OCHRE-BREASTED PIPIT *Anthus nattereri* **I**[7]

This ground-haunting grassland-dwelling semi-nomadic insectivore has become extremely scarce and local in south-east Brazil, Paraguay and northern Argentina, probably owing to overgrazing and other forms of habitat modification.

DISTRIBUTION The Ochre-breasted Pipit occurs very locally in south-eastern Brazil from southern Minas Gerais south to Rio Grande do Sul, southern Paraguay and north-eastern Argentina.

Brazil In the following account, localities are listed from north to south, with coordinates (unless otherwise stated) derived from Paynter and Traylor (1991).

Minas Gerais De Mattos *et al*. (1984) indicated that the bird was known in the state via reference(s) in the literature and specimens in museums, but no details are given. Specific records are from Monte Belo and Alfenas, in winter, 1983–1985 (J. F. Pacheco *in litt*. 1986), and a female in MNRJ collected on 4 April 1967 at Morro do Ferro, Poços de Caldas (hence Sick 1985).

São Paulo Older records are from: Ipanema (Hellmayr 1935); Villa Prudente (within São Paulo city), January 1900 (specimen in USNM); Ipiranga (within São Paulo city), December 1896 (von Ihering 1898, Pinto 1944); Itapetininga, July 1926 (Pinto 1944); Rio Verde (Sclater 1878, Pinto 1944); Pescaria (untraced, but probably between Ipanema and Itararé: Paynter and Traylor 1991) (Sclater 1878, Pinto 1944); and Itararé, May 1905 (Sclater 1878, Pinto 1944; also Hellmayr 1935). The only post-1926 records appear to be those of E. O. Willis (*in litt*. 1986), who mentioned the species from two unspecified localities in the state, recently.

Paraná Older records are from: Fazenda Monte Alegre, Castro, August 1907 (Pinto 1944; also Hellmayr 1935); and Invernadinha (near Guarapuava), 1,065 m, May 1922 (Sztolcman 1926). Scherer Neto (1985) indicated that the species was known in the state via reference(s) in the literature and his own field records, but no details are given.

Santa Catarina A bird, probably this species, in the vicinity of São Joaquim on 8 January 1990 (Pacheco and Fonseca 1990, J. F. Pacheco verbally 1992) is the only record.

Rio Grande do Sul Older records are from Conceição do Arroio (now Osório), August 1928 (Belton 1984-1985, Sick 1985) and São Lourenço (São Lourenço do Sul), in the last century (von Ihering 1899a). Modern records are from Carazinho, November 1978, and São Francisco de Paula, January 1979 (Belton 1984-1985).

Paraguay Records are from: near Monte Lindo (23°57'S 57°12'W in OG 1957a), Chaco, May 1989 (M. Pearman *in litt*. 1990); Paraguarí, between June and mid-August 1893 (Salvadori 1895b; see Remarks); San Patricio, Misiones, August 1977 (Ridgely and Tudor 1989).

Argentina The only records are from Corrientes in the 1960s: a series of 23 birds was collected between 16 and 22 July 1961 at Estancia San Joaquín (anticipated at c.27°45'S 56°15'W: Paynter 1985) on the río Aguapey near San Carlos (Partridge 1962), with a female from c.14 km north of Ituzaingó, October 1967 (Short 1971, specimen in AMNH), a male from Cuay Grande, 28°40'S 56°17'W, and three males from Torrent, all in May 1962 (specimens in MACN). Records for southern Misiones require confirmation (Olrog 1979, Narosky and Yzurieta 1987).

POPULATION Although pipits can be unobtrusive and difficult to identify in their somewhat unfashionable habitat, it seems evident that this species is genuinely rare and very local (Belton 1984-1985, Ridgely and Tudor 1989). The record from San Carlos, where the species was "abundant" (Partridge 1962), is evidently exceptional, and the reason for the lack of recent records in Argentina is not clear (J. C. Chebez *in litt*. 1986, M. Nores and D. Yzurieta *in litt*. 1986), although Partridge's site itself has apparently not been revisited (see Measures Proposed).

ECOLOGY The Ochre-breasted Pipit is a poorly known species (Sick 1985, Ridgely and Tudor 1989, Canevari *et al*. 1991) which has been recorded in both dry and wet pastures (Belton 1984-1985, Narosky and Yzurieta 1987), rolling grasslands (Ridgely and Tudor 1989), and rocky fields, at times in the vicinity of Hellmayr's Pipit *Anthus hellmayri* (Poços de Caldas, Minas Gerais) or Short-billed Pipit *A. furcatus*

(Osório, Rio Grande do Sul) (Sick 1985); J. Natterer reported that it frequented grassy plains and liked "to run on the roads" (Sclater 1878). Birds observed in Minas Gerais in the winters 1983–1985 were in man-made grasses around the Furnas dam in the vicinity of, e.g., Firewood-gatherer *Anumbius annumbi* and Burrowing Owl *Speotyto cunicularia* (Alfenas), in dried-out water-buffalo pastures with streams (Monte Belo) (J. F. Pacheco *in litt*. 1986), and those in Chaco were on a farm track and adjacent grassland (M. Pearman *in litt*. 1990). Studies in São Paulo suggest that the species depends on recently burnt areas within natural grasslands, and that it is semi-nomadic in response to optimal conditions (Willis 1991). Food taken from the stomach of a specimen consisted of insects, mainly (Sztolcman 1926). Breeding data are scarce, and available only from the southern portion of the species's range. Thus, birds collected at Carazinho in November and São Francisco de Paula in January had enlarged gonads; at Carazinho they were displaying and acting strongly territorially in response to play-back of song (Belton 1984-1985). Birds in Corrientes, July, were singing and giving aerial displays (Partridge 1962). A male collected in August at Osório had the testes half-enlarged (specimen in AMNH). A female collected on 22 October at Ituzaingó was flushed from a nest on the ground beside a tussock of grass in a pasture, which contained four eggs in an advanced state of incubation (Short 1971; specimen in AMNH). A nest of unstated origin is described as a shallow cup made of plant stems and grass roots (von Ihering 1900b).

THREATS Overgrazing and/or other forms of modification of its natural grassland habitat has been regarded as a probable threat and cause of the presumed decline of the Ochre-breasted Pipit (Ridgely and Tudor 1989; also J. C. Chebez *in litt*. 1986). However, the critical problem appears to be the species's need for a mosaic of burnt grassland areas, which do not exist within small reserves (Willis 1991). Moreover, natural campos (as well as cerrados) in Brazil are undergoing massive agricultural development with eucalyptus, pines, sugarcane and soybeans (E. O. Willis *in litt*. 1986), and abuse of pesticides over cultivated lands might represent an additional threat to these basically insectivorous birds. Shiny Cowbird *Molothrus bonariensis* parasitism might also eventually be included in this list of possible threats to the species, as it sometimes affects birds of this genus (see Sick 1985).

MEASURES TAKEN The species is protected under Brazilian law (Bernardes *et al*. 1990).

MEASURES PROPOSED General ornithological fieldwork in the areas from which the species is known, or where it might be expected, should be extended to include searches to locate it, to provide information on its ecology, including possible seasonal movements, and to assess its conservation status. Extensive sites which hold the species should be notified to conservation authorities as a matter of urgency. Large reserves that allow for a mosaic of burnt areas, as indicated under Ecology, need to be developed (Willis 1991). A return to Estancia São Joaquín in Corrientes is planned to determine the species's status there 30 years later (M. Nores *in litt*. 1992), and this could result in important perceptions about the needs of the bird in the province. Identification of the species and documentation of records should whenever possible rely on field characters such as voice and tape-recording rather than on the collection of further specimens.

REMARKS It is conceivable that the specimen attributed by Salvadori (1895b) is a Chaco Pipit, which had not then been described (F. E. Hayes *in litt*. 1991); its re-examination is desirable.