

# First country record of *Atractus medusa* (Serpentes, Dipsadidae) in Ecuador

Diego F. Cisneros-Heredia\* and Ana Romero

The Pacific lowlands on Colombia and Ecuador hold an exceptional concentration of biological diversity (Myers et al., 2000), but suffer heavily from on-going, extensive habitat loss (Beck et al., 2008). Increasing knowledge on the biodiversity of this region is a key factor to support and develop strategies for its long-term conservation and sustainable development. Unfortunately, information on the amphibians and reptiles of western Ecuador is limited, with several species undescribed, unreported, or little known, and many areas unexplored (Bustamante et al., 2007; Guayasamin et al., 2008; Torres-Carvajal et al., 2008; Cisneros-Heredia et al., 2010; Salazar-Valenzuela et al., 2015; Torres-Carvajal et al., 2015). Herein, we present the first country record of *Atractus medusa* Passos, Mueses-Cisneros, Lynch & Fernandes from Ecuador.

A specimen of *Atractus medusa* (deposited at the Laboratorio de Zoología Terrestre, Universidad San Francisco de Quito, DFCH-USFQ 191.101109, Figs. 1–2) was collected by Ana Romero at Tundaloma, a private lodge located ca. 14.7 km SSE from the town of San Lorenzo, province of Esmeraldas, Republic of Ecuador (1°10'57.7" N, 78°45'10.1" W, 55 m) on 10 November 2009 (Fig. 3). *Atractus medusa* was recently described based on a single specimen collected at Playa Blanca, Gorgona Island, department of Cauca, Colombia (Passos et al., 2009). The new locality (Fig. 3) is the second known for the species, the first record for Ecuador, and represents an extension of *A. medusa*'s

geographic range of ca. 207 km SSW from the type locality (Passos et al., 2009).

The Ecuadorian specimen of *A. medusa* exhibits all diagnostic features described by Passos et al. (2009), including: 17-17-17 smooth dorsal scale rows; two postoculars; one long loreal; temporals 1+2; seven supralabials (third and fourth contacting orbit on one side, just fourth contacting on the other side); seven infralabials; first four contacting chinshields; five prediastemal and one postdiastemal maxillary teeth; three gular scale rows; two prefrontals; dark brown head with beige temporal region; light brown body with light occipital band, dark nuchal collar, and round dark blotches; light venter with diffuse dark dots concentrated posteriorly; dark ventral surface of tail; and rather long tail.

*Atractus medusa* was described on the basis of a single male specimen, and no females have been reported so far (Passos et al., 2009). The Ecuadorian specimen is a juvenile female, chromatic and structurally similar to the holotype, differing by having more ventrals (146) and less subcaudals (33). These differences are easily explained by usual sexual dimorphism displayed by the genus (Savage, 1960; Passos et al., 2005).

No information about the colouration in life or natural history of *Atractus medusa* was provided in the original description. The colouration in life of the Ecuadorian specimen of *A. medusa* was similar to the pattern described for the preserved holotype, but with some minor variation (underlined): Dark brown head with invasion of beige towards the temporal region; light brown dorsum with light occipital band followed by dark nuchal collar and round dark brown blotches, decreasing in size posteriorly; darker brown, black and beige scales surrounding the black body blotches, ventral surfaces yellowish cream with diffuse dark brown dots towards the lateral borders of the scales and concentrated on posterior half of body; dark brown tail with some small

---

Universidad San Francisco de Quito (USFQ), Colegio de Ciencias Biológicas & Ambientales, Laboratorio de Zoología Terrestre, campus Cumbayá, Casilla Postal 17-1200-841, Quito, Ecuador.

\* Corresponding author e-mail:

diegofrancisco.cisneros@gmail.com



**Figure 1.** Dorsal view of *Atractus medusa* (USFQ 191.101109) collected at Tundaloma, province of Esmeraldas, Republic of Ecuador.

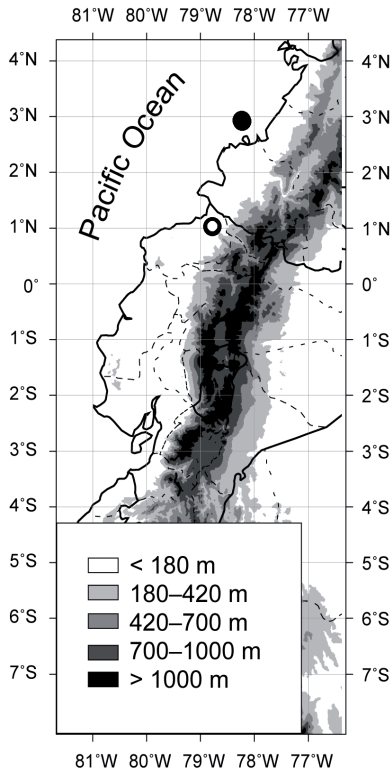
cream marks (Fig. 1–2). The Ecuadorian specimen of *A. medusa* was found active at night (19h00) among leaf-litter on the floor of the forest. It was on a hilly area covered by secondary non-seasonal lowland evergreen forest. An individual of *Oxyrhopus petola* was found ca. 0.2 m apart from the *A. medusa*.

*Atractus* Wagler is the most diverse snake genus in the world, with over 140 described species (Passos et al., 2013; Köhler and Kieckbusch, 2014; Salazar-Valenzuela et al., 2014), but the taxonomy, distribution and natural history of the *Atractus* from the Pacific lowlands on western Ecuador remain largely unknown (Passos et al.,



**Figure 2.** Ventral view of *Atractus medusa* (USFQ 191.101109) collected at Tundaloma, province of Esmeraldas, Republic of Ecuador.





**Figure 3.** Map of southwestern Colombia and western Ecuador showing the two known localities of *Atractus medusa*: Gorgona island, Colombia (type-locality, black circle) and Tundaloma, Ecuador (open circle).

2009). Four species of *Atractus* are currently known to inhabit the Pacific lowlands of Ecuador (below 1000 m): *Atractus microrhynchus* (Cope), endemic to central and southwestern Ecuador and northwestern Peru; *A. medusa* Passos, Mueses-Cisneros, Lynch & Fernandes herein reported; *A. multicinctus* (Jan) with records from the provinces of Esmeraldas and Imbabura in Ecuador; and *A. paucidens* Despax, endemic to Ecuador and known from the provinces of Pichincha and Santo Domingo de los Tsáchilas (Savage, 1960; Passos et al., 2009; Passos et al., 2012). A photographic report of *Atractus* sp. (cf. *melas*) from the Bilsa Biological Station, province of Esmeraldas, northwestern Ecuador (Ortega-Andrade et al., 2010) corresponds to *A. multicinctus*, showing an *Atractus* with bright red nuchal collar and ventral surfaces.

**Acknowledgements.** We are grateful to Universidad San Francisco de Quito for institutional support; to Andrés Chiriboga for allowing fieldwork at Tundaloma; to Germanía Lucero and Jaime Romero for her financial and moral support; to Verónica Garcés and local staff of Tundaloma for fieldwork assistantship; to Ma. Elena Heredia, and Laura Heredia for their constant support; to Pablo Riera for laboratory support; and to Paulo Passos for providing comments on an earlier draft of this paper. The specimen herein reported was obtained under the research and collection permit issued to Ana Romero by the Ministry of Environment of Ecuador (No. 0037 Fauna-DPE-MA).

## References

- Bustamante, M.R., Cisneros-Heredia, D.F., Yáñez-Muñoz, M.H., Ortega-Andrade, H.M., Guayasamin, J.M. (2007): Amphibia, Centrolenidae, *Cochranella pulverata*, *Hyalinobatrachium aureoguttatum*: distribution extension, Ecuador. *Check List* **3**(3): 271–276.
- Beck, E., Bendix, J., Kottke, I., Makeschin, F., Mosandl, R. (2008): Gradients in a Tropical Mountain Ecosystem of Ecuador. *Ecological Studies* 198. Berlin, Germany, Springer Verlag.
- Cisneros-Heredia, D.F., Yáñez-Muñoz, M.H. Ortega-Andrade, H.M. (2010): Endemic Ecuadorian glassfrog *Cochranella mache* is Critically Endangered because of habitat loss. *Oryx* **44**(1): 114–117.
- Guayasamin, J.M., Cisneros-Heredia, D.F., Castroviejo-Fisher, S. (2008): Taxonomic identity of *Cochranella petersi* Goin, 1961 and *Centrolenella ametarsia* Flores, 1987. *Zootaxa* **1815**: 25–34.
- Köhler, G., Kieckbusch, M. (2014): Two new species of *Atractus* from Colombia (Reptilia, Squamata, Dipsadidae). *Zootaxa* **3872**(3): 291–300.
- Myers, N., Mittermeier, R.A., Mittermeier, C.G., Da Fonseca, G.A., Kent, J. (2000): Biodiversity hotspots for conservation priorities. *Nature* **403**(6772): 853–858.
- Ortega-Andrade, H.M., Bermingham, J., Aulestia, C., Paucar, C. (2010): Herpetofauna of the Bilsa Biological Station, province of Esmeraldas, Ecuador. *Check List* **6**(1): 119–154.
- Passos, P., Fernandes, R., Zanella, N. (2005): A new species of *Atractus* (Serpentes: Colubridae) from southern Brazil. *Herpetologica* **61**: 209–218.
- Passos, P., Mueses-Cisneros, J.J., Lynch, J.D., Fernandes, R. (2009): Pacific lowland snakes of the genus *Atractus* (Serpentes: Dipsadidae), with description of three new species. *Zootaxa* **2293**: 1–34.
- Passos, P., Cisneros-Heredia, D.F., Rivera, D.E., Aguilar, C., Schargel, W.E. (2012): Rediscovery of *Atractus microrhynchus* and reappraisal of the taxonomic status of *A. emersoni* and *A. natans* (Serpentes: Dipsadidae). *Herpetologica* **68**(3): 375–392.
- Passos, P., Kok, P.R.J., Albuquerque, N.R., Rivas, G.F. (2013): Groundsnakes of the lost world: A review of *Atractus* (Serpentes: Dipsadidae) from the Pantepui region, Northern South America. *Herpetological Monographs* **27**: 52–86.
- Salazar-Valenzuela, D., Torres-Carvajal, O., Passos, P. (2014): A new species of *Atractus* (Serpentes: Dipsadidae) from the Andes of Ecuador. *Herpetologica* **70**(3): 350–363.

- Salazar-Valenzuela, D., Martins, A., Amador-Oyola, L., Torres-Carvajal, O. (2015): A new species and country record of threadsnakes (Serpentes: Leptotyphlopidae: Epictinae) from northern Ecuador. *Amphibian & Reptile Conservation* **8**(1): 107–120 (e89).
- Savage, J.M. (1960): A revision of the Ecuadorian snakes of the genus *Atractus*. *Miscellaneous Publications of the Museum of Zoology, University of Michigan* **112**:1–86.
- Torres-Carvajal, O., Almendáriz, A., Valencia, J., Yáñez-Muñoz, M.H., Reyes, J.P. (2008): A new species of *Enyalioides* (Iguanidae: Hoplocercinae) from southwestern Ecuador. *Papéis Avulsos de Zoología* **48**(20): 227–235.
- Torres-Carvajal, O., Venegas, P. J., de Queiroz, K. (2015): Three new species of woodlizards (Hoplocercinae, *Enyalioides*) from northwestern South America. *ZooKeys* **494**: 107–132.