

*This locally distributed furnariid inhabits diverse hillside shrubbery interspersed with mature grassland in Patagonian Argentina and adjacent Chile, a habitat that has been drastically altered for over a century by grazing sheep.*

**DISTRIBUTION** The Austral Canastero (see Remarks 1) breeds from sea level to 1,500 m, from Neuquén, Argentina, and Concepción, Chile, south to Tierra del Fuego and Isla de los Estados, with some birds apparently being partly migratory, occurring rarely as far north as Valparaíso, Chile, in winter (see Remarks 2). Unless otherwise stated, the following localities are those summarized by Cory and Hellmayr (1925), Hellmayr (1932), Olrog (1948), Johnson (1967) and Humphrey *et al.* (1970), and coordinates unless otherwise stated are from OG (1967), Humphrey *et al.* (1970) and Paynter (1985):

**Argentina** (*Buenos Aires*) Rosas, at 35°58'S 58°56'W (two specimens, one only labelled "Buenos Aires", in MACN: Zotta 1936); (*Neuquén*) Copahue, 3,000 m, at 37°49'S 71°07'W (one seen in January 1990: record and coordinates from M. Babarskas *in litt.* 1992); Sierra Pilpil, 1,500 m, near Lago Nahuel Haupí; 11 km east of Bariloche, 760 m, near Lago Nahuel Haupí, Bariloche being at 41°09'S 71°18'W (also sightings of two c.3 km east of Bariloche in December 1981: D. F. Stotz *in litt.* 1989); (*Chubut*) El Hoyo (= Hoyo de Epuyén), at 42°04'S 71°30'W (two specimens in LSUMZ collected in May 1967 and June 1969); Valle del Lago Blanco, at 45°54'S 71°15'W; (*Santa Cruz*) arroyo Eke (= río Ecker), at 47°04'S 70°45'W, May 1898 (specimen in FMNH), Estancia Killikaike Norte, at 51°34'S 69°28'W, April 1899 (specimen in FMNH); Estancia Monte Dinero, at 52°18'S 68°33'W, December 1960 (two specimens in YPM; coordinates from OG 1968); Cabo Vírgenes, near sea level, at 52°19'S 68°21'W (B. M. Whitney *in litt.* 1988);

*Isla Grande–Tierra del Fuego* Isla de los Estados, at 54°47'S 64°15'W, where the species is known from the penguin rookery (coordinates from Humphrey *et al.* 1970); around Río Grande, 53°47'S 67°42'W, in various areas including some along the highway to Ushuaia, 54°48'S 68°18'W (B. M. Whitney *in litt.* 1991);

**Chile** (*Valparaíso*) Concón Bajo, at 32°56'S 71°32'W; Concón Alto, at 32°57'S 71°27'W; Lago de Peñuelas, at 33°10'S 71°31'W (two specimens in YPM collected in July 1938 and May 1943); (*Santiago*) near Santiago town, at 33°27'S 70°40'W (two specimens in USNM collected in July 1865, three in MNHNS, one collected in May 1854, two in May 1862); San Bernardo, at 33°36'S 70°43'W; (*Colchagua*) Cauquenes; (*Concepción*) near Coronel, at 37°01'S 73°08'W; (*Bío-Bío*) road from Lincura (36°52'S 72°23'W) to Estero de Pino Hachado, January 1947 (38°40'S 71°01'W, in Cautín) (specimen in MCZ); (*Cautín*) Lonquimai, at c.38°26'S 71°14'W, January 1947 (specimen in MCZ); río Lolen, 1,100 m, Lonquimai valley, at 38°29'S 71°14'W; Laguna Gualletué, 1,160 m, at 38°42'S 71°16'W; Maquegua, Temuco, at 38°46'S 72°39'W (four specimens in BMNH collected in April 1908 and June 1910); Pelal, Temuco, at 38°50'S 72°40'W, June 1910 (two specimens in BMNH); (*Malleco*) Icalma, c.1,300 m, at 38°48'S 71°16'W, January 1959 (three specimens in WFVZ); (*Valdivia*) Valdivia town, at c.39°46'S 72°51'W (two specimens in MNHNS collected 1899, one in September); (*Llanquihue*) río Ñireguao, 850 m, at 45°10'S 72°09'W; (*Aisén*) Coihaique Alto, at 45°29'S 71°36'W; Chile Chico, 230 m, at 46°33'S 71°44'W, January 1961 (specimen in WFVZ); (*Magallanes*) Torres del Paine National Park, c.51°00'S 72°48'W (fair numbers seen in January 1990: P. Gregory *in litt.* 1990); Ultimo Esperanza, at c.51°34'S 72°45'W, April 1897 (specimen in BMNH); Straits of Magellan (presumed type-locality); Bahía Laredo and Cabeza del Mar, at c.52°57'S 70°51'W; Punta Arenas, at 53°09'S 70°55'W (specimen in CM collected in March 1939; also sighting of one in February 1989: P. J. Roberts *in litt.* 1989).

*Isla Grande–Tierra del Fuego* Ekewern (= Estancia Nueva de Río Oro), at 52°52'S 69°31'W; Estancia Gente Grande, at 53°04'S 70°16'W; road from Cerro MacPhearson to Estancia China Creek, at 53°03-09'S 69°11'W; Porvenir, at 53°18'S 70°22'W; Bahía Inútil, at 53°30'S 69°39'W; and Estancia Viamonte, sea level, Río Grande, at c.54°03'S 67°18'W.

**POPULATION** The species appears to be very local and decreasing in numbers. In Chile, Pässler (1922) found it breeding in Concepción in the period 1914–1918, but many years later there was no sign of it there (Johnson 1967); it was reported to be common at Cauquenes in Colchagua during the last century (Reed 1877), but there are no subsequent records from that province; Olrog (1948) found it only at a single

locality in Aisén during 1940. However, fair numbers were found in suitable scrubby habitat within Torres del Paine National Park, Magallanes, in January 1990 (P. Gregory *in litt.* 1990). On Isla Grande it was apparently rare at the turn of the century, when Crawshaw (1907) only saw a single bird during six months of ornithological fieldwork. Philippi *et al.* (1954) found it quite common at Estancia Nueva de Río Oro and also heard it at another locality on Isla Grande in 1946, but did not find it elsewhere, either in 1946 or during another expedition in 1952. In north-eastern Isla Grande it is reported to be rare, records being of single birds in winter (April, July and September, 1927 and 1930) (Humphrey *et al.* 1970) and none was found there in April 1940 (Olrog 1948). Olrog (1948) found it common at Cabeza del Mar and near Porvenir in 1940-1941; Philippi *et al.* (1954) found none at Porvenir in 1946 although they searched in the same habitat they had found the species in earlier; B. M. Whitney (*in litt.* 1988) found it to be an uncommon breeder south of Porvenir in December 1987; and P. Gregory (*in litt.* 1990) reported fair numbers there in streamside scrub during January 1990. This canastero was apparently locally common near Cabo Vírgenes in January 1988 (B. M. Whitney *in litt.* 1988), and described as truly common within proper habitat (see below) on Isla Grande, such habitat being commonest on the Argentinian side around Río Grande (various areas including some along the highway to Ushuaia), and perhaps less extensive on the Chilean side (B. M. Whitney *in litt.* 1991). The species is not rare near Bariloche (M. I. Christie *per M. Nores in litt.* 1989), where D. F. Stotz (*in litt.* 1989) recorded two in December 1981.

**ECOLOGY** The Austral Canastero inhabits shrub-steppes (i.e. brush-covered slopes and flats), the dominant shrub being the thorny 0.5-1 m tall “calafate” *Berberis cuneata*, and it appears to prefer areas where a fairly diverse shrub association is interspersed with clumps of native *Festuca*-type grass (Pässler 1922, Olrog 1948, Philippi *et al.* 1954, B. M. Whitney *in litt.* 1988, 1991). At Porvenir it was only found in this habitat in 1987, and did not occur in the disturbed shrubby hills where there was significant grazing and but few species of shrubs (B. M. Whitney *in litt.* 1988). At the penguin rookery at Cabo Vírgenes it has also been found in more homogeneous beach vegetation (B. M. Whitney *in litt.* 1988). The statement by Landbeck (1877) that it inhabits open meadows, damp grassland and well-watered hillsides seems to be somewhat misleading, but may possibly suggest that it was once an inhabitant of long-grass prairie but was forced into secondary habitat by the widespread introduction of sheep, which completely changed the Patagonian landscape over 100 years ago (NK).

The Austral Canastero forages mostly on the ground, hopping or creeping along, sometimes crawling into clumps of grass, quickly reemerging, picking food off the ground and stems, occasionally jumping up to snatch a prey-item off a higher stem, and sometimes huddling at the base of a grass clump, picking intently there for several seconds; it may occasionally forage quite out in the open, on sparse vegetation or even bare earth (B. M. Whitney *in litt.* 1988). Recorded food items include insects of various sizes, such as bugs (Hemiptera: Pentatomidae) and beetles (Coleoptera: Chrysomelidae and Carabidae), and insect larvae (Zotta 1936, Humphrey *et al.* 1970, MCZ label data).

Birds sing from an elevated perch, usually near the top of a shrub (B. M. Whitney *in litt.* 1988), and the nest is placed in a bush (Pässler 1922, Philippi *et al.* 1954). Birds with active gonads have been taken in September (Humphrey *et al.* 1970), in late December and early January (Olrog 1948), and birds apparently feeding young were seen in mid-January (B. M. Whitney *in litt.* 1988), although by January 1946 breeding appeared to have ended at Porvenir (Philippi *et al.* 1954). Five juveniles have been collected in Cautín in February (Hellmayr 1932), and one collected in Santiago in May is labelled as being juvenile (J. C. Torres-Mura *in litt.* 1988). In Concepción its ecology resembled that of Dusky-tailed Canastero *Asthenes humicola*, which had two broods there, one beginning in late September or early October, and one in early December (Pässler 1922).

Although the species appears to be resident on Isla Grande (Humphrey *et al.* 1970), it equally appears to be (at least partly) migratory further north in Chile (Hellmayr 1932). Records from Valparaíso and Santiago all fall from May to September; in Colchagua it was said to be common, but no time of occurrence was given; it was found breeding in Concepción, but was only found from April to September in Malleco, c.100 km south of the Concepción site (Hellmayr 1932: also specimens in MCZ and YPM). Further south, in Bío-Bío and Cautín there are only summer records, but winter records from Temuco, Chubut, Santa Cruz, Magallanes and Tierra del Fuego show the species to be only partly migratory (Hellmayr 1932, Humphrey *et al.* 1970; specimens in AMNH, BMNH, FMNH, LSUMZ and MCZ).

**THREATS** The rarity of this species can most likely be attributed to habitat destruction by heavy sheep

grazing, and a certain amount of burning (NK, B. M. Whitney *in litt.* 1991). While the native herbivore, the guanaco *Lama guanacoe*, bites the grass off, introduced sheep often tear the grass-roots loose from the ground, thus promoting soil erosion, which is rapid in these wind-swept regions, and virtually no areas with long grass now remain in Patagonia, which used to be covered by this habitat (Humphrey *et al.* 1970, NK). Even if long grass is not the preferred nesting habitat, it appears to be important for foraging (see Ecology).

**MEASURES TAKEN** In Chile, this species has been recorded in Torres del Paine National Park (181,400 ha: IUCN 1992), although it undoubtedly occurs within some the vast protected areas encompassing significant parts of Aisén and Magallanes, e.g. Laguna San Rafael, Bernardo O'Higgins and Alberto de Agostini National Parks (totalling c.6,728,000 ha: IUCN 1992), and Alacalufes and Katalalixar National Reserves (totalling c.2,988,000 ha: IUCN 1992). There have apparently been no records within protected areas in Argentina.

**MEASURES PROPOSED** Grazing on a rotational basis, or perhaps farming guanaco rather than sheep, would help to maintain suitable habitat for this species, and prevent erosion. One or more localities where the species is known to occur should be fenced off from grazing sheep, not only to preserve the present species, but also other forms of native flora and fauna endemic to this region (see also Measures Proposed under Austral Rail *Rallus antarcticus*, with which it may be sympatric at some localities). Such measures should perhaps be concentrated within the protected areas mentioned above, although some survey work is necessary in many of these to determine the size of populations or even the species's presence there.

**REMARKS** (1) Olrog (1962) suggested that Streak-backed Canastero *Asthenes wyatti*, Puno Canastero *A. punensis* (and Córdoba Canastero *A. sclateri*) should be treated as subspecies of Austral Canastero, while Navas and Bó (1982) advocated the treatment of *anthoides* and *wyatti* as distinct species and suggested that *punensis* should be treated as subspecies of *sclateri*. Fjeldså and Krabbe (1989) pointed out that the great variability of birds in the zone of contact between *wyatti* and *punensis* suggests that differentiation has only reached megasubspecies level, and presumably both *punensis* and *sclateri* should be treated as subspecies of *wyatti* (NK). However, there seems to be insufficient evidence for treating *wyatti* as a subspecies of *anthoides* (*contra* Olrog 1962); *anthoides* differs from all the other forms by being smaller, having a relatively smaller tail, retaining its pointed tail-feathers in adult plumage, having a less extensive rufous wing-bar, building its nest in a bush rather than in a tussock of grass, and having constant rather than increasingly shorter intervals between notes in its trilled song (NK; tape-recordings by B. M. Whitney and NK, sonagrams printed by National Sound Archive, London). We do not follow the merging of *Asthenes* with *Thripophaga* proposed by Vaurie (1971, 1980; see Remarks under Pale-tailed Canastero *A. huancavelicae* and Russet-mantled Softtail *Thripophaga berlepschi*).

(2) A specimen collected by C. Darwin is labelled "E. Falkland Island" (Sclater 1874). It remains the only record from the Falkland Islands/Islas Malvinas and is considered a mislabelled bird originating in Chile (Woods 1988).