

First country record of *Norops wermuthi* KÖHLER & OBERMEIER, 1998, for Honduras

The dactyloid genus *Norops* WAGLER, 1830, comprising 175 species (NICHOLSON et al. 2012), is the largest and most widely distributed group of small terrestrial and arboreal lizards of the Neotropics. Although the majority of these species occurs in Middle America, only 16 are recorded in Nicaragua (KÖHLER 2010; KÖHLER & VESELÝ 2010; SUNYER & KÖHLER 2010), the largest and central country in this biogeographic region. The territory of two species is restricted to Nicaragua: *Norops villai* (FITCH & HENDERSON, 1976), endemic to Great Corn Island in Caribbean Nicaragua and *Norops wermuthi* KÖHLER & OBERMEIER, 1998, endemic to the highlands of the northern mountains of Nicaragua (KÖHLER 2001; SUNYER et al. 2008; SUNYER & KÖHLER 2010).

KÖHLER (2008) included *N. wermuthi* in the *N. crassulus* (COPE, 1864) group,

which comprises about a dozen of species that inhabit the highlands of Nuclear Central America and adjacent Mexico. *Norops wermuthi* is characterized by its distinct hemipenial morphology (see Fig. 5 in SUNYER et al. 2008), relatively small dewlap (about 110 mm² in size when expanded and red in males, 30 mm² and orange in females) with a relatively small number of gorgetal scales (14-18 enlarged gorgetal scales and 20-30 enlarged sternal scales in males, 15-23 slightly enlarged gorgetal-sternal scales in females), presence of a brown interorbital bar and of crossbands on the limbs, pale brown ventral coloration with a dark brown midventral stripe, and dark brown bars radiating out from the eye (SUNYER et al. 2008). In addition, it generally features weakly keeled midventral scales and heterogeneous lateral squamation (KÖHLER & OBERMEIER 1998; SUNYER et al. 2008).

Norops wermuthi was reported from five isolated highland (1000-1658 m elevation) populations in the Nicaraguan central-northern mountains, which correspond to the southernmost portion of the Chortis

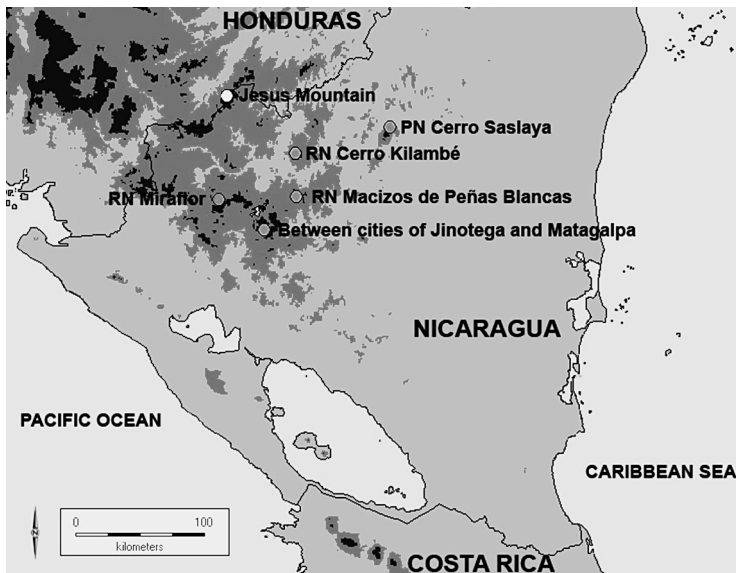


Fig. 1: Distribution of *Norops wermuthi* KÖHLER & OBERMEIER, 1998 in Nicaragua and Honduras. The filled circles represent known localities and the empty circle the new binational locality reported herein. Areas above 600 m a.s.l. dark grey, areas above 1,200 m a.s.l. black. Distributional records were taken from the relevant literature (FITCH & SEIGEL 1984; KÖHLER & OBERMEIER 1998; VENCES et al. 1998; KÖHLER 1999; 2000; 2001; KÖHLER & SCHMIDT 2000; SUNYER et al. 2008; TRAVERS et al. 2011).

Block Highlands (Fig. 1; SAVAGE 2002; SUNYER et al. 2008; TRAVERS et al. 2011): highlands between the Cities of Jinotega and Matagalpa (1570), Depts. Jinotega and Matagalpa; Reserva Natural Miraflor (1450), Dept. Estelí; Reserva Natural Cerro Kilambé (1750), Dept. Jinotega; Parque Nacional Cerro Saslaya (1650), Depts. Jinotega and Región Autónoma Atlántico Norte; and Reserva Natural Macizos de Peñas Blancas (1745), Dept. Jinotega (maximum altitudes [m a.s.l.] in parentheses). In addition, *N. wermuthi* has the highest known elevational distribution of any herpetofaunal species in Nicaragua (1658 m a.s.l.; SUNYER & KÖHLER 2010; TRAVERS et al. 2011). The species has been classified “Vulnerable” based on IUCN Red List criteria [VU; B1ab(iii)] and as a “High Vulnerability” species within Nicaragua (SUNYER & KÖHLER 2010).

Between 19 and 24 July 2011, the authors carried out baseline inventory work on the Jesus Mountain, a mostly Nicaraguan area dominated by coffee plantations with small patches of relatively well preserved cloud forest in the mountain top (1810 m a.s.l.), right at the border of Nicaragua (Dept. Nueva Segovia) to Honduras (Dept. El Paraíso). One of the trails surveyed follows the uppermost portions of the Cordillera Dipilto-Jalapa, which is also coincident with the political border between Honduras and Nicaragua. The Cordillera Dipilto-Jalapa is the geologically oldest portion of the Nicaraguan territory dating back to the Paleozoic (ELMING et al. 2001) and includes Cerro Mogotón (2107 m a.s.l.), Nicaragua’s highest mountain peak. The upper portion (above 1200 m a.s.l.) of the steep Cordillera Dipilto-Jalapa corresponds to the Lower Montane Moist Forest formation (HOLDRIDGE 1967). Jesus Mountain, also known as Cerro Jesús, situated in the eastern portion of the Cordillera Dipilto-Jalapa, is not under legal protection neither by the Nicaraguan nor the Honduran side, although the southwestern parts of the Cordillera are currently under legal Nicaraguan protection as Reserva Natural Dipilto y Jalapa. During the Nicaraguan Civil War (1979-1990), portions of strategic importance were armored with landmines to avoid military trespassing from Honduras. Most

landmines were only recently removed and therefore, the whole area remained understudied for decades.

Six specimens of *Norops wermuthi* were encountered during opportunistic searches at night time and caught by hand. The day after capture, they were preserved after euthanasia by intracardial injection of T61 (Intervet). Specimens collected in Honduras were collected under permission of Instituto Nacional de Conservación (ICF) Resolución GG-MP-086-2010 and Dictamen DVS 045-2010, and exported under Constancia 009-2012-DVS-ICF. Nicaraguan specimens were obtained under collecting permit No. 011-102010 provided by MARENA (Ministerio del Ambiente y los Recursos Naturales), Managua, Nicaragua. Specimens were deposited in the collections of the Museum of Vertebrate Zoology (MVZ), University of California, Berkeley, USA (MVZ 269384, Fig. 2), and the Museo Herpetológico de la UNAN-León (MHUL), Universidad Nacional Autónoma de Nicaragua-León (MHUL 156-160, Fig. 2), León, Nicaragua. Coordinates (WGS 84 datum) and elevation were recorded in the field using Garmin GPS receivers with barometric altimeters.

Two adult females (MHUL 156, MVZ 269384) were captured at about 19:00 h on 19 July 2011, at the very top of Jesus Mountain (13°59′04.3″N, 86°11′24.1″W, 1802 m a.s.l.). MHUL 156 was collected on the Nicaraguan side, approximately one meter from the border, and MVZ 269384 on the Honduran side, about three meters from the border. Both specimens were found at the same perch height on vegetation, approximately 1.5 m above the ground and at a linear distance of 10 meters from each other. During the nocturnal descent from the peak of the mountain the authors collected four more specimens (two males and two females; MHUL 157-160) perched on vegetation on both sides of the political border, with the lowest elevation specimens observed at 13°59′01.3″N, 86°11′22.2″W, 1745 m a.s.l. All six specimens were detected at night time between 19:00 h and 21:00 h while sleeping on leaves and small branches, 40-210 cm above the ground. When the same trail was surveyed again during daytime, no representatives of this species were seen.

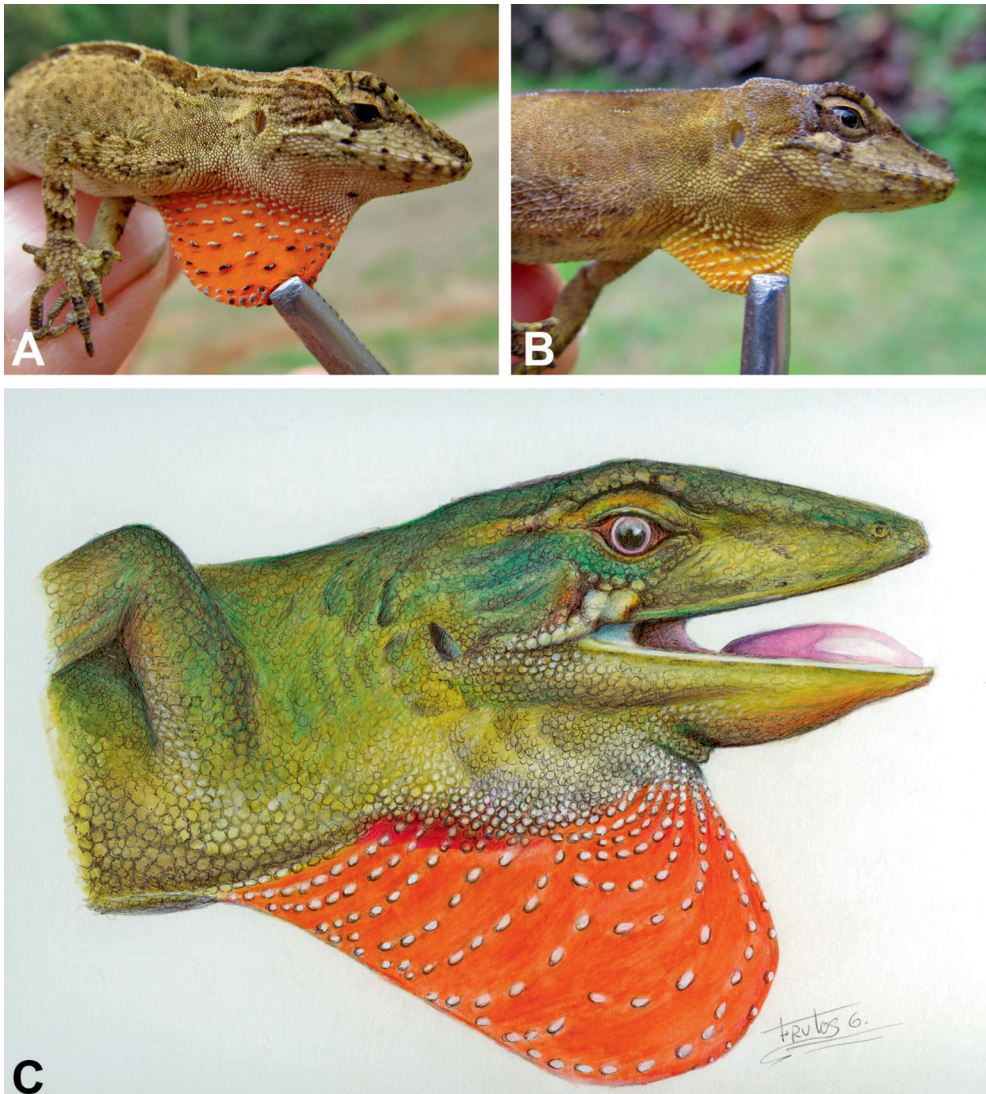


Fig. 2: Individuals of *Norops wermuthi* KÖHLER & OBERMEIER, 1998 with extended dewlaps from Jesus Mountain: (A) adult male (MHUL 160) from Dept. Nueva Segovia, Nicaragua; (B) adult female (MVZ 269384) from Dept. El Paraíso, Honduras; and (C) representation of an adult male from Reserva Natural Cerro Kilambé, Dept. Jinotega, Nicaragua. Drawing: F. GARCÍA.

Jesus Mountain is the sixth locality reported for *Norops wermuthi* and constitutes the northernmost and highest elevation locality for the species. The record extends the species' distributional range approximately 70 km northwest from its closest locality, Reserva Natural Cerro Kilambé, Dept.

Jinotega, Nicaragua, and confirms the presence of this species for the first time in Honduran territory (see Fig. 1). Therefore, *N. wermuthi* is no longer considered endemic to Nicaragua. This locality also upwardly extends the species altitudinal range by 144 m elevation, which is now known to be

between 1000-1802 m a.s.l., thus making MHUL 156 the highest elevation herpetofaunal specimen recorded in Nicaraguan territory.

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