

New records of the Crowned Eagle, *Harpyhaliaetus coronatus*, in the State of Rio Grande do Sul, southern Brazil

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RESUMO. Novos registros da águia-cinzenta, *Harpyhaliaetus coronatus*, no Estado do Rio Grande do Sul, sul do Brasil. Nós apresentamos novos registros para o Estado do Rio Grande do Sul (sul do Brasil) da águia-cinzenta *Harpyhaliaetus coronatus*, uma ave de rapina ameaçada globalmente. Os registros estão relacionados a formações campestres e tratam de indivíduos solitários ou aves provavelmente pareadas. De modo a preservar essa e outras aves de rapina propensas à extinção e que ainda habitam a região, nós sugerimos medidas conservacionistas que aprimorem as políticas ambientais atuais dentro e fora de unidades de conservação, bem como mitiguem os riscos potenciais de empreendimentos projetados (várias barragens e um aeroporto).

PALAVRAS-CHAVE: aves de rapina, Accipitridae, distribuição, conservação

ABSTRACT. We present new records of the Crowned Eagle *Harpyhaliaetus coronatus*, a threatened raptor species, in the state of Rio Grande do Sul, southern Brazil. The records are linked to grassland formations and deal with individual or probably paired birds. To improve the policies in and outside protected areas, as well as to access the potential risks of projected buildings (several dams and an airport), some of the proposed conservationist measures suggested are to preserve this and other raptors prone to local extinction that still inhabits the Campos de Cima da Serra region.

KEY WORDS: raptors, Accipitridae, distribution, conservation

The Crowned Eagle, *Harpyhaliaetus coronatus*, is a large, monotypic bird of prey of the open areas of central and southern South America, including Brazil, Bolivia, Paraguay and Argentina (Brown and Amadon 1968, Bierregaard 1994, 1995, Sick 1997, Robbins *et al.* 1999, Ridgely *et al.* 2003, BirdLife International 2004). The species is poorly known, and the available literature covers only its distribution and conservation status (see Albuquerque 1983, 1986, Collar *et al.* 1992, De Lucca 1995, Ribeiro 1997, Gonnet and Blendinger 1998, Andrade and Andrade 1998a, b, Kajiwara *et al.* 2001, Bencke *et al.* 2003, for some Brazilian and neighbouring examples), its taxonomy (Amadon 1949, 1982), and a few biological data (Sick and Teixeira 1977, De La Peña 1992).

In Brazil, the known range of this eagle comprises the states of Pará, Maranhão, Bahia, Mato Grosso, Mato Grosso do Sul, Goiás, Minas Gerais, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, and Rio Grande do Sul (Collar *et al.* 1992, Andrade and Andrade 1998a, BirdLife International 2004). Only three specimens were recorded for Rio Grande do Sul before the twenty-first century in the municipalities of São Lourenço do Sul (Ihering 1899), São José do Norte (Gliesch 1930), and São Francisco de Paula (Belton 1994). Additionally, Collar *et al.* (1992) refer to a specimen in the Museu Nacional do Rio Janeiro originating from Rio Grande do Sul, but without specific locality. This species, previously qualified as Vulnerable following the IUCN Red List criteria (BirdLife

International 2000), was recently uplisted to Endangered because new information suggests that it has a very small, fragmented population, which suggests a significant and continuing decline in numbers (BirdLife International 2004). In Brazil, the Crowned Eagle was recently considered Vulnerable (MMA 2003), figuring in Brazilian regional lists of threatened species in the states of Minas Gerais (Machado *et al.* 1998), São Paulo (Estado de São Paulo 1998), Paraná (Straube *et al.* 2004), and Rio Grande do Sul (Bencke *et al.* 2003).

Belton (1994) suggested that *H. coronatus* was probably extinct in Rio Grande do Sul, with the habitat fragmentation allied to direct persecution as the major reasons for its presumed disappearance. This statement was followed by Mähler Jr. and Fontana (2000), who did not find this species at the “Centro de Pesquisas e Conservação da Natureza Pró-Mata”, a private protected area established in the northeast of the state. However, large areas of suitable habitat for this eagle - grassland, shrubland and savannah - still largely remains in the Campos de Cima da Serra (Planalto) region, and so its continuous existence here would not seem unlikely, even though at low densities (Collar *et al.* 1992). Recently, there have been sporadic records of this species spread over the northeastern portions of the Planalto (Bierregaard 1994, Bencke *et al.* 2003). This work presents eight recent sightings of the Crowned Eagle in northeastern Rio Grande do Sul, with some considerations about its conservation status in southern Brazil.

METHODS

Records were made between 2001 and 2004 during bird monitoring and surveys conducted by both authors in Campos de Cima da Serra, a savannah-like formation interspersed with *Araucaria* forest blocks and located in the northeastern highlands of Rio Grande do Sul (IBGE 1986). Some of the records were previously presented by Bencke *et al.* (2003), and here we provide additional information about them; the other records represent unpublished observations. All but one were adult birds and easily distinguished from other large raptors occurring in the study areas (e.g., Black-chested Buzzard-Eagle - *Geranoaetus melanoleucus*, Savanna Hawk - *Heterospizias meridionalis* and Great Black-Hawk - *Buteogallus urubitinga*, AB and IAA, unpubl. data). Identifications were made using binoculars and/or spotting scopes, and in two occasions, 20 February 2001 and 29 October 2003, the birds were close enough to be identified by naked eye. Time of day, assigned for February, October and November, ignores Brazilian Daylight Saving Time.

RESULTS

Records (Figure 1), in chronological order, are as follows: 21 February 2001, Passo do Inferno Dam (29°16'S, 50°45'W), Canela and São Francisco de Paula municipalities. At ca. 09:00 h, one bird was seen by both authors just above the tall forest canopy, soaring over a canyon. The observers spotted the individual through a large gap in the forest canopy. The bird drifted away from sight to nearby grasslands, and probably the same bird uttered a sharp, long and eagle-like whistle. Unlike the adult colour, this individual had all the ventral face buff, not grey, including the head. Although this pattern resembles the immature plumage described and depicted in Brown and Amadon (1968), Narosky and Yzurieta (1993), and De La Peña and Rumboll (1998), there were no distinguishable streaks, and so this record may represent a bird almost attaining the adult-age plumage. Later in the morning, another bird with adult plumage flew very high on thermals at the same place.

27 March 2001, Bugres Dam (29°20'S, 50°42'W), Canela municipality. One tape-recorded adult plus two Black Vultures, *Coragyps atratus*, watched by AB and IAA at 18:00 h. Roughly ten minutes were spent observing this individual. The birds ascended high, circling above the dense forested canyon, with the vultures moderately lower than the eagle.

28 March 2001, Bugres Dam. A pair of adult birds (presumably a couple) gliding high over the forested hills with *Araucaria* woodlands and *Eucalyptus* plantations (from 09:50 h to 09:54 h). Both birds were whistling persistently, but no display other than soaring and singing together was perceived. The birds were watched and tape-recorded by AB.

29 March 2001, Bugres Dam. At the same site of the previously described pair, at 15:55 h, a whistle heard by AB, which

sounded exactly as the tape-recorded vocalizations above, is assumed here as belonging to this species.

23 May 2001, Canastra Dam (29°23'S, 50°44'W), Canela municipality. A pair was watched by IAA at 16:30 h, soaring around a forested slope, rising over dense subtropical woodland with tall *Araucaria angustifolia* groves. On the same occasion, there were many Black Vultures in flight and a perched pair of King Vultures, *Sarcoramphus papa*.

28 November 2001, Canastra Dam. At 19:20 h, AB saw two adult birds together, soaring high in company of a Black Vulture and a pair of Short-tailed Hawks, *Buteo brachyurus*. Both eagles elevated themselves in circles over the valley until they disappeared from sight.

29 October 2003, BR-116 Highway (28°16'S, 50°47'W), Vacaria municipality. Two adults spotted by AB and André Mendonça-Lima, passing above a gas station and apparently trying to escape from a forming storm by the middle of the afternoon. Both birds were flying low and fast, followed by a Black Vulture. The site has roadside urbanization, surrounded by cattle farms, and is near the dense forested area of the Pelotas River, at the Santa Catarina-Rio Grande do Sul border.

01 February 2004, Bom Jesus municipality (28°18'S 50°42'W). Roughly by mid morning, AB saw an adult bird chased in flight by a Swallow-tailed Kite, *Elanoides forficatus*. The eagle apparently was not much bothered by the kite attacks; it was just flying away. The site is in a private property (here called Fazenda Minella), 20 km from the one described above, and has disturbed grassland utilized as livestock pasture.

DISCUSSION

In all sightings, the eagles were soaring over woodlands adjacent to grasslands, or over open and slightly undulated fields. None was seen perched or in agricultural landscapes, but many were soaring over large subtropical forest blocks, as reported by Gonnet and Blendinger (1998) in Argentine Yungas. However, our findings may represent spurious records of birds that moved over from nearby grasslands, since all individuals were in the air, and none was seen perched or making any discernible use of the forests.

The records here were clustered in two distinct regions: one south (Canela and São Francisco de Paula municipalities), and the other north (Vacaria and Bom Jesus municipalities), both within Campos de Cima da Serra or Planalto das Araucárias region. The proximity of Passo do Inferno Dam and the Bugres-Canastra complex of dams allows the possibility that the several records at these sites are, actually, the same pair of birds, and that the "sub-adult" bird was probably their offspring or a wandering animal trying to establish itself. The same may be true for the two records near the Pelotas River, further north. Therefore, if we consider the Vacaria/Bom Jesus birds as a different pair from that of Canela/São Francisco de Paula region summed with the records from in-

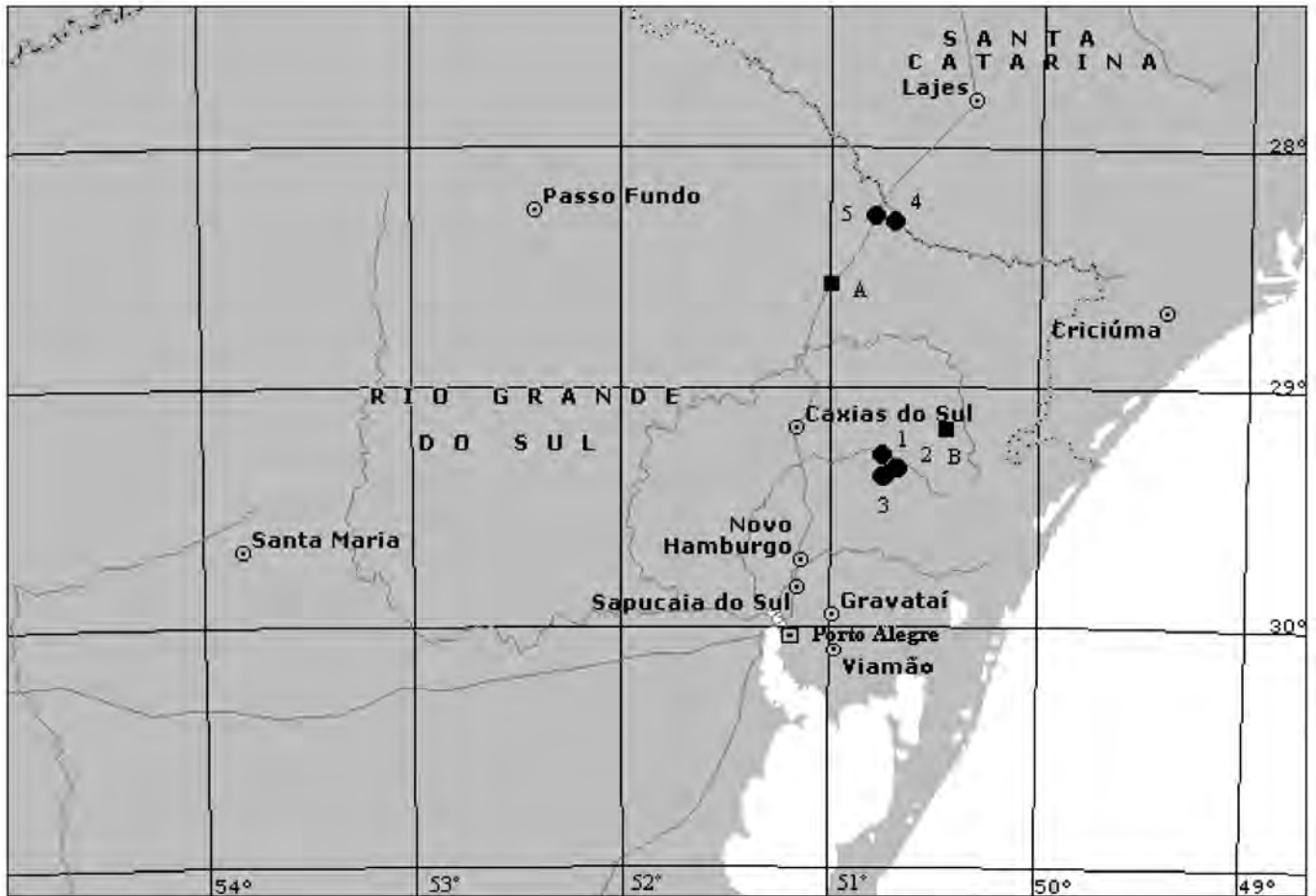


Figure 1. Map showing the locations of the recent records of the Crowned Eagle in Rio Grande do Sul, Brazil. Present note: 1, Passo do Inferno Dam; 2, Bugres Dam; 3, Canastra Dam; 4, Bom Jesus Municipality; 5, BR 116 Highway. Other recent records (Bencke *et al.* 2003): A, Arroio dos Passos (Campestre da Serra); B, São Francisco de Paula (Southwest of municipality and north of Várzea do Cedro)

intermediate areas as Várzea do Cedro (north of São Francisco de Paula) and Campestre da Serra municipality (Bencke *et al.* 2003), we can estimate the minimal number of four couples, plus a few juveniles, as the total population of this handsome eagle in northeastern Rio Grande do Sul. The localized occurrence and the apparent absence of this species in ornithologically well-known sites of the Planalto das Araucárias, like Centro de Conservação da Natureza Pró-Mata, Parque Nacional de Aparados da Serra, Parque Nacional da Serra Geral and neighbourhoods, point out to the species low densities described elsewhere (Collar *et al.* 1992, BirdLife International 2000, 2004).

We recorded no nesting. However, the presence of a possible nearly adult bird indicates that some breeding activity may occur. Moreover, suitable nest sites such as rock slopes and tree tops (even exotic ones like *Eucalyptus* spp.) cited in the literature (e.g., De La Peña 1992, Andrade and Andrade 1998a, BirdLife International 2000, 2004,) are widespread in the study region. However, it is equally possible that the juvenile bird may have dispersed from other areas.

The Campos de Cima da Serra is one of the most impor-

tant tourism centre of Rio Grande do Sul, attracting visitors chiefly from other Brazilian states, who seek the “European landscape” of local places. Therefore, the municipal administrations claim for facilities like an airport, a project presently hindered by Brazilian environmental agencies. Furthermore, there are several dams, projected or in construction. Although they will not flood the mixed grassland/forest habitats, the future associated power lines are a possible cause of injuries for large birds. Power lines are known to be important sources of mortality for raptor populations throughout the world (Janss and Ferrer 2001, Rubolini *et al.* 2001). These threats, allied to major impacts such as hunt and habitat impoverishment lead chiefly by the rapid conversion of large blocks of grasslands into pine plantations, point to the urgent need for regional conservation efforts directed at the rich top predator guild, which includes, besides *H. coronatus*, *S. papa*, *G. melanoleucus*, *H. meridionalis* and *B. urubitinga*, the Mantled Hawk, *Leucopternis polionota* (Belton 1994, Bencke *et al.* 2003), the Mountain Lion, *Puma concolor* and the Maned Wolf, *Chrysocyon brachyurus* (Mazzolli *et al.* 2002, Indrusiak and Eizirik 2003).

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