

*The nominate race of this curassow was formerly common in the northern mountains of central Venezuela, but deforestation and hunting have much reduced it there, although its status in the Andes of Merida and the adjacent departments of Colombia is unknown; the race gilliardi from the Sierra de Perijá on the Colombia/Venezuela border is also believed to be under great pressure.*

**DISTRIBUTION** The Northern Helmeted Curassow exists in two forms, nominate *pauxi* ranging through the northern coastal mountains of central Venezuela from Miranda west into the Cordillera de Mérida across the border into Colombia in extreme south-west Norte de Santander and northernmost Boyacá; and race *gilliardi* in the Sierra de Perijá (Serranía de los Motilones) on both sides of the border in north-east Colombia and western Venezuela. The population of *gilliardi* is judged very probably to extend further south (Wetmore and Phelps 1943) and possibly even to make contact with nominate *pauxi* at the junction of the Colombian and Venezuelan Andes (Vaurie 1967c, 1968); nevertheless, while accepting the possible bias created by the distribution of fieldwork, the current concentration of records suggests that the species's two main centres are the Sierra de Perijá and the 250 km stretch of mountains west of Caracas. Localities, as given in Hellmayr and Conover (1942), Wetmore and Phelps (1943), Phelps and Phelps (1958, 1962), Vaurie (1967c) or as otherwise stated, with coordinates from Paynter and Traylor (1981) and Paynter (1982), are:

**Venezuela** (nominate *pauxi*, east to west): Cerro Negro 10°03'N 66°18'W (these coordinates placing it within the Guatopo National Park [see CNPPA 1982], whence there are apparently more recent records: S. D. Strahl verbally 1988); near Caracas, c. 10°30'N 66°55'W; Maracay, 10°15'N 67°36'W, and Rancho Grande, 10°22'N 67°41'W (Schäfer and Phelps 1954), both these being part of the Henri Pittier National Park (see CNPPA 1982); Cumbre de Valencia (type-locality: Blake 1977), 10°20'N 68°00'W; San Esteban, 10°26'N 68°01'W; Montalbán, 10°13'N 68°20'W; near Tucacas, 10°48'N 68°19'W; Nirgua, 10°09'N 68°34'W; Lagunita de Aroa, 10°26'N 68°54'W; mountains inland from Aroa, 10°15'N 68°55'W; Cubiro, 9°47'N 69°35'W, this evidently close to or in the Yacambú National Park (see CNPPA 1982), whence there are apparently more recent records (S. D. Strahl verbally 1988) including one in April 1992 (F. Rojas *per* C. Sharpe verbally 1992); “Montaña del Capas” (presumably Quebrada La Capaz), 8°43'N 71°24'W; Montañas de Limones, Mérida (untraced); La Azulita, 8°43'N 71°27'W; Burgua, 7°26'N 72°00'W;

(race *gilliardi*, north to south) Fila Macoíta–Apón (the ridges between the rivers Apón and Macoíta), 10°24'N 72°33'W; Campamento Avispa, 10°10'N 72°48'W; Cerro Yin-taina (also Manastara; Cerro Jurustaco; and “Sierra de Perijá west of Machiques”), all at or around 10°05'N 72°55'W; upper río Negro, 10°02'N 72°56'W (judged from TAW 1986); La Sabana (also Cerro Ayapa and Kunana: specimens in COP), all at or around 10°00'N 72°50'W; (upper) río Tucuco, 9°55'N 72°50'W (judged from TAW 1986);

**Colombia** (nominate *pauxi*, east to west) in the extreme south-east Norte de Santander and extreme north Boyacá, with plausible hunters' reports from adjacent westernmost Arauca in the río Crave Norte (Vaurie 1968, evidently based on Nicéforo 1955), specific localities (certain and reported) being (1) on the río Valegrá (Chucarima; El Porvenir, south of Labateca), (2) río Margua (La Dominga in the río Saravita canyon; San Alberto, between Quebrada Talco [Falco in Nicéforo and Olivares 1965] and the headwaters of the río San Lorenzo), (3) Quebrada La China on the río Cubugón (Alto de Herrera north of Santa Librada; headwaters of La China; Santa Librada and to the south; west slopes of Cerro de San Agustín; Palo Negro; El Porvenir; Quebrada Güjica), (4) upper río Cobaría (río Tecaúca) (in the San Francisco de Cobaría region, 2,800 m), and (5) the valley of the Cravo Norte above Tame (Nicéforo 1955; see Remarks);

(race *gilliardi*, north to south) El Bosque, above Carraipia, 11°09'N 72°20'W; Monte Elias, Sierra Negra, 10°51'N 72°43'W; Tierra Nueva, Sierra Negra (type-locality), 10°35'N 72°45'W; Hiroca (“Eroca”), 9°42'N 73°05'W.

**POPULATION** In the last century this species was common in the mountains of northern Venezuela (Summerhayes 1874, Funck 1875), and even in the 1950s was thought to be fairly abundant (Ginés and Avelado 1958), although by then it was considered scarce at Rancho Grande, with a population of some 25-50 birds (Schäfer and Phelps 1954), and virtually exterminated in settled areas (Schäfer 1953). It has recently been described as occurring at a naturally low level of abundance, with less than one pair per 20-40 ha or 5-10 birds per km<sup>2</sup>, but nevertheless in drastic decline (Strahl and Silva 1987). The nominate subspecies was described as already very rare in Colombia over 25 years ago (Nicéforo and Olivares 1965), and there appears to be no subsequent evidence of its status there or indeed of the race *gilliardi* in either Colombia or Venezuela.

**ECOLOGY** The species occupies very dense, wet, cool, mountain forest (“cloud-forest”) on steep slopes in the subtropical and adjacent upper tropical and temperate zones, 500-2,000 m but usually and preferably 1,000-1,500 m in dense subtropical cloud-forest (Schäfer and Phelps 1954, Delacour and Amadon 1973, Meyer de Schauensee and Phelps 1978): it avoids forest edge and particularly selects humid gorges with a thick undergrowth of dwarf palms and terrestrial aroids, requiring the presence of associations of *Heliconia*, *Cyclanthus*, *Calathea*, *Anthurium* and *Dieffenbachia* (Schäfer 1953, Hilty and Brown 1986). However, females tend to select somewhat drier places when nesting (Schäfer 1953). Birds are highly site-faithful, and roost, nest, sing and seek safety in lower branches, rarely moving up into the middle storey (Schäfer 1953, Schäfer and Phelps 1954, Hilty and Brown 1986).

The species is largely terrestrial, foraging on the ground for fallen fruit and seeds but also taking grasses, buds and leaves (Schäfer 1953).

Territorial singing begins in December (or when the dry season ends), territories apparently being only 10 ha or less (300 x 300 m); pair formation (one case of apparent male bigamy, with the two nests 130 m apart inside one territory) takes place in February, nest-building (by the female) at the end of March, hatching of young (two eggs are laid, and only the female incubates, the male never associating with her from nest-building until hatching) in mid-May, but although nesting is entirely over by July, care of the young by both adults continues into October, when the moult is complete (Schäfer 1953). These breeding data are matched in the Sierra de Perijá, source of a laying female, 7 April, a breeding-condition male, 21 June, and a juvenile, 11 August (Hilty and Brown 1986). The nest is placed in forks or on horizontal branches some 4-6 m from the ground (Schäfer 1953). Incubation in captivity lasted 30 days in one instance (Taylor 1975a). The species is usually found in pairs or family parties throughout the year, and young remain with their mothers until October or November (Funck 1875, Schäfer 1953); this and other evidence above suggests some divergence of mating system from that observed in the closely related Southern Helmeted Curassow *Pauxi unicornis* (see relevant account), and indeed Schäfer (1953) considered the bird monogamous.

Daily (foraging) activity is restricted to the first hours of the day and the last of the afternoon; territorial singing often occurs at night in the early breeding season, but usually also over the midday hours from April to June (Schäfer 1953).

**THREATS** Deforestation and indiscriminate hunting both in Venezuela and Colombia are to blame for the substantial decline in this species (Schäfer 1953, Negret 1987). The low density of the species renders it vulnerable to human disturbance, and it is hunted even in national parks (Strahl and Silva 1987). In Henri Pittier National Park there is also heavy disturbance from the Maracay–Ocumare and Maracay–Choroni roads (M. Pearman *in litt.* 1991). It is also hunted by Indians who use the helmet in necklaces (Wetmore and Phelps 1943). In Colombia the race *pauxi* is (or was) hunted zealously by both colonists and Indians, again (in the case of the latter) not only for its meat but also for its helmet (Nicéforo and Olivares 1965).

**MEASURES TAKEN** The species occurs (but is hunted) in Rancho Grande (Henri Pittier) National Park, Venezuela (Schäfer and Phelps 1954, S. D. Strahl verbally 1988), and also in Guatopo and Yacambú National Parks (S. D. Strahl verbally 1988). In Colombia it is present on the eastern slope of both El Cocuy and Tamá National Parks (J. I. Hernández Camacho verbally 1988). A major

educational campaign to generate interest in saving the species in both Venezuela and Colombia is now being mounted (Strahl and Silva 1987); ProVita Animalium is currently running such a campaign in the Yacambú National Park, Venezuela (C. Sharpe verbally 1992).

**MEASURES PROPOSED** A thorough analysis of the current status of the species and the threats it faces throughout its range would provide the best basis for determining an appropriate course of action; to a large extent this ought, in Venezuela, to be a component of a general survey to assess the needs of the threatened and endemic avifauna of the northern mountains and the Andes of Mérida, and the decisions taken should represent the interests of all such species. One measure already suggested, for the curassow at least, is the establishment of a “binational” park in the Sierra de Perijá/Serranía de los Motilones (Negret 1987).

**REMARKS** J. I. Hernández Camacho (verbally 1988) has pointed out that the first records of the species in Colombia date from 1761 when nine captive birds were noted recorded as having come from “La Salina de Chita”, Boyacá.