from Serra do Cachimbo), in addition to large numbers of other endemic plants and animals of the Brazilian Shield. Very good-looking (extensive campo sujo) habitat for the species has been noted in Brasília National Park and north of Chapada dos Guimarães National Park north-east of Cuiabá, Brazil (TAP): this area should be investigated urgently for this and other threatened birds of the region (listed in Threats under Lesser Nothura), and the possibility of including the rolling grasslands north of the main highway west of the town should be pursued at once. Campo sujo habitat in existing parks and reserves should be protected from annual burning and other forms of unnatural disturbance. The status of the isolated northern population in

Euscarthmus rufomarginatus

Surinam should also be investigated, particularly as the area is contiguous with savanna in adjacent northern Brazil (see Schulz *et al.* 1977) which presumably also holds the species.