

Natural history notes and conservation of two species endemic to the Espinhaço Range, Brazil: Hyacinth Visorbearer *Augastes scutatus* and Grey-backed Tachuri *Polystictus superciliaris*

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Cotinga 11 (1999): 75–78

São descritas observações comportamentais e notas sobre a conservação de dois endemismos da Cadeia do Espinhaço, Brasil: o beija-flor-de-gravata-verde *Augastes scutatus* e o papa-moscas-de-costas-cinzentas *Polystictus superciliaris*. Machos de *A. scutatus* foram observados realizando comportamento territorial, perseguindo outros beija-flores e vocalizando em poleiros expostos ao redor de recursos florais. Por outro lado, as fêmeas desta espécie nunca foram observadas defendendo territórios, sempre sendo registradas visitando flores mais esparsas e voando para outros locais. Indivíduos de *P. superciliaris* são comumente observados forrageando em arbustos e árvores baixas dos campos rupestres a procura de pequenos insetos. Um ninho encontrado em julho de 1996 e o registro de uma ave jovem em agosto deste mesmo ano na Serra do Curral sugerem que a época reprodutiva desta espécie seja no meio do ano. Embora as duas espécies ocorram em unidades de conservação, sugere-se que *A. scutatus* seja considerado como uma espécie presumivelmente ameaçada no Estado de Minas Gerais pela aparente grande sensibilidade da mesma à mudanças em seu habitat.

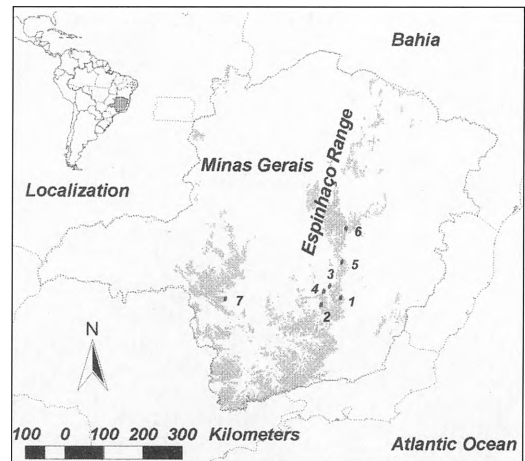
Introduction

The Espinhaço Range encompasses parts of Minas Gerais and Bahia states in Brazil³ (see map), and is covered by campos rupestres vegetation⁴ (Fig. 1). The campos rupestres of the Espinhaço Range are an important centre of plant endemism⁴ and diversity⁶. Typical botanical families found in the campos rupestres are Eriocaulaceae and Velloziaceae^{1,4,12,13,15}. Five bird species are considered endemic to the Espinhaço Range^{18,19}: Hooded Visorbearer *Augastes lumachellus*, Hyacinth Visorbearer *Augastes scutatus*, Cipó Canastero *Asthenes luizae*, Grey-backed Tachuri *Polystictus superciliaris* and Pale-throated Serra-finch *Embernagra longicauda*. Our ornithological knowledge of the Espinhaço Range is incomplete, despite a number of contributions^{2,7,10,11,14,17,20,21}, thus my aim here is to describe field observations of Hyacinth Visorbearer and Grey-backed Tachuri. All observations were made in Minas Gerais.

Hyacinth Visorbearer *Augastes scutatus*

Observations were principally made at Serra do Caraça (20°05'S 43°28'W, municipality of Catas Altas) (Fig. 1) and at Serra do Cipó (19°14'S 43°29'W, municipality of Santana do Riacho) in 1996–1998 at 1,200–1,950 m. Additional observations were made at Serra da Piedade (19°49'S 43°46'W, municipality of Caeté), at Serra da Moeda (20°17'S 43°57'W, municipality of Moeda) in 1997, and at Serra do Gavião (18°26'S 43°25'W, municipality of Serro) in 1998.

Males are highly territorial and can commonly be seen perched and vocalising around clumps of flowering shrubs and herbs. Species flowering in *Augastes scutatus* territories were: *Aspilia tomentosa*, *Dasyphyllum sprengelianum* and



Map showing the sampling localities in Minas Gerais State. 1. Serra do Caraça; 2. Serra da Moeda; 3. Serra da Piedade; 4. Serra do Curral; 5. Serra do Cipó; 6. Serra do Gavião; 7. Serra da Canastra. Shaded areas correspond to elevation above 1,000 m in Minas Gerais State; the southern part of these areas is represented by Serra da Mantiqueira.

Eremanthus crotonoides (Asteraceae), *Stenorrhynchos* sp. (Orchidaceae), *Barbacenia sellowii* (Velloziaceae), and *Stachytarpheta glabra* (Verbenaceae). Males commonly use just 2–3 preferred perches to vocalise: these are usually exposed leafless branches. In March 1997, at Serra do Cipó, a male *Augastes scutatus* was pursued by a Swallow-tailed Hummingbird *Eupetomena macroura* when visiting flowers of *Psittacanthus robustus* (Loranthaceae). In January 1998, at Serra do Caraça, a male pursued a male Glittering-bellied Emerald *Chlorostilbon aureoventris*, flying toward



1



2



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4



5



6

Figure 1. Typical campo rupestre in the Espinhaço Range at 1,900 m, Serra do Caraça, Minas Gerais: the habitat of Hyacinth Visorbearer *Augastes scutatus* and Grey-backed Tachuri *Polystictus superciliaris* (Marcelo F. de Vasconcelos)

Figure 2. Female Hyacinth Visorbearer *Augastes scutatus*, Serra do Cipó, Minas Gerais (Marcelo F. de Vasconcelos)

Figure 3. Male Hyacinth Visorbearer *Augastes scutatus* preening, Serra do Caraça, Minas Gerais (Marcelo F. de Vasconcelos)

Figure 4. Grey-backed Tachuri *Polystictus superciliaris* foraging at candeia *Eremanthus erythropappus*, Serra do Curral, Minas Gerais (Marcelo F. de Vasconcelos)

Figure 5. Grey-backed Tachuri *Polystictus superciliaris* nest, Serra do Curral, Minas Gerais (Marcelo F. de Vasconcelos)

Figure 6. Mining activity at Serra do Curral, Minas Gerais, which has partially degraded the campo rupestre and perhaps led to the extinction of Hyacinth Visorbearer in this area (Marcelo F. de Vasconcelos)

it and toward another unidentified hummingbird. At the same site, in August 1998 a male pursued an unidentified hummingbird and was in turn pursued.

Females were not observed to sing or defend territories but were always seen visiting scattered flowers, although they would sometimes perch near food (e.g. flowers of *Pavonia* sp. at Serra do Cipó) (Fig. 2). Males occasionally would feed in a similar manner (*Barbacenia flava*, *Barbacenia sessiliflora* and *Vochysia* sp.). Males were also observed preening while perched, usually on less exposed branches than those used as song posts (Fig. 3). Some rasped the sides of the bill on their perch. The bill was used to preen the wings, back, breast and rump, while the feet were used to preen the throat and ear-coverts. Stretching behaviour was observed in several males at Serra do Caraça: the tail was opened like a fan, while the wings were raised slightly back and fluttered.

Principal plant species visited by *A. scutatus* were of the families Asteraceae, Convolvulaceae, Leguminosae, Loranthaceae, Lythraceae, Malvaceae, Scrophulariaceae, Velloziaceae, Verbenaceae and Vochysiaceae. The species was also observed feeding on insects: in April 1996, a male was watched perch-gleaning (see Fitzpatrick⁵) from a horizontal branch, where it pecked at a small insect on the same branch. In this behaviour, the bird only stretched its neck toward the insect. On another occasion, also in April 1996, a male hawked⁵ small insects from an exposed branch before returning to the same perch.

Grey-backed Tachuri *Polystictus superciliaris*
Observations were made at Serra do Curral (19°57'S 43°54'W, municipalities of Nova Lima and Belo Horizonte), Serra do Caraça (Fig. 1), Serra da Piedade, Serra do Cipó, Serra do Gavião, and Serra da Canastra (20°14'S 46°21'W, municipality of São Roque de Minas) in 1996–1998 at 1,100–1,950 m.

Individuals were usually observed foraging at shrubs and small trees in campos rupestres (Fig. 4) and in bushy pastures, always above 1,000 m. Most records involved single birds, but pairs and occasionally three individuals foraging together were also observed. Common vocalisations were a rapid and repeated *pitrup-pitrup-pitrup...* and *fruilrilrilrilrilril*. The *pitrup-pitrup-pitrup...* vocalisation was tape-recorded and the bird responded to playback, approaching the observers. Nesting appears to occur in winter. A cup-shaped nest under construction was discovered in July 1996 at Serra do Curral (Fig. 5) and the now-occupied nest contained a single egg in August (see Vasconcelos & Lombardi²⁰). Willis & Oniki²³ observed one “carrying material to a nest (not located)” in July. In August 1996, at Serra do Curral, an immature and adult bird were perched together in the same bush: the former had a clear whitish supercilium, a cream-coloured belly (cleaner than the adult) and a shorter

tail than in adults. It vocalised, a low *fruilrilrilrilrilril*, whereupon the adult flew to another bush 30 m away and gave a higher *fruilrilrilrilrilril*, calling the young to the same bush. Foraging tactics (following Fitzpatrick⁵) were: sally-gleaning (n = 4), perch-gleaning (n = 3) and aerial hawking (n = 1). During sally-gleaning and aerial hawking, the birds were not observed to hover and always returned to the original perch. With the exception of one record—when a bird captured a caterpillar by perch-gleaning—all food items noted were small insects. Although Ridgely & Tudor¹⁶ mention that the species occasionally drops to the ground to forage, I never observed *P. superciliaris* on the ground, and suggest that this behaviour must be relatively uncommon.

Conservation

Although *A. scutatus* is not considered threatened in Minas Gerais^{8,9}, I consider that the species deserves a more critical threat status in the state. *P. superciliaris* is considered near-threatened in Minas Gerais⁸ but can be found above 1,000 m at sites partially degraded by human activities such as mining and in abandoned bushy pastures. *A. scutatus* appears more sensitive to comparatively minor changes to its habitat. It was not observed at partially or highly degraded areas in the Espinhaço range, perhaps because it is more dependent on typical campos rupestres plant species. There are historical records of *A. scutatus* in Belo Horizonte municipality²², but efforts to find the species in the only area of campo rupestre in the municipality (Serra do Curral) were fruitless. Records of *A. scutatus* at this locality were made prior to mining activity at Serra do Curral (Fig. 6) and the modification and destruction of campo rupestre caused by this development may have led to the local extinction of *A. scutatus*. In contrast, *P. superciliaris* and Pale-throated Serra-finch *E. longicauda* still occur at Serra do Curral: indeed, *E. longicauda* appears to be extending its range due to continued deforestation in east Minas Gerais (Machado *et al.*¹⁰, MFV pers. obs.). Despite the provision of biological reserves supporting *A. scutatus* (Serra do Cipó National Park, Caraça Natural Park) and *P. superciliaris* (Serra do Cipó National Park, Serra da Canastra National Park, Caraça Natural Park) in Minas Gerais, I suggest that *A. scutatus* deserves near-threatened status in the state.

Acknowledgements

I am grateful to Alexandre Salino, Andrey Castro, Carlos Carvalho, Carlos Vasconcelos, Cleber Figueredo, Eduardo Almeida, Eduardo Carvalho-Filho, Edwin Willis, Eurípedes Pontes-Júnior, Frederico Vasconcelos, João Stehmann, Julio Lombardi, Lemuel Leite, Livia Temponi, Luisa Atzeni, Marcelo Fonseca, Marcos Coelho, Marcos Rodrigues, Marcos Osório, Paulo Corgozinho,

Prinscila Oliveira, Renata Durães, Tadeu Melo-Júnior and Yoshika Oniki who all assisted in my fieldwork. In addition, I thank Pe. Célio Dell'Amore for enabling me to study in Caraça Natural Park and IBAMA for their hospitality in the Serra do Cipó National Park. Cássio Martins (Fundação Biodiversitas) kindly prepared the map. Finally, I thank Dr Marcos Rodrigues (Universidade Federal de Minas Gerais) for his revision of the manuscript and Rolf Grantsau for permitting me to visit his hummingbird collection at São Bernardo do Campo.

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