

Restricted to the mountain slopes surrounding Cochabamba city, Bolivia, this rare and beautiful mountain-finch is rendered vulnerable by its extremely limited distribution.

DISTRIBUTION The Cochabamba Mountain-finch (see Remarks under Tucumán Mountain-finch *Poospiza baeri*) is restricted to the slopes of the mountains surrounding Cochabamba city, in southern Cochabamba department, Bolivia, at 17°10-39'S 65°23'-66°29'W. The bird is known from a large number of specimens (c.85) taken at just the following 10-11 localities (coordinates, unless otherwise stated, from Paynter *et al.* 1975): Cerro Cheñua Sandra (c.17°39'S 66°29'W: IGM 1965a), adjacent to Cerro Pararani, 70 km from Cochabamba on the Oruro road, two birds (in ZMUC) taken at 3,800-3,900 m; Toncoma (c.17°15'S 66°20'W), two birds (in NRM) taken at 3,200-3,250 m; Liriuni (17°19'S 66°20'W), on Monte Tunari, nine birds (in BMNH, NRM) taken at 3,000-3,200 m; Cerro Huacanqui (c.17°21'S 65°52'W), 19 birds (in NRM) taken at 3,800 m; Colomi (17°21'S 65°52'W: the same as for the previous locality), two birds (in CM, MCZ) taken at 3,075 and 3,600 m; Faldas del Monte del Abra (c.17°10'S 65°45'W), one bird (in NRM) taken at 3,200-3,260 m; north of Quillacollo, where two were seen in April 1989 (M. Pearman *in litt.* 1990); Tiraque (17°25'S 65°43'W), where 34 birds (in AMNH, ANSP, FMNH, MCZ, ROM, UMMZ, USNM and ZMUC) were taken between 3,250 and 3,500 m (also Bond and Meyer de Schauensee 1942-1943, Remsen *et al.* 1988); Vacas (17°32'S 65°35'W), at 3,650 m (von Berlepsch 1893); between Pocona and Vacas, at 3,000 m (one in CM); Pocona (17°39'S 65°24'W), two birds (in CM, ZFMK) taken at 2,700 m (Remsen *et al.* 1988); Quebrada Majón (c.17°24'S 65°23'W: MC 1933), near Quehuñapampa (6.6 km by road beyond López Mendoza, and 98 km by road from Cochabamba on the Santa Cruz road, Carrasco province), eight birds (in EBD, LSUMZ) taken at 2,950-3,150 m (also Remsen *et al.* 1988); and 120 km from Cochabamba towards Santa Cruz de la Sierra, Carrasco province (Remsen *et al.* 1988).

The species was not found in apparently suitable habitat further south, in Chuquisaca department, despite an intensive search in September 1991 (J. Fjeldså verbally 1991).

POPULATION At Cerro Huacanqui 19 specimens were collected in just two days (Fjeldså and Krabbe 1989), and at Tiraque seven were collected in a day (specimens in MCZ), although it was found to be uncommon there in January 1984 (NK). At Quebrada Majón it was noted on 10 of 16 field-days (Remsen *et al.* 1988). During recent visits to most of the known localities, no more than 1-2 pairs were found per locality (S. Arias verbally 1991), and with present distributional knowledge the entire population may be estimated to number between several hundred and a few thousand individuals (NK).

ECOLOGY The Cochabamba Mountain-finch inhabits watered ravines with dense bushes and scattered trees such as *Polylepis* and *Alnus*, and a variety of dense, thorny bushes (von Berlepsch 1893, Remsen *et al.* 1988, Fjeldså and Krabbe 1989, 1990), primarily between 3,000 and 3,800 m (once at 2,700 m and once at 3,900 m: see Distribution). It is possible that the coloration of the bird's plumage is specially adapted to *Polylepis* (NK). Birds are found alone or in pairs, and are secretive and shy (von Berlepsch 1893, Fjeldså and Krabbe 1990); however, it was reported to be rather tame and easily approached in Quebrada Majón by Remsen *et al.* (1988). This mountain-finch forages within dense shrubbery (occasionally on the ground), but may scold from a tree-top when disturbed near the nest (Remsen *et al.* 1988, Fjeldså and Krabbe 1990).

Food (from stomach contents of eight specimens in LSUMZ, ZMUC) appears to be primarily seeds (black, yellow and buff seeds, with wheat or barley and wheat chaff), but insect parts along with grit have also been recorded. Two adults have been observed feeding what appeared to be insect larvae to a recently fledged juvenile (Remsen *et al.* 1988). Birds with active gonads have been taken in January and April, recently fledged young in April and May, with others still in juvenile plumage in July and August; an adult with inactive gonads was taken in August (specimens in LSUMZ, NRM, ZMUC; Remsen *et al.* 1988).

THREATS The main threat to this species is the traditional burning of the mountain slopes to stimulate regrowth of grass: *Polylepis* trees are very sensitive to burning, and in most places this practice has led to the restriction of woodlands to steep ravines, the exception being a few places where land use includes the maintenance of mosaics of small fields and thickets (J. Fjeldså *in litt.* 1992). Cutting of *Polylepis* may be a

Threatened birds of the Americas

threat, and M. Pearman (*in litt.* 1990) suggested that suitable habitat is now extremely limited within the Cochabamba basin. The species's minute range renders it vulnerable to any habitat alteration.

MEASURES TAKEN Tunari National Park (6,000 ha: IUCN 1992) holds a fair-sized *Polylepis* wood (Fjeldså 1987), and although the Cochabamba Mountain-finch has not yet been recorded there it is probably present (NK).

MEASURES PROPOSED Remsen *et al.* (1988) strongly recommended that conservation efforts be taken on this mountain-finch's behalf, suggesting that a survey of the extent of *Polylepis* woodlands in the region would be particularly important. A more detailed definition of the species's ecological requirements and population should be carried out in parallel with habitat surveys. However, until a viable population is discovered in the Tunari National Park, strong measures are needed for all remaining habitat, which presumably also protects the various watercourses from erosion. An education campaign in the relevant local communities to emphasize the importance of the vegetation in the mountain-slope gullies inhabited by this species would certainly aid the conservation of the bird.