



# MAXIMILIAN'S BLUE-TAILED MICROTEIID

*Micrablepharus maximiliani*  
(Reinhardt & Lütken, 1862)



**Figure 1** - *Micrablepharus maximiliani*, lateral view, Reserva Natural Laguna Blanca, Dpto. San Pedro (Karina Atkinson/Para La Tierra 23 June 2010)

**ALTERNATIVE NAMES** The generic name *Micrablepharus* is from the Greek *mikros* meaning small and *blepharon* meaning eyelids. The specific name *maximiliani* is in honour of Maximilian Alexander Philip Prince zu Wied-Neuwied (1782-1867) a German explorer and collector in Brazil.

**English** : Maximilian's Blue-tailed Microteiid (Smith 2011), Blue-tailed Lizard (Sousa & Freire 2010).

**TAXONOMY** Synonyms adapted from The Reptile Database (<http://reptile-database.reptarium.cz/>).

*Gymnophthalmus Maximiliani* Reinhardt & Lütken 1862: 211 Type locality Sergipe, Brazil.

*Micrablepharus maximiliani* Boulenger 1885: 426

*Micrablepharus glaucurus* Boettger 1885: 218

*Micrablepharus dunni* Laurent 1949

*Micrablepharus maximiliani* Peters et al. 1970: 204

*Micrablepharus maximiliani* Dirksen & de la Riva 1999

*Micrablepharus maximiliani* Castoe et al. 2004

**DESCRIPTION** A small, superficially skink-like lizard with brownish body, creamy dorsolateral band and long blue tail. Dorsal surface rich brown, broad lateral band blackish-brown and venter whitish. Upperside of limbs blackish-brown, underside whitish. Underside of tail blackish with thin whitish scale edges. Body slender and slightly dorso-laterally flattened, with small rounded dorsal and ventral scales. Body elongated, legs short. (Vanzolini et al 1980).

**Head scales:** Rostrum well-defined in dorsal view. Frontonasal enlarged, prefrontals absent and frontal small. Frontoparietal small and interparietals longer than parietals, reaching to the temporal region. A pair of large scales are located posterior to the parietals, separated along the medial line of the body by a single scale contacting the interparietals. Two supraoculars thinner anteriorly (almost triangular) and contacting the frontonasal. Two elongated superciliaries, expanding slightly anteriorly. Nostril in a large, elongated nasal scale. Large, high loreal in ample contact with frontonasal. Small scale between the loreal and orbit and long, thin infraorbital. Temporal region with large scales. Supralabials 8. Single symphyseal and postsymphyseal relatively large, followed posteriorly by three pairs of polygonal scales of increasing size which are in contact with infralabials laterally. In at least one specimen from Laguna Blanca the symphyseal and postsymphyseal are fused. Gular scales similar to ventral, with poorly defined collar of 5 to 7 scales. (Vanzolini et al 1980).

**Body scales:** Dorsal scales small, smooth, semicircular and imbricate. Venter and first third of the tail with similar scale pattern to the dorsum. The distal part of the tail on all surfaces is covered by keeled, pointed scales. 16 scale rows around the body. Anal scale variable but typically with three large scales on posterior margin. (Vanzolini et al 1980).

**Limbs:** Dorsal surface of forelimbs covered in smooth, sound imbricate scales. Ventral surface with scales similar to those of the ventral body surface, but much smaller. Palm with large granules. Infradigital lamellae laterally compressed and median tubercle. Four digits on all feet. Anterior and ventral faces of the coxa with scales similar to those of the body. Anterior tibial scales small, smooth and slightly imbricate. Males with 5 to 6 pores on each side, partially covered by an anterior scales and with 2 or 3 small scales separating them. Tibial squamification continuous with that of the coxa except on the posterior side. Males with 5 to 6 femoral pores on each side. (Vanzolini et al 1980).

**GEOGRAPHICAL VARIATION** None reported

**IDENTIFICATION** No other Paraguayan lizard has a blue tail contrasting with broadly-striped brown body. Members of the genus *Mabuya* are superficially similar, but all Paraguayan Scincidae have tails that are concolorous with the body.

**DISTRIBUTION** In Brazil the species is found in Alagoas, Bahía, Ceará, Distrito Federal, Espírito Santo, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraíba, Pernambuco, Piauí, Rio de Janeiro, Rio Grande do Norte, Sergipe and Tocantins States. Reports from Rondônia, Brazil by Vitt & Caldwell (1993) apparently refer to the similar, closely related *M.atticolus*. In Bolivia there is a single record from Cerro Colorado, Departamento Santa Cruz (S19°27' W62°21'). (Ribeiro de Moura et al 2010)

In Paraguay there are few locality records with specimens: Tobati, Departamento Cordillera (S25°15' W57°04' - UMMZ 146754); PN Ybycui, Departamento Paraguari (S26°01' W57°03' - MNHNP 8445); San Pedro del Ycuamandyyu, Departamento San Pedro (S24°03' W57°04' - MNHNP 11466) (Cacciali 2010, Ribeiro de Moura et al 2010); Reserva Natural Laguna Blanca, Departamento San Pedro (S23°48'40.4" W56°17'34.2" - CZPLT-H-011; CZPLT-H-070). (Smith et al 2011).

**HABITAT** Ribeiro de Moura et al (2010) provided a review of the known distribution of this species. Of 137 records, 53.28% were from cerrado areas and 17.51% from caatinga. Records were much fewer in transitional areas at the edge of these habitats, Humid Chaco 2.91%, Pantanal 1.45%, Dry Chaco 0.007% and there were some records from purely forest biomes Amazonia 6.56 % and Atlantic Forest 17.51% that were also in a zone of transition from cerrado or caatinga. Given the variability of the plant community structures that make up the cerrado and caatinga habitats that comprise the bulk of the species range, the oft-cited description of this species habitat as "open areas" is likely an oversimplification of its habitat requirements.

**In Paraguay:** Though classified as Humid Chaco by Ribeiro de Moura et al (2010) specimens at Tobati and PN Ybycui were in a transition zone from Humid Chaco to Atlantic Forest, known locally as "Paraguay Central" (Cacciali 2010). In fact the habitat at Ybycui at least is much closer to pure Atlantic Forest than it is to Humid Chaco. Laguna Blanca specimens were captured and observed mainly in disturbed transitional humid/cerradón forest and cerradón forest islands. None were captured in open campo limpio cerrado despite extensive pitfall trapping effort (Anna Kollberg in litt). In Paraguay at least the limited data suggests that the species prefers forest fragments, or areas with bushy vegetation. Greater

sampling effort in the cerrado zone will likely confirm that the bulk of the species distribution is in this habitat with occurrence in transitional areas being an effect of colonisation, mirroring the pattern found in Brazil.

**In Brazil:** In Minas Gerais (Ribeiro de Moura et al 2010) found the species in Atlantic Forest fragments close to the Rio Doce, but the authors commented that the species presence there was probably a result of colonisation from surrounding cerrado or caatinga. Other records in the state are typically in cerrado areas, or in areas of transition from cerrado to Atlantic Forest. With greater sampling a similar pattern is likely to be observed in Paraguay, with the under-sampled cerrado biome representing the bulk area of range of the species and transitional areas representing suboptimal habitats.

Vitt (1991) considered the species typical of open areas but noted an association with leafcutter ant *Atta* sp. nests in the cerrado of Mato Grosso, Brazil. Vanzolini et al (1980) state that they prefer areas with warmer climates within the caatinga biome of Brazil.

**HABITS** A small, shy, terrestrial lizard associated with leaf litter (Vanzolini et al 1980). This is a diurnal lizard active all year round. Seven of 10 observations by Vitt (1991) during February in Mato Grosso, Brazil were between 3-5pm, with the earliest observation at 10am.

Specimens observed on forest trails at Reserva Natural Laguna Blanca rapidly hid themselves under fallen trunks or tree roots when approached by an observer (Smith et al 2011). Vitt (1991) noticed an association with *Atta* ant nests which were used as a refuge by the species, though the ants themselves were not consumed. Vitt & Caldwell (1993) described a specimen rapidly burying itself in soft sand, disappearing from sight, when approached.

**DIET AND FEEDING BEHAVIOUR** Vitt (1991) described the species as a terrestrial wide-forager in the cerrado of Brazil, typically foraging amongst leaf litter and within grass clumps. The following invertebrate groups were recorded in the diet: Araneae, Cercopidae and Cicadellidae, though the sample size was very small. Mean prey dimensions (n=34) were 4.75 (+/-0.38) x 1.46 (+/-0.09) mm.

**GENERAL BEHAVIOUR** The tail is autotomous and the bright colouration may be designed to draw attention to it when fleeing a predator. (P.Smith pers. obs.)

**BREEDING BEHAVIOUR** Oviparous. Two eggs are produced in a clutch (Vitt 1991).

**PHYSIOLOGY** Teixeira et al (1999) described the ultrastructure of mature spermatozoa of this species.

**STATUS AND CONSERVATION** Not globally threatened. Motte et al (2009) consider the species Data Deficient in Paraguay. Cacciali (2010) described the species as "very rare" in Paraguay on the basis of the very few records known at that time, however Smith et al (2011) report the species as fairly common at Reserva Natural Laguna Blanca, Departamento San Pedro. This being a small, terrestrial, forest lizard, prone to hiding at the approach of an observer, it does not lend itself to easy detection or capture by methods typically employed by herpetologists on short term collecting or monitoring trips. The application of pitfall traps with drift fences over longer sampling periods by fieldworkers from Para La Tierra Research Station based at RNLB was crucial to the increased capture rate of this species and provided a much clearer image of the species abundance. It would seem likely that this small lizard is not so much rare as overlooked in Paraguay, and in some areas may even be quite common. Little sampling of this kind has been performed in the cerrado zone in Paraguay, which may perhaps be considered the optimal habitat type for this species in Paraguay given the paucity of records from much better sampled habitats such as Atlantic Forest.

**MEASUREMENTS** Vanzolini et al (1980) give an SVL of 40mm.

Vitt (1991) provides the following measurements for 10 specimens from Brazil: SVL 36.5mm (+/-0.7); Head Width 5mm (+/-0.03); Hind Leg Length 13.2mm (+/-0.2); Mass 1.02g (+/-0.02).

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**Figure 2** - *Micrablepharus maximiliani*, dorsal view, Reserva Natural Laguna Blanca, Dpto. San Pedro (Karina Atkinson/Para La Tierra 23 June 2010)



**Figure 3** - *Micrablepharus maximiliani*, ventral view, Reserva Natural Laguna Blanca, Dpto. San Pedro (Karina Atkinson/Para La Tierra 23 June 2010).