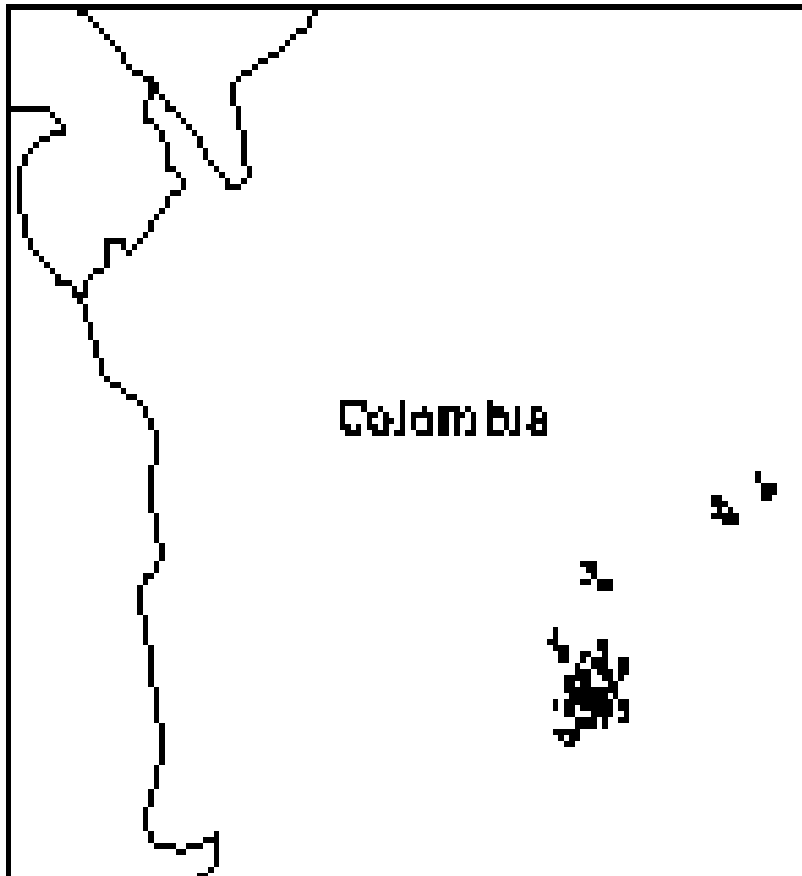


*This hummingbird was originally thought to have a very limited range along the western slope of the East Andes of Colombia. Many recent records indicate that it might have a wider distribution, but its apparent association with now dwindling tracts of oak forest indicates its vulnerability to habitat clearance.*

**DISTRIBUTION** The Black Inca occurs on the western slope of the East Andes in south-east Santander, western Boyacá and western Cundinamarca departments, and also on the western slope of the Central Andes in Quindío department, Colombia. Localities where this hummingbird has been recorded (with coordinates, unless otherwise stated, from Paynter and Traylor 1981) are as follows:



*Santander* Virolín<sup>1</sup> (6°05'N 73°12'W), where three males (in USNM) were collected at 1,675-1,705 m in August 1943 (28 km south of Charalá on the Duitama road), with two birds (in ICN) taken between 1,840 and 1,970 m during November and December 1978, and within a 5 km radius of which birds were seen during March 1988 (Brooke 1988b); Finca La Argentina (untraced, but in the vicinity of Virolín), where two birds (in ICN) were taken at 2,070-2,150 m in November 1979 and February 1980; and Loma del Rayo (untraced, but also in the vicinity of Virolín), where three birds (in ICN) were collected at 1,980-1,995 m, also in November 1979 and February 1980;

*Boyacá* Cerro Carare<sup>2</sup> (5°55'N 73°27'W: OG 1964), c.9 km east-south-east of Toqui, where the bird was

found to be quite common between 2,300 and 2,500 m during 1978 (King 1978-1979), and where M. Pearman (*in litt.* 1988, 1990) found three birds during February 1987 (on a ridge known locally as "Las Penas");

*Cundinamarca* Yacopí<sup>3</sup> (c.5°30'N 74°20'W; at 1,415 m, and c.12 km north-north-east of La Palma), and Guaduas<sup>4</sup> (5°04'N 74°36'W; at c.1,000 m), both mentioned by Meyer de Schauensee (1948-1952) and Olivares (1969); La Vega<sup>5</sup> (5°00'N 74°21'W), mentioned by King (1978-1979); on the road to La Vega<sup>6</sup> (4°56'N 74°18'W: coordinates from P. Kaestner), where the species was recorded at 2,100 m in April 1989 (P. Kaestner *in litt.* 1992); Chimbe<sup>7</sup> (4°55'N 74°28'W: OG 1964), a locality mentioned by Geoffroy (1861) and Olivares (1969); Albán<sup>8</sup> (4°53'N 74°27'W; 12 km north-west of Facacativá), mentioned by Nicéforo and Olivares (1967) and Olivares (1969); Facacativá<sup>9</sup> (4°49'N 74°22'W), where the type-specimen was collected at 2,600 m (Bourcier 1843, Meyer de Schauensee 1948-1952); Anolaima<sup>10</sup> (4°46'N 74°28'W; at c.1,500 m, and 14 km south-west of Facacativá), mentioned by Geoffroy (1861) and Olivares (1969); Laguna de Pedropalo<sup>11</sup> (c.4°45'N 74°24'W; at 2,010 m, and 9 km north of Tena), where specimens (in ICN, WFVZ) were collected between 1967 and 1983, and where birds were

seen on a number of occasions between 1988 and 1990 (P. Kaestner *in litt.* 1992); near Laguna de Pedropalo at km 28 on the Bogotá–La Mesa road<sup>12</sup> (La Mesa is at 4°38'N 74°28'W), where birds were recently recorded at 1,800 m (P. Kaestner *in litt.* 1992); Bojacá<sup>13</sup> (4°44'N 74°21'W; at 2,845 m), where the species was recorded in 1974 (King 1978-1979); Vereda El Roble (untraced, but in La Vega municipality: see Remarks), where a bird (in ICN) was taken at 2,400 m in September 1965;

*Quindío* Salento (4°38'N 75°34'W), where a male (in MHNUC) was taken in February 1976 (A. Negret *in litt.* 1992), this being the only record from the Central Andes.

**POPULATION** The Black Inca is generally rare (S. L. Hilty *in litt.* 1986), and was only infrequently recorded from the turn of the century until the late 1960s (see above). However, recent records from near Virolín, including four observations during a week in March 1988 (Brooke 1988b: see above) suggest that it is not uncommon there (G. Arango verbally 1991). At Cerro Carare, King (1978-1979) reported the species to be quite common (in 1978), with a total population that “must have run into many hundreds”, M. Pearman (*in litt.* 1990) finding three birds there on one day in February 1987 and reporting that locals knew the bird well. The Black Inca is also regularly recorded at Laguna de Pedropalo (F. G. Stiles verbally 1991), where P. Kaestner (*in litt.* 1992) saw birds on six out of eight visits to the site between 1988 and 1990; moreover, this hummingbird has been recorded at a number of sites nearby (see Distribution), but cannot be found with any regularity other than at the lake (e.g. P. Kaestner *in litt.* 1992 searched for the species eight times without success in the roadside forest at km 28). The evidence thus suggests that, at best, this species is locally fairly common.

**ECOLOGY** Recorded elevations at which the Black Inca has been collected or observed are between 1,675 and 2,500 m, although the altitudes of a number of collecting localities are between c.1,000 and 2,845 m (see Distribution). The Black Inca primarily inhabits the interior of humid montane forest, especially oak (*Quercus humboldtii* and *Trigonobalanus excelsa*) forest (Hilty and Brown 1986, M. Pearman *in litt.* 1988, P. Kaestner *in litt.* 1992, LGN). However, at Virolín birds were recorded in open parkland and riverside gallery forest as well as in primary stands of oak (Brooke 1988b), and at Cerro Carare M. Pearman (*in litt.* 1990) reported that locals had observed birds in a flowering garden. The species is a “trap-lining” nectar feeder (but territories are occasionally defended), favouring species with pendant flowers and long corolla tubes, especially vines and climbers (e.g. *Aphelandra*, *Palicourea*, *Psammisia*, *Thibaudia* species), tree-ferns, which it finds from lower mid-levels, in the canopy, and low at forest edges, in parkland, etc. (Snow and Snow 1980, Brooke 1988b, Fjeldså and Krabbe 1990, P. Kaestner *in litt.* 1992), and also *Fuchsia*, *Bomarea* and *Aetanthus*, all of which thrive along forest edge and in old second growth (F. G. Stiles *in litt.* 1992). The gonad condition and moulting sequence of specimens in ICN suggests that breeding takes place between June and October (LGN).

**THREATS** Although this hummingbird has been seen in tiny relict forest patches (D. W. Snow *in litt.* 1986, P. Kaestner *in litt.* 1992), it appears to be commonest in areas where quite extensive forest remains (see Population), and as such must be considered threatened owing to the serious depletion of humid temperate (especially oak-dominated) forest on the western slope of the East Andes (King 1978-1979, LGN). Many areas (e.g. Virolín, Cerro Carare and Laguna de Pedropalo) are now surrounded by intensive crop cultivation or pastureland (Brooke 1988b, M. Pearman *in litt.* 1990, P. Kaestner *in litt.* 1992). Whether this species can maintain a viable population away from more extensive areas of forest is unknown, although it will probably survive if patches of woodland remain along streams and on steep slopes (as in the Bojacá–Laguna de Pedropalo area: see Ecology) (F. G. Stiles *in litt.* 1992).

**MEASURES TAKEN** Based on recommendations outlined in Romero-Zambrano (1983) for the conservation of the Gorgeted Wood-quail *Odontophorus strophium* (see relevant account), ICBP and Fundación Natura supported a survey of the oak-dominated forests of the Virolín area in Santander in March 1988, and since this time ICBP, Fundación Natura and INDERENA have been working on a cooperative project to create a protected area there, now to be called the Cachalú Wildlife Sanctuary (Fundación Natura 1990, G. I. Andrade *in litt.* 1990).

**MEASURES PROPOSED** Apart from the proposal made for the creation of Cachalú Wildlife Sanctuary in the Virolín area (which has yet to be formally designated), since 1990 both the “Grupo Ornis” and the recently founded “Sociedad Bogotana de Ornitología” have been promoting the necessity of giving legal protection to the remnant oak forest that surrounds Laguna de Pedropalo, where this species, Turquoise Dacnis *Dacnis dacnis hartlaubi* and Apolinar’s Wren *Cistothorus apolinari* (see relevant accounts) have been recorded in recent years. Formal protection of Laguna de Pedropalo and the Virolín area is an urgent priority, and these current initiatives should be strongly encouraged.

Surveys are needed in the few remnants of upper and lower montane humid forest across the western slope of the East Andes, both of which have suffered extensive deforestation, but are important for a number of sympatric threatened species, e.g. Gorgeted Wood-quail, Chestnut-bellied Hummingbird *Amazilia castaneiventris*, White-mantled Barbet *Capito hypoleucus*, Recurve-billed Bushbird *Clytoctantes alixii*, Turquoise Dacnis, Red-bellied Grackle *Hypopyrrhus pyrohypogaster* (see relevant accounts), and also the near-threatened Sooty Ant-tanager *Habia gutturalis*, so any conservation initiatives should, where possible, consider the needs of all the above species. As well as determining the extent of remaining habitat and current status of the threatened species in this area, the precise ecological requirements of the Black Inca need to be assessed so that its habitat preference, and the extent to which it relies on large areas of forest, can be determined. Although only known from one (recent) record on the western slope of the Central Andes, the immediate area of this is (or at least was) important for six other threatened species, the details and conservation of which are given in the equivalent section under Moustached Antpitta *Grallaria alleni*.

**REMARKS** Although untraced, “Vereda El Roble” may refer to El Roble (c.4°23’N 74°19’W; at 2,475 m) on the old Bogotá–Fusagasugá trail.