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**A new size record for the  
West African egg-eating snake  
*Dasypeltis gansi* Trape & Mané,  
2006, with new distribution records**

by

**Michael F. Bates & Ivan Ineich**



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Cover: *Dasypeltis gansi* (MNHN 2012.0212) from Koudoubol, Lake Chad. (Photo: Michael F. Bates)



**A new size record for the West African egg-eating snake *Dasypeltis gansi* Trape & Mané, 2006, with new distribution records**

by

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**ABSTRACT**

**Bates, M.F. & Ineich, I. 2012. A new size record for the West African egg-eating snake *Dasypeltis gansi* Trape & Mané, 2006, with new distribution records. *Navors. nas. Mus., Bloemfontein* 28: 41-48.** We report on a new size record for the West African egg-eating snake *Dasypeltis gansi*, based on an exceptionally large female (981 mm SVL, 125 mm tail length) collected at the edge of Lake Chad, Republic of Chad. New distribution records presented here include the northernmost record for the species in Senegal (Richard Toll), the westernmost record in Burkina Faso (24 km S of Tenkodogo), the northernmost record in Chad (Koudoubol at Lake Chad), and the most southerly record in Cameroon (Wakwa Research Station).  
**(*Dasypeltis gansi*, size, distribution, West Africa)**

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## INTRODUCTION

Trape & Mané (2006a) described three new species of *Dasypeltis* Wagler, 1830 from West Africa, including two subspecies of *Dasypeltis gansi*, namely *D. g. gansi* and *D. g. latericia*. These two subspecies were recorded from the West Sudanian Savanna and a few adjacent areas, where neither *D. fasciata* A. Smith, 1849 (a forest species) nor *D. scabra* (Linnaeus, 1758) – with which they were previously confused (*e.g.* Gans 1959) – occur. Trape, Mediannikov & Trape (2012) subsequently conducted a molecular analysis of West African *Dasypeltis* and raised *D. g. latericia* to species status, rendering *D. gansi* a monotypic species. These authors also revised the distribution maps of the various West African species and showed that *D. gansi* ranged from Senegal through Guinea, southern Mali, southern Niger, Togo, Benin, Nigeria, northern Cameroon, and the adjacent border regions of Chad, with *D. latericia* restricted to south-eastern Senegal, northern Guinea, and southern and south-western Mali.

The dorsal pattern of both *D. gansi* and *D. latericia* consists of ovoid to rectangular dark saddles, separated by smaller pale to whitish areas, with dark lateral bars extending down the flanks between the saddles. However, in *D. gansi* the pattern is vague and much less distinct. After preservation, specimens of *D. gansi* become more-or-less uniform beige above and (usually) uniformly yellow below, while the dorsal pattern described above is still vaguely evident in preserved specimens of *D. latericia*, which have beige underparts (Trape & Mané 2006a).

The largest specimens measured by Trape & Mané (2006a) were (only total length was given): *D. gansi* male 697 mm, female 1020 mm; *D. latericia* male 637 mm, female 845 mm. A few additional papers have now reported on the presence of these species in West Africa (Trape & Mané 2006b; Chirio & LeBreton 2007; Chirio 2009; Ullenbruch, Grell & Böhme 2010; Segniagbeto, Trape, David, Ohler, Dubois & Glitho 2011; Trape *et al.* 2012), but none have mentioned specimens larger than those of Trape & Mané (2006a).

During September 2011 the first author visited the Muséum national d'Histoire naturelle in Paris (MNHN) to examine specimens of *Dasypeltis* as part of a taxonomic revision of the genus. The opportunity was taken to examine in detail one (MNHN 2006.0308) of six paratypes of *D. g. gansi*, as well as the only paratype (MNHN 2006.0314) of *D. g. latericia*, in the Paris collection. An additional four specimens not examined by Gans (1959) (the first three listed below were identified as *D. scabra* at MNHN, the fourth was unaccessioned at the time) with primarily brown dorsal coloration were identified as *D. gansi*, including a very large female collected in 2004 by the second author in Chad, which represents a new maximum size record for this species. These four specimens represent range extensions for

the species and include the first fully documented records for Chad and Cameroon. A few *D. gansi* records for these countries are merely plotted on the maps of Trape & Mané (2006a,b), Chirio & LeBreton (2007) and Trape *et al.* (2012), but voucher specimens and locality details are not indicated.

## MATERIALS AND METHODS

Characters important for identification purposes were examined, for the most part with the aid of a stereo microscope, and recorded according to the methods of Gans (1959). Ventrals were counted according to Dowling (1951) with additional typical ventrals (often called preventrals) indicated after a plus sign (see below). The total count was used by Gans (1959; i.e. all distinctly widened ventral plates behind the second pair of chin shields, excluding the anal plate). Sex was determined by presence or absence of an inverted hemipenis (on the right side) at the base of the tail. Both sides of the head were examined but scale counts are presented for one side only (there was no variation between left and right sides). Head and body measurements (excluding snout-vent length) were performed using a dial caliper (0.01 mm).

## RESULTS AND DISCUSSION

For all specimens: body with 2-4 lateral rows of reduced, serrated scales; nasal scale divided below the nostril; temporals 2+3 (except 2+2 in MNHN 1972.0143, see collection details below); preoculars 1; postoculars 2 (but one in MNHN 2012.0212, see below); supralabials 7 (3rd and 4th enter orbit); frontal shield smooth except for a single row of shallow pits on the outer margin; inter-prefrontal sulcus weakly developed, with prefrontals merely in contact.

Variation in scalation and coloration in specimens of *D. gansi* examined:

MNHN 1965.0088 – female – 24 km S of Tenkodogo, southern Burkina Faso (11°35'N, 00°23'W; distance measured on N16 road), collection date unknown but prior to 1965: ventrals 258+1, subcaudals 62, midbody scale rows 23; dorsum light brown, no pattern; venter immaculate and pale salmon in colour.

MNHN 1972.0143 – juvenile, probably a female based on ventral and subcaudal counts (see Trape & Mané 2006a) – Wakwa Research Station, Ngaoundéré, northern Cameroon (7°14'N, 13°35'E), collection date unknown but prior to 1972: ventrals 250+1, subcaudals 67, midbody scale rows 25; dorsum light brown, no pattern; venter pale salmon, with occasional small dark stipples at edges.

MNHN 1983.0478 – gravid female – Richard Toll, north-western Senegal (16°28'N, 15°41'W), collected 9 November 1967: ventrals 249+1, subcaudals 49+ (tip missing), midbody scale rows 23; dorsum light brown with some darker markings at edges of scales; venter immaculate cream; about 747 mm SVL (difficult to measure), 93 mm tail length.

MNHN 2012.0212 (field no. 2904I) – female – Koudoubol, Lake Chad, western Chad (13°24'38"N, 14°43'37"E; elevation 300 m), collected 30 August 2004: ventrals 244+1, subcaudals 50, midbody scale rows 24; dorsum light brown (Fig. 1) with vague darker saddles and white-bordered scales (one or two) between them; venter yellowish cream (Fig. 2) with occasional small dark stipples at lateral edges.

Trape & Mané (2006a) provided scale counts for 90 specimens of *D. gansi*: ventrals 221-240 (males), 235-255 (females); subcaudals 68-83 (males), 59-73 (females). The ventral count of 258 (plus one preventral, *i.e.* 259 using Gans' 1959 method) for the Tenkodogo female (MNHN 1965.0088) is the highest recorded for the species, while the subcaudal count for the Lake Chad female (MNHN 2012.0212) is by far the lowest. The tail of the latter specimen does not appear to be truncated (Figs 1 & 2). Trape & Mané's (2006a) meristic data for *D. gansi* apparently refers only to specimens from Senegal, Mali, Niger and Benin, so the possibility that eastern populations usually have lower subcaudal counts needs to be investigated.

MNHN 2012.0212 (Figs 1 & 2) is a large female collected by the second author near the city of Bol on the banks of Lake Chad. The specimen was collected early in the morning while basking in the sun on the branch of a shrub about 1.8 m above ground and about 10 m from the lake shore. Shrubs were separated from the lake shore by reeds and low aquatic vegetation (mostly about 1.2 m in height). In life the specimen had reddish-brown rhombic markings (often X-shaped) dorsally. Some skin between the scales on the flanks was yellowish. The entire tongue was deep black.

The snake was fixed in a coiled position, so snout-vent length (SVL) was measured twice (987 mm and 974 mm) using a length of string. The average of the two measurements was used: SVL 981 mm + tail length 125 mm (measured against a ruler) = 1106 mm total length. This female is therefore the largest known specimen of *D. gansi*, surpassing Trape & Mané's (2006a) previous record of 1020 mm (see above) by 86 mm (*i.e.* 8.4% longer). Head length (from posterior jaw ending against the bone to end of snout on right side of head) 27.3 mm; maximum head width 15.3 mm; maximum circumference of body 76.0 mm; maximum body width 19.6 mm; maximum body height 21.6 mm.



Figure 1: Dorsal view of the record size female *Dasypeltis gansi* (MNHN 2012.0212) from Koudoubol, Lake Chad.



Figure 2: Ventral view of the record size female *Dasypeltis gansi* (MNHN 2012.0212) from Koudoubol, Lake Chad. The missing skin on the belly was the result of tissue sampling.

All specimens listed above represent new distribution records. Richard Toll is the northernmost record in Senegal, about 85 km north-east of Mbakhana (16°05'N, 16°22'W), the nearest other record in that country, although the species has also been recorded about 55 km to the north-east at the Rkiz lake margin in Mauritania (Trape *et al.* 2012). Apart from the 24 km S of Tenkodogo record detailed above, there are only two other fully documented localities (Diapaga and Point Triple) for *D. gansi* in Burkina Faso (Chirio 2009), although a few localities on the border of this country and Niger/Benin are plotted on the map of Trape *et al.* (2012), which presumably represents the most updated interpretation of the species' range. The Tenkodogo record is therefore the most westerly locality for the species in Burkina Faso. It should be noted that the map for *D. gansi* (*D. g. gansi* and *D. g. latericia*) in Trape & Mané (2006a,b) contains several records covering most of Burkina Faso, but the vast majority of these were omitted from the most recent map of Trape *et al.* (2012) without explanation. Most of the Burkina Faso records were derived from the Roman collection at the Centre national de la Recherche scientifique et technologique (CNRST) in Ouagadougou (J-F. Trape *in litt.* 22 July 2012). Roman (1980) recorded only *D. fasciata* and mapped it from numerous localities throughout Burkina Faso, but Trape (2005) later mentioned that two specimens from the Sahel in the northern parts of this country were referable to *D. scabra* (= *D. sahelensis*, see Trape *et al.* 2012). All other specimens from Burkina Faso were referred to '*D. gansi*' by Trape & Mané (2006a,b).

When Trape examined the specimens he did not consider *D. latericia* to be distinct from *D. gansi* (he later considered them as subspecies), but he now recalls that specimens with colour patterns referable to both species were present in the collection, meaning that a re-examination of material will be required in order to establish the approximate range limits of the two species in that country, and for this reason the Burkina Faso records on the '*D. gansi*' map in Trape & Mané (2006a) were excluded from the maps in Trape *et al.* (2012) (J-F. Trape *in litt.* 22 July 2012). The Wakwa Research Station, Cameroon record is situated about 140 km south-east of the nearest other *D. gansi* locality (see map in Chirio & LeBreton 2007) and is the most southerly known record for the species in Cameroon. According to Chirio & LeBreton (2007), *D. confusa* has also been collected in the latter area. The new Lake Chad record is a slight northern extension of the known range of *D. gansi* in Chad (Trape *et al.* 2012). Western Chad represents the eastern known limit of this species. Trape *et al.* (2012) also recorded *D. sahelensis* nearby, north of Lake Chad in south-eastern Niger.

Gans (1959) provided detailed scalation data for four unpatterned dorsally brown ("2B") females from within the known range of *D. gansi* in West Africa. Included was a female (MCZ 44243) from 30 km east of Kribi (a forest area) in Cameroon with 214 ventrals and 50 subcaudals, and another (ZMU 23807) from "Togo" with 202 ventrals (no subcaudal count given). These counts are lower than those for *D. gansi* and other congeners from West Africa (Gans 1959; Trape & Mané 2006a; Trape *et al.* 2012) and the specimens therefore require re-examination. However, Gans' (1959) other two "2B" females from Ghana may be referable to *D. gansi*. The first (MCZ 55237) of these specimens, from Achimota School, Achimota, southern Ghana (05°37'38"N, 00°12'49"W), in the forest-savanna mosaic of the Dahomey Gap, has a high ventral count of 247, tail damaged (no subcaudal count), 24 midbody scale rows, marginally pitted frontal, and faint inter-prefrontal sulcus. According to Trape & Mané (2006a), *D. gansi* occurs in savanna areas and not forest, where it is replaced by *D. fasciata*. The other specimen (MCZ 53704) is from Tamale (Guinea Savanna) in northern Ghana (09°24'27"N, 00°51'12"W) and it also has a high ventral count of 241, 60 subcaudals, 23 midbody scale rows, marginally pitted frontal, and weak inter-prefrontal sulcus. The maps of Trape & Mané (2006a,b) indicate that *D. gansi* may occur in north-western Ghana, but the nearest recorded locality to Ghana in Trape *et al.* (2012) is at Fazaou near the border with Togo.

## OPSOMMING

Ons rapporteer oor 'n nuwe grootte rekord vir die Wes-Afrikaanse eier-vretende slang *Dasypeltis gansi*, gebaseer op 'n buitengewone groot vywie (981 mm snoet tot kloaka slip, 125 mm stert lengte) wat langs die oewer van die Tsjad-meer, Republiek van Tsjad, versamel is. Nuwe verspreidings rekords wat hier aangebied word sluit in die noordelikste rekord vir die spesie in Senegal (Richard Toll), die mees westelike rekord in Burkina Faso (24 km S van Tenkodogo), die noordelikste rekord in Chad (Koudoubol by die Tsjad-meer), en die mees suidelike rekord in Kameroen (Wakwa Research Station).



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