

Range extension of *Thaumastus caetensis* Pena, Salgado and Coelho, 2011 (Gastropoda: Orthalicidae: Bulimulinae) in the highlands of Minas Gerais, southeastern Brazil

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ABSTRACT: *Thaumastus caetensis* Pena, Salgado and Coelho, 2011 is a recently described species from Serra da Piedade (19°49'19" S, 43°40'46" W), Caeté municipality, Minas Gerais, southeastern Brazil. We present a new record of this species based on a young specimen collected in the highlands of Reserva Particular do Patrimônio Natural Santuário do Caraça, at Serra do Caraça (20°08'04" S, 43°27'09" W). This species is probably restricted to the "campos rupestres", above 1,400 m above sea level and the new record represents the only known protected occurrence within the species' range.

The American subfamily Bulimulinae ranges from Florida (USA) to 34° S in Argentina (Breure 1979). In this subfamily, *Thaumastus* Albers, 1860 is a South American genus of land snails represented by six subgenera: *Thaumastus* s.s., *T. (Scholvenia)*, *T. (Kara)*, *T. (Quechua)* and *T. (Atahualpa)* described by Strebel (1910), and *T. (Thaumastiella)* described by Weyrauch (1956). The only subgenus recorded in Brazil is *Thaumastus* (Breure 1979), with 31 species, which has been studied by several authors in the last years (Jurberg *et al.* 1979, 1988; Barros *et al.* 1991; Salgado and Coelho 1995; Salgado *et al.* 1995; Pena *et al.* 1996, 2005, 2011). In the state of Minas Gerais, southeastern Brazil, there are records for four species that are associated to limestone outcrops or mountain tops (Pena *et al.* 2005, 2011). *Thaumastus (Thaumastus) caetensis* Pena, Salgado and Coelho, 2011 (Figure 1) is a recently described species (Pena *et al.* 2011) known solely from its type locality in the Serra da Piedade (19°49'19" S, 43°40'46" W), Caeté municipality, southern Espinhaço Range, Minas Gerais, southeastern Brazil. This species is restricted to "campos rupestres" vegetation (see Vasconcelos 2011), usually above 1,400 m above sea level.

On 13 April 2000, while working in the "campos rupestres" of Pico do Inficionado (20°08'04" S, 43°27'09" W – ca. 2,060 m above sea level), Reserva Particular do Patrimônio Natural Santuário do Caraça, at Serra do Caraça, Catas Altas municipality, Minas Gerais (Figure 2), MFV collected a specimen of this species. The specimen was collected alive through visual searching and hand-picking. It was fixed in 10% formalin solution, and transferred to 70% alcohol. Collecting permission was unnecessary for invertebrates in 2000 and Pe. Célio M. Dell'Amore, director of the reserve, permitted this scientific activity (verbally). The specimen was identified by MSP as *Thaumastus caetensis* based on its original description: "Shell thick, oval-lengthened, apex truncated; yellowish-brown with wide and narrow axial reddish-brown bands irregularly

alternated; protoconch with oblique striae slightly undulated and straight nucleus, and 2¾ whorls (Figure 3). Teleoconch with axial thickened lines; thin, shiny and adhered periostracum; convex body whorl with slightly evident suture (Figure 4); aperture oval-lengthened, smaller than half of total shell height, roundly and large at base and sharp at apex; thin and white peristome; columellar callus straight and inclined" (Pena *et al.* 2011: 534). The specimen was a young and presented the following measurements (in mm): height 36.8, width 21.1, height of aperture 21.0 mm and width of aperture 11.6. This specimen was deposited in the mollusk collection of the Museu de Ciências Naturais, Pontifícia Universidade Católica de Minas Gerais, under the number MCN 390.



FIGURE 1. Ventral (A) and dorsal (B) views of specimen of *Thaumastus caetensis* (MCN 390) collected at the Pico do Inficionado, Serra do Caraça, Minas Gerais; bar = 8 mm. Photo: Wellinson Brito.

This is the second record of this little-known species. It shares a pattern of distribution very similar to some plant species restricted to the "campos rupestres" of the highest peaks from southern Espinhaço Range. Examples

include *Huperzia rubra* (Cham.) Trevisan (Lycopodiaceae), *Cattleya longipes* (Rchb.f.) Van den Berg (Orchidaceae) and *Fuchsia coccinea* Curt. (Onagraceae). Some of these plant species occur in the highest elevations (above 1,400 m above sea level) of Serra da Piedade, Serra do Caraça and also in the “serras” of Ouro Preto and Mariana municipalities (Vasconcelos *et al.* 2002, R. C. Mota personal communication). Based on these endemic plant taxa, restricted to high elevation “campos rupestres” of southern Espinhaço Range, it is possible that *T. caetensis* will be found on other high mountains of Ouro Preto and Mariana municipalities.



FIGURE 2. “Campos rupestres” of Pico do Inficionado, Serra do Caraça, Minas Gerais, typical habitat of *Thaumastus caetensis*. Photo: Marcelo Ferreira de Vasconcelos.



FIGURE 3. Apex sculpture detail of specimen of *Thaumastus caetensis* (MCN 390) collected at the Pico do Inficionado, Serra do Caraça, Minas Gerais. Photo: Wellinson Brito.

The new record in the Serra do Caraça is very important for this species’ conservation, because it is the only one within a protected area. Serra da Piedade and other high mountains of southern Espinhaço Range have been intensely degraded by human activities, especially illegal fires set to burn the “campos rupestres” in the dry season. In this context, the fern *H. rubra* is locally extinct in Serra da Piedade and in other mountains of Ouro Preto and Mariana municipalities, including Pico do Itacolomi State Park (Vasconcelos *et al.* 2002). Thus, it is extremely important to find new localities of occurrence of *T. caetensis* in order to assess the real conservation status of this probably montane endemic and restricted range species. Finally, we stress that it is important to avoid confusion of this rare species to the exotic and invader *Achatina fulica*, the African land snail, which is usually larger. Nevertheless, the identification should always be based on the species diagnosis (Pena *et al.* 2011).



FIGURE 4. Suture detail of specimen of *Thaumastus caetensis* (MCN 390) collected at the Pico do Inficionado, Serra do Caraça, Minas Gerais. Photo: Wellinson Brito.

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