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ON THE IDENTITY OF SOME TAXA IN THE TARANTULA TRIBE HAPALOPINI, WITH TWO SYNONYMIES, AND DESCRIPTION OF FOUR NEW GENERA AND THREE NEW SPECIES (ARANEAE: THERAPHOSIDAE)

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On the identity of some taxa in the tarantula tribe Hapalopini, with two synonymies, and description of four new genera and three new species (Araneae: Theraphosidae)

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ABSTRACT

Four new genera are described to resolve the recent placement of non-congeneric species in *Hapalopus* Ausserer, 1875 and *Thrixopelma* Schmidt, 1994. Further taxonomic notes on Hapalopini are provided. *Crypticarachne* **gen. nov.** is described for the newly combined monotypic species *Crypticarachne nadineae* (Sherwood & Gabriel, 2022) **comb. nov.** *Devicarina* **gen. nov.** is described to house the newly combined species *Devicarina akroa* (Moeller, Galleti-Lima & Guadanucci, 2024) **comb nov.** (type species) and *Devicarina guidonae* (Moeller, Galleti-Lima & Guadanucci, 2024) **comb. nov.** which were clearly misplaced in *Hapalopus*. *Ewok* **gen. nov.** is described for six newly combined and two newly described species: *Ewok aymara* (Chamberlin, 1916) **comb. nov.**, *Ewok aycaramba* **sp. nov.**, *Ewok christineae* (Sherwood & Gabriel, 2024) **comb. nov.** (type species), *Ewok cyaneolum* (Schmidt, Friebolin & Friebolin, 2005) **comb. nov.**, *Ewok eliseanneae* (Sherwood & Gabriel, 2024) **comb. nov.**, *Ewok kainae* **sp. nov.**, *Ewok kimraykawsaki* (Signorotto *et al*., 2025) **comb. nov.** and *Ewok pruriens* (Schmidt, 1998) **comb. nov.** *Warmiru* **gen. nov.** is described to accommodate the newly combined species *Warmiru lagunas* (Schmidt & Rudloff, 2010) **comb. nov.** and *Warmiru longicolli* (Schmidt, 2003) **comb. nov.** (type species). *Thrixopelma peruvianum* (Schmidt, 2007) **syn. nov.** is proposed as a junior synonym of *Warmiru longicolli* **comb. nov.** based on spermathecal morphology. Finally, *Anqasha lima* **sp. nov.** is described based on material from Peru in accordance with Article 13 of the International Code of Zoological Nomenclature. The recent misidentification of palpal bulb keels by Kaderka & Quispe-Colca (2025) is corrected, and *Thrixopelma zaratensis* Kaderka & Quispe-Colca, 2025 is newly transferred to *Ewok* **gen. nov.** with *Ewok zaratensis* **syn. nov.** placed as a junior synonym of *Ewok christineae* **comb. nov.**

Key words: taxonomy, morphology, museums, synonymy, tarantula, theraphosid

INTRODUCTION

The genus *Thrixopelma* Schmidt, 1994 currently contains 13 species (World Spider Catalog, 2025): *T. aymara* (Chamberlin, 1916) (♀, Peru), *T. choquequirao* Millenpeier, Chaparro, Ochoa, Ferretti & West, 2024 (♂♀, Peru), *T. christineae* Sherwood & Gabriel, 2024 (♂, Peru), *T. cyaneolum* Schmidt, Friebolin & Friebolin, 2005 (♂♀, Peru), *T. eliseanneae* Sherwood & Gabriel, 2024 (♂, Peru), *T. kimraykawsaki* Signorotto *et al*., 2025 (♂♀, Peru), *T. lagunas* Schmidt & Rudloff, 2010 (♂♀, Peru), *T. longicolli* (Schmidt, 2003) (♂♀, Ecuador and Peru), *T. nadineae* Sherwood & Gabriel, 2022 (♂, Ecuador), *T. ockerti* Schmidt, 1994 (type species, ♂♀, Peru), *T. peruvianum* (Schmidt, 2007) (♀, Peru), *T. pruriens* Schmidt, 1998 (♂♀, Peru, purportedly also Chile), and *T. zaratensis* Kaderka & Quispe-Colca, 2025 ((♂♀, Peru). Following the revision of the genus by Sherwood *et al*. (2021), three further works have built upon the foundation of their work by adding more new species (Sherwood & Gabriel, 2022b, 2024; Millenpeier *et al*., 2024) and the redescription of the male of the type species (Signorotto *et al*., 2025). Aguilera *et al*. (2022) made some brief remarks about *T. pruriens*, but did not describe any new species. Signorotto *et al.* (2025) recently succeeded in redescribing the conspecific male of *T. ockerti*, giving for the first time a much more stable taxonomic identity to the type species.

After the taxonomic revision of *Hapalopus* by Sherwood *et al.* (2024), which stabilised and defined the genus, Moeller *et al.* (2024) described two new species supposedly belonging to this genus. The authors argued their generic position on the basis of a comparison of previously published works on *Hapalopus*, without having examined any type material of *Hapalopus sensu stricto* themselves. Due to the purportedly lack of uniformity of diagnostic characters from species previously placed in *Hapalopus* prevented the conciliation of putative monophyletic groups. Their work was likely further impacted by the fact it was published shortly after the major revision of the genus, meaning they were unaware of new data relating to the type species.

Kaderka & Quispe-Colca (2025) published an article in *Revista Peruana de Biología* describing the morphology of a putative conspecific male of *T. auymara*, a 'new' species (see below), a new keel identification proposal for this group, and a revised 'diagnosis' of *Thrixopelma* sensu lato. The incorrect subsequent spelling "*Thrixopelma christinae*" is also used by Kaderka & Quispe-Colca (2025). Many errors exist in their work (see Discussion). One comment by Kaderka & Quispe-Colca (2025) is correct, in Sherwood & Gabriel (2024) the phrase "*T. ockerti* allegedly from both Peru and Chile" should read "*T. pruriens* allegedly from both Peru and Chile".

In this work, we re-stabilise the taxonomy of *Hapalopus* by removing the species misplaced there by Moeller *et al*. (2024) and further re-appraise the taxonomy of *Thrixopelma* based on excellent recent data published by Signorotto *et al*. (2025), which confirmed our long-held suspicions that *Thrixopelma* is not monophyletic (Sherwood *et al*., 2021). Four new genera are consequently described: *Crypticarachne* **gen. nov.**, *Devicarina* **gen. nov.**, *Ewok* **gen. nov.**, and *Warmiru* **gen. nov.**, with numerous new combinations established. Two new species are described from Peru based on type material deposited in the Muséum national d'Histoire naturelle, Paris, France: *Ewok aycaramba* **gen. et sp. nov.** and *Ewok kainae* **gen. et sp. nov.** A new species-level synonymy within this genus also proposed as well as within *Thrixopelma*. Errors in the paper by Kaderka & Quispe-Colca (2025) are discussed. Finally, a third new species, belonging to the Peruvian endemic genus *Anqasha* Sherwood & Gabriel, 2022, is

described based on a specimen deposited in the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru which was first depicted, but was not formally named, by Kaderka (2023).

MATERIAL AND METHODS

Specimens were examined under binocular microscopes. Photographs were made using a Canon EOS 6D Mark II attached to a Leica MZ12.5 stereomicroscope, with images stacked using Helicon Focus software. Description style follows Sherwood *et al*. (2021). Abbreviations – Repositories of material examined: IBSP = Instituto Butantan, São Paulo, Brazil; MNHN = Muséum national d'Histoire naturelle, Paris, France; NHMUK = Natural History Museum, London, United Kingdom; SMF = Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt am Main, Germany; ZMH = Zoologisches Museum Hamburg, Germany; ZSFQ = Museo de Zoología, Universidad San Francisco de Quito, Ecuador. Structures: ALE = anterior lateral eyes, AME = anterior median eyes, PLE = posterior lateral eyes, PME = posterior median eyes; PB = prolateral branch (of tibial apophysis), RB = retrolateral branch (of tibial apophysis). Other: coll. = collector; colln. = collection; leg. = legit (collected by). Leg spine terminology follows Petrunkevitch (1925) with the modifications proposed by Bertani (2001): d = dorsal, v = ventral, r = retrolateral, p = prolateral. Palpal bulb terminology and keel homology criteria follows Bertani (2000) with modifications for the retrolateral keel and expanded definitions proposed by Peñaherrera-R *et al.* (2025): A = apical keel, PACK = prolateral accessory central keel; PI = prolateral inferior keel, PS = prolateral superior keel, RS = retrolateral superior keel, SA = subapical keel, TH = tegular heel; with the additions proposed by Gabriel & Sherwood (2020): ER = embolic ridge, PR = prolateral ridge, PAR = prolateral apical ridge, PC = prolateral crease, and Sherwood *et al*. (2023): DEH = dorsal embolic hump. Leg formulae start with the longest leg to the shortest in order of decreasing size, e.g. 4,1,2,3. Urticating setae terminology follows Cooke, Roth & Miller (1972). All measurements are in mm. Authors' emphases in square brackets.

MORPHOLOGICAL OBSERVATIONS

Herein, we provide observations on three unreported morphological structures that further support the taxonomic actions in this manuscript (see Taxonomy). During the examination of almost all the type material of *Thrixopelma sensu lato* (*Ewok* **gen. nov.** and *Warmiru* **gen. nov.**), *Thrixopelma sensu stricto*, and "*Hapalopus*" *sensu* Moeller *et al.* (2024) (i.e. *Devicarina* **gen. nov.**), we observed structures which had been missed or misidentified by previous workers. We have subsequently investigated these on all of the genera herein, have physically examined all of the [extant] type material deposited in European museums, as well as material deposited in IBSP. For those species whose types were deposited elsewhere, and that were consequently not examined, confirmed presence or absence of each structure was conducted through consulting the published works on given species (i.e. *E. kimraykawsaki* **comb. nov.**). These outgrowth modifications, herein referred to as cuticular processes (Peñaherrera-R. & Guayasamin, in press), are described and classified in the following paragraphs based on the position of the outgrowth.

Medial prolateral embolar projection (MPE): comprises of a rounded or domed process emerging at the prolateral face of embolus at medial section. This projection can be inferred as homologous within all the species of *Ewok* **gen. nov.** (Fig. 1C). This projection is below the prolateral inferior and subapical keels. The MPE is identifiable at apical view of the palpal bulb.

Intermediate tegular+embolar projection (ITE): comprises of a rounded or domed process emerging at the ventral face between the tegulum and embolus, extending the prolateral and retrolateral inferior borders of each respective surface (Fig. 1). This projection can be inferred as homologous, uniting the genera *Devicarina* **gen. nov.**, *Ewok* **gen. nov.** and *Warmiru* **gen. nov.** (Fig. 1). ITE aligns with the proximal or distal section of the prolateral crease and is found with a conspicuous ridge at the centre of the process (almost ventral section of the bulb) which is composed of a crested keel. This keel is represented by the subapical keel in *Devicarina* **gen. nov.** and *Ewok* **gen. nov.**, and prolateral inferior keel in *Warmiru* **gen. nov.** The ITE presents different character states with respect to the level of projection, being weakly developed in *Ewok* **gen. nov.**, developed in *Warmiru* **gen. nov.**, and well-developed in *Devicarina* **gen. nov.** In *Ewok* **gen. nov.**, is also distinguished by the ITE accompanied by the prolateral inferior keel, but at the prolateral section of the bulb.

In addition to the new cuticular processes, a keel previously identified as apical keel by Moeller *et al.* (2024: fig. 56, 70) from species of *Devicarina* **gen. nov.** drew our attention due to incongruences toward Bertani's (2000) male palpal bulb homologous keels and expanded definitions proposed by Peñaherrera-R. *et al.* (2025). This keel is uniquely positioned along the prolateral inferior border of the distal section of embolus and unrelated to the properly identified spermatic pore keels, apical keel, and subapical keel (Fig. 2A–B). Accordingly, we herein name this newly identified keel as the **infra-apical keel**, referring to its position below the set of apical and subapical keels and along the prolateral inferior border of the distal section of embolus (Fig. 2B).

Although a proper phylogenetic analysis will further support the naming and consideration of these new structures for theraphosid taxonomy, other upcoming work will bring related results (Peñaherrera-R. & Guayasamin, in press.; Peñaherrera-R. *et al.*, in prep.) as they formed part of PP-R's MSc thesis.

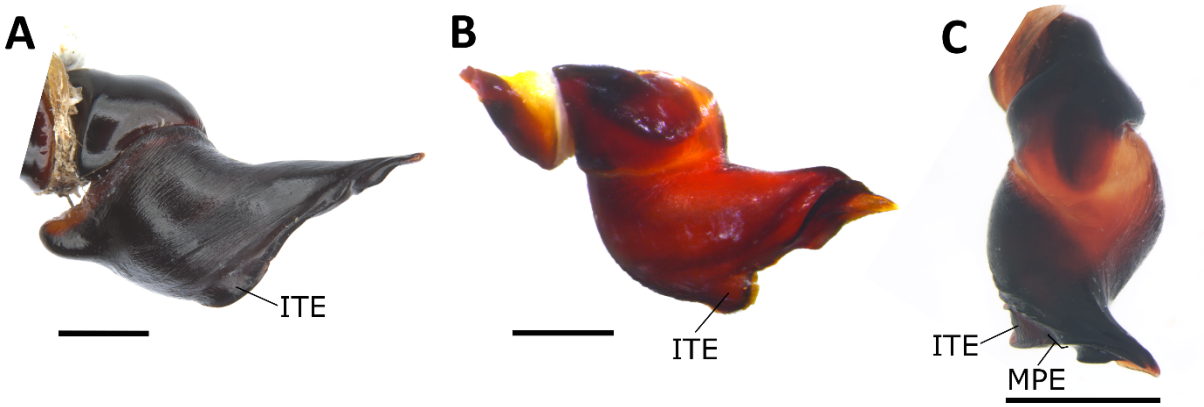

Figure 1: Cuticular processes on male palpal bulb found in *Warmiru* **gen. nov.**, *Devicarina* **gen. nov.,** and *Ewok* **gen. nov. A** *W. longicolli* **gen. et comb. nov.**, holotype male (SMF 40565-84), prolateral view, **B** *D. akroa* **gen. et comb. nov.**, holotype male (IBSP 272763), prolateral view, **C** undescribed species *Ewok* sp. 'Ecuador2', male (ZSFQ-i12153), apical view. Scale bars: 1 mm (A), 0.8 mm (B), 0.5 mm (C).

TAXONOMY

Status of two species formerly misplaced in the genus *Hapalopus* Ausserer, 1875

Devicarina Peñaherrera-R., Sherwood, Gabriel, Léon-E., Rollard, Leguin, Brescovit & Lucas **gen. nov.**

Hapalopus: Moeller *et al*., 2024: 60–65, figs. 5–8, 10–18, 53–78 (misidentification, *sensu H. akroa* and *H. guidonae*).

LSID urn:lsid:zoobank.org:act:05133940-B875-4A63-AF09-AA6ED2835FE2

Type species: *Hapalopus akroa* Moeller, Galleti-Lima & Guadanucci, 2024 by designation herein.

Diagnosis: Males of *Devicarina* **gen. nov.** resemble those of *Ewok* **gen. nov.** by having a ITE projection with a central ridge composed of a subapical keel at the centre of the ITE. However, males of *Devicarina* **gen. nov.** differ from *Ewok* **gen. nov.** by having a well-developed ITE without an extension of the prolateral inferior keel, ventrally positioned subapical keel, infra-apical keel present, prolateral keels extending over an almost vertical axis, triangular retrolateral palpal tibial process, and abdominal pattern present (weakly developed ITE accompanied by the prolateral inferior keel at prolateral section, prolaterally positioned subapical keel, prolateral keels comparatively extending over an horizontal axis, rounded retrolateral palpal tibial process, and absence of an abdominal pattern and infra-apical keel in *Ewok* **gen. nov.**). Females of *Devicarina* resemble those of *Megaphobema* Pocock, 1901, *Sericopelma* F. O. Pickard-Cambridge, 1897, and *Theraphosa* Walckenaer, 1805 by having a domed spermatheca without latero-apical receptacles or lobes. However, females of *Devicarina* **gen. nov.** differ from *Megaphobema*, *Sericopelma*, and *Theraphosa* by the absence of horizontal spermathecae striae, presence of urticating setae Type III, and absence of urticating setae type I (horizontal spermathecae striae present, urticating setae type I, and urticating setae type III absent in *Megaphobema*, *Sericopelma*, and *Theraphosa*).

Etymology: The generic epithet is a composition of the words *devius* and *carina*. The Latin word *devius* means deviating or inconsistent and *carina* refers to keels found on the palpal bulb, in reference to the fact palpal bulb morphology of the genus strongly differs from *Hapalopus*. The gender is masculine.

Distribution: Brazil (World Spider Catalog, 2025, *sub Hapalopus*; Fig. 12).

Species included: *Devicarina akroa* (Moeller, Galleti-Lima & Guadanucci, 2024) **comb nov.** and *Devicarina guidonae* (Moeller, Galleti-Lima & Guadanucci, 2024) **comb. nov.**

Remarks: Herein we propose an amended keel identification on the male palpal bulb of *Devicarina* **gen. nov.**, exemplified by the morphology of the type species (Fig. 4), the holotype, and one non-type male of *D. guidonae* **comb. nov.** (Fig. 2) of which we examined.

Contributions to the taxonomy of *Thrixopelma* Schmidt, 1994 and some related lineages

Within the recent and important contribution of Signorotto *et al.* (2025), the identity of the male of the type species of *Thrixopelma* was finally provided. Thus, leaving a tangle of unequal diagnostic characters on the male palpal bulb of the rest of species currently placed in *Thrixopelma*. Herein, we propose three new genera that allows a correct conciliation of genus-level recognition in agreement with sexual traits.

***Thrixopelma* Schmidt, 1994**

Thrixopelma Schmidt, 1994a: 4.
Thrixopelma: Schmidt, 1994b.
Thrixopelma: Schmidt, 1997, 2003b (in part).
Thrixopelma: Sherwood *et al*., 2021; Signorotto *et al.*, 2025 (in part, redescribed type species).

Type species: *Thrixopelma ockerti* Schmidt, 1994 by monotypy.

Amended diagnosis: Males of *Thrixopelma sensu stricto* differ from all other theraphosid genera by the presence of a spatulate region (concave) at distal prolateral section of the palpal bulb surrounded by a prolateral inferior keel, apical keel, and subapical keel, and the presence of a dorsal embolic hump accompanied with a prolateral superior keel dorso-retrolaterally positioned. Females of *Thrixopelma* resemble those of *Warmiru* **gen. nov.** by having hypersclerotised receptacles. However, females of *Thrixopelma* differ from *Warmiru* **gen. nov.** by the presence of a longitudinal dark stripe at the dorsum of the abdomen and wide membranous bursa copulatrix (abdominal pattern absent and a thinner membranous bursa copulatrix in *Warmiru* **gen. nov.**).

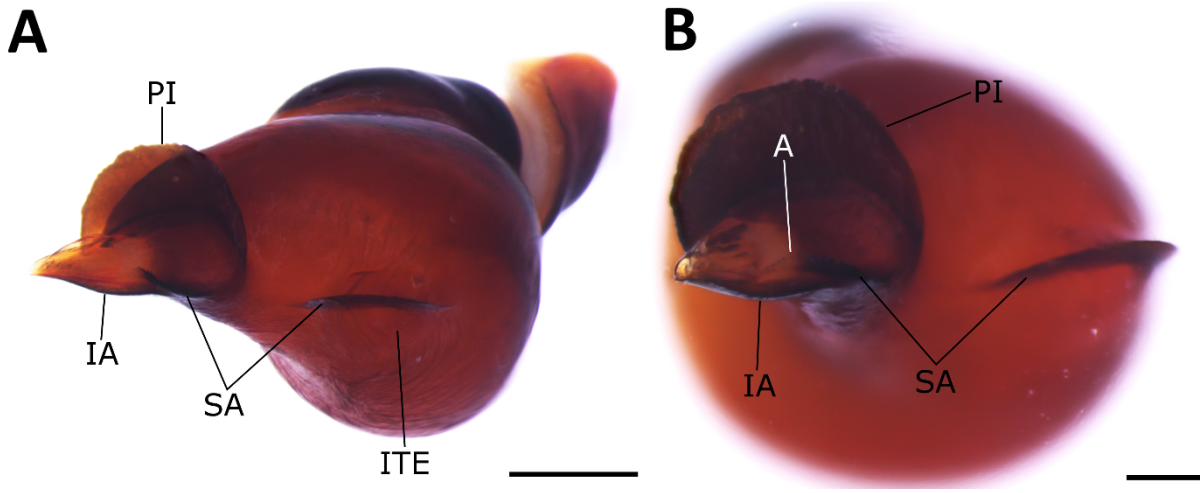

Figure 2: Keel morphology on male palpal bulb of *Devicarina* **gen. nov.**: *D. guidonae* **gen. et comb. nov.**, non-type male (IBSP 232253) from Teresina, Piauí, Brazil, palpal bulb as schematic model (right hand side), **A** prolatero-ventral view, **B** apical view. Scale bars: 0.5 mm (A), 0.2 mm (B).

Distribution: Peru (World Spider Catalog, 2025; Fig. 12).

Species included: *T. choquequirao* Millenpeier, Chaparro, Ochoa, Ferretti & West, 2024 and *T. ockerti* Schmidt, 1994.

Remarks: Herein we provide an updated diagnosis of *Thrixopelma* based on the new findings of Signorotto *et al.* (2025) and the examination of an undescribed species (Figs. 3A–B) of *Thrixopelma sensu stricto* which will be described elsewhere (León-E. *et al.*, in prep). We leave *T. choquequirao* inside *Thrixopelma sensu lato* due to the morphological disparities within the new generic delimitation and because we have not reviewed material corresponding to this or similar species. The description of this species by Signorotto *et al.* (2025) contains several oversights and deficiencies that will be discussed elsewhere (Peñaherrera-R. *et al*. in prep.). RG, DS, and PP-R are aware of other unidentified species which fall into this genus but are not available for description at this time.

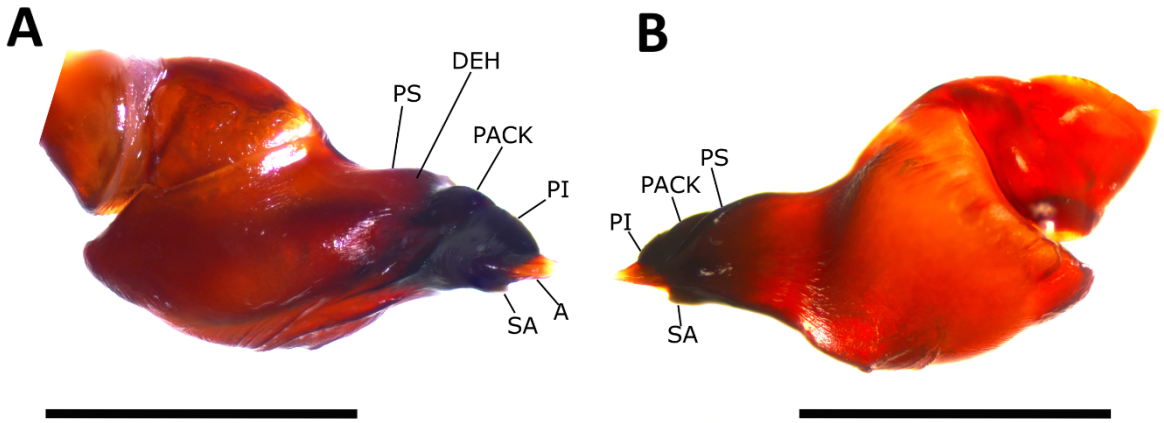

Figure 3: Male palpal bulb morphology and principal structure identification in *Thrixopelma sensu stricto*, exemplified by an undescribed species: *Thrixopelma* sp. 'Ecuador1' (ZSFQ-i12146), left hand side, **A** prolateral view, **B** retrolateral view. Scale bars: 1 mm.

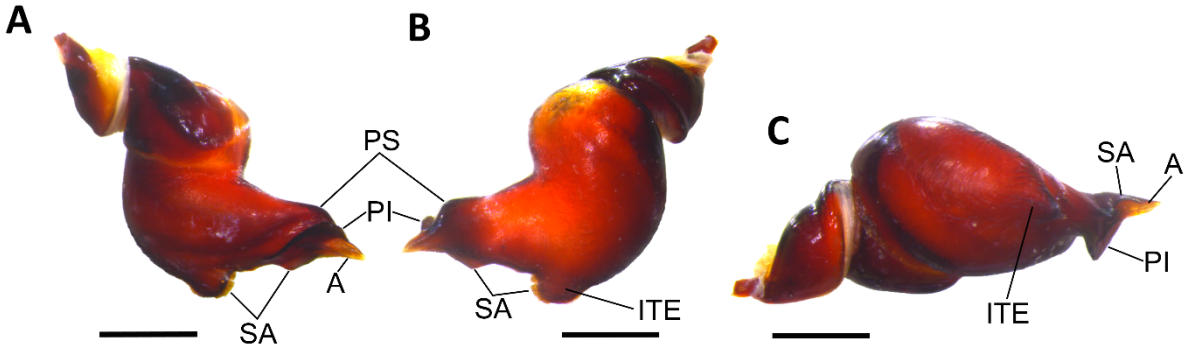

Figure 4: *Devicarina akroa* **comb. nov.** holotype male (IBSP 272763), palpal bulb, right hand side (mirrored), **A** prolateral view, **B** retrolateral view, **C** ventral view. Scale bars = 1 mm.

Crypticarachne Peñaherrera-R., Sherwood, Gabriel, León-E., Rollard, Leguin, Brescovit & Lucas **gen. nov.**

Thrixopelma: Sherwood & Gabriel, 2022b (in part, misidentified, *sensu T. nadineae*).

LSID urn:lsid:zoobank.org:act:C9B4F019-EF73-41E7-98EB-C225E484A4DC

Type species: *Thrixopelma nadineae* Sherwood & Gabriel, 2022 by monotypy.

Diagnosis: Males of *Crypticarachne* **gen. nov.** resemble those of *Munduruku* Miglio, Bonaldo & Pérez-Miles, 2013 and *Warmiru* **gen. nov.** by having a thin terminal section of embolus accompanied with a prolateral superior keel dorsally positioned, and a prolateral inferior keel ventrally extending towards the tegulum. However, males of *Crypticarachne* **gen. nov.** differ from *Munduruku* and *Warmiru* **gen. nov.** by having prolateral accessory central keel restricted only to the tegulum length, absence of a retrolateral process on palpal tibia, comparatively shorter distal section of embolus, subapical keel absent, strong curved metatarsus I, and presence of small multiple accessory keels situated at tegulum (rounded retrolateral process on palpal tibia, subapical keel present, slightly curved metatarsus I, elongate distal section of embolus, and small multiple accessory keels and accessory central keel absent in *Munduruku* and *Warmiru* **gen. nov.**). Additionally, males of *Crypticarachne* **gen. nov.** differ from *Munduruku* by having a straight embolus, comparatively having a retrolateral branch more elongated and digitiform than prolateral branch of tibial apophysis, protruding and digitiform tegular heel, and absence of an abdominal pattern (embolus ventrally projected and equal length on both tibial apophysis branches, non-digitiform and rounded tegular heel, and abdominal pattern composed of a black pinnate pattern on a creamy background in *Munduruku*); distinguished from males of *Warmiru* **gen. nov.** by the absence of an undulated prolateral inferior keel and ITE process (undulation at central section of prolateral inferior keel and ITE present in *Warmiru* **gen. nov.**).

Etymology: The generic epithet is in reference to the cryptic nature of the genus, combining this word with the Greek *arachne* to form 'the cryptic spider'. The gender is feminine.

Distribution: Ecuador (Sherwood & Gabriel, 2022, *sub Thrixopelma*; Fig. 12).

Remarks: The palpal bulb is presented to show key characters (Figs. 5A–E).

Species included: *C. nadineae* (Sherwood & Gabriel, 2022) **comb. nov.**

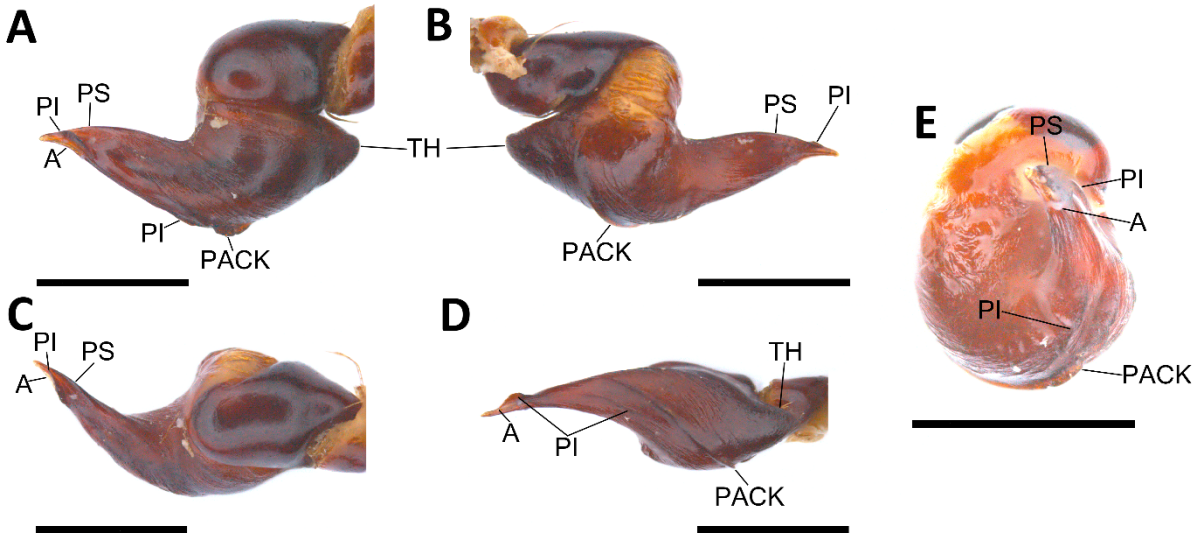

Figure 5: *Crypticarachne nadineae* **gen. et comb. nov.** holotype male (ZMB 0000888), palpal bulb, left hand side, **A** prolateral view, **B** retrolateral view, **C** dorsal view, **D** ventral view, **E** apical view. Scale bars = 1 mm. Figures adapted from Sherwood & Gabriel (2022).

Ewok Peñaherrera-R., Sherwood, Gabriel, León-E., Rollard, Leguin, Brescovit & Lucas **gen. nov.**

Eurypelma: Chamberlin, 1916 (in part, misidentified).
Paraphysa: Schmidt, 1997 (in part, misidentified).
Thrixopelma: Schmidt, Friebolin & Friebolin, 2005a, 2005b; Schmidt & Rudloff, 2010 (misidentified).
Euathlus: Perafán & Pérez-Miles, 2014 (in part, misidentified).
Thrixopelma: Fukushima & Bertani, 2017; Sherwood *et al*., 2021 (in part, misidentified).
Thrixopelma: Aguilera *et al*., 2022; Sherwood & Gabriel, 2024; Millenpeier *et al*., 2024; Signorotto *et al*., 2025 (misidentified).

LSID urn:lsid:zoobank.org:act:B536CF72-B5C9-4902-B39F-3D57DC626367

Type species: *Thrixopelma christineae* Sherwood & Gabriel, 2024 by designation herein.

Diagnosis: Males of *Ewok* **gen. nov.** resembles those of *Devicarina* **gen. nov.** by having a ITE projection with a central ridge composed of a subapical keel at the centre of the ITE. However, males of *Ewok* **gen. nov.** differ from *Devicarina* **gen. nov.** by having a weakly developed ITE accompanied by the prolateral inferior keel at prolateral section, prolaterally positioned subapical keel, prolateral keels comparatively extending over an horizontal axis, rounded retrolateral palpal tibial process, MPE present, and absence of an abdominal pattern and infra-apical keel (well-developed ITE without an extension of the prolateral inferior keel, ventrally positioned subapical keel, prolateral keels extending over an almost vertical axis, triangular retrolateral palpal tibial process, infra-apical keel, and abdominal pattern present, and MPE absent in *Devicarina* **gen. nov.**). Furthermore, males of *Ewok* **gen. nov.** differ from *Devicarina* **gen. nov.** by comparatively having a retrolateral branch more elongated and digitiform than prolateral branch of tibial apophysis and presence of urticating setae IV (equal length on both tibial apophysis branches and urticating setae IV absent in *Devicarina* **gen. nov.**). Females of *Ewok* **gen. nov.** resemble those of *Thrixopelma* by having hypersclerotised receptacles. However, females of *Ewok* **gen. nov.** differ from *Thrixopelma* by the absence of a dorsal abdominal pattern composed of a longitudinal dark stripe and a thinner membranous bursa copulatrix (longitudinal dark stripe present and wide membranous bursa copulatrix in *Thrixopelma*).

Etymology: The generic epithet is an apposition derived from a fictitious species of the *Star Wars* universe. Ewoks, native to the forest moon of Endor, are small, furry creatures, much like tarantulas. Just as the Ewok language is difficult to understand, the taxonomy of these spiders is similarly complex and challenging. The gender is masculine.

Distribution: Peru (Sherwood *et al*., 2021; Sherwood & Gabriel, 2024; Signorotto *et al*., 2025 *sub Thrixopelma*; Fig. 12).

Remarks: The palpal bulb morphology of *E. christineae* **comb. nov.** and *E. eliseanneae* **comb. nov.** are figured to exemplify key genus characteristics (Figs. 6–7).

Species included: *E. aymara* (Chamberlin, 1916) **comb. nov.**, *E. aycaramba* **sp. nov.**, *E. christineae* (Sherwood & Gabriel, 2024) **comb. nov.**, *E. cyaneolum* (Schmidt, Friebolin & Friebolin, 2005) **comb. nov.**, *E. eliseanneae* (Sherwood & Gabriel, 2024) **comb. nov.**,

E. kainae **sp. nov.**, *E. kimraykawsaki* (Signorotto *et al*., 2025) **comb. nov.** and *E. pruriens* (Schmidt, 1998) **comb. nov.**

Ewok aycaramba Sherwood, Gabriel, Peñaherrera-R., León-E., Rollard, Leguin, Brescovit & Lucas **sp. nov.**

LSID urn:lsid:zoobank.org:act:0642B01A-EB48-422C-BE2F-655DD743A045

Type material: Holotype ♀ (MNHN AR-4845), Baños nr. Cajamarca, Peru, '*Eurypelma*', 'vel. aff.', E. Simon colln. 21094, examined; paratype ♀ (MNHN AR-4845), same data, examined.

Diagnosis: *Ewok aycaramba* **sp. nov.** can be distinguished from *E. aymara* **comb. nov.** and *E. pruriens* **comb. nov.** by having 14 labial cuspules (more than 50 in *E. pruriens* **comb. nov.** and more than 60 in *E. aymara* **comb. nov.**), from *E. cyaneolum* **comb. nov.** by the absence of neck constriction of the spermathecae (present in *E. cyaneolum* **comb. nov.**), from *E. kainae* **sp. nov.** by the rounded receptacles (conical-shaped in *E. kainae* **sp. nov.**) and from *E. kimraykawsaki* **comb. nov.** by the rounded receptacles (asymmetrical in *E. kimraykawsaki* **comb. nov.**). Further distinguished from *E. kainae* **sp. nov.** by the greater number of maxillary cuspules.

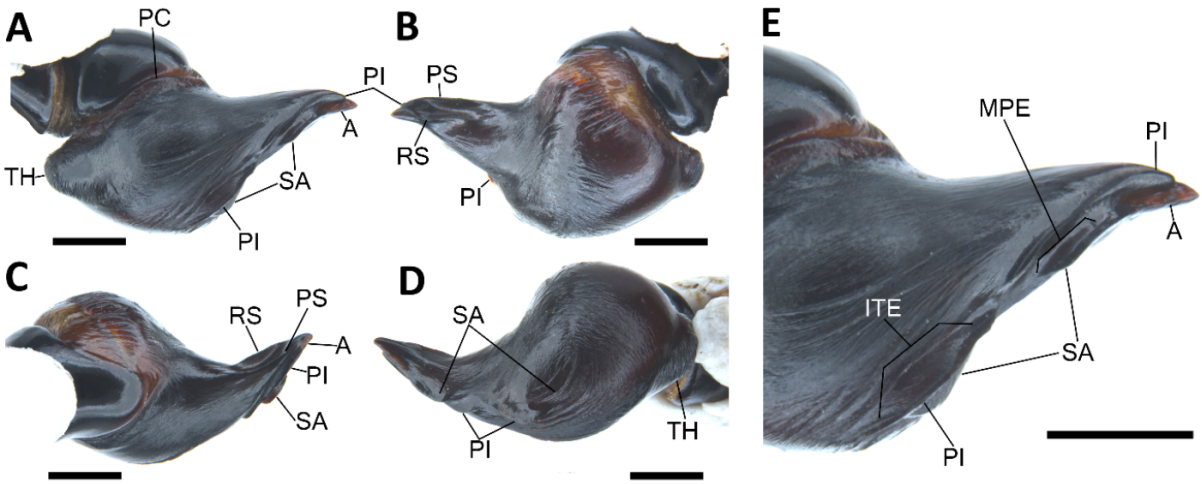

Figure 6: *Ewok christineae* **gen. et comb. nov.** holotype male (MNHN AR-4846), palpal bulb, left hand side, **A** prolateral view, **B** retrolateral view, **C** dorsal view, **D** ventral view, **E** prolateral view, close up. Scale bars = 1 mm. Figures adapted from Sherwood & Gabriel (2024).

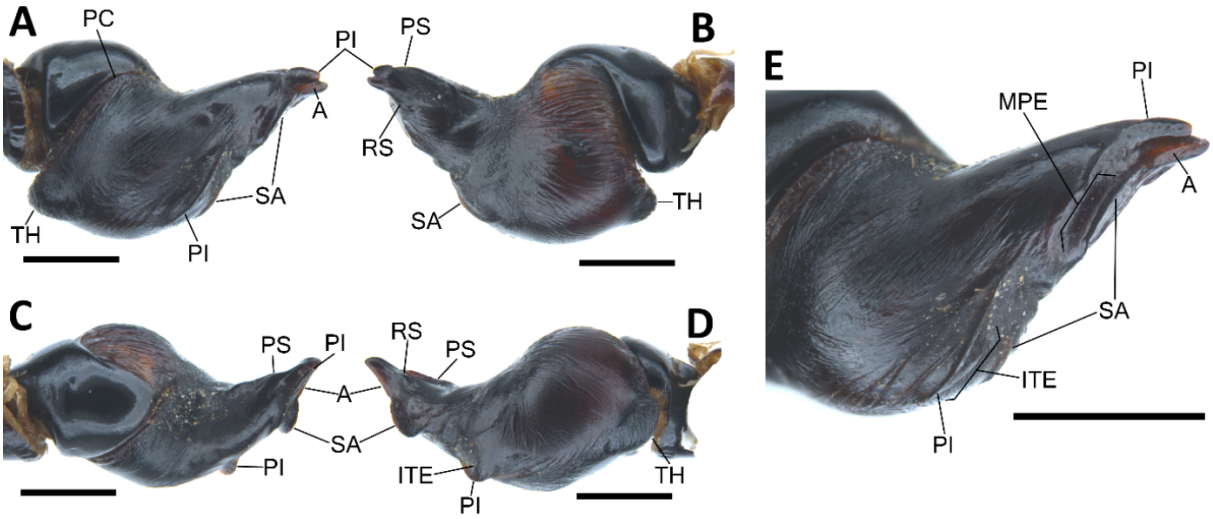

Figure 7: *Ewok eliseanneae* **gen. et comb. nov.** holotype male (MNHN AR-4852), palpal bulb, left hand side, **A** prolateral view, **B** retrolateral view, **C** dorsal view, **D** ventral view. Scale bars = 1 mm. Figures adapted from Sherwood & Gabriel (2024).

Etymology: The specific epithet is a noun in apposition, derived from the Spanish phrase ay, caramba which is used to express surprise, in reference to our reaction as more species of this genus are found in the unidentified material of MNHN.

Description of holotype female: Total length including chelicerae: 43.4. Carapace: length 16.5, width 14.3. Caput: raised. Ocular tubercle: slightly raised, length 1.6, width 2.0. Eyes: AME > ALE, ALE > PLE, PLE > PME, anterior row procurved, posterior row recurved. Clypeus: narrow; clypeal fringe: long. Fovea: deep, transverse. Chelicera: length 7.7, width 3.6. Abdomen: length 19.2, width 13.8. Maxilla with 110–120 cuspules, covering approximately 36% of proximal edge. Labium: length 1.4, width 2.0, with 14 labial cuspules most separated by 0.5–1.0 times the width of a single cuspule. Labio-sternal mounds: joined. Sternum: length 7.5, width 5.9, with three pairs of sigilla. Tarsi I–IV fully scopulate. Metatarsal scopulae: I 100%; II 67%; III 42%; IV uninterpretable, metatarsus malformed. Lengths of leg and palpal segments: see table 1, legs 4,1,2,3. Spination: femur III d 0–0–2, IV d 0–0–1, tibia I v 0–0–2, II v 0–1–3, III d 0–2–2, v 0–2–3, IV d 0–3–2, v 0–2–3, palp v 0–0–1, p 1–0–1, metatarsus I v 1–1–1 (apical), II v 0–1–3 (apical), III d 2–2–2, v 2–2–3 (apical), IV d 2–4–2, v 2–2–6 (3 apical). Posterior lateral spinnerets with three segments: basal 2.0, medial 1.3, digitiform apical 2.3. Posterior median spinnerets with one segment. Spermathecae with spermathecae with two hypersclerotised receptacles, rounded and nearly symmetrical, wider than long (Figs. 8B–C). Urticating setae: Type III and IV present dorsally. Colour: alcohol preserved brown, long red hairs densely clothing dorsal abdomen.

Distribution: Known only from the type locality, Los Baños del Inca, Cajamarca, Peru (approx. 7°09'40.1"S, 78°30'20.1"W).

Remarks: Despite the absence of tarsus IV, it would be incongruent with all published data on known theraphosines to not assume that leg IV in normal cases is the longest, thus the standard 4123 leg formula is assumed. The jar containing the type material also contained six immature specimens (Fig. 8A): 3 immature females and 3 immature males, which are hereby excluded from the type series. Two smaller juvenile theraphosids, likely conspecific but which cannot be concluded with certainty, are also present in the

original jar and are excluded from the type series. The holotype and paratype are now clearly labelled and kept separate from the non-type specimens.

Table 1: *Ewok aycaramba* **gen. et sp. nov.** holotype female (MNHN AR-4845), length of legs and palp, * denotes missing segment, > indicates length of leg will be greater than number.

	I	II	III	IV	Palp
Femur	12.9	11.2	9.8	12.2	7.3
Patella	7.2	6.6	6.4	5.8	5.4
Tibia	9.9	8.3	8.4	10.8	6.5
Metatarsus	7.7	7.7	9.1	13.8	–
Tarsus	5.8	5.4	5.4	*	6.2
Total	43.5	39.2	39.1	>42.6	25.4

Figure 8: *Ewok aycaramba* **gen. et sp. nov.** (MNHN AR-4845), **A** specimens in jar (arrow indicates holotype) and original labels, **B** spermathecae of holotype, dorsal view, **C** spermathecae of paratype, apical view. Scale bars (B–C) = 1 mm.

Ewok kainae Gabriel, Sherwood, Peñaherrera-R., León-E., Rollard, Leguin, Brescovit & Lucas **sp. nov.**

LSID urn:lsid:zoobank.org:act:B2FC6F30-BD42-46C1-AC2C-44B03F68A78C

Type material: Holotype ♀ (MNHN AR-17704), Huamachuco, Peru, a Cozas, 1899, leg. P. O. Simons, E. Simon colln. 20986.

Diagnosis: *Ewok kainae* **sp. nov.** can be distinguished from *E. aymara* **comb. nov.** and *E. pruriens* **comb. nov.** by the conical-shaped receptacles and having 19 labial cuspules (receptacles not conical-shaped, more than 50 in *E. pruriens* **comb. nov.** and more than 60 in *E. aymara* **comb. nov.**), and from *E. aycaramba* **sp. nov.**, *E. cyaneolum* **comb. nov.**

and *E. kimraykawsaki* **comb. nov.** by the conical-shaped receptacles (not conical in *E. aycaramba* **sp. nov.**, *E. cyaneolum* **comb. nov.**, and *E. kimraykawsaki* **comb. nov.**). Further distinguished from *E. cyaneolum* **comb. nov.** by the absence of constriction of the receptacle necks (neck constriction present in *E. cyaneolum* **comb. nov.**) and from *E. aycaramba* **sp. nov.** by the lesser number of maxillary cuspules.

Etymology: The specific epithet is an eponym in honour of our colleague Kaïna Privet (Museum national d'Histoire naturelle, Paris) to welcome her into her future role curating the most important collection of spider specimens in the world.

Figure 9: *Ewok kainae* **gen. et sp. nov.** holotype female (MNHN AR-17704), **A** specimens in jar (arrow indicates holotype) and original labels, **B** spermathecae, dorsal view, **C** spermathecae, apical view. Scale bars (B-C) = 1 mm.

Description of holotype female: Total length including chelicerae: 52.8. Carapace: length 20.8, width 14.6. Caput: raised. Ocular tubercle: slightly raised, length 1.4, width 2.5. Eyes: AME > ALE, ALE > PLE, PLE > PME, anterior row procurved, posterior row recurved. Clypeus: narrow; clypeal fringe: short. Fovea: deep, transverse. Chelicera: length 9.9, width 5.4. Abdomen (detached from cephalothorax): length 21.7, width 19.6. Maxilla with 70–80 cuspules, covering approximately 36% of proximal edge. Labium: length 1.9, width 2.2, with 19 labial cuspules most separated by 0.5–1.0 times the width of a single cuspule. Labio-sternal mounds: joined. Sternum: length 9.4, width 7.0, with three pairs of sigilla. Tarsi I–IV fully scopulate. Metatarsal scopulae: I 100%; II 66%; III 30%; IV 17%. Lengths of leg and palpal segments: see table 2, legs 4,1,2,3. Spination:

femur I d 0–0–1, II d 0–0–1, III d 0–0–1, IV d 0–0–1, tibia I v 1–1–2, II d 0–0–1, v 1–1–2, III d 1–0–1, v 1–0–2, IV d 2–2–1, v 1–2–2, palp v 0–2–1, metatarsus I v 2–0–1 (apical), II v 2–1–1 (apical), III d 2–2–2, v 1–2–3 (apical), IV d 2–2–2, v 2–4–5 (3 apical). Posterior lateral spinnerets with three segments: basal 3.0, medial 1.7, digitiform apical 3.4. Posterior median spinnerets with one segment. Spermathecae with spermathecae with two hypersclerotised receptacles, conical, longer than wide (Figs. 9B–C). Urticating setae: Type III and IV present dorsally. Colour: alcohol preserved brown.

Distribution: Known only from the type locality, Huamachuco, Peru (approx. 7°48′43.3″S, 78°02′55.3″W).

Remarks: Four immature specimens in the same jar are hereby excluded from the type series (Fig. 9A). The holotype is now clearly labelled and kept separate from the rest of the specimens.

Table 2: *Ewok kainae* **gen. et sp. nov.**, holotype female (MNHN AR-17704), length of legs and palp.

	I	II	III	IV	Palp
Femur	14.9	13.4	13.0	19.7	12.5
Patella	9.1	8.9	8.1	8.7	8.0
Tibia	11.9	10.5	8.8	12.5	8.6
Metatarsus	9.8	9.0	11.7	14.7	–
Tarsus	6.7	6.3	6.3	7.7	6.4
Total	52.4	48.1	47.9	63.3	35.5

Warmiru Peñaherrera-R., Sherwood, Gabriel, León-E., Rollard, Leguin, Brescovit & Lucas **gen. nov.**

Lasiodorides: Schmidt, 2003a (misidentified).
Paraphysa: Schmidt, 2007 (in part, misidentified).
Thrixopelma: Schmidt, 1997 (in part, misidentified).
Thrixopelma: Sherwood *et al*., 2021 (in part, misidentified).

LSID urn:lsid:zoobank.org:act:BF4FB293-9874-47BD-9383-E201724BC66E

Type species: *Lasiodorides longicolli* Schmidt, 2003 by designation herein.

Diagnosis: Males of *Warmiru* **gen. nov.** resemble those of *Munduruku* Miglio, Bonaldo & Pérez-Miles, 2013 by having an elongated terminal section of embolus accompanied with a prolateral superior keel dorsally positioned, a prolateral inferior keel ventrally extending towards the tegulum, and presence of a subapical keel. However, *Warmiru* **gen. nov.** differs from *Munduruku* by having a prolateral inferior keel with a central undulation (somewhat resembling a weakly developed keelar apophysis), protruding and digitiform tegular heel, straight embolus, presence of a ITE projection with a central ridge composed of a prolateral inferior keel, and absence of an abdominal pattern (prolateral inferior keel without undulations, non-digitiform and rounded tegular heel, embolus ventrally projected, abdominal pattern composed of a black pinnate pattern on a creamy background, and ITE projection absent in *Munduruku*). Additionally, males of *Warmiru* **gen. nov.** differ from *Munduruku* by having the RB comparatively more elongated and digitiform than PB (equal length on both tibial apophysis branches in *Munduruku*). Females of *Warmiru* **gen. nov.** resemble those of *Thrixopelma* by having

hypersclerotised receptacles. Nevertheless, females of *Warmiru* **gen. nov.** differ from *Thrixopelma* by the absence of a dorsal abdominal pattern composed of a longitudinal dark stripe and a thinner membranous bursa copulatrix (longitudinal dark stripe present and wide membranous bursa copulatrix in *Thrixopelma*). Females of *Warmiru* **gen. nov.** strongly resemble those of *Ewok* **gen. nov.** by having hypersclerotised spermathecae and absence of an abdominal pattern, however male palpal bulb morphology strongly supports the separation of these two new genera (see above).

Etymology: The generic epithet is a composition of the Quechuan words *warmi* and *uru*. The word *warmi* means woman and *uru* means spider, this new genus is dedicated to all women, past and present, who have worked as arachnologists. We celebrate their invaluable work and honour their contributions and acknowledge the path they have paved for future workers. The gender is feminine.

Distribution: Peru (World Spider Catalog, 2025, sub *Thrixopelma*; Fig. 12).

Species included: *Warmiru lagunas* (Schmidt & Rudloff, 2010) **comb. nov.** and *Warmiru longicolli* (Schmidt, 2003) **comb. nov.**

Remarks: The palpal bulb morphology of both known species is presented (Figs. 10–11).

Warmiru lagunas (Schmidt & Rudloff, 2010) **comb. nov.**
Thrixopelma lagunas Schmidt & Rudloff, 2010: 8, figs. 3–10.
Thrixopelma lagunas: Sherwood et al., 2021: 906, figs. 43-50, 93–94.
Thrixopelma lagunas: Sherwood & Gabriel, 2024: 2, figs. 5A–B.

Type material: See Sherwood *et al*. (2021).

Diagnosis: See Sherwood *et al*. (2021).

Distribution: Peru (World Spider Catalog, 2025).

Warmiru longicolli (Schmidt, 2003) **comb. nov.**
Lasiodorides longicolli Schmidt, 2003a: 4, figs. 1–3, 5–6.
Paraphysa peruviana Schmidt, 2007: 3, fig. 1. **syn. nov.**
Euathlus peruvianus: Perafán & Pérez-Miles, 2014: 2414 (*nomen dubium*).
Thrixopelma longicolli: Sherwood *et al*., 2021: 908, figs. 51–59, 61, 92.
Thrixopelma peruvianum: Sherwood *et al*., 2021: 909, figs. 62, 64–66, 68.
Thrixopelma longicolli: Sherwood & Gabriel, 2024: 2, figs. 5C–D.

Type material: See Sherwood *et al*. (2021).

Diagnosis: See Sherwood *et al*. (2021).

Distribution: Peru or Ecuador (World Spider Catalog, 2025).

Remarks: Sherwood *et al*. (2021) previously discussed that the paratype series of *W. longicolli* **comb. nov.** contained multiple species and their corresponding spermathecae, and were conservative, cautious not to assign which spermathecae was that which

belonged to the true female of *W. longicolli* **comb. nov.** as at the time we felt such evidence did not exist. However, our ongoing study of this genus shows that the inwardly P-shaped spermathecae of the paratype female exuvia SMF 40564-84 in that type series is most parsimonious with the female of *W. longicolli* **comb. nov.** *sensu stricto* and thereby considered as conspecific with the holotype male. Consequently, we can now see no differences in the spermathecae of *W. longicolli* **comb. nov.** and that of *T. peruvianum* which cannot, in the latter species, be explained by intraspecific variation and/or ontogeny. Therefore, we propose *T. peruvianum* as a junior synonym of the newly transferred species *W. longicolli* **comb. nov.**, demonstrating both sexes of the latter species are now known. Like most of the species described by G ü nther Schmidt in this genus, further fieldwork is needed to ascertain the precise extent of the distribution range of this species within Peru (Sherwood *et al*., 2021).

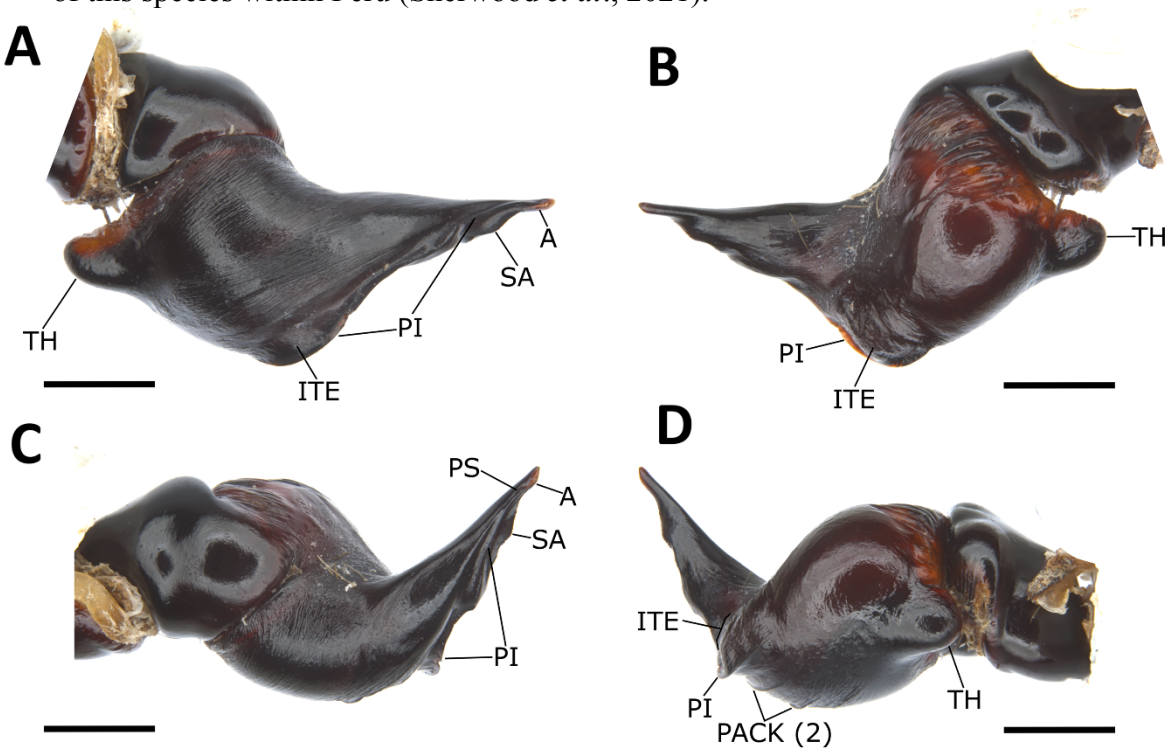

Figure 10: *Warmiru lagunas* **gen. et comb. nov.** holotype male (SMF 66757-84), palpal bulb, right hand side (mirrored), **A** prolateral view, **B** retrolateral view, **C** dorsal view, **D** ventral view. Scale bars = 1 mm.

Taxonomic notes on *Anqasha* Sherwood & Gabriel, 2022

Anqasha lima Sherwood, Peñaherrera-R., Gabriel, León-E., Rollard, Leguin, Brescovit & Lucas **sp. nov.**
Anqasha sp. Kaderka 2023: 12–13, figs. 8, 9B, 10.

LSID urn:lsid:zoobank.org:act:70B888B0-083E-4B73-8D04-FA1553E5B67D

Type material: Holotype ♀ (MUSM-ENT 0501413), Lomas Flor de Amancaes, Lima, Peru, 10/2005, leg. C. Castillo, deposited in the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru, examined only by photos in Kaderka (2023).

Diagnosis: *Anqasha lima* **sp. nov.** differs from *A. picta* and *A. minaperinensis* by the longer lobes of the spermathecal receptacles (lobes shorter in *A. picta* and *A. minaperinensis*).

Etymology: The specific epithet is a noun in apposition, derived from the Peruvian Department of Lima.

Description of holotype female: See Kaderka (2023: 12–13, Figs. 8, 9B, 10).

Distribution: Known only from the type locality, Lomas Flor de Amancaes, Peru (Fig. 12).

Remarks: Kaderka (2023) illustrated and provided a text-based description of this taxon as "*Anqasha* sp.", citing that the specimen may be immature. This is a possibility, yet we have never seen an immature theraphosine at that body length with such sclerotised spermathecae. It could simply be a species that matures at a smaller size. In any case, the spermathecal morphology and distribution of this specimen vary significantly from that of known species, and we thus describe it here in full compliance with Article 13 of the International Code of Zoological Nomenclature (ICZN, 1999). Now it has been formally named, future workers can investigate this species, attempt to locate the unknown male, and perhaps comment further on the body size of females. We typically prefer to directly examine our type material, but this represents a special case as a full description of the specimen was given in Kaderka (2023), and Radan Kaderka never directly examined the holotype of *A. picta*, nor the females from NHMUK that he assigned to *A. minaperinensis* Kaderka, 2023. Conversely, we directly examined all NHMUK material (Sherwood & Gabriel, 2022a), although we agree with him that the females are better treated as a separate species to the holotype male based on the new data Kaderka had available after our previous work.

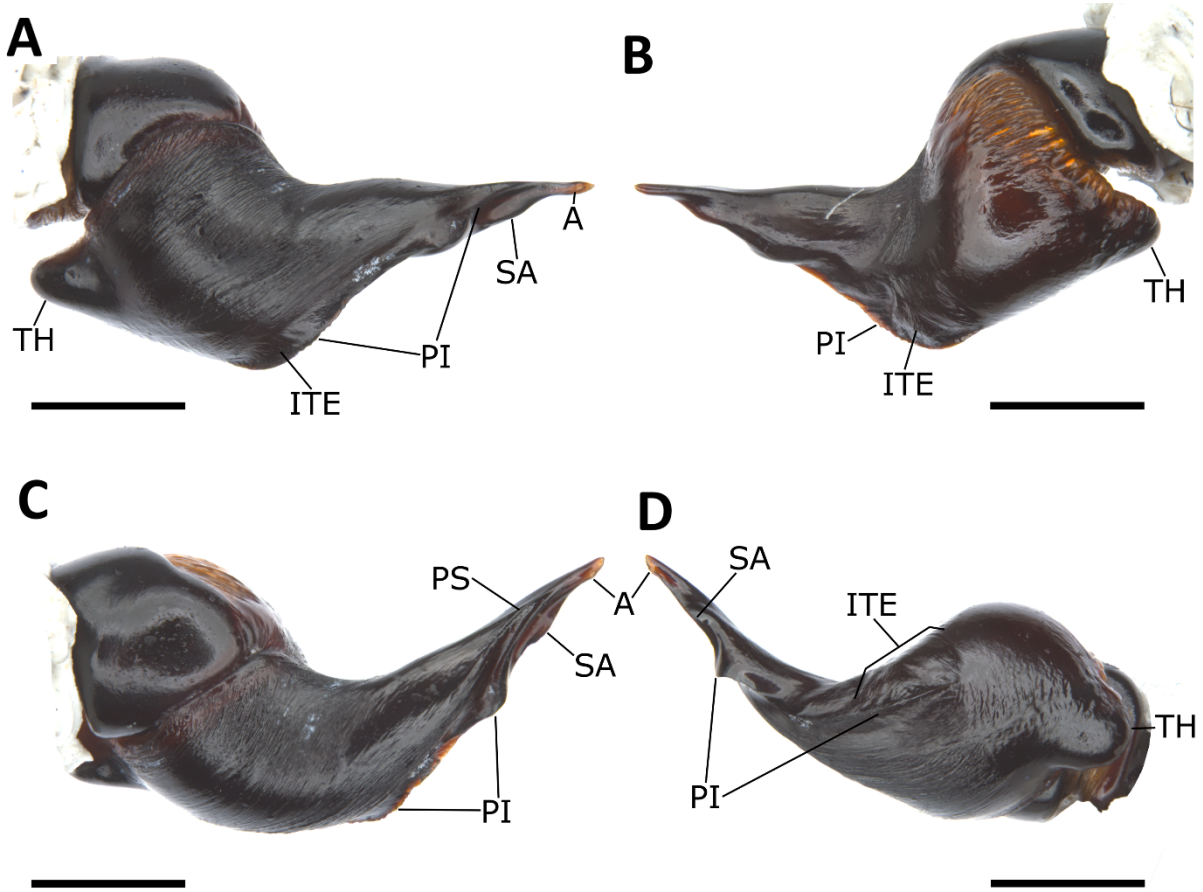

Figure 11: *Warmiru longicolli* **gen. et comb. nov.** holotype male (SMF 40565-84), palpal bulb, left hand side, **A** prolateral view, **B** retrolateral view, **C** dorsal view, **D** ventral view. Scale bars = 1 mm.

DISCUSSION

Herein, four new theraphosid genera are proposed in order to bring taxonomic stability towards *Hapalopus* and *Thrixopelma*, *sensu lato*. As previously mentioned, due to recent works assigning species to both genera (i.e. Moeller *et al*. 2024; Millenpeier *et al*. 2024) the morphology of several unique characters and character states, vastly different from the type species, were overlooked by two groups (Moeller *et al*., 2024; Millenpeier *et al*., 2024) Thus, an incorrect generic 'definitions' of *Hapalpus* and *Thrixopelma* occurred and diagnosability criteria were not properly applied (e.g. phenotypic diagnosability in taxon naming, *sensu* Vences *et al*. 2013). Although a phylogenetic analysis of the north Andean hapalopines is pending (Peñaherrera-R. *et al*., in prep), the absence of shared diagnostic characters (e.g. keelar apophysis on SA, present in *Hapalopus sensu stricto*) meant that by 2025 both genera could be plainly seen as non-monophyletic and conflicting groups prior to our proposed taxonomic changes herein.

It is generally assumed that mygalomorphs are a significantly conserved and homogeneous infraorder regarding their morphology and a plausible low efficiency on support for species, genera, and family delimitation (e.g. Raven, 1985). Nonetheless, the subfamily Theraphosinae is not only one of the most diverse in the number of species and genera, but also one of the most diverse and rich in structures of the genitalia. Within the new emendation on keel identification and recognition of new innovative and informative characters of the male palpal bulb, new putatively monophyletic groups were herein detected. The question of recognition of genus-level nomina is debated in some circles, as exemplified in vertebrates by a recent paper that argued there was over-splitting of genus group clades in amphibians (Mahony *et al*. 2024). However, taxonomy in spiders where superspecies divergence is pronounced (Kraus, 2002; Sherwood, 2024), is a dynamic field that rapidly adapts to new lines of evidence to clarify the full extent of the tree of life. The recognition of monophyletic clades as genera is a standard and stable aspect of spider systematics and improves the clarity of recognition of distinct groups.

The misinterpretation of morphological characters by Kaderka & Quispe-Colca (2025) has resulted in a mosaic of incorrect definitions for *Thrixopelma* and unclear genus boundaries, which cannot be accepted. The proposed homology and delimitation for *Thrixopelma* by Kaderka & Quispe-Colca (2025) does not hold under closer scrutiny, based on the evidence presented in this work as well as in extended definitions of prolateral superior, prolateral inferior, apical, and subapical keels proposed by Peñaherrera-R. (2025) in agreement of Bertani's (2000) homologous keels hypothesis. The new generic delimitations proposed herein address these taxonomic inconsistencies and contribute to establishing clearer morphologically supported boundaries within *Thrixopelma* sensu stricto, and the former *Thrixopelma* sensu lato (*Crypticarachne* **gen. nov.**, *Ewok* **gen. nov.**, and *Warmiru* **gen. nov.**).

Whilst Kaderka & Quispe-Colca (2025) properly identified the apical and subapical keels, as well as providing an intuitive schematic diagram of the distribution of the "main" palpal bulb keels (Kaderka & Quispe-Colca, 2025: fig. 41), we found significant errors regarding the prolateral inferior and superior keels interpreted on the depicted specimens by Kaderka & Quispe-Colca (2025). First, the prolateral superior keel was mistaken as a retrolateral keel in *T. ockerti* by Kaderka & Quispe-Colca (2025: fig. 42); additionally, the prolateral accessory central keel was mistaken as a prolateral superior keel. This error may be caused by the dorso-retrolateral position of this prolateral superior keel. Nonetheless, the apical convergence of this keel towards the prolateral inferior keel justifies its proper identification

as the prolateral superior keel instead of a retrolateral keel (Fig. 3A–B; Signorotto *et al*. 2025: figs. 2C–E).

Furthermore, we reject the putative absence of a prolateral superior keel in the male of *E. aymara* **comb. nov.** as well as in *Thrixopelma zaratensis* Kaderka & Quispe-Colca, 2025, as the prolateral superior keel can clearly be observed in prolateral, retrolateral, and apical views of each respective species (Kaderka & Quispe-Colca, 2025: figs. 16A–B, 23A–F, 29A–B, 29D, 38A–C). The presence of a weakly developed ITE projection with a central ridge composed of a subapical keel at the centre of the ITE, as well as an MPE projection in the male palpal bulb of *E. aymara* **comb. nov.** [as *T. aymara*] described by Kaderka & Quispe-Colca (2025), further supports our transfer herein to the newly established *Ewok* **gen. nov.**

The aforementioned characters, as well as the rest of diagnostic characters of this new genus (see Diagnosis of *Ewok* **gen. nov.**), are present in *T. zaratensis*, which we hereby transfer as *Ewok zaratensis* **comb. nov.** However, after analysing the morphology of this species in comparison with *T. christineae* (Fig. 6; Sherwood & Gabriel, 2024: fig. 1; Kaderka & Quispe-Colca, 2025: figs. 28, 29, 38), we found no differences in the morphology of the palpal bulb, palpal tibia, and tibial apophyses. Therefore, it is clear that the species described by Kaderka & Quispe-Colca (2025) is not distinct. Based on the above reasons, *Ewok zaratensis* **syn. nov.** is proposed as a junior synonym of *Ewok christineae* **comb. nov.**

It is possible that some of the examined specimens placed under the name of *T. aymara* [= *E. aymara* **comb. nov.**] by Kaderka & Quispe-Colca (2025) could represent other species and that the observed male palpal bulb variation in *E. aymara* (e.g. Kaderka & Quispe-Colca, 2025: fig. 17) could represent a misidentification at species or even genus level. Only their specimens from the *locus typicus* should be considered *E. aymara* **comb. nov.** at this stage until further investigations are made.

Kaderka & Quispe-Colca (2025: 2), who have not examined the type specimens, state of the species described by Sherwood & Gabriel (2025): “The type locality [of *E. christineae* **comb. nov.**] mentioned by authors, which is in the historical centre of Lima, is erroneous, as well as the Plaza de Armas in the city of Tumbes in the case of *T. eliseanneae*.”. This is an egregious statement, which along with their statement that these species, amongst others, present “... the type locality is unknown” (Kaderka & Quispe-Colca, 2025: 30), is contradicted by the labels accompanying the type specimens, and much of the data in Kaderka & Quispe-Colca (2025).

Firstly, Kaderka & Quispe-Colca (2025: 20) refer to [*Ewok*] *christineae* as being “geographically related” to their ‘new’ species. However, they do not mention that Sherwood & Gabriel (2025) gave very wide coordinates only down to minutes for this species, intentionally showing that the locality lies somewhere within the region of/near Lima, but is not pinpointed to a small spot within the modern city. The type locality of *T. eliseanneae* was pinpointed for the description based on old maps showing the locality during the time period. Kaderka & Quispe-Colca (2025) provide no evidence as to why the localities would be wrong. The fact explicit localities are stated on the labels and in the original description also show that their statement that the type localities of these two species is “unknown” is not just misinterpreted, but untruthful as this has never been written by any other workers except them.

Secondly, Kaderka & Quispe-Colca (2025: 27, fig. 40) present a map with both species plotted in the correct location as described by Sherwood & Gabriel (2025) and further show

their specimens of their "new" species (a synonym of *E. christineae* **comb. nov.**) less than 150km to the east of the type locality marker of *E. christineae* **comb. nov.** and thus in the same ecoregion (*sensu* Dinerstein *et al*., 2017). The fact these specimens are morphologically identical in the palpal bulb (misinterpreted by Kaderka & Quispe-Colca, 2025) and other morphological characters (see above), and inhabit the same ecoregion is sufficient evidence they are conspecific and completely dismantles the claims that the type locality of the senior name is "unknown". The precise coordinates offered for *E. christineae* **comb. nov.** [as *T. zaratensis*] provide a clear modern distribution range for this species, and along with the more broadly georeferenced type locality of the senior name, show that *E. christineae* **comb. nov.** is distributed in a radius of less than 100 km from Lima at present. It is possible this species is more widespread in the ecoregion, and fieldwork should be conducted to ascertain if this is correct.

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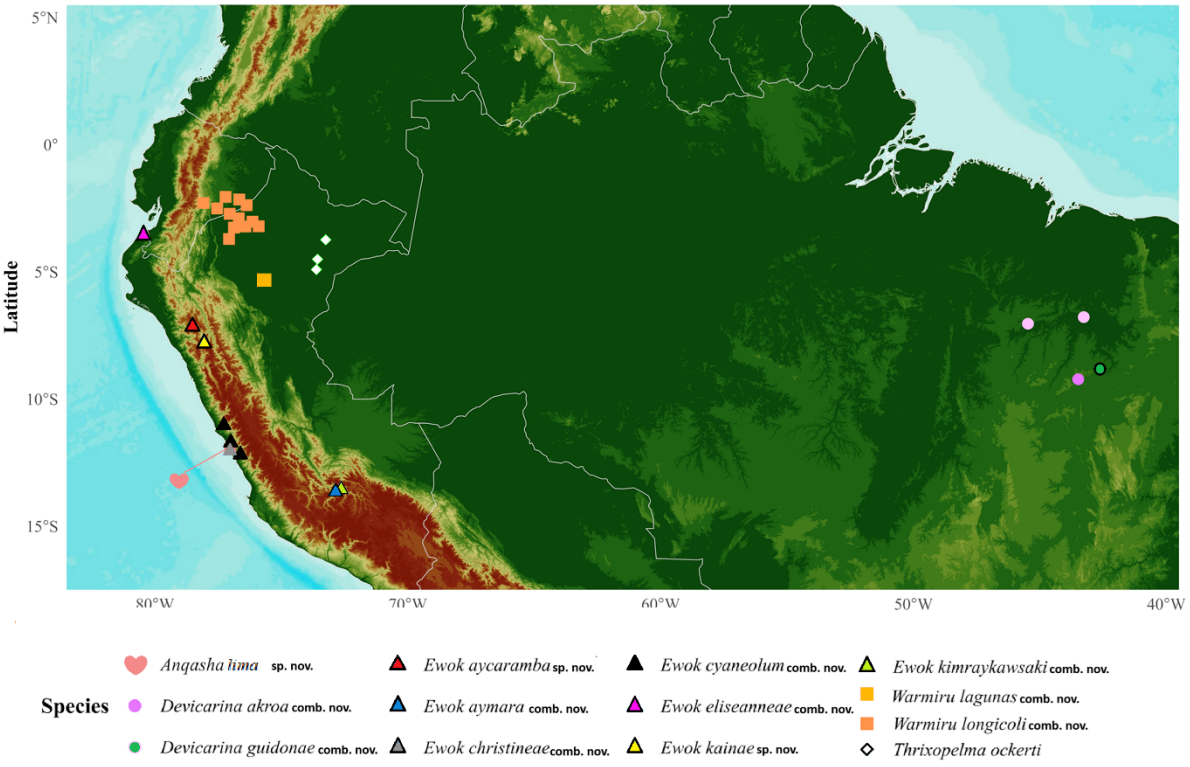

Figure 12: Distribution of the genera *Crypticarachne* **gen. nov.**, *Devicarina* **gen. nov.**, *Ewok* **gen. nov.**, *Thrixopelma* Schmidt, 1994, and *Warmiru* **gen. nov.** and the type locality of the newly described *Anqasha lima* **sp. nov.** For further unplotted records of *E. christineae* **comb. nov.**, see Kaderka & Quispe-Colca (2025) (*sub Thrixopelma zaratensis*).

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