

Endemic to the densely populated Colombian tourist island of San Andrés in the western Caribbean, this vireo is apparently now restricted to an area of 17 km², where it is threatened by encroaching urbanization, agriculture and coconut palm cultivation.

DISTRIBUTION The San Andrés Vireo is endemic to the island of San Andrés in the western Caribbean (belonging to Colombia), c.200 km east of Nicaragua, Hilty and Brown (1986) implying, without any evidence, that the species occurs on Isla Providencia. San Andrés is only c.13 x 4 km, and records of this species come predominantly from the southern third (Barlow and Nash 1985), although Tye and Tye (1991) recorded it in the northern central area, and Bond (1979) suggested that it is widespread.

POPULATION This vireo is a common resident, having a breeding territory size of as little as 0.5 ha (10 singing males in an area of 5 ha); its abundance appears to have remained unchanged since 1948 (Russell *et al.* 1979, Barlow and Nash 1985). However, the northernmost 20% of the island is urbanized and the southern half is converted to coconut palm *Cocos nucifera* plantations (Tye and Tye 1991), and Barlow and Nash (1985) suggested that records are restricted to an area of 17 km².

ECOLOGY The species is generally recorded from brushy pastures and adjacent inland mangrove swamps, where birds actively forage by gleaning for arthropods and caterpillars from almost ground level to 5 m in shrubby vegetation, and very occasionally to 10 m in tall trees (Barlow and Nash 1985). Males are in full song during April (Russell *et al.* 1979), although nests (two have been found) with eggs and young in have been recorded only in June (Barlow and Nash 1985). One nest was built c.2 m above the ground in a fork of a small branch in a c.4 m high black mangrove *Avicennia marina* situated in a swampy area with large clumps of scrubby mangrove growth, whereas the other (very close to the first) was in an area of pasture with scattered trees, suspended 1 m up from a terminal fork in a 1.3 m broad-leafed shrub which in turn was shaded by a large breadfruit *Artocarpus altilis*; both contained two eggs or young (Barlow and Nash 1985).

THREATS The northernmost 20% of the island (around the capital San Andrés) is urbanized (Tye and Tye 1991), and is the island's centre for tourism (Johnson 1987): little habitat for scrub-dwelling birds remains in or around the capital (Barlow and Nash 1985). The indigenous population of San Andrés, concentrated in the northern two-thirds of the island (Barlow and Nash 1985), increased from 17,000 in 1967 (Emmel 1975) to over 50,000 by 1984 (Johnson 1987). During the seventeenth and eighteenth centuries, San Andrés supported apparently extensive natural stands of "cedar" (possibly *Cedrela odorata*), which were decimated by early colonists (Emmel 1975): the current vegetation cover is mainly coconut palm (covering the southern half of the island) with farmland in between, the native vegetation being restricted to small patches of trees (associated with inland mangrove swamps: Barlow and Nash 1985) and scrub amongst the farmland and settlements (Tye and Tye 1991).

Apart from the inevitable encroachment caused by urbanization (from an expanding resident and tourist population) and agriculture, coastal mangrove areas are being destroyed (on the east coast) by waste oil and the outflow of hot cooling water (Wells 1988), although the extent to which this is affecting the vireo is unknown.

MEASURES TAKEN None is known (see Johnson 1988).

MEASURES PROPOSED A detailed survey of the whole island must determine the precise distribution and abundance of this vireo. Its optimal ecological requirements remain unclear and need definition so that the impact of increasing tourist and commercial pressures can be accurately assessed. For this same reason, the extent and status of remaining native habitats urgently require attention. Any substantial areas of native habitat, especially inland mangroves with their associated stands of native trees, need protection. Various proposals for the control of discharges (oil, hot cooling water, sewage etc.) which affect the

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marine life (especially the coral formations), lagoon areas, and the mangroves, were put forward by Wells (1988).