



Painting by A. Gallo

Baudó Guan (*Penelope ortonii*)

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Work to Date

The Baudó Guan (*Penelope ortonii*) is poorly known (Delacour and Amadon 1973, Hilty and Brown 1986, del Hoyo 1994, Franco-Maya 2002). This guan is endemic to the Chocó biogeographic ecoregion (Stattersfield et al. 1998), where it is locally known from the Pacific slope of the Andes of northwestern South America, ranging from north of Choco Department in Colombia to Guayas province in Ecuador (Delacour and Amadon 1973, Hilty and Brown 1986, Ridgely and Greenfield 2001).

This species is distributed between 50-1500 m asl (Hilty and Brown 1986, Jahn and Mena 2002). *P. ortonii* inhabits foothills, usually in steep terrain adjacent to level ground, as well as hills and mountain ridges, where it occupies early to late (i.e., primary) successional stage humid and wet forests (Delacour and Amadon 1973, H. Álvarez-López pers. comm., O. Jahn unpubl. data). The variety of forest along sheer slopes of this region of the Andes is probably related with unstable soils that cause frequent landslides (H. Álvarez-López pers. comm.). Considering man as a limiting factor of the guan's distribution, the more frequent records in abrupt terrain are not surprising (Delacour and Amadon 1973, Ridgely and Greenfield 2001), due to inaccessibility to hunters. For example, this guan has been recorded regularly far from human settlements in extensive plains and rolling lowland hills adjacent to foothills (Jahn 2001, in press).

This guan lives in all strata of forest. In the canopy it feeds, vocalizes, preens, and flies in courtship displays. In the medium stratum it hides avoiding its main predators, such as large raptors (e.g., *Spizaetus ornatus*). On the ground it looks for food and is able to cross roads (see Hilty and Brown 1986, Stotz et al. 1996, Ridgely and Greenfield 2001, Franco-Maya 2002, O. Jahn unpubl. data, J. C. Luna pers. comm.). As with most cracids, this species is primarily frugivorous (del Hoyo 1994, O. Jahn unpubl. data). One stomach containing two unknown seeds was reported (Salaman 1994), the species is known to eat fruits of Chanul (*Humiriastrum procerum*, Humiriaceae; J.C. Luna, A. Cortes and N. Hughes pers. comm.).

Territorial pairs are established during the breeding season, and post-breeding birds live in family flocks, usually numbering around four individuals and exceptionally to eight. When one member

of a pair dies, the remaining individual takes some time to establish a new partner to bond with (O. Jahn unpubl. data). Data from Colombia and Ecuador suggest this species breeds between July and September, with the clutch numbering two eggs (Haffer 1968, Salaman 1994, Salaman et al. 2000, O. Jahn unpubl. data). Jahn and Mena (2002) have estimated 24 years for three generations, but considering the two to three year maturation period of medium-sized cracids (del Hoyo 1994), a more realistic estimate is perhaps 12-18 years.

Status and Threats

Using visual and auditory transect mapping samples (Jahn in press), extrapolated population size is estimated at 7,000-21,000 mature individuals (O. Jahn unpubl. data). However these values are in regions far from human settlements and therefore must be considered preliminary. It is likely that true global population size is considerably less, concordant with BirdLife International's (2005) estimate of 2,500-10,000 mature individuals.

Status in Colombia: The species is patchily distributed, sometimes absent from habitat that seems suitable (Hilty and Brown 1986). It has reported as common in "alto Anchicayá" (Valle del Cauca Department) and in the Pangan reserve (Nariño Department), where forests are intact without hunting pressure. Conversely, the species is less common in the "bajo Anchicayá" (Valle del Cauca Department), which contains human settlements (H. Álvarez-López pers. comm., J.C. Luna and R. Strewe pers. comm.).

Status in Ecuador: There are records in Esmeraldas Province, mainly in the buffer zone of Cotacachi-Cayapas Ecological Reserve, where the species is rare to uncommon in intact forest. This guan is absent in the vicinity of human settlements because it is sensitive to unsustainable anthropogenic activities, such as over-hunting and unplanned habitat modification, disappearing even under light pressures (Jahn 2001, Ridgely and Greenfield 2001, Jahn and Mena 2002). Additionally there are small populations of this guan in Pichincha Province, where it is rare on the slopes of the Pichincha Volcano (B. Herrera-V. pers. comm.). Apparently there are no recent confirmed records south of this province (Ridgely and Greenfield 2001).

Threats: In short, the threats for *Penelope orton* are unmanaged hunting, as well as habitat loss and modification (Franco-Maya 2002, Jahn and Mena 2002). Both threats are related to cropland expansion (Fajardo Montaña 2002) and regional integration projects (Critical Ecosystem Partnership Fund 2001).

The concentration of land suitable for farming and cattle ranching in the hands of only a few owners, often results in migration of landless people to remote and extensively forested areas which are not of economic interest for cash crop enterprises. The social and political conditions in these isolated settlements often favor overexploitation of natural resources, as well as the cultivation of illicit use crops, accelerating deforestation even further (Álvarez 2002). In the Pacific region of Colombia, the Baudó Guan shares its distributional range with some of the primary cultivation areas of the coca plant (*Erythroxylon coca*, Erythroxylaceae; Uribe Ramírez 1997).

Due to the prevalent condition of isolation, the inhabitants of such settlements have to sustain on the natural environment (e.g., through hunting and selective logging; Critical Ecosystem Partnership Fund 2001, Fajardo Montaña 2002, Jahn 2001, in press). Cracids are an important source of protein in rural areas of Latin America, and as frugivores their populations may also be affected by selective harvesting of important food trees. Additionally, it must be taken into account that the Baudó Guan usually does

not flee if approached by humans (Hilty and Brown 1986, Jahn and Mena 2002, Johns 1998, Redford and Robinson 1987, Redford 1992).

Furthermore, regional integration projects, like pipeline construction (e.g., Oleoducto de Crudos Pesados in Ecuador; Soltani et al. 2001), hydroelectrical dams (e.g., Arrieros del Micay hidroelectric dam in Colombia; Critical Ecosystem Partnership Fund 2001), and roads (e.g., Ibarra – San Lorenzo and Borbón – Matajé in Ecuador; Jahn and Mena 2002), among others, have accelerated the degradation of ecosystems in the Colombian and Ecuadorian Pacific region. Consequently natural resources can be more easily accessed and exploited, as is the case with the Baudó Guan and important elements of its habitat, such as valuable hardwood trees (Salaman 1994, Jahn in press).

Conservation Action

The distributional range of *P. ortoni* coincides with the Chocó-Manabí conservation corridor, a joint effort of Colombian and Ecuadorian social organizations, NGOs, governmental agencies, academic institutions, and the private sector. The aims of this conservation effort are the maintenance of the Choco biogeographic region's diversity by creating a network of protected areas, ensuring the continuity of ecological and evolutionary processes and improving human life conditions through sustainable development (Critical Ecosystem Partnership Fund 2001).

I. Insure protection and assess status in existing Colombian reserves

- a. The species inhabits the northern region of the Farallones de Cali National Natural Park (205,266 ha, Valle del Cauca Department; see Franco-Maya 2002).
- b. The species is also protected in the Ensenada de Utria National Natural Park (54,300 ha, Chocó Department), which covers a coastal mountain ridge (i.e., Serranía del Baudó, see BirdLife Internacional 2005).
- c. Assess status of the population in the Pangan Private Reserve (1,000 ha, Nariño Department), where the forest is protected and there is no hunting pressure (see Franco-Maya 2002).

II. Enforce “no hunting” laws

- a. In Ecuador hunting of this species has been prohibited by law (Resolución Ministerial No. 105 del 7 de enero de 2000, see Jahn and Mena 2002).

III. Insure protection and integral maintenance in Ecuadorian reserves and their buffer zones

- a. A population occurs in the lower parts of the Cotacachi-Cayapas Ecological Reserve (204,400 ha, Esmeraldas and Imbabura Provinces). However, hunters are immigrating at a fast rate due to the recent construction of a road in the northern part of this protected area, and in the west through fluvial systems (Jahn and Mena 2002).
- b. The Baudó Guan inhabits the Mindo-Nambillo Protected Forest (19,200 ha, Pichincha Province, Soltani et al. 2001).
- c. The community of Playa de Oro (10,900 ha, Esmeraldas Province), located at the borders of the Cotacachi-Cayapas Ecological Reserve, contains what is perhaps the best assessed guan population throughout its range. This community implements alternative development strategies that reduce the pressure on natural resources.
- d. Small numbers of this guan can be found in the Jocotoco-Canandé Private Reserve (1,500 ha, Esmeraldas Province), where it is protected despite of the presence of human settlements in its neighborhood. The Jocotoco Foundation is planning to expand this reserve further. In addition it aspires to develop a joint cooperative management of nearby forests together with a local timber company (R. Ridgely pers. comm.).

IV. Assess status in existing Ecuadorian reserves

- a. The species probably inhabits the Awá Ethnic Reserve (101,000 ha, Carchi Province), even though its status remains unknown; hunting pressure exists (Jahn and Mena 2002).
- b. The Awacachi Corridor (10,000 ha, Esmeraldas Province), a private reserve that connects the Cotacachi-Cayapas Ecological Reserve with the Awá Ethnic Reserve, may protect a population of the Baudó Guan.



The guan's habitat in the upper Río Santiago drainage, Ecuador (photo by O. Jahn)

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