

*The only known area for this undergrowth-haunting ant-follower lies west of the town of Santo Amaro, Bahia, Brazil; loss of habitat there has been substantial and a reserve is now urgently necessary.*

**DISTRIBUTION** The Fringe-backed Fire-eye (see Remarks) is known only from a very restricted area in the vicinity of Salvador, coastal Bahia, eastern Brazil. The type-specimen (in UMZC) was collected in “Pitangua” (Swainson 1825, Cory and Hellmayr 1924): subsequent authors have amended this to “Pitanga” (Pinto 1938, 1978, Meyer de Schauensee 1966, King 1978-1979 – this last has “Piranga” in error), one of them taking this to mean a locality “near Mata de São João” (Pinto 1938) north of Salvador, but most likely the true type-locality is a site bearing this name 8 km west of Santo Amaro, north-west of Salvador (see Pinto 1943: 266), although the species could not be found there despite the use of tape playback, April 1992 (M. Pearman *in litt.* 1992). A bird was later collected at Santo Amaro itself in October 1913 (Cory and Hellmayr 1924; specimen in FMNH), and the species was relocated there again in 1968 (Sick 1972) and in January 1988 (B. M. Whitney *in litt.* 1991). It was studied from 21 November to 1 December 1974 in the Fazendas Timbó and Palma, 15 km south of Santo Amaro, along the road to Cachoeira, north bank of the rio Paraguaçu (Willis and Oniki 1982). One specimen in MNRJ is from Santo Amaro, October 1977 (see Teixeira *et al.* 1989), and another is from Cachoeira, August 1926. The species has never been recorded south of the rio Paraguaçu (King 1978-1979), but may extend or have extended as far north-east as the rio São Francisco (Willis and Oniki 1982).

**POPULATION** Numbers are unknown. The species may be locally “very common” (Willis and Oniki 1982; see Ecology), but is nonetheless considered endangered (Sick 1969, 1972, King 1978-1979, Sick and Teixeira 1979, Willis and Oniki 1982; see Threats).

**ECOLOGY** All fire-eyes tend to avoid the very open and vertically oriented undergrowth of tall forests, favouring instead tangled undergrowth, second-growth and other habitats where horizontal perches can be found near the ground; they also avoid sunlight and open vegetation, such as bushy pastures or the extensive semi-open cerrados and caatingas of central Brazil (Willis and Oniki 1982). At Santo Amaro, the Fringe-backed Fire-eye was very common in tall second-growth and uncommon in tall forest, rare in patches of second-growth where most of the vegetation had been cut out, and absent from open zones (Willis and Oniki 1982). Fringe-backed Fire-eyes usually move through tangles of vegetation up to 10 m above the ground searching for insects, and scattered individuals or pairs also favour patches of dense vegetation, around old tree-falls or at the forest edge; they occasionally join interspecific bird flocks, seldom followed for long, a commonly associated species being the Moustached Wren *Thryothorus genibarbis* (Willis and Oniki 1982).

Fire-eyes regularly follow army ant swarms for flushed prey, and 10-16 Fringe-backed Fire-eyes may quickly concentrate at each major swarm of army ants *Eciton burchelli*, which are followed for hours on end across logging roads through dense or open vegetation, but not into sunny clearings (Willis and Oniki 1982). Food is taken almost always (117 of 130 records) from the ground or near it; prey recorded included grasshoppers, winged ants, cockroaches and a 4 cm centipede (Willis and Oniki 1982). The pair found near Santo Amaro in 1988 were following ants, occasionally going to the ground to snatch flushed arthropods, but ranging as high as 4 m into the trees (B. M. Whitney *in litt.* 1988).

The gonads of the October specimen from Santo Amaro were developed (Teixeira *et al.* 1989). Several young Fringe-backed Fire-eyes were out of the nest in late November at Santo Amaro, some nearly independent; both male and female young had dull orange (instead of the adults' bright red) eyes; in several cases only one parent, either the male or the female, fed a young bird or led it away from the observer (Willis and Oniki 1982).

**THREATS** The major threat is from forest clearance, owing to the species's very restricted range. Forests in which this bird lived have been widely destroyed from the rio Paraguaçu north and, despite its abundance in second growth (see Ecology), it is endangered since not even second growth has been left by the spread of Bahian agriculture in recent years (Willis and Oniki 1982); its close relative in southern Brazil, the White-shouldered Fire-eye *Pyriglena leucoptera* (see Remarks) has been unable to survive in woodlots of 21 and 250 ha, and survives only in woodlots of 300 to 1,400 ha or larger (Willis 1979, Willis and Oniki 1982). The whole area north of Salvador is heavily populated, and government programmes for

industrial, agricultural and pastoral expansion will destroy the few remaining forest tracts; forest near Santo Amaro, where the species was found in 1968 and 1974, had been reduced to small patches by 1977 (King 1978-1979), and has suffered still more from recent expansion of oil-palm cultivation, although some tall second-growth could still be found there in 1985 (J. Becker verbally 1988). However, the ridge on which the birds were found in 1988 “held the only forest anywhere near the road for miles in any direction”, although other forested ridges were visible in the far distance (B. M. Whitney *in litt.* 1988).

**MEASURES TAKEN** The Fringe-backed Fire-eye is protected under Brazilian law (Bernardes *et al.* 1990).

**MEASURES PROPOSED** Creation of a biological reserve has been recommended (Sick 1969, King 1978-1979), but no action has been taken so far. This, however, remains imperative, as it is becoming impossible to identify any suitable tracts of forest in this region of Brazil (B. M. Whitney *in litt.* 1988). Fieldwork to identify potential reserves should be combined with that for the Bahia Tapaculo *Scytalopus psychopomus* and Stresemann's Bristlefront *Merulaxis stresemanni* (see relevant accounts).

**REMARKS** The Fringe-backed Fire-eye has been treated as a subspecies, either of the White-backed Fire-eye *P. leuconota* (Pinto 1938, 1978) or of the White-shouldered Fire-eye (Zimmer 1931), but this view has not been followed by other authorities (Cory and Hellmayr 1924, Peters 1951, Meyer de Schauensee 1966, Sick 1972, 1979, 1985, Willis and Oniki 1982), and the three may be regarded instead as members of a superspecies (Sick 1972, 1979, 1985). Specimens of Fringe-backed Fire-eyes in Europe from “Bahia” have wingbars that suggest hybridization with White-shouldered Fire-eyes, suggesting that the level of separation between these forms is low (Willis and Oniki 1982); the latter replaces the former south of the rio Paraguaçu (King 1978-1979, Willis and Oniki 1982). Behaviour and vocalizations are very similar in all fire-eyes (Sick 1979, Willis and Oniki 1982, B. M. Whitney *in litt.* 1988); however, antbirds often behave and call similarly even when good sympatric species; future studies in Bahia may locate regions where *atra* occurs with *leuconota* or *leucoptera*, with or without intergradation, but deforestation is so general that few such populations are likely to survive (Willis and Oniki 1982).