



## The taxonomic status of the Venezuelan snakes *Atractus matthewi* and *A. nororientalis* (Serpentes, Colubridae)

PHILIPPE J. R. KOK<sup>1</sup>, GILSON A. RIVAS FUENMAYOR<sup>2</sup> and OLIVIER S. G. PAUWELS<sup>3</sup>

<sup>1,3</sup>Department of Vertebrates, Royal Belgian Institute of Natural Sciences, 29 rue Vautier, B-1000 Brussels, Belgium; Email: Philippe.Kok@naturalsciences.be, osgpauwels@hotmail.com

<sup>2</sup>Museo de Historia Natural La Salle, Apartado Postal 1930, Caracas 1010-A, Venezuela; Email: anolis30@hotmail.com, gilson.rivas@fundacionlasalle.org.ve

About 20 species of the colubrid snake genus *Atractus* have been reported from Venezuela (Markezich & Barrio-Amorós 2004). Our attention was recently drawn to the simultaneous description of two new and very similar *Atractus* species from northeastern Venezuela (Markezich & Barrio-Amorós 2004, Sánchez *et al.* 2004). In this paper we show that these two species are actually conspecific and that *Atractus nororientalis* Sánchez, De Sousa, Esqueda & Manzanilla, 2004 is a junior synonym of *Atractus matthewi* Markezich & Barrio-Amorós, 2004.

The description of *Atractus matthewi* was published in English in the *Bulletin of the Maryland Herpetological Society*, while that of *Atractus nororientalis* was published in Spanish in *Saber*, Universidad de Oriente, Venezuela. Both species were described from the same area, with both articles mentioning that manuscripts were received in July 2004, accepted in July 2004 and published in September 2004. In their description of *Atractus nororientalis* Sánchez *et al.* even referred to paratypes of *A. matthewi* as “referred material” explaining that “*Los especímenes EBRG 3952, 3953 y 3954, capturados durante las actividades de campo por los autores y depositados en la colección de reptiles de EBRG, fueron tomados en calidad de préstamo por terceras personas durante la ejecución de este proyecto y no devueltos a su debido tiempo. Por ese motivo, no se pudo realizar la verificación de algunas de sus características taxonómicas. Esto adicionalmente, imposibilitó su inclusión como parte de la serie tipo de la especie. Sin embargo, se suministran algunos datos de estos ejemplares y se mencionan en el aparte de “Material referido”*. Which means: “The specimens EBRG 3952, 3953 and 3954, captured during field activities by the authors and deposited in the collection of reptiles of EBRG, were borrowed by third persons during the execution of this project and were not returned within the time allowed. For that reason, the verification of some of their taxonomical characteristics could not be carried out. Additionally, their inclusion as part of the type series was impossible. However, some data about these specimens are provided and they are mentioned as “Referred material” ” (free translation by us).

The following questions then arose: (1) are *Atractus matthewi* and *A. nororientalis* conspecific; (2) in this case which species should be considered a junior synonym since the manuscripts were apparently published simultaneously? *Atractus matthewi* was described on the basis of six specimens (2 adult males, 1 adult female, 1 juvenile female, and 2 juveniles of undetermined sex), while *A. nororientalis* was described on the basis of 2 specimens (1 adult male and 1 adult female). We have examined the holotype of *A. matthewi* (AMNH 29316) and compared it with good quality digital photographs of the holotype (EBRG 4453) and the paratype (EBRG 4454) of *A. nororientalis* [unfortunately the Museo de la Estación Biológica de Rancho Grande (EBRG) refused to lend type material (F. Bisbal, *in litt.* to PJRK, 8 January 2007) and also refused to let us reproduce the type pictures here]. We carefully compared both original descriptions as well (important morphological and colouration characters are shown in Table 1). These comparisons unambiguously revealed that *Atractus matthewi* and *A. nororientalis* are not distinguishable in any morphological nor colouration character. Authors reported the same intraspecific variations (*i.e.* in the temporal scalation, with the presence of an elongate or shortened upper temporal). Nevertheless, some slight differences were noted like the number of maxillary teeth (6-7 in *A. nororientalis* vs. 8-9 in *A. matthewi*), but Markezich & Barrio-Amorós (2004: 116) stated that the character could not be determined in two other specimens. Markezich & Barrio-Amorós (*pers. comm.*, Apr. 2007) took empty sockets (2-3 in most specimens) into account for their tooth counts; it is probable that Sánchez *et al.* (2004) counted only the teeth, ignoring empty sockets, which would explain the slight difference in the tooth counts between the two descriptions of the same species. Slight differences were also noted in the number of ventral scales (157-165 in *A. nororientalis* vs. 160-168 in *A. matthewi*); in the number of supralabials (7 in *A. nororientalis* vs. 6-7 in *A. matthewi*); and in the number of infrala-

bials (7-8 in *A. nororientalis* vs. 6-7 in *A. matthewi*). Sánchez *et al.* (2004) reported a total length of 224-408 mm in *A. nororientalis*, while Markezich & Barrio-Amorós (2004) reported a total length of 170-372 mm in *A. matthewi*. These minor differences can be considered as reflecting intraspecific variation and are certainly not a valid argument to separate the species; we thus conclude that both of them are conspecific.

**TABLE 1.** Selected diagnostic characters of *Atractus matthewi* and *A. nororientalis*. Abbreviations used are: TL = total length in mm, DSR = dorsal scale rows, V = ventrals, SC = subcaudals, SL = supralabials, IL = infralabials, T = temporals, MT = maxillary teeth.

Species	TL	DSR	V	SC	SL	IL	T	MT	Dorsal colouration	Ventral colouration
<i>A. matthewi</i>	170-372	17-17-17	160-168	23-28	6-7	6-7	1+2	8-9	Uniform medium brown	Cream with transverse dark banding
<i>A. nororientalis</i>	224-408	17-17-17	157-165	24-26	7	7-8	1+2	6-7	Uniform medium brown	Cream with transverse dark banding

It should be noted that the type locality of *Atractus nororientalis* and the locality of some paratypes of *A. matthewi* (EBRG 3952-54) result from an error of interpretation from the collectors. The real name for that locality is “Cerro El Guamal, vertiente sur-oeste del Macizo del Turimiquire, estado Anzoátegui (10°01'28"N, 64°07'44"W)”. The Cerro La Laguna is lower than El Guamal (ca. 1400 m asl), but relatively close to it. Some pictures of the supposed Cerro La Laguna appeared in a publication of Manzanilla *et al.* (2000), but they were in fact taken in the antennas of the Cerro El Guamal. One of us (GARF) confirmed it in several occasions during fieldwork on *Mabuya croizati* in the Turimiquire massif. Thus when Markezich & Barrio-Amorós (2004) and Sánchez *et al.* (2004) cited Cerro La Laguna, it must be understood as Cerro El Guamal.

The taxonomic status of the species being resolved, we could have referred to Article 24.2.1 of the International Code of Zoological Nomenclature (ICZN 1999) which states: “When the precedence between names or nomenclatural acts cannot be objectively determined, the precedence is fixed by the action of the first author citing in a published work those names or acts and selecting from them; this author is termed the “First Reviser”.” (ICZN 1999). However, further investigations revealed that it is unnecessary because the publication date of the journal *Saber* is erroneous. At the beginning of 2005, GARF sent a letter to the Editor of the journal *Saber* in order to know the status of the manuscript. On 24<sup>th</sup> January 2005, the Editor replied that the manuscript would be published in the July-December 2004 issue, which was in press (G. Ojeda *in litt.* to GARF). We recently examined the complete volume 16 number 2 of the journal *Saber*, which bears the mention: “Se terminó de imprimir en los talleres de la Editorial Universitaria de la Universidad de Oriente en el mes de julio de 2005 Cumaná/Estado Sucre/Venezuela” meaning that the volume was printed in the University Press of the Universidad de Oriente, Cumaná, Estado Sucre, Venezuela during the month of July 2005.

Consequently, according to the Principle of Priority (Article 23, ICZN 1999), *Atractus nororientalis* is to be regarded as a junior synonym of *A. matthewi*.

As mentioned above, some paratypes of *A. matthewi* (EBRG 3952-54) were collected by the senior author of *Atractus nororientalis*: D.[inora] S.[ánchez] Hernandez (see Markezich & Barrio-Amorós 2004). A better communication would certainly have avoided this duplication of effort. It is surprising to notice that specimens collected by D. Sánchez were lent to colleagues and that Sánchez apparently did not contact them to verify that they were not describing the same new species.

*Acknowledgements.* We warmly thank David A. Kizirian (American Museum of Natural History, New York) for the loan of the holotype of *Atractus matthewi*, Javier Sánchez (Museo EBRG) for providing digital photographs of the type series of *Atractus nororientalis*, Allan Markezich (Black Hawk College, Moline) for his precisions about teeth counts in *A. matthewi*, and Frédéric Chérot (Université Libre de Bruxelles, Brussels) for constructive discussions.

## Literature cited

ICZN (1999) *International Code of Zoological Nomenclature*. Fourth edition. International Trust for Zoological Nomenclature, London, xxix + 306 pp.

- Manzanilla, J., De Sousa, L. & Sánchez, D. (2000) Atlas densidades de *Polistes versicolor versicolor* (Oliver 1791) (Hymenoptera: Vespidae) en el Cerro La Laguna, Macizo del Turimiquire, Estado Anzoátegui, Venezuela. *Boletín de Entomología Venezolana*, 15, 245–248.
- Markezich, A.L. & Barrio-Amorós, C.L. (2004) A New Species of *Atractus* (Serpentes: Colubridae) from Northeastern Venezuela. *Bulletin of the Maryland Herpetological Society*, 40, 111–121.
- Sánchez, D., De Sousa, L., Esqueda, L.F., & Manzanilla, J. (“2004” [2005]) Especie nueva de *Atractus* (Serpentes: Colubridae) del Macizo del Turimiquire, tramo oriental de la Cordillera de la Costa, Venezuela. *Saber*, 16, 89–95.

### **Material examined**

*Atractus matthewi*—Venezuela: Estado Sucre: Carápas, AMNH 29316 (holotype).

*Atractus nororientalis*—Venezuela: Estado Anzoátegui: « Cerro La Laguna », Macizo del Turimiquire, EBRG 4453 (holotype), EBRG 4454 (paratype) [digital photographs].