Herpetology Notes, volume 5: 539-542 (2012) (published online on 21 December 2012)

New distribution records of *Gymnophthalmus speciosus* (Hallowell, 1861) (Squamata, Gymnophthalmidae) in Nicaragua

Roberto García-Roa[1] and Javier Sunyer[2]

Nicaragua´s herpetofauna is in general poorly known. During the last one and a half decade several research attempts have increased Nicaragua´s checklist both in total number of species and in number of endemic species, as well as provided distribution extensions for several species (Köhler 2001; 2004; Köhler and McCranie 1999; Köhler et al. 2004; Sunyer and Köhler 2007; 2010; Sunyer et al. 2009; 2010; 2011; Salazar and Barquero 2012). However a detailed picture of the distribution of each species present in the country is far from being completed and extensive field research is still required.

Gymnophthalmus speciosus (Hallowell 1861) is a small lizard included within the family Gymnophthalmidae. The genus *Gymnophthalmus* Merrem 1820, contains a total of eight species, based on Avila-Pires (1995) and Savage (2002). In Central America we find a single representative of species of the genus, *G. speciosus* (Fig 1). This microteid lizard is unmistakable in Nicaragua because it has a combination of the following characteristics: a) four fingers on its forelimbs, instead of five; b) absence of movable eyelids, c) presence of a usually red colored tail; and d) presence of nasal scales separated by front nasal scales.

Gymnophthalmus speciosus is distributed from the Isthmus of Tehuantepec: from southern Mexico, at the Pacific ocean, to Colombia, and from northeastern Guatemala, at the Atlantic ocean, to Venezuela, as well as in Guyana, between sea level and 1220 m (Savage 2002, Köhler 2008). It is the only species of the family of Gymnophthalmidae whose distribution reaches beyond northern Costa Rica. It was described as *Blepharactisis speciosa* (Hallowell 1861) being its type locality "Nic aragua" generically, not being too informative about its particular distribution. Additionally, Cope (1871) described Tretioscincus laevicaudus in Nicaragua, a current synonym of *G. speciosus*. This species is considered „rare" in Nicaragua (Ruiz and Buitrago 2003) and, mostly due to the lack of field exploration, the knowledge about its distribution in the country is very limited. So far, there are a few Nicaraguan museum specimens that are mostly kept in museums in the U.S.A. and Germany, and some of them does not include detailed geographic collecting information. The lack of field surveys and studies on this species in which compiled both historical data and new records for the country, prevented reflection in a real way on the status of the species in Nicaragua. Köhler (2001) cited this particular species in two localities in Nicaragua, despite estimating its potential distribution range along the country´s entire lowlands (Köhler 2008). Recent field work throughout Nicaragua has uncovered new populations of this species in the country (see Figs. 1 and 2, Table 1 and Appendix). Most specimens were located usually under dry tree trunks and fallen leaves, although they can also be found above them (Ferrer and González 2007).

These new records support the wide distribution of *G. speciosus* in the lowlands of Nicaragua, particularly along the Pacific slope, being of particular interest records in those departments where the existence of this species was not previously reported. In addition to the new records herein presented (see Table 1 and Fig. 1), there are sightings of this species in the lowlands of Momotombo volcano (Depto. León; com. pers. J. A. Orozco y C. A. Sánchez-Ramos), in a dormant crater of Masaya volcano (Depto. Masaya; com. pers. J. G. Martínez-Fonseca), and near the city of León (Environmental Botanical Garden of UNAN-León, Depto. León; com. pers. M. Salazar-Saavedra).

1 Fonoteca Zoológica, Departamento de Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales (CSIC). José Gutiérrez Abascal, 2, 28006, Madrid, España. C.e: roberto.garcia.roa@gmail.com

2 Museo Herpetológico de la UNAN-León (MHUL), Departamento de Biología, Facultad de Ciencias y Tecnología, Universidad Nacional Autónoma de Nicaragua-León, León, Nicaragua. C. e: javier_sunyer@yahoo.com

Acknowledgements. Collection permits (No. 011-102010) were authorized by MARENA (Ministry of Environment and Natural Resources), Managua, Nicaragua. For the donation of data and photographs of certain populations, we are very grateful to **Richard Leonardi (Lost Canyon)**, Billy M. Alemán (Om-etepe), Milton Ubeda (Kilambé), Ernesto Y. González (Campus UNAN-Managua), Milton Salazar-Saavedra (Finca Concepción de María, and Cosigüina), José G. Martínez-Fonseca (Santa Te-resa de Carazo) and Mike Fried (Bahía Redonda). We are partic-ularly grateful to Lenin A. Obando, Darwin E. Manzanarez, and Oscar González for their help in the field and R. Márquez, J. Sáiz, and S. Castroviejo-Fisher for their advice and revision of the manu-script. This project was partially funded by the DAAD (Deutscher Akademischer Austausch Dienst) and the Co-operation Office of the University of Alcalá.

References

Avila-Pirés, T. C. S. (1995). Lizards of Brazilian Amazonia (Reptilia: Squamata).
Zoologische Verhandelingen, **299**: 1–706.
Cope, E. D. (1871) [1870]. Catalogue of Batrachia and Reptilia obtained by J. A. McNiel in Nicaragua. Second and Third Annual Reports of the Trustees of the Peabody Academy Science, **1869–70**: 82–85.
Ferrer, J., González, M. (2007). Supervivencia de los saurios del Jardín Botánico de Barranquilla. Revista de la Academia Colombiana Ciencias, **31**: 139–144.
Hallowell, E. (1861) [1860]. Report upon the Reptilia of the North Pacific Exploring Expedition, under command of Capt. John Rogers, U. S. N. Proceedings of the Academy of Natural Sciences, **12**: 479–510.

Figure 1. Photographs of the *Gymnophthalmus speciosus* from: **1. Lost Canyon;** 2. Finca Concepción de María; 3. Reserva Natural Isla Juan Venado; 4. Bahía Redonda; 5. Isla Ometepe; 6. Volcán Cosigüina; 7. Close up of *G. speciosus* (Ilustration: R.García-Roa and F.García).

Table 1. New records of *Gymnophthalmus speciosus* in Nicaragua.

Department	Locality	Geographical Coordenates (Long/Lat)	Elevation (m asl)	Nº Voucher
Carazo	Dolores, Finca Concepción de María	11.860811 86.207858	132	-
Carazo	2 km SE Santa Teresa de Carazo	11.735611 86.132811	375	JS 2352–53
Chinandega	Reserva Natural Volcán Cosigüina	12.882924 87.538614	45	-
Jinotega	Reserva Natural Cerro Kalimbé	13.62927 85.71976	431	-
León	San Juan de Dios, Lost Canyon	12.734622 86.389058	145	-
León	Reserva Natural Isla Juan Venado	12.336667 86.949142	42	-
Managua	Las Nubes	11.998797 86.298683	910	JS 915
Managua	Campus UNAN-Managua	12.133333 86.283333	202	JS 2355
Matagalpa	Reserva Natural Cerro Musún	12.955222 85.230889	450–630	JS 786–87 SMF 86759–60
Rivas	Reserva de la Biósfera Isla Ometepe	11.5115 85.554667	45	-
Rivas	Tola, Bahía Redonda	11.382794 86.025122	20	-

Hernández-Ruz, E. J. (2006). *Gymnophthalmus speciosus* (Hallowell 1861) (Squamata, Gymnophthalmidae) in Colombia. Caldasia, **28**: 79–88.

Köhler, G. (2001). Anfibios y Reptiles de Nicaragua. Herpeton. Offenbach.

Köhler, G. (2008). Reptiles of Central America, 2nd ed. 400 pp. Herpeton. Offenbach.

Köhler, G., Quintana, A. Z., Buitrago, F., Diethert, H. (2004). New and noteworthy records of amphibians and reptiles from Nicaragua. Salamandra **40**: 15–24.

Köhler, G., McCranie J. R. (1999). A new species of colubrid snake of the Rhadinaea godmani group from Cerro Saslaya, Nicaragua. Senckenbergiana biologica **79**(2): 243–249.

Ruiz, G. A., Buitrago, F. (2003). Guía ilustrada de la herpetofauna de Nicaragua. ARAUCARIA-MARENA-AECI. Managua.

Salazar, M., Barquero M. D. (2012). First country records for *Urotheca decipiens* and *Urotheca pachyura* and range extensions of Urotheca guentheri in Nicaragua. Herpetological Bulletin **121**: 30–32.

Savage, J. M. (2002). The Amphibians and Reptiles of Costa Rica: A Herpetofauna between Two Continents, between Two Seas. The University of Chicago Press. Chicago.

Sunyer, J., Köhler G. (2007). New and noteworthy records of amphibians and reptiles from Nicaragua. Salamandra **43**(1): 15–20.

Sunyer, J., Köhler, G. (2010). Conservation status of the herpetofauna of Nicaragua, pp. 488–509. In L. D. Wilson, J. H. Townsend, and J. D. Johnson eds. Conservation of Mesoamerican Amphibians and Reptiles. Utah, U.S.A.: Eagle Mountain Publishing.

Sunyer, J., Townsend J. H., Wake D. B., Travers S. L., Gonzalez S., Obando L. A., Quintana A. Z. (2011). A new cryptic species of salamander, Genus *Oedipina* (Caudata: Plethodontidae), from premontane elevations in northern Nicaragua, with comments on the systematic status of the Nicaraguan paratypes of O. pseudouniformis Brame, 1968. Breviora **526**: 1–16.

Sunyer, J., Townsend, J. H., Wilson L. D., Travers, S. L., Obando, L. A., Páiz G., Griffith D., Köhler G. (2009). Three new country records of reptiles from Nicaragua. Salamandra **45**(3): 186–190.

Sunyer, J., Wake D. B., Townsend, J. H., Travers, S. L., Rovito, S. M., Papenfuss, T. J., Obando, L. A., Köhler, G. (2010). A new species of worm salamander (Caudata: Plethodontidae: *Oedipina*) in the subgenus *Oeditriton* from the highlands of Northern Nicaragua. Zootaxa **2613**: 29–39.

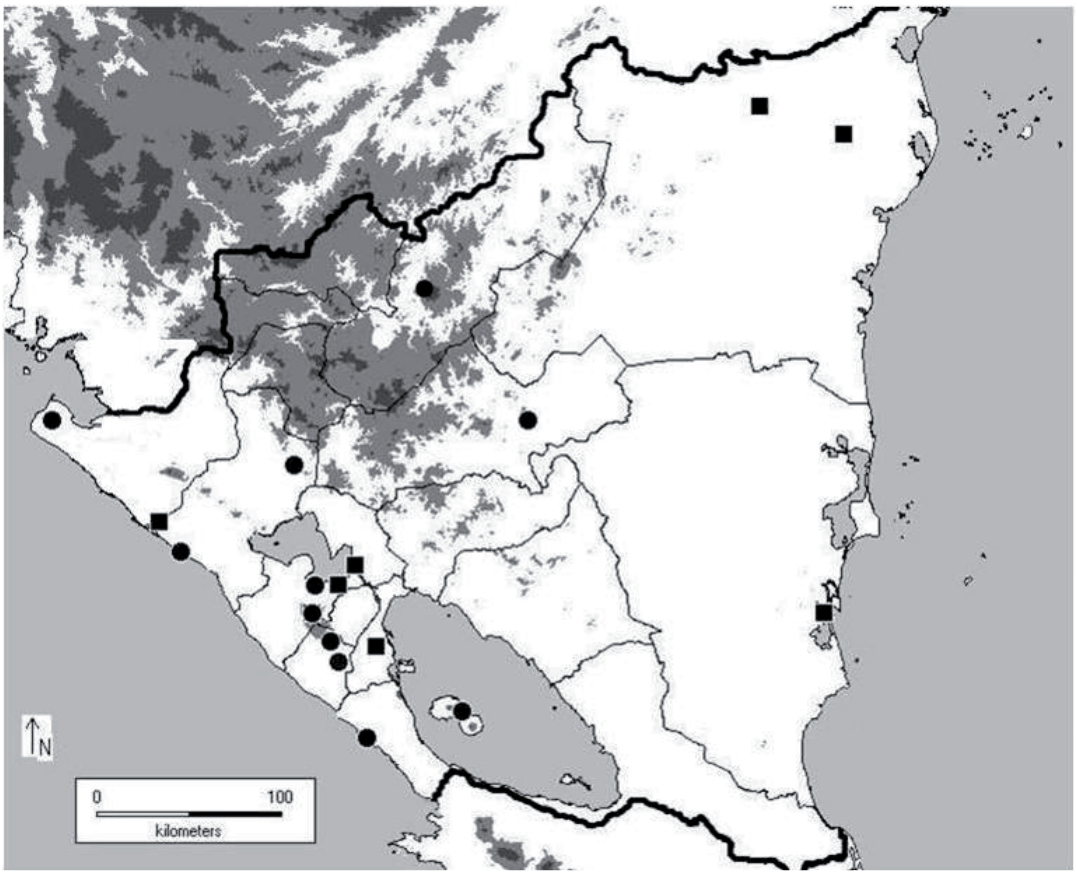

Figure 2. Geographical distribution of *Gymnophthalmus speciosus* in Nicaragua, showing new quotes (circles) and historical quotes (squares) of this species in the country. Details of each locality in the Appendix. Water bodies in light gray. Elevations above 600 m gray, above 1200 m dark gray.

Appendix

Historical records:

Nicaragua: Granada: Granada: OMNH 36164–36172; Volcán Mombacho, near lower antenna, 11,83316667/ 85,97950000, 1100 msnm: SMF 79656, 79666–67; León: El Polvón: MCZ R-5788, R-187916, R-187917; Managua: 2 km NE Tipitapa: LACM 37959; Casa Colorada: LACM 159554; 1 km N Sabana Grande, 40 msnm: UK 124991; Región Autónoma del Atlántico Norte: 25 km SSW Waspam, Comarca de El Cabo: LACM 74324; 90 km NW Puerto Cabezas, Comarca de El Cabo: LACM 145825; Región Autónoma del Atlántico Sur: Bluefields, Airport Zelaya: UMNH 5276; Rio San Juan: San Juan River: MPM 1882.

Accepted by Zoltan T. Nagy