

BLUE-FACED RAIL

Gymnocyrex rosenbergii

Critical —
Endangered —
Vulnerable C2a



This rail qualifies as Vulnerable because it is inferred to have a small population which is undergoing a continuing decline and severe fragmentation owing to habitat loss.

DISTRIBUTION The Blue-faced Rail is known chiefly from dense wet lowland forest in the northern half of Sulawesi, Indonesia, but with additional records suggesting a general distribution on the island and on neighbouring Peleng (see Remarks 1). Records are from:

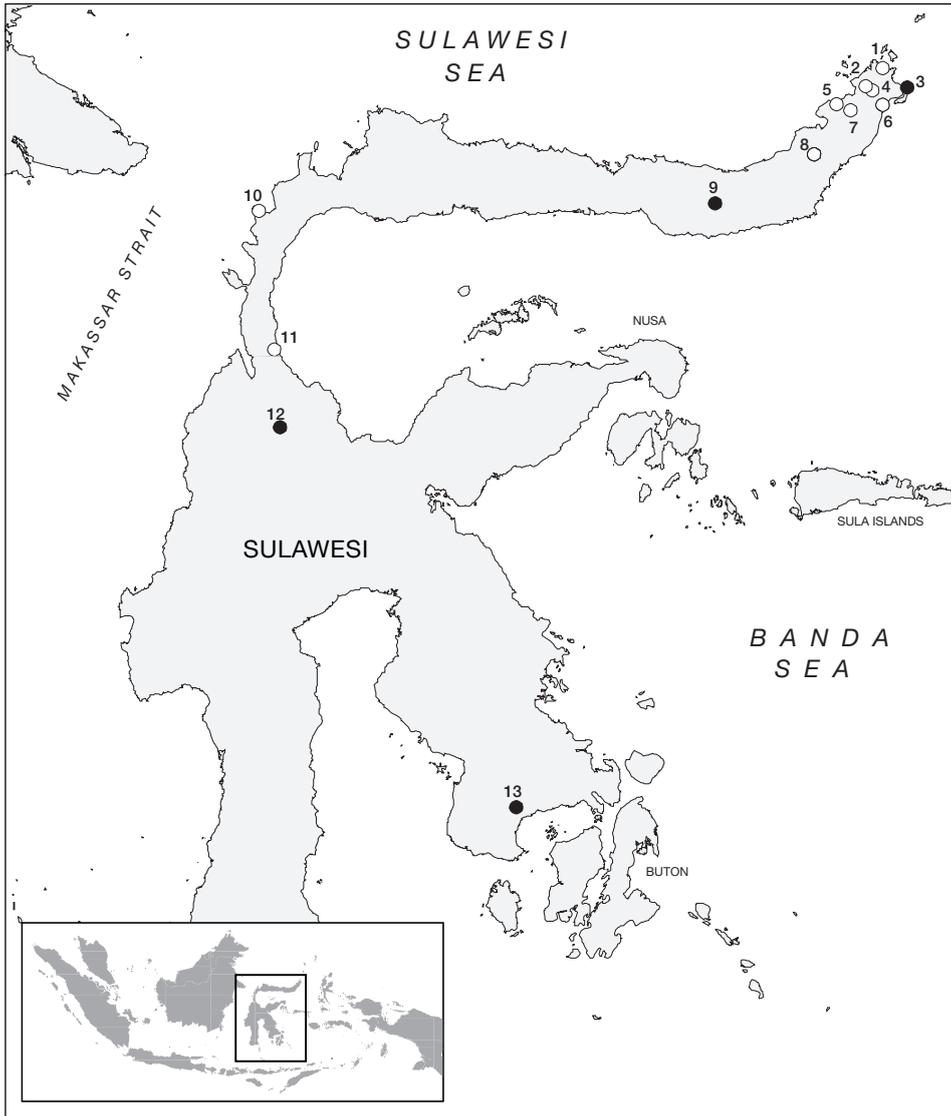
■ **INDONESIA Sulawesi** ■ **North Sulawesi Likupang**, Minahassa, September, January 1889 (Hose 1903; see Remarks 3 under Maleo *Macrocephalon maleo*); **Mapanget**, Tonsea, Minahassa, December 1938 (male in ZMA); **Tangkoko-DuaSudara Nature Reserve**, 800 m, October 1999 (I. Hunowu and Y. Manderos *per* R. J. Lee *in litt.* 2000); **Kumarsot**, 300 m, foot of Gunung Kalabat, Minahassa, February/March 1931 (Stresemann and Heinrich 1939–1941); **Ranotongkor**, 150 m, Tanahwangko, Minahassa, December 1939 (female in ZMA, Coomans de Ruiter 1946a); **Kema** (type locality), Minahassa, October 1864 (male in RMNH); **Rurukan**, Gunung Mahawu, 800 m, Minahassa, December–January 1884–1885 (Blasius 1897), April 1894 (Meyer and Wigglesworth 1895a), and 1898 (juvenile female in MZB), January 1931 (Stresemann and Heinrich 1939–1941; specimen in AMNH); **Poopo**, Tanahwangko, Minahassa, between December 1939 and March 1940 (Coomans de Ruiter 1946a; 13 specimens in RMNH, ZMA); **Bogani Nani Wartabone National Park** (formerly Dumoga Bone) at Kosinggolan river, dry tributary, 285 m, Bolaang Mongondow, September 1981 (Rozendaal and Dekker 1989), at Toraut, September 1990 and August 1997 (M. van Beirs *in litt.* 1999), January 1999 (I. Mauro *in litt.* 1999), and c. 10 km east of Pinogu at 250–350 m, February 2000 (J. Riley *in litt.* 2000); **Munte**, Tanahwangko, Minahassa, January 1940 (female in ZMA); ■ **Central Sulawesi Labuan Sore** (Parigi), Pegunungan Palu, November 1916 (Riley 1924); **Lore Lindu National Park**, by reliable local report (Watling 1983b) and in the Sopu river valley, 750 m, July 1987 (Lambert 1989b), near the turnoff to Anaso, July 1999 (L. Petersson *in litt.* 1999) and on the Waterfall Track, September 1999 (V. Hesse *in litt.* 1999), with several recent records at 600–700 m 2–3 km south of Kamarora (K. D. Bishop *in litt.* 2000); ■ **South-East Sulawesi Gunung Watumohai**, 250 m, Rawa Aopa Watumohai National Park, September 1995 (Wardill *et al.* 1995, 1998);

Peleng unspecified locality, three birds in August 1938 (Eck 1976, 1980b; see Remarks 1).

POPULATION A century ago Hose (1903) had judged this “a rare bird”, having only seen it once, and it was later judged one of Sulawesi’s four rarest birds (Stresemann and Heinrich 1939–1941). However, its retiring habits mean that it has gone under-recorded and is not quite so rare as supposed (Coomans de Ruiter 1946a, Rozendaal and Dekker 1989, Collar *et al.* 1994). Changes in range are not known, but it has most probably disappeared from the greater part of Minahassa, where it used to be locally not uncommon in the first half of the twentieth century (Coomans de Ruiter 1946a). Some 10,705 km² of lowland forest was extant in Sulawesi in about 1975 (FAO 1981–1982).

ECOLOGY Habitat The species has been found in dense primary tropical lowland evergreen rainforest (“the older jungle”: Hose 1903) at 150–800 m (based on evidence in Distribution;

see Remarks 2), although at 700–800 m the habitat is perhaps better characterised as moist hill-forest (K. D. Bishop *in litt.* 2000). Coomans de Ruiter (1946a) found the species in the same areas as Snoring Rail *Aramidopsis plateni* but more numerous, reporting that all his birds were caught in little dense bushes in *djoramé* landscapes (see Ecology under Snoring Rail). Records in 2000 at Bogani Nani Wartabone were in flat primary forest with many small streams (J. Riley *in litt.* 2000). Ripley (1977) noted that the species had been recorded



The distribution of Blue-faced Rail *Gymnocrex rosenbergii*: (1) Likupang; (2) Mapanget; (3) Tangkoko Nature Reserve; (4) Kumarsot; (5) Ranotongkor; (6) Kema; (7) Rurukan; (8) Poopo; (9) Bogani Nani Wartabone National Park; (10) Munte; (11) Labuan Sore; (12) Lore Lindu National Park; (13) Gunung Watumohai.

○ Historical (pre-1950) ● Recent (1980–present)

from dense second growth in abandoned cultivation, but Collar and Andrew (1988) had reports from undisturbed forest only. One of their informants, F. R. Lambert, subsequently published the record in question (Lambert 1989b) as from much the same habitat as (and close to) where he saw Snoring Rail, described as (probably) old secondary forest with a thick understorey of small saplings, some bamboo and rattan, although when disturbed the bird ran into a wetter area bordering a stream (habitat of Snoring Rail). Elsewhere a single bird was seen moving down a streambed and at a small stagnant pool amongst bare rocks in a steep-sided valley in relatively dry forest on ultrabasic substrate; the forest had a thick understorey of palms, rattans and vines and a canopy cover of c.70% (Wardill *et al.* 1995).

Food Snails, beetles and other insects have been recorded in the diet (specimen labels in ZMA; also Coomans de Ruiter 1946a).

Breeding Breeding appears to take place around December/January: a downy chick was collected in January (specimen in ZMA), and a juvenile bird was reported in April (Meyer and Wiglesworth 1895a). A juvenile was collected on Peleng in August (MCZ label data).

THREATS The Blue-faced Rail has the bulk of its range in the “Endemic Bird Area”, threats and conservation measures in which are profiled by Sujatnika *et al.* (1995) and Stattersfield *et al.* (1998). The single certain threat to this species is habitat loss through forest destruction and degradation in the lowlands. Figures published by Whitten *et al.* (1987c:97) showed that by around 1975 Sulawesi retained from its original cover 53% of wet, 26% moist, 24% dry lowland forest on alluvium, 4%, 33% and 7% respectively on limestone, and 6%, 10% and 3% respectively on volcanic soils, with much higher proportions remaining merely for the highly stunted and species-poor forests on ultrabasic rock (see Remarks 3), all of which demonstrates the chronic human demand that has been and continues to be placed on the most productive land in the island. In the two decades to 1995 Sulawesi then “lost over 67% of productive wet lowland forest habitat to timber production and agriculture” (i.e. two-thirds of that which remained in 1975), such that in North Sulawesi depletion has been so great that logging is no longer a major industry, although clearance for agriculture continues unabated (Kinnaird 1995). For example, Kumarsot is no longer forested and even forest on Gunung Klabat is very heavily disturbed by small-scale logging in its lower reaches (J. Riley, J. C. Wardill *in litt.* 1999).

Locally perhaps it may suffer from trapping by snares and hunting with dogs (J. C. Wardill *in litt.* 1999; also Taylor 1998). As a ground-dwelling rail it may be vulnerable to introduced or feral predators, e.g. cats, particularly as there are no similar natural enemies on the island (R. F. A. Grimmett *in litt.* 2000; see Threats under Snoring Rail).

MEASURES TAKEN The species occurs in three national parks and one nature reserve: Bogani Nani Wartabone also holds Maleo *Macrocephalon maleo*, Snoring Rail, Sulawesi Golden Owl *Tyto inexpectata*, Cinnabar Hawk-owl *Ninox ios* and Matinan Flycatcher *Cyornis sanfordi*; Lore Lindu also holds Maleo, Snoring Rail, Sulawesi Golden Owl and Sulawesi Eared-nightjar *Eurostopodus diabolicus*; Rawa Aopa Watumohai also holds Milky Stork *Mycteria cinerea*, Maleo and Yellow-crested Cockatoo *Cacatua sulphurea*; Tangkoko-DuaSudara also holds Maleo and Snoring Rail.

MEASURES PROPOSED Surveys are urgently needed in the following areas: Peleng, which still possesses large stretches of forest (SvB); Gunung Klabat, which is still largely forested from 400 to 2,000 m and its 56 km² of protection forest is a proposed wildlife reserve (SvB); and Pegunungan Palu, whose forest between 500 and 2,400 m has been proposed for protection within a 6,000 km² wildlife reserve (SvB).

The single greatest priority for conservation on Sulawesi today is probably to find and protect the best remaining areas that combine mangrove, swamp forest and lowland forest

connecting to hill forest, since there is no reserve on the island which effectively addresses the preservation of major tracts of lowland forest types. Although the majority of Sulawesi endemic birds are upland species, they are moderately well served by existing reserves, whereas lowland species, even if not endemic and therefore perhaps less endangered, run a far higher risk of local or island-wide extinction. Certain globally threatened species endemic to the island, such as the Blue-faced Rail, Snoring Rail, Maleo and Sulawesi Golden Owl *Tyto inexpectata*, may achieve their highest densities in low-lying forest, even if they each extend varying distances into the hills, and their futures would be better secured through one or more reserves which deliberately endeavoured to embrace a suite of low-lying habitats. Ten Near Threatened endemic species—Maroon-chinned Fruit-dove *Ptilinopus subgularis*, Yellowish-breasted Racquet-tail *Prioniturus flavicans*, Red-billed Hanging-parrot *Loriculus exilis*, Ochre-bellied Hawk-owl *Ninox ochracea*, Sulawesi Kingfisher *Ceyx fallax*, Lilac-cheeked Kingfisher *Cittura cyanotis*, Green-backed Kingfisher *Actenoides monachus*, Pied Cuckoo-shrike *Coracina bicolor*, Red-backed Thrush *Zoothera erythronota* and Rufous-throated Flycatcher *Ficedula rufigula*—are concentrated in lower-lying forests, and would all greatly benefit from protected-area development, as would several non-endemic threatened and Near Threatened species, including Milky Stork *Mycteria cinerea*, Lesser Fish-eagle *Ichthyophaga humilis*, Grey-headed Fish-eagle *Ichthyophaga ichthyæetus* and Yellow-crested Cockatoo *Cacatua sulphurea*.

In respect of this, a very extensive tract of pristine hill and montane forest, some of which may have arms of continuous cover down to the sea, is to be found in the north-west corner of the northern (Minahassa) peninsula: an area of 5,000 km² lying between 500 and 3,000 m was proposed as a game reserve and protection forest 20 years ago (FAO 1981–1982), and although nothing subsequently happened the area appears to remain as untouched as it is unexplored (K. D. Bishop *in litt.* 2000), and therefore represents a real opportunity for the preservation of at least further areas of hill and montane forest.

Meanwhile, there are some interesting sections of swampy forest along the east coast of the northern peninsula from Tomali around to Gorontalo, and local informants indicate others along the west coast from Palu to Toli-Toli; some of these sites appear to have high potential for swamp-dwelling species and require investigation (K. D. Bishop *in litt.* 2000).

There is also a need to determine the extent to which a feral cat population is established in Lore Lindu National Park and at other key forest areas in Sulawesi, and the impact these predators may be having on the Blue-faced Rail and other ground-dwelling endemic species in the island (R. F. A. Grimmett *in litt.* 2000).

REMARKS (1) Eck (1976) mentioned that the Peleng birds may belong to a different race, but that the differences involved (eye and leg colour) might be seasonal (see also Taylor 1998). It is not entirely clear if he included a juvenile specimen, now in MCZ (see Breeding), collected at the same time. (2) Taylor (1998) gave 0–1,500 m, but this may be too liberal. (3) Commentary on the value of forests on ultrabasic soils is as follows: “...conservation may just end up with the commercially worthless forest in reserves... in lowland areas they are usually forests on nutrient-poor soils, which, as anyone who has been to reserves such as Morowali in Central Sulawesi will testify, are relatively birdless” (Jepson and Ounsted 1997).