

Atypical coloration pattern  
in a specimen of *Lampropeltis*  
*triangulum stuarti* WILLIAMS, 1978  
from western Nicaragua

*Lampropeltis triangulum* (LACÉPÈDE, 1789) is a large milksnake distributed in the central and eastern portions of the U.S. and across Mexico and Central America to north-western South America. In Central and South America it is the only representative of the genus. Two subspecies are known to occur in Nicaragua, *L. t. hondurensis* WILLIAMS, 1978, found on the Caribbean versant from Honduras to northeastern Costa Rica, and *L. t. stuarti* WILLIAMS, 1978, distributed on the Pacific side from southeastern Guatemala to central Costa Rica (KÖHLER 2008).

The specimen of *L. t. stuarti* described in this study (Fig. 1), is a subadult of unknown sex collected by Eric VAN DEN BERGHE in December 1997 near Masatepe (11°54'25"N, 86°08'40"W, 600-650 m asl), Department of Masaya, Nicaragua, in a shaded coffee plantation. The specimen deposited in the collection of the Forschungsinstitut und Naturmuseum Senckenberg in Frankfurt a. M., Germany (SMF 81025) has the following morphological data: snout-vent length 425 mm; tail length 55 mm (tail incomplete); ventrals 220; dorsal scale rows at midbody 21; supralabials 7, third and fourth (right) and third (left) in contact with eye; infralabials 9; red body rings 23. These values are well within the documented range of variation of this subspecies (WILLIAMS 1978).

SMF 81025 has a narrow, white band forming a "V" on top of the snout, that WILLIAMS (1978) mentioned as typical for the subspecies *L. t. stuarti*. However, our specimen shows a coloration pattern that is different from those of all other published specimens, and from the comparative specimens of *L. t. stuarti* examined by us (see

appendix). The white snout band begins at the postnasals and passes dorsally along the internasal-prefrontal border. The first supralabials are predominantly black with a white spot on their lower edges. Rostal and mental are black with white speckles. The first chin shields are black with a white spot on the anterior part. The second chin shields are entirely black. Dorsally the head is completely black from the posterior portion of the prefrontals to the posterior portion of the parietals where the first white ring begins. This ring involves the posterior temporals, the complete sixth supralabial and the anterior one-half of the seventh supralabial. The sixth infralabial is completely integrated in the white ring as well, just as the posterior one-half of the adjacent fifth and the anterior one-half of the seventh infralabial. Ventrally the ring is incomplete because of the black chin shields.

On the rest of the body the white rings are narrow (1-2 dorsal scales wide) and complete. Most of the red rings are interrupted by black coloration middorsally, and do not reach the ventral surface. The black rings are much more extensive and cross the red rings middorsally. Thus, the latter form red triangles laterally. Only the first, sixth, and seventh pair of red triangles are in contact with each other middorsally. All red scales are black tipped. The posterior half of the tail has a red dorsal stripe which ends two dorsal scales anterior to the tip of the tail. The overall coloration in SMF 81025 is considerably darker than in other representatives of this subspecies (Fig. 2). However, WILLIAMS (1978) mentioned a specimen (TNHC 1033) from Nicaragua that has black rings tending to cross the red rings middorsally.

A tendency to melanism is often observed in higher altitude populations of snakes. An example is the subspecies *L. t. gaigae* DUNN, 1937, that inhabits the mountains of southeastern Costa Rica and western Panama. It is assumed that melanism in ectothermic animals allows them to inhabit cooler areas as they heat faster when basking in the sun due to lower skin reflectance (CAPULA & LUISSELLI 1994; CLUSELLA TRULLAS et al. 2007). As an accessory benefit of melanism, melanins are an important barrier against UV radiation (MAJERUS 1998) that increases at higher elevations.



Fig. 1: Anomalous colored *Lampropeltis triangulum stuarti* WILLIAMS, 1978 (SMF 81025) from western Nicaragua. Foto: E. VAN DEN BERGHE.

Since all other specimens of *L. t. stuarti* we examined were normally colored, we assume this specimen to be a single outlier within a normally colored population. Therefore, SMF 81025 is a noteworthy example of an individual with unusual high proportions of black pigment from the lowlands (600 m).

APPENDIX: List of comparative *Lampropeltis triangulum stuarti* examined: Costa Rica: north-eastern Puntarenas: northern Barranca, Finca San Miguel, SMF 52778; El Salvador: La Libertad: Finca Los Cedros, Cumbre near Santa Tecla, 1000 m, SMF 43166 (holotype), SMF 42845, SMF 42251-2; Nicaragua: Granada: Volcan Mombacho, 680 m, SMF 78589. *Lampropeltis triangulum*: Nicaragua: Matagalpa: Selva Negra, 1300 m, SMF 77826-8. Jinotega: Cerro Kilambé 1010 m, SMF 85492; Río San Juan: Los

Guatuzos, Río Frio, Fundeverde, 45 m, JS 385 (This specimen will be deposited in the herpetological collection of FUNDAR, Managua, Nicaragua).

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AUTHORS: Andreas HERTZ, Forschungsinstitut und Naturmuseum Senckenberg, Sektion Herpetologie, Senckenberganlage 25, 60325 Frankfurt am Main and J. W. Goethe-Universität Frankfurt, Biologie-Campus, Haus A, Institut für Ökologie, Evolution und Diversität, Siesmayerstrasse 70-72, D-60323 Frankfurt am Main < ahertz@senckenberg.de >; Eric VAN DEN BERGHE, Department of Biology, Ave Maria University, San Marcos, Carazo, Nicaragua, <ericvdb@avemaria.edu.ni >; Dr. Gunther KÖHLER, Forschungsinstitut und Naturmuseum Senckenberg, Sektion Herpetologie, Senckenberganlage 25, 60325 Frankfurt am Main < gkoehler@senckenberg.de >



Fig. 2: Normally colored *Lampropeltis triangulum stuarti* WILLIAMS, 1978 from 1100 m on Volcan Mombacho, approximately 20 km southeast of the collection site of SMF 81025. Roadkill specimen. Foto: E. VAN DEN BERGHE.

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Autor(en)/Author(s): Hertz Andreas, Van den Berghe Eric, Köhler Gunther

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