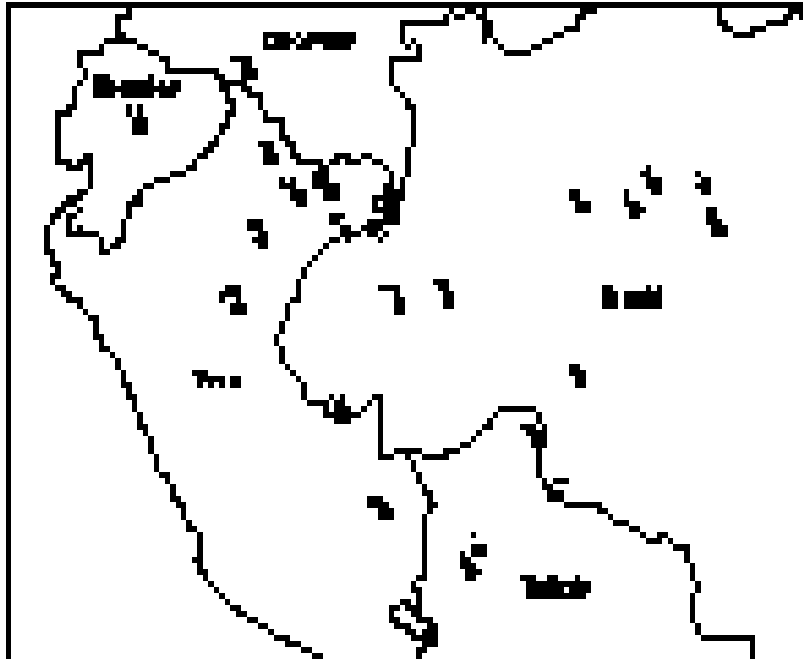


Although seemingly very widespread in the Amazon basin of Brazil, Colombia, Ecuador, Peru and Bolivia, this species appears to be almost wholly unknown, and it may be suffering seriously as a consequence of loss of riverine habitat.

DISTRIBUTION The Wattled Curassow occupies the Amazon basin on rivers chiefly in Brazil and Peru, but also in Bolivia, Colombia and Ecuador. The records show a curious distribution in the middle and upper Amazon and in the middle and upper Madeira, and it is a seemingly anomalous record like that from the río Caquetá in Colombia that suggests that the species's range is very incompletely known: Gyldenstolpe (1951) believed it would be found on the rio Purus in Brazil, and indeed it might be expected on the Juruá (now proven) and all or any of the other rivers in the massive dendritic system of the Amazon basin (and, considering the number of apparently unexplored and undisturbed rivers such as the Coari, Tefé, Jutai, Jandiatuba and Branquinho, this seems likely); on the other hand, to generalize and hence to assume its distribution, such as in the map in Delacour and Amadon (1973) or when Meyer de Schauensee (1964) converted the two known records from Colombia into "forests east of the Andes from Caquetá southward to the Amazon", is an unaffordable risk.



Bolivia There are three records from the lower río Beni, one without further data, one from El Desierto¹, 13°45'S 67°20'W, and one from Puerto Salinas², 14°20'S 67°33'W (Allen 1889, Hellmayr and Conover 1942, Gyldenstolpe 1945; coordinates from Paynter *et al.* 1975).

Brazil The species has been found along the Amazon west of the junction with the rio Madeira, and along the rio Madeira itself, extending south-west to the Bolivian border, and there are reports from the middle and upper rio Juruá.

Records on or associated with the Amazon (as the Solimões), and all from Amazonas state, are from the Paraná do Manhã (untraced, but an affluent of rio Japurá), September 1927 (specimen in MNRJ); Manaus³ (i.e. Barra do Rio Negro), June and July 1834 (von Pelzeln 1868-1871, still the only record: Novaes 1978b); rio Manacapuru⁴ ("rio Manacapuri"), October 1925 (specimens in CM); Catuá island near Ega⁵ (now Tefé), c.3°45'S 64°00'W (on AGSNY 1940), c.1850 (Bates 1863); and Ilha do Comprido⁶, now Ilhas Codajás, just west of the mouth of the rio Purus, July 1935 to January 1936 (Pinto 1938, Hellmayr and Conover 1942, Vaurie 1967b, Paynter and Traylor 1991; specimens in FMNH), plus at the mouth of the rio Javari⁷ apparently at c.4°12'S 70°42'W, July 1977 (Hilty and Brown 1986, Paynter and Traylor 1991).

Records from the rio Madeira and its tributaries, all made by J. Natterer in 1829-1830 (von Pelzeln 1868-1871), are from Borba⁸ (Amazonas), January 1830, and in Rondônia at: Salto do Teotônio⁹, c.8°51'S 64°02'W (on AGSNY 1940 and in Paynter and Traylor 1991), October 1829; Piori, untraced but close to (upriver from) the preceding, October 1829; Cachoeira do Bananeira¹⁰, c.10°36'S 65°25'W on the Mamoré (on AGSNY 1940 and in Paynter and Traylor 1991), September 1829; and Volta do Gentio¹¹, 12°12'S 64°53'W, on the rio Guaporé along the Bolivian border, August 1829.

Records from the rio Juruá are based on (entirely reliable: birds well described) reports from hunters along the middle section of the river, e.g. at rubber-tapping sites around and downriver of Itamarati¹² (C. A. Peres and A. Whittaker *in litt.* 1992); older inhabitants remember it from their youth around Eirunepé¹³, but it is extinct there now (C. A. Peres and A. Whittaker *in litt.* 1992). Indians just inside Peru have reported the presence of the species in the headwaters of the rio Envira¹⁴ (Embira), a tributary of the rio Juruá in south-west Acre (Ortiz 1988).

Colombia There are two records, one from Isla Loreto¹⁵ ("Isla de Mocagua") on the Amazon, 3°51'S 70°15'W, and one from Tres Troncos¹⁶, La Tagua, 0°08'N 74°41'W, on the río Caquetá, a tributary of the Solimões (Meyer de Schauensee 1948-1952, Blake 1955; coordinates from Paynter and Traylor 1981). However, S. Defler is believed to have found the species recently in the south-east (M. G. Kelsey verbally 1992).

Ecuador The species is known from the río Napo and the río Negro¹⁷ (presumably that at 1°24'S 78°13'W: see Paynter and Traylor 1977) (Chapman 1926, Hellmayr and Conover 1942, Vaurie 1967b), with several being recorded along Quebrada Papaya, a small blackwater north-bank tributary of the Napo, in June 1982 (TAP); there are also records from the mouth of the río Curaray (see Remarks 1), including statements by Huitotos Indians in 1982 that the species (locally called *piuri*) still occurs up the Napo towards the Curaray confluence, while from the lower Napo only the oldest man spoken to remembered the bird (TAP).

Peru Records (arranged here from north to south, with coordinates from Stephens and Traylor 1983) are chiefly from the Amazon and its major tributaries in the department of Loreto in the north-east: from the mouth of the río Curaray¹⁸ (see Remarks 1); in the basin of the río Napo, according to LSUMZ field studies (Ortiz 1988, TAP), with specimen records from there (Sclater and Salvin 1870) and nearby río Mazán and Iquitos¹⁹ (Hellmayr and Conover 1942, Vaurie 1967b); north of the río Amazonas at Pebas and Apayacu²⁰, 3°19'S 72°06'W (Sclater and Salvin 1870, Taczanowski 1884-1886, Vaurie 1967b); along the río Yavari²¹ on the Brazilian frontier (Ortiz 1988, TAP); the lower río Marañón (Sclater and Salvin 1873, Ortiz 1988, TAP), whence also a specimen so labelled and another from Samiria²², 4°42'S 74°18'W (Hellmayr and Conover 1942, Vaurie 1967b); the lower río Ucayali (Sclater and Salvin 1873, Ortiz 1988), whence also a specimen from Sarayacu²³, 6°44'S 75°06'W (Taczanowski 1886, Hellmayr and Conover 1942, Vaurie 1967b); and far to the south, in Madre de Dios, at the mouth of the río Colorado²⁵, 12°39'S

70°20'W, a tributary of the rio Madeira (Hellmayr and Conover 1942, Vaurie 1967b). Because of his reports of birds just inside the Brazilian border (see above), Ortiz (1988) drew attention to the possibility of the species occurring inside Peru south-west of the headwaters of the Envira, i.e. just south-west of 10°S 72°W.

POPULATION In Bolivia on the lower río Beni a century ago the species was, with the Razor-billed Curassow *Mitu tuberosa*, considered abundant and found both singly and in flocks of 5-15 (Allen 1889), although this report cannot be considered reliable (see Remarks 2). In Peru in the 1960s it was reported less common and more local than the Razor-billed Curassow (Koepcke and Koepcke 1963) and it is now regarded as extremely rare there and the highest cracid conservation priority after White-winged Guan *Penelope albipennis* (Ortiz 1988); local people within its range refer to it as having disappeared almost totally in the past 30 years (TAP). There have been no reports from eastern Ecuador for at least 10 years, despite much work in the region on cracids (A. Johnson verbally 1991). In Colombia it appears to be extinct along the río Caquetá (J. V. Rodríguez *per* S. Defler verbally 1988), and the species was not recorded during several years' fieldwork to the north of, in and near the Amacayacu National Park, near Leticia, in the late 1980s (S. Defler verbally 1988, M. G. Kelsey verbally 1992). Recent surveys by R. Garcés in various parts of lower Amazonia suggest that the species has indeed disappeared from Ecuador, Colombia and Peru (Strahl 1991), and that other than at the Javari estuary south of Leticia (see Distribution) there appear to be no recent records; several ornithologists now express serious concern over the fate of the species throughout its range (J. V. Remsen *in litt.* 1986, S. D. Strahl verbally 1988, TAP). Nevertheless, although Koepcke and Koepcke (1963) thought it rare in zoos, Delacour and Amadon (1973) called it “one of the commoner curassows in captivity”, and the recent evidence of traders is that the bird was still common in the mid-1980s in remote regions of Bolivia (J. Estudillo López verbally 1988) and in southern Colombia, western Brazil and north-east Peru, where local people offer it for sale at small airstrips (F. O. Lehmann verbally 1988). The testimony of hunters on the rio Juruá in Brazil is certainly that the bird is far rarer than the Razor-billed Curassow, but nevertheless still routinely found (C. A. Peres and A. Whittaker *in litt.* 1992).

ECOLOGY The habitat is humid lowland (to 300 m) tropical-zone forest (Hilty and Brown 1986). In one report the drier areas within such habitat are favoured and swampy areas shunned (Koepcke and Koepcke 1963), while in five others an association with water is apparent: in one, várzea was occupied (Hilty and Brown 1986); in another, the species was twice found near the edge of a lake or pond (Bates 1863: 282, 292); in the third, birds are specifically stated to inhabit riverine island forests, várzeas locally, near streams and black-water rivers (Ortiz 1988); in the fourth, birds were flushed from dry levees into vine tangles in 14-18 m high várzea along a small blackwater stream (TAP); in the fifth, hunters reported the species as primarily occupying várzea at least for most of the year, contrasting this with the Razor-billed Curassow, which uses both várzea and terra firme forest (C. A. Peres and A. Whittaker *in litt.* 1992).

If the species is indeed an ecological counterpart of the east Brazilian Red-billed Curassow *Crax blumenbachii* (see relevant account), as suggested by Teixeira and Sick (1981), then an association with water would certainly be likely. It may be more arboreal than other curassows, keeping mostly to the trees (Koepcke and Koepcke 1963; hence presumably Hilty and Brown 1986), and indeed Bates (1863: 282) reported a “flock” (from which a bird was collected) some 30 m up in the canopy. There are no published data on food or breeding in the wild; however, six of nine specimens collected in 1935-1936 on Ilhas Codajás, Solimões, had gonad condition noted: two males had small testes in July 1935, two had them enlarged in July and August 1935; and two females had small ovaries in July 1935 and January 1936 (specimens in FMNH). The extent to which birds move in pairs is unknown, but if this happens only when breeding it is worth noting that a pair was shot on 19 or 20 August 1829 on the Guapore, Brazil (von Pelzeln 1868-1871).

THREATS A century ago the species was much exploited for food in northern Bolivia (Allen 1889); in Peru it was regarded as suffering great hunting pressure in the early 1960s (Koepcke and Koepcke 1963) and this continues (Ortiz 1988). In eastern Ecuador the increased traffic in shotguns since 1970, owing to the opening up of the region to oil exploration and extraction, render this bird all the more vulnerable, if indeed it still occurs (A. Johnson verbally 1991). Destruction and development of várzea along the Brazilian Amazon is a major conservation concern (TAP). Despite all this, the reasons why this species

should have vanished so comprehensively from ornithological knowledge in the twentieth century remain puzzling; and there are still vast areas of várzea on the upper Solimões, Juruá and Purus (D. F. Stotz *in litt.* 1988).

MEASURES TAKEN None is known in the wild, and despite its rarity and status as a gamebird the species is not protected under Brazilian law. In captivity, efforts are being made to breed the species at the Cracids Breeding and Conservation Center “Lanaken”, Belgium, where 16 birds are held (Geerlings 1992).

MEASURES PROPOSED Given the large (and potentially enormous) range of this species, a useful first step would be to identify any protected areas in the five countries concerned within which the Wattled Curassow might be expected, and to survey them. Second, particular areas where the species has previously been recorded should be resurveyed: such areas should be selected after consultations over their current condition (in Peru the best hope for a good population may be the upper río Napo: Ortiz 1988). Third, areas where the species may be anticipated, such as in the vast areas of várzea along the Solimões, Purus and the Juruá, require exploration (D. F. Stotz *in litt.* 1988; but see Remarks 3); in particular, the Ilhas Codajás, source of at least 16 specimens (Vaurie 1967b), merits new investigation. There appear to be a number of captive specimens and it would be of great value to trace their origin.

REMARKS (1) Paynter and Traylor (1977, 1983) doubtless correctly favoured Peru over Ecuador for the location of the mouth of the río Curaray, but it is worth noting that of four specimens from this locality, all collected between 25 January and 14 February 1926 by the Olallas, two (in ANSP and MCZ; the others in AMNH) explicitly state “Ecuador” on the labels; it is also worth noting that the Curaray forms two confluences, one well inside Peru with the Napo, the other virtually at the border with the Cononaco, and if this latter is the site in question the collecting could have occurred within Ecuadorian territory. (2) Allen (1889) simply repeated the remarks of the collector, who supposed that the Wattled and Razor-billed Curassows “were only individuals of different age and the same species”, which means that his comments on abundance may chiefly refer to the latter. (3) Some of these seemingly remote areas have been explored without evidence of the species, however; see, e.g., von Ihering (1905b) and Sneath (1908).