



Fundación
Miguel Lillo
Tucumán
Argentina

doi

A new species of *Ixchela* Huber (Araneae: Pholcidae) from Honduras with updated taxonomic keys, and first record of *Physocyclus globosus* (Taczanowski)

Una nueva especie de *Ixchela* Huber (Araneae: Pholcidae) de Honduras, con claves taxonómicas actualizadas, y primer registro de *Physocyclus globosus* (Taczanowski)

Alex M. Cubas-Rodriguez^{1,2} , Alejandro Valdez-Mondragón^{3*} 

¹ Escuela de Biología, Facultad de Ciencias, Universidad Nacional Autónoma de Honduras, Departamento Francisco Morazán, Tegucigalpa, Honduras.

² Centro Zamorano de Biodiversidad, Departamento de Ambiente y Desarrollo, Escuela Agrícola Panamericana, El Zamorano, Honduras.

³ Colección de Aracnología (CARCIB), CIBNOR, S.C. Programa Académico de Planeación Ambiental y Conservación (PLAYCO), CIBNOR. Km. 1 Carretera a San Juan de La Costa "EL COMITAN", La Paz, Baja California Sur, México.

* Corresponding author: <lat_mactans@yahoo.com.mx>

Abstract

The spider genus *Ixchela* Huber, 2000 (family Pholcidae) is composed of 22 species distributed in North and Central America. A new species, *Ixchela komari* sp. nov. is described herein from the Department of Olancho, Honduras, based on adult male and female specimens, increasing the known diversity to 23 species. With this description, the diversity of the genus in Honduras increases to three known species, *Ixchela furcula* (F. O. Pickard-Cambridge), *I. viquezi* Valdez-Mondragón, and the new species described herein, making it the most diverse country in Central America for this genus to date. Additionally, *Physocyclus globosus* (Taczanowski) is recorded in Honduras for the first time.

Keywords: Central America, daddy long-legs spiders, Neotropical, Modisiminae, Physocyclinae, taxonomy.

► Ref. bibliográfica: Cubas-Rodriguez, A. M.; Valdez-Mondragón, A. 2026. "A new species of *Ixchela* Huber (Araneae: Pholcidae) from Honduras with updated taxonomic keys, and first record of *Physocyclus globosus* (Taczanowski)". *Acta Zoológica Lilloana* 70 (2): 689-709. DOI: <https://doi.org/10.30550/j.azl/2383>

► Recibido: 17 de marzo 2026 – Aceptado: 4 de junio 2026.

► URL de la revista: <http://actazoologica.lillo.org.ar>



OPEN ACCESS

► Esta obra está bajo una Licencia Creative Commons Atribución – No Comercial – Sin Obra Derivada 4.0 Internacional.

Resumen

El género de arañas *Ixchela* Huber (familia Pholcidae) está compuesto por 22 especies, distribuidas principalmente en América del Norte y Central. Se describe una nueva especie, *Ixchela komari* sp. nov. del Departamento de Olancho, Honduras, basada en especímenes adultos machos y hembras, incrementando la diversidad conocida a 23 especies. Con esta descripción, la diversidad del género para Honduras aumenta a tres especies conocidas: *Ixchela fúrcula* (F. O. Pickard-Cambridge), *I. viquezi* Valdez-Mondragón, y la nueva especie descrita aquí, siendo el país más diverso de América Central de este género hasta el momento. Adicionalmente, *Physocyclus globosus* (Taczanowski) es reportada en Honduras por primera vez.

Palabras clave: América Central, arañas patonas, Neotropical, Modisiminae, Physocyclinae, taxonomía.

INTRODUCTION

The spider family Pholcidae C. L. Koch, 1850, commonly known as daddy long-legs spiders, is the most diverse family within the Synspermiata clade (Michalik & Ramírez, 2014), composed of 97 genera and 2,086 species (WSC, 2026). These spiders are very common in tropical and subtropical regions (Huber 2011; 2018; Eberle et al., 2018), and some species inhabiting urban areas where some species are considered cosmopolitan (synanthropic) (Huber 2000, 2011). Pholcids are also commonly associated with caves, being the spider family with the highest diversity of troglobitic and troglomorphic species worldwide (Huber, 2018).

The genus *Ixchela* Huber 2000 belongs to the subfamily Modisiminae and currently comprises 22 described species, with Mexico having the greatest diversity (WSC, 2026). It is composed of relatively large spiders that are distributed from Mexico to Panama, occurring mainly in temperate pine, oak, and holm oak forests between 1000–2950 m of elevation (Valdez-Mondragón 2013a, 2020; Huber, 2000). In the last decade, comprehensive works have been carried out with this genus, including taxonomic reviews with descriptions of new species, as well as molecular studies that explain the patterns of diversification and species delimitation. The genus *Ixchela* is hypothesized to have diverged in the late Miocene, with the divergence between the two major clades within the genus occurring in the late Pliocene, and most of the speciation events occurring during the Pleistocene (Valdez-Mondragón & Francke, 2015).

In Honduras, only two species of *Ixchela* are known so far, *I. viquezi* Valdez-Mondragón, 2013 and *I. furcula* (F. O. Pickard-Cambridge). The latter species was recorded from Olancho and Francisco Morazán departments by Valdez-Mondragón (2013a). So far, not considering the new species described herein, the only endemic species of the genus in Honduras is *I. viquezi*, which was described from specimens collected in the La Tigra National Park in Francisco Morazán by Valdez-Mondragón (2013a).

Several species of pholcid spiders, such as some of the subfamily Arteminae, have been introduced across the world by humans. For example, *Artema atlanta* Walckenaer is a large pholcid spider introduced in the Americas (WSC, 2026). Other species of Physocyclinae, a new subfamily recently proposed by Meng et al. (2026), such as *Physocyclus globosus* (Taczanowski), is a cosmopolitan species native to North America, but has been recorded in several regions around the world including some Central American countries such as Costa Rica and Panama (Valdez-Mondragón, 2010; Baert et al. 2023; WSC, 2026).

This work describes a third species of the spider genus *Ixchela* from Honduras, with specimens collected in the community of La Unión, Department of Olancho. Additionally, the synanthropic and cosmopolitan species *Physocyclus globosus* is recorded in Honduras for the first time.

MATERIAL AND METHODS

Specimens were collected by hand, preserved in 80% ethanol, and labeled with their complete field data. The type specimens are deposited at the Colección Aracnológica (CZB), Centro Zamorano de Biodiversidad, Departamento de Ambiente y Desarrollo, Escuela Agrícola Panamericana, El Zamorano, Honduras. Other institutions mentioned in the descriptions include Muséum National d'Histoire Naturelle (MNHN), Paris, France (Curator: Dr. Kaina Privet), and Instituto Butantan (IBSP), São Paulo, Brazil (Curator: Dr. Antonio Domingos Brescovit). Descriptions follow Valdez-Mondragón (2013a, 2020). All measurements are in millimetres (mm). The material was examined using an Olympus SZ stereoscopic microscope. A dissecting microscope Euromex-Nexius Zoom was used to make the drawings. Since *Physocyclus globosus* can be easily identified by photographs, some records of the species in the map were obtained from the iNaturalist web page (<https://www.inaturalist.org/>). The specimens were examined in ethanol (80%) under a binocular microscope model Olympus SZ. Photographs of the specimens were taken using an Eakins microscope camera. Female epigyne and male palps were dissected in ethanol (80%) and cleaned in potassium hydroxide (KOH 10%) for 5 min to remove the soft tissue (epigyne).

Morphological structures were suspended in 80% gel alcohol to facilitate positioning and covered with a thin layer of liquid ethanol (80%) to minimize diffraction during photography. The images were edited using Adobe Photoshop CS6. The map was made using Quantum GIS 3.22.6 (QGIS.org 2025).

Description

Order Araneae Clerck, 1757

Family Pholcidae C. L. Koch, 1850

Genus *Ixchela* Huber, 2000

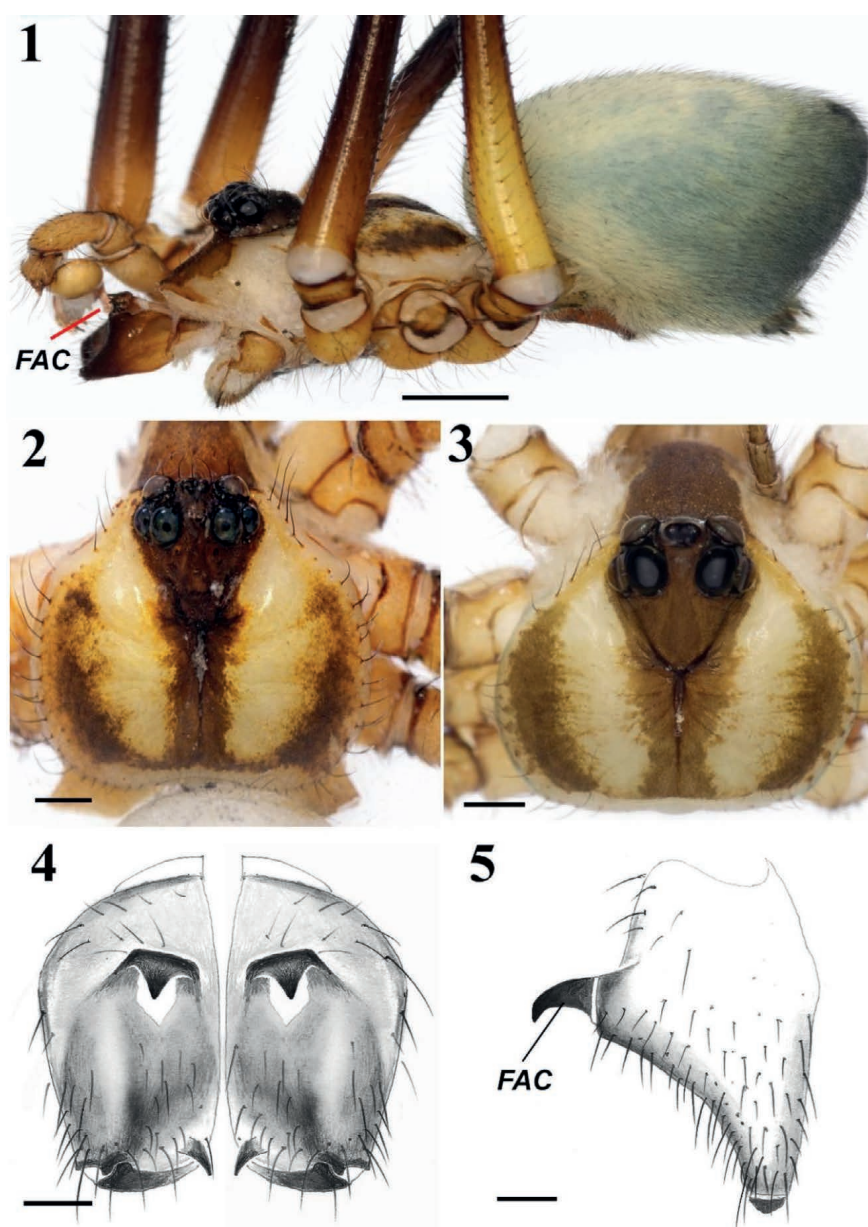
Type species. *Coryssocnemis furcula* F. O. Pickard-Cambridge, 1902,
by original designation (Huber, 2000).

Emended diagnosis.— The genus is distinguished by the prolateroventral apophysis of the palp bulb of the male (PAB) (Figs 6–9); by the apical-dorsal spine-shaped projection on the embolus (Valdez-Mondragón, 2013a: arrow figs 25; 53, 65); by the apical-vental projection on the embolus (V-M, 2013a: arrow figs 26; 37, 53); by the curved spine distally on procurus (V-M, 2013a: figs 25, 37, 53); by the ventral protuberance with long setae on the procurus (VPP) (Figs 6, 8); by long procurus, which can be straight (V-M, 2013a: figs 25, 37), sigmoid (V-M, 2013a: fig. 53) or curved (Figs 6, 8); by the sclerotized small and sub-distal spine on the embolus (V-M, 2013a: arrows figs 38, 55, 80); and by the frontal apophysis of chelicerae on males (FAC) (Figs 4, 5).

Description.— For an updated description of the genus, see Valdez-Mondragón (2013a) and Valdez-Mondragón and Francke (2015).

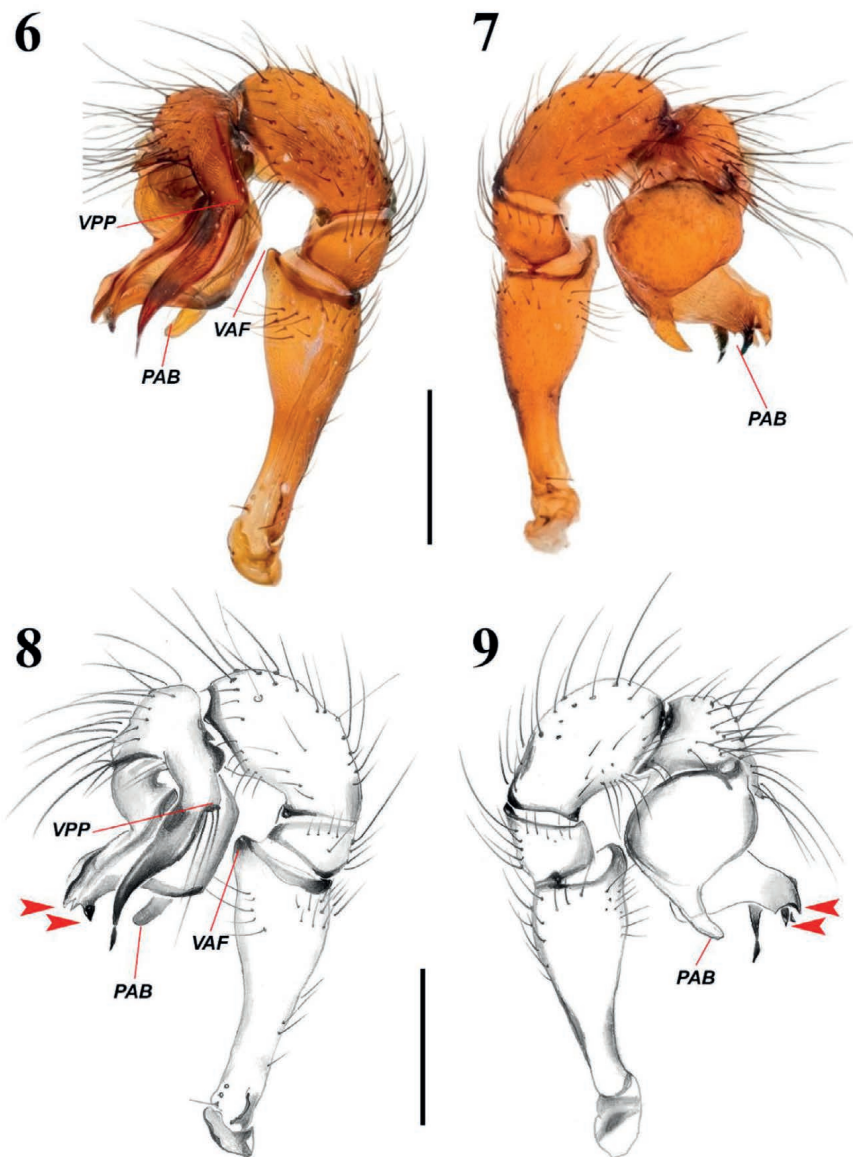
Composition.— 23 species including *Ixchela komari* sp. nov. See the World Spider Catalog for a complete list of species (WSC, 2026).

Distribution and natural history.— See Valdez-Mondragón and Francke (2015) and Valdez-Mondragón (2020) for complete details about the biogeographic distribution, habitat, and microhabitat.



Figures 1–5. *Ixchela komari* sp. nov. 1, Male holotype (CZB-Ar-002), habitus lateral view. 2, Male holotype, carapace, dorsal view, photograph, respectively. 3, Female paratype carapace, dorsal view, photograph. 4–5, Male holotype, chelicerae, drawings of frontal and lateral views, respectively. Scale bars: 1 mm (1–3); 0.5 mm (4–5). Abbreviations: FAC, frontal apophyses of chelicerae.

Figuras 1–5. *Ixchela komari* sp. nov. 1, Holotipo macho (CZB-Ar-002), habitus en vista lateral. 2, Holotipo macho, caparazón, vista dorsal, fotografía, respectivamente. 3, Caparazón del paratipo hembra, vista dorsal, fotografía. 4–5, Holotipo macho, quelíceros, dibujos en vistas frontal y lateral, respectivamente. Barras de escala: 1 mm (1–3); 0.5 mm (4–5). Abreviaturas: FAC, apófisis frontal de los quelíceros.



Figures 6–9. *Ixchela komari* sp. nov. Male holotype (CZB-Ar-002). 6–7, Left palp, retro-lateral and pro-lateral views, respectively. 8–9, Left palp, drawings of retro-lateral and pro-lateral views, respectively. Red arrows indicate the apical-dorsal and apical-ventral spine-shaped projections on embolus. Scale bars: 0.5 mm. Drawings by A. Valdez-Mondragón. Abbreviations: PAB, prolateral ventral apophysis of bulb; VAF, ventrodistal apophysis of femur; VPP, ventral basal protuberance of procursus.

Figuras 6–9. *Ixchela komari* sp. nov. Holotipo macho (CZB-Ar-002). 6–7, Palpo izquierdo, vistas retrolateral y prolateral, respectivamente. 8–9, Palpo izquierdo, dibujos en vistas retrolateral y prolateral, respectivamente. Las flechas rojas indican las proyecciones apical-dorsal y apical-ventral en forma de espina en el émbolo. Barras de escala: 0.5 mm. Dibujos por A. Valdez-Mondragón. Abreviaturas: PAB, apófisis ventral prolateral del bulbo; VAF, apófisis ventrodistal del fémur; VPP, protuberancia basal ventral del procursus.

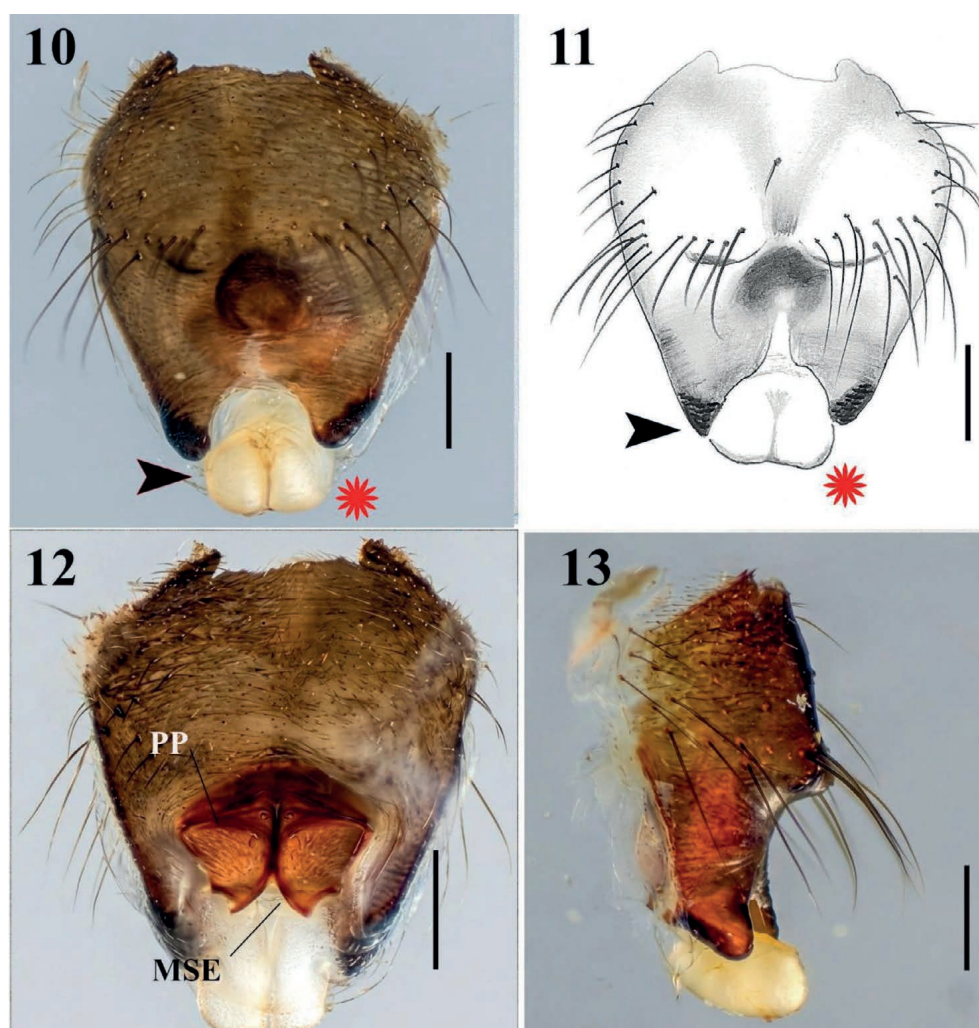
Key to species of *Ixchela* Huber, 2000

Abbreviations for Valdez-Mondragón (2013)= VM 2013; Valdez-Mondragón & Francke (2015)= VM & F 2015; Valdez-Mondragón (2020)= VM 2020. Abbreviations by Valdez-Mondragón (2013a) are used in the taxonomic keys and descriptions as follows: ALE, anterior lateral eyes; AME, anterior median eyes; FAC, frontal apophysis of chelicerae; LAC, lateral apophyses of chelicerae; MSE, median septum of epigyne; PAB, prolateral ventral apophysis of bulb; PLE, posterior lateral eyes; PME, posterior median eyes; PP, pore plates; SAC, sclerotized apophysis of chelicerae; VAE, ventral apophysis of epigyne; VAF, ventrodistal apophysis of femur; VPP, ventral basal protuberance of procursus.

Males

- 1 Chelicerae with well-developed SAC (VM 2020: fig. 6) 2
- Chelicerae without or with inconspicuous SAC (VM 2020: fig. 17) 13
- 2(1) Chelicerae with FAC long (VM & F 2015: figs 40, 51, 74) 6
- Chelicerae with FAC inconspicuous or small (Figs 3, 4; VM 2013: figs 150, 205) 3
- 3(2) Chelicerae with FAC inconspicuous (VM 2020: figs 6, 7), procursus long and straight, with distal spine, small and curved (VM 2020: fig. 9); palp with PAB finger-shaped (VM 2020: fig. 8); palp femur conical, curved ventrally, slightly curved dorsally, with small VAF (VM 2020: figs 8, 9) *Ixchela panchovillai* Valdez-Mondragón, 2020
- Chelicerae with FAC small (VM 2013: figs 149, 150, 204, 205) 4
- 4(3) Procursus straight (VM 2013: figs 152, 207) 5
- Procursus sigmoid-shaped (Figs 6, 8), FAC elongated and with a hook-shaped sclerotized tip (Figs 1, 4, 5), the PAB in the new species is long and curved (Figs 6–9), the VAF conspicuous and visible (Figs. 6, 8), palpal tibia is short and straight (Figs. 6–9) *Ixchela komari* sp. nov.
- 5(4) Chelicerae with FAC wide basally with tip slightly curved (VM 2013: figs 149, 150); embolus with basal protuberance conical, ending in round tip near PAB (VM 2013: figs 153, 154); palp with small PAB (VM 2013: figs 153, 154); palp femur wide and short, 2× longer than wide (VM 2013: figs 152, 153) *Ixchela franckei* Valdez-Mondragón, 2013
- Chelicerae with FAC with tip not curved (VM 2013: figs 204, 205); embolus without basal protuberance (VM 2013: fig. 208); palp with large PAB (VM 2013: figs 207, 208); palp femur thin and long, almost 3× longer than wide (VM 2013: figs 207, 208); procursus with long

- distal spine, straight basally and curved distally, J-shaped (VM 2013: figs 207–209) *Ixchela viquezi* Valdez-Mondragón, 2013
- 6(2) Palp femur without ventral protuberances (VM & F 2015: figs 38, 49),
chelicerae with FAC straight, located on basal third (VM & F 2015:
figs 40, 51) 7
- Palp femur with a ventral conical protuberance (VM 2013: arrow
fig. 140); chelicerae with FAC curved, located basally (VM 2013:
figs 136, 137) *Ixchela taxco* Valdez-Mondragón, 2013
- 7(6) FAC pointed apically (VM 2013: figs 22, 63) 8
- FAC rounded apically (VM & F 2015: figs 62, 85) 11
- 8(7) Palp femur convex ventrally (VM & F 2015: figs 38, 49) 9
- Palp femur concave ventrally (VM 2013: figs 25, 65) 10
- 9(8) FAC wide and conical, directed toward front (VM & F 2015: figs 37,
40); VAF small (VM & F 2015: figs 38, 39); color pattern around the
fovea very marked, width even throughout (VM & F 2015: fig. 35)
..... *Ixchela azteca* Valdez-Mondragón & Francke, 2015
- FAC very long, directed upward and slightly curved apically (VM
& F 2015: figs 48, 51); VAF long and curved (VM & F 2015: figs
49, 50); color pattern around the fovea diffuse, wider anteriorly (VM
& F 2015: fig. 46)
..... *Ixchela jalisco* Valdez-Mondragón & Francke, 2015
- 10(8) Retrolateral face of palp femur with several setae medially (VM 2013:
fig. 25); PAB straight and wide, without a distinct notch between
PAB and embolus (VM 2013: fig. 26)
..... *Ixchela abernathyi* (Gertsch, 1971)
- Retrolateral face of palp femur without setae medially (VM 2013:
fig. 65); PAB narrow and curved, with a distinct notch between PAB
and embolus (VM 2013: fig. 66) *Ixchela placida* (Gertsch, 1971)
- 11(7) FAC forming an angle of $> 90^\circ$ with the chelicerae in lateral view 12
- FAC forming an angle of 90° with the chelicerae in lateral view (VM
& F 2015: fig. 62)
..... *Ixchela mendozai* Valdez-Mondragón & Francke, 2015
- 12(11) FAC distally ending in a small tip (VM & F 2015: fig. 85)
..... *Ixchela tlayuda* Valdez-Mondragón & Francke, 2015
- FAC distally rounded (VM & F 2015: fig. 74)
..... *Ixchela purepecha* Valdez-Mondragón & Francke, 2015
- 13(1) FAC with frontal and curved sclerotized apophyses (VM 2013: figs
89, 176) 14
- FAC without frontal and curved sclerotized apophyses 16
- 14(13) PAB small and non-protruding (VM 2013: figs 54, 181); curved
sclerotized apophyses on FAC long, claw-shaped, pointing forward
(VM 2013: figs 49, 175) 15



Figures 10–13. *Ixchela komari* sp. nov. Female paratype (CZB-Ar-003). 10–11, Epigyne, ventral view (arrows indicate sclerotized small cones, red asterisks indicate the two rounded, poorly sclerotized protuberances). 12, Epigyne, dorsal view. 13, Epigyne, left lateral view. Scales: 0.5 mm. Drawing by A. Valdez-Mondragón. Abbreviations: MSE, median septum of epigyne; PP, pore plates.

Figuras 10–13. *Ixchela komari* sp. nov. Paratipo hembra (CZB-Ar-003). 10–11, Epigino, vista ventral (las flechas indican pequeños conos esclerosados, los asteriscos rojos indican dos protuberancias redondeadas pobremente esclerosadas). 12, Epigino, vista dorsal. 13, Epigino, vista lateral izquierda. Escalas: 0.5 mm. Dibujo por A. Valdez-Mondragón. Abreviaturas: MSE, septo medio del epigino; PP, placas porosas.

- PAB strongly developed, distinctly protruding (VM, 2013; fig. 92); curved sclerotized apophyses on FAC short, hook-shaped, pointing towards each other (VM 2013: figs 88–90) *Ixchela mixe* Valdez-Mondragón, 2013
- 15(14) FAC short, located slightly distal to middle of chelicerae (VM, 2013; fig. 50), curved sclerotized apophyses on FAC oblique to mid-line of chelicerae and located in the middle of a large pale patch (VM 2013: fig. 49) *Ixchela pecki* (Gertsch, 1971)

- FAC strongly developed, located on basal third of chelicerae (VM 2013: fig. 176); curved sclerotized apophyses on FAC parallel to mid-line of chelicerae and located basal to a small pale patch (VM 2013: fig. 175) *Ixchela santibanezi* Valdez-Mondragón, 2013
- 16(13) Chelicerae with vestigial SAC (VM 2013: figs 74, 162) 17
- Chelicerae without SAC (VM 2013: figs 34, 100, 124) 21
- 17(16) Palp femur $\leq 2.5\times$ longer than wide (VM 2013: figs 78, 192) 18
- Palp femur $> 2.6\times$ longer than wide (VM 2013: figs 115, 167) 20
- 18(17) FAC rounded and protruding in lateral view (VM 2013: fig. 190); embolus with long, thin, curved projection ventrodistally (VM 2013: fig. 191); marginal pattern of coloration on each side of carapace diffuse, narrow (VM 2013: fig. 87)
..... *Ixchela huasteca* Valdez-Mondragón, 2013
- FAC short and blunt in lateral view (Fig. 18, VM 2013: fig. 75) 19
- 19(18) Embolus with long and wide, leaf-shaped projection ventrodistally (VM 2013: fig. 80); PAB slightly pointed distally (VM 2013: fig. 79) marginal pattern of coloration on each side of carapace distinct, irregular and wide (VM 2013: fig. 73)
..... *Ixchela simoni* (O. Pickard-Cambridge, 1898)
- Embolus without long and wide, leaf-shaped projection ventrodistally (Figs 19, 20), PAB rounded distally (Fig. 19); marginal pattern of coloration on each side of carapace arc-shaped, irregular and thin (Fig. 15) *Ixchela zapatai* Valdez-Mondragón, 2020
- 20(17) FAC rounded and blunt; with narrow base (VM 2013: fig. 113); frontal faces of chelicerae angled, meeting medially at oblique angles (VM 2013: fig. 112); palp femur distinctly angled on basal quarter (VM 2013: figs 115, 116); embolus distally broad and blunt; PAB long and thin, finger-like (VM, 2013; fig. 116); chelicerae evenly colored in frontal view, pale (VM 2013: fig. 112)
..... *Ixchela juarezi* Valdez-Mondragón, 2013
- FAC conical with broad base (VM 2013: fig. 162); frontal faces of chelicerae flat, meeting medially on the same plane (VM 2013: fig. 162); palp femur not angled on basal quarter (VM, 2013; figs 167, 168); embolus distally tapering and narrow (VM 2013: figs 166–168); PAB wide-based and short, thumb-like (VM 2013: fig. 168); chelicerae with FAC region distinctly darker in frontal view, contrasting with pale basal and distal regions (VM 2013: figs 162) ..
..... *Ixchela tzotzil* Valdez-Mondragón, 2013



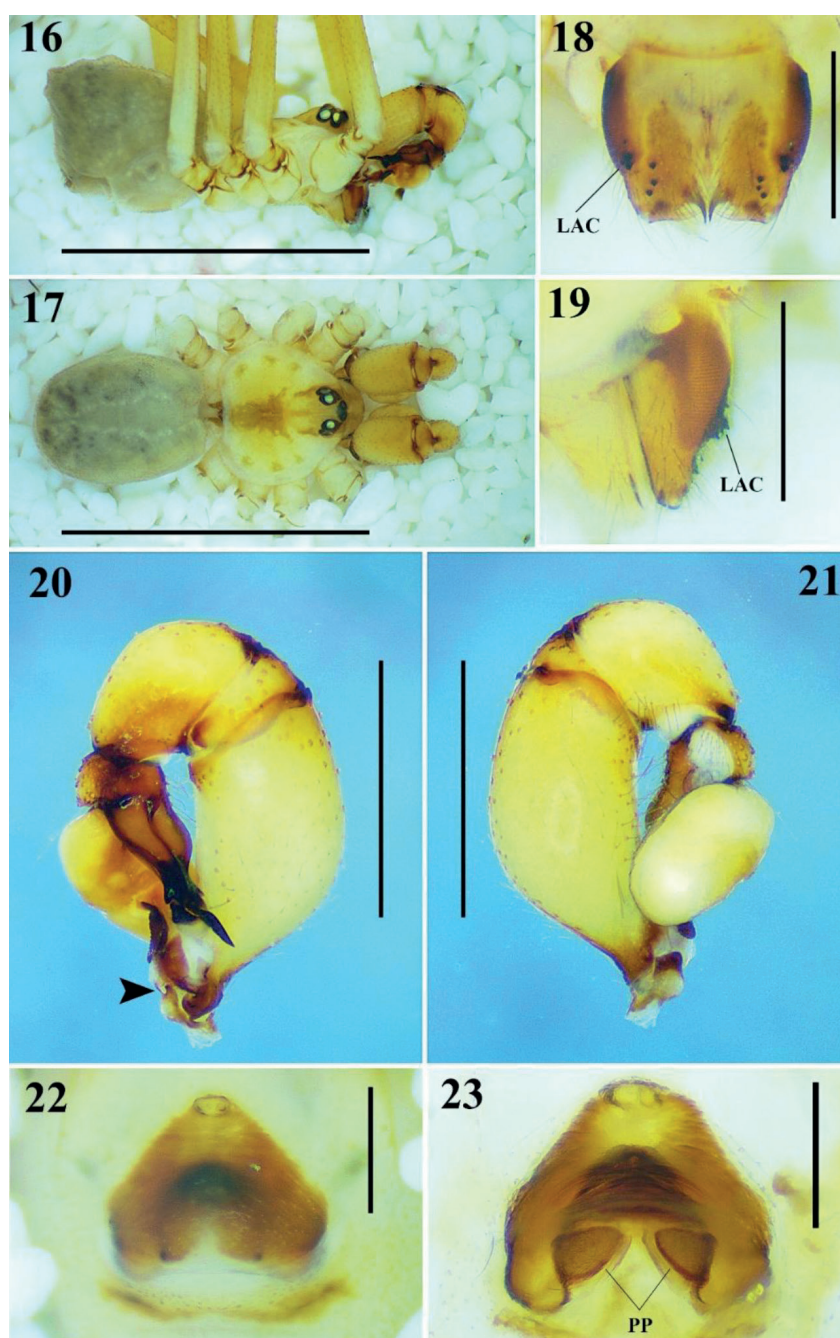
Figures 14–15. Habitat of *Ixchela komari* sp. nov. in Honduras. Cloud Forest in the area of Refugio de Vida Silvestre la Muralla, La Unión, (Olancho).

Figuras 14–15. Hábitat de *Ixchela komari* sp. nov. en Honduras. Bosque nublado en el área del Refugio de Vida Silvestre La Muralla, La Unión (Olancho).

- 21(16) Chelicerae with a pale region on distal half (VM 2013: figs 33, 34); fovea with color pattern around it touching the posterior part of ocular region (VM 2013: fig. 32); long and conical FAC, claw-shaped distally (VM 2013: figs 34, 35); PAB with a distinct medial constriction (VM 2013: fig. 38) *Ixchela furcula* (F. O. Pickard-Cambridge, 1902)
- Chelicerae without a pale region on distal half (VM 2013: figs 100, 124); fovea with color pattern around it not touching the posterior part of ocular region (VM 2013: figs 99, 123); short and rounded FAC (VM 2013: figs 100, 124); PAB without a distinct medial constriction (VM 2013: figs 104, 129) 22
- 22(21) FAC apically wide and flat in lateral view (VM 2013: fig. 101); FAC directed frontally (VM 2013: figs 100, 102); palp femur thick, $< 2.5\times$ longer than wide (VM 2013: figs 103, 104) *Ixchela huberi* Valdez-Mondragón, 2013
- FAC apically small and rounded in lateral view (VM 2013: fig. 124); FAC directed towards each other (VM 2013: figs 124, 126); palp femur thin, $3.3\times$ longer than wide (VM 2013: figs 128, 129) *Ixchela grix* Valdez-Mondragón, 2013

Females

- 1 Epigyne longer than wide (Figs 10,11; VM 2013: figs 41, 95, 119) .. 2
 - Epigyne as long as wide, or slightly wider than long (VM & F 2015: figs 42, 53) 6
- 2(1) Epigyne with a single long apophysis or without apophysis (VM 2013: figs 121, 185) 3
 - Epigyne with paired apophyses (VM 2013: figs 39, 95) 4
- 3(2) Epigyne with a very long, curved and conical ventral apophysis (VM 2013: figs 118–121); epigyne rhomboidal (VM 2013: fig. 119); posterior part without pale region and without a concavity in lateral view (VM 2013: figs 119, 121) *Ixchela juarezi* Valdez-Mondragón, 2013
 - Epigyne without ventral apophysis, pear-shaped in ventral view (VM 2013: figs 183, 185), posterior part with a small pale region (VM 2013: fig. 183), with a posterior concavity in lateral view (VM 2013: arrow, fig. 185) *Ixchela santibanezi* Valdez-Mondragón, 2013
- 4(2) Epigyne without rounded, poorly sclerotized protuberances close to epigastric furrow (VM 2013: figs 39, 41, 95) 5
 - Epigyne with rounded, poorly sclerotized protuberances close to epigastric furrow (asterisks, Figs 10, 11), on the median part of epigyne there are two small, rounded apophyses (Figs 10, 11, 13), whereas on distal part, there are two conical apophyses with sclerotized small cones (arrows, Figs 10, 11), in ventral view, general shape of the epigyne is rhomboid-shaped (Figs. 10, 11) *Ixchela komari* sp. nov.
- 5(4) Epigyne wider anteriorly, with VAE close together (VM 2013: figs 43, 44); VAE in anterior part, without rounded protuberance (VM, 2013; figs 39, 41, 43, 44) *Ixchela furcula* (F. O. Pickard-Cambridge, 1902)
 - Epigyne wider medially, with VAE separated from each other (VM 2013: fig. 94); VAE on anterior rounded protuberance (VM 2013: figs 94, 95, 97) *Ixchela mixe* Valdez-Mondragón, 2013
- 6(1) Epigyne with a conspicuous conical apophysis medially (VM & F 2015: figs 41, 52) 7
 - Epigyne without a conspicuous conical apophysis medially (VM 2013: figs 30, 71, 145, 158, 172) 13
- 7(6) Epigyne triangular in ventral view (VM 2013: fig. 82) *Ixchela simoni* (O. Pickard-Cambridge, 1898)
 - Epigyne subquadrate in ventral view (VM 2013: fig. 56) 8



Figures 16–23. *Physocyclus globosus* (Taczanowski, 1874). (IBSP). 16, Male, habitus, lateral view. 17, habitus, dorsal view. 18, front view of chelicerae. 19, retrolateral view of chelicerae. 20–21, Left palp, retrolateral and prolateral views, respectively (arrow indicates the translucent, curved apical spine). 22, 23, Female, ventral and dorsal views of epigyne respectively. Scale bars: 0.5 mm (18, 19, 22, 23), 1 mm (20, 21), 4 mm (16, 17). Abbreviations: LAC, lateral apophyses of chelicerae; PP, pore plates.

Figuras 16–23. *Physocyclus globosus* (Taczanowski, 1874). (IBSP). 16, Macho, habitus en vista lateral. 17, habitus en vista dorsal. 18, vista frontal de los quelíceros. 19, vista retrolateral de los quelíceros. 20–21, Palpo izquierdo, vistas retrolateral y prolateral, respectivamente (la flecha indica la espina apical translúcida y curvada). 22, 23, Hembra, vistas ventral y dorsal del epigino respectivamente. Barras de escala: 0.5 mm (18, 19, 22, 23), 1 mm (20, 21), 4 mm (16, 17). Abreviaturas: LAC, apófisis laterales de los quelíceros; PP, placas porosas.

- 8(7) Epigyne in frontal view triangular, pointed (Fig. 23; VM 2013: fig. 210) 9
- Epigyne in frontal view subquadrate, blunt (VM 2013: fig. 58)
..... *Ixchela pecki* (Gertsch, 1971)
- 9(8) Epigyne with PP longer than wide (VM 2013: fig. 212)
..... *Ixchela viquezi* Valdez-Mondragón, 2013
- Epigyne with PP wider than long (VM & F 2015: figs 43, 54) 10
- 10(9) Epigyne in frontal view with lateral rounded protuberances, slightly conspicuous or conspicuous (VM & F 2015: figs 55, 67) 16
- Epigyne in frontal view without lateral rounded protuberances (Fig. 23, VM 2013: figs 106, 130) 11
- 11(10) Epigyne with apophysis medially (VM 2013: figs 107, 109)
..... *Ixchela huberi* Valdez-Mondragón, 2013
- Epigyne with anterior apophysis (Fig. 24; VM 2013: figs 131, 133) ..
..... 12
- 12(11) Epigyne with small and curved apophysis (VM 2013: figs 131, 133)
..... *Ixchela grix* Valdez-Mondragón, 2013
- Epigyne with straight apophysis, large and sharp apically, forming an angle $>90^\circ$ with the Epigyne (VM 2020: figs 23, 24)
..... *Ixchela zapatai* Valdez-Mondragón, 2020
- 13(6) Epigyne with small and circular concavity in frontal–distal part (VM 2013: figs 142, 159); in frontal view epigyne without posteromedian wide area (VM, 2013; figs 142, 159); epigyne trapezoidal in ventral view (VM 2013: figs 143, 155) 15
- Epigyne without small and circular concavity in frontal–distal part (VM 2013: fig. 169); in frontal view epigyne with posteromedian wide area (VM 2013: fig. 169) 14
- 14(13) Epigyne with posteromedian wide area not extending beyond posterior margin (VM 2013: fig. 169); without small, rounded pit on posteromedian area (VM 2013: figs 169, 170); hexagonal in ventral view (VM 2013: fig. 170) *Ixchela tzotzil* Valdez-Mondragón, 2013
- Epigyne with posteromedian wide area extending beyond posterior margin, with two lateral prominent corners (VM 2020: fig. 12), in lateral view, with an anterior small projection (VM 2020: fig. 13); epigyne pentagonal in ventral view (VM 2020: fig. 10)
..... *Ixchela panchovillai* sp. nov.
- 15(13) Epigyne higher than wide in frontal view (VM, 2013; fig. 142); with anterior two-thirds dark, posterior third pale (VM 2013: fig. 143)
..... *Ixchela taxco* Valdez-Mondragón, 2013
- Epigyne wider than high in frontal view (VM 2013: fig. 159); with anterior half pale and distal half dark (VM, 2013; fig. 155)
..... *Ixchela franckei* Valdez-Mondragón, 2013

- 16(10) Epigyne in frontal view with slightly conspicuous lateral rounded protuberances (VM & F 2015: figs 44, 55) 17
- Epigyne in frontal view with conspicuous lateral rounded protuberances (VM & F 2015: figs 67, 78) 19
- 17(16) Epigyne with ventral apophysis pointed distally (VM & F 2015: figs 41, 52) 18
- Epigyne with ventral apophysis rounded distally (VM 2013: figs 198, 201) *Ixchela huasteca* Valdez-Mondragón, 2013
- 18(17) Epigyne with ventral apophysis curved and located on anterior part (VM & F 2015: fig. 41)
..... *Ixchela azteca* Valdez-Mondragón & Francke, 2015
- Epigyne with ventral apophysis almost straight and located on middle part (VM & F 2015: fig. 52)
..... *Ixchela jalisco* Valdez-Mondragón & Francke, 2015
- 19(16) Epigyne in lateral view, with a noticeably long ventral apophysis (VM & F 2015: fig. 75) 20
- Epigyne in lateral view, with an inconspicuous, short ventral apophysis (VM 2013: figs 30, 71) 21
- 20(19) Epigyne in lateral view, with ventral apophysis narrow and pointed apically (VM & F 2015: fig. 75)
..... *Ixchela purepecha* Valdez-Mondragón & Francke, 2015
- Epigyne in lateral view, with ventral apophysis wide and rounded apically (VM & F 2015: figs 66, 86) 22
- 21(19) Epigyne in frontal view, with distal margin concave (VM 2013: fig. 68); with two prominent, lateral rounded protuberances (VM 2013: figs 68, 69, 71) *Ixchela placida* (Gertsch, 1971)
- Epigyne in frontal view, with posteromedial area extending beyond posterior margin (VM 2013: fig. 27); with two weak, lateral rounded protuberances (VM 2013: figs 27, 28, 30)
..... *Ixchela abernathyi* (Gertsch, 1971)
- 22(20) Epigyne in lateral view wide and almost straight (VM & F 2015: fig. 86); MSE not touching the PP in dorsal view (VM & F 2015: fig. 88) *Ixchela tlayuda* Valdez-Mondragón & Francke, 2015
- Epigyne in lateral view wider and slightly more curved than *I. tlayuda* (VM & F 2015: fig. 66); MSE touch the PP indorsal view (VM & F 2015: fig. 65)
..... *Ixchela mendozai* Valdez-Mondragón & Francke, 2015

Ixchela komari sp. nov.

Figures 1–15, 24

urn:lsid:zoobank.org:act:DEAC989B-8988-48A1-9199-6C99DD348822

Type material.— HONDURAS: Olancho: 1 m# holotype (CZB-Ar-002), 15-September-2023; Col., A. M. Cubas-Rodríguez, from Refugio de Vida Silvestre la Muralla (15°05'49", -86°44'10", 1460 m a.s.l.). 1 f# paratype (CZB-Ar-003), 15-September-2023; Col., A. M. Cubas-Rodríguez, from Refugio de Vida Silvestre la Muralla.

Etymology.— This species is a patronym dedicated to Dr. Oliver Komar in recognition of his distinguished scientific career and his steadfast commitment to the conservation of biodiversity in Honduras. He has been a leading figure in the study and protection of Honduran avifauna, actively supporting conservation initiatives and institutional strengthening through Aves Honduras and the Zamorano Center for Biodiversity.

Diagnosis.— *Ixchela komari* sp. nov. resembles *I. viquezi*; however, in the new species the frontal apophyses of chelicerae are elongated and with a hook-shaped sclerotized tip (Figs 1, 4, 5), whereas in *I. viquezi* the frontal apophyses of chelicerae are small with a small, rounded tip (Valdez-Mondragón 2013a: figs 204, 205); the sclerotized apophyses of chelicerae are absent in the new species (Fig. 4) but present in *I. viquezi*; prolateral ventral apophysis of bulb in the new species is longer and curved (Figs 6–9), whereas in *I. viquezi* it is rounded, wide, and straight (Valdez-Mondragón 2013a: figs 207, 208); procursus shorter and sigmoid-shaped in the new species (Figs 6, 8), whereas in *I. viquezi* it is longer and straight; ventrodistal apophysis of femur conspicuous and visible in the new species (Figs. 6, 8), whereas in *I. viquezi* it is small and inconspicuous; palpal tibia in *I. komari* sp. nov. it is shorter and straight (Figs. 6–9), whereas in *I. viquezi* is longer and slightly curved. In ventral view, female epigyne longer than wide in *I. komari* sp. nov. (Figs 10, 11), whereas in *I. viquezi* is as long as wide (Valdez-Mondragón 2013a: fig. 211); in the new species, on the median part of epigyne there are two small, rounded apophyses (Figs 10, 11, 13), whereas in *I. viquezi* a long and wide median apophysis is present; on distal part of epigyne, two conical apophyses with sclerotized small cones are present in the new species (arrows, Figs 10, 11), whereas in *I. viquezi* such conical apophyses are absent; between these conical apophyses, in the new species there are two rounded, poorly sclerotized protuberances (asterisks, Figs 10, 11), which are absent in *I. viquezi*; in ventral view, general shape of the epigyne in *I. komari* sp. nov. is rhomboid-shaped (Figs. 10, 11), whereas in *I. viquezi* it is straight in anterior part and curved in posterior part, close to epigastric furrow (Valdez-Mondragón 2013a: fig. 211).

Description: Male (Holotype).—

– *Prosoma*: Carapace light orange, pale grey on distal half, with a dark marginal region on posterior half (Figs 2). Fovea longitudinal, with a dark grey pattern; ocular region dark brown (Figs 1, 2). Clypeus with a dark brown region (Fig. 2). Chelicerae light brown (Fig. 1, 4–5). Sternum light olive, labium and endites pale brown, paler distally. Retrolateral processes of endites pale.

– *Legs*: Coxae and trochanters pale orange (Fig. 1). Femurs dark brown, paler basally, without subdistal rings. Tibiae, metatarsi, and tarsi pale brown.

– *Opisthosoma*: Globular, slightly light grey, slightly conical posteriorly, becoming pale green anteriorly and distally (Fig. 1).

– *Palp*: Femur conical, orange, becoming darker ventrally, sigmoid before the VAF (Figs 6, 7). VAF conspicuous and conical (Figs. 6–9). Patella and tibia orange; procursus curved, dark brown, with a small distal spine (Fig. 6, 8). VPP small, with few large setae (Figs. 6, 8). Embolus short and wide, with a slight curvature ventrally, distally with apical-dorsal and apical-ventral spine-shaped projections (red arrows, Figs. 6–9).

– *Measurements*. Total length 6.30. Carapace 2.10 long, 2.0 wide. Clypeus length 0.90. Diameter AME 0.14, ALE 0.25, PME 0.18, PLE 0.22. Distance ALE-PME 0.16, PME-PME 0.29. Leg I: 51.92 (11.90+1.90+13.60+18.64+5.88), tibia II: 11.04, tibia III: 9.29, tibia IV: 11.93; tibia I l/d 26.85.

Description: Female (Paratype).— Similar as male, with some differences.

– *Prosoma*: Distal half of carapace grey to olive green, darker than male (Fig. 3). Ocular region darker brown than male. Sternum brown, paler distally and darker than male.

– *Legs*: Coxae and trochanters light orange, becoming olive green in the prolateral and retrolateral regions. Femora, tibiae, metatarsi and tarsi olive green, paler than male.

– *Epigyne*: Longer than wide (Figs. 10–13). Dark brown coloration (Fig. 10), with long setae on middle rounded apophyses (Figs 10, 11, 13). PP longer than wide, MSE thin, forming an upside-down Y-shape (Fig. 12).

– *Measurements*: Total length 7.36. Carapace 2.16 long, 1.85 wide. Clypeus 0.70 long. AME diameter 0.13, ALE 0.23, PME 0.16, PLE 0.20. Distance ALE-PME 0.18. PME-PME 0.31. Leg I: 33.94 (8+0.98+9.95+11.5+3.50), tibia II: 7.02, tibia III: 4.85, tibia IV: 6.98; tibia I l/d: 23.47.

Natural History.— The specimens were found in wooded areas of pine forest near the Refugio de Vida Silvestre la Muralla, La Unión, (Olancho), living under fallen logs, small mud walls, and under abandoned stairs (Figs. 14–15).

Distribution.— HONDURAS: Olancho (Fig. 24).

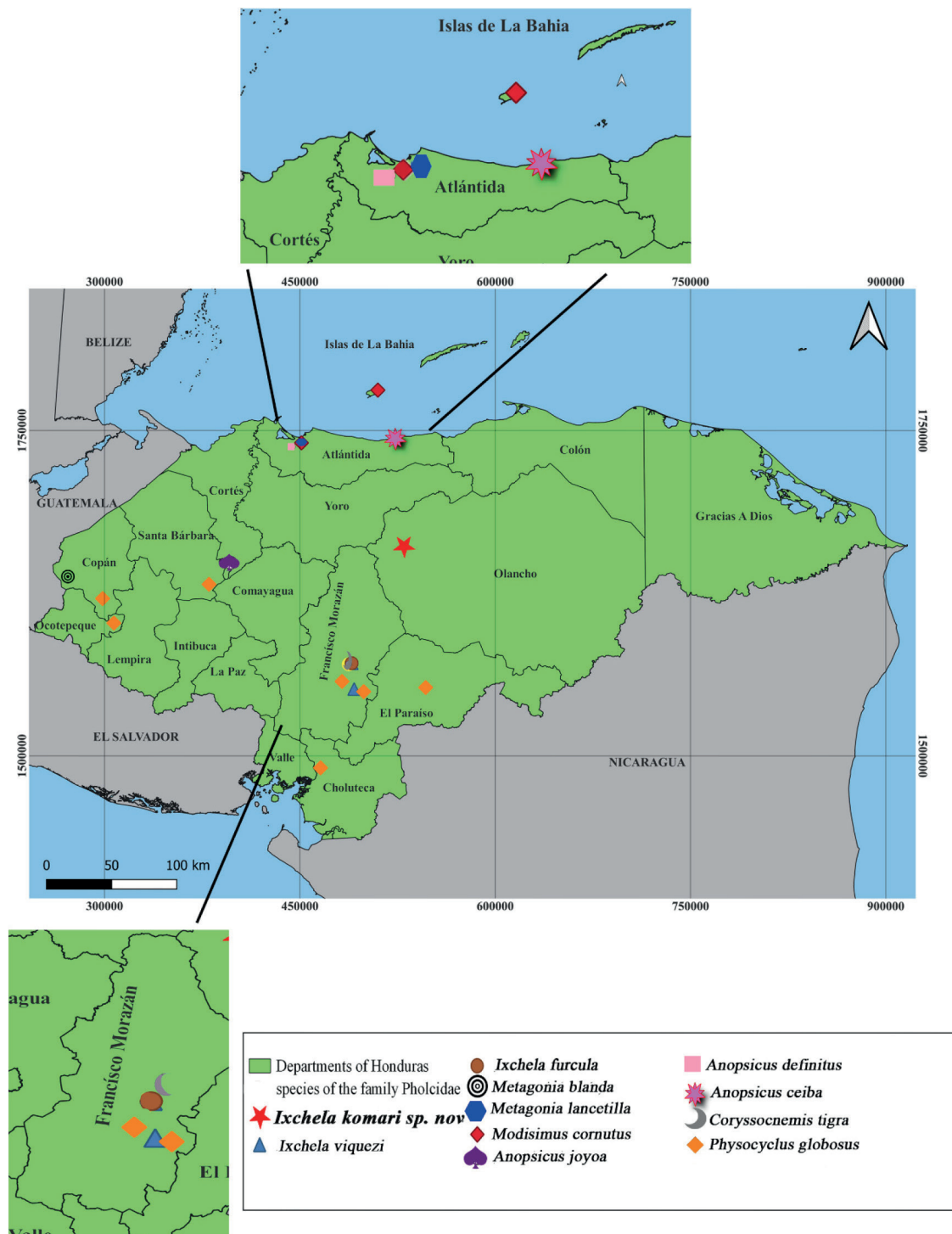


Figure 24. Distribution records of the species of the family Pholcidae known from Honduras, including the type locality of *Ixchela komari* sp. nov.

Figura 24. Registros de distribución de las especies de la familia Pholcidae conocidas de Honduras, incluyendo la localidad tipo de *Ixchela komari* sp. nov.

Physocyclus globosus* (Taczanowski, 1874)Pholcus globosus* Taczanowski, 1874: 105.

See WSC (2026) for complete synonymic list of the species.

Figures 16–24

Examined material.— HONDURAS: Francisco Morazan: 1m# (IBSP-325838), 1f# (IBSP-325842) from facilities of the Universidad Nacional Autónoma de Honduras (UNAH), Tegucigalpa (lat 14.0851°, lon -87.1622°); 15 September 2023; A.M. Cubas-Rodriguez Col., daylight collection.

Distribution.— Cosmopolitan species (Valdez-Mondragón 2010: Map 3). See Valdez-Mondragón (2010) for complete distribution records of the species. Honduras (new records), in six departments: Francisco Morazán, Ocotepeque, Copan, Santa Barbara, Choluteca, and El Paraíso (Fig. 24).

DISCUSSION

The pholcid spiders from Honduras are so far poorly known, currently comprising six genera and 11 species, with the genus *Anopsicus* Chamberlin & Ivie being the most diverse with three described species (WSC, 2025). The genus *Ixchela* belongs to the subfamily Modisiminae Simon, 1893 and the type species of the genus (*I. furcula*) was described from Los Altos Region in Tecpan, Guatemala by F. O. Pickard-Cambridge (1902) and posteriorly recorded from Parque Nacional La Tigra in Honduras by Huber (1998). However, the first species described from Honduras was *I. viquezi* in 2013 (Valdez-Mondragón 2013a) from Oyuca, but also known from Parque Nacional La Tigra, which means that *I. furcula* and *I. viquezi* are sympatric species. More than a decade later, a third species of the genus, *I. komari* sp. nov. is recorded from Honduras, making both *Anopsicus* and *Ixchela* the most diverse genera in the country with three species each. Further sampling is needed in Honduras to discover additional species of pholcids spider, especially in general in temperate and montane regions of Honduras where the *Ixchela* spiders inhabit.

Regarding the genus *Physocyclus*, these pholcid spiders are common in North America, showing their highest diversity in Mexico with 38 recognized species (Valdez-Mondragón 2010; 2013b; Jiménez & Palacios-Cardiel 2013, Nolasco & Valdez-Mondragón 2020; 2022; Alcántar-Valenzuela et al. 2024). *Physocyclus* is distributed in North and Central America, from the southern United States to Costa Rica (Valdez-Mondragón 2010; 2013b). However, in the case of *P. globosus*, the species has been introduced by humans to different countries, regions, and even islands around the world (Baert et al. 2023), including Honduras as recorded for the first time herein.

ACKNOWLEDGEMENTS

We give our sincere thanks to Andrea M. Rodríguez, Astrid Martínez, and David Medina for their help with fieldwork during the expedition to Olancho. Likewise, we would like to extend our special thanks to Dr. Eric Van Den Berghe, Ph.D., from Zamorano University, for his valuable support with the deposit and handling of the material and for his collaboration throughout this process. We are grateful to the reviewers for their comments and suggestions that improved our manuscript. The first author thanks the Vincent Roth Fund for Systematic Research for funding awarded to him by the American Arachnological Society in 2024. We also thank to Dr. Antonio D. Brescovit for his support and help. We thank to the reviewers of the manuscript and Associate Editor of *Acta Zoológica Lilloana* by their comments and suggestions which improved the manuscript quality.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

REFERENCES

- Alcántar-Valenzuela, J.J., Chamé Vázquez, D., Jiménez, M.-L., & Castañeda de los Santos, G. (2024). Current knowledge of spiders (Arachnida: Araneae) from Sinaloa, Mexico: Species checklist and new records, including the first record of *Plexippus petersi* Karsch, 1878 for America. *Acta Zoológica Mexicana (n.s.)*, 40, 1–27. <https://doi.org/10.21829/azm.2024.401267>
- Baert, L., Maelfait, J.P., Desender, K., Hendrickx, F., Dekoninck, W., Berthet, M., Bouckaert, K., Caudron, J., & Leclercq, M. (2023). Updated checklist, origin, distribution, literature and genital drawings of the spiders of the Galápagos Islands. *Belgian Journal of Entomology*, 142, 1–188. <https://doi.org/10.5281/zenodo.12639161>
- Eberle, J., Dimitrov, D., Valdez-Mondragón, A., & Huber, B.A. (2018). Microhabitat change drives diversification in pholcid spiders. *BMC Evolutionary Biology*, 18, 141. <https://doi.org/10.1186/s12862-018-1244-8>
- Huber, B.A. (1998). Report on some pholcid spiders collected in Guatemala and Honduras (Araneae, Pholcidae). *Revue Suisse de Zoologie*, 105, 49–80. <https://doi.org/10.5962/bhl.part.80031>
- Huber, B.A. (2000). New World pholcid spiders (Araneae: Pholcidae): A revision at generic level. *Bulletin of the American Museum of Natural History*, 254, 1–348. [https://doi.org/10.1206/0003-0090\(2000\)254<0001:NWPSAP>2.0.CO;2](https://doi.org/10.1206/0003-0090(2000)254<0001:NWPSAP>2.0.CO;2)

- Huber, B.A. (2011). Phylogeny and classification of Pholcidae (Araneae): An update. *Journal of Arachnology*, 39, 211–222. <https://doi.org/10.1636/CA10-57.1>
- Huber, B.A. (2018). Cave-dwelling pholcid spiders (Araneae, Pholcidae): A review. *Subterranean Biology*, 26, 1–18. <https://doi.org/10.3897/subtbiol.26.26430>
- Jiménez, M.L., & Palacios-Cardiel, C. (2013). A new species of *Physocyclus* (Araneae: Pholcidae) from Mexico. *Zootaxa*, 3717, 96–99. <https://doi.org/10.11646/zootaxa.3717.1.8>
- Meng, G., Carvalho, L. S., Podsiadlowski, L., & Huber, B. A. (2026). Low coverage whole genome sequencing reveals a new subfamily of daddy long-legs spiders from Brazilian Caatinga (Araneae: Pholcidae). *Arthropod Systematics & Phylogeny*, 84, 95–121. <https://doi.org/10.3897/asp.84.e174748>
- Michalik, P., Ramírez, M.J., 2014. Evolutionary morphology of the male reproductive system, spermatozoa and seminal fluid of spiders (Araneae, Arachnida) – Current knowledge and future directions. *Arthropod Struct. Dev.* 43, 291–322. <https://doi.org/10.1016/j.asd.2014.05.005>
- Nolasco, S., & Valdez-Mondragón, A. (2020). On the daddy long-legs spiders of the genus *Physocyclus* (Araneae: Pholcidae) from Mexico: Description of a new species from the Baja California Peninsula. *Revista Mexicana de Biodiversidad*, 91, 1–7. <https://doi.org/10.22201/ib.20078706e.2020.91.3316>
- Nolasco, S., & Valdez-Mondragón, A. (2022). Four new species of the spider genus *Physocyclus* Simon, 1893 (Araneae: Pholcidae) from Mexico, with updated taxonomic identification keys. *European Journal of Taxonomy*, 813, 173–206. <https://doi.org/10.5852/ejt.2022.813.1739>
- Valdez-Mondragón, A. (2013a). Taxonomic revision of the spider genus *Ixchela* Huber, 2000 (Araneae: Pholcidae), with description of ten new species from Mexico and Central America. *Zootaxa*, 3608, 285–327. <https://doi.org/10.11646/zootaxa.3608.5.1>
- Valdez-Mondragón, A. (2013b). Morphological phylogenetic analysis of the spider genus *Physocyclus* (Araneae: Pholcidae). *Journal of Arachnology*, 41, 184–196. <https://doi.org/10.1636/K12-33.1>
- Valdez-Mondragón, A. (2020). COI mtDNA barcoding and morphology for species delimitation in the spider genus *Ixchela* Huber (Araneae: Pholcidae), with the description of two new species from Mexico. *Zootaxa*, 4747(1), 54–76. <https://doi.org/10.11646/zootaxa.4747.1.2>
- Valdez-Mondragón, A., & Francke, O.F. (2015). Phylogeny of the spider genus *Ixchela* Huber, 2000 (Araneae: Pholcidae) based on morphological and molecular evidence (COI and 16S), with a hypothesized diversification in the Pleistocene. *Zoological Journal of the Linnean Society*, 175, 20–58. <https://doi.org/10.1111/zoj.12265>
- World Spider Catalog. (2026). *World Spider Catalog*, version 26. Natural History Museum Bern, Bern. Available from: <http://wsc.nmbe.ch> (accessed 22 February 2026).