UNIVERSIDADE DE SÃO PAULO
MUSEU DE ZOOLOGIA

Andre Mori Di Stasi

Revisão Taxonômica e Análise Cladística de *Psalistops* Simon, 1889 e *Trichopelma* Simon, 1888 (Araneae, Barychelidae)

São Paulo
2018

Andre Mori Di Stasi

Taxonomic Revision and Cladistic Analysis of *Psalistops* Simon, 1889 and *Trichopelma* Simon, 1888 (Araneae, Barychelidae)

Revisão Taxonômica e Análise Cladística de *Psalistops* Simon, 1889 e *Trichopelma* Simon, 1888 (Araneae, Barychelidae)

Original version

Thesis Presented to the Post-Graduate Program of the Museu de Zoologia da Universidade de São Paulo to obtain the degree of Doctor of Science in Systematics, Animal Taxonomy and Biodiversity

Advisor: Rogerio Bertani, PhD.

São Paulo
2018

Serviço de Bibloteca e Documentação
Museu de Zoologia da Universidade de São Paulo

Cataloging in Publication

Di Stasi, Andre Mori
Taxonomic revision and cladistic analysis of *Psalistops* Simon 1889 and *Trichopelma* Simon, 1888 (Aranae Barychelidae) /Andre Mori Di Stasi; orientador Rogerio Bertani. São Paulo, 2018.
165p.

Tese de Doutorado – Programa de Pós-Graduação em Sistemática, Taxonomia e Biodiversidade, Museu de Zoologia, Universidade de São Paulo, 2018.
Versão Original

1. Aranae Barychelidae. 2. Taxonomia – Aranae. 3. Cladistica – Aranae. III. Aranae – *Psalistops* Simon 1889. IV. *Trichopelma* Simon, 1888 I. Bertani, Rogerio, orient. II. Título.

Nome: MORI DI STASI, ANDRE

Título: Revisão Taxonômica e Análise Cladística de *Psalistops* Simon, 1889 e *Trichopelma* Simon, 1888 (Araneae, Barychelidae)

Thesis Presented to the Post-Graduate Program of the Museu de Zoologia da Universidade de São Paulo to obtain the degree of Doctor of Science in Systematics, Animal Taxonomy and Biodiversity.

Aprovado: ___ / ___ / _____

Comissão Julgadora

Prof. Dr. _____ Instituição:_____

Julgamento: _____ Assinatura:_____

Prof. Dr. _____ Instituição:_____

Julgamento: _____ Assinatura:_____

Prof. Dr. _____ Instituição:_____

Julgamento: _____ Assinatura:_____

Prof. Dr. _____ Instituição:_____

Julgamento: _____ Assinatura:_____

Prof. Dr. _____ Instituição:_____

Julgamento: _____ Assinatura:_____

ACKNOWLEDGEMENTS

I would like to express my gratitude towards several people and institutions that allowed and contributed for the development of this project, among them:

To Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) and Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP 2015/19976-3) for the financial support of the Project.

To Museu de Zoologia da Universidade de São Paulo (MZUSP) and Instituto Butantan for providing a space and infrastructure for the analysis and/or classes during the post-graduation program.

To the following institutions and their respective professionals: Lorenzo Prendini and Louis Sorkin, The American Museum of Natural History (AMNH); Christine Rollard, Muséum national d'Histoire Naturelle (MNHN); Lauren Esposito and Darrell Ubick, California Academy of Science (CAS); Janet Beccaloni, The Natural History Museum in London (BMNH); Gonzalo Giribet and Lauren Leibensperger, Museum of Comparative Zoology (MCZ); Jonathan Coddington and Dana DeRoche, Smithsonian National Museum of Natural History (USNM); Peter Jäger, Monica Solórzano-Krämer and Julia Altmann, Naturmuseum Senckenberg (SMF); Jason Dunlop, Museum für Naturkunde (ZMB); Adriano Kury and Carla Barros, Museu Nacional do Rio de Janeiro (MNRJ); Zoë Simmons, The Oxford University Museum of Natural History (OUMNH); Célio Magalhães and Marlus Almeida, Instituto Nacional de Pesquisas da Amazônia (INPA); Ricardo Pinto da Rocha and Mauro Cardoso Júnior, Museu de Zoologia da Universidade de São Paulo (MZUSP); Alexandre Bonaldo, Museu Paraense Emílio Goeldi (MPEG); and Ediney Magalhães from Comissão Executiva do Plano da Lavoura Cacaueira (CEPLAC) for loaning important material for the research and/or providing a space and opportunity to search for relevant material in their respective institutions.

To Leandro Keiji Maurer Ozahata from Laboratório de análise de minerais e rochas (Lamir) in Universidade Federal do Paraná (UFPR) and Rubia Figueredo Gouveia from Laboratório Nacional de Nanotecnologia (LNNANO) in Centro Nacional de Pesquisa em Energia e Materiais (CNPEM) for helping with the process of microtomography.

To Raymond Pupedis from the Peabody Museum of Natural History for providing pictures of the type specimen of *Trichopelma zebra*.

To Rogerio Bertani, for advising, supporting and guiding me throughout the whole project and introducing me to the arachnological world.

To Carol, Pedro, Alex, Irene, Yeimy and Aramys from Laboratório de Ecologia e Evolução (LEEV) of Instituto Butantan for the support and camaraderie in the lab and for helping to create a very friendly and productive environment in our laboratory.

To my friends and family, whose support was unconditional and essential for my personal and professional development.

ABSTRACT

Barychelidae is a family of mygalomorph spiders that has been typically considered as consisting of three subfamilies (Barychelinae, Sasoninae and Trichopelmatinae). The subfamily Trichopelmatinae, however, has also been considered as potentially belonging to Theraphosidae. Lack of information about this subfamily has compounded many problems in the understanding of its systematic standing. Therefore, a taxonomic revision and cladistics analysis of the subfamily is presented, vying to resolve the relationships within this group. The study also aims to: redescribe the type material, provide pictures for the type material, analyze specimens from several collections, and possibly describing new species and/or unknown male or female individuals, and develop a taxonomic key of Trichopelmatinae. A cladistics analysis was performed, including all the species of Trichopelmatinae, in addition to some species of Barychelidae, Theraphosidae, Paratropididae and Nemesiidae. The data matrix with 60 taxa and 95 characters was analyzed with implied character weighting, in which six different values of concavities (k) were used. The chosen cladogram was the one obtained with the values of "k" for 4, 5 and 6, as they showed the shortest cladogram length and highest fit number. The results presented show that Trichopelmatinae is a monophyletic group, which is now comprised of three genera (*Psalistops* Simon, 1889, *Reichlingia* (Rudloff, 2001) and *Trichopelma* Simon, 1888). Additionally, Trichopelmatinae are herein transferred to Theraphosidae. Several species are synonymized: *P. montigena* Simon, 1889, *P. tigrinus* Simon, 1889 and *P. zonatus* Simon, 1889 with *P. melanopygius* Simon, 1889; *T. corozalis* (Petrunkevitch, 1929) with *T. insulanum* (Petrunkevitch, 1926); *P. maculosus* Bryant, 1948 with *P. fulvus* Bryant, 1948; *P. opifex* (Simon, 1889) and *P. solitarius* (Simon, 1889) with *Schismatothele lineata* Karsch, 1879. The following transfers are also done: *P. fulvus*, *P. hispaniolensis* Wunderlich, 1988, *P. venadensis* Valerio, 1986 and*P. steini* (Simon, 1889) to *Trichopelma*; *P. gasci* Maréchal, 1996 to *Hapalopus* Ausserer, 1875; *T. astutum* Simon, 1889 to *Euthycaelus* Simon, 1889; *T. maddeni* Esposito & Agnarsson, 2014 to *Holothele* Karsch, 1879; *T. flavicomum* Simon, 1891 and *T. illetabile* Simon, 1888 to the subfamily Sasoninae. The species *T. illetabile*, *P. nigrifemuratus* Mello-Leitão, 1939, *T. spinosum* (Franganillo, 1926), *T. scopulatum* (Fischel, 1927) and *T. eucubanum* Özdikmen & Demir, 2012 are considered as *nomina dubia*. Moreover, 1 new species of *Psalistops* (*P.* sp. nov. 1) and 11 new species of *Trichopelma* (*T.* sp. nov. 1, *T.* sp. nov. 2, *T.* sp. nov. 3, *T.* sp. nov. 4, *T.* sp. nov. 5, *T.* sp. nov. 6,

T. sp. nov. 7, *T.* sp. nov. 8, *T.* sp. nov. 9, *T.* sp. nov. 10 and *T.* sp. nov. 11) are described. Both genera have their distribution mapped and new occurrences documented. The results of the analysis showed that the revision of Trichopelmatinae allowed for a better understanding of its systematic standing and also provided with some important information about the families Barychelidae and Theraphosidae. This highlights that a more comprehensive cladistics analysis, with even more representatives from all the included families would potentially help resolve and define better the systematic standing of both families.

Keywords: Mygalomorphae. Neotropical. Spider. Systematics. Trichopelmatinae.

RESUMO

Barychelidae é uma família de aranhas migalomorfas que contém tipicamente três subfamílias (Barychelinae, Sasoninae e Trichopelmatinae). A subfamília Trichopelmatinae, entretanto, também já foi considerada como pertencendo à Theraphosidae. Falta de informações sobre essa subfamília acarreta em vários problemas no entendimento de sua posição sistemática. Para tentar resolver essa questão, a revisão taxonômica e análise cladística da subfamília são aqui apresentadas, de froma a colaborar no entendimento dos relacionamentos dentro desse grupo. O estudo também pretende: redescrever o material tipo, fornecer imagens do material tipo, analisar espécimes de diversas coleções, e possivelmente descrever novas espécies e/ou indivíduos machos ou fêmeas desconhecidos, assim como desenvolver chave taxonômica de Trichopelmatinae. Foi realizada análise cladística incluindo todas as espécies de Trichopelmatinae, além de algumas espécies de Barychelidae, Theraphosidae, Paratropididae e Nemesiidae. A matriz de dados com 60 táxons e 95 caracteres foi analisada com pesagem de caráter implícita, em que 6 diferentes valores de concavidades ("k") foram utilizados. O cladograma escolhido foi aquele obtido com as concavidades 4, 5 e 6, pois eles demonstraram os cladogramas mais curtos e maior valor de fit. Os resultados aqui apresentados mostram que Trichopelmatinae é um grupo monofilético, que agora é composto por três gêneros, (*Psalistops* Simon, 1889, *Reichlingia* (Rudloff, 2001) e *Trichopelma* Simon, 1888). Adicionalmente, as espécies de Trichopelmatinae são transferidos para Theraphosidae. Várias espécies são sinonimizadas: *P. montigena* Simon, 1889, *P. tigrinus* Simon, 1889 e *P. zonatus* Simon, 1889 com *P. melanopygius* Simon, 1889; *T. corozalis* (Petrunkevitch, 1929) com *T. insulanum* (Petrunkevitch, 1926); *P. maculosus* Bryant, 1948 com *P. fulvus* Bryant, 1948; *P. opifex* (Simon, 1889) e *P. solitarius* (Simon, 1889) com *Schismatothele lineata* Karsch, 1879. As seguintes transferências também são feitas: *P. fulvus*, *P. hispaniolensis* Wunderlich, 1988, *P. venadensis* Valerio, 1986 e *P. steini* (Simon, 1889) para *Trichopelma*; *P. gasci* Maréchal, 1996 para *Hapalopus* Ausserer, 1875; *T. astutum* Simon, 1889 para *Euthycaelus* Simon, 1889; *T. maddeni* Esposito & Agnarsson, 2014 para *Holothele* Karsch, 1879; *T. flavicomum* Simon, 1891 e *T. illetabile* Simon, 1888 para a subfamília Sasoninae. As espécies *T. illetabile*, *P. nigrifemuratus* Mello-Leitão, 1939, *T. spinosum* (Franganillo, 1926), *T. scopulatum* (Fischel, 1927) e *T. eucubanum* Özdikmen & Demir, 2012 são consideradas como *nomina dubia*. Além disso, 1 nova espécie de *Psalistops* (*P.* sp. nov. 1) e 11 novas espécies de

Trichopelma (*T.* sp. nov. 1, *T.* sp. nov. 2, *T.* sp. nov. 3, *T.* sp. nov. 4, *T.* sp. nov. 5, *T.* sp. nov. 6, *T.* sp. nov. 7, *T.* sp. nov. 8, *T.* sp. nov. 9, *T.* sp. nov. 10 and *T.* sp. nov. 11) são descritas. Espécies de ambos os gêneros têm suas distribuições mapeadas e novas ocorrências documentadas. Os resultados da análise demonstraram que a revisão de Trichopelmatinae permitiu um melhor entendimento de seu posicionamento sistemático e também forneceu algumas informações importantes sobre as famílias Barychelidae e Theraphosidae. Isso demonstra que uma análise cladística mais abrangente, com mais representantes de todas as famílias incluídas, poderia ajudar a resolver e definir melhor a sistemática de ambas as famílias.

Palavras-chave: Aranha. Mygalomorphae. Neotropical. Sistemática. Trichopelmatinae.

SUMMARY

Taxonomic Revision and Cladistic Analysis of *Psalistops* Simon, 1889 and *Trichopelma* Simon, 1888 (Araneae, Barychelidae)

Introduction

The Barychelidae is a family of spiders from the infra-order Mygalomorphae popularly known as brush-footed trapdoor spiders, due to the dense patch of hairs under their claws, which resemble brushes, and also because they typically live in burrows with a trapdoor made of silk and soil. The spiders of this family are found on several continents, including Oceania, South America, Africa and Asia (Raven, 1994).

There have not been many proposed phylogenies specifically about this family. However, what is generally agreed is that they are comprised of three subfamilies (Sasoninae, Barychelinae and Trichopelmatinae). The Sasoninae and Barychelinae form a monophyletic group, while the Trichopelmatinae is in a basal position within the Barychelidae (Raven, 1985). Nevertheless, this has not yet been resolved (Raven, 1994).

The subfamily Trichopelmatinae includes two genera: *Psalistops* Simon, 1889 and *Trichopelma* Simon, 1888, with 31 described species in total. According to the World Spider Catalog (2018), their distribution is limited to the New World, particularly in the Caribbean, Central and South America. This group has remained a mystery for a long time, because they have never undergone any sort of revision, and so the information about them is scarce and scattered across the literature, with very few images published, most of which are drawings.

Raven (1985) performed a cladistic analysis to determine the relationship between several genera and families of mygalomorph spiders and considered the Barychelidae as a sister group of the Paratropididae + Theraphosidae, and joined these three groups into a monophyletic group called the Theraphosoidina. However, Raven (1985) did his research at a time when there were not computer programs to carry out maximum parsimony analysis. He took on a massive task and did everything manually, so there was a chance of his phylogenetic trees not being the most parsimonious possible.

Goloboff (1993) performed the first cladistic analysis of the Mygalomorphae with computer programs. His analysis highlighted several issues in the classification of

Mygalomorphae, which should be thoroughly investigated. With regard to Barychelidae, his analysis agrees with the position proposed by Raven (1985).

Some years later, Raven (1994) revised and compiled a list of Barychelidae spiders from Australia and the western Pacific and suggested that Trichopelmatinae be transferred from the Barychelidae to the Theraphosidae (tarantula spiders). However, since he did not present any phylogenetic arguments for such a transfer, his suggestion was rejected (World Spider Catalog, 2018).

Hedin & Bond (2006) also performed a phylogenetic analysis of the mygalomorph spiders, but this time included both molecular and morphological characters in an attempt to clear the many doubts and uncertainties concerning this group. The use of molecular characters was because the morphological characters alone were unable to resolve the relationships between the big groups of the Mygalomorphae. Their results were obtained from an analysis of genes from the ribosomal RNA 18S and 28S cistrons.

Some time later, Bond *et al.* (2012) performed a new analysis including the same previously used characters, but this time adding a new molecular character: genes that codify nuclear proteins. This study included a small number of specimens, of which the same 2 genera of Barychelidae were once again used. The authors concluded that this approach was promising for resolving the phylogeny of Mygalomorphae, but at the same time they stated that a new study with a bigger sample size would be necessary for more reliable results.

With respect to Barychelidae, the data from Hedin & Bond (2006) and Bond *et al.* (2012) seemed to confirm the proximity of Barychelidae with Theraphosidae, uniting these two families in a monophyletic group, and leaving Paratropididae in an external position. This new result could be used to support the suggestion made by Raven (1994), as the Trichopelmatinae have always been considered a basal group within the Barychelidae, so it would not be too far-fetched to imagine that this subfamily could potentially belong to Theraphosidae.

Moreover, Bond *et al.* (2012) argued that the characters used to distinguish Theraphosidae and Barychelidae are ill-defined (*e.g.* shape of maxilla and number of labial and maxillary cuspules), some of which are shared by many other groups of mygalomorphs. Due to the absence of well-established synapomorphies, the authors wondered if Theraphosidae and Barychelidae represented one or two clades.

More recently, Guadanucci (2014) performed an analysis of the genera from the subfamily Ischnocolinae (Theraphosidae), which is not considered a monophyletic group. Species from every subfamily of Theraphosidae were included in the analysis, as well as some species of Barychelidae, like *Sason* Simon, 1887 (Sasoninae), *Pisenor* Simon, 1889, *Cyphonisia* Simon, 1889 (Barychelinae), and *Trichopelma* (Trichopelmatinae). One of the conclusions was that *Trichopelma* should be included in Theraphosidae. However, the species used for the analysis was the type, which is only known for the male specimen, and that possibly limited the conclusions with regards to the systematic placement of Trichopelmatinae.

In spite of the new interesting data, things have remained undecided since the results are still preliminary by the authors' own admission. Additionally, the hypotheses by Raven (1994) could not be tested using the data presented in the article, because they did not include many specimens from the Trichopelmatinae. Based on these observations, it is evident that the phylogeny and systematics of the Trichopelmatinae is understudied and therefore underdetermined.

Taxonomic history of *Trichopelma* and *Psalistops*

Trichopelma Simon, 1888

The genus *Trichopelma* was described by Simon (1888) in his classic paper on arachnids from the Antilles. The type species *Trichopelma nitidum* Simon, 1888 was described from "Santo-Domingo" (Dominican Republic) based on a single male; and, in the same paper, Simon (1888) described *T. illetabilis* with a female from Teffé, Amazonas, Brazil. Some years later, Simon (1891) described *Trichopelma flavicomum* Simon, 1891 with a female from "São Antonio da Barra" (now Condeuba) in the state of Bahia, Brazil.

In his huge mygalomorph revision, Raven (1985) made several taxonomical transferences and synonymies, some of which involved directly the genus *Trichopelma*. One of the genera considered as a junior synonym of *Trichopelma*, *Stothis* Simon, 1889 was described with two species, *S. cenobita* Simon, 1889, based on a female from the forest of San-Esteban in Venezuela and *S. astuta* Simon, 1889 also based on a female and occurring in the same locality of San-Esteban forest and also in Catuche, close to Caracas, Venezuela. Some years later, the same author Simon (1892) described *Stothis affinis* Simon, 1892, with a female from Saint Vincent Island, in the Caribbean. Banks

(1909) described a new species, *Stothis cubana* Banks, 1909, from a specimen from Santiago de las Vegas, Cuba. Other two species were described by Franganillo (1926, 1930), *Stothis spinosa* Franganillo, 1926, specimen from San José de Las Lajas, Habana, Cuba; and *Stothis maculata* Franganillo, 1930, specimen from Valle de Viñales, Cuba.

Raven (1985) also synonymized with *Trichopelma* other four monotypic genera: *Hapalopinus* Simon, 1903, with the species *H. cubanus* Simon, 1903 described with a male from Cuba; *Merothele* Petrunkevitch with the single species *M. zebra* Petrunkevitch, 1925, described with a female from Cerro Flores in Panama; *Oberarius* Petrunkevitch, 1926, with a single species *O. insulanus* Petrunkevitch, 1926 described with a female from St. Thomas in the Carribean; and *Leptostylus scopulatus* Fischel, 1927, generic name preoccupied and renamed as *Leptofischela scopulata* Strand, 1929, described with a male from Venezuela.

In the same paper Raven (1985) transferred *Psalistops corozali* Petrunkevitch, 1929, described with a female from Corozal, Puerto Rico, to *Trichopelma*.

Valerio (1986) described *Trichopelma laselva* Valerio, 1986, with a female from Finca La Selva Station, Heredia Province, Costa Rica.

After examining the types of *Acanthopelma maculata* Banks, 1906, described with two specimens from Magnolia Key, Andros Island in the Bahamas, Rudloff (1997) transferred the species to *Trichopelma*.

Özdikmen & Demir (2012) replaced two homonyms resulted from the previous synonymies and genera transferences, *Stothis cubana* = *Trichopelma banksia* Özdikmen & Demir, 2012, and *Stothis maculata* = *Trichopelma eucubanum* Özdikmen & Demir, 2012.

Esposito & Agnarsson, in Bloom et al. (2014) described *Trichopelma maddeni* Esposito & Agnarsson, 2014 based on a troglomorphic, eyeless female from Cueva Seibo, Parque Nacional del Este, Altagracia province, Dominican Republic.

Ríos-Tamayo (2017) redescribed the holotype of *Trichopelma cubanum* and proposed it should belong in the Barychelidae.

***Psalistops* Simon, 1889**

Simon (1889) described a new genus *Psalistops* with three species: *Psalistops melanopygius* Simon, 1889 (type species designed by Simon, 1892), based on a female from Catuche forest in Caracas, Venezuela; *Psalistops tigrinus* Simon, 1889, described

with a female from Valencia, San-Esteban in the Province of Carabobo, Vanezuela; and *P. zonatus* Simon, 1889, described with female and male, from Tovar colony, Venezuela.

Mello-Leitão (1923) described a new species, *Psalistops crassimanus* Mello-Leitão, 1923, from Alcatrazes Island in the state of São Paulo, Brazil with male and female.

Petrunkevitch (1929) described *Psalistops corozali* Petrunkevitch, 1929 with a female collected in a limestone cavern at Corozal, in Porto Rico.

Two years later, Franganillo, 1931 synonimized *Leptopelma arastellatus* Franganillo, 1930, described probably with a female, from Sierra Maestra, Cuba, with *Psalistops corozali*.

Mello-Leitão (1939, 1946) described other two species, *Psalistops nigrifemuratus* Mello-Leitão, 1939, based on a male from Buri, in the state of São Paulo, Brazil; and *Psalistops auripilus* Mello-Leitão, 1946 based on a male from Florida, Uruguay.

Bryant (1948) described two species, *Psalistops fulvus* Bryant, 1948, male and female, from Diquini, Haiti; and *P maculosa* Bryant, 1948, with a male, also from Haiti.

In his revision of mygalomorph genera Raven (1985) synonimized *Epipedesis* Simon, 1889 with *Psalistops*. As a result, the three species described by Simon (1889) in *Epipedesis* were transferred to *Psalistops*: *Epipedesis montigena* Simon, 1889 based on a female from the summit of Valencia in San-Esteban forest, Venezuela; *Epipedesis opifex* Simon, 1889, female, from La Guaira, Venezuela; and *Epipedesis solitarius* Simon, 1889, female, from Catuche forest, Venezuela. He also transferred *Psalistops corozali* to *Trichopelma*.

Valerio (1986) described *Psalistops venadensis* Valerio, 1986, with a female from El venado, San Carlos, Alajuela province, Costa Rica.

Maréchal (1996) described *Psalistops gasci* Maréchal, 1996, with two females from Arataye River, Saut Pararé, French Guiana.

Guadanucci & Weinmann (2014) transferred *Euthycaelus steini* Simon, 1889, described based on a female from Tovar colony in Venezuela, to *Psalistops.*

Passanha et al. (2014) transferred *Psalistops auripilus* to *Pycnothele* Chamberlin, 1917, in the Nemesiidae.

Bertani, *et al.*, (2017) transferred *P. crassimanus* to *Stenoterommata* Holmberg, 1881 in the Nemesiidae.

Objectives

As mentioned previously, the current knowledge about the Trichopelmatinae subfamily is scarce, mostly due to the lack of recent studies focused on the systematics and taxonomy of this group. Moreover, the majority of the species have not had updated descriptions. This is an issue, because many of the species only had a description done a long time ago, which are deficient and incomplete, since they did not include many important characters used to describe new species of spiders nowadays. Additionally, images of the described material are rare.

Lack of material has also represented a problem for this group, as many species were described based on only one specimen, and therefore many of them lack information about gender differences. Out of the 31 species, 18 are represented only by female individuals, 6 by male, and 4 unidentified (World Spider Catalog, 2018). The unidentified specimens could be for two reasons: either the authors forgot to include this information, or the species was described based on an immature specimen, which is another issue since it is known that spiders undergo many morphological changes as they mature. Judging by how scattered the information about the Trichopelmatinae is, there is a possibility that a species based only on a single female and another based on a single male could actually belong to the same species.

The objectives of this project are: 1-. A taxonomic revision of the genera *Psalistops* Simon, 1889 and *Trichopelma* Simon, 1888; 2- resolve the phylogeny between the species of both genera and the relationships between the Trichopelmatinae subfamily and other mygalomorph spiders, particularly the Theraphosidae and Barychelidae; 3- analyze specimens from several collections, including recently collected and unidentified material, possibly describing new species and previously unknown male or female individuals, 4- develop a taxonomic key of Trichopelmatinae.

Material and methods

The description format generally follows Raven (1985) and Raven (1994). All measurements are in millimeters and were obtained with a Mitutoyo digital caliper. Leg and palp measurements were taken from the dorsal aspect of the left side, and the leg spines description was also taken from the left limbs. A Leica LAS Montage and LAS

3D module mounted on a Leica M205C dissecting microscope were used for image capture and measurements of other spider structures. All the given coordinates were obtained from Google Earth, using the center of the municipalities as reference.

Abbreviations: (ALE) anterior lateral eyes, (AME) anterior median eyes, (ITC) inferior tarsal claw, (MOQ) median ocular quadrangle, (PLE) posterior lateral eyes, (PLS) posterior lateral spinnerets, (PME) posterior median eyes, (PMS) posterior median spinnerets, (STC) superior tarsal claws.

The cladistic analysis was performed with the help of the computer program TNT (Tree analysis using New Technology), developed by Goloboff *et al*. (2003). The data matrix (Tab. 1) with 60 taxa and 95 characters was analyzed by using implied character weighting, in which six different values of concavities (k) were used, ranging from 1 until 6. All characters were treated as unordered. Absolute and relative Bremer supports were obtained by the program as well.

Specimens of Trichopelmatinae from the following museums were examined: American Museum of Natural History, New York (AMNH), California Academy of Science, San Francisco (CAS), Comissão Executiva do Plano da Lavoura Cacaueira, Ilhéus (CEPLAC), Instituto Butantan, São Paulo (IBSP), Instituto Nacional de Pesquisas da Amazônia, Manaus (INPA), Laboratório Especial de Ecologia e Evolução, São Paulo (LEEV), Museu de Zoologia da Universidade de São Paulo, São Paulo (MZUSP), Museum für Naturkunde, Berlin (ZMB), Muséum national d'Histoire Naturelle, Paris (MNHN), Museum of Comparative Zoology, Cambridge (MCZ), Museu Nacional do Rio de Janeiro, Rio de Janeiro (MNRJ), Museu Paraense Emílio Goeldi, Belém (MPEG), The Natural History Museum, London (BMNH), Naturmuseum Senckenberg, Frankfurt (SMF), Oxford University Museum of Natural History, Oxford (OUMNH), Smithsonian National Museum of Natural History, Washington (USNM).

Additional specimens that were examined and included in the cladistic analysis include: *Avicularia avicularia*, 1 male, Brazil, Pará, Tucuruí, Equipe Resgate de Fauna col., IBSP 8848; 1 female, Brazil, Pará, Tucuruí, UHE Tucuruí, 05/11/1988, Equipe Resgate de Fauna col., IBSP 4832; *Catumiri chicaoi*, 1 female and 1 male, Brazil, Bahia, São João da Mata, Reserva de Sapiranga, 10/02/2007, R. Bertani, C. S. Fukushima & R. H. Nagahama col., LEEV 279; *Catumiri parvum*, 2 females, Brazil, Rio Grande do Sul, Rosario do Sul, Serra do Caverá, L. M. Borges col., LEEV 281; 1 male, Brazil, Rio Grande do Sul, Rosario do Sul, Serra do Caverá, L. M. Borges col., 16/08/2016, LEEV 282; *Coremiocnemis valida*, 1 male, Malaysia, April/2000, R. West col., LEEV 287;

Cosmopelma decoratum, 12 females and 2 immatures, Brazil, Bahia, Fazenda Santa Teresa, MNRJ 12919, R2955; 1 male, Brazil, Bahia, Uruçuca, Fazenda Almada, J. Santos col., CEPLAC 3793; *Cyphonisia obesa*, 1 female, Congo, MNHN AR4537; 1 female and 1 male, Ivory Coast, Lamto, E. D. pub col., DRESCO collection, MNHN Sim 910421; *Dolichothele bolivianum*, 1 male, Brazil, Goiás, Catalão, Fazenda Alvorada, Jan/2004, Guadanucci & Monteiro col., MZUSP 26076; 1 female, Brazil, Goiás, Catalão, Fazenda Alvorada, February/2003, Guadanucci col., MZUSP 23224; *Dolichothele exillis*, 1 male, Brazil, Bahia, Central, 12-27/07/2000, Brescovit & Ramos col., IBSP 9484; 1 female, Brazil, Bahia, Caatinga do Moura, 24-29/01/1980, Vanzolini col., MZUSP 1877; *Euthycaelus astutus*, female holotype of *Stothis astuta*, Venezuela, Simon col., MNHN 9869; *Euthycaelus colonicus*, 1 female, Brazil, Amazonas, Tobogan de La Selva, A. Perez Gonzales & A. Giupponi, MNRJ 07558; *Guyruita atlantica*, 1 male, Brazil, Alagoas, Estação Ecológica de Murici, 08/17/2006, Bertani, Ortega & Nagahama col., MNRJ 6982; 1 female, Brazil, Alagoas, Estação Ecológica de Murici, 08/12/2006, Bertani, Ortega & Nagahama col., MNRJ 6890; *Guyruita cerrado*, 1 male, Brazil, Goiás, Catalão, Fazenda Pé de Morro, 10/21/2015, R. Bertani col., MNRJ 6971; 1 female, Brazil, Tocantins, UHE Peixe Angical, 11/11/2006, Equipe Resgate de Fauna col., IBSP no number; *Haplopelma minax*, 1 male, Thailand, Cumphon, Goh ded., June/1979; 2 females, Thailand, Imi E. Bangkok, 05/11/1988, R. Bayer col., IBSP 9645; *Holothele longipes*, 1 female, Brazil, Amazonas, Urucu, Base de operações geólogo Pedro de Moura, Sep/06, C. A. C. Santos Jr. col., MPEG ARA 034330; 1 female, Brazil, Pará, Portel, Floresta Nacional de Caxiuanã, Igarapé, Plote PPBio, 19-28/07/2007, M. A. Ribeiro-Junior & N. F. Lo-Man-Hung col., MPEG ARA 034328; *Idiophthalma* sp. 1, 1 female, Ecuador, Simon col., MNHN AR4546/21960; *Idiophthalma* sp. 2, 1 male, Brazil, Pará, Juruti, Acampamento Mutum, 02/12/2007, N. F. Lo-Man Huang col., MPEG ARA 034336; *Ischnocolus* sp., 6 females and 1 male, Algeria, Ouarsenis, Vaulogé col., MNHN AR4596/20419; *Lasiodora* sp., 2 males and 2 immatures, Brazil, São Paulo, Paraibuna, P. Calazaris col., March/1985, IBSP 4754; 2 females, Brazil, São Paulo, Paraibuna, J. B. Vilhena, 07/15/1971, IBSP 2225; *Melloina santuario*, 1 female, Venezuela, El Santuario, 04/19/2000, MNRJ 12965; 1 male, Venezuela, El Santuario, O. Villarreal col., MIZA-520; *Neodiplothele fluminensis*, 1 female, Brazil, Rio de Janeiro, Parna, Tijuca, Sumaré, R. L. C. Baptista *et al.* col., 01/22/2005, MNRJ 07575; 1 male, Brazil, Rio de Janeiro, Parna, Tijuca, Sumaré, R. L. C. Baptista *et al.* col., December/2001; *Neoholothele fasciaaurinigra*, 1 female,

Colombia, Villa Vicencio, Finca La Loma, 08/20/2006, A. P. L. Giupponi col.., MNRJ 07548; *Paratropis* sp. 1, 1 female and 1 male, MNRJ 07539; *Paratropis* sp. 2, 2 females, Ecuador, Los Rios, Sandoval, 09/18/1979, MV-PAR-0001; 3 males, Ecuador, Los Rios, T. de Vries, 03/01/1979, MV-PAR-0002; *Pelinobius muticus*, 1 male, born in captivity, mother collected in Kenya, Ping ded., IBSP 8530; 1 female, Africa, Kenya, P. Klass/Koln ded., IBSP 9643; *Poecilotheria ornata*, 1 female, Sri Lanka, F. Palinger ded., IBSP 8767; 1 male, India, A. Zanotti col., IBSP 9660; *Psalmopoeus cambridgei*, 2 females, Trinidad & Tobago, Simla, 02/28/1963, Rozen col., AMNH no number; 1 male, Trinidad & Tobago, Saint Augustine, 09/05/1966, E. K. Waering col., AMNH no number; *Pterinochilus chordatus*, 1 male, Africa, pet trade, LEEV 284; *Pterinochilus* sp., 1 female, Africa, F. Palinger ded., IBSP 8765; 3 males; Africa, pet trade, LEEV 283; *Reichlingia annae*, male holotype and 1 female paratype, Belize, Orange Walk District, New River Lagoon, S. B. Reichling col., 01/09/1995; *Sason robustum*, 10 females and 3 males, Sri Lanka, MNHN AR4563; Sasoninae gen. nov. 2, 1 male, Brazil, Pará, Portel, Floresta Nacional de Caxiuanã, Igarapé, Plote PPBio, 19-28/07/2007, M. A. Ribeiro-Junior & N. F. Lo-Man Hung col., MPEG ARA 034323; 1 female, Brazil, Pará, Portel, Floresta Nacional de Caxiuanã, Igarapé, Plote PPBio, 2007, Gomes *et al.* col., MPEG ARA 034333; *Schismatothele benedettii*, 2 males, Brazil, Amazonas, Ig. Barro Branco, Arm. Malaise, 13-23/09/2004, INPA no number; 1 male and 1 female, Brazil, Amazonas, Manaus, Reserva F. A. Ducke, 21/06-06/07-2007, G. Freitas & M. Feitosa col., INPA no number; *Sickius longibulbi*, 1 male, Brazil, Brasilia, Reserva da Marinha, 08/11/2007, Bertani *et al.* col., LEEV 280; 1 female, Brazil, Brasilia, Reserva da Marinha, 08/11/2007, Bertani *et al.* col., LEEV 280; *Stenoterommata* sp., 1 female and 1 male, Brazil, Minas Gerais, Ouro Preto e Mariana, Parque Estadual do Itacolomi, 01/10/2005, LEEV 275; *Stromatopelma* sp., 1 male, Africa, Serra Leoa, August, 1988, Pinz ded., IBSP 9662; 1 female, Africa, pet trade, LEEV 285; *Tapinauchenius plumipes*, 1 male, Brazil, Amazonas, Acariquara, 08/12/2017, M. Q. Almeida col., INPA 4882; 1 female, Brazil, Amazonas, Ramal do Olímpio, Novo Arião, 03-15/07/1997, P. F. Bürnheim, N. O. Aguiar & N. F. Fé col.

Given how the genera from Trichopelmatinae have been included in both Barychelidae and Theraphosidae, several specimens of both families were included in order to test Trichopelmatinae position. Moreover, three species from Paratropididae were included to test the monophyly of the group created by Raven (1985), Theraphosoidina, which includes Barychelidae, Paratropididae and Theraphosidae.

TABLE 1. Data matrix (? = unknown, - = non-applicable).

Taxon	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Stenoterommata sp.	0	0	0	0	1	1	0	0	1	1	-	1	0	0	0	1	0	-	0	-	0	0	0	0	2	0	0	0	0	0	0	0	0
Cyphonisia obesa	0	0	0	0	0	1	1	2	0	1	-	1	0	0	0	1	1	0	0	-	0	0	0	0	2	0	0	0	0	0	0	0	0
Idiophthalma sp.	0	0	0	0	3	1	1	3	1	1	-	1	0	0	2	1	1	0	0	-	0	0	0	0	1	-	0	0	0	0	0	0	0
Idiophthalma sp. 2	0	0	0	0	3	1	1	3	1	1	-	1	0	0	2	1	1	0	0	-	0	0	0	0	1	-	0	0	0	0	0	0	0
Sasoninae ge. nov. 1	0	0	0	0	0	1	0	0	1	?	-	0	0	0	0	1	0	-	0	-	0	0	0	0	2	-	0	0	0	0	0	0	0
Neodiplothele fluminensis	0	0	0	0	0	1	0	1	1	1	-	2	0	0	0	1	0	-	0	-	0	0	0	0	2	-	0	0	0	0	0	0	1
Sasoninae gen. nov. 2	0	0	0	0	1	1	0	0	0	0	-	0	0	0	0	1	1	0	0	-	0	0	0	0	1	-	0	0	0	0	0	0	1
Cosmopelma decoratum	0	0	0	0	0	0	0	0	1	4	-	0	0	0	0	1	0	-	0	-	1	0	1	1	2	-	0	0	0	0	0	0	1
Sason robustum	0	0	0	0	2	0	1	2	1	4	-	0	0	0	0	1	0	-	0	-	1	0	0	0	1	0	0	0	0	0	0	0	1
Sickius longibulbi	0	0	0	0	0	1	1	1	0	0	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0
Melloina santuario	0	0	0	0	0	1	1	1	0	0	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	1	0
Paratropis sp. 1	0	0	0	1	2	2	1	0	2	0	-	0	0	0	1	1	0	-	1	2	0	1	0	0	0	1	0	1	0	1	0	1	0
Paratropis sp. 2	0	0	0	1	2	2	1	0	2	0	-	0	0	0	1	1	0	-	1	2	0	1	0	0	0	1	0	1	0	1	0	1	0
Guyruita atlantica	0	0	0	0	0	1	0	0	0	0	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0
Guyruita cerrado	0	0	0	0	0	1	0	0	0	2	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0
Dolichothele bolivianum	0	0	0	0	0	1	0	1	2	0	-	0	0	0	0	1	1	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0
Dolichothele exillis	0	0	0	0	0	1	0	1	2	0	-	0	0	0	0	1	1	0	1	1	0	0	0	0	2	1	0	0	0	0	0	0	0
Lasiodora sp.	0	1	0	0	0	1	1	1	1	0	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0
Coremiocnemis valida	0	0	0	0	1	1	1	0	0	0	-	0	0	0	0	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0
Pelinobius muticus	0	0	0	0	1	1	0	1	1	0	-	0	0	0	0	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0
Haplopelma sp.	0	0	0	0	0	1	0	1	1	0	-	0	1	1	0	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0
Pterinochilus chordatus	0	0	0	0	0	1	0	2	0	0	-	0	1	0	0	1	0	-	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0
Pterinochilus sp.	0	0	0	0	0	1	0	2	0	0	-	0	1	0	0	1	0	-	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0
Tapinauchenius plumipes	0	0	1	0	0	1	1	0	1	2	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0
Psalmopoeus cambridgei	0	0	1	0	0	1	1	0	1	2	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	1	0	0	0	1	0	0
Avicularia avicularia	1	0	0	0	0	1	1	1	0	0	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	2	0	0
Poecilotheria ornata	0	0	0	0	0	1	0	1	0	2	-	0	0	1	0	1	1	0	1	1	0	0	0	0	1	1	1	0	0	0	2	0	0
Stromatopelma sp.	0	0	0	0	0	1	1	0	0	0	-	0	0	0	0	1	0	-	1	1	0	0	0	0	1	1	0	0	0	0	2	0	0
Neoholothele fasciaaurinigra	0	0	0	0	0	1	1	0	1	2	-	0	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Schismatothele benedettii	0	0	0	0	0	1	1	0	1	2	-	0	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Euthycaelus astutus	0	0	0	0	0	1	1	0	2	0	-	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0

Taxon	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Euhycoelus colonicus	0	0	0	0	0	1	1	0	2	0	-	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Catumiri chicaoi	0	0	0	0	0	1	0	1	1	2	-	0	0	0	0	1	1	0	1	0	0	0	0	0	2	-	0	0	0	0	0	0	0
Catumiri parvum	0	0	0	0	0	1	0	1	1	0	-	0	0	0	0	1	1	0	1	0	0	0	0	0	2	-	0	0	0	0	0	0	0
Ischnocolus sp.	0	0	0	0	0	1	0	0	1	0	-	0	0	0	0	1	0	-	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Holothele longipes	0	0	0	0	0	1	1	0	0	0	-	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0
Reichlingia annae	0	0	0	0	1	1	1	0	2	2	-	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Psalistops melanopygius	0	0	0	0	0	1	1	1	1	2	-	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Psalistops sp. nov. 1	0	0	0	0	0	1	1	1	1	2	-	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Trichopelma affine	0	0	0	0	0	1	1	1	2	3	0	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma banksia	0	0	0	0	2	1	1	1	1	?	-	?	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma coenobita	0	0	0	0	0	1	1	1	1	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma cubanum	0	0	0	0	0	?	1	2	0	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	?
Trichopelma fulvus	0	0	0	0	0	1	1	2	1	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma insulanum	0	0	0	0	0	1	1	1	1	3	2	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma laselva	0	0	0	0	0	1	1	1	1	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma maculatum	0	0	0	0	0	1	1	2	1	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Trichopelma nitidum	0	0	0	0	2	?	1	1	1	3	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	0	0	1	0	0	0	?
Trichopelma steini	0	0	0	0	0	1	1	1	1	3	2	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma sp. nov. 1	0	0	0	0	0	1	1	1	0	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Trichopelma sp. nov. 2	0	0	0	0	0	1	1	1	1	?	-	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Trichopelma sp. nov. 3	0	0	0	0	0	?	1	1	0	3	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	?
Trichopelma sp. nov. 4	0	0	0	0	0	1	1	1	2	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma sp. nov. 5	0	0	0	0	0	1	1	1	2	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma sp. nov. 6	0	0	0	0	0	?	1	2	0	3	1	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	?
Trichopelma sp. nov. 7	0	0	0	0	0	1	1	2	0	?	-	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Trichopelma sp. nov. 8	0	0	0	0	0	1	1	1	1	3	2	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Trichopelma sp. nov. 9	0	0	0	0	0	1	1	1	1	3	3	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma sp. nov. 10	0	0	0	0	0	1	1	1	1	3	3	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Trichopelma sp. nov. 11	0	0	0	0	0	1	1	0	1	3	3	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0

Taxon	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
Stenoterommata sp.	0	0	-	0	0	0	0	1	1	2	3	3	0	1	1	0	1	0	0	0	?	2	0	1	1	1	0	1	0	0	0	0	0
Cyphonisia obesa	0	0	-	0	0	0	0	0	1	2	0	0	1	2	1	0	1	1	1	1	0	1	1	2	1	1	1	1	0	0	0	0	0
Idiophthalma sp.	?	0	-	0	?	1	1	1	1	0	0	?	1	2	1	0	1	1	1	1	0	?	?	?	?	?	?	?	?	0	?	0	?
Idiophthalma sp. 2	0	0	-	0	0	0	0	0	0	?	?	0	1	?	?	?	?	?	?	?	?	2	1	2	1	1	1	1	0	?	0	?	0
Sasoninae ge. nov. 1	?	1	0	1	?	0	0	0	0	0	0	?	1	2	0	1	0	2	1	1	1	?	?	?	?	?	?	?	?	0	?	0	?
Neodiplothele flaminensis	0	1	0	1	0	0	0	0	0	0	0	0	1	2	0	1	0	2	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0
Sasoninae gen. nov. 2	0	0	-	1	0	0	0	0	0	0	0	2	1	2	0	1	0	2	1	1	0	2	0	2	1	1	1	0	0	0	0	0	0
Cosmopelma decoratum	0	1	0	1	0	0	0	0	0	0	0	0	1	2	0	1	0	2	1	1	1	2	0	3	1	1	1	0	0	0	0	0	0
Sason robustum	0	1	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	2	1	1	0	2	0	3	1	1	1	0	0	0	0	0	0
Sickius longibulbi	0	1	1	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	0	2	1	2	1	1	1	0	0	0	0	0	0
Melloina santuario	0	1	1	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	?	1	1	0	0	?	?	1	0	0	1	1	1
Paratropis sp. 1	0	0	-	0	0	0	0	0	0	1	1	1	0	0	-	-	-	-	0	-	-	0	-	-	0	-	-	0	0	0	0	0	0
Paratropis sp. 2	0	0	-	0	0	0	0	0	0	1	1	1	0	0	-	-	-	-	0	-	-	0	-	-	0	-	-	0	0	0	0	0	0
Gayrusita atlantica	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	1	1	0	2	1	2	1	1	1	0	0	0	0	0	0
Gayrusita cerrado	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	1	1	0	2	1	2	1	1	1	0	0	0	0	0	0
Dolichothele boliviana	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	1	0	2	0	2	2	0	1	0	0	0	0	0	0
Dolichothele exilis	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	1	0	2	0	2	2	0	1	0	0	0	0	0	0
Lasiodora sp.	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	0	0	2	0	2	2	0	1	0	0	0	0	0	0
Coremiocnemis valida	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	0	1	2	0	2	2	0	2	0	0	0	0	0	0
Pelinobius muticus	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	0	0	3	0	2	2	0	2	0	0	0	0	0	0
Haplopelma sp.	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	2	0	2	0	2	2	0	1	0	0	0	0	0	0
Pterinochilus chordatus	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	0	0	2	0	2	2	0	1	0	0	0	0	0	0
Pterinochilus sp.	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	0	0	2	0	2	2	0	1	0	0	0	0	0	0
Tapinauchenius plumipes	0	1	1	0	0	0	0	0	0	0	0	2	1	3	1	0	0	1	3	0	1	3	0	2	3	0	0	0	0	0	0	0	0
Psalmopoeus cambridgei	0	1	1	0	0	0	0	0	0	0	0	2	1	3	1	0	0	1	3	0	1	3	0	2	3	0	1	0	0	0	0	0	0
Avicularia avicularia	0	1	1	0	0	0	0	0	0	0	0	0	1	3	0	0	0	1	3	0	0	3	0	2	3	0	1	0	0	0	0	0	0
Poecilotheria ornata	0	1	1	0	0	0	0	0	0	0	0	0	1	3	0	0	0	1	3	2	0	3	0	2	3	0	1	0	0	0	0	0	0
Stromatopelma sp.	0	1	1	0	0	0	0	0	0	0	0	2	1	3	0	0	0	1	3	0	0	3	0	2	3	0	1	0	0	0	0	0	0
Neoholothele fasciaunigra	0	1	1	0	0	0	0	0	0	0	2	2	1	2	0	0	0	1	1	1	0	2	0	2	1	1	1	0	0	0	0	0	0
Schimatothele benedetti	1	1	1	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	0	2	1	1	1	1	1	0	0	0	0	0	1
Euthycaelus astutus	?	1	1	0	?	0	0	0	0	0	2	?	1	2	0	0	1	1	1	1	0	?	?	?	?	?	?	?	?	0	?	0	?

Taxon	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
Euthycaelus colonicus	1	1	1	0	0	0	0	0	0	0	2	2	1	2	0	0	0	1	1	1	0	2	0	2	2	1	1	0	0	0	0	0	0
Catumiri chicaoi	0	1	1	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	0	2	1	2	1	1	1	0	0	0	0	0	0
Catumiri parvum	0	1	1	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	0	2	1	2	1	1	1	0	0	0	0	0	0
Ischnocolus sp.	0	1	1	0	1	0	0	0	0	0	0	2	1	2	1	0	1	1	1	1	1	2	1	2	2	1	1	0	0	0	0	1	0
Holothele longipes	0	1	1	0	0	0	0	0	0	0	0	2	1	2	1	0	1	1	1	1	0	2	1	2	1	1	1	1	0	0	1	1	1
Reichlingia annae	0	1	1	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	1	2	1	2	1	1	1	1	1	0	1	0	1
Psalistops melanopygius	0	1	1	0	0	0	0	0	0	0	0	3	1	2	1	0	1	1	1	1	0	2	1	1	1	1	1	1	0	0	0	0	0
Psalistops sp. nov. 1	?	1	1	0	?	0	0	0	0	0	0	?	1	2	1	0	1	1	1	1	0	?	?	?	?	?	?	?	?	0	?	0	?
Trichopelma affine	?	1	1	0	?	0	0	0	0	0	2	?	1	2	1	0	1	1	1	1	0	?	?	?	?	?	?	?	?	0	?	1	?
Trichopelma banksia	?	1	1	0	?	0	0	0	0	0	0	?	1	2	1	0	1	1	1	1	0	?	?	?	?	?	?	?	?	0	?	?	?
Trichopelma coenobita	0	1	1	0	0	0	0	0	0	0	0	2	1	2	0	0	0	1	1	1	1	2	0	2	1	1	1	1	0	0	0	1	1
Trichopelma cubanum	0	1	1	0	0	0	0	0	0	?	?	0	1	?	?	?	?	?	?	?	?	2	0	2	1	1	2	1	0	?	0	?	0
Trichopelma fulvus	0	1	1	0	0	0	0	0	0	0	2	3	1	2	1	0	1	1	1	1	0	2	1	1	1	1	1	1	0	0	0	1	1
Trichopelma insulanum	0	1	1	0	0	0	0	0	0	0	2	2	1	2	1	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	1	1
Trichopelma laselva	?	1	1	0	?	0	0	0	0	0	1	?	1	2	0	0	0	1	1	1	0	?	?	?	?	?	?	?	?	0	?	1	?
Trichopelma maculatum	0	1	1	0	0	0	0	0	0	0	0	2	1	2	1	0	1	1	1	1	0	2	1	2	1	1	1	1	0	0	0	1	1
Trichopelma nitidum	0	1	1	0	0	0	0	0	0	?	?	3	1	?	?	?	?	?	?	?	?	1	1	1	1	1	1	1	0	?	1	?	1
Trichopelma steini	?	1	1	0	?	0	0	0	0	0	2	?	1	2	1	0	1	1	1	1	0	?	?	?	?	?	?	?	?	0	?	0	?
Trichopelma sp. nov. 1	0	1	1	0	0	0	0	0	0	0	2	3	1	2	1	0	0	1	1	1	1	1	1	2	1	1	2	1	0	0	0	1	1
Trichopelma sp. nov. 2	?	1	1	0	?	0	0	0	0	0	0	?	1	2	1	0	1	1	1	1	0	?	?	?	?	?	?	?	?	1	?	1	?
Trichopelma sp. nov. 3	0	1	1	0	0	0	0	0	0	?	?	2	1	?	?	?	?	?	?	?	?	1	1	1	1	1	1	1	0	?	0	?	1
Trichopelma sp. nov. 4	?	1	1	0	?	0	0	0	0	0	0	?	1	2	1	0	0	1	1	1	1	?	?	?	?	?	?	?	?	0	?	1	?
Trichopelma sp. nov. 5	0	1	1	0	0	0	0	0	0	0	0	2	1	2	0	1	0	1	1	1	1	2	0	2	1	1	2	1	0	0	1	1	1
Trichopelma sp. nov. 6	0	1	1	0	0	0	0	0	0	?	?	2	1	?	?	?	?	?	?	?	?	2	0	2	1	1	2	1	0	?	1	?	0
Trichopelma sp. nov. 7	?	1	1	0	?	0	0	0	0	0	2	?	1	2	0	1	0	2	1	1	0	?	?	?	?	?	?	?	?	0	?	1	?
Trichopelma sp. nov. 8	?	1	1	0	?	0	0	0	0	0	0	?	1	2	0	0	0	1	1	1	0	?	?	?	?	?	?	?	?	0	?	0	?
Trichopelma sp. nov. 9	0	1	1	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	0	2	1	2	1	1	1	1	0	0	0	1	1
Trichopelma sp. nov. 10	?	1	1	0	?	0	0	0	0	0	0	?	1	2	1	0	1	1	1	1	0	?	?	?	?	?	?	?	?	0	?	1	1
Trichopelma sp. nov. 11	?	1	1	0	?	0	0	0	0	0	0	?	1	2	0	0	0	1	1	1	0	?	?	?	?	?	?	?	?	0	?	1	?

Taxon	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Stenoterommata sp.	0	1	0	1	0	0	2	2	1	2	0	0	-	-	-	-	-	0	1	0	0	0	1	2	1	0	0
Cyphonisia obesa	1	1	0	0	0	0	2	0	0	0	0	0	-	-	-	-	-	0	0	0	1	0	2	2	0	0	0
Idiophthalma sp.	0	1	0	0	0	0	2	2	1	2	0	?	?	?	?	?	?	?	?	0	?	?	?	?	?	?	?
Idiophthalma sp. 2	0	1	0	0	0	0	?	?	?	?	?	3	0	0	1	1	1	0	0	0	1	0	2	2	0	0	0
Sasoninae ge. nov. 1	1	1	0	0	0	0	2	4	0	1	1	?	?	?	?	?	?	?	?	0	?	?	?	?	?	?	?
Neodiplothele fluminensis	1	0	0	0	0	0	2	2	1	3	0	0	-	-	-	-	-	0	1	0	1	0	2	2	0	0	0
Sasoninae gen. nov. 2	0	1	0	0	0	0	2	2	1	3	0	0	-	-	-	-	-	0	1	0	1	0	2	2	0	0	2
Cosmopelma decoratum	1	1	0	0	1	0	2	2	1	3	0	0	-	-	-	-	-	0	1	0	1	0	2	2	0	0	0
Sason robustum	1	1	0	0	1	0	2	0	2	4	0	0	-	-	-	-	-	0	1	0	1	0	2	0	0	0	0
Sickius longibulbi	0	1	1	2	0	0	0	-	-	-	0	3	2	0	0	1	1	0	0	0	2	0	2	2	1	0	1
Melloina santuario	0	1	1	1	0	0	2	0	0	0	0	3	1	0	1	1	1	1	0	0	2	1	2	0	0	0	0
Paratropis sp. 1	1	1	1	2	0	0	2	1	0	1	0	0	-	-	-	-	-	0	0	0	0	0	2	0	0	0	3
Paratropis sp. 2	1	0	1	2	0	0	2	1	0	1	0	0	-	-	-	-	-	0	0	0	0	0	2	0	0	0	3
Guyruita atlantica	0	1	1	1	0	0	2	2	2	5	0	3	1	0	1	1	1	0	0	0	2	0	2	0	0	0	0
Guyruita cerrado	0	1	1	2	0	0	2	2	2	5	0	3	2	0	1	1	0	0	0	0	2	0	2	0	0	0	0
Dolichothele boliviana	0	1	1	1	0	0	2	-	-	-	0	3	0	0	1	0	0	0	0	0	1	0	2	0	0	1	3
Dolichothele exilis	0	1	1	1	0	0	2	-	-	-	0	3	0	0	1	0	0	0	0	0	1	0	3	2	0	0	0
Lasiodora sp.	0	1	1	2	0	0	2	2	0	0	3	3	2	0	1	0	0	0	0	0	1	0	0	0	2	1	0
Coremiocnemis valida	0	1	1	2	0	0	2	2	1	2	2	0	-	-	-	-	-	0	0	0	1	0	3	2	0	0	0
Pelinobius muticus	0	1	1	2	0	0	2	2	1	2	0	0	-	-	-	-	-	0	0	0	1	0	2	2	1	0	4
Haplopelma sp.	0	1	1	2	0	0	1	-	-	-	3	1	0	-	-	-	-	0	0	0	1	0	1	2	0	1	0
Pterinochilus chordatus	0	1	1	2	0	0	2	1	0	1	3	2	1	-	-	-	-	0	0	0	1	0	2	2	0	0	3
Pterinochilus sp.	0	1	1	2	0	0	2	2	0	0	3	2	2	-	-	-	-	0	0	0	1	0	2	2	0	0	2
Tapinauchenius plumipes	0	1	1	3	0	0	2	1	0	1	2	1	1	0	1	-	-	0	0	0	0	0	2	2	0	0	0
Psalmopoeus cambridgei	0	1	1	3	0	0	2	1	1	2	2	1	1	0	1	-	-	0	0	0	0	0	2	1	1	0	3
Avicularia avicularia	0	1	1	2	0	0	2	2	-	-	3	1	1	-	-	-	-	0	0	0	1	0	2	1	0	0	1
Poecilotheria ornata	0	1	1	2	0	0	1	-	-	-	3	0	-	-	-	-	-	0	0	0	1	0	0	2	2	1	5
Stromatopelma sp.	0	1	1	2	0	0	2	2	0	0	0	0	-	-	-	-	-	0	0	0	1	0	2	0	1	0	0
Neoholothele fasciaaurinigra	0	1	1	2	0	0	2	0	0	1	0	3	1	0	1	0	2	0	0	0	1	0	2	2	0	0	0
Schismatothele benedettii	0	1	1	2	0	0	2	-	-	-	3	3	2	0	0	0	0	0	0	0	1	0	0	2	2	1	0
Euthycaelus astutus	0	1	1	1	0	0	2	3	0	0	3	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?

Taxon	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Eudyocoelus colonicus	0	1	1	1	0	0	2	-	-	-	3	3	1	0	1	0	0	0	0	0	1	0	0	0	2	1	0
Catumiri chicaoi	0	1	1	2	0	0	2	0	2	1	0	3	1	1	1	0	0	0	0	0	0	0	3	2	0	0	0
Catumiri parvum	0	1	1	2	0	0	2	0	0	1	0	3	1	1	0	0	0	0	0	0	1	0	3	2	0	0	0
Ischnocolus sp.	0	1	1	1	0	0	2	2	2	5	0	0	-	-	-	-	-	0	0	0	1	0	2	2	0	0	1
Holothele longipes	0	1	1	2	0	0	2	0	1	3	0	3	1	0	1	0	0	0	0	0	1	0	2	2	0	0	2
Reichlingia annae	0	1	1	1	0	1	1	-	-	-	3	3	1	0	1	0	0	0	0	0	1	0	1	2	1	1	3
Psalistops melanopygius	0	1	1	1	0	1	2	1	2	4	0	3	0	1	0	0	0	0	0	0	1	0	2	0	0	0	0
Psalistops sp. nov. 1	0	1	1	1	0	1	2	1	0	0	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma affine	0	1	0	0	0	0	2	1	2	5	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma bankxia	0	1	0	0	0	0	2	1	0	1	0	?	?	?	?	?	?	?	?	0	?	?	?	?	?	?	?
Trichopelma coenobita	0	1	0	0	0	0	2	2	0	1	0	3	0	1	0	0	0	0	0	0	2	0	2	2	0	0	0
Trichopelma cubanum	0	1	0	1	0	0	?	?	?	?	?	3	1	1	0	0	0	0	0	0	2	0	2	1	0	0	0
Trichopelma fulvus	0	1	0	1	0	0	2	1	1	2	1	3	1	1	0	0	0	0	0	0	2	0	2	2	0	0	0
Trichopelma insulanum	0	1	0	1	0	0	2	1	0	1	0	3	1	1	0	0	0	0	0	0	2	0	2	0	0	0	0
Trichopelma laselva	0	1	?	?	?	?	2	2	0	0	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma maculatum	0	1	0	1	0	0	2	0	1	3	0	3	2	0	1	0	0	0	0	0	2	0	2	0	0	0	0
Trichopelma nitidum	0	1	0	1	0	0	?	?	?	?	?	3	2	0	1	0	0	0	0	1	2	0	2	0	0	0	0
Trichopelma steini	0	1	0	0	0	0	2	2	1	2	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma sp. nov. 1	0	1	0	0	0	0	2	0	2	4	1	3	1	0	1	0	0	0	0	0	2	0	2	2	0	0	0
Trichopelma sp. nov. 2	0	1	0	0	0	0	2	1	0	1	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma sp. nov. 3	0	1	0	1	0	0	?	?	?	?	?	3	1	0	1	0	0	0	0	0	2	0	2	2	0	0	0
Trichopelma sp. nov. 4	0	1	0	0	0	0	2	2	0	0	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma sp. nov. 5	0	1	0	1	0	0	1	-	-	-	3	3	1	1	0	0	0	0	0	0	2	0	1	2	1	1	1
Trichopelma sp. nov. 6	0	1	0	1	0	0	?	?	?	?	?	3	1	0	0	0	0	0	0	0	2	0	2	1	0	0	0
Trichopelma sp. nov. 7	1	1	0	0	1	0	2	0	2	4	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma sp. nov. 8	0	1	0	1	0	0	1	-	-	-	3	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma sp. nov. 9	0	1	0	1	0	0	2	1	2	5	0	3	1	1	0	0	0	0	0	0	2	0	2	0	0	0	0
Trichopelma sp. nov. 10	0	1	0	0	0	0	2	2	1	3	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Trichopelma sp. nov. 11	0	1	0	0	0	0	2	2	0	0	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?

List of characters

In this cladistic analysis there was a combination of characters and terminology that were either the same or modified from previous articles, as well as new ones that are hereby proposed. The characters 6-11, 14, 19-22, 27-29, 45-48, 64-68, and 72 are the same as or modified from Raven (1985); the characters 3-5, 15, 16 and 80 are the same as or modified from Fukushima & Bertani (2017); the characters 23, 26, 35 and 39 are the same as or modified from Mori & Bertani (2016); the characters 18, 37 and 38 are the same as or modified from Guadanucci (2014); the character 32 is the same as Goloboff (1993); the remaining characters are either first suggested here or represent a new take on previously used characters.

1) Maxillary cuspules number: minimum value: 3 cuspules; maximum value: 259.
Characters 1 and 2 are herein analyzed as continuous characters (Goloboff *et al.*, 2006). The number of labial and maxillary cuspules seem to indicate real relationships between some taxa, and as such are important to be included in the analysis. Given how TNT cannot perform an analysis with absolute numbers above 65, the absolute values of cuspule numbers were normalized in a scale from 0 to 1, and then added to the program for analysis. The absolute and normalized values are shown in table 1. This approach prevents the creation of artificial and subjective ranges (*i.e.* from 0-10, 11-40, 41-80 etc.) and allows for a more objective incorporation of these characters in the analysis.
2) Labial cuspules number: minimum value: 0 cuspules; maximum value: 367. See character 1.
3) Urticating setae type II: (0) absent; present (1).
4) Urticating setae type III: (0) absent; present (1).
5) Setae on metatarsi and tibiae I-IV, length, males: (0) same length; (1) longer setae projecting laterally.
6) Modified setae encrusted with soil: (0) absent; (1) present.
7) Fovea shape: (0) straight, slightly procurved or slightly recurved; (1) procurved; (2) recurved; (3) very procurved (Fig. 1).
The fovea has been typically described as straight, procurved or recurved. A new state (very procurved) is included to distinguish the fovea from certain Barychelinae genera (*i.e. Idiophthalma*), which displays a very sharp curvature.
8) Tubercle height in females: (0) absent or low; (1) high; (2) very high.

The tubercle height differences are rather difficult to categorize, and so the states here are mostly representative of the extremes. The state (2) corresponds to what Raven (1985) described as 'highly elevated'. In the taxa included here, the male tubercles did not show significant variation, and as such were not included in the analysis.

9) Clypeus: (0) present; (1) absent.

10) Anterior eye row: (0) straight or slightly procurved (Fig. 2); (1) procurved (Fig. 3); (2) strongly procurved (Fig. 4); (3) extremely procurved (Fig. 5).

The terms 'straight' and 'slightly procurved' have been typically used in taxonomical descriptions of eye rows. We merged them in the state (0), given how sometimes it is difficult to discern what 'slightly' means in this character. Additionally, (3) is included to distinguish the state found in certain Barychelinae genera (*i.e. Idiophthalma*), in which the ALE are situated almost in a straight longitudinal line with the AME.

11) Posterior eye row: (0) straight or slightly recurved; (1) recurved; (2) strongly recurved.

12) Abdomen pattern: (0) uniform; (1) mottled; (2) striped (Figs. 21, 40); (3) 18-spot (Fig. 66); (4) converging (see Fig. 4 in Mori & Bertani, 2016).

This character is highly variable among the species. Herein, the above terminology is suggested in order to facilitate the discussion later on. 'Uniform' means no spots or markings of any kind on abdomen; 'mottled' means several spots or markings on abdomen, without forming a specific pattern; 'striped' refers to several horizontal and parallel lines on abdomen, possibly meeting or with a narrow interruption in the midlines, and forming a symmetrical pattern; '18-spot' refers to a pattern of three longitudinal and parallel rows of spots, each row containing 6 spots, forming a symmetrical pattern; 'converging' refers to a pattern of horizontal and parallel stripes, with the anterior stripes having a large gap, which gets progressively narrower towards the end of abdomen.

13) 18-spot pattern: (0) unconnected (Figs. 95, 101); (1) partially connected (Figs. 103, 108); (2) connected (Fig. 89); (4) merged (Fig. 253).

The 18-spot pattern shows variation among the species, which are reflected in this character. 'Unconnected' means that the spots are completely separated from one another; 'partially connected' means that some of the spots are connected to each other via transverse or longitudinal lines; 'connected' means that all the spots are connected via transverse and longitudinal lines; 'merged' means that the transverse and

longitudinal lines also connected to one another, which results in several C-shaped dark spots on abdomen.

14) Rastellum: (0) absent; (1) absent, but with thick setae instead (Figs. 19, 36, 65); (2) present.

15) Scopula on retrolateral face of chelicerae: (0) absent; (1) present.

16) Spiniform setae on lower prolateral face of maxillae: (0) absent; (1) present.

17) Sternum shape: (0) width and length subequal; (1) wider than long; (2) longer than wide.

18) Sigilla position: (0) more than one diameter from sternum margin; (1) less or close to one diameter from sternum margin.

19) Maxillary heel: (0) absent or nearly indistinct (Fig. 305); (1) present.

20) Maxillary heel shape: (0) thick (Fig. 19); (1) thin (Fig. 65).

21) Frontal lobe: (0) absent or nearly indistinct (Fig. 305); (1) present.

22) Frontal lobe length: (0) less than half of maxillae width; (1) approximately half of maxillae width; (2) ¾ or more of maxillae width (Fig. 6).

23) Spiky cuspules on labium or maxillae: (0) absent; (1) present.

24) Maxillary cuspules spread until frontal lobe: (0) absent; (1) present.

25) Maxillary cuspules spread until heel: (0) absent; (1) present.

26) Coxal cuspules: (0) absent; (1) present.

27) Labium shape: (0) quadrate (Fig. 6); (1) trapezoid (Fig. 19, 65); (2) ellipsoid (Fig. 305).

28) Labial cuspules distribution: (0) one row; (1) more than one row.

29) Lyra: (0) absent; (1) present.

30) Abdominal tubercles: (0) absent; (1) present.

31) Book lung combs: (0) absent; (1) present (Fig. 67).

32) Thickened tibia I: (0) absent; (1) present.

33) Spine density on metatarsi III and IV: (0) high; (1) reduced; (2) absent.

This character is determined as follows: 'high' includes multiple apical spines and/or several other concentrated on the distal third; 'reduced' includes one apical spine and/or 1-2 additional spines.

34) Tarsal spines in all legs: (0) absent; (1) present.

35) Symmetrical v2-2-2 pattern of long and curved spines on female palps: (0) absent; (1) present (see Fig. 3 in Mori & Bertani, 2016).

36) Retrolateral megaspine comb on male palp tibia: (0) absent; (1) present.

37) Tarsal clavate tricobothria: (0) absent; (1) present.

38) Tarsal clavate tricobothria spread: (0) concentrated in the middle (Fig. 309); (1) distributed in two lines along tarsus (Fig. 7).

39) Curved long spines on metatarsus I and II: (0) absent; (1) present.

40) Spine club on male tibia I: (0) absent; (1) present (Fig. 8).

41) Spine brush on tibia III: (0) absent; (1) present (Fig. 9).

42) Preening combs on legs I and II: (0) absent; (1) present.

43) Preening combs on legs III: (0) absent; (1) present.

44) Preening combs on legs IV: (0) absent; (1) present.

45) STC on female palp: (0) bare; (1) with one tooth; (2) with several teeth.

46) STC on female legs: (0) bare; (1) with one tooth; (3) with several teeth; (4) with double row of several teeth.

47) STC on male legs: (0) bare; (1) with one tooth; (2) with several teeth; (3) with double row of several teeth.

48) Claw tuft: (0) absent; (1) present.

49) Scopula on palp, legs I and II of females: (0) absent; (1) sparse; (2) dense; (3) spatulate.

50) Scopula shape on tarsus of palp of females: (0) full; (1) parted.

51) Scopula spread on female palp: (0) only in tarsus; (1) on tarsus and tibia.

52) Scopula shape on female tarsi I and II: (0) full; (1) parted.

53) Scopula spread on female legs I and II: (0) on tarsus and part of metatarsus; (1) on tarsus and metatarsus; (2) On tarsus, metatarsus and tibia.

54) Scopula on female legs III and IV: (0) absent; (1) sparse; (2) dense; (3) spatulate.

55) Scopula shape on female legs III and IV: (0) full; (1) parted.

56) Scopula spread on female legs III and IV: (0) on tarsus and part of metatarsus; (1) on tarsus and metatarsus; (2) on tarsus, metatarsus and tibia.

57) Scopula on male legs I and II: (0) absent; (1) sparse; (2) dense; (3) spatulate.

58) Scopula shape on male legs I and II: (0) full; (1) parted.

59) Scopula spread on male legs I and II: (0) on tarsus; (1) on tarsus and part of metatarsus; (1) on tarsus and metatarsus; (2) on tarsus, metatarsus and tibia.

60) Scopula on male legs III and IV: (0) absent; (1) sparse; (2) dense; (3) spatulate.

61) Scopula shape on male legs III and IV: (0) full; (1) parted.

62) Scopula spread on male legs III and IV: (0) on tarsus; (1) on tarsus and part of metatarsus; (2) on tarsus and metatarsus.

63) Metatarsi and tarsi I and II of males discolored: (0) absent; (1) present (Fig. 69). This new character refers to a discoloring in the tarsi and metatarsi I and II of males, which can be seen ventrally. The tarsi and metatarsi are either very pale or a much lighter shade of brown, compared to the other legs, probably due to a weakly chitinized area.

64) Tarsi I and II of males: (0) integral; (1) cracked (Fig. 72).

65) Tarsus III of females: (0) integral; (1) cracked.

66) Tarsus III of males: (0) integral; (1) cracked.

67) Tarsus IV of females: (0) integral; (1) cracked.

68) Tarsus IV of males: (0) integral; (1) cracked.

69) Leg color: (0) uniform; (1) banded (Fig. 240, 241).

70) PMS: (0) absent; (1) present.

71) PLS article size: (0) all articles clearly different in size (Fig. 64); (1) two or more articles subequal in size (Fig. 37).

72) Apical article of PLS shape: (0) domed (Fig. 92); (1) triangular (Fig. 20); (2) digitiform (Fig. 55).

73) Bands in apical PLS article: (0) absent; (1) present.

74) Incrassate spinnerets: (0) absent; (1) present (Fig. 20, 37, 46).

75) Spermathecae: (0) absent; (1) one (Fig. 231); (2) two (Figs. 27-30).

76) Spermathecae main stalk: (0) thin (Fig. 181); (1) thick tapering (Figs. 27-30); (2) thick (Fig. 173); (3) folded (Fig. 301); (4) coiled (Fig. 307).

'Main stalk' refers to the portion of the spermathecae that branches off from the basis of each spermathecae in a specimen. Therefore, this structure is not present on the spermathecae that are merged into one.

77) Spermathecae main stalk branching: (0) absent (Fig. 78); (1) two branches (Fig. 94); (2) several branches (Fig. 100).

78) Spermathecae receptacle shape: (0) no constriction (Fig. 173); (1) one rounded receptacle (Fig. 78); (2) two subequal rounded receptacles (Fig. 94); (3) two distinct rounded receptacles (Fig. 110, 111); (4) more than two rounded receptacles branching only from the tip of the main stalk (Figs. 27-30); (5) more than two rounded receptacles branching laterally throughout the main stalk (Fig. 100).

Certain distinctions to the different shapes of receptacles at the end of the main stalk are necessary. 'No constriction' refers to the receptacle that does not form a definied shape

and are contiguous to the main stalk; in contrast, the 'rounded receptacles' have a neck-like constriction separating them from the rest of the main stalk.

79) Spermathecae color: (0) uniformly slightly chitinized, pale (Figs. 27-30); (1) stalk heavily chitinized, dark (Fig. 181); (2) receptacle heavily chitinized, dark (Fig. 10); (3) all spermathecae heavily chitinized, uniformly dark (Fig. 301).

80) Spur: (0) absent; (1) single thin; (2) single thick; (3) double.

In this character, 'single' refers to spur that bears only the apophysis, whereas 'double' include the apophysis and an associated cuticular projection to it.

81) Apophysis placement: (0) prolateral; (1) proventral; (2) ventral.

82) Apophysis distance from cuticular projection: (0) close (Fig. 60); (1) far (Fig. 34).

83) Apophysis alignment with cuticular projection: (0) straight (Fig. 34); (1) diagonal (Fig. 60).

84) Apophysis and cuticular projection direction: (0) convergent (Fig. 34); (1) straight (see Fig. 5 in Bertani & da Silva, 2002).

85) Apophysis shape: (0) curved; (1) straight; (2) flat.

86) Apophysis on metatarsus: (0) absent; (1) present.

87) Megaspine in tibia I: (0) absent; (1) present.

88) Metatarsus bulge: (0) absent; (1) present (Fig. 71).

This new character refers to a slight bulge present on the metatarsus, seemingly in the same position of the apophysis on the tibia. No spine is attached to it.

89) Cymbium: (0) entire; (1) forked (Fig. 41); (2) strongly forked (Fig. 59).

The cymbium of some specimens may display a 'fork' on its surface, which is positioned close to the insertion of the bulb. The state 'forked' means that the length of the fork is under half the length of the cymbium, whereas 'strongly forked' means that it is either half or above half the length of the cymbium.

90) Spines on cymbium: (0) absent; (1) present.

91) Embolus length: (0) very short (see Figs 4 and 5 in Panzera *et al.*, 2011); (1) short (Figs 227 and 228); (2) long (Figs 61 and 62); (3) very long (see Figs 7 and 8 in Guadanucci, 2004).

Herein, 'very short' refers to an embolus that barely extends from the bulb; 'short' refers to an embolus that is shorter or close to the length of the tegulum; 'long' refers to any measure between 'short' and 'very long'; 'very long refers to an embolus that is close to or above 2 times the length of the tegulum.

92) Embolus curve: (0) straight or slightly curved (Figs 61 and 62); (1) curved at the tip (Figs 237 and 238); (2) curved (Figs 38 and 39).

93) Embolus thickness: (0) thin (Figs 38 and 39); (1) thick (Figs 227 and 228); (2) very thick (see Figs. 4 and 5 in Panzera *et al.*, 2011).

94) Keels: (0) absent (Figs. 38 and 39); (1) present (Figs. 227 and 228).

95) Embolus twist: (0) absent (Figs 38 and 39); (1) twisted at base (Figs 227 and 228); (2) twisted medially (see Figs. 1B-D in Guadanucci *et al.*, 2017); (3) twisted near tip (see Figs 1 and 2 in Reichling, 1997); (4) twisted at base and tip (see Figs 44-47 in Gallon, 2010); (5) corkscrew twist (see Fig. 800 in Schmidt, 2003).

TABLE 2. Absolute and normalized values of cuspules in maxillae and labium.

Taxon	**Maxillary cuspules**		**Labial cuspules**	
	Absolute	**Normalized**	**Absolute**	**Normalized**
Avicularia avicularia	148	0.566	101	0.275
Idiophthalma sp. 2	4	0.004	0	0.000
Coremiocnemis valida	236	0.910	312	0.850
Catumiri chicaoi	29	0.102	0	0.000
Catumiri parvum	32	0.113	0	0.000
Cosmopelma decoratum	30	0.105	0	0.000
Cyphonisia obesa	6	0.012	2	0.005
Dolichothele bolivianum	20	0.066	3	0.008
Dolichothele exilis	14	0.043	6	0.016
Euthycaelus astutus	153	0.586	195	0.531
Euthycaelus colonicus	229	0.883	257	0.700
Haplopelma minax	130	0.496	101	0.275
Guyruita atlantica	92	0.348	180	0.490
Guyruita cerrado	213	0.820	367	1.000
Holothele sp.	219	0.844	167	0.455
Idiophthalma sp.	4	0.004	0	0.000
Ischnocolus sp.	105	0.398	36	0.098
Lasiodora sp.	259	1.000	147	0.401
Melloina santuario	72	0.270	81	0.221
Neodiplothele sp.	3	0.000	0	0.000
Neoholothele fasciaaurinigra	223	0.859	271	0.738

Paratropis sp. 1	51	0.188	60	0.163
Paratropis sp. 2	48	0.176	57	0.155
Pelinobius muticus	202	0.777	331	0.902
Poecilotheria ornata	197	0.758	325	0.886
Psalistops melanopygius	82	0.309	29	0.079
Psalistops sp. nov. 1	60	0.223	18	0.049
Psalmopoeus sp.	217	0.836	152	0.414
Pterinochilus chordatus	214	0.824	33	0.090
Pterinochilus sp.	242	0.934	36	0.098
Reichlingia annae	88	0.332	77	0.210
Sason robustum	5	0.008	8	0.022
Sasoninae gen. nov. 1	4	0.004	0	0.000
Sasoninae gen. nov. 2	5	0.008	0	0.000
Schismatothele benedettii	96	0.363	277	0.755
Sickius longibulbi	139	0.531	127	0.346
Stenoterommata sp.	147	0.563	4	0.011
Stromatopelma calceatum	100	0.379	52	0.142
Tapinauchenius plumipes	147	0.563	121	0.330
Trichopelma affine	91	0.344	47	0.128
Trichopelma banksia	66	0.246	27	0.074
Trichopelma coenobita	43	0.156	22	0.060
Trichopelma cubanum	97	0.367	37	0.101
Trichopelma fulvus	53	0.195	24	0.065
Trichopelma insulanum	89	0.336	35	0.095
Trichopelma laselva	97	0.367	44	0.120
Trichopelma maculatum	101	0.383	46	0.125
Trichopelma nitidum	70	0.262	51	0.139
Trichopelma sp. nov. 1	115	0.438	44	0.120
Trichopelma sp. nov. 2	84	0.316	32	0.087
Trichopelma sp. nov. 3	62	0.230	45	0.123
Trichopelma sp. nov. 4	76	0.285	23	0.063
Trichopelma sp. nov. 5	140	0.535	33	0.090
Trichopelma sp. nov. 6	46	0.168	15	0.041

Trichopelma sp. nov. 7	60	0.223	15	0.041
Trichopelma sp. nov. 8	94	0.355	38	0.104
Trichopelma sp. nov. 9	78	0.293	23	0.063
Trichopelma sp. nov. 10	70	0.262	48	0.131
Trichopelma sp. nov. 11	119	0.453	74	0.202
Trichopelma steini	54	0.199	16	0.044

FIGURES 1–10. Characters used in analysis. **1,** *Idiophthalma* sp. 1, very procurved fovea. **2,** *T.* sp. nov. 11, straight anterior eye row. **3,** *T. nitidum*, procurved anterior eye row. **4,** *T.* sp. nov. 7, strongly procurved anterior eye row. **5,** *Idiophthalma* sp. 1, extremely procurved anterior eye row. **6,** *Paratropis* sp. 1, quadrate labium and strongly produced frontal lobe. **7,** *P. melanopygius*, tarsal clavate tricobothria. **8,** *Ischnocolus* sp., spine club on tibia I. **9,** *Idiophthalma* sp. 1, spine brush on tibia III. **10,** *Tapinauchenius plumipes*, spermathecae with chitinized receptacles.

Results

Tab. 3 shows the length of the obtained cladograms and fit values for concavities 1 to 6. The cladogram from concavities 4, 5 and 6 was chosen over the others because it shows a shorter length (488.894) with overall higher fit values.

TABLE 3. Tree lengths and fit values for different values of "k".

"k" value	Fit	Tree length
1	37.65	491.531
2	45.01	488.691
3	49.87	487.894
4	**53.45**	**486.894**
5	**56.25**	**486.894**
6	**58.52**	**486.894**

Fig. 11 shows the cladogram obtained with k=1; Fig. 12 with k=2; Fig. 13 with k=3; and Fig. 14 with concavities from 4 to 6. They differ by the position of *Sickius longibulbis*, *Ischnocolus sp.*, *Catumiri* and *Holothele longipes*.

With K=1 the species *Sickius longibulbis* is included in Theraphosidae, being the basal group after *Guyruita atlantica*. *Ischnocolus* forms a monophyletic group with *Catumiri*, and both are a sister group to most Schismatothelinae + Trichopelmatinae; *Holothele longipes* stands as a sister group to all these other together. Moreover, K=1 differs also on the position of *T. maculatum*, which is the basal group in *Trichopelma*. All the other cladograms show a trichotomy at the basis of *Trichopelma*, which includes *T. maculatum* and two other monophyletic groups within the genus.

With K=2 *S. longibulbis* is the basal group in Theraphosidae, followed by *Guyruita atlantica*. Additionally, *Ischnocolus* does not form a monophyletic group with *Catumiri*, being the sister group of *Catumiri* + most Schismatothelinae + Trichopelmatinae.

With K=3 the species *Sickius longibulbis* is not grouped with the other Theraphosidae, becoming instead a sister group to the Theraphosidae + Paratropididae.

Finally, in the preferred cladogram with K=4, 5 and 6, *Holothele longipes* is the sister group of Trichopelmatinae; *Catumiri* is the sister group of *Ischnocolus* + *Holothele*

longipes + Trichopelmatinae; and most Schismatothelinae form a sister group with all these other mentioned groups. Tab. 4 shows the synapomorphies of the preferred cladogram.

FIGURE 11. Cladogram obtained for k=1.

FIGURE 12. Cladogram obtained for k=2.

FIGURE 13. Cladogram obtained for k=3.

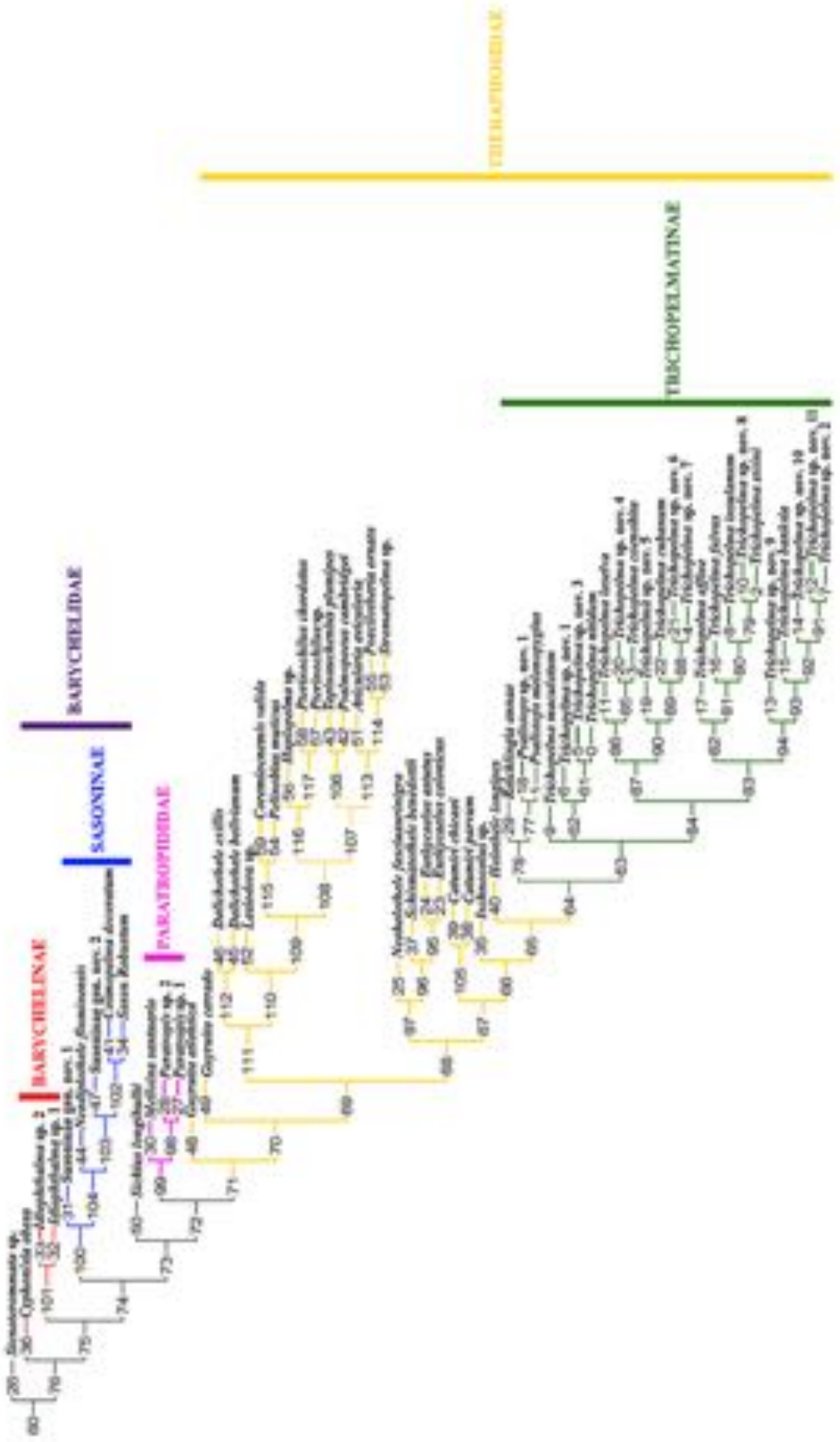


FIGURE 14. Cladogram obtained for k=4, 5 and 6.

TABLE 4. Synapomorphies and values for Bremer support for cladogram of Fig. 14.

Taxa or Node	Character	Change	Absolute	Relative
T. nitidum	2	0.123 --> 0.139		
	7	0 --> 2		
	31	0 --> 1		
	66	0 -->1		
	81	0 --> 2		
	88	0 --> 1		
	92	2 --> 0		
P. melanopygius		No autapomorphies		
T. steini	1	0.336 --> 0.199		
	2	0.090-0.095 --> 0.044		
	72	1 --> 0		
T. coenobita	1	0.285 --> 0.156		
	2	0.063 --> 0.060		
	79	0 --> 1		
T. sp. nov. 7	69	0 --> 1		
	72	1 --> 0		
	73	0 --> 1		
T. sp. nov. 3	1	0.262 --> 0.230		
T. sp. nov. 1	1	0.367-0.383 --> 0.438		
	62	1 --> 2		
	72	1 --> 0		
T. sp. nov. 2	65	0 --> 1		
T. insulanum	77	1 --> 0		
	78	2 --> 1		
T. maculatum	2	0.120-0.123 --> 0.125		
	10	1 --> 2		
	77	2 --> 1		
	78	4 --> 3		
	81	1 --> 2		
	92	2 --> 0		
T. sp. nov. 8	1	0.336 --> 0.355		
	2	0.090-0.095 --> 0.104		
	31	1 --> 0		
	46	2 --> 0		
	50	1 --> 0		
	52	1 --> 0		
	75	2 --> 1		
	79	0 --> 3		
T. laselva	2	0.090-0.095 --> 0.120		
	46	0 --> 1		
T. sp. nov. 11	1	0.316 --> 0.453		
	2	0.087-0.131 --> 0.202		
	10	1 --> 0		
	50	1 --> 0		
	52	1 --> 0		
	78	1 --> 0		
T. sp. nov. 9	2	0.074-0.095 --> 0.063		
T. sp. nov. 10	77	0 --> 1		
	78	1 --> 3		
T. banksia	1	0.262-0.293 --> 0.246		
	7	0 --> 2		
T. fulva	1	0.336 --> 0.195		
	2	0.090-0.095 --> 0.065		
	10	1 --> 2		
	47	2 --> 3		
	79	0 --> 1		
T. affine	2	0.090-0.095 --> 0.128		
	11	1 --> 2		
	13	1 --> 0		
	72	1 --> 0		
P. sp. nov. 1	1	0.309 --> 0.535		

Taxa or Node	Character	Change	Absolute	Relative
	2	0.079 --> 0.049		
	77	2 --> 0		
	78	4 --> 0		
T. sp. nov. 5	1	0.367 --> 0.535		
	56	0 --> 1		
	75	2 --> 1		
	79	0 --> 3		
	91	2 --> 1		
	93	0 --> 1		
	94	0 --> 1		
	95	0 --> 1		
T. sp. nov. 4	11	1 --> 2		
	50	0 --> 1		
T. sp. nov. 6	1	0.223 --> 0.168		
T. cubanum	2	0.090-0.095 --> 0.101		
	47	2 --> 0		
E. colonicus	1	0.586 --> 0.883		
	52	1 --> 0		
E. astutus	2	0.700 --> 0.531		
N. fasciaaurinigra	1	0.367-0.586 --> 0.859		
	52	1 --> 0		
	85	0 --> 2		
Stenoterommata sp.		No autapomorphies		
Paratropis sp. 1	70	1 --> 0		
Paratropis sp. 2		No autapomorphies		
R. annae	2	0.120-0.123 --> 0.210		
	7	0 --> 1		
	11	1 --> 2		
	56	0 --> 1		
	64	0 --> 1		
	66	0 --> 1		
	75	2 --> 1		
	79	0 --> 3		
	91	2 --> 1		
	93	0 --> 1		
	94	0 --> 1		
	95	0 --> 3		
M. santuario	10	0 --> 1		
	63	0 --> 1		
	66	0 --> 1		
	67	0 --> 1		
	68	0 --> 1		
	72	2 --> 1		
	78	1 --> 0		
	86	0 --> 1		
	90	0 --> 1		
Sasoninae gen. nov. 1	56	0 --> 1		
	76	2 --> 4		
	79	0 --> 1		
Idiophthalma sp. 1	41	0 --> 1		
	42	0 --> 1		
	43	0 --> 1		
Idiophthalma sp. 2		No autapomorphies		
S. robustum	2	0.000 --> 0.022		
	7	0 --> 2		
	9	0 --> 1		
	10	0 --> 2		
	39	1 --> 0		
	47	0 --> 1		
	76	2 --> 0		
	77	1 --> 2		

Taxa or Node	Character	Change	Absolute	Relative
	78	3 --> 4		
	92	2 --> 0		
Ischnocolus sp.	19	1 --> 0		
	40	0 --> 1		
	56	0 --> 1		
	60	1 --> 2		
	72	2 --> 1		
	80	3 --> 0		
	95	0 --> 1		
C. obesa	10	0 --> 2		
	11	1 --> 0		
	57	2 --> 1		
	69	0 --> 1		
	76	2 --> 0		
	78	2 --> 0		
S. benedettii	1	0.367-0.586 --> 0.363		
	2	0.700-0.738 --> 0.755		
	47	2 --> 0		
	59	2 --> 1		
	68	0 --> 1		
	81	1 --> 2		
	83	1 --> 0		
C. parvum	77	2 --> 0		
	83	1 --> 0		
C. chicaoi	89	1 --> 0		
H. longipes	1	0.398-0.777 --> 0.844		
	9	0 --> 1		
	63	0 --> 1		
	66	0 --> 1		
	68	0 --> 1		
	77	2 --> 1		
	78	5 --> 3		
	95	0 --> 2		
C. decoratum	1	0.008 --> 0.105		
	25	0 --> 1		
	26	0 --> 1		
	56	0 --> 1		
P. cambridgei	1	0.566-0.777 --> 0.836		
	2	0.330 --> 0.414		
	29	0 --> 1		
	77	0 --> 1		
	92	2 --> 1		
	93	0 --> 1		
	94	0 --> 3		
T. plumipes	1	0.566-0.777 --> 0.563		
	62	1 --> 0		
N. fluminensis	1	0.004-0.008 --> 0.000		
	10	0 --> 1		
	14	0 --> 2		
	56	0 --> 2		
	57	2 --> 1		
	59	2 --> 1		
	60	1 --> 0		
D. bolivianum	2	0.016 --> 0.008		
	28	1 --> 0		
	94	0 --> 1		
	95	0 --> 3		
D. exillis	1	0.0066 --> 0.043		
	91	2 --> 3		
Sasoninae gen. nov. 2	7	0 --> 1		
	11	1 --> 0		

Taxa or Node	Character	Change	Absolute	Relative
	19	0 --> 1		
	37	1 --> 0		
	47	0 --> 2		
	69	1 --> 0		
	95	0 --> 2		
G. atlantica	72	2 --> 1		
G. cerrado	1	0.398-0.777 --> 0.820		
	2	0.401-0.490 --> 1.000		
	12	0 --> 2		
	81	1 --> 2		
S. longibulbi	1	0.270-0.348 --> 0.531		
	10	0 --> 1		
	75	2 --> 0		
	83	1 --> 0		
	93	0 --> 1		
	95	0 --> 1		
A. avicularia	3	0 --> 1		
	92	2 --> 1		
	95	0 --> 1		
Lasiodora sp.	1	0.5666-0.777 --> 1.000		
	4	0 --> 1		
	81	1 --> 2		
	91	2 --> 0		
	93	0 --> 2		
	94	0 --> 1		
Stromatopelma sp.	1	0.566-0.758 --> 0.379		
	2	0.275-0.330 --> 0.142		
	10	1 --> 0		
	19	1 --> 0		
	47	0 --> 2		
	79	3 --> 0		
	92	2 --> 0		
P. muticus	2	0.850 --> 0.902		
	57	2 --> 3		
	93	0 --> 1		
	95	0 --> 4		
P. ornata	2	0.275-0.330 --> 0.886		
	9	1 --> 0		
	12	0 --> 2		
	16	0 --> 1		
	29	0 --> 1		
	55	0 --> 2		
	75	2 --> 1		
	91	2 --> 0		
	94	0 --> 1		
	95	0 --> 5		
Haplopelma sp.	1	0.566-0.777 --> 0.496		
	16	0 --> 1		
	18	1 --> 0		
	55	0 --> 2		
	75	2 --> 1		
	81	1 --> 0		
	91	2 --> 1		
	94	0 --> 1		
Pterinochilus sp.	1	0.824 --> 0.934		
	81	1 --> 2		
P. chordatus	2	0.098 --> 0.090		
	76	2 --> 1		
	78	0 --> 1		
C. valida	1	0.777 --> 0.910		
	10	1 --> 0		

Taxa or Node	Character	Change	Absolute	Relative
	56	0 --> 1		
	91	2 --> 3		
Node 61	1	0.367-0.383 --> 0.262	0.04	99
	20	0 --> 1		
	59	2 --> 1		
Node 62	57	2 --> 1	0.04	98
Node 63	12	2 --> 3	0.12	35
	67	0 --> 1		
	71	1 --> 0		
	89	1 --> 2		
Node 64	14	0 --> 1	0.19	98
	63	0 --> 1		
	72	2 --> 1		
	78	1 --> 4		
Node 65	9	0 --> 1	0.19	98
Node 66	78	5 --> 1	0.16	60
Node 67	2	0.401-0.455 --> 0.098-0.123	0.19	98
	22	1 --> 0		
Node 68	47	0 --> 2	0.19	98
	50	0 --> 1		
	52	0 --> 1		
Node 69	84	1 --> 0	0.19	98
	89	2 --> 1		
Node 70	1	0.348 --> 0.398-0.777	0.19	98
	85	1 --> 0		
Node 71	2	0.221-0.346 --> 0.401-0.490	0.19	98
	9	1 --> 0		
	78	1 --> 5		
Node 72	92	2 --> 0	0.19	98
Node 73	1	0.004-0.012 --> 0.270-0.348	0.4	68
	2	0.000-0.005 --> 0.221-0.346		
	11	1 --> 0		
	21	0 --> 1		
	28	0 --> 1		
	71	0 --> 1		
	72	0 --> 2		
	89	1 --> 2		
Node 74	14	1 --> 0	0.54	100
	37	0 --> 1		
	63	1 --> 0		
	78	2 --> 1		
Node 75	45	2 --> 0	0.82	89
Node 76		No synapomorphies	1.12?	100?
Node 77	1	0.332 --> 0.309	0	100
	2	0.120-0.123 --> 0.079		
Node 78	1	0.367-0.383 --> 0.332	0.12	35
	74	0 --> 1		
Node 79	67	0 --> 1	0.04	100
Node 80	13	1 --> 2	0.02	99
Node 81	77	2 --> 1	0.02	99
	78	5 --> 2		
Node 82	46	0 --> 2	0.01	43
Node 83	1	0.367 --> 0.336-0.344		
	76	0 --> 1		
	78	4 --> 5		
Node 84	2	0.120-0.123 --> 0.090-0.095	0.04	98
	31	0 --> 1		
	82	0 --> 1		
	83	1 --> 0		
Node 85	1	0.367 --> 0.285	0.03	100
	2	0.090-0.095 --> 0.063		

Taxa or Node	Character	Change	Absolute	Relative
	56	0 --> 1		
Node 86	76	0 --> 2	0.03	99
	77	2 --> 0		
	78	4 --> 0		
Node 87	50	1 --> 0	0.06	63
	52	1 --> 0		
	58	1 --> 0		
Node 88	1	0.367 --> 0.223	0.06	100
	2	0.090-0.095 --> 0.041		
	31	1 --> 0		
Node 89	10	1 --> 2	0.03	34
	68	1 --> 0		
	92	2 --> 1		
Node 90	51	0 --> 1	0.09	58
	62	1 --> 2		
Node 91	1	0.262-0.293 --> 0.316	0.03	60
	31	1 --> 0		
Node 92	20	0 --> 1	0.04	98
Node 93	72	1 --> 0	0.03	60
	77	2 --> 0		
Node 94	1	0.336-0.344 --> 0.293	0.01	43
	13	1 --> 3		
Node 95	11	1 --> 2	0.37	67
	12	2 --> 0		
	18	1 --> 0		
	72	2 --> 1		
Node 96	36	0 --> 1	0.24	54
	79	0 --> 3		
	91	2 --> 0		
	93	0 --> 2		
	94	0 --> 1		
Node 97	2	0.120-0.123 --> 0.700-0.738	0.24	54
	77	2 --> 0		
Node 98	1	0.270 --> 0.188	0.69	100
	2	0.221 --> 0.163		
	6	0 --> 1		
	7	0 --> 2		
	8	1 --> 2		
	11	0 --> 2		
	17	0 --> 1		
	19	1 --> 0		
	22	1 --> 2		
	24	0 --> 1		
	27	1 --> 0		
	30	0 --> 1		
	32	0 --> 1		
	37	1 --> 0		
	45	0 --> 1		
	48	1 --> 0		
	69	0 --> 1		
	80	3 --> 0		
	89	2 --> 0		
	95	0 --> 3		
Node 99	34	0 --> 1	0.68	95
	49	2 --> 0		
	54	1 --> 0		
	60	1 --> 0		
Node 100	9	1 --> 0	0.72	100
	19	1 --> 0		
	39	0 --> 1		
	51	0 --> 1		

Taxa or Node	Character	Change	Absolute	Relative
	53	1 --> 2		
	69	0 --> 1		
Node 101	9	1 --> 0	0.69	100
	19	1 --> 0		
	39	0 --> 1		
	51	0 --> 1		
	53	1 --> 2		
	69	0 --> 1		
Node 102	8	1 --> 0	0.82	100
	23	0 --> 1		
	59	2 --> 3		
	73	0 --> 1		
Node 103	58	1 --> 0	0.72	68
Node 104	35	0 --> 1	0.72	68
	78	1 --> 3		
Node 105	1	0.367-0.398 --> 0.113	0.27	100
	2	0.098-0.123 --> 0.000		
	27	1 --> 2		
	47	2 --> 0		
	82	0 --> 1		
	91	2 --> 3		
Node 106	5	0 --> 1	0.69	100
	10	1 --> 0		
	12	0 --> 2		
	47	0 --> 2		
	50	0 --> 1		
	56	0 --> 1		
	72	2 --> 3		
	76	2 --> 1		
	79	3 --> 2		
	89	1 --> 0		
Node 107	49	2 --> 3	0.74	73
	54	2 --> 3		
	57	2 --> 3		
	60	2 --> 3		
Node 108	2	0.401 --> 0.275-0.330	0.26	100
Node 109	33	0 --> 1	0.65	76
Node 110	54	1 --> 0	0.51	72
Node 111	10	0 --> 1	0.44	69
	54	1 --> 2		
	58	1 --> 0		
	60	1 --> 2		
	61	1 --> 0		
Node 112	1	0.398-0.777 --> 0.066	0.53	76
	2	0.401 --> 0.016		
	27	1 --> 2		
	72	2 --> 1		
	81	1 --> 0		
Node 113	33	1 --> 2	0.74	73
Node 114	80	1 --> 0	0.74	73
Node 115	2	0.401 --> 0.850	0.81	80
	7	0 --> 1		
	18	1 --> 0		
	62	1 --> 2		
	77	0 --> 1		
	78	0 --> 2		
Node 116	15	0 --> 1	0.75	74
Node 117	1	0.566-0.777 --> 0.824	0.88	81
	2	0.275 --> 0.098		
	10	1 --> 2		
	19	1 --> 0		
	80	1 --> 2		

Taxonomy

Trichopelmatinae Raven, 1985

Trichopelmatinae Raven, 1985: 115; Goloboff, 1993: 7; Guadanucci, 2014: 509.

Diagnosis. This subfamily is diagnosed by the presence of thick setae on the distal edge of the chelicerae (Fig. 19), metatarsi and tarsi I of males discolored (Fig. 71), and apical article of PLS triangular or domed (Figs. 20 and 92).
Composition: *Trichopelma* Simon, 1888; *Psalistops* Simon, 1889; *Reichlingia* Rudloff, 2001.

Taxonomic key for Trichopelmatinae

1) Spinnerets thin.....*Trichopelma*
Spinnerets incrassate.....2
2) All tarsi integral…….……*Psalistops*
Tarsi IV cracked……...…….……*Reichlingia*

Psalistops Simon, 1889

Psalistops Simon, 1889: 196; 1892: 127; Petrunkevitch 1911: 85; Mello-Leitão, 1923: 121; Petrunkevitch, 1928: 76; Roewer 1942: 222; Raven, 1985: 115; Valerio 1986: 95; Wunderlich, 1988: 50; Goloboff, 1995: 27; Marechal, 1996: 590; World Spider Catalog, 2018.
Epipedesis Simon, 1889: 203; 1892: 128; Petrunkevitch, 1911: 61; 1928: 75; Roewer, 1942: 220; Raven, 1985: 152. First synonymized by Raven (1985).

Type species. *Psalistops melanopygius* Simon, 1889.
Diagnosis. Males and females of *Psalistops* differ from those of the other theraphosid genera except *Reichlingia* by the incrassate spinnerets; and from *Reichlingia* by having less than 35 labial cuspules, STC on males with two rows of teeth, tarsi I, II and III integral, and presence of two spermathecae.

Description. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved. Clypeus absent. Eight eyes arranged on tubercle. Anterior eye row procurved, posterior row recurved. Chelicerae: sparse patch of setae on retrolateral and dorsal sides. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thick setae instead. Labium: trapezoid, with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, with 18-34 cuspules. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 60-84 cuspules on upper mound in inner angle. Heel distinct, thick. Anterior lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: Fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of setae. Book lungs semi-circular, with elliptical aperture. Book lung combs absent.

Legs: formula IV-I-II-III. Preening combs absent. Clavate tricobothria in two rows, not concentrated medially. Claws: ITC absent. STC bare on all legs in females and bearing two rows of few teeth on males; 1 bare claw on female palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. All tarsi integral. Tibial apophysis prolateral and curved, with small curved cuticular projection, aligned in straight row with the apophysis and positioned far from it. .

Male palp: bulb rounded and thick with duct tapering. Embolus long, straight, with slightly curved apical portion. Keels absent. Cymbium rounded, slightly forked prolaterally. Spermathecae: two, each with a thick tapering stalk. Spinnerets: PMS small. Apical segment of PLS triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern striped; ventrally pale.

Distribution. Venezuela and Colombia.

Key for species of *Psalistops*

(Male of *Psalistops* sp. nov. 1 is unknown)

Spermathecae with several rounded receptacles……...……..*Psalistops melanopygius*

Spermathecae with a single receptacle.……..……..*Psalistops* sp. nov. 1

***Psalistops melanopygius* Simon, 1889**

(Figs 15-42, 311)

Psalistops melanopygia Simon, 1889: 196; 1892: 127; Petrunkevitch, 1911: 85; 1928: 76; 1939: 301.

Psalistops melanopygius; Roewer, 1942: 222; Valerio, 1986: 95; Marechal, 1996: 590; World Spider Catalog 2018.

Psalistops zonatus Simon, 1889: 197; Petrunkevitch, 1911: 85; Roewer, 1942: 223; Valerio, 1986: 94; World Spider Catalog 2018. **Syn. nov.**

Psalistops tigrinus Simon, 1889: 198; Petrunkevitch, 1911; 85; Roewer, 1942: 223; World Spider Catalog, 2018. **Syn. nov.**

Epipedesis montigena Simon, 1889: 203; 1892: 128; Petrunkevitch, 1911: 61; 1928: 75; Roewer, 1942: 220. **Syn. nov.**

Psalistops montigena; World Spider Catalog, 2018.

Diagnosis. Differs from *Psalistops* sp. nov. 1 by the presence of several receptacles in the spermathecae.

Type material. A lectotype female and three paralectotype females of *P. melanopygius*, here designated, from Venezuela, Caracas [10°30'N, 66°54' W], Simon col., MNHN AR146439. 1 lectotype male, 4 paralectoypes females and 1 immature, here designated, of *P. zonatus*, Venezuela, Tovar Colony [10°38'N, 67°30' W], Simon col., MNHN 9856/100-01. 11 paralectotypes females, 1 paralectotype male, here designated, of *P. zonatus*, Venezuela, Tovar Colony [10°38'N, 67°30' W], Simon col., MNHN 100-02. 1 lectotype female and 4 paralectotype females of *Psalistops tigrinus,* Venezuela, Valencia, San Esteban [10°39'N, 67°96' W], Simon col., MNHN 9881. 1 female, holotype of *Epipedesis montigena,* Venezuela, Valencia, San Esteban [10°39'N, 67°96' W], Simon col., MNHN 9877. All type material examined.

Other material examined. None.

Description. Female MNHN 9856/100-01 (Figs 15-20, 27). Carapace 7.52 long, 6.19 wide. Abdomen 10.35 long, 6.55 wide. Total length 17.87. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved, 1.1 mm

wide. Clypeus absent. Eight eyes arranged on tubercle 0.59 high, 1.0 wide, 1.25 long. MOQ 1.29 wide, 0.66 long. Anterior eye row procurved, posterior row recurved. AME 0.34, ALE 0.26, PME 0.14, PLE 0.29. Eye interspaces: AME-AME 0.44, AME-ALE 0.33, ALE-ALE 1.08, PME-PLE 0.18, PME-PME 0.77, ALE-PLE 0.46, PLE-PLE 1.15. Chelicerae: 4.02 long, sparse patch of setae on retrolateral and dorsal sides, with 8 large teeth and numerous tiny. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thick setae instead. Labium: trapezoid, 0.95 long, 1.07 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 26 cuspules rounded, on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 2.15 long in front, 2.9 long behind, 1.59 wide, with ca. 66 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 4.14 long, 3.76 wide. Fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of setae. Book lungs semi-circular, with elliptical aperture. Book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa d0-0-1, ti p1-0-1 v2-2-2ap, me p0-1-0 v1-0-1ap, ta 0; leg II: fe d0-0-1, pa d0-1-1, ti d1-1-1 v1-1-3ap, me p0-1-0 v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-1-1, ti p1-1-0 r0-1-1 v2-1-4ap, me p1-1-1(ap) d0-3-2ap v1-1-2ap, ta 0; leg IV fe d0-0-1, pa 0, ti p1-1-0 r1-0-1 v2-1-4ap, me p1-1-1 d0-1-2 v2-2-3(2ap), ta 0; palp: fe d0-0-1, pa 0, ti p1-0-1ap v0-2-4ap, ta 0. Preening combs absent. Clavate tricobothria in two rows, not concentrated medially: 10 in tarsus I; 10 in tarsus IV; 11 in tarsus III; 8 in tarsus IV; 10 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and anterior half of metatarsus; legs III and IV: parted and sparse in tarsus and anterior third of metatarsus; palp: parted and dense on tarsus. All tarsi integral.

Spermathecae: two, each with a thick tapering stalk, and several rounded receptacles branching from each tip of the stalk.

Spinnerets: Incrassate. PMS small, 0.87 long, 0.5 wide, 0.47 apart. Basal, middle, and apical segments of PLS, 1.28 long, 1.06 wide; 0.82 long, 0.94 wide; 0.61 long, 0.75 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, symmetrical, with 5 stripes extending on lateral sides, each stripe connected to spots at the termination near the midline; ventrally pale.

TABLE 5. *Psalistops melanopygius*. Female, MNHN 9856/100-01. Leg measurements, left side.

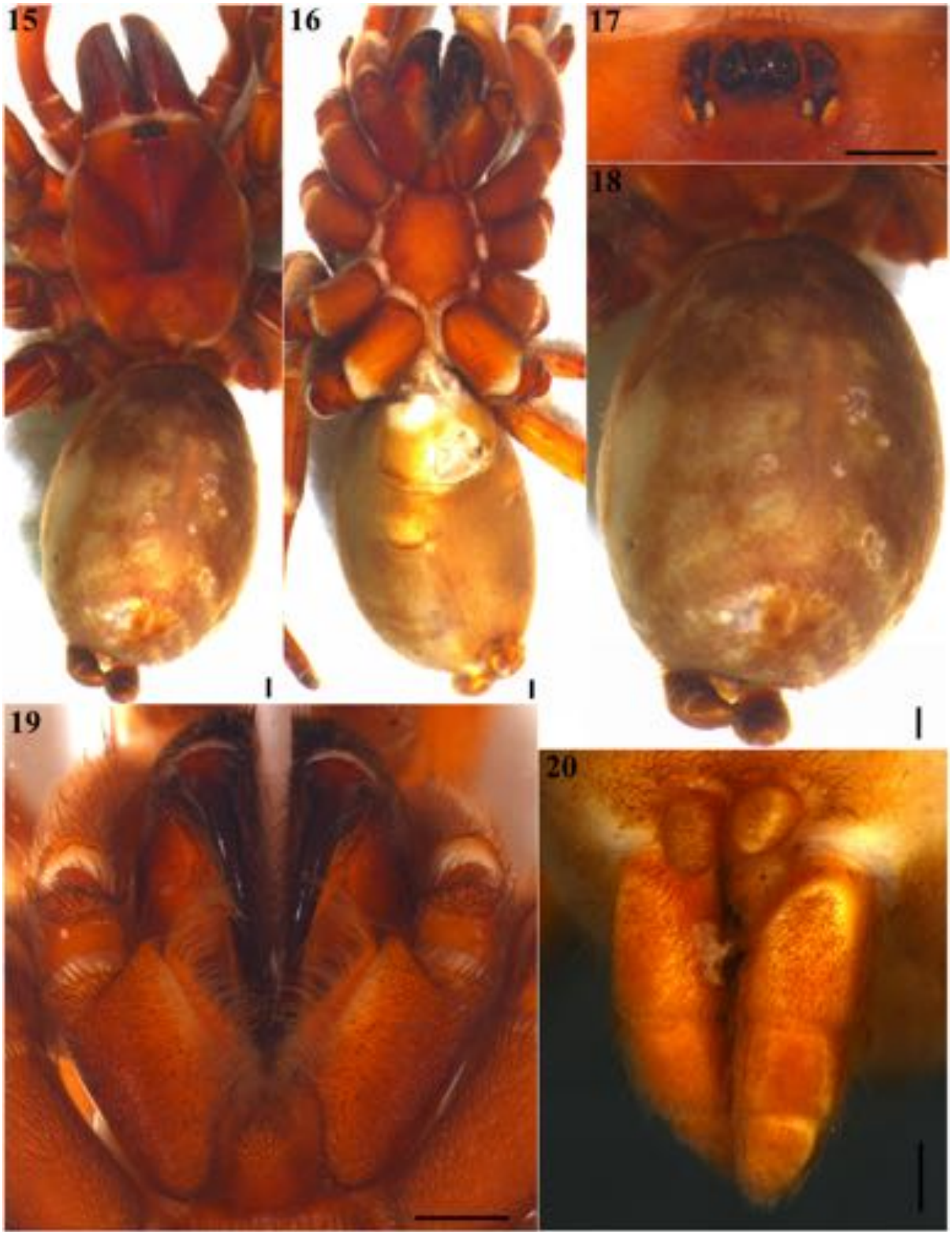
	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**1.91**	**2.13**	**2.47**	**-**	**3.58**	**10.09**
Leg I	**4.76**	**3.53**	**3.4**	**2.94**	**1.83**	**16.46**
Leg II	**3.9**	**3.07**	**2.75**	**2.44**	**1.82**	**13.98**
Leg III	**2.06**	**2.56**	**2.08**	**2.52**	**3.6**	**12.82**
Leg IV	**4.79**	**3.11**	**3.49**	**3.99**	**2.51**	**17.89**

Description. Male MNHN 100-2 (Figs 31-42). All characters as in female, except: Carapace 5.13 long, 4.34 wide. Abdomen 5.4 long, 2.82 wide. Total length 10.53. Carapace: Fovea 0.7 wide. Eight eyes arranged on tubercle 0.38 high, 0.9 wide, 0.76 long. MOQ 0.98 wide, 0.55 long. AME 0.27, ALE 0.27, PME 0.17, PLE 0.2. Eye interspaces: AME-AME 0.78, AME-ALE 0.27, ALE-ALE 0.81, PME-PLE 0.12, PME-PME 0.65, ALE-PLE 0.37, PLE-PLE 0.86. Chelicerae: 2.43 long, with 9 large teeth and 13 tiny. Labium: 0.44 long, 0.68 wide, having ca. 21 cuspules. Maxillae: 1.5 long in front, 2.0 long behind, 0.8 wide, with ca. 58 cuspules. Sternum: 2.54 long, 2.41 wide.

Legs: IV-I-II-III. Spines: leg I: fe d1-3-2, pa 0, ti p1-0-1, r0-1-0, v2-3-1ap, me p0-1-0 v1-0-1ap, ta 0; leg II: fe d1-3-2, pa 0, ti p1-0-1 v2-2-2ap, me p0-1-0 v1-0-1ap, ta 0; leg III fe d1-4-2, pa p0-0-2, ti d0-1-1 v2-2-3ap, me p0-1-1 d0-1-2 v3-3-3ap, ta 0; leg IV fe d1-5-4, pa p0-0-1, ti p0-1-0 r0-1-1 v3-2-4(3ap), me p1-0-1 r0-1-1 v4-4-4(3ap), ta 0; palp: fe d0-0-1, pa 0, ti 0, ta 0. Tricobothria: 11 in tarsus I; 11 in tarsus II; 9 in tarsus III; 8 in tarsus IV; 11 in palpal tarsus. Claws: ITC absent. STC with two rows of 5-6 teeth, present on all legs. Scopula: absent on palp. Tibial apophysis: double, prolateral, curved, far from cuticular projection.

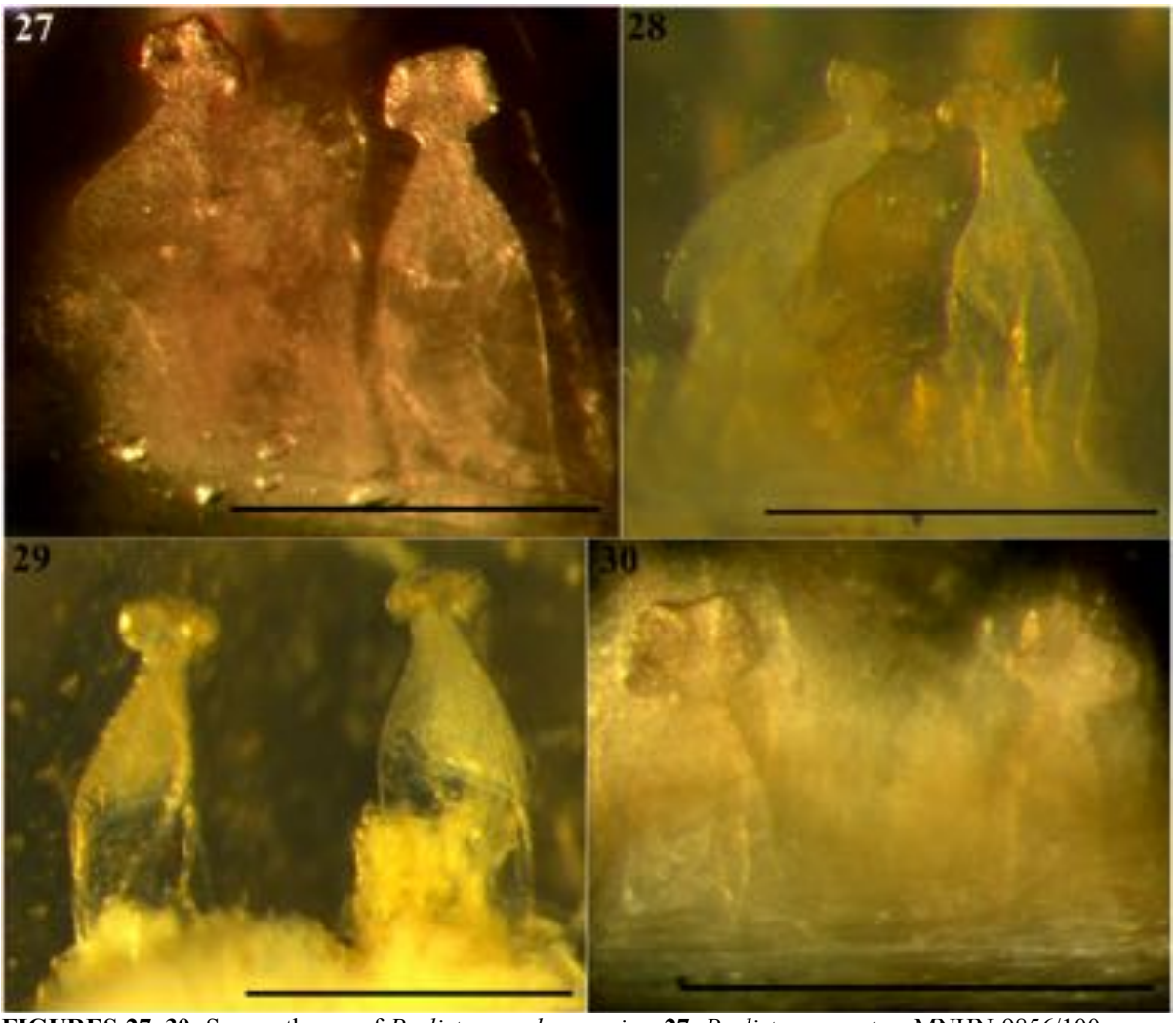
Palp: bulb rounded and thick with duct tapering. Embolus long, straight, with slightly curved apical portion. Keels absent. Cymbium rounded, forked prolaterally.

Spinnerets: PMS 0.61 long, 0.21 wide. Basal, middle, and apical segments of PLS, 1.24 long, 0.6 wide; 0.81 long, 0.62 wide; 0.99 long, 0.45 wide, respectively.



FIGURES 15–20. *Psalistops melanopygius*, female lectotype of *P. zonatus* from Venezuela, Tovar Colony, MNHN 9856/100-01. **15,** habitus. **16,** ventral view. **17,** eye tubercle. **18,** abdominal pattern. **19,** maxillae and labium **20,** incrassate spinnerets. Scales = 1 mm.

FIGURES 21–26. *Psalistops melanopygius*. **21-22,** *Psalistops melanopygius*, immature paralectotype from Venezuela, Caracas, MNHN AR146439. **21,** habitus. **22,** ventral view. **23-24,** *Psalistops montigena*, female lectotype from Venezuela, Valencia, MNHN 9877. **23,** habitus. **24,** ventral view. **25-26,** *Psalistops tigrinus*, female lectotype from Venezuela, Valencia, MNHN 9881. **25,** habitus. **26,** ventral view. Scales = 1 mm.

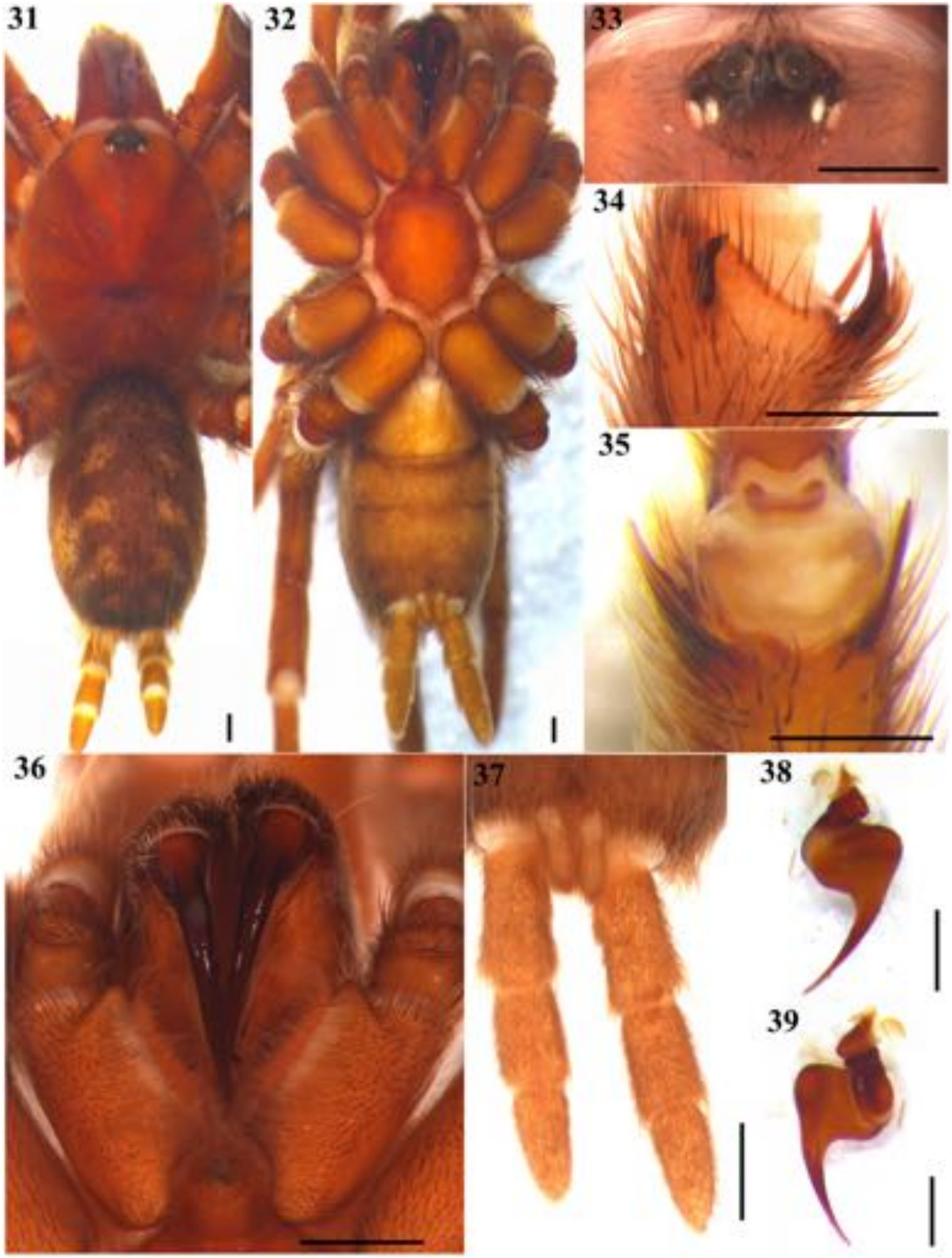


FIGURES 27–30. Spermathecae of *Psalistops melanopygius*. **27,** *Psalistops zonatus*, MNHN 9856/100-01. **28,** *Psalistops melanopygius*, MNHN AR146439. **29,** *Psalistops montigena*, MNHN 9877. **30,** *Psalistops tigrinus*, MNHN 9881. Scales = 0.5 mm (4, 5, 7, 9).

TABLE 6. *Psalistops melanopygius*. Male, MNHN 100-02. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**2.96**	**1.63**	**2.63**	**-**	**1.65**	**8.87**
Leg I	**5.47**	**2.91**	**4.39**	**3.73**	**2.74**	**19.24**
Leg II	**4.9**	**2.45**	**3.64**	**3.49**	**2.24**	**16.72**
Leg III	**4.31**	**2.09**	**2.91**	**3.67**	**2.31**	**15.29**
Leg IV	**6**	**2.47**	**4.66**	**5.21**	**2.81**	**21.15**

Distribution. Venezuela.



FIGURES 31–39. *Psalistops melanopygius*, male paralectotype of *P. zonatus* from Venezuela, Tovar Colony, MNHN 100-02. **31,** habitus. **32,** ventral view. **33,** eye tubercle. **34,** apophysis and cuticular projection, prolateral view. **35,** apophysis and cuticular projection, ventral view. **36,** maxillae and labium. **37,** incrassate spinnerets. **38,** left bulb, prolateral view. **39,** left bulb, retrolateral view. Scales = 1 mm (31, 32, 33, 36, 37), 0.5 mm (34, 35, 38, 39).

FIGURES 40–42. *Psalistops melanopygius*, male paralectotype of *P. zonatus* from Venezuela, Tovar Colony, MNHN 100-02. **40,** striped abdomen pattern. **41,** right cymbium. **42,** STC with two rows of small teeth. Scales = 1 mm (40), 0.5 mm (41, 42).

Remarks. This species was described by Simon (1889) based on a group of spiders collected in Caracas. The analysis of the type material of *P. melanopygius* (Figs. 21-22, 28), as well as of *P. zonatus* (Figs. 15-20, 27), *P. tigrinus* (Figs. 25-26, 30) and *P. montigena* (Figs. 23-24, 29), all of which collected in Venezuela by the author (Simon, 1889), revealed that the morphology of all these species, including the genitalia (Figs. 27-30), showed little to no variation. Therefore, the species *P. zonatus*, *P. tigrinus* and *P. montigena* are synonymized with *P. melanopygius*.

Given the poor condition of the types of *P. melanopygius*, the redescription of the species was written based on the female lectotype and a male paralectotype of *P. zonatus*, as they were in the best conditions within this group.

The synonymy of the species allowed the description of a male *P. melanopygius*, which had been so far known only from female specimens. It is also the only described male of the genus *Psalistops* so far.

***Psalistops* sp. nov. 1**

(Figs 43-48, 311)

Diagnosis. Differs from *P. melanopygius* by having the spermathecae with a single rounded receptacle on the main stalk apex.

Type material. 1 female holotype, Colombia, Cundinamarca [05°02'N, 74°03'], 02/15/1965, P. R. Craig col., CASENT 9071249.

Other material examined. None.

Description. Female (Figs 43-48). Carapace 4.33 long, 3.49 wide. Abdomen 5.66 long, 3.57 wide. Total length 9.99. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 0.5 wide. Clypeus absent. Eight eyes arranged on tubercle 0.31 high, 0.68 wide, 0.65 long. MOQ 0.85 wide, 0.49 long. Anterior eye row slightly procurved, posterior row recurved. AME 0.16, ALE 0.18, PME 0.13, PLE 0.17. Eye interspaces: AME-AME 0.3, AME-ALE 0.19, ALE-ALE 0.67, PME-PLE 0.11, PME-PME 0.54, ALE-PLE 0.39, PLE-PLE 0.75. Chelicera: 2.27 long, dense patch of hair and setae on retrolateral and dorsal sides, with 7 large teeth and 5 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.51 long, 0.66 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 17 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.11 long in front, 1.61 long behind, 1.0 wide, with ca. 42 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, rounded. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 2.12 long, 2.14 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-1-1, ti r0-1-1 v0-1-2ap, me p0-1-1 v0-2-3ap, ta 0; leg IV fe d0-0-1, pa p0-1-1, ti r0-1-1 v0-1-2ap, me p0-1-1 v0-2-3ap, ta 0; palp: fe 0, pa 0, ti p0-1-0 v1-0-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 9 in tarsus I; 6 in tarsus II; 8 in tarsus III; 8 in tarsus IV; 6 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and moderately dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Annular bands absent.

Spermathecae: two, each with a thick stalk, and a single rounded receptacle on its tip.

Spinnerets: Incrassate. PMS small, 0.54 long, 0.29 wide, 0.22 apart. Basal, middle, and apical segments of PLS, 0.91 long, 0.62 wide; 0.85 long, 0.49 wide; 0.81 long, 0.33 wide, respectively. Apical segment triangular. All segments covered by fine setae.
Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, possibly symmetrical, with 5 transverse lines.

TABLE 7. *Psalistops* sp. nov. 1. Female, CASENT 9071249. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**2.32**	**1.49**	**1.45**	**-**	**1.58**	**6.84**
Leg I	**3.75**	**2.53**	**2.41**	**2.01**	**1.52**	**12.22**
Leg II	**2.58**	**2.14**	**1.78**	**1.64**	**1.41**	**9.55**
Leg III	**2.49**	**1.68**	**1.33**	**1.68**	**1.33**	**8.51**
Leg IV	**3.64**	**2.23**	**2.78**	**2.67**	**1.53**	**12.85**

Distribution. Colombia.

Psalistops nigrifemuratus* Mello-Leitão, 1939 *nomem dubium

Psalistops nigrifemuratus Mello-Leitão, 1939: 523; Brescovit *et al*., 2011; World Spider Catalog, 2018.

Remarks. *Psalistops nigrifemuratus* was described by Mello-Leitão (1939) based on one male specimen from Burí, state of São Paulo, Brazil. The type has not been located and is herein considered as lost.
The description of the specimen is rather poor and incomplete. However, the description of the palp having 3-6 very thick spines on the palpal tibia seems to contrast with the glabrous palpal tibia found in the males of *Psalistops*.
Additionally, as Bertani *et al.*, (2017) pointed out, the family Barychelidae was poorly diagnosed and understood at the time Mello-Leitão published this work, which led to the author including several nemesiid genera in the Barychelidae, including the previously described *Psalistops crassimanus* Mello-Leitão, 1923 which has since then been transferred to the genus *Stenoterommata* Holmberg, 1881 by Bertani *et al.*, (2017).

FIGURES 43–48. *Psalistops* sp. nov. 1, female holotype from Colombia, Cundinamarca, CASENT 9071249. **43,** habitus. **44,** ventral view. **45,** eye tubercle. **46,** spinnerets. **47,** maxillae and labium **48,** spermathecae. Scales = 1 mm (40-44), 0.5 mm (45).

Therefore, it is possible that this specimen was also another misplacement by the author and that the type did not belong to *Psalistops*, but to a nemesiid of the genus *Rachias* Simon, 1892 or *Stenoterommata*. The species is hereby considered as *nomen dubium*.

***Hapalopus gasci* (Maréchal, 1996) comb. nov.**
(Figs 49-56)

Psalistops gasci Maréchal, 1996: 590, f. 1a-c, 2; Vedel *et al*., 2013: 361.

Diagnosis. *H. gasci* female differs from those of other species of *Hapalopus* by having a highly sclerotized and fused spermatheca, with two thick stalks branching from the basis and having two clearly defined rounded receptacles at the end.

Type Material. 1 female holotype, French Guiana, Saut Pararé, Arataye River [3°58'N, 52°56' W], 02/18/1990, P. Maréchal col., MNHN 101-01, examined; 1 female paratype, French Guiana, Roura, Montagne de Kaw [4°33'N, 52°12' W], June 1993, C. Marty col., MNHN 101-02, examined.

Redescription. Female MNHN 101-1 (Figs 49-56). Carapace 9.36 long, 8.43 wide. Abdomen 14.48 long, 8.96 wide. Total length 23.84. Carapace: Surface moderately dense with hair, sparse with setae especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, strongly procurved, 1.27 wide. Clypeus absent. Eight eyes arranged on tubercle 0.44 high, 1.49 wide, 1.14 long. MOQ 1.56 wide, 0.83 long. Anterior eye row slightly procurved, posterior row recurved. AME 0.37, ALE 0.49, PME 0.2, PLE 0.33. Eye interspaces: AME-AME 0.46, AME-ALE 0.42, ALE-ALE 1.27, PME-PLE 0.25, PME-PME 0.86, ALE-PLE 0.56, PLE-PLE 1.36. Chelicerae: 4.26 long, dense patch of hair and setae on retrolateral and dorsal sides, with 9 large teeth and 3 tiny. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent. Labium: trapezoid, 1.33 long, 1.89 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 36 cuspules rounded, concentrated in the front. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 3.19 long in front, 3.94 long behind, 2.13 wide, with ca. 68 cuspules on upper mound in inner angle. Heel distinct, thick. Frontal lobe distinct, long. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 4.27 long, 4.25 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: dense cover of hair, including urticating setae type IV, sparse setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti 0, me v0-1-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti p0-0-1 v0-1-0, me v1-1-3ap, ta 0; leg III: fe 0, pa 0, ti p0-1-1 r1-0-1 v0-2-2ap, me p1-1-1 r0-1-1 v0-2-3ap, ta 0; leg IV: fe 0, pa 0, ti p0-1-1 r0-1-1 v0-2-2ap, me p1-1-1 r0-2-1 v0-2-5(3ap), ta 0; palp: fe d0-0-1, pa 0, ti v0-0-3(2ap), ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 13 in tarsus I; 19 in tarsus IV; 13 in tarsus III; 11 in tarsus IV; 19 in palpal tarsus. Claws: ITC absent. STC with 4 teeth on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and anterior half of metatarsus; legs III and IV: parted and sparse in tarsus and anterior half of metatarsus; palp: dense and parted on tarsus. All tarsi integral.

Spermathecae: spermatheca fused, granulate, and highly sclerotized, with a thin membranous base, from which two merged thick stalks branch off, and at the end of each stalk a rounded receptacle.

Spinnerets: PMS small, 1.09 long, 0.44 wide, 1.03 apart. Basal, middle, and apical segments of PLS, 1.63 long, 1.09 wide; 1.2 long, 0.78 wide; 0.91 long, 0.52 wide, respectively. Apical segment digitiform. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsally dark brown; ventrally pale.

TABLE 8. *Hapalopus gasci*. Female, MNHN 101-01. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**4.9**	**3.35**	**3.6**	**-**	**2.95**	**14.8**
Leg I	**6.63**	**4.47**	**5.09**	**3.46**	**2.37**	**22.02**
Leg II	**6.04**	**4.08**	**4.17**	**3.74**	**2.57**	**20.51**
Leg III	**5.22**	**3.28**	**3.93**	**4.97**	**2.81**	**20.21**
Leg IV	**7.46**	**3.73**	**5.73**	**7.54**	**3.06**	**27.52**

Remarks. This species was described based on two females from French Guiana. The analysis of the specimen revealed that it does not belong to the *Psalistops* genus, due to several character differences, such as the presence of urticating setae type IV, apical PLS segment digitiform, and spinnerets not incrassate. It is hereby transferred to the genus *Hapalopus* due to having a membranous base in the spermathecae (see Fukushima et al. 2005)

FIGURES 49–56. *Hapalopus gasci*, female holotype from French Guyana, Saut Pararé, MNHN 101-01. **49,** habitus. **50,** ventral view. **51-52,** urticating setae type IV. **53,** eye tubercle. **54,** maxillae and labium **55,** spinnerets. **56,** spermathecae. Scales = 1 mm (49, 50, 53-55), 0.5 mm (56).

***Trichopelma* Simon, 1888**

Trichopelma Simon, 1888: 215; 1892: 129; Valerio, 1986: 97; Petrunkevitch, 1911: 93; 1928: 76; Roewer, 1942: 223; Raven, 1985: 115; Goloboff, 1995: 27; Penney & Pérez-Gelabert, 2002: 205; Pérez-Gelabert, 2008: 49; Guadanucci, 2014: 3; Bloom *et al.*, 2014: 152; Guadanucci, 2014: 513; Ríos-Tamayo, 2017: 194; World Spider Catalog, 2018.

Stothis Simon, 1889: 198; 1892: 128; Petrunkevitch 1911: 90; 1928: 76; Roewer, 1942: 223. First synonymized by Raven, 1985: 159.

Hapalopinus Simon, 1903: 930; Petrunkevitch, 1911: 69; Petrunkevitch, 1928: 78; Roewer, 1942: 230; Gerschman & Schiapelli, 1973: 70; Schmidt, 1986: 42. First synonymized by Raven, 1985: 153.

Merothele Petrunkevitch, 1925: 91; Petrunkevitch, 1928: 76. First synonymized by Raven, 1985: 156.

Obaerarius Petrunkevitch, 1926: 40. First synonymized by Raven, 1985: 157.

Type species. *Trichopelma nitidum* Simon, 1888.

Diagnosis. Differ from those of all other theraphosid genera by the 18-spot pattern on the abdomen, all PLS articles in visibly different sizes and cymbium of males strongly forked; also differ from *Psalistops* and *Reichlingia* by the non-incrassate spinnerets.

Description. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep. Clypeus absent. Eight eyes arranged on tubercle. Chelicera: dense patch of hair and setae on retrolateral and dorsal sides. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: heel distinct. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 1.88 long, 1.89 wide. Fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of setae. Book lungs semi-circular, with elliptical aperture, sometimes with book lung combs.

Legs: Preening combs absent. Clavate tricobothria in two rows, not concentrated medially. Claws: ITC absent. STC in females smooth or with a series of 2-4 teeth. STC in males with ou without a double row of teeth. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Tibial apophysis prolateral and curved, with small cuticular projection nearby.

Male palp: Cymbium rounded, strongly forked prolaterally.

Spinnerets: PMS small. All segments of PLS covered by fine setae, all segments with distinct sizes.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern: 18-spot.

Distribution. Northern South America (Venezuela and Guyana), Southern Central America (Panama and Costa Rica), and the Caribbean (Bahamas Islands, Cuba, Dominican Republic, Grenada, Haiti, Jamaica, Puerto Rico, Saint Thomas Island, and Saint Vincent).

Key for species of *Trichopelma*

(Males of T. affine, T. banksia, T. sp. nov. 4*, T.* sp. nov. 8*, T.* sp. nov. 7*, T. laselva, T.* sp. nov. 11*, T.* sp. nov. 10*, T.* sp. nov. 2 *and T. steini and females of T.* sp. nov. 6*, T. cubanum, T. nitidum and, T.* sp. nov. 3 *are unknown).*

1) Male……..……2

Female……11

2) Tibial apophysis placed prolaterally (Figs. 82 and 83)…….….*T. coenobita*

Tibial apophysis placed ventrally (Fig. 60)……...……..……..3

Tibial apophysis placed proventrally (Figs. 115 and 116)……..……4

3) Metatarsus I bulge present (Fig. 71)……..……..……....*T. nitidum*

Metatarsus I bulge absent…….….*T. maculatum*

4) Apophysis aligned diagonally with cuticular projection (Figs. 186 and 187).....5

Apophysis aligned in straight line with cuticular projection (Figs. 223 and 224)…..…..6

5) Apical segment of PLS domed (Fig. 188)…….*T.* sp. nov. 1

Apical segment of PLS triangular (Fig. 204)..…….……*T.* sp. nov. 3

6) Keel around embolus present (Figs. 227 and 228)…….……*T.* sp. nov. 5

Keel around embolus absent.....7

7) STC bare……..……..8

STC with teeth……..…….9

8) Abdomen pattern merged (Fig. 253)…….……*T.* sp. nov. 9

Abdomen pattern partially connected (Fig. 220)…….……..……*T. cubanum*

9) STC with two rows of teeth……..……..….*T. fulva*

STC with one row of teeth……..…….10

10) Embolus slightly curved (Figs. 144 and 145)…….……..*T. insulanum*

Embolus curved at the tip (Figs. 237 and 238)……..….*T.* sp. nov. 6

11) STC with one tooth……..……*T. laselva*

STC bare or with more than one tooth……...…12

12) Spermatheca fused (Fig. 252)…….……..13

Spermatheca not fused (Fig. 197)……14

13) Tarsus IV integral.....*T.* sp. nov. 8

Tarsus IV cracked (Fig. 72)……....*T.* sp. nov. 5

14) Tarsus III cracked……..*T.* sp. nov. 2

Tarsus III integral…….……..…...15

15) Legs banded (Fig. 240 and 241)……..……...*T.* sp. nov. 7

Legs uniform……...…….16

16) STC with teeth……...……17

STC bare……..21

17) Spermatheca with dark sclerotized stalk (Fig. 152)……..18

Spermatheca with uniform color (Fig. 100)……19

18) Spermatheca with two receptacles (Fig. 152)…….…….*T. fulva*

Spermatheca with more than two receptacles (Fig. 181)……..….……*T.* sp. nov. 1

19) Abdomen pattern unconnected (Fig. 95)…….……...*T. affine*

Abdomen pattern connected (Fig. 128)…….....….……20

20) Spermatheca without branching (Figs. 135 and 136)…….…….*T. insulanum*

Spermatheca with branching (Fig. 94)……...…..……*T. steini*

21) Main stalk of spermatheca thin (Figs. 110 and 111)……..……..*T. maculatum*

Main stalk of spermatheca thick (Fig. 280)……..22

22) Book lung combs absent …….....*T.* sp. nov. 11

Book lung combs present (Fig. 67)……....23

23) Main stalk of spermatheca without constriction (Fig. 213)……..*T.* sp. nov. 4

Main stalk of spermatheca with constriction (Fig. 197)…….....…..24

24) Spermatheca with one receptacle (Fig. 197)……....25

Spermatheca with more than one receptacle (Fig. 274)……..26

25) Main stalk tapering (Fig. 127)…….……....*T. banksia*

Main stalk not tapering (Fig. 78)…….……..……..….*T. coenobita*

26) Spermatheca with two rounded receptacles (Fig. 274)...……...…….*T.* sp. nov. 10

Spermatheca with more than two rounded receptacles (Fig. 258)……...……*T.* sp. nov. 9

***Trichopelma nitidum* Simon, 1888**

(Figs 57-72, 316)

Trichopelma nitida Simon, 1888: 215; 1892: 129; Valerio, 1986: 97; Bloom *et al.*, 2014: 152.

Trichopelma nitidum; Petrunkevitch, 1911: 93; 1928: 76; Roewer, 1942: 223; Penney & Pérez-Gelabert, 2002: 205; Pérez-Gelabert, 2008: 49; Guadanucci, 2014: 513; Ríos-Tamayo, 2017: 194; World Spider Catalog, 2018.

Diagnosis. *Trichopelma nitidum* male differs from those of other *Trichopelma* species by having a bulge on the metatarsus I (Fig. 71).

Type material. 1 male holotype, Hispaniola (DOMINICAN REPUBLIC), San Domingo [18°48'N, 69°93' W], MNHN 97/AR4555, examined.

Other material examined. DOMINICAN REPUBLIC, *Independencia*, La Descubierta Savana real [18°37'N, 71°52' W], 1 male, 11/25-12/05/1991, S. & J. Peck col., AMNH RD4.

Redescription. Male MNHN AR4555 (Figs 57-72). Carapace 6.53 long, 4.93 wide. Abdomen 5.8 long, 3.04 wide. Total length 12.33. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, recurved, 0.9 wide. Clypeus absent. Eight eyes arranged on tubercle 0.46 high, 0.93 wide, 0.77 long. MOQ 1.02 wide, 0.57 long. Anterior eye row procurved, posterior row recurved. AME 0.27, ALE 0.29, PME 0.15, PLE 0.23. Eye interspaces: AME-AME 0.35, AME-ALE 0.28, ALE-ALE 0.81, PME-PLE 0.15, PME-PME 0.57, ALE-PLE 0.42, PLE-PLE 0.86. Chelicerae: 1.97 long, dense patch of hair and setae on retrolateral and dorsal sides, with eight large teeth and 7 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.52 long, 0.65 wide with dense patch of fine setae anteriorly,

and fine setae sparsely distributed medially. 55 cuspules rounded, spreading until about one third of length. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.65 long in front, 2.21 long behind, 1.06 wide, with 68 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thin. Anterior lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 2.67 long, 2.57 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: predominantly smooth, with sparse cover of hair and setae. Book lungs semi-circular, with elliptical aperture; book lung combs present.

Legs: formula undeterminable, due to incomplete legs II and III. Spines: leg I: fe d0-0-4, pa 0, ti p0-1-1, r0-1-0, v1-0-2, me v0-1-1ap, ta 0; leg II: fe d0-0-4; leg III fe d1-1-2 r0-1-1, pa p0-0-2, ti p1-0-1 r1-1-1 v3-2-3ap, me p1-1-1 r1-1-1ap v2-2-3ap; leg IV fe d0-2-1, pa p0-0-2, ti p0-1-1 r1-1-1 v3-2-3ap, me p2-1-2 d0-1-1ap r1-1-1 v3-2-4(2ap), ta 0; palp: fe d0-0-4, pa 0, ti v0-2-1, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 4 in tarsus I; missing in tarsus IV; 8 in palpal tarsus. Claws: ITC absent. STC with 3 pairs of teeth on legs I and IV. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: leg I: parted and moderately dense in tarsus and anterior half of metatarsus; leg IV: parted, sparse in tarsus and anterior half of metatarsus; absent on palp. Soft yellow thin hair present on all legs. Pallid annular bands on tarsi IV. Tibial apophysis: double, ventral, curved, close to cuticular projection. Metatarsus I with prolateral bulge.

Palp: bulb pyriform with duct tapering. Embolus long, straight, with slightly curved apical portion. Keels absent. Cymbium triangular, strongly forked prolaterally.

Spinnerets: PMS small, elongate, 0.23 long, 0.06 wide, 0.09 apart. Basal, middle, and apical segments of PLS, 0.99 long, 0.38 wide; 0.51 long, 0.38 wide; 0.33 long, 0.29 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae dark brown, carapace and legs dark brown. Abdomen dorsal pattern symmetrical, with 6 spots medially and stripes extending on lateral sides, each stripe connected to other spots at the termination near the midline; ventrally mostly pale, with darker spots.

TABLE 9. *Trichopelma nitidum*. Male, MNHN 97/AR4555. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**1.91**	**2.13**	**2.47**	**-**	**3.58**	**10.09**
Leg I	**4.69**	**3.07**	**3.55**	**3.2**	**1.93**	**16.44**
Leg II	**4.44**	**-**	**-**	**-**	**-**	**-**
Leg III	**3.99**	**2.11**	**2.68**	**3.94**	**-**	**-**
Leg IV	**5.13**	**2.23**	**4.43**	**5.57**	**2.44**	**19.8**

Distribution. Dominican Republic.

Remarks. *Trichopelma nitidum* has several characters that are common in other *Trichopelma* species, though not shared by all the species, such as the book lung combs, tarsi IV cracked, maxillary heel thin and STC with two rows of several teeth. A new character that is exclusive to *T. nitidum* is the metatarsus I bulge, which is quite evident on both legs I. Whether this character is exclusive to males or not it is not known, although it is quite possible, given how its position on metatarsus I proventral, resembling the position in which the tibial apophysis are typically found.

With all these characters in mind, this species has a very distinctive and well-established morphology. Unfortunately, the female of this species is still unknown. All the other *Trichopelma* species with both females and males described do not show sexual dimorphism with regards to the book lung combs and maxillary heel shape, so it is quite possible that the female of this species would display those characters as well.

***Trichopelma coenobita* Simon, 1889**

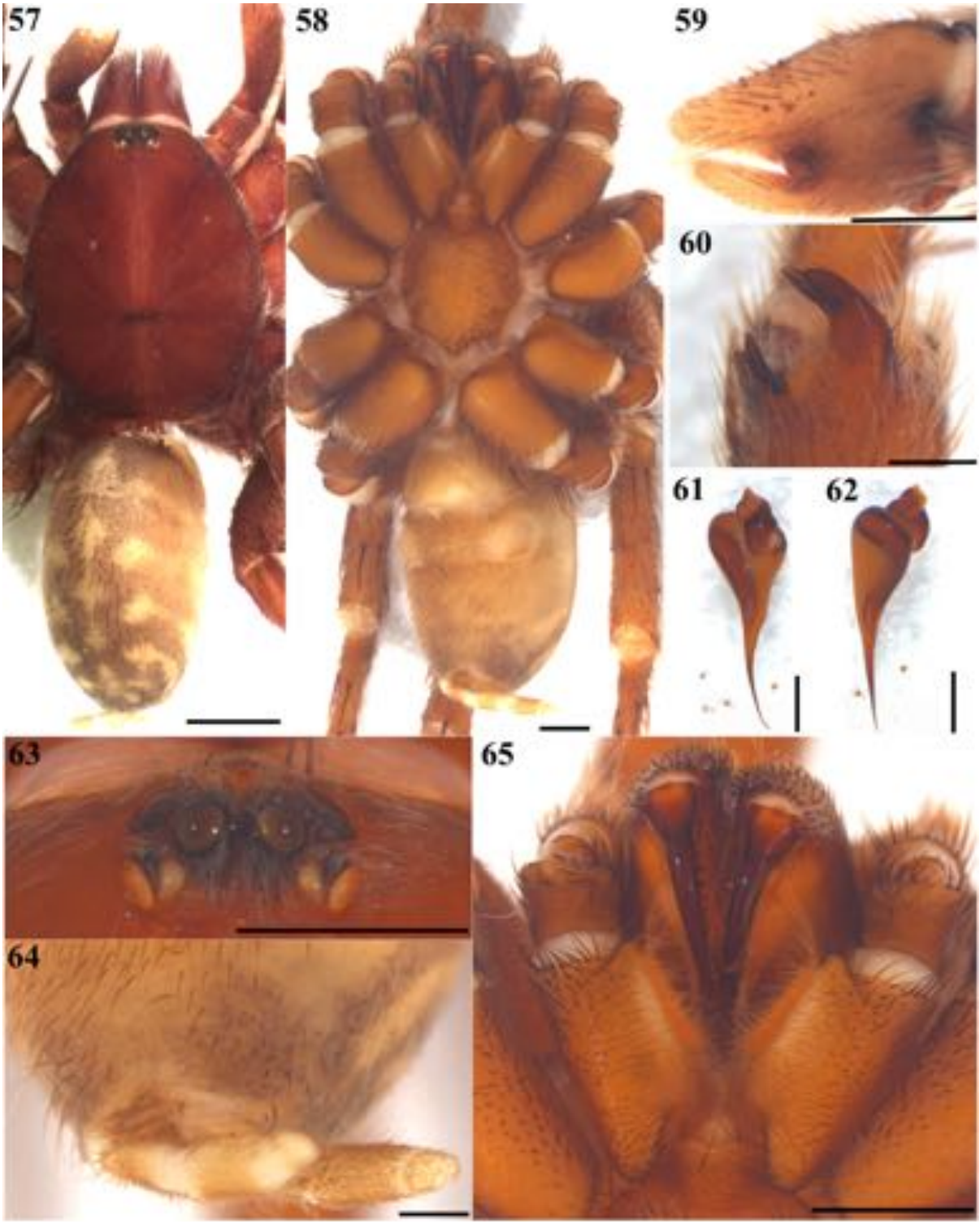
(Figs 73-88, 314)

Stothis coenobita Simon, 1889: 198; 1892: 128; Petrunkevitch 1911: 90; 1928: 76; Roewer, 1942: 223.

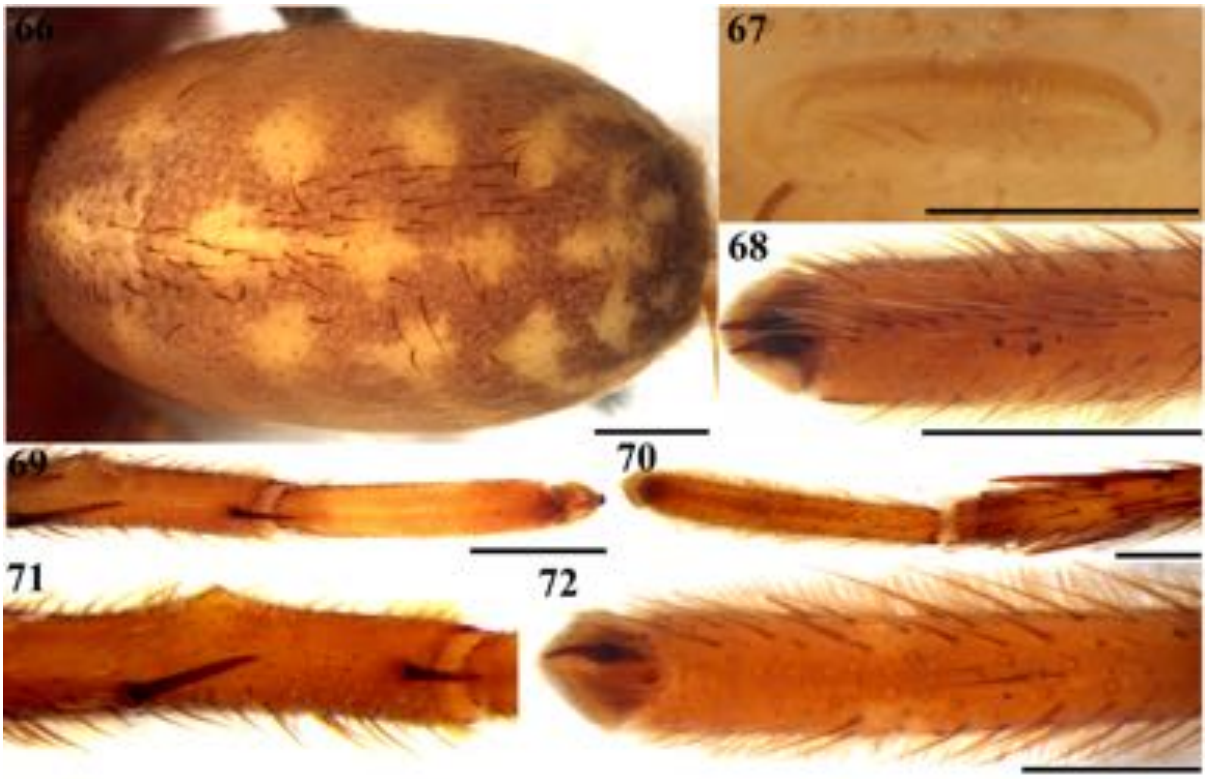
Trichopelma coenobita; World Spider Catalog, 2018.

Diagnosis. Females differ from *T.* sp. nov. 2, *T. insulanum* and *T. banksia* by having a thick main stalk in the spermathecae; also differ from the rest of *Trichopelma* by having

one rounded receptacle on the spermathecae. Males differ from all other *Trichopelma* by having the apophysis positioned prolaterally.



FIGURES 57–65. *Trichopelma nitidum*, male holotype from Hispaniola, Dominican Republic, MNHN 97/AR4555. **57,** habitus. **58,** ventral view. **59,** right cymbium. **60,** apophysis and cuticular projection, ventral view. **61,** left bulb, retrolateral view. **62,** left bulb, prolateral view. **63,** eye tubercle. **64,** spinnerets. **65,** maxillae and labium. Scales = 1 mm (57, 58, 63-65), 0.5 mm (59-62).



FIGURES 66–72. *Trichopelma nitidum*, male holotype from Hispaniola, Dominican Republic, MNHN 97/AR4555. **66,** abdomen pattern. **67,** book lung combs. **68,** left tarsus I, with clavate tricobothria. **69,** right leg I, showing dense scopula and ventral discoloring. **70,** left leg IV, showing sparse scopula. **71,** right metatarsus I, showing the bulge. **72,** right tarsus IV cracked. Scales = 1 mm (66, 68-72), 0.5 mm (67).

Type material. 1 female lectotype and 1 female paralectotype, here designated, Venezuela, Carabobo, San Esteban [10°39'N, 67°96'W], Simon col., MNHN 9867/AR4550, examined.

Other material examined. TRINIDAD AND TOBAGO [10°69'N, 61°22'W]: 1 female, January 1945, R. Ingle col., AMNH TR1; same locality, 1 male, 02/28/1968, J. Rozen col., AMNH TR2; Arima Valley [10°61'N, 61°27'W], 1 female, 1 male, 02/10-22/1964, Rozen & Wygodzinsky col., AMNH TR3; Blanchisseuse [10°77'N, 61°24'W], 1 female, 07/14-26/1978, no further data, AMNH TR4.

Redescription. Female MNHN 9867/AR4550 (Figs. 73-78). Carapace 9.59 long, 9.67 wide. Abdomen 10.51 long, 7.04 wide. Total length 20.1. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly recurved, 1.31 wide. Clypeus absent. Eight eyes arranged on tubercle 0.68 high, 1.44 wide, 1.23 long. Tubercle dislocated ahead of frontal margin of carapace. MOQ 1.65 wide, 0.96 long. Anterior eye row procurved, posterior row recurved. AME 0.38, ALE 0.48, PME 0.2, PLE 0.41. Eye interspaces: AME-AME 0.5, AME-ALE 0.54, ALE-ALE 1.34, PME-

PLE 0.23, PME-PME 0.93, ALE-PLE 0.63, PLE-PLE 1.34. Chelicerae: 4.57 long, sparse patch of hair and setae on retrolateral and dorsal sides, with 11 large teeth and 5 tiny. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 1.02 long, 1.27 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 20 cuspules rounded, spreading until frontal third line. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 2.48 long in front, 3.57 long behind, 1.92 wide, with ca. 47 cuspules on upper mound in inner angle, spreading until bottom third-line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 4.71 long, 4.07 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-1ap, me v0-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-0-1ap, me v0-0-1ap, ta 0; leg III fe d0-0-1, pa 0, ti r0-0-1ap v0-0-3ap, me v0-2-3ap, ta 0; leg IV fe 0, pa 0, ti v0-1-2ap, me v3-3-3ap, ta 0; palp: fe d0-0-1, pa 0, ti p0-1-0 v0-1-2ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 6 in tarsus I; 4 in tarsus II; 14 in tarsus III; 16 in tarsus IV; 20 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: entire and dense in tarsus and anterior half of metatarsus; legs III and IV: parted and sparse in tarsus and anterior third of metatarsus; palp: entire and dense on tarsus. All tarsi integral.

Spermathecae: two, each with a thick stalk, and one rounded receptacle branching from each.

Spinnerets: PMS small, 1.06 long, 0.33 wide, 0.5 wide. Basal, middle, and apical segments of PLS, 1.23 long, 0.91 wide; 0.68 long, 0.74 wide; 0.28 long, 0.4 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsally dark brown; ventrally brown.

TABLE 10. *Trichopelma coenobita*. Female, MNH9867/AR4550. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**5.1**	**3.02**	**3.61**	**-**	**3.4**	**15.13**
Leg I	**6.54**	**5.01**	**4.66**	**3.85**	**2.07**	**22.13**
Leg II	**6.02**	**4.13**	**4.25**	**3.47**	**2.17**	**20.04**
Leg III	**5.51**	**3.35**	**2.86**	**3.5**	**1.98**	**17.2**
Leg IV	**7.54**	**4.28**	**5.02**	**7.12**	**2.36**	**26.32**

Description. Male AMNH TR2 (Figs. 79-88). All characters as in female, except: Carapace 7.13 long, 6.23 wide. Abdomen 7.28 long, 4.58 wide. Total length 14.41. Carapace: Fovea 1.18 wide. Eight eyes arranged on tubercle 0.5 high, 1.21 wide, 0.95 long. MOQ 1.32 wide, 0.67 long. AME 0.26, ALE 0.28, PME 0.15, PLE 0.18. Eye interspaces: AME-AME 0.49, AME-ALE 0.36, ALE-ALE 1.1, PME-PLE 0.18, PME-PME 0.8, ALE-PLE 0.5, PLE-PLE 1.18. Chelicerae: 2.28 long, with 12 large teeth and 6 tiny. Labium: 0.6 long, 1.02 wide, having ca. 23 cuspules. Maxillae: 2.15 long in front, 2.58 long behind, 1.26 wide, with ca. 52 cuspules. Sternum: 3.29 long, 3.16 wide.
Legs: Spines: leg I: fe d0-0-1, pa 0, ti p1-1-1 v2-2-1ap, me v1-0-1ap, ta 0; leg II: fe d0-0-2, pa 0, ti p1-1-1 v2-1-3ap, me p0-1-0 v2-1-1ap, ta 0; leg III fe d1-2-2, pa p0-0-1, ti d1-1-0 v2-3-3ap, me d1-2-2 v2-3-3ap, ta 0; leg IV fe d0-0-2, pa p0-0-1, ti d0-1-1 r0-1-0 v3-3-2ap, me d0-1-2 v4-4-4(3ap), ta 0; palp: fe d0-0-1, pa 0, ti p0-2-2 r0-0-1, ta 0. Tricobothria: 12 in tarsus I; 4 in tarsus II; 12 in tarsus III; 16 in tarsus IV; 14 in palpal tarsus. Claws: ITC absent. STC with two rows of 5-6 teeth on all legs. Scopula: absent on palp. Tibial apophysis: double, ventral, curved, far from cuticular projection.
Palp: bulb rounded and thick with duct tapering. Embolus long, straight, with slightly curved apical portion. Keels absent. Cymbium rounded, strongly forked prolaterally.
Spinnerets: PMS 0.61 long, 0.18 wide. Basal, middle, and apical segments of PLS, 1.27 long, 0.76 wide; 0.8 long, 0.62 wide; 0.37 long, 0.35 wide, respectively.

FIGURES 73–78. *Trichopelma coenobita*, female lectotype from Venezuela, San Esteban, MNHN 9867/AR4550. **73,** habitus. **74,** ventral view. **75,** eye tubercle. **76,** spinnerets. **77,** maxillae and labium. **78,** spermarhecae. Scales = 1 mm (73-77), 0.5 mm (78).

TABLE 11. *Trichopelma coenobita*. Male, AMNH TR2. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.33**	**2.3**	**3.2**	**-**	**0.86**	**9.69**
Leg I	**7.77**	**4.09**	**6.07**	**4.7**	**2.77**	**25.4**
Leg II	**6.68**	**3.44**	**5.36**	**5.07**	**2.51**	**23.06**
Leg III	**6.18**	**2.91**	**4.1**	**5.7**	**2.36**	**21.25**
Leg IV	**8.49**	**3.36**	**6.68**	**9.93**	**2.82**	**31.28**

Distribution. Venezuela and Trinidad and Tobago.

Remarks. This species was originally described as *Stothis coenobita* by Simon (1889), based on a large and well-preserved female. The male of this species is herein described for the first time, as it was found with another female specimen. Both the new male and female also represent a new occurrence of this species in Trinidad and Tobago, extending the geographical distribution known.

***Trichopelma steini* (Simon, 1889) comb. nov.**

(Figs 89-94, 314)

Euthycaelus steini Simon, 1889: 201; Petrunkevitch, 1911: 65; Roewer, 1942: 221.

Psalistops steini; Guadanucci & Weinmann, 2014: 287; World Spider Catalog, 2018.

Diagnosis. Differs from females of *T. fulvus* by not having any dark chitinized part on spermathecae; also differs from rest of *Trichopelma* by having two subequal rounded receptacles on spermathecae.

Type material. 1 lectotype female, 2 paralectotypes females, here designated, Venezuela, Aragua, Tovar Colony [10°40'N, 67°29'W], Simon col., MNHN 9886, examined.

Redescription. Female 9886 (Figs 89-94). Carapace 4.9 long, 4.19 wide. Abdomen 6.34 long, 5.02 wide. Total length 11.24. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 0.64 wide. Clypeus absent. Eight eyes arranged on tubercle 0.4 high, 0.73 wide, 0.95 long. MOQ 1.04 wide, 0.55 long. Anterior eye row procurved, posterior row recurved. AME 0.26, ALE 0.32, PME 0.15, PLE 0.26. Eye interspaces: AME-AME 0.35, AME-ALE 0.29, ALE-ALE 0.9, PME-

FIGURES 79–88. *Trichopelma coenobita*, male from Trinidad & Tobago, Arima Valley, AMNH TR2. **79,** habitus. **80,** ventral view. **81,** eye tubercle. **82,** apophysis and cuticular projection, prolateral view. **83,** apophysis and cuticular projection, ventral view. **84,** maxillae and labium. **85,** spinnerets. **86,** left bulb, prolateral view. **87,** left bulb, retrolateral view. **88,** right cymbium. Scales = 1 mm (79-81, 84, 85), 0.5 mm (82, 83, 86-88).

PLE 0.16, PME-PME 0.6, ALE-PLE 0.4, PLE-PLE 0.91. Chelicerae: 1.88 long, sparse patch of hair and setae on retrolateral and dorsal sides, with 11 large teeth and 3 tiny. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium:

trapezoid, 0.75 long, 0.49 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 17 cuspules rounded, some missing, concentrated on distal third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.39 long in front, 1.72 long behind, 0.92 wide, with ca. 62 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 2.16 long, 2.12 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse setae. Book lungs semi-circular, with elliptical aperture; book lung combs present.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti 0, me v1-0-1(ap), ta 0; leg II: fe d0-0-1, pa 0, ti 0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-0-1, ti p0-2-1(ap) r0-1-0, me p1-1-1(ap) r1-1-1 v0-2-2(ap), ta 0; leg IV fe 0, pa 0, ti r1-0-1 v0-0-2(ap), me d2-2-2 v3-3-3(ap), ta 0; palp: fe d0-0-1, pa 0, ti v0-1-3(ap), ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 10 in tarsus I; 7 in tarsus IV; 7 in tarsus III; 10 in tarsus IV; 15 in palpal tarsus. Claws: ITC absent. STC with 4 teeth on on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and anterior half of metatarsus; legs III and IV: parted and sparse in tarsus and anterior third of metatarsus; palp: parted and dense on tarsus. All tarsi integral.

Spermathecae: two, each with a thick short stalk, from which two large rounded receptacles branch.

Spinnerets: PMS small, 0.41 long, 0.15 wide, 0.09 apart. Basal, middle, and apical segments of PLS, 0.62 long, 0.47 wide; 0.41 long, 0.45 wide; 0.23 long, 0.26 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern symmetrical, with 6 stripes extending on lateral sides, each stripe connected to spots at the termination near the midline, and one bigger spot in the middle of the terminations; ventrally pale, with some brown spots.

TABLE 12. *Trichopelma steini*. Female, MNHN 9886. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**2.45**	**1.4**	**1.45**	**-**	**1.62**	**6.92**
Leg I	**3.11**	**2.17**	**2.35**	**1.66**	**1.05**	**10.34**
Leg II	**2.9**	**1.81**	**2.22**	**1.82**	**1.15**	**9.9**
Leg III	**2.28**	**1.54**	**1.62**	**1.83**	**1.27**	**8.54**
Leg IV	**3.36**	**1.84**	**2.88**	**3.51**	**1.45**	**13.04**

Distribution. Venezuela.

Remarks. This species was originally described by Simon (1889) as *Euthycaelus steini*, based on a group of 3 female syntypes. Later on, Guadanucci & Weinmann (2014) transferred this species to *Psalistops*.

However, the analysis of the types revealed that the specimens do not have incrassate spinnerets, while displaying a very clear 18-spot abdominal pattern. As such, these species is herein transferred to *Trichopelma*.

***Trichopelma affine* (Simon, 1892)**

(Figs 95-102, 314)

Stothis affinis Simon, 1892: 552; Petrunkevitch, 1911: 90; Roewer, 1942: 223.

Trichopelma affine; World Spider Catalog, 2018.

Diagnosis. Differs from other *Trichopelma* females by the unconnected 18-point abdomen pattern and by the spermathecae with more than two rounded receptacles branching laterally throughout the main stalk.

Type material. 1 immature lectotype and 2 immature lectotypes, here designated, Saint Vincent and Grenadines: Saint Vincent (13°25'N, 61°18' W), H. H. Smith col., MNHN 10421/AR4558, examined.

Other material examined. SAINT VINCENT AND THE GRENADINES: Saint Vincent, Camden Park [13°17'N, 61°24' W], 2 females, 1 immature, 01/07/1965, R. T. Bell col., MCZ 75068; 8 females, 2 immatures, same locality, Simon col., BMNH BM1894-304; Grand Etang, Grenada [12°09'N, 61°69' W], 3 females, 02/09/1910, no further data, MCZ 75025.

FIGURES 89–94. *Trichopelma steini*, female lectotype from Venezuela, Tovar Colony, MNHN 9866. **89,** habitus. **90,** ventral view. **91,** eye tubercle. **92,** spinnerets. **93,** maxillae and labium **94,** spermarthecae. Scales = 1 mm (89-93), 0.5 mm (94).

Description. Female MCZ 75025 (Figs 95-100). Carapace 8.86 long, 7.15 wide. Abdomen 9.68 long, 5.15 wide. Total length 18.54. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 0.8 wide. Clypeus absent. Eight

eyes arranged on tubercle 0.22 high, 1.0 wide, 0.89 long. MOQ 1.11 wide, 0.64 long. Anterior eye row procurved, posterior row recurved. AME 0.4, ALE 0.43, PME 0.23, PLE 0.37. Eye interspaces: AME-AME 0.75, AME-ALE 0.64, ALE-ALE 1.94, PME-PLE 0.29, PME-PME 1.4, ALE-PLE 0.95, PLE-PLE 2.03. Chelicera: 2.46 long, dense patch of hair and setae on retrolateral and dorsal sides, with 12 large teeth and 6 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.73 long, 1.03 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 102 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.18 long in front, 2.02 long behind, 1.07 wide, with ca. 155 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 1.88 long, 1.89 wide. Fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs present.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti p0-0-1 v0-1-0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-1-0, ti p0-0-1 r1-1-0 v2-2-3ap, me d1-2-2 v3-2-3ap, ta 0; leg IV fe 0, pa 0, ti r1-0-1 v1-1-3ap, me d1-1-2 v2-3-3ap, ta 0; palp: fe 0, pa 0, ti v0-3-3ap, ta 0. Preening combs absent. Clavate tricobothria in two rows, not concentrated medially: 12 in tarsus I; 15 in tarsus II; 10 in tarsus III; 10 in tarsus IV; 16 in palpal tarsus. Claws: ITC absent. STC with 4 teeth on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: two, each with a thin tapering stalk, and several rounded receptacles branching around the upper half-length of each stalk.

Spinnerets: PMS small, 0.67 long, 0.23 wide, 0.06 apart. Basal, middle, and apical segments of PLS, 1.11 long, 0.44 wide; 0.58 long, 0.39 wide; 0.25 long, 0.23 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, seemingly symmetrical, with 18 unconnected dots, arranged in 3 lines of 6 dots each; ventrally brown.

TABLE 13. *Trichopelma affine*. Female, MCZ 75025. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**4.22**	**3.8**	**3.66**	**-**	**2.72**	**14.4**
Leg I	**5.3**	**3.1**	**3.44**	**2.24**	**1.34**	**15.52**
Leg II	**4.67**	**3.12**	**3.26**	**2.24**	**1.86**	**15.15**
Leg III	**4.02**	**3.06**	**3.15**	**3.04**	**1.8**	**15.07**
Leg IV	**5.28**	**2.4**	**3.42**	**4.04**	**1.6**	**16.74**

Distribution. Saint Vincent and the Grenadines, and in Grenada.

Remarks. Simon (1892) initially described this species as *Stothis affinis*, based on a group 3 immature and small types. Luckily, several other specimens of this species were found in other museum collections from the type locality, an island on the Caribbean. Thus, it was possible to redescribe this species with information from the spermathecae, while also using a larger and better preserved specimen. Unfortunately, no male specimen was found.

***Trichopelma cubanum* (Simon, 1903)**

Hapalopinus cubanus Simon, 1903: 930, f. 1085-1086; Petrunkevitch, 1911: 69; Petrunkevitch, 1928: 78; Roewer, 1942: 230; Gerschman & Schiapelli, 1973: 70, f. 58-62; Schmidt, 1986: 42, f. 15-16.

Psalistops cubanus; Wunderlich, 1988: 52, f. 33.

Trichopelma cubanum; García, 2000; Ríos-Tamayo, 2017; World Spider Catalog, 2018.

Type material. 1 male holotype, Cuba, MNHN 17702, not examined.

Other material examined. CUBA, Havana, Soledad [23°13'N, 82°37'W]: 1 male, February1925, Salt & Meyers col., MCZ 75007, examined.

Remarks. This species was described based on one male specimen, which was not examined herein. Although a new male specimen was found, a redescription of this

species is not necessary, for the type has been recently redescribed and depicted in pictures by Ríos-Tamayo (2017). Per the pictures and description of the type material and the analysis of the new specimen, this species can remain as valid in the *Trichopelma* genus. No female specimen has been described.

FIGURES 95–100. *Trichopelma affine*, female from Grenada, Grand Etang, MCZ 75025. **95,** habitus. **96,** ventral view. **97,** eye tubercle. **98,** spinnerets. **99,** maxillae and labium **100,** spermathecae. Scales = 1 mm (95-99), 0.5 mm (100).

FIGURES 101–102. *Trichopelma affine*, immature lectotype from Saint Vincent, MNHN 10421/AR4558. **101,** habitus. **102,** ventral view. Scales = 1 mm.

***Trichopelma maculatum* (Banks, 1906)**

(Figs 103-121, 315)

Acanthopelma maculatum Banks, 1906: 185, f. 1-2; Roewer, 1942: 224.

Acanthopelma maculata; Petrunkevitch, 1911: 42;

Trichopelma maculatum; Rudloff, 1997: 9; García, 2000: 3; World Spider Catalog, 2018.

Diagnosis. Females differ from *T.* sp. nov. 10 by having a thin main stalk on the spermathecae; and differ from the rest of *Trichopelma* by having two rounded receptacles that are distinct from each other on the spermathecae; males differ from *T. nitidum* by the absence of a metatarsus bulge; also differ from the rest of *Trichopelma* by having a ventral apophysis.

Type material. 1 female holotype, 1 immature paratype, Bahamas, Andros Island, Magnolia Key [24°85'N, 77°89'W], 05/25/1904, W. M. Wheeler col., AMNH no number.

Other material examined. BAHAMAS: Andros Island [24°70'N, 78°01'W], 2 males, 1908, B. E. Dahlgren & H. Mueller col., AMNH A3575; Andros Island, Fresh Creak [24°71'N, 77°80'W], 1 male, 04/23/1953, L. Giovani col., AMNH BH1; South Bimini [25°70'N, 79°27'W], 3 females, May 1951, W. J. Gertsch & M. A. Cazier col., AMNH BH8; Abaco Cay, Allons Cay [26°98'N, 77°66'W], 2 females, 05/09/1953, E. B. Hayden col., AMNH BH10.

Redescription. Female BH10 (Figs 103-107). Carapace 3.39 long, 2.69 wide. Abdomen 5.42 long, 3.61 wide. Total length 8.81. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 0.46 wide. Clypeus absent. Eight eyes arranged on tubercle 0.17 high, 0.52 wide, 0.42 long. MOQ 0.56 wide, 0.31 long. Anterior eye row procurved, posterior row slightly recurved. AME 0.12, ALE 0.15, PME 0.06, PLE 0.09. Eye interspaces: AME-AME 0.18, AME-ALE 0.16, ALE-ALE 0.43, PME-PLE 0.08, PME-PME 0.31, ALE-PLE 0.22, PLE-PLE 0.49. Chelicera: 1.6 long, dense patch of hair and setae on retrolateral and dorsal sides, with 13 large teeth and 5 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.33 long, 0.56 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 54 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 0.9 long in front, 1.26 long behind, 0.61 wide, with ca. 95 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 3.43 long, 3.2 wide. Fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti 0, me v1-1-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-1-0, me v1-1-1ap, ta 0; leg III fe d0-0-1, pa p0-0-2, ti p1-1-0 r1-1-0 v2-2-3ap, me d0-1-2 r1-1-0 v2-3-3ap, ta 0; leg IV fe d0-0-1, pa p0-0-1, ti r1-1-0 v3-2-

3ap, me d3-2-1 v2-4-3ap, ta 0; palp: fe d0-0-1, pa 0, ti p0-1-0 v0-2-3ap, ta 0. Preening combs absent. Clavate tricobothria in two rows, not concentrated medially: 9 in tarsus I; 7 in tarsus II; 15 in tarsus III; 14 in tarsus IV; 11 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: two, each with a thin tapering stalk, and two rounded receptacles branching from the tip of each stalk: inner receptacle bigger, outer receptacle smaller.

Spinnerets: PMS small, 0.19 long, 0.07 wide, 0.08 apart. Basal, middle, and apical segments of PLS, 0.3 long, 0.18 wide; 0.24 long, 0.3 wide; 0.15 long, 0.6 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern seemingly symmetrical, with 6 connected spots medially, each sided by two lateral stripes on both sides; ventrally pale.

TABLE 14. *Trichopelma maculatum*. Female, AMNH BH10. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**1.91**	**2.13**	**2.47**	**-**	**3.58**	**10.09**
Leg I	**3.68**	**2.34**	**2.38**	**2.08**	**1.32**	**11.8**
Leg II	**3.42**	**2.74**	**2.26**	**2.02**	**1.12**	**11.56**
Leg III	**3.2**	**2.2**	**1.84**	**2.32**	**1.7**	**11.26**
Leg IV	**4.32**	**2.56**	**3.4**	**4.32**	**2.14**	**16.74**

Redescription. Male A3575 (Figs 112-121). All characters as in female, except: Carapace 5.88 long, 4.48 wide. Abdomen 4.5 long, 2.46 wide. Total length 10.38. Carapace: Fovea 0.87 wide. Eight eyes arranged on tubercle 0.29 high, 0.91 wide, 0.81 long. MOQ 1.22 wide, 0.64 long. AME 0.41, ALE 0.52, PME 0.25, PLE 0.49. Eye interspaces: AME-AME 0.41, AME-ALE 0.27, ALE-ALE 0.8, PME-PLE 0.18, PME-PME 0.74, ALE-PLE 0.47, PLE-PLE 0.42. Chelicerae: 3.52 long, with 9 large teeth and 7 tiny. Labium: 0.47 long, 1.14 wide, having ca. 52 cuspules. Maxillae: 1.91 long in

front, 2.55 long behind, 1.17 wide, with ca. 103 cuspules. Sternum: 3.82 long, 3.76 wide.

FIGURES 103–107. *Trichopelma maculatum*, female from Bahamas, Abaco Cay, AMNH BH10. **103,** habitus. **104,** ventral view. **105,** eye tubercle. **106,** maxillae and labium. **107,** spinnerets. **108-109.** *Trichopelma maculatum*, female holotype from Bahamas, Andros, AMNH no number. **108,** habitus. **109,** ventral view. **110** spermathecae of AMNH BH10. **111.** spermathecae of female holotype. Scales = 1 mm (103-109), 0.5 mm (110, 111).

Legs: IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti p1-0-1 v2-1-1ap, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0-0-1, ti p1-0-1 v2-1-3ap, me v1-0-1ap, ta 0; leg III fe d0-2-2, pa p1-1-1 r0-1-0, ti p1-1-0ap r1-1-0ap v3-2-2ap, me d2-2-2 v1-2-3ap, ta 0; leg IV fe d0-0-2, pa p0-1-0 r0-1-0, ti p1-0-1 r1-0-1 v3-3-3ap, me d3-2-2 v4-3-3ap, ta 0; palp: fe 0, pa 0, ti p0-1-0 v1-1-1, ta 0. Tricobothria: 12 in tarsus I; 16 in tarsus II; 12 in tarsus III; 7 in tarsus IV; 8 in palpal tarsus. Claws: STC each claw with 4 teeth, present on all legs. Scopula: absent on palp. Tibial apophysis: prolateral, curved, far from cuticular projection. Tarsus III and IV cracked.

Palp: bulb rounded and slim with duct tapering. Embolus long, straight, with slight curvature at mid-length. Keels absent. Cymbium rounded, strongly forked prolaterally.

Spinnerets: PMS 0.32 long, 0.13 wide, 0.1 apart. Basal, middle, and apical segments of PLS, 1.2 long, 0.63 wide; 0.59 long, 0.43 wide; 0.29 long, 0.29 wide, respectively.

TABLE 15. *Trichopelma maculatum*. Male, AMNH A5375. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.12**	**1.36**	**2.22**	**-**	**0.72**	**7.42**
Leg I	**4.78**	**3.41**	**3.43**	**3.71**	**3.34**	**17.67**
Leg II	**4.26**	**3.05**	**3.48**	**3.69**	**2.46**	**16.94**
Leg III	**4.83**	**2.44**	**3.07**	**3.73**	**2.5**	**16.57**
Leg IV	**5.89**	**2.85**	**4.64**	**6.52**	**3.2**	**23.1**

Distribution. Bahamas.

Remarks. Originally described as *Acanthopelma maculatum* by Banks (1906) based on a specimen with undetermined sex, this species was later transferred by Rudloff (1997) to *Trichopelma*. The analysis here revealed that the holotype is female.

Additional material allowed for the finding of better preserved specimens, as well as male specimens, which are described for the first time. The redescription of the female was done based on a larger and better-preserved female.

FIGURES 112–121. *Trichopelma maculatum*, male from Bahamas, Andros, AMNH A3575. **112,** habitus. **113,** ventral view. **114,** eye tubercle. **115,** apophysis and cuticular projection, prolateral view. **116,** apophysis and cuticular projection, ventral view. **117,** maxillae and labium. **118,** spinnerets. **119,** left bulb, prolateral view. **120,** left bulb, retrolateral view. **121**, cymbium. Scales = 1 mm (112–114, 117, 118), 0.5 mm (115, 116, 119-121).

***Trichopelma banksia* Özdikmen & Demir, 2012**

(Figs 122-127, 315)

Stothis cubana Banks, 1909: 155; Roewer, 1942: 223.

Trichopelma banksia; Özdikmen & Demir, 2012: 119 (preoccupied); World Spider Catalog, 2018.

Diagnosis. Differs from *T. nitidum* by having a thick maxillary heel; also differs from the rest of *Trichopelma* by having a visibly recurved fovea.

Type material. 1 female holotype, Cuba, Havana, Santiago de Las Vegas [22°97'N, 82°38' W], Nathan Banks col., MCZ no number, examined.

Redescription. Female holotype (Figs 122-127). Carapace 6.33 long, 5.21 wide. Abdomen 7.77 long, 3.85 wide. Total length 14.1. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly recurved, 1.08 wide. Clypeus absent. Eight eyes arranged on tubercle 0.36 high, 1.13 wide, 0.8 long. MOQ 1.22 wide, 0.67 long. Anterior eye row procurved, posterior row recurved. AME 0.24, ALE 0.31, PME 0.21, PLE 0.24. Eye interspaces: AME-AME 0.35, AME-ALE 0.41, ALE-ALE 0.95, PME-PLE 0.21, PME-PME 0.63, ALE-PLE 0.45, PLE-PLE 1.02. Chelicerae: 3.12 long, sparse patch of hair and setae on retrolateral and dorsal sides, with 9 large teeth and 8 tiny. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.71 long, 1.06 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 14 cuspules rounded, though many missing, concentrated in the front-third line. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.67 long in front, 2.71 long behind, 1.27 wide, with 78 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 2.83 long, 2.6 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula indeterminable, because legs II and IV are missing. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg III fe 0, pa p0-3-0, ti p0-1-0 d2-2-0ap v1-1-3ap, me d2-2-2 v1-2-3ap, ta 0; palp: fe d0-0-1, pa 0, ti v0-1-3ap, ta 0. Patellar spines in a triangle. Preening combs absent. Tricobothria in two rows, not concentrated medially: 16 in tarsus I; 5 in tarsus III; 15 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: leg I: entire and dense in tarsus and anterior half of metatarsus; leg III: parted and sparse in tarsus and anterior third of metatarsus; palp: parted and dense on tarsus.

Spermathecae: two, each with a thick stalk, and one rounded receptacle branching from each.

Spinnerets: PMS small, elongate, 0.52 long, 0.14 wide, 0.05 apart. Basal, middle, and apical segments of PLS, 0.87 long, 0.59 wide; 0.35 long, 0.42 wide; 0.19 long, 0.28 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern: Chelicerae brown, carapace and legs brown. Abdomen dorsally light brown, pattern indistinguishable; ventrally pale.

TABLE 16. *Trichopelma banksia*. Female, MCZ no number. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.81**	**2.67**	**2.56**	**-**	**2.51**	**11.55**
Leg I	**4.7**	**3.46**	**3.51**	**2.99**	**1.74**	**16.4**
Leg II	**-**	**-**	**-**	**-**	**-**	**-**
Leg III	**4.17**	**2.77**	**2.67**	**3.15**	**1.89**	**14.65**
Leg IV	**-**	**-**	**-**	**-**	**-**	**-**

Distribution. Cuba.

Remarks. This species is currently represented only by the female holotype, which is in precarious condition. Several legs and many cuspules are missing, and the abdomen and spinnerets are withered and stiff. The specimen had been previously dissected, and now the spermathecae seems to be embedded by a resin-like material, making its handling and cleaning rather difficult. There are also two dark orange spots on top of each spermathecaee, which is not exactly clear whether they are from the original, or a result

of this strange resin-like cover. Nonetheless, the important structures of the spermathecae are visible, but unfortunately no other specimen with similar characteristics was found.

FIGURES 122–127. *Trichopelma banksia*, female holotype from Cuba, Havana, MCZ no number. **122,** habitus. **123,** ventral view. **124,** eye tubercle. **125,** spinnerets. **126,** maxillae and labium **127,** spermathecae. Scales = 1 mm (122-126), 0.5 mm (127).

***Trichopelma zebra* (Petrunkevitch, 1925)**

Merothele zebra Petrunkevitch, 1925: 91; Petrunkevitch, 1928: 76.
Trichopelma zebra; Miranda & Bermúdez, 2010: 175; World Spider Catalog, 2018.

Type material. 1 female holotype of *Merothele zebra*, Panama, Cerro Flores [8°28'N, 81°43'W], 03/19/1924, YPM-ENT no number, not examined
Remarks. This species was originally described by Petrunkevitch (1925) as *Merothele zebra*, and later transferred to *Trichopelma* by Raven (1985). The holotype of this species was not analyzed. However, Dr. Raymond Pupedis, the senior collections manager of the Peabody Museum of Natural History in Yale, was kind enough to provide some pictures of the type material. Looking at the pictures, it is possible to confirm that the specimen does belong to *Trichopelma*, particularly due to the clear 18-spot abdominal pattern. The type material was not possible to be dissected, so further information was not attained.

***Trichopelma insulanum* (Petrunkevitch, 1926)**
(Figs 128-146, 316)

Obaerarius insulanus Petrunkevitch, 1926: 40, f.40.
Psalistops corozali Petrunkevitch, 1929: 17, f. 6-7; Franganillo, 1931: 285; Roewer, 1942: 222; García, 2000: 3. **Syn. nov.**
Leptopelma arastellatus Franganillo, 1930: 4. First synonymized with *Psalistops corozali* Petrunkevitch, 1929 by Franganillo, 1931.
Trichopelma corozali; Raven, 1985: 113; World Spider Catalog, 2018.
Trichopelma insulanum; World Spider Catalog, 2018.

Diagnosis. Females differ from *T.* sp. nov. 8 by having non-fused spermathecae; from *T. steini* by not having branching on the main stalk of spermathecae. Males and females differ from the rest of *Trichopelma* by having a connected 18-point pattern.
Type material. 1 female holotype of *Obaerarius insulanus*, United States Virgin Islands, Saint Thomas Island [18°33'N, 64°89'W], July 1915, D. R. Shoemaker col., USNM no number, examined; 1 female holotype of *Psalistops corozalis*, Puerto Rico,

Corozal [18°34'N, 66°31'W], January 1915, H. C. Crampton col., AMNH F3872, examined.

Other material examined. PUERTO RICO: 1 immature, no further data, AMNH F3956d; Corozal, cave in Corozal [18°34'N, 66°31'W], 1 male, 1 female, 04/01/1967, S. Peck col., AMNH PR2; Cidra, Treasure Island [18°18'N, 66°14'W], 1 male, 02/26-27/1955, A. M. Nedler col., AMNH PR4; Bayaney, Empalme cave [18°34'N, 66°80'W], 2 immatures, 01/07/1967, S. Peck col., AMNH no number; Águas Buenas, 1 female, 02/13/1968, M. B. Fenton col., AMNH no number.

Redescription. Female AMNH F3872 (Figs 128-132). Carapace 2.98 long, 2.49 wide. Abdomen 3.22 long, 1.66 wide. Total length 6.2. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 0.46 wide. Clypeus absent. Eight eyes arranged on tubercle 0.2 high, 0.59 wide, 0.47 long. Tubercle ahead of frontal carapace margin. MOQ 0.56 wide, 0.34 long. Anterior eye row procurved, posterior row recurved. AME 0.12, ALE 0.13, PME 0.05, PLE 0.11. Eye interspaces: AME-AME 0.19, AME-ALE 0.16, ALE-ALE 0.46, PME-PLE 0.1, PME-PME 0.31, ALE-PLE 0.26, PLE-PLE 0.47. Chelicerae: 1.26 long, sparse patch of hair and setae on retrolateral and dorsal sides, with 7 large teeth and 9 tiny. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.34 long, 0.56 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 37 cuspules rounded, spreading until mid-line length. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 0.8 long in front, 1.07 long behind, 0.56 wide, with ca. 86 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 1.27 long, 1.29 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair and setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v0-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg III fe 0, pa p0-2-0, ti p0-1-0 d2-1-1 v2-0-3ap, me d2-1-1ap v4-1-3ap, ta 0; leg IV fe 0, pa r0-1-0, ti r1-1-1 v3-2-3ap, me d0-3-2 v2-3-3ap, ta 0; palp: fe 0, pa 0, ti v0-1-3ap, ta 0. Preening combs absent.

Tricobothria in two rows, not concentrated medially: 15 in tarsus I; 14 in tarsus IV; 8 in tarsus III; 9 in tarsus IV; 13 in palpal tarsus. Claws: ITC absent. STC with two rows of 4 teeth on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and metatarsus; legs III and IV: parted and sparse in tarsus and anterior part of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: two, each with a thin tapering stalk, from which a rounded receptacle branches.

Spinnerets: PMS small, 0.24 long, 0.06 wide, 0.07 apart. Basal, middle, and apical segments of PLS, 0.42 long, 0.26 wide; 0.17 long, 0.19 wide; 0.07 long, 0.09 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, symmetrical, with 6 stripes extending on lateral sides, each stripe connected to spots at the termination near the midline and a central spot in the middle of each line; ventrally pale.

TABLE 17. *Trichopelma insulanum*. Female, AMNH F3872. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.17**	**2.13**	**1.58**	**-**	**1.92**	**8.8**
Leg I	**4.18**	**3.16**	**2.44**	**2.2**	**1.33**	**13.31**
Leg II	**4.1**	**2.74**	**2.36**	**2.42**	**1.41**	**13.03**
Leg III	**3.91**	**2.36**	**1.96**	**2.79**	**1.41**	**12.43**
Leg IV	**4.42**	**2.15**	**3.1**	**3.86**	**1.82**	**15.35**

Description. Male AMNH PR2 (Figs 137-146). All characters as in female, except: Carapace 3.38 long, 2.88 wide. Abdomen 3.49 long, 1.62 wide. Total length 6.87. Carapace: Fovea 0.87 wide. Eight eyes arranged on tubercle 0.25 high, 0.96 wide, 0.96 long. MOQ 0.98 wide, 0.6 long. AME 0.2, ALE 0.2, PME 0.17, PLE 0.2. Eye interspaces: AME-AME 0.38, AME-ALE 0.28, ALE-ALE 0.92, PME-PLE 0.2, PME-PME 0.66, ALE-PLE 0.4, PLE-PLE 0.86. Chelicerae: 3.43 long, with 9 large teeth and 13 tiny. Labium: 0.88 long, 1.25 wide, having ca. 25 cuspules. Maxillae: 3.0 long in front, 4.0 long behind, 1.6 wide, with ca. 55 cuspules. Sternum: 2.54 long, 2.41 wide.

FIGURES 128–136. *Trichopelma insulanum*, female holotype of *T. corozalis* from Puerto Rico, Corozal, AMNH F3872. **128,** habitus. **129,** ventral view. **130,** eye tubercle. **131,** maxillae and labium. **132,** spinnerets. **133-134.** *Trichopelma insulanum*, female holotype of *T. insulanum* from Virgin Islands, Saint Thomas, USNM no number. **133,** habitus. **134,** ventral view. **135** spermathecae of AMNH F3872. **136.** spermathecae of female UNSM no number. Scales = 1 mm (128-134), 0.5 mm (135, 136).

Legs: IV-I-II-III. Spines: leg I: fe d1-3-2, pa 0, ti p1-0-1, r0-1-0, v2-3-1ap, me p0-1-0 v1-0-1ap, ta 0; leg II: fe d1-3-2, pa 0, ti p1-0-1 v2-2-2ap, me p0-1-0 v1-0-1ap, ta 0; leg III fe d1-4-2, pa p0-0-2, ti d0-1-1 v2-2-3ap, me p0-1-1 d0-1-2 v3-3-3ap, ta 0; leg IV fe d1-5-4, pa p0-0-1, ti p0-1-0 r0-1-1 v3-2-4(3ap), me p1-0-1 r0-1-1 v4-4-4(3ap), ta 0; palp: fe d0-0-1, pa 0, ti 0, ta 0. Tricobothria: 11 in tarsus I; 11 in tarsus II; 9 in tarsus III; 8 in tarsus IV; 11 in palpal tarsus. Claws: ITC absent. STC with two rows of 5-6 teeth, present on all legs. Scopula: absent on palp. Tibial apophysis: double, prolateral, curved, far from cuticular projection.

Palp: bulb rounded and thick with duct tapering. Embolus long, straight, with slightly curved apical portion. Keels absent. Cymbium rounded, strongly forked prolaterally.

Spinnerets: PMS 0.61 long, 0.21 wide, 0.1 apart. Basal, middle, and apical segments of PLS, 1.26 long, 0.6 wide; 0.91 long, 0.62 wide; 0.99 long, 0.45 wide, respectively.

TABLE 18. *Trichopelma insulanum*. Male, AMNH PR2. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**1.43**	**0.85**	**1.08**	**-**	**0.33**	**3.69**
Leg I	**2.38**	**1.59**	**1.98**	**1.96**	**1.32**	**9.23**
Leg II	**2.43**	**1.46**	**1.9**	**1.86**	**1.31**	**8.96**
Leg III	**2.43**	**1.09**	**1.55**	**2.4**	**1.16**	**8.63**
Leg IV	**2.8**	**1.38**	**2.46**	**3.37**	**1.55**	**11.56**

Distribution. Saint Thomas Island and Puerto Rico.

Remarks. Petrunkevitch described both the species *Obaerarius insulanus* (1926) and *Psalistops corozali* (1929) based on female specimens. Both these species were later transferred to the genus *Trichopelma* by Raven (1985).

The analysis of both holotypes, including the dissected spermathecae showed that these two species are actually conspecific, and so are herein synonymized. Furthermore, the analysis of additional brought upon the male specimen of this species, which is herein described for the first time.

FIGURES 137–146. *Trichopelma insulanum*, male from Puerto Rico, Corozal, AMNH PR2. **137,** habitus. **138,** ventral view. **139,** eye tubercle. **140,** apophysis and cuticular projection, prolateral view. **141,** apophysis and cuticular projection, ventral view. **142,** maxillae and labium. **143,** spinnerets. **144,** left bulb, prolateral view. **145,** left bulb, retrolateral view. **146**, cymbium. Scales = 1 mm (137-139, 142, 143), 0.5 mm (140, 141, 144-146).

***Trichopelma fulvus* (Bryant, 1948) n. comb.**

(Figs 147-168, 316)

Psalistops fulva Bryant, 1948: 335, f. 2, 5, 9.

Psalistops fulvus; Brignoli, 1983: 131; Penney & Perez-Gelabert, 2002: 205; Perez-Gelabert, 2008: 49; World Spider Catalog, 2018.

Psalistops maculosa Bryant, 1948: 336, f. 1, 8. **Syn. nov.**

Psalistops maculosus; Brignoli, 1983: 131; Penney & Perez-Gelabert, 2002: 205; Perez-Gelabert, 2008: 49; World Spider Catalog, 2018.

Psalistops maculata; Wunderlich, 1988: 52, f. 34.

Diagnosis. Females differ from *T. steini*, *T. maculatum* and *T.* sp. nov. 10 by having a thick tapering main stalk in the spermathecae; differ from the rest of *Trichopelma* by having two branches on the main stalk of the spermathecae. Males differ from *T. nitidum* and *T.* sp. nov. 1 by having apophysis far from cuticular projection; also differ from the rest of *Trichopelma* by having double row of several teeth on STC.

Type material. 1 male holotype, 1 female paratype of *Psalistops fulva*, Haiti, Diquini [18°32'N, 72°24'W], November 1912, W. M. Mann col., MCZ B002, examined. 1 female, 1 immature and 1 male holotype of *Psalistops maculosus*, Haiti, Milot [19°60'N, 72°21'W], January 1913, W. M. Mann col., MCZ B001, examined.

Other material examined. None.

Redescription. Female B002 (Figs 147-152). Carapace 6.92 long, 5.73 wide. Abdomen 8.56 long, 5.22 wide. Total length 15.48. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 0.84 wide. Clypeus absent. Eight eyes arranged on tubercle 0.24 high, 0.91 wide, 0.72 long. MOQ 1.1 wide, 0.66 long. Anterior eye row procurved, posterior row recurved. AME 0.26, ALE 0.22, PME 0.19, PLE 0.24. Eye interspaces: AME-AME 0.37, AME-ALE 0.3, ALE-ALE 0.82, PME-PLE 0.17, PME-PME 0.66, ALE-PLE 0.5, PLE-PLE 0.98. Chelicera: 2.05 long, dense patch of hair and setae on retrolateral and dorsal sides, with 9 large teeth and 9 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.78 long, 1.19 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 50 cuspules rounded on distal one

third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.9 long in front, 2.58 long behind, 1.38 wide, with ca. 65 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 2.83 long, 2.82 wide. Fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs present.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v1-1-0, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v1-1-0, me v1-1-1ap, ta 0; leg III fe d0-0-1, pa p0-0-2, ti p2-1-0 r1-1-0 v3-1-3ap, me p1-1-0 v3-2-3ap, ta 0; leg IV fe d0-0-1, pa p1-0-0 r1-0-0, ti p1-1-1 v3-2-3ap, me p1-2-1 r1-1-1 v3-3-3ap, ta 0; palp: fe d0-0-1, pa 0, ti p0-1-0 v0-2-3ap, ta 0. Preening combs absent. Clavate tricobothria in two rows, not concentrated medially: 5 in tarsus I; 9 in tarsus II; 8 in tarsus III; 7 in tarsus IV; 9 in palpal tarsus. Claws: ITC absent. STC each with 4 teeth on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: two, each with a thin tapering stalk, and two rounded receptacles branching from the tip of each stalk; branching point of the stalk more chitinized.

Spinnerets: PMS small, 0.41 long, 0.13 wide, 0.15 apart. Basal, middle, and apical segments of PLS, 0.82 long, 0.57 wide; 0.53 long, 0.44 wide; 0.35 long, 0.32 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alchool): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern seemingly symmetrical, with 18 connected dots, arranged in 3 lines of 6 dots each; ventrally pale.

TABLE 19. Trichopelma fulvus. Female, MCZ B002. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**2.97**	**1.84**	**2.12**	**-**	**2.36**	**9.29**
Leg I	**4.09**	**3.11**	**3.15**	**2.42**	**1.46**	**14.23**
Leg II	**3.73**	**2.97**	**2.76**	**2.63**	**1.68**	**13.77**
Leg III	**3.59**	**2.09**	**2.29**	**2.82**	**1.75**	**12.54**
Leg IV	**4.02**	**2.72**	**3.75**	**5.17**	**2.31**	**17.97**

Redescription. Male B001 (Figs 153-162). All characters as in female, except: Carapace 6.16 long, 4.92 wide. Abdomen 5.91 long, 3.1 wide. Total length 10.53. Carapace: Fovea 0.8 wide. Eight eyes arranged on tubercle 0.34 high, 0.96 wide, 0.77 long. MOQ 0.96 wide, 0.58 long. AME 0.2, ALE 0.25, PME 0.15, PLE 0.19. Eye interspaces: AME-AME 0.37, AME-ALE 0.27, ALE-ALE 0.72, PME-PLE 0.37, PME-PME 0.56, ALE-PLE 0.48, PLE-PLE 0.84. Chelicerae: 1.45 long, with 10 large teeth and 7 tiny. Labium: 0.55 long, 0.9 wide, having ca. 24 cuspules. Maxillae: 1.57 long in front, 1.99 long behind, 1.09 wide, with ca. 53 cuspules. Sternum: 2.99 long, 2.47 wide.
Legs: IV-I-II-III. Spines: leg I: fe d0-0-2, pa 0, ti p0-1-0 r0-1-0 v2-2-1ap, me v3-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti p0-1-1 r0-0-1 v2-1-3ap, me v2-0-1ap, ta 0; leg III fe d0-0-2, pa p0-1-0 r0-2-0, ti p2-2-1ap d1-1-0 r0-2-1ap v2-1-2ap, me p1-1-1ap d1-1-1 r1-1-1ap v2-2-2ap, ta 0; leg IV fe d0-0-2, pa r0-1-0, ti p0-1-2 d0-1-1 r1-2-1 v3-1-3ap, me p1-0-2(1ap) d1-2-2 r1-0-2(1ap) v1-2-1ap, ta 0; palp: fe d0-0-3(1ap), pa d0-0-1, ti p0-1-1ap d1-0-1ap r0-0-1ap, ta 0. Tricobothria: missing in tarsus I; missing in tarsus II; 7 in tarsus III; missing in tarsus IV; 13 in palpal tarsus. Claws: STC with two rows of 4-5 teeth, present on all legs. Scopula: absent on palp. Tibial apophysis: double, prolateral, curved, far from cuticular projection.
Palp: bulb rounded and thick with duct tapering. Embolus long, straight, with slightly curved apical portion. Keels absent. Cymbium rounded, strongly forked prolaterally.
Spinnerets: PMS 0.32 long, 0.11 wide, 0.08 apart. Basal, middle, and apical segments of PLS, 0.69 long, 0.42 wide; 0.44 long, 0.35 wide; 0.3 long, 0.23 wide, respectively.

FIGURES 147-152. *Trichopelma fulvus*, female paratype from Haiti, Diquini, MCZ B002. **147,** habitus. **148,** ventral view. **149,** eye tubercle. **150,** spinnerets. **151,** maxillae and labium **152,** spermathecae. Scales = 1 mm (147-151), 0.5 mm (152).

TABLE 20. *Trichopelma fulvus*. Male, MCZ B001. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**4.5**	**2.81**	**2.07**	**-**	**1.21**	**10.59**
Leg I	**4.53**	**2.94**	**3.46**	**3.33**	**1.85**	**16.11**
Leg II	**4.23**	**2.64**	**3.1**	**3.4**	**2.04**	**15.41**
Leg III	**3.85**	**2.13**	**2.64**	**3.46**	**2.16**	**14.24**
Leg IV	**5.14**	**2.52**	**4.04**	**5.73**	**2.17**	**19.6**

Distribution. Haiti.

Remarks. Bryant (1948) described two new species from Haiti: *Psalistops fulvus* and *Psalistops maculata*, placing both of them in the genus *Psalistops* due to a similarity to *P. corozali*. The analysis of both type material revealed that the specimens actually belong to *Trichopelma*, since they do not have incrassate spinnerets and also display the 18-spot abdominal pattern. Hence, they are herein transferred from *Psalistops* to *Trichopelma*.

Additionally, by comparing both species it was possible to observe that there are little to no significant morphological differences between them. Given how they were both collected in close localities and no distinguishing character could be found, the species are herein synonymized under the name *T. fulvus*. This species is redescribed for both sexes.

***Trichopelma laselva* Valerio, 1986**

(Figs 169-173, 313)

Trichopelma laselva Valerio, 1986: 97, f. 4, 8-9, 12-13; World Spider Catalog, 2018.

Diagnosis. Differs from other females of *Trichopelma* by having one tooth on the STC of legs.

Type material. 1 female holotype, Costa Rica, Heredia, La Selva Biological Station [10°42'N, 84°02'W], 02/11/1976, Roth-Schroepfer col., AMNH CR1, examined.

Other material examined. None.

Redescription. Female CR1 (Figs 169-173). Carapace 8.32 long, 6.33 wide. Abdomen 10.69 long, 6.86 wide. Total length 19.01. Carapace: Surface predominantly smooth,

FIGURES 153–162. *Trichopelma fulvus*, male holotype from Haiti, Diquini, MCZ B002. **153,** habitus. **154,** ventral view. **155,** eye tubercle. **156,** apophysis and cuticular projection, prolateral view. **157,** apophysis and cuticular projection, ventral view. **158,** maxillae and labium. **159,** spinnerets. **160,** left bulb, prolateral view. **161,** left bulb, retrolateral view. **162**, cymbium. Scales = 1 mm (153-155, 158, 159), 0.5 mm (156, 157, 160-162).

FIGURES 163–168. *Trichopelma fulvus*, male holotype of *Psalistops maculosus* from Haiti, Milot, MCZ B001. **163,** habitus. **164,** ventral view. **165,** apophysis and cuticular projection, prolateral view. **166,** apophysis and cuticular projection, ventral view. **167,** left bulb, prolateral view. **168,** left bulb, retrolateral view. Scales = 1 mm (163, 164), 0.5 mm (165-168).

with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved, 1.11 wide. Clypeus absent. Eight eyes arranged on tubercle 0.47 high, 1.23 wide, 0.98 long. MOQ 1.33 wide, 0.71 long. Anterior eye row procurved, posterior row recurved. AME 0.25, ALE 0.38, PME 0.15, PLE 0.19. Eye interspaces: AME-AME 0.42, AME-ALE 0.37, ALE-ALE 1.23, PME-PLE 0.2, PME-PME 0.8, ALE-PLE 0.51, PLE-PLE 1.19. Chelicera: 3.11 long, dense patch of hair and setae on retrolateral and dorsal sides, with 10 large teeth and 4 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.91 long, 1.33 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 42 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 2.31 long in front, 3.39 long behind, 1.38 wide, with ca. 101 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 3.43 long, 3.2 wide. Fine setae scattered over surface, without dense patches. Three pairs of sigilla,

rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs present.

Legs: formula indeterminable, because leg II is missing. Spines: leg I: fe 0, pa 0, ti 0, me v0-0-1ap, ta 0; leg II: missing; leg III fe 0, pa p0-1-1, ti v0-1-3ap, me d0-0-2 v3-1-3ap, ta 0; leg IV fe 0, pa 0, ti v1-0-1, me d0-1-0 v0-3-3ap, ta 0; palp: fe 0, pa 0, ti v0-1-2ap, ta 0. Preening combs absent. Clavate tricobothria missing. Claws: ITC absent. STC with 1 tooth on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: leg I: entire and dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and entire on tarsus. Tarsus IV cracked.

Spermathecae: two with a long thick main stalk, with a rounded apical portion.

Spinnerets: PMS small, 0.7 long, 0.27 wide, 0.17 apart. PLS missing.

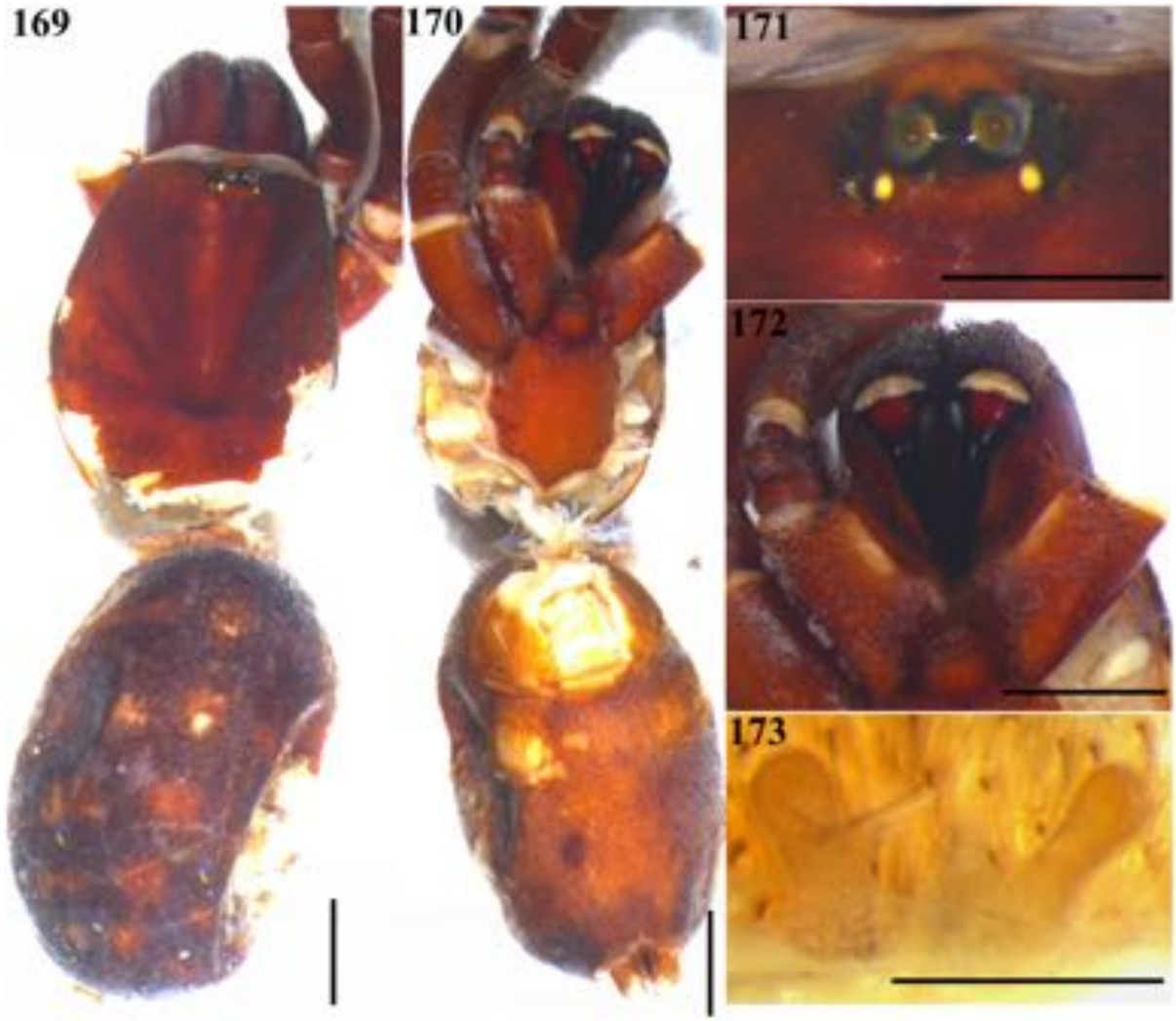
Color pattern (preserved in alchool): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern very faint, seemingly symmetrical, with 18 disconnected dots, arranged in 3 lines of 6 dots each; ventrally pale.

TABLE 21. *Trichopelma laselva*. Female, MNHN 100-02. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.85**	**2.55**	**2.61**	**-**	**2.25**	**11.26**
Leg I	**4.95**	**3.6**	**3.68**	**2.71**	**1.59**	**16.53**
Leg II	**-**	**-**	**-**	**-**	**-**	**-**
Leg III	**4.12**	**2.98**	**2.81**	**3.86**	**1.8**	**15.57**
Leg IV	**6.01**	**3.45**	**4.84**	**6.25**	**2.3**	**22.85**

Distribution. Costa Rica.

Remarks. This species was described by Valerio (1986) based on one female specimen. This holotype is in very poor condition, with several legs missing, other close to detaching and the PLS completely torn and lost. In any case, it was possible to redescribe the species and verify its validity in the *Trichopelma*, specially due to the visible 18-point abdominal pattern.



FIGURES 169-173. *Trichopelma laselva*, female holotype from Costa Rica, Heredia, AMNH CR1. **169,** habitus. **170,** ventral view. **171,** eye tubercle. **172,** maxillae and labium. **173,** spermathecae. Scales = 1 mm (169-172), 0.5 mm (173).

***Trichopelma venadensis* Valerio, 1986 n. comb.**

Psalistops venadensis; Valerio, 1986: 94, f. 1-3, 6-7, 10-11; World Spider Catalog, 2018.

Type material. Female holotype, Costa Rica, El venado, San Carlos, Alajuela Province, C. E. Valerio col., MZUCR, not examined.

Remarks. This species was described by Valerio (1986) based on a female holotype and an immature female paratype. It was described alongside *Trichopelma laselva*. Interestingly, both these genera have very similar spermathecae, with a thick tapering main stalk, and a well-defined rounded receptacle at the tip.

Valerio (1986) included the species in the *Psalistops* genus due to the integral tarsus IV an apical PLS segment short and conical. However, both these characters are present in

some species of *Trichopelma* and are not restricted to *Psalistops*. Looking at the illustration by Valeio (1986), the specimen clearly displays the connected 18-spot abdominal pattern, and as such it is herein transferred to the genus *Trichopelma*.

Both *T. laselva* and *T. venadensis* seem very close in morphology, specially the seemingly equal spermathecae. Nonetheless, a distinction between the two species is maintained due to the former having a cracked tarsus IV and only one tooth in the STC, while the latter has an integral tarsus IV and several teeth in the STC.

***Trichopelma hispaniolensis* Wunderlich, 1988 n. comb.**

(Figs. 174-175)

Psalistops hispaniolensis Wunderlich, 1988: 50; Penney & Pérez-Gelabert, 2002: 205; Pérez-Gelabert, 2008: 49; Dunlop *et al.*, 2009.

Type material. 1 male holotype, Dominican amber, Wunderlich col., SMFBe-852, examined.

Remarks. This fossil specimen was described by Wunderlich (1988) based on a male specimen preserved in Dominican amber. The spider was preserved alongside numerous leaves, a larva of a cockroach (Blattaria), a beetle (Coleoptera), an ant (Formicidae) and 5 fecal balls.

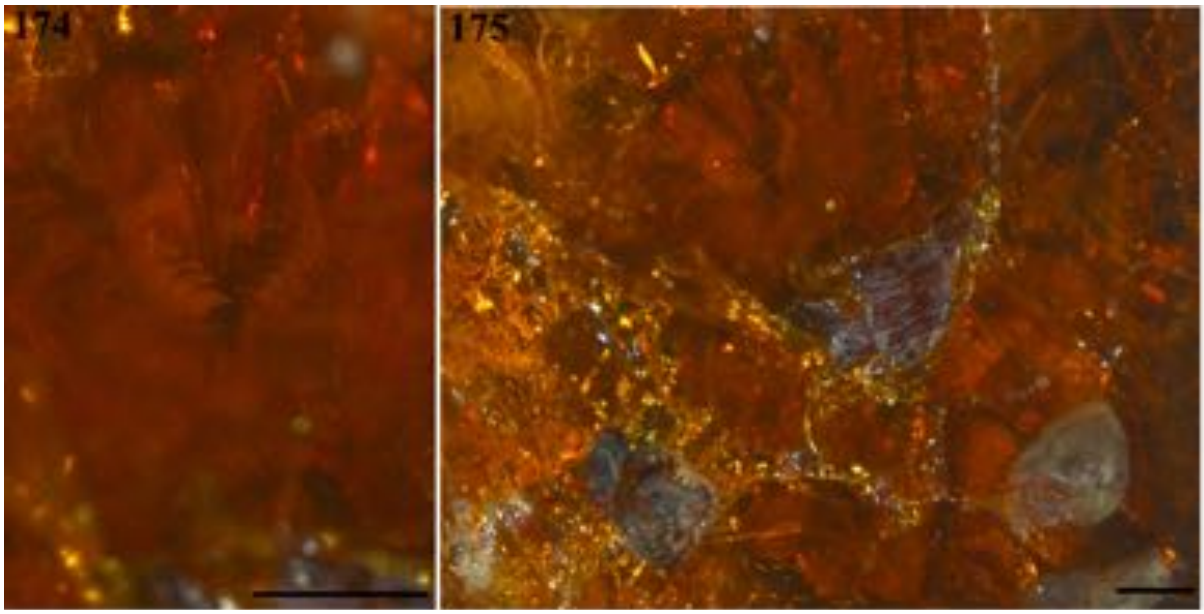
The author detailed that the fossil already had some abraded body parts, such as the abdomen, spinnerets, right tarsi III and IV, left tibia III and femur IV. However, it seems like the author managed to describe other key characters, such as the parted entire scopula of the tarsi, clavate tricobothria on tarsi, bulb morphology, tarsal claws with several teeth, among others.

The type was examined and a redescription was attempted. However, the condition of the ambar had worsened since the original state pictured by Wunderlich (1988). There were many more cracks on the surface of the ambar, which covered nearly the entire body of the already hidden fossil. The cracks had progressed so much, that the museum had put the amber inside a resin case to protect it.

There was an attempt at acquiring an image via a microtomography reconstruction. Unfortunately, the scanning could not produce an image of the spider, so not much was possible to be done with the fossil.

Notwithstanding, the drawings published by Wunderlich (1988) could shed some light about the identification of this fossil species. Curiously, the pyriform bulb with long embolus resemble a lot to the bulbs in *Trichopelma*, as does the apophysis with the small cuticular projection closely positioned to it. Moreover, the locality where the fossil was found (Hispaniola), so it is possible to imagine that this species actually belongs to *Trichopelma*.

Furthermore, Wunderlich (1988) stated that he included the fossil specimen in *Psalistops* due to the similarity to *P. maculata* and *P. fulva* (now both *Trichopelma fulvus*) and *P. cubana* (synonym of *T. cubanum*). Therefore, this species is herein transferred to the genus *Trichopelma*.



FIGURES 174-175. *Trichopelma hispaniolensis*, male holotype preserved in Dominican Amber, SMFBe-852. **174,** maxillae and chelicerae. **175,** ventral view. Scales = 1 mm.

***Trichopelma* sp. nov. 1**

(Figs 176-191, 316)

Diagnosis. Females differ from *T. fulva* by having more than two receptacles in the spermathecae; from the rest of *Trichopelma* by having a dark sclerotized stalk in the spermathecae. Males differ from *T. nitidum, T. maculatum* and *T.* sp. nov. 3 by having PLS with a domed apical segment; from the rest of *Trichopelma* by having the apophysis aligned diagonally with the cuticular projection.

Type material. 1 female holotype, Dominican Republic, Parque Nacional del Este [18°37'N, 67°68'], jul/2004, J. Huff col., AMNH RD7; 1 male paratype, same data as female.

Description. Female AMNH RD7 (Figs 176-181). Carapace 4.33 long, 3.49 wide. Abdomen 5.66 long, 3.57 wide. Total length 9.99. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 0.5 wide. Clypeus absent. Eight eyes arranged on tubercle 0.31 high, 0.68 wide, 0.65 long. MOQ 0.85 wide, 0.49 long. Anterior eye row slightly procurved, posterior row recurved. AME 0.16, ALE 0.18, PME 0.13, PLE 0.17. Eye interspaces: AME-AME 0.3, AME-ALE 0.19, ALE-ALE 0.67, PME-PLE 0.11, PME-PME 0.54, ALE-PLE 0.39, PLE-PLE 0.75. Chelicera: 2.27 long, dense patch of hair and setae on retrolateral and dorsal sides, with 7 large teeth and 5 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.51 long, 0.66 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 17 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.11 long in front, 1.61 long behind, 1.0 wide, with ca. 42 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, rounded. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 2.12 long, 2.14 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-1-1, ti r0-1-1 v0-1-2ap, me p0-1-1 v0-2-3ap, ta 0; leg IV fe d0-0-1, pa p0-1-1, ti r0-1-1 v0-1-2ap, me p0-1-1 v0-2-3ap, ta 0; palp: fe 0, pa 0, ti p0-1-0 v1-0-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 9 in tarsus I; 6 in tarsus II; 8 in tarsus III; 8 in tarsus IV; 6 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and moderately dense in tarsus and

anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Annular bands absent.

Spermathecae: two, each with a thick stalk, and one rounded receptacle branching from each tip of the stalk.

Spinnerets: PMS small, 0.54 long, 0.29 wide, 0.22 apart. Basal, middle, and apical segments of PLS, 0.91 long, 0.62 wide; 0.85 long, 0.49 wide; 0.81 long, 0.33 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, possibly symmetrical, with 5 transverse lines.

TABLE 22. *Trichopelma* sp. nov. 1. Female, AMNH RD7. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**2.48**	**1.74**	**1.73**	**-**	**1.14**	**7.09**
Leg I	**4.61**	**3.47**	**3.13**	**2.21**	**1.58**	**15**
Leg II	**3.68**	**3**	**2.42**	**2.22**	**1.62**	**12.94**
Leg III	**3.65**	**2.27**	**2.25**	**3.04**	**1.9**	**13.11**
Leg IV	**4.75**	**2.84**	**3.8**	**4.98**	**2.59**	**18.96**

Description. Male AMNH RD2 (Figs 182-191). All characters as in female, except: Carapace 5.59 long, 4.64 wide. Abdomen 5.3 long, 2.6 wide. Total length 10.89. Carapace: Fovea 0.62 wide. Eight eyes arranged on tubercle 0.31 high, 0.86 wide, 0.72 long. MOQ 1.01 wide, 0.68 long. AME 0.22, ALE 0.18, PME 0.14, PLE 0.21. Eye interspaces: AME-AME 0.36, AME-ALE 0.25, ALE-ALE 0.79, PME-PLE 0.12, PME-PME 0.59, ALE-PLE 0.47, PLE-PLE 0.89. Chelicerae: 1.59 long, with 7 large teeth and 5 tiny. Labium: 0.55 long, 0.82 wide, having ca. 25 cuspules. Maxillae: 1.52 long in front, 1.98 long behind, 0.91 wide, with ca. 79 cuspules. Sternum: 2.49 long, 2.44 wide. Legs: IV-I-II-III. Spines: leg I: fe d0-0-3, pa 0, ti p1-0-1, v3-2-3ap, me p1-0-0 v1-3-1ap, ta 0; leg II: fe d0-0-4, pa 0, ti p1-0-1 v3-1-3ap, me p1-0-0 v2-1-1ap, ta 0; leg III fe d3-1-2, pa p0-0-1 r0-1-0, ti p1-0-1 d0-1-1 v4-3-2ap, me d1-1-3 v3-2-3ap, ta 0; leg IV fe d1-3-3, pa p0-0-1, ti d2-1-0 v3-3-3ap, me d2-3-2 v3-4-3ap, ta 0; palp: fe 0, pa 0, ti p0-0-2ap v1-1-1, ta 0. Tricobothria: 7 in tarsus I; 13 in tarsus II; 11 in tarsus III; 10 in tarsus IV; 11 in palpal tarsus. Claws: ITC absent. STC with two rows of 4-5 teeth, present on all

FIGURES 176-181. *Trichopelma* sp. nov. 1, female holotype from Dominican Republic, Parque Nacional del Este, AMNH RD7. **176,** habitus. **177,** ventral view. **178,** eye tubercle. **179,** spinnerets. **180,** maxillae and labium. **181,** spermathecae. Scales = 1 mm (176-180), 0.5 mm (181).

legs. Scopula: absent on palp. Tibial apophysis: double, prolateral, curved, close to cuticular projection.

Palp: bulb rounded and thick with duct tapering. Embolus long, straight, with slightly curved apical portion. Keels absent. Cymbium rounded, strongly forked prolaterally. Spinnerets: PMS 0.24 long, 0.1 wide, 0.08 apart. Basal, middle, and apical segments of PLS, 0.97 long, 0.47 wide; 0.59 long, 0.4 wide; 0.35 long, 0.25 wide, respectively.

TABLE 23. *Trichopelma* sp. nov. 1. Male, AMNH RD2. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**4.1**	**2.52**	**1.87**	**-**	**1.05**	**9.54**
Leg I	**4.24**	**2.65**	**3.19**	**3**	**1.56**	**14.64**
Leg II	**3.98**	**2.21**	**2.52**	**2.9**	**1.79**	**13.4**
Leg III	**3.54**	**1.98**	**2.28**	**3.14**	**1.96**	**12.9**
Leg IV	**4.86**	**2.24**	**3.69**	**5.35**	**1.98**	**18.12**

Distribution. Dominican Republic.

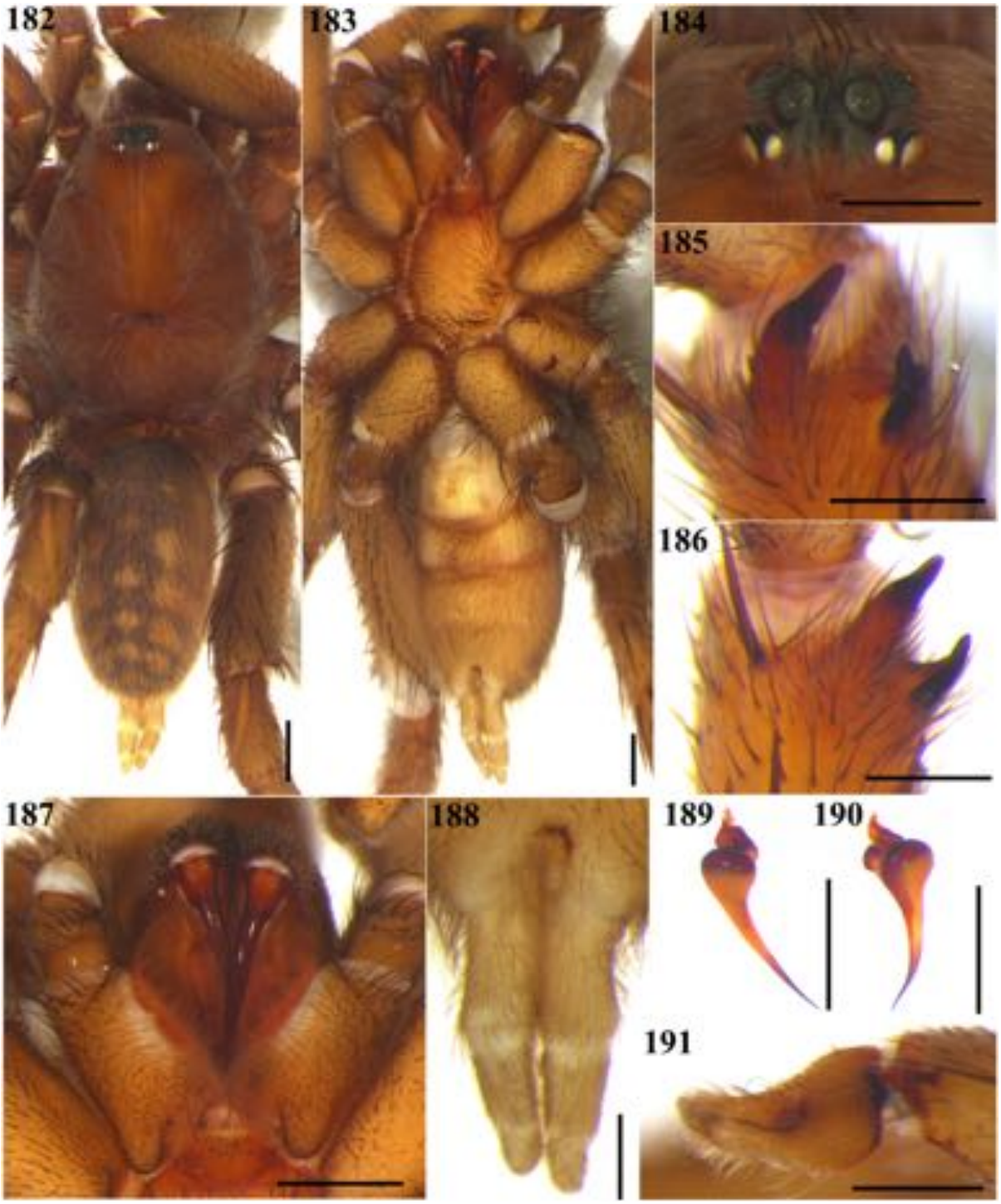
***Trichopelma* sp. nov. 2**

(Figs. 192-197, 316)

Diagnosis. Differs from other females of *Trichopelma* by having tarsus III cracked.

Type material. 1 female holotype, Dominican Republic, [18°73'N, 70°16'], jul/2004, J. Huff col., AMNH RD5.

Description. Female AMNH RD5 (Figs 192-197). Carapace 8.27 long, 6.62 wide. Abdomen 8.95 long, 5.04 wide. Total length 17.22. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 1.21 wide. Clypeus absent. Eight eyes arranged on tubercle 0.42 high, 1.08 wide, 0.86 long. MOQ 1.3 wide, 0.67 long. Anterior eye row slightly procurved, posterior row recurved. AME 0.23, ALE 0.34, PME 0.16, PLE 0.28. Eye interspaces: AME-AME 0.45, AME-ALE 0.28, ALE-ALE 1.06, PME-PLE 0.22, PME-PME 0.7, ALE-PLE 0.44, PLE-PLE 1.16. Chelicera: 2.66 long, dense patch of hair and setae on retrolateral and dorsal sides, with 9 large teeth and 6 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 1.02 long, 1.24 wide with dense patch of fine setae



FIGURES 182–191. *Trichopelma* sp. nov. 1, male paratype from Dominican Republic, Parque Nacional del Este, AMNH RD2. **182,** habitus. **183,** ventral view. **184,** eye tubercle. **185,** apophysis and cuticular projection, prolateral view. **186,** apophysis and cuticular projection, ventral view. **187,** maxillae and labium. **188,** spinnerets. **189,** left bulb, prolateral view. **190,** left bulb, retrolateral view. **191**, cymbium. Scales = 1 mm (182-184, 187, 188), 0.5 mm (185, 186, 189-191).

anteriorly, and fine setae sparsely distributed medially, having ca. 34 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 2.25 long in front, 3.3 long behind, 1.59 wide, with ca. 86 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thin. Anterior lobe distinct,

angular. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 3.68 long, 3.36 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-1-1, ti d1-1-0 r1-1-0 v2-1-3ap, me p1-1-0 d0-2-2ap v2-1-3ap, ta 0; leg IV fe 0, pa p0-0-1, ti r1-1-0 v2-2-3ap, me d1-2-2 v2-3-3ap, ta 0; palp: fe d0-0-1, pa 0, ti p0-2-0 v0-1-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 9 in tarsus I; 12 in tarsus IV; 8 in tarsus III; 3 in tarsus IV; 8 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and moderately dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Tarsi III and IV cracked.

Spermathecae: two, each with a thick tapering stalk, and several rounded receptacles branching from each tip of the stalk.

Spinnerets: PMS small, digitiform, 0.49 long, 0.17 wide, 0.11 apart. Basal, middle, and apical segments of PLS, 0.74 long, 0.42 wide; 0.49 long, 0.29 wide; 0.17 long, 0.19 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, indiscernible; ventrally pale.

TABLE 24. *Trichopelma* sp. nov. 2. Female, AMNH RD5. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.7**	**2.26**	**3.03**	**-**	**2.32**	**11.31**
Leg I	**5.69**	**3.89**	**4**	**3.6**	**1.49**	**18.67**
Leg II	**5.08**	**3.58**	**3.8**	**3.53**	**1.55**	**17.54**
Leg III	**4.86**	**3.31**	**3.31**	**3.94**	**1.97**	**17.39**
Leg IV	**6.55**	**3.77**	**4.91**	**6.6**	**2.22**	**24.05**

Distribution. Dominican Republic.

FIGURES 192-197. *Trichopelma* sp. nov. 2, female holotype from Dominican Republic, AMNH RD5. **192,** habitus. **193,** ventral view. **194,** eye tubercle. **195,** spinnerets. **196,** maxillae and labium **197,** spermathecae. Scales = 1 mm (192-196), 0.5 mm (197).

***Trichopelma* sp. nov. 3**

(Figs. 198-207, 316)

Diagnosis. Differs from *T. maculatum* and *T.* sp. nov. 1 by having the scopula spread on entire metatarsus III and IV; from other males of *Trichopelma* by the absence of book lung combs.

Type material. 1 male holotype, Dominican Republic, Parque Nacional del Este [18°37'N, 67°68'], jul/2004, J. Huff col., AMNH RD6.

Other material examined. None.

Description. Male AMNH RD6 (Figs 198-207). Carapace 5.67 long, 4.58 wide. Abdomen 5.43 long, 2.73 wide. Total length 11.1. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 0.62 wide. Clypeus absent. Eight eyes arranged on tubercle 0.38 high, 0.72 wide, 0.7 long. MOQ 0.97 wide, 0.57 long. Anterior eye row strongly procurved, posterior row slightly recurved. AME 0.21, ALE 0.19, PME 0.14, PLE 0.24. Eye interspaces: AME-AME 0.37, AME-ALE 0.19, ALE-ALE 0.7, PME-PLE 0.16, PME-PME 0.57, ALE-PLE 0.36, PLE-PLE 0.84. Chelicerae: 1.63 long, dense patch of hair and setae on retrolateral and dorsal sides, with 7 large teeth and 5 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.42 long, 0.77 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially having ca. 52 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.47 long in front, 2.03 long behind, 0.99 wide, with ca. 65 cuspules on upper mound in inner angle, not spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 2.53 long, 2.57 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: predominantly smooth, with sparse cover of hair and setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: IV-I-II-III. Spines: leg I: fe d0-1-2, pa 0, ti p0-1-1, v0-3-1, me v1-1-1ap, ta 0; leg II: fe d0-1-2, pa 0, ti p0-1-1 v2-1-3ap, me p0-1-0 v1-1-1, ta 0; leg III fe d0-1-2, pa p0-0-2, ti p0-1-1 r1-0-1 v3-2-3ap , me d1-2-2 v2-2-3ap; leg IV fe d0-0-2, pa p0-0-1 r1-0-0, ti

d0-2-0 v3-2-3ap, me d0-1-3 v2-4-3ap, ta 0; palp: fe d0-0-4, pa 0, ti p1-2-1 r0-0-1, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 12 in tarsus I; 13 in tarsus II, 13 in tarsus III, 5 in tarsus IV; 6 in palpal tarsus. Claws: ITC absent. STC with 3 teeth on all legs. Claw tufts in all legs, divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and moderately dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; absent on palp. Tarsi III and IV cracked. Tibial apophysis: double, ventral, curved, close to cuticular projection.

Palp: bulb piriform with duct tapering. Embolus long, straight, with slightly curved apical portion. Keels absent. Cymbium triangular, strongly forked prolaterally.

Spinnerets: PMS small, 0.47 long, 0.12 wide, 0.07 apart. Basal, middle, and apical segments of PLS, 0.74 long, 0.43 wide; 0.54 long, 0.36 wide; 0.3 long, 0.27 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae dark brown, carapace and legs dark brown. Abdomen dorsal pattern symmetrical, with 6 spots medially and stripes extending on lateral sides, each stripe connected to other spots at the termination near the midline; ventrally mostly pale, with darker spots.

TABLE 25. *Trichopelma* sp. nov. 3. Male, AMNH RD6. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.3**	**2.14**	**3.14**	**-**	**1.08**	**9.66**
Leg I	**5.25**	**3.25**	**5.27**	**3.72**	**2.25**	**19.74**
Leg II	**4.72**	**2.67**	**4.32**	**4.06**	**2.94**	**18.71**
Leg III	**4.55**	**2.27**	**3.71**	**5.06**	**3.06**	**16.65**
Leg IV	**4.98**	**2.24**	**5.44**	**6.8**	**3.55**	**23.01**

Distribution. Dominican Republic.

FIGURES 198–207. *Trichopelma* sp. nov. 3, male holotype from Dominican Republic, Parque nacional del Este, AMNH RD6. **198,** habitus. **199,** ventral view. **200,** eye tubercle. **201,** apophysis and cuticular projection, prolateral view. **202,** apophysis and cuticular projection, ventral view. **203,** maxillae and labium. **204,** spinnerets. **205,** left bulb, prolateral view. **206,** left bulb, retrolateral view. **207**, cymbium. Scales = 1 mm (198-200, 203, 204), 0.5 mm (201, 202, 205-207).

***Trichopelma* sp. nov. 4**

(Figs. 208-213, 315)

Diagnosis. Differs from females of *T. laselva* and *T.* sp. nov. 11 by the strongly recurved posterior eye row; from the rest of *Trichopelma* by having the main stalk of the spermathecae without constriction.

Type material. 1 female holotype, Cuba, Havana [23°11'N, 82°36'], Nathan Banks col., MCZ 75006.

Other material examined. None.

Description. Female MCZ 75006 (Figs 208-213). Carapace 6.37 long, 5.37 wide. Abdomen 7.6 long, 4.16 wide. Total length 13.97. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly recurved, 0.75 wide. Clypeus absent. Eight eyes arranged on tubercle 0.32 high, 0.86 wide, 0.83 long. MOQ 1.14 wide, 0.62 long. Anterior eye row procurved, posterior row recurved. AME 0.18, ALE 0.23, PME 0.12, PLE 0.16. Eye interspaces: AME-AME 0.36, AME-ALE 0.31, ALE-ALE 0.91, PME-PLE 0.19, PME-PME 0.65, ALE-PLE 0.5, PLE-PLE 1.02. Chelicera: 3.11 long, dense patch of hair and setae on retrolateral and dorsal sides, with 8 large teeth and 5 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.67 long, 1.03 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 26 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.96 long in front, 2.65 long behind, 1.29 wide, with ca. 79 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 3.06 long, 2.96 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs present.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-0-1, ti p1-0-0 r1-0-1 v2-1-3ap, me d2-2-2 v2-2-3ap, ta 0; leg IV fe d0-0-1, pa 0, ti p0-0-1 v1-2-3ap, me

d2-2-2 v2-2-3ap, ta 0; palp: fe d0-0-1, pa 0, ti p0-0-1 v0-1-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 8 in tarsus I; 8 in tarsus II; 16 in tarsus III; 10 in tarsus IV; 6 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: entire and dense in tarsus and metatarsus; legs III and IV: parted, sparse in tarsus, anterior half of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: two, each with a thick stalk and rounded apex.

Spinnerets: PMS small, digitiform, 0.59 long, 0.18 wide, 0.1 apart. Basal, middle, and apical segments of PLS, 0.92 long, 0.57 wide; 0.37 long, 0.44 wide; 0.16 long, 0.21 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, symmetrical, with 6 spots in the middles, and on the side of each spost a lateral line.

TABLE 26. *Trichopelma* sp. nov. 4. Female, MCZ 75006. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.72**	**2.48**	**2.53**	**-**	**2.54**	**11.27**
Leg I	**4.85**	**3.45**	**4.09**	**2.55**	**1.79**	**16.73**
Leg II	**4.63**	**3.09**	**3.29**	**3.09**	**2.04**	**16.14**
Leg III	**3.59**	**2.78**	**2.84**	**3.46**	**1.85**	**14.52**
Leg IV	**5.46**	**2.55**	**4.53**	**3.26**	**1.96**	**17.76**

Distribution. Cuba.

***Trichopelma* sp. nov. 5**

(214-229, 315)

Diagnosis. Females differ from *T.* sp. nov. 8 by having the scopula of legs III and IV spread on entire metatarsus; from other *Trichopelma* by having a fused spermathecae. Males differ from other *Trichopelma* by having keels around the embolus.

FIGURES 208-213. *Trichopelma* sp. nov. 4, female holotype from Cuba, Havana, MCZ 75006. **208,** habitus. **209,** ventral view. **210,** eye tubercle. **211,** spinnerets. **212,** maxillae and labium **213,** spermathecae. Scales = 1 mm (208-212), 0.5 mm (213).

Type material. 1 female holotype, Cuba, Isla de Pinos, [21°60'N, 82°82'], 01/04/1905, Barbours & Banks col., MCZ 75003; 1 male paratype, same data as female, MCZ 75005.

Other material examined. None.

Description. Female MCZ 75003 (Figs 214-219). Carapace 7.32 long, 5.86 wide. Abdomen 11.91 long, 6.62 wide. Total length 19.23. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved, 0.84 wide. Clypeus absent. Eight eyes arranged on tubercle 0.27 high, 0.96 wide, 0.99 long. MOQ 1.17 wide, 0.69 long. Anterior eye row procurved, posterior row recurved. AME 0.22, ALE 0.31, PME 0.13, PLE 0.22. Eye interspaces: AME-AME 0.38, AME-ALE 0.36, ALE-ALE 0.96, PME-PLE 0.2, PME-PME 0.67, ALE-PLE 0.54, PLE-PLE 1.1. Chelicera: 4.1 long, dense patch of hair and setae on retrolateral and dorsal sides, with 9 large teeth and 6 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.79 long, 1.19 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 33 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 2.21 long in front, 2.96 long behind, 1.52 wide, with ca. 106 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, thin. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 3.3 long, 3.12 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs present.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v0-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-0-1, ti p0-0-1 v0-2-3ap, me d2-2-2 v1-2-2ap, ta 0; leg IV fe d0-0-1, pa 0, ti p0-0-1 v0-2-3ap, me d2-2-2 v1-2-2ap, ta 0; palp: fe d0-0-1, pa 0, ti p0-0-1 v0-2-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 9 in tarsus I; 6 in tarsus II; 8 in tarsus III; 8 in tarsus IV; 6 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: entire and dense in tarsus, metatarsus; and

anterior third of tibia; legs III and IV: parted, sparse in tarsus, metatarsus and anterior third of tibia; palp: dense and entire on tarsus and anterior third of tibia. Tarsus IV cracked.

Spermathecae: two, each with a thick stalk, and one rounded receptacle branching from each tip of the stalk.

Spinnerets: PMS small, 0.39 long, 0.21 wide, 0.12 apart. Basal, middle, and apical segments of PLS, 1.23 long, 0.63 wide; 0.44 long, 0.49 wide; 0.26 long, 0.28 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, symmetrical, with 6 spots in the middles, and on the side of each spot a lateral line.

TABLE 27. *Trichopelma* sp. nov. 5. Female, MCZ 75003. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.7**	**2.48**	**2.16**	**-**	**2.06**	**10.4**
Leg I	**4.73**	**3.43**	**3.5**	**2.6**	**1.78**	**16.04**
Leg II	**4.16**	**3.28**	**2.86**	**2.84**	**1.62**	**14.76**
Leg III	**3.94**	**2.42**	**2.54**	**3.08**	**1.95**	**13.93**
Leg IV	**5.35**	**3.05**	**4.16**	**5.24**	**2.47**	**20.27**

Description. Male MCZ 75005 (Figs 220-229). All characters as in female, except: Carapace 6.13 long, 4.94 wide. Abdomen 6.46 long, 3.23 wide. Total length 12.59. Carapace: Fovea 0.71 wide. Eight eyes arranged on tubercle 0.19 high, 0.82 wide, 0.85 long. MOQ 1.07 wide, 0.59 long. AME 0.19, ALE 0.2, PME 0.09, PLE 0.2. Eye interspaces: AME-AME 0.38, AME-ALE 0.28, ALE-ALE 0.86, PME-PLE 0.16, PME-PME 0.61, ALE-PLE 0.47, PLE-PLE 0.98. Chelicerae: 2.23 long, with 8 large teeth and 5 tiny. Labium: 0.5 long, 0.9 wide, having ca. 35 cuspules. Maxillae: 1.73 long in front, 2.25 long behind, 0.97 wide, with ca. 84 cuspules. Sternum: 2.49 long, 2.44 wide. Heel distinct, thin. Frontal lobe distinct, short.

Legs: IV-I-II-III. Spines: leg I: fe d0-0-2, pa p0-1-0, ti p0-1-1, v3-5-1, me v1-0-1ap, ta 0; leg II: fe d0-0-2, pa p0-0-1, ti p1-1-0 v2-2-1ap, me v1-0-1ap, ta 0; leg III fe d0-2-2, pa p0-1-1, ti p0-1-1, r1-1-0, v2-3-3ap, me d2-2-2ap v3-2-3ap, ta 0; leg IV fe d0-2-2, pa 0; ti p0-1-1, r1-1-0, v2-3-3ap, me d2-2-2ap v3-2-3ap, ta 0; palp: fe d0-0-1, pa 0, ti p0-2-

FIGURES 214–219. *Trichopelma* sp. nov. 5, female holotype from Cuba, Isla de Pinos, MCZ 75003. **214,** habitus. **215,** ventral view. **216,** eye tubercle. **217,** spinnerets. **218,** maxillae and labium. **219,** spermathecae. Scales = 1 mm (214-218), 0.5 mm (219).

1ap d0-0-1, ta 0. Tricobothria: missing in legs; 6 in palpal tarsus. Scopula: absent on palp. Tibial apophysis: double, prolateral, curved, close to cuticular projection.

Palp: bulb rounded and thick with duct tapering. Embolus short, curved, with slightly curved apical portion. Keels on both sides of embolus. Cymbium rounded, strongly forked prolaterally.

Spinnerets: PMS 0.41 long, 0.11 wide, 0.08 apart. Basal, middle, and apical segments of PLS, 1.03 long, 0.49 wide; 0.49 long, 0.46 wide; 0.38 long, 0.29 wide, respectively.

TABLE 28. *Trichopelma* sp. nov. 5. Male, MCZ 75005. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**2.98**	**1.72**	**2.09**	**-**	**1.04**	**7.83**
Leg I	**4.46**	**3.13**	**3.3**	**3.4**	**2.06**	**16.35**
Leg II	**4.22**	**2.85**	**3.42**	**3.64**	**2.14**	**16.27**
Leg III	**4.23**	**2.31**	**2.65**	**3.92**	**2.38**	**15.49**
Leg IV	**5.64**	**2.67**	**4.15**	**6.09**	**2.92**	**21.47**

Distribution. Cuba.

***Trichopelma* sp. nov. 6**

(Figs. 230-239, 315)

Diagnosis. Differs from males of *T. cubanum* by having the apophysis close to the cuticular projection; from other males of *Trichopelma* by having the embolus curved at the tip.

Type material. 1 male holotype, Cuba, Havana, El Laguito [23°08'N, 82°45'], jul/1966, P. Alayo col., MCZ 75067.

Other material examined. None.

Description. Male MCZ 75067 (Figs 230-239). Carapace 3.34 long, 2.84 wide. Abdomen 2.97 long, 1.63 wide. Total length 6.31. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, recurved, 0.55 wide. Clypeus absent. Eight eyes arranged on tubercle 0.36 high, 0.71 wide, 0.64 long. MOQ 0.89 wide, 0.56 long. Anterior eye row strongly procurved, posterior row recurved. AME 0.32, ALE 0.33, PME 0.16, PLE 0.31. Eye interspaces: AME-AME 0.55, AME-ALE 0.36, ALE-ALE 1.1, PME-PLE 0.19, PME-PME 0.86, ALE-PLE 0.64, PLE-PLE 1.25. Chelicerae:

FIGURES 220–229. *Trichopelma* sp. nov. 5, male paratype from Cuba, Isla de Pinos, MCZ 75005. **220,** habitus. **221,** ventral view. **222,** eye tubercle. **223,** apophysis and cuticular projection, prolateral view. **224,** apophysis and cuticular projection, ventral view. **225,** maxillae and labium. **226,** spinnerets. **227,** left bulb, prolateral view. **228,** left bulb, retrolateral view. **229**, cymbium. Scales = 1 mm (220-222, 225, 226), 0.5 mm (223, 224, 227-229).

1.85 long, dense patch of hair and setae on retrolateral and dorsal sides, with 8 large teeth and 5 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.73 long, 0.84 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 16 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.41

long in front, 3.15 long behind, 0.99 wide, with ca. 54 cuspules on upper mound in inner angle, not spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 2.22 long, 1.96 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: predominantly smooth, with sparse cover of hair and setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: IV-I-II-III. Spines: leg I: fe d0-1-2, pa 0, ti p0-1-1, v0-3-1, me v1-1-1ap, ta 0; leg II: fe d0-1-2, pa 0, ti p0-1-1 v2-1-3ap, me p0-1-0 v1-1-1, ta 0; leg III fe d0-1-2, pa p0-0-2, ti p0-1-1 r1-0-1 v3-2-3ap , me d1-2-2 v2-2-3ap; leg IV fe d0-0-2, pa p0-0-1 r1-0-0, ti d0-2-0 v3-2-3ap, me d0-2-2 v2-3-3ap, ta 0; palp: fe d0-0-4, pa 0, ti p1-2-1 r0-0-1, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 15 in tarsus I; 16 in tarsus II, 13 in tarsus III, 3 in tarsus IV; 7 in palpal tarsus. Claws: ITC absent. STC with 4 teeth on all legs. Claw tufts in all legs, divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and moderately dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; absent on palp. Tarsus IV cracked. Tibial apophysis: double, ventral, curved, close to cuticular projection.

Palp: bulb piriform with duct tapering. Embolus short, curved, with slightly curved apical portion. Keels absent. Cymbium triangular, strongly forked prolaterally.

Spinnerets: PMS small, 0.18 long, 0.11 wide, 0.07 apart. Basal, middle, and apical segments of PLS, 1.1 long, 0.67 wide; 0.78 long, 0.59 wide; 0.45 long, 0.35 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae dark brown, carapace and legs dark brown. Abdomen dorsal pattern symmetrical, with 6 spots medially and stripes extending on lateral sides, each stripe connected to other spots at the termination near the midline; ventrally mostly pale, with darker spots.

TABLE 29. *Trichopelma* sp. nov. 6. Male, MCZ 75067. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**3.08**	**2.01**	**2.83**	**-**	**1.09**	**9.01**
Leg I	**5.47**	**3.46**	**4.23**	**4.18**	**2.56**	**19.9**
Leg II	**5.25**	**3.12**	**4.17**	**4.28**	**2.7**	**19.52**
Leg III	**4.78**	**2.41**	**3.26**	**4.97**	**2.84**	**18.26**
Leg IV	**6.08**	**3**	**5.47**	**6.99**	**3.26**	**24.8**

Distribution. Cuba.

***Trichopelma* sp. nov. 7**

(Figs 240-245, 312)

Diagnosis. Differs from other *Trichopelma* by having banded legs and banded apical segment of PLS.

Type material. 1 female holotype, Guyana, Kamakusa [05°66'N, 60°13'], 04/11/1922, H. Lang & La Varre col., AMNH BG1.

Description. Female AMNH BG1 (Figs 240-245). Carapace 6.88 long, 6.08 wide. Abdomen 8.48 long, 6.0 wide. Total length 17.22. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly recurved, 0.88 wide. Clypeus absent. Eight eyes arranged on tubercle 0.53 high, 1.34 wide, 1.22 long. MOQ 1.72 wide, 0.96 long. Anterior eye row strongly procurved, posterior row slightly recurved. AME 0.38, ALE 0.35, PME 0.19, PLE 0.31. Eye interspaces: AME-AME 0.56, AME-ALE 0.81, ALE-ALE 1.13, PME-PLE 0.25, PME-PME 0.93, ALE-PLE 0.78, PLE-PLE 1.45. Chelicera: 3.32 long, dense patch of hair and setae on retrolateral and dorsal sides, with 11 large teeth and 7 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.68 long, 1.07 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 15 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 2.09 long in front, 2.75 long behind, 1.43 wide, with ca. 53 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe

FIGURES 230–239. *Trichopelma* sp. nov. 6, male holotype from Cuba, Havana, MCZ 75067. **230,** habitus. **231,** ventral view. **232,** eye tubercle. **233,** apophysis and cuticular projection, prolateral view. **234,** apophysis and cuticular projection, ventral view. **235,** maxillae and labium. **236,** spinnerets. **237,** left bulb, prolateral view. **238,** left bulb, retrolateral view. **239**, cymbium. Scales = 1 mm (230-232, 235, 236), 0.5 mm (233, 234, 237-239).

distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 3.06 long, 3.03 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen:

moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti p0-1-0 v0-1-0, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti p0-1-0 v0-1-0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-0-1, ti p1-1-0 v0-2-0, me d2-2-2ap v0-2-2ap, ta 0; leg IV fe d0-0-1, pa p0-0-1, ti p1-1-0 v0-2-0, me d2-2-2ap v0-2-2ap, ta 0; palp: fe d0-0-1, pa 0, ti p0-1-0 r0-1-0 v2-3-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 3 in tarsus I; 4 in tarsus II; 10 in tarsus III; 4 in tarsus IV; 16 in palpal tarsus. Claws: ITC absent. STC with 4 teeth on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: entire and dense in tarsus, metatarsus and anterior third of tibia; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and entire on tarsus and anterior third of tibia. Tarsus IV cracked.

Spermathecae: two, each with a thick tapering stalk, and several rounded receptacles branching from each tip of the stalk.

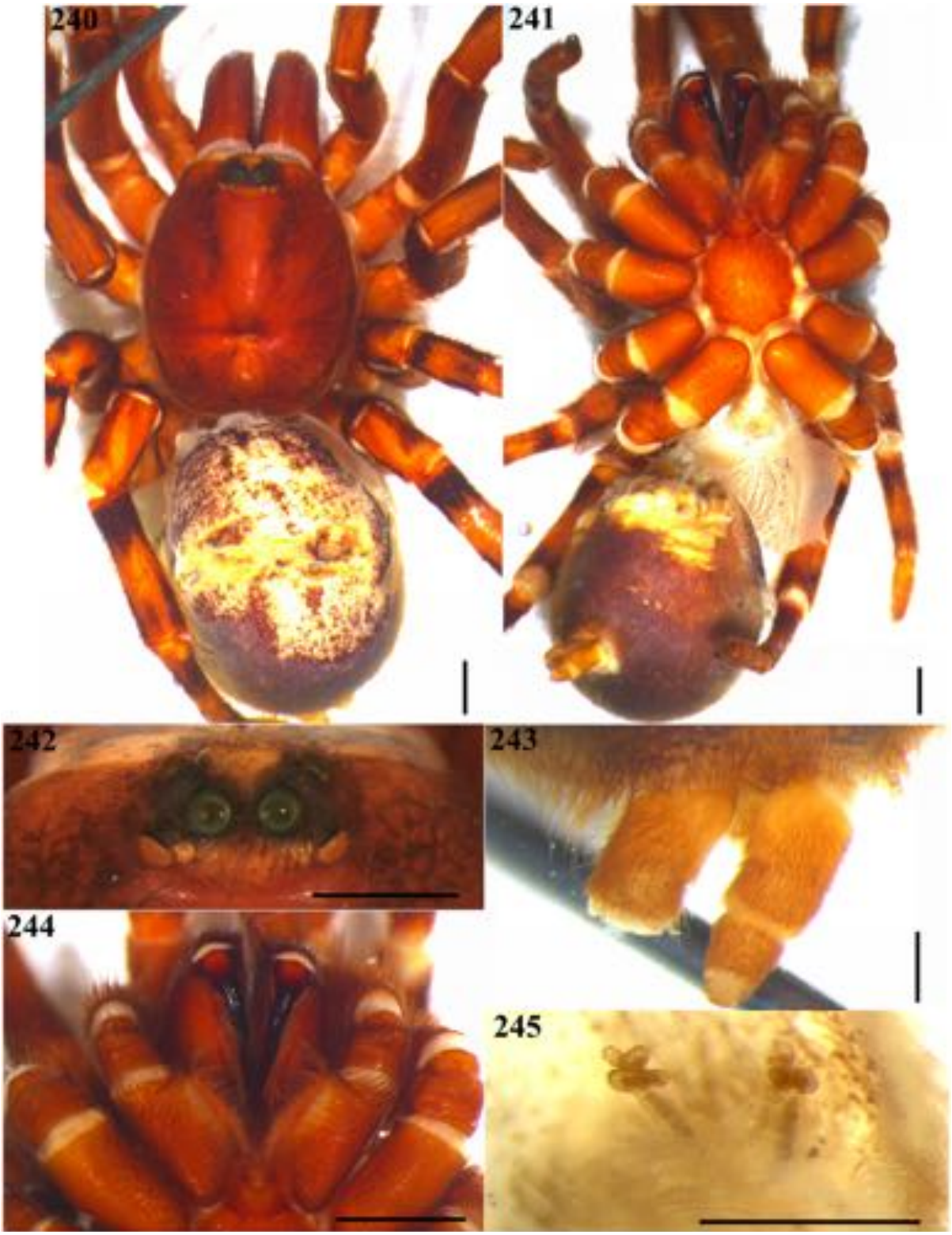
Spinnerets: PMS small, 0.29 long, 0.16 wide, 0.11 apart. Basal, middle, and apical segments of PLS, 1.12 long, 0.66 wide; 0.52 long, 0.5 wide; 0.22 long, 0.27 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs bicolor. Abdomen dorsal pattern faint, indiscernible; ventrally pale.

TABLE 30. *Trichopelma* sp. nov. 7 Female, AMNH BG1. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**4.6**	**3.24**	**3.42**	**-**	**2.69**	**13.95**
Leg I	**6.46**	**4.23**	**4.95**	**3.26**	**2.12**	**21.02**
Leg II	**5.78**	**3.87**	**4.02**	**3.54**	**2.35**	**19.56**
Leg III	**5.02**	**3.07**	**3.78**	**4.84**	**2.65**	**19.36**
Leg IV	**7.23**	**3.56**	**5.47**	**7.38**	**2.87**	**26.51**

Distribution. Guyana.



FIGURES 240-245. *Trichopelma* sp. nov. 7, female holotype from Guyana, Kamakusa, AMNH BG1. **240,** habitus. **241,** ventral view. **242,** eye tubercle. **243,** spinnerets. **244,** maxillae and labium. **245,** spermathecae. Scales = 1 mm (240-244), 0.5 mm (245).

***Trichopelma* sp. nov. 8**

(Figs 246-252, 315)

Diagnosis. Females differ from *T.* sp. nov. 5 by having the scopula of legs III and IV spread on anterior half of metatarsus; from other *Trichopelma* by having a fused spermathecae.

Type material. 1 female holotype and 4 female paratypes, Bahamas: South Bimini [25°70'N, 79°27'], jul/1951, M. A. Cazier, C. & P. Vaurie col., AMNH BH5.

Description. Female AMNH BH5 (Figs 264-252). Carapace 2.7 long, 2.48 wide. Abdomen 4.08 long, 2.56 wide. Total length 6.78. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved, 0.45 wide. Clypeus absent. Eight eyes arranged on tubercle 0.14 high, 0.52 wide, 0.39 long. MOQ 0.53 wide, 0.39 long. Anterior eye row procurved, posterior row recurved. AME 0.1, ALE 0.14, PME 0.06, PLE 0.09. Eye interspaces: AME-AME 0.17, AME-ALE 0.15, ALE-ALE 0.44, PME-PLE 0.07, PME-PME 0.3, ALE-PLE 0.2, PLE-PLE 0.46. Chelicera: 1.36 long, dense patch of hair and setae on retrolateral and dorsal sides, with 8 large teeth and 3 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.3 long, 0.41 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 38 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 0.86 long in front, 1.11 long behind, 0.55 wide, with ca. 91 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 1.21 long, 1.24 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti v0-1-0, me v1-0-1ap, ta 0; leg III fe d0-0-1, pa p0-1-1, ti r0-0-1 v0-1-2ap, me d0-2-2 v1-2-3ap, ta 0; leg IV fe d0-0-1, pa 0, ti r1-0-1 v0-1-2ap, me d0-2-2 v2-3-3ap, ta 0; palp: fe 0, pa 0, ti v0-2-3ap, ta 0. Preening combs absent. Clavate

tricobothria in two rows, not concentrated medially: 12 in tarsus I; 13 in tarsus II; 10 in tarsus III; 10 in tarsus IV; 15 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: one, rounded, highly chitinized.

Spinnerets: PMS small, 0.26 long, 0.1 wide, 0.08 apart. Basal, middle, and apical segments of PLS, 0.52 long, 0.27 wide; 0.26 long, 0.22 wide; 0.12 long, 0.1 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern symmetrical, with 6 spots in the middle connected on each side to a lateral stripe.

TABLE 31. *Trichopelma* sp. nov. 8. Female, AMNH BH5. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**2.86**	**1.82**	**1.58**	**-**	**1.34**	**7.6**
Leg I	**3.6**	**2.8**	**1.72**	**2.08**	**1.58**	**11.78**
Leg II	**3.12**	**2.4**	**2.4**	**1.89**	**1.58**	**11.39**
Leg III	**2.88**	**2**	**1.86**	**1.46**	**1.86**	**10.06**
Leg IV	**4.16**	**2.38**	**3.26**	**3.54**	**2.16**	**15.5**

Distribution. Bahamas.

***Trichopelma* sp. nov. 9**

(Figs 253-268, 317)

Diagnosis. Females differ from *T. affine* by the merged 18-spot pattern on abdomen, from the rest of *Trichopelma* by having more than two receptacles branching laterally throughout the main stalk of spermathecae. Males differ from other *Trichopelma* by the merged 18-spot pattern on abdomen.

FIGURES 246-252. *Trichopelma* sp. nov. 8, female holotype from Bahamas, South Bimini, AMNH BH5. **246,** habitus. **247,** ventral view. **248,** left tarsus I, showing full scopula. **249,** eye tubercle. **250,** spinnerets. **251,** maxillae and labium. **252,** spermathecae. Scales = 1 mm (246-251), 0.5 mm (252).

Type material. 1 female holotype, Jamaica, Hermitage Reservoir [18°08'N, 76°76'], 24/07/1960, Vauries col., AMNH JM9; 3 males and 2 females paratypes, Jamaica, St.

Catherine, Worthy Park Estate [18°14'N, 77°14'], 04/11/1973, Russell Norton col., AMNH JM5.

Other material examined. None.

Description. Female AMNH JM9 (Figs 253-258). Carapace 4.04 long, 3.21 wide. Abdomen 4.78 long, 2.57 wide. Total length 8.82. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved, 0.89 wide. Clypeus absent. Eight eyes arranged on tubercle 0.32 high, 0.55 wide, 0.47 long. MOQ 0.64 wide, 0.32 long. Anterior eye row procurved, posterior row recurved. AME 0.15, ALE 0.16, PME 0.07, PLE 0.1. Eye interspaces: AME-AME 0.21, AME-ALE 0.15, ALE-ALE 0.54, PME-PLE 0.08, PME-PME 0.42, ALE-PLE 0.26, PLE-PLE 0.61. Chelicera: 2.08 long, dense patch of hair and setae on retrolateral and dorsal sides, with 10 large teeth and 6 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.5 long, 0.65 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 24 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.2 long in front, 1.64 long behind, 0.8 wide, with ca. 73 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 1.82 long, 1.6 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs present.

Legs: formula IV-I-II-III. Spines: leg I: fe 0, pa 0, ti 0, me v0-0-1ap, ta 0; leg II: fe 0, pa 0, ti 0, me v1-0-1ap, ta 0; leg III fe 0, pa p1-1-1, ti v1-2-3ap, me d1-1-1 p1-1-1 v3-0-2ap, ta 0; leg IV fe 0, pa 0, ti r1-0-1 v0-0-3ap, me d1-2-1 v3-3-5ap, ta 0; palp: fe 0, pa 0, ti v0-0-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 15 in tarsus I; 16 in tarsus II; 17 in tarsus III; 16 in tarsus IV; 12 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and anterior half of metatarsus; legs III and IV: parted,

sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: two, each with a thick tapering stalk, and several rounded receptacle branching from each tip of the stalk.

Spinnerets: PMS small, 0.27 long, 0.1 wide, 0.07 apart. Basal, middle, and apical segments of PLS, 0.77 long, 0.33 wide; 0.27 long, 0.25 wide; 0.15 long, 0.13 wide, respectively. Apical segment triangular. All segments covered by fine setae.

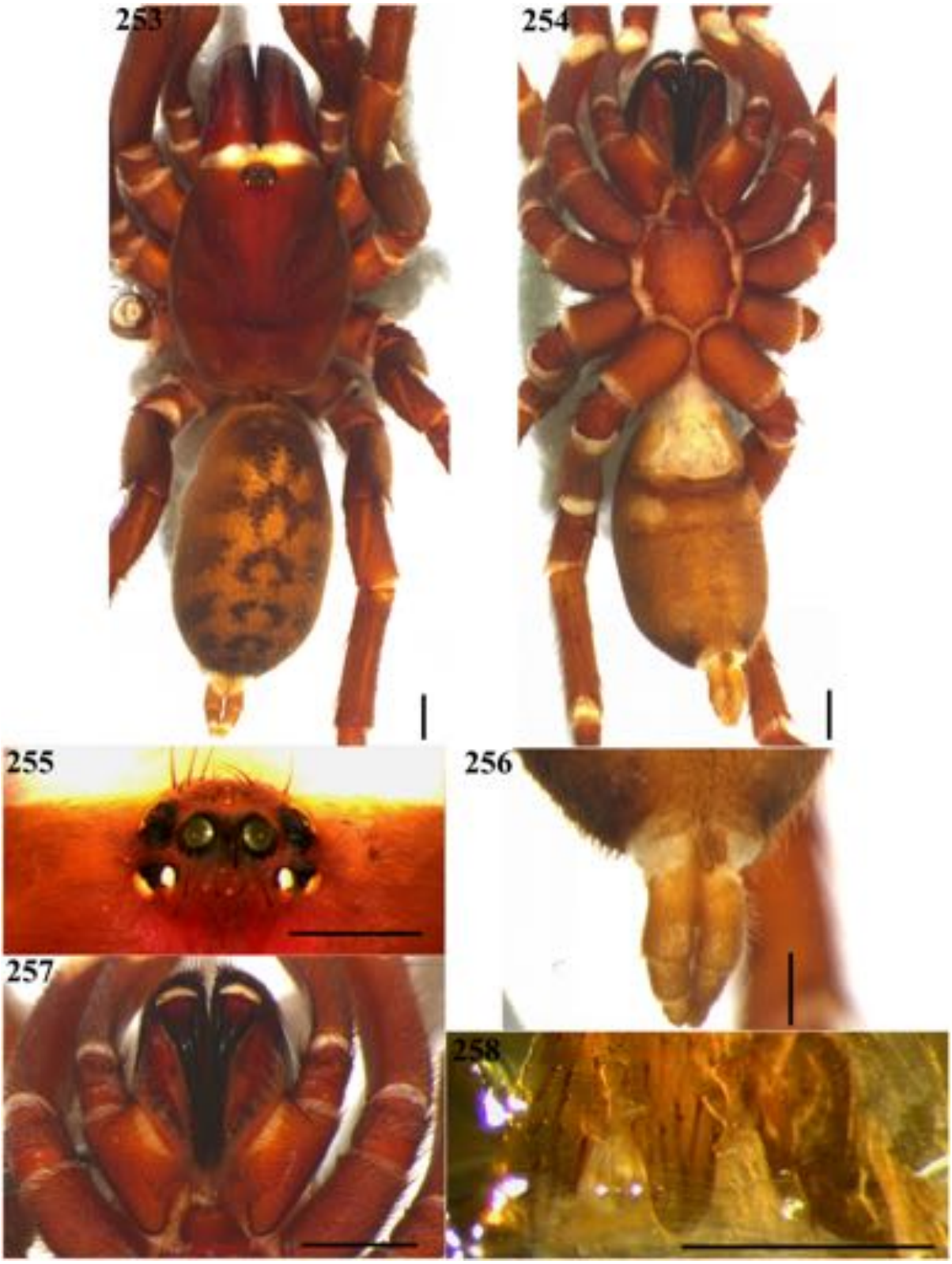
Color pattern (preserved in alchool): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern symmetrical, with 6 spots in the middle connected on each side to a lateral thick line, forming a series of C-shaped dark spots.

TABLE 32. *Trichopelma* sp. nov. 9. Female, AMNH JM9. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**4.16**	**2.82**	**2.52**	**-**	**1.32**	**10.82**
Leg I	**5.4**	**4.02**	**3.8**	**1.48**	**1.36**	**16.06**
Leg II	**4.82**	**3.62**	**3.42**	**2.62**	**1.54**	**16.02**
Leg III	**3.62**	**2.68**	**2.72**	**3.2**	**1.76**	**13.98**
Leg IV	**5.16**	**3.56**	**4.65**	**5.13**	**2.18**	**20.68**

Description. Male AMNH JM5 (Figs 259-268). All characters as in female, except: Carapace 2.17 long, 1.82 wide. Abdomen 1.86 long, 1.12 wide. Total length 4.03. Carapace: Fovea 0.28 wide. Eight eyes arranged on tubercle 0.15 high, 0.34 wide, 0.27 long. MOQ 0.37 wide, 0.17 long. AME 0.08, ALE 0.08, PME 0.05, PLE 0.06. Eye interspaces: AME-AME 0.13, AME-ALE 0.1, ALE-ALE 0.32, PME-PLE 0.06, PME-PME 0.2, ALE-PLE 0.13, PLE-PLE 0.33. Chelicerae: 0.52 long, with 7 large teeth and 4 tiny. Labium: 0.24 long, 0.38 wide, having ca. 37 cuspules. Maxillae: 0.52 long in front, 0.71 long behind, 0.36 wide, with ca. 68 cuspules. Sternum: 0.89 long, 0.9 wide.

Legs: IV-I-II-III. Spines: leg I: fe d0-0-1, pa 0, ti p0-1-1, v2-1-1ap, me v0-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti p0-0-1 v0-1-2ap, me v0-0-1ap, ta 0; leg III fe d0-0-2, pa p0-2-1, ti d2-2-0, v2-2-2ap, me d2-2-1ap v2-2-3ap, ta 0; leg IV fe d0-0-2, pa d0-1-0; ti d2-2-2, r0-1-1, v3-3-3ap, me d2-3-4ap v2-4-5(3ap), ta 0; palp: fe 0, pa 0, ti v0-0-3ap, ta 0. Tricobothria: 9 in leg I; 10 in leg II; 4 in leg III; 3 in leg IV; 9 in palpal tarsus. Scopula:



FIGURES 253–258. *Trichopelma* sp. nov. 9, female holotype from Jamaica, Hermitage Reservoir, AMNH JM9. **253,** habitus. **254,** ventral view. **255,** eye tubercle. **256,** spinnerets. **257,** maxillae and labium. **258,** spermathecae. Scales = 1 mm (253-257), 0.5 mm (258).

absent on palp. Tibial apophysis: double, prolateral, curved, close to cuticular projection.

Palp: bulb rounded and thick with duct tapering. Embolus short, curved, with slightly curved apical portion. Keels absent. Cymbium rounded, strongly forked prolaterally. Spinnerets: PMS 0.09 long, 0.03 wide, 0.02 apart. Basal, middle, and apical segments of PLS, 0.26 long, 0.15 wide; 0.11 long, 0.12 wide; 0.07 long, 0.06 wide, respectively.

TABLE 33. *Trichopelma* sp. nov. 9. Male, AMNH JM5. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**1.7**	**1.28**	**1.64**	**-**	**0.44**	**5.06**
Leg I	**3**	**2.12**	**2.58**	**2.66**	**1.22**	**11.58**
Leg II	**2.42**	**1.89**	**2.32**	**2.5**	**1.22**	**10.35**
Leg III	**2.86**	**1.54**	**1.88**	**2.44**	**1.56**	**10.28**
Leg IV	**3.94**	**1.82**	**3.42**	**4.12**	**1.58**	**14.88**

Distribution. Jamaica.

***Trichopelma* sp. nov. 10**

(Figs 269-274, 317)

Diagnosis. Differs from females of *T. maculatum* by having a thick stalk on spermathecae; from rest of *Trichopelma* by having two distinct rounded receptacles on spermathecae.

Type material. 1 female holotype, Jamaica, Clarendon [17°95'N, 77°24'], 20/12/1972, S. & J. Peck col., AMNH JM15.

Other material examined. None.

Description. Female AMNH JM15 (Figs 269-274). Carapace 3.1 long, 2.4 wide. Abdomen 3.33 long, 2.08 wide. Total length 6.43. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved, 0.41 wide. Clypeus absent. Eight eyes arranged on tubercle 0.22 high, 0.48 wide, 0.42 long. MOQ 0.55 wide, 0.27 long. Anterior eye row procurved, posterior row recurved. AME 0.1, ALE 0.08, PME 0.07, PLE 0.08. Eye interspaces: AME-AME 0.18, AME-ALE 0.14, ALE-ALE 0.44, PME-PLE 0.09, PME-PME 0.33, ALE-PLE 0.17, PLE-PLE 0.51. Chelicera: 1.21 long, dense patch of hair and setae on retrolateral and dorsal sides, with 8 large

FIGURES 259-268. *Trichopelma* sp. nov. 9, male paratype from Jamaica Hermitage Reservoir, AMNH JM5. **259,** habitus. **260,** ventral view. **261,** eye tubercle. **262,** apophysis and cuticular projection, prolateral view. **263,** apophysis and cuticular projection, ventral view. **264,** maxillae and labium. **265,** spinnerets. **266,** left bulb, prolateral view. **267,** left bulb, retrolateral view. **268**, cymbium. Scales = 1 mm (259-261, 264, 265), 0.5 mm (262, 263, 266-268).

teeth and 5 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium (Fig. ????): trapezoid, 0.35 long, 0.56 wide with dense patch of

fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 46 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 0.9 long in front, 1.14 long behind, 0.58 wide, with ca. 67 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, thin. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 1.35 long, 1.26 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe 0, pa 0, ti 0, me v0-0-1ap, ta 0; leg II: fe 0, pa 0, ti 0, me v1-0-1ap, ta 0; leg III fe 0, pa p1-1-1, ti v1-2-3ap, me d1-1-1 p1-1-1 v3-1-2ap, ta 0; leg IV fe 0, pa 0, ti r0-0-1 v0-0-3ap, me d1-2-1 v3-3-5ap, ta 0; palp: fe 0, pa 0, ti v0-0-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 16 in tarsus I; 12 in tarsus II; 8 in tarsus III; 10 in tarsus IV; 14 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: two, each with a thick stalk, and two small receptacles branching from each tip of the stalk.

Spinnerets: PMS small, 0.15 long, 0.06 wide, 0.06 apart. Basal, middle, and apical segments of PLS, 0.33 long, 0.25 wide; 0.23 long, 0.2 wide; 0.15 long, 0.13 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern symmetrical, with 6 spots in the middle connected on each side to a lateral thick line, forming a series of C-shaped dark spots.

TABLE 34. *Trichopelma* sp. nov. 10. Female, AMNH JM15. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**1.68**	**0.98**	**0.87**	**-**	**1.03**	**4.56**
Leg I	**2.32**	**1.61**	**1.9**	**0.88**	**0.68**	**7.39**
Leg II	**1.94**	**1.53**	**1.44**	**0.82**	**0.7**	**6.43**
Leg III	**1.95**	**1.13**	**1.14**	**1.02**	**0.89**	**6.13**
Leg IV	**2.46**	**1.55**	**1.95**	**2.3**	**1.33**	**9.59**

Distribution. Jamaica.

***Trichopelma* sp. nov. 11**

(Figs 275-280, 317)

Diagnosis. Differs from other females of *Trichopelma* by having a straight anterior eye row.

Type material. 1 female holotype and 1 female paratype, Jamaica, St. Andrew Parish [18°03'N, 76°75'], 15/06/1948, D. E. Miller col., AMNH JM3.

Other material examined. None.

Description. Female AMNH JM3 (Figs 275-280). Carapace 3.74 long, 3.2 wide. Abdomen 4.41 long, 2.76 wide. Total length 8.15. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved, 0.46 wide. Clypeus absent. Eight eyes arranged on tubercle 0.27 high, 0.59 wide, 0.44 long. MOQ 0.66 wide, 0.34 long. Anterior eye row procurved, posterior row recurved. AME 0.15, ALE 0.13, PME 0.08, PLE 0.09. Eye interspaces: AME-AME 0.21, AME-ALE 0.13, ALE-ALE 0.51, PME-PLE 0.08, PME-PME 0.38, ALE-PLE 0.28, PLE-PLE 0.58. Chelicera: 1.57 long, dense patch of hair and setae on retrolateral and dorsal sides, with 8 large teeth and 6 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent, distal edge with thickened setae. Labium: trapezoid, 0.5 long, 0.71 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 68 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.01

FIGURES 269-274. *Trichopelma* sp. nov. 10, female holotype from Jamaica, Clarendon, AMNH JM15. **269,** habitus. **270,** ventral view. **271,** eye tubercle. **272,** spinnerets. **273,** maxillae and labium **274,** spermathecae. Scales = 1 mm (269-273), 0.5 mm (274).

long in front, 1.47 long behind, 0.8 wide, with ca. 97 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe distinct, short.

Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 1.59 long, 1.54 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-I-II-III. Spines: leg I: fe 0, pa 0, ti 0, me v0-0-1ap, ta 0; leg II: fe 0, pa 0, ti 0, me v1-0-1ap, ta 0; leg III fe 0, pa p1-1-1, ti v1-1-3ap, me d1-1-1 p0-1-1 v3-1-2ap, ta 0; leg IV fe 0, pa 0, ti r1-0-1 v0-0-3ap, me d1-2-1 v3-3-5ap, ta 0; palp: fe 0, pa 0, ti v0-0-3ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 17 in tarsus I; 9 in tarsus II;11 in tarsus III; 15 in tarsus IV; 17 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior third of metatarsus; palp: dense and parted on tarsus. Tarsus IV cracked.

Spermathecae: two, each with a thick stalk, and one big rounded receptacle branching from each tip of the stalk.

Spinnerets: PMS small, 0.2 long, 0.09 wide, 0.08 apart. Basal, middle, and apical segments of PLS, 0.26 long, 0.22 wide; 0.15 long, 0.2 wide; 0.12 long, 0.13 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern symmetrical, with 6 spots in the middle connected on each side to a lateral thick line, forming a series of C-shaped dark spots.

TABLE 35. *Trichopelma* sp. nov. 11. Female, AMNH JM3. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**2.3**	**1.43**	**1.46**	**-**	**1.48**	**6.67**
Leg I	**3.21**	**2.25**	**2.7**	**2.4**	**1.4**	**11.96**
Leg II	**2.63**	**1.67**	**2.33**	**1.2**	**1.2**	**9.03**
Leg III	**2.31**	**1.39**	**1.56**	**1.82**	**1.21**	**8.29**
Leg IV	**3.28**	**2.32**	**2.46**	**2.36**	**1.82**	**12.24**

Distribution. Jamaica.

FIGURES 275-280. *Trichopelma* sp. nov. 11, female holotype from Jamaica, St. Andrew Parish, AMNH JM3. **275,** habitus. **276,** ventral view. **277,** eye tubercle. **278,** spinnerets. **279,** maxillae and labium **280,** spermathecae. Scales = 1 mm (275-279), 0.5 mm (280).

Trichopelma spinosum* (Franganillo, 1926) *nomem dubium

Stothis spinosa Franganillo, 1926: 42;
Trichopelma spinosum; García, 2000: 3; World Spider Catalog, 2018.

Type material. 1 holotype of undertermined sex, not located.
Remarks. This species was originally described by Franganillo (1931) as *Stothis spinosa* based on one specimen of undertemined sex.
According to García, 2000, the types were either not found or lost. In the very short description by Franganillo (1931), the author mentions the presence of a clypeus in the specimen. Since *Trichopelma* species do not have a clypeus, and the type material is lost, this species is herein considered as *nomem dubium*.

Trichopelma scopulatum* (Fischel, 1927) *nomem dubium

Leptostylus scopulatus Fischel, 1927: 65, f. 7-8.
Leptofischelia scopulata Strand, 1929: 17.
Trichopelma scopulatum; World Spider Catalog, 2018.

Type material. 1 male holotype from Venezuela, not located.
Remarks. This species was originally described by Fischel (1927) as *Leptostylus scopulatus*, then later renamed to *Leptofischelia scopulata* by Strand (1929). Raven (1985) transferred it to *Trichopelma*, noting that the male holotype was lost. The transfer to *Trichopelma* was due to similarity in the palpal bulb and tibial apophysis.
By reading the description and examining the illustration by Fischel (1927), it was possible to see that this species does not belong to *Trichopelma*. The tibial apophysis seems to be very thick and long, protruding far more than what is encountered in any species of *Trichopelma*. Additionally, the cymbium has a very dense scopula, which is also not a shared character by *Trichopelma*.This specimen could potentially belong to *Holothele longipes*, which shares these characteristics and are quite common in Venezuela.
Therefore, this species is herein considered as *nomen dubium*.

Trichopelma eucubanum* Özdikmen & Demir, 2012 *nomem dubium

Stothis maculata Franganillo, 1930: 7.
Trichopelma maculatum García, 2000: 3.
Trichopelma eucubanum Özdikmen & Demir, 2012: 119 (preoccupied); World Spider Catalog, 2018.

Remarks. This species was originally described by Franganillo (1930) as *Stothis maculata* based on one specimen of undertemined sex. After Raven (1985) synonymized the genus *Stothis* with *Trichopelma*, this species became an homonim with the already existing *Trichopelma maculatum* (Banks, 1906). Therefore, Özdikmen & Demir, 2012 assigned a replacement name for this species.
According to García, 2000, the types were either not found or lost. In the very short description by Franganillo (1930), the author mentions the presence of a clypeus in the specimen. Since *Trichopelma* species do not have a clypeus, and the type material is lost, this species is herein considered as *nomem dubium*.

***Schismatothele lineata* Karsch, 1879**
(Figs 281-288)

Schismatothele lineata Karsch, 1879: 544; Roewer, 1942: 207; Rudloff 1997: 12, f. 12-15; Schmidt, 1997: 15, f. 2; Schmidt, 2003: 122, f. 77; Guadanucci & Weinmann, 2014: 282; World Spider Catalog, 2018.
Epipedesis opifex Simon, 1889: 202; Petrunkevitch, 1911: 61; Roewer, 1942: 220. **Syn. nov.**
Psalistops opifex; World Spider Catalog, 2018.
Epipedesis solitarius Simon, 1889: 202; Petrunkevitch, 1911: 61; Roewer, 1942: 220. **Syn. nov.**
Psalistops solitarius; World Spider Catalog, 2018.

Type material. 1 female lectotype and 2 female paralectotypes, here designated, of *Psalistops opifex*, VENEZUELA, *La Guaira*, [10°58'N, 66°92' W], Simon col., MNHN 9858; 1 female holotype of *Psalistops solitarius*, VENEZUELA, *Caracas*, [10°30'N, 66°54' W], Simon col., MNHN 9857. All type material examined.

Remarks. Both the species *Epipedesis opifex* and *Epipedesis solitarius* were described by Simon (1892) based on some female specimens. The genus *Epipedesis* was then synonymized with *Psalistops* in the mygalomorph revision of Raven (1985).
The analysis of the type material, however, indicates that neither species belong to the genus *Psalistops*, as they lack characters such as the incrassate spinnerets and main stalk on the spermathecae.
Additionally, both species actually correspond to *Schismatothele lineata*, due to having a heavily sclerotized spermathecae, with both dorsal and ventral receptacles fused (see Guadanucci & Weinmann, 2014). Therefore, the species are herein synonymized with *Schismatothele lineata*.

Trichopelma illetabile* Simon, 1888 *incertae sedis
(Figs 289-295)

Trichopelma illetabilis Simon, 1888: 216.
Trichopelma illetabile Petrunkevitch 1911: 93; Mello-Leitão, 1923: 125; Vellard, 1924: 147; Roewer, 1942: 223; World Spider Catalog, 2018.

Type material. 1 immature holotype of *Trichopelma illetabilis*, Brazil, Amazonas, Tefé (3°64'S, 64°71'W), MNHN 3119/AR4553, examined.
Remarks. This species was described by Simon based on a single immature specimen. The analysis of the holotype revealed that it does not belong to *Trichopelma*. The presence of a clypeus, domed apical segment of PLS, very few maxillary cuspules, labial cuspules absent, clavate tricobothria concentrated medially and scopula spreading until the tibia all indicate that this species should be in Sasoninae. Given that it is an immature specimen, no new genus or species will be suggested herein. Therefore, it is considered as *incertae sedis*.

FIGURES 281-288. *Schismatothele lineata*. **281-284.** Female holotype of *Epipedesis opifex* from Venezuela, La Guaira, MNHN 9858. **281,** habitus. **282,** ventral view. **283,** maxillae and labium. **284,** spermathecae. **285–288.** Female holotype of *Epipedesis solitarius* from Venezuela, Caracas, MNHN 9857. **285,** habitus. **286,** ventral view. **287,** maxillae and labium **288,** spermathecae. Scales = 1 mm (281-283, 285-297), 0.5 mm (284, 288).

FIGURES 289–295. *Trichopelma illetabile incerta sedis*, immature holotype from Brazil, Amazonas, MNHN 3119/AR4553. **289,** habitus. **290,** ventral view. **291,** eye tubercle. **292,** maxillae and labium. **293,** spinnerets **294,** left leg I, showing scopula spreading until tibia. **295,** right tarsus I, showing clavate tricobothria concentrated in the middle. Scales = 1 mm.

***Euthycaelus astutus* Simon, 1889 n. comb.**

(Figs 296-301)

Stothis astuta Simon, 1889: 199; Petrunkevitch, 1911: 90; Schenkel, 1953. **Syn. nov.**

Trichopelma astutum World Spider Catalog, 2018.

Diagnosis. Differs from other species of *Euthycaelus* by having two folded main stalks from each side of the partially fused spermatheca.

Type material. 1 female lectotype of *Stothis astuta*, here designed, from Venezuela, Carabobo, San Esteban [10°39'N, 67°96'W], Simon col., MNHN 9869; 3 females and 1 immature paralectotypes of *Stothis astuta*, here designed, from Venezuela, Carabobo, San Esteban [10°39'N, 67°96'W], Simon col., MNHN 9876/AR4556, examined.

Redescription. Female lectotype MNHN 9869 (Figs 296-301). Carapace 8.33 long, 7.01 wide. Abdomen 11.59 long, 7.97 wide. Total length 19.92. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, straight, 1.35 wide. Clypeus absent. Eight eyes arranged on tubercle 0.5 high, 1.42 wide, 1.16 long. MOQ 1.49 wide, 0.66 long. Anterior eye row slightly procurved, posterior row recurved. AME 0.4, ALE 0.39, PME 0.2, PLE 0.3. Eye interspaces: AME-AME 0.56, AME-ALE 0.41, ALE-ALE 1.35, PME-PLE 0.23, PME-PME 0.87, ALE-PLE 0.48, PLE-PLE 1.24. Chelicera: 3.53 long, dense patch of hair and setae on retrolateral and dorsal sides, with 10 large teeth and 7 tiny on inner edge. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent. Labium: trapezoid with bulge, 0.96 long, 1.72 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially, having ca. 122 cuspules rounded on distal one third. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 2.66 long in front, 3.22 long behind, 1.78 wide, with ca. 152 cuspules on upper mound in inner angle, spreading until mid-length line. Heel distinct, thick. Frontal lobe nearly indistinct, rounded. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 3.57 long, 3.85 wide. Fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: moderately dense cover of hair, sparse cover of setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula I IV II III. Spines: leg I: fe d0-0-1, pa 0, ti 0, me v0-0-1ap, ta 0; leg II: fe d0-0-1, pa 0, ti d0-0-1, me v1-0-2ap, ta 0; leg III fe 0, pa p0-0-1, ti p0-0-2 r0-0-1 v0-0-2, me p1-1-1 d0-1-1 v0-2-3ap, ta 0; leg IV fe 0, pa 0, ti r0-0-1 v0-0-1ap, me d1-2-2 v2-1-

3ap, ta 0; palp: fe d0-0-1, pa 0, ti v0-0-4ap, ta 0. Preening combs absent. Tricobothria in two rows, not concentrated medially: 14 in tarsus I; 16 in tarsus IV; 17 in tarsus III; 17 in tarsus IV; 10 in palpal tarsus. Claws: ITC absent. STC with 3 teeth on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: parted and moderately dense in tarsus and anterior half of metatarsus; legs III and IV: parted, sparse in tarsus and anterior half of metatarsus; palp: dense and parted on tarsus. Annular bands absent.

Spermathecae: two fused, heavily sclerotized, each with a long folded stalk.

Spinnerets: PMS small, 0.74 long, 0.33 wide, 0.1 apart. Basal, middle, and apical segments of PLS, 1.35 long, 0.88 wide; 0.69 long, 0.67 wide; 0.51 long, 0.48 wide, respectively. Apical segment triangular. All segments covered by fine setae.

Color pattern (preserved in alchool): Chelicerae brown, carapace and legs brown. Abdomen dorsal pattern faint, seemingly symmetrical, with 5 stripes extending on lateral sides, each stripe connected to spots at the termination near the midline; ventrally pale.

TABLE 36. *Euthycaelus astutus*. Female, MNHN 9869. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**4.36**	**2.65**	**2.85**	**-**	**2.46**	**12.32**
Leg I	**5.17**	**3.62**	**4.12**	**3.65**	**2.63**	**19.19**
Leg II	**4.72**	**3.34**	**3.59**	**2.96**	**2.35**	**16.96**
Leg III	**4.31**	**2.95**	**2.92**	**3.86**	**2.31**	**16.35**
Leg IV	**6.29**	**3.51**	**4.99**	**5.65**	**2.95**	**23.39**

Distribution. Venezuela.

Remarks. This species was described by Simon (1889) based on syntypes, and later was transferred to the genus *Trichopelma* when Raven (1985) synonymized the genus *Stothis* to it. The analysis of these syntypes revealed that it does not belong to the *Trichopelma* genus, mainly for characters such as the lack of a 18-spot abdominal pattern, many cuspules on labium and maxillae, and labium trapezoid with several cuspules. The species is herein transferred to the genus *Euthycaelus* due to sharing the diagnostic characters in it, such as the heavily sclerotized spermathecae with a pair of single receptacles (see Guadanucci & Weinmann, 2014).

FIGURES 296-301. *Euthycaelus astutus n. comb*., female holotype from Venezuela, Carabobo, MNHN 9869. **296,** habitus. **297,** ventral view. **298,** eye tubercle. **299,** left tarsus IV cracked. **300,** maxillae and labium. **301,** spermathecae. Scales = 1 mm (296-300), 0.5 mm (301).

Sasoninae gen. nov. 1 Simon, 1891

(Figs 302-309)

Trichopelma flavicomum Simon, 1891: 308; Petrunkevitch 1911: 92; Mello-Leitão, 1923: 125; Roewer, 1942: 223; World Spider Catalog, 2018.

Diagnosis. Differs from other Sasoninae by having a coiled main stalk in the spermathecae; from *Sason* by having a clypeus; from *Neodiplothele* by having four spinnerets; and from *Cosmopelma* by not having coxal cuspules or spiky cuspules.

Type material. 1 female holotype, Brazil, Bahia, São Antônio da Barra (now Condeúba) [11°14'S, 43°30'W], Gounelle col., MNHN 9978/AR4557, examined.

Redescription. Female AR4557 (Figs 302-309). Carapace 4.19 long, 3.2 wide. Abdomen 4.7 long, 3.0 wide. Total length 8.89. Carapace: Surface predominantly smooth, with sparse hair and setae, especially around margins. Thoracic striae faint, shallow and narrow. Caput raised. Fovea deep, slightly procurved, 0.65 wide. Clypeus 0.14 long. Eight eyes arranged on tubercle 0.27 high, 0.75 wide, 0.5 long. MOQ 0.75 wide, 0.32 long. Anterior eye row slightly procurved, posterior row recurved. AME 0.18, ALE 0.19, PME 0.1, PLE 0.14. Eye interspaces: AME-AME 0.26, AME-ALE 0.22, ALE-ALE 0.66, PME-PLE 0.11, PME-PME 0.48, ALE-PLE 0.24, PLE-PLE 0.66. Chelicerae: 0.97 long, dense patch of hair and setae on retrolateral and dorsal sides, with 6 large teeth. Intercheliceral intumescence absent. Fangs light brown at base, darkening distally to blackish brown hue. Rastellum absent. Labium: ellipsoid, 0.67 long, 0.27 wide with dense patch of fine setae anteriorly, and fine setae sparsely distributed medially. Cuspules absent. Labiosternal groove shallow, flat, with pair of sigilla. Maxillae: 1.4 long in front, 1.7 long behind, 0.6 wide, with 4 rounded cuspules on upper mound in inner angle. Heel indistinct. Frontal lobe indistinct. Fine setae throughout the surface, without dense patches. Lyra absent. Sternum: 1.99 long, 1.66 wide. Hair and fine setae scattered over surface, without dense patches. Three pairs of sigilla, rounded, first pair close to coxa I, second pair close to coxa II, and third pair close to coxa III. All sigilla one diameter from margin. Abdomen: sparse cover of hair and setae. Book lungs semi-circular, with elliptical aperture; book lung combs absent.

Legs: formula IV-II-I-III. Spines: leg I: fe 0, pa 0, ti v1-1-1, me v2-0-1ap, ta 0; leg II: fe 0, pa 0, ti v0-1-1ap, me v2-0-1ap, ta 0; leg III: fe 0, pa p0-1-1, ti p1-1-0 r0-0-1, me p1-1-1 d0-0-2ap r1-1-1 v0-1-1ap, ta 0; leg IV: fe 0, pa 0, ti p0-1-0 r0-1-0 v0-0-1ap, me p1-

1-1ap d1-1-1 r0-1-1ap v1-1-1ap, ta 0; palp: fe 0, pa 0, ti p1-1-2 v0-1-1ap, ta 0. Patellar spines arranged horizontally. Preening combs absent. Tricobothria concentrated medially: missing in tarsus I; 3 in tarsus II; 4 in tarsus III; missing in tarsus IV; 5 in palpal tarsus. Claws: ITC absent. STC bare on all legs; 1 bare claw on palp. Claw tufts in all legs divided in two symmetric parts, with smaller tuft underneath. Scopulae: legs I and II: entire and dense in tarsus, metatarsus and anterior third of tibia; legs III and IV: parted and sparse in tarsus and anterior third of metatarsus; palp: entire and dense on tarsus and sparse on anterior third of tibia. All tarsi integral.

Spermathecae: two, each with a rounded basis, from which a spiraled stalk branches out, with a rounded receptacle at the termination.

Spinnerets: PMS short, 0.1 long. Basal, middle, and apical segments of PLS, 0.32 long, 0.41 wide, 0.08 apart; 0.25 long, 0.3 wide; 0.15 long, 0.19 wide, respectively. Apical segment domed. All segments covered by fine setae.

Color pattern (preserved in alcohol): Chelicerae brown, carapace brown with light brown tapering stripe medially, legs light brown, with brown bands in every article. Abdomen dorsally brown with pale spots scattered; ventrally pale with dark spots scattered.

TABLE 37. Gen. nov. 1. Female, MNHN 9978/AR4557. Leg measurements, left side.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palp	**1.6**	**1.3**	**0.99**	**-**	**0.87**	**4.76**
Leg I	**2.41**	**1.78**	**1.7**	**1.29**	**0.96**	**8.14**
Leg II	**2.41**	**1.56**	**1.77**	**1.33**	**0.93**	**8**
Leg III	**2**	**1.55**	**1.47**	**1.85**	**1.06**	**7.93**
Leg IV	**3.2**	**1.87**	**2.62**	**3.43**	**1.44**	**12.56**

Distribution. Brazil, state of Bahia.

Remarks. Simon (1891) described this species as *Trichopelma flavicomum* based on a small female specimen. The analysis of the holotype showed that it does not belong to this genus or even the same family. Instead, it should be moved to the Barychelidae, within the Sasoninae subfamily. Additionally, it will be necessary to create a new genus for accommodating it, for it does not fit in with any other currently known Sasoninae.

Characters that distinguish it from Trichopelmatinae are: regular sized spinnerets, absence of 18-point abdominal pattern, presence of a clypeus, labium without cuspules and maxillae with very few cuspules. Characters that justify its inclusion in Sasosinae are: maxillary heel and frontal lobe indistinct, clypeus absent, curved long spines on metatarsi I and II, scopula on the tibia of female palps, and the banded legs.

FIGURES 302-309. Sasoninae gen. nov. 1, female holotype from Brazil, Bahia, MNHN 9978/AR4557. **302,** habitus. **303,** ventral view. **304,** eye tubercle. **305,** maxillae and labium. **306,** spinnerets. **307,** spermathecae. **308,** left leg I, showing scopula spreading until tibia. **309,** right tarsus I, showing clavate tricobothria concentrated in the middle. Scales = 1 mm (302-306, 308, 309), 0.5 mm (307).

***Holothele maddeni* (Esposito & Agnarsson, 2014) n. comb.**

Trichopelma maddeni Esposito & Agnarsson, in Bloom *et al.*, 2014: 152, f. 31-g; World Spider Catalog, 2018.

Type material. 1 female holotype from Cueva Seibo, Parque Nacional del Este, Altagracia province, Dominican Republic, July 10, 2012, Team CarBio col., deposited in the NMNH Smithsonian, not examined.

Remarks. This species was described by Esposito & Agnarsson (2014) based on a single female specimen, being the only blind species within the genus *Trichopelma*. The authors argued that it belonged in *Trichopelma* due to the presence of a cracked tarsus IV. However, the cracked tarsus IV is not an exclusive character to *Trichopelma*, as it can also be found in other genera, such as *Reichlingia*, *Cyrtogrammoma*, *Melloina*, *Ischnocolus*, *Holothele* and selenocosmiines.

Additionally, the lack of an abdomen pattern and the very long spinnerets with a digitiform segment of PLS distances it from *Trichopelma* as well. Based on these characters, this species is herein transferred to the genus *Holothele*.

Geographic distribution

The subfamily Trichopelmatinae is restricted to the New World, particularly in the northern part of South America, Central America and the Caribbean (Figs. 310-317).

The genus *Reichlingia* has only been documented in Belize, Central America. On the other hand, *Psalistops* is restricted to South America, occurring in Venezuela and Colombia (Fig. 311).

Trichopelma is the most widespread genus of the three, occurring in Central and South America (Figs 312-314), as well in several islands of the Caribbean (Figs 314-317). Overall, most species tend to occur in a specific island or country, however some species (*e. g. T. affine)* also occur in more than one island, though they are usually not far apart. This apparent island/country endemism in most species could be due to the lack of knowledge of Trichopelmatinae in the literature. Perhaps there are several specimens in local museums that have not been described or identified yet, and many other species of *Trichopelma* could occur in more than one island.

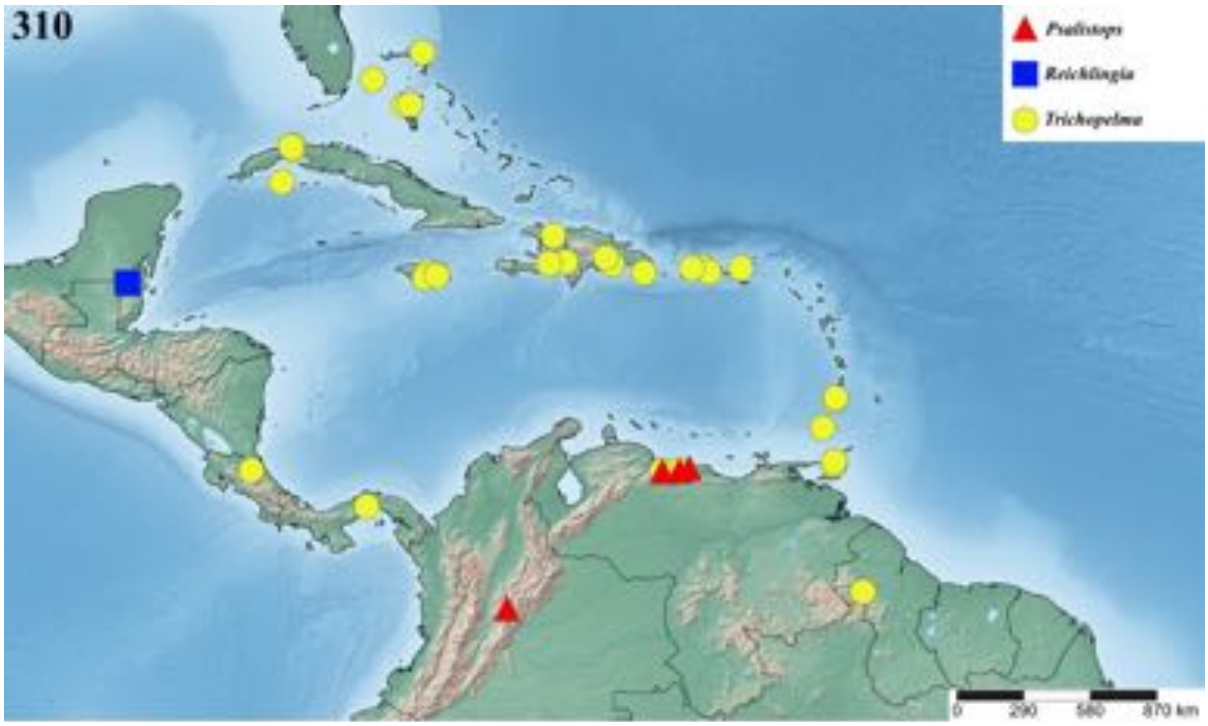


FIGURE 310. Distribution of Trichopelmatinae.

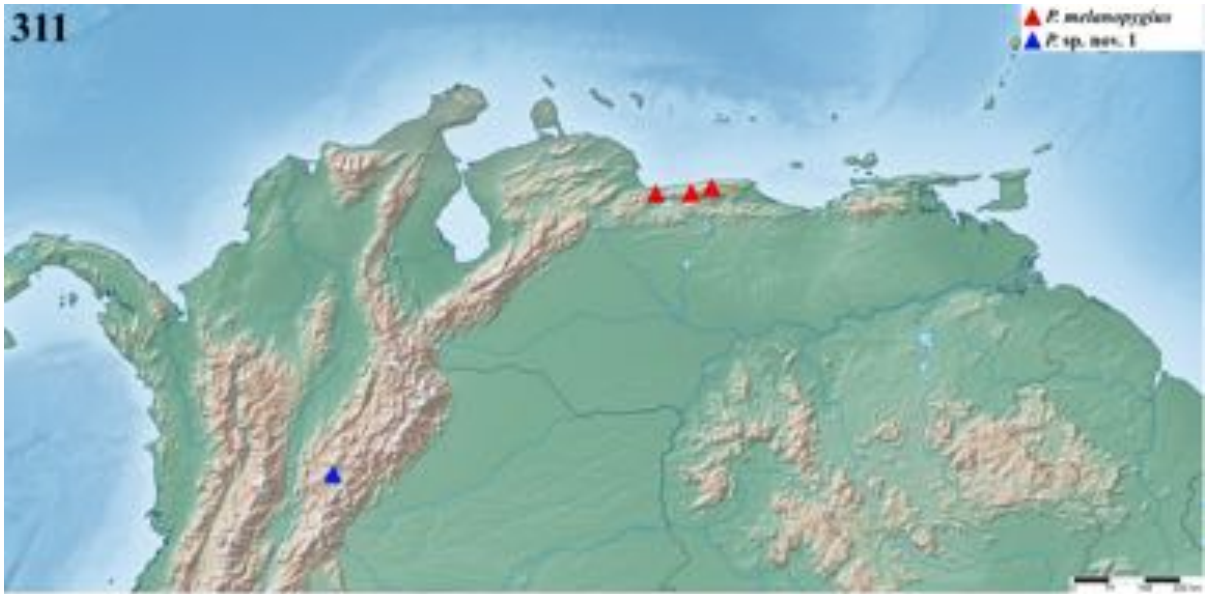


FIGURE 311. Distribution of the genus *Psalistops*.

FIGURE 312. Distribution of *T.* sp. nov. 7. **313.** Distribution of *T. laselva* and *T. zebra*.

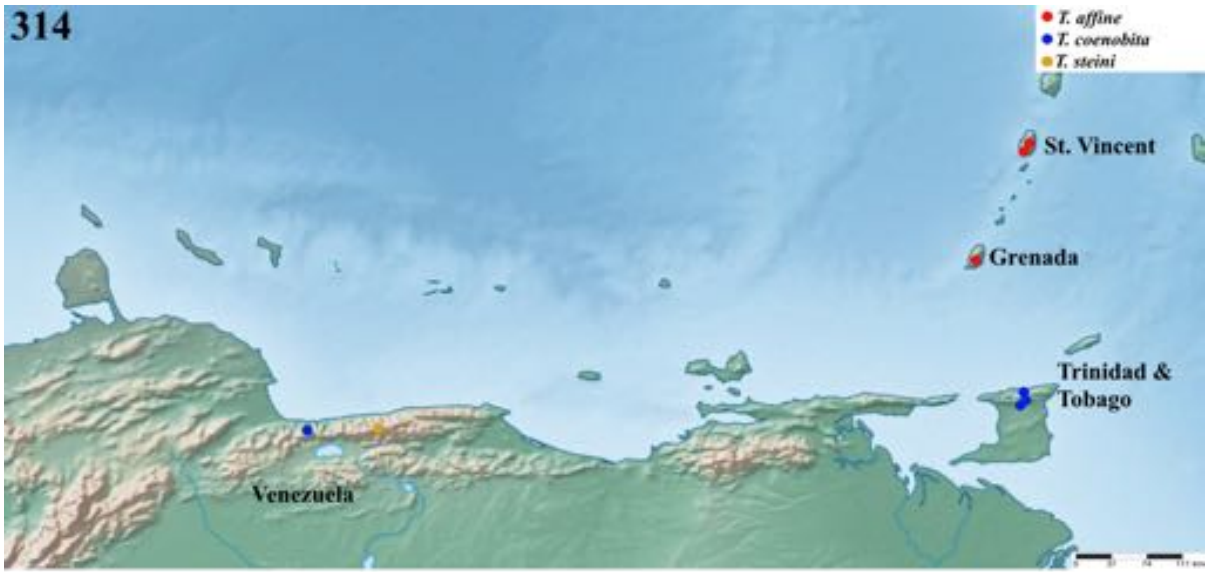


FIGURE 314. Distribution of *T. affine*, *T. coenobita* and *T. steini*.

FIGURE 315. Distribution of *T. banksia, T. cubanum, T. maculatum*, *T.* sp. nov. 4, *T.* sp. nov. 5, *T.* sp. nov. 6 and *T.* sp. nov. 8.

FIGURE 316. Distribution of *T. fulvus*, *T. insulanum*, *T. nitidum*, *T.* sp. nov. 1, *T.* sp. nov. 2, *T.* sp. nov. 3.

FIGURE 317. Distribution of *T.* sp. nov. 9, *T.* sp. nov. 10, *T.* sp. nov. 11.

Discussion

The cladistics analysis showed some interesting results with regards to systematic standings and synapomorphies. The major clades that are relevant to Trichopelmatinae will be discussed in parts.

Barychelinae

Raven (1985) had previously characterized the subfamily Barychelinae by the distinctive elongate eye group, with the anterior eye row being sharply procurved, the apical segment of PLS domed, cuspules reduced or absent on labium, and labium much wider than long. Within this subfamily were included the genera *Cyphonisia* and *Idiophthalma*. Most of the characters used by Raven were also observed in the specimens of Barychelinae studied here.

Interestingly, *Cyphonisia* did not form a monophyletic group with the other two Barychelinae (*Idiophthalma* sp. 1 + *Idiophthalma* sp. 2). Although the anterior eye row of *Cyphonisia obesa* is more strongly procurved than what is found on most other mygalomorphs (character 10), it was not quite as dislocated as the extremely procurved row seen in *Idiophthalma*. Similarly, the straight posterior eye row (character 11) of the former contrasts to the recurved of the latter. Furthermore, the leg color (character 69) also differs in *Cyphonisia obesa*, which is banded in two colors, whereas the other Barychelinae have uniformly colored legs.

This suggests that either Barychelinae could be a paraphyletic group, or that perhaps *Cyphonisia obesa* does not belong to it. On the other hand, this could also be explained due to the lack of more barychelines in this analysis. As such, no changes to the subfamily Barychelinae are suggested based just on the results of this analysis.

Sasoninae

Raven (1985) had previously characterized the subfamily Sasoninae by the presence of a clypeus or the eye group being less than twice as wide as long, absence of biserially dentate STC in males, domed apical segment of PLS, and linear cuspules on the labium of females and some males. All of these characters were also observed here.

Just as in Raven (1985), Sasoninae is considered a monophyletic group here. This subfamily is very well-established, with several easy to identify synapomorphies: absence of a clypeus (character 9), with a reversion in *Sason robustum* and some parallelisms across Theraphosidae; maxillary heel absent (character 19), with one reversion in Sasoninae gen. nov. 2; curved long spines on metatarsi I and II (character 39), with one reversion in *Sason robustum*; scopula on the tibia of the palp (character 51) and front legs (character 53) of females; and the banded legs (character 69), with

one reversion in Sasoninae gen. nov. 2, and some parallelisms in *Cyphonisia obesa* and *Paratropis sp*.

Barychelidae

The results herein presented offer an interesting perspective to the taxonomic standing of the family Barychelidae. Raven (1985) had previously grouped the Barychelidae due to the absence of a third claw, biserially dentate paired claws on males and well-developed scopula on tarsi I and II. In his analysis, Barychelidae was a monophyletic group, sister group of Theraphosoidea (see below). Together, the three families formed a group called Theraphosoidina by Raven (1985).

Goloboff (1993) argued that Raven (1985) did not propose unequivocal synapomorphies for Barychelidae, since the characters could be simply plesiomorphies. However, Goloboff (1993) highlighted a character that could support the monophyly of Barychelidae: the presence of book lung combs. His analysis also agreed with the monophyly of Theraphosoidina.

In the analysis by Bond *et al.* (2016), the families Theraphosidae and Barychelidae were found as sister groups, forming a monophyletic group, although the authors highlighted that the results were based on very limited sampling. The characters that distinguish them from other mygalomorphs would be the presence of a claw tuft and the well-developed scopula on the legs.

Bond *et al*. (2016) also argued that the characters separating Theraphosidae from Barychelidae (presence of a prominent frontal lobe and increased number of cuspules) were weak and shared by many other mygalomorphs. Additionally, the authors wondered if the two families could potentially represent one family only. They also stated that an enhanced sampling of the genera from both groups may resolve the status of both families.

The analysis herein revealed a different result, as none of these characters support a monophyly of the Barychelidae family; the absence of a third claw and a well-developed scopula is shared by virtually all the Theraphosidae groups used here, and biserially dentate paired claws (characters 46 and 47) occur only in some groups of Trichopelmatinae and in *Stenoterommata*. Likewise, the presence of book lung combs (character 31) was not found in any of the species of Barychelidae included here. Such structures were only found in some species of *Trichopelma.*

Contrary to Bond *et al.* (2012), the presence of the frontal lobe in the analysis showed up as a synapomorphy of all the Theraphosidae here, supporting the analysis by Raven (1985). Additionally, the length of the frontal lobe (character 22) also recovered some monophyletic groups: the state (2) ¾ or more of maxillae width is a synapomorphic character to both species of *Paratropis*, while the state (0) less than half of the maxillae is a synapomorphy of the clade in the node 68, which includes part of the Theraphosidae. This shows that both presence of a frontal lobe and how well-developed it is can be used as diagnostic characters of clades, and so are important characters to consider in analysis.

Idiophthalma sp. 1 and *Idiophthalma* sp. 2 form a monophyletic group, which is supported by the very procurved fovea (character 7), extremely procurved anterior eye row (character 10) and longer than wide sternum (character 17), and it is the sister-group of Sasoninae + Theraphosoidea (see below).

The clade Sasoninae + Theraphosoidina is supported by the absence of a rastellum (character 14), with the exception of *Neodiplothele* sp. and Trichopelmatinae; presence of tarsal clavate tricobothria (character 37), with reversions in *Paratropis sp*. and Sasoninae gen. nov. 2; absence of discolored metatarsi and tarsi I and II in males (character 63), with reversions in *Melloina santuario*, *Holothele* and Trichopelmatinae.

This hints that Barychelidae is not a monophyletic group, and so several interpretations and taxonomic changes could be suggested. One of them could be that Barychelinae is the true representative of the Barychelidae family, while Sasoninae could be elevated to the family category as Sasonidae. Another option would be the transfer of both Sasoninae and Paratropididae to the Theraphosidae family, making it a possible sister-group to the would-be Barychelidae.

In any case, no transfer will be suggested here. As stated previously, in order to fully comprehend the taxonomic standing of the Barychelidae family, it would be better to perform an analysis in which the Barychelinae subfamily is better represented. Perhaps the inclusion of other taxa could switch around even the position of the Sasoninae.

Theraphosoidea

Raven (1985) diagnosed Theraphosoidea based on the produced anterior maxillary lobe and labial cuspules dense and numerous. This group included the families

Paratropididae and Theraphosidae. The analysis performed by Goloboff (1993) also agreed with the monophyly of this group.

In the analysis performed by Bond *et al.* (2012), Paratropididae is positioned much more externally than Barychelidae and Theraphosidae, turning Theraphosoidea and Theraphosoidina polyphyletic. The authors included one representative genus of Paratropididae, and stated that perhaps the inclusion of other genera could clarify the placement of the family, though they doubt that it would turn Theraphosoidea into monophyletic again.

Theraphosoidea is also supported by this analysis. Both the characters highlighted by Raven (1985), the presence of a frontal lobe (character 21) and the increased number of labial cuspules (character 2), were also observed in the analysis, though the labial cuspules density has one reversion in the genus *Catumiri*. Furthermore, another synapomorphy was recovered here: the increased number of maxillary cuspules (character 1), with reversion in *Catumiri*. These results suggest that the group Theraphosoidea might in fact be monophyletic. Also, another synapomorphic character is that at least two segments of PLS are subequal in length, with a reversion in *Trichopelma*.

Similarly, the family Paratropididae is herein considered as monophyletic, although there were only a few species represented. The synapomorphies include tarsal spines in all legs (character 34), scopula absent on palp and legs of females (characters 49 and 54), as well as on the legs III and IV of males (character 60).

Ischnocolinae

According to Raven (1985), the Ischnocolinae were traditionally characterized by having the scopula of the anterior tarsi parted and differ from other Theraphosidae by having scopula on tarsi III and IV weak and sparse. However, the author also states that revisions of some ischnocoline genera are needed before they can be grouped into monophyletic groups, and in his analysis, Ischnocolinae is paraphyletic.

Similarly, in the analysis by Guadanucci (2014), Ischnocolinae also did not form a monophyletic group, but two supra-generic clades of Ischnocolinae were recovered as monophyletic, so the author split the subfamily in Ischnocolinae *sensu stricto* and Schismatothelinae, a new subfamily created by the author (see below).

The Ischnocolinae *sensu stricto* included the genera *Acanthopelma, Trichopelma, Reichlingia, Ischnocolus* and some species of *Holothele*. According to Guadanucci (2014), this group can be diagnosed by the presence of the intercheliceral intumescence and by having all tarsi cracked.

Differently from Guadanucci (2014), this analysis indicates that the Ischnocolinae *sensu stricto* is paraphyletic, with the genera *Trichopelma* and *Reichlingia* not forming sister-groups with *Ischnocolus* or *Holothele*. Additionally, the diagnostic characters seen by Guadanucci (2014) were not observed in the analysis here, as the intercheliceral intumescence was lacking in virtually every taxon except for the male of *Stenoterommata* sp. As for the cracked tarsi, this is a highly variable character that is not present in all species of *Trichopelma*, and when it is present, usually is just on the leg IV. Additionally, the *Ischnocolus* specimens studied here did not have the tarsi of all legs cracked. Based on the results obtained herein, Ischnocolinae can be monophyletic, including Schismatothelinae, Trichopelmatinae, *Holothele longipes* and *Catumiri*. In this case, Schismatothelinae and Trichopelmatinae should be synonymized with Ischnocolinae. Since not all ischnocoline genera were included in the present analysis, these synonimies were not done.

These contradictory results reflect the idea that many genera of the subfamily Ischnocolinae are in need of taxonomic revision, as suggested by Guadanucci (2014). Furthermore, perhaps the inclusion of more species from the subfamily can paint a clearer picture of its taxonomic standing.

Schismatothelinae

As stated above, the subfamily Schismatothelinae was created by Guadanucci (2014) when the author split the former Ischnocolinae. The group is composed of the genera *Sickius*, *Guyruita*, *Schismatothele*, *Hemiercus* and some species of *Holothele*.

This subfamily is supported by the presence of a highly dense area of cupules in the labium, which are concentrated on a raised area. Additionally, the author stated that the genera *Schismatothele*, *Hemiercus* and *Holothele* are all in need of taxonomic revision.

The present analysis showed that Schismatothelinae is polyphyletic, mostly due to the genus *Guyruita*, which does not form a monophyletic group with the rest. Curiously, both species of *Guyruita* also were also not recovered as monophyletic.

These results suggest that the subfamily Schismatothelinae should be maintained, but with the removal of the genus *Guyruita*. As such, the synapomophic character of this subfamily would be the one stated by Guadanucci (2014): the high density of cupules (character 2) concentrated in the front of the labium and the spermathecae without branching (character 77). Schismatothelinae is herein considered as the sister group of Trichopelmatinae.

Trichopelmatinae

Trichopelmatinae is a subfamily proposed by Raven (1985), which was included in the family Barychelidae and comprised only the genera *Psalistops* and *Trichopelma*. The author noticed that the males of this group displayed two rows of teeth on the STC, just as in all genera of Barychelidae, except Sasoninae.

Additionally, he noticed that the specimens of Trichopelmatinae had a higher density of cuspules in the maxillae and labium than most other species of Barychelidae, and short and triangular apical segments of the spinnerets. As for the diagnostic character of the group, he stated that Trichopelmatinae has a very produced maxillary heel.

Furthermore, the author also distinguished the two genera of the subfamily by the tarsus IV, which is cracked in *Trichopelma*, and integral in *Psalistops*. The group was considered by the author as the basal subfamily of the Barychelidae.

Guadanucci (2014) included the genera *Reichlingia* and *Trichopelma* in his analysis. His result grouped the two as sister groups and transferred both to the Theraphosidae from the Barychelidae. *Psalistops* was not included in the analysis. The Theraphosidae was then recovered as a monophyletic group, with the following synapomorphies: cymbium with lobes of similar sizes, absence of rastellum, anterior maxillary lobe distinct, large tarsal clavate tricobothria disposed in two rows, and apical segment of PLS digitiform (with reversion in *Trichopelma* + *Reichlingia*).

The Trichopelmatinae subfamily is herein considered valid and it also includes the genus *Reichlingia*. The synapomorphies of this subfamily are the rastellum absent, with thickened setae instead (character 14), with parallelism in Barychelinae and *Cyphonisia;* Metatarsi and tarsi I and II of males discolored (character 63), with parallelism in some other taxa and apical segment of spinnerets domed or triangular (character 72), but never digitiform.

Furthermore, the genus *Psalistops* is herein transferred to Theraphosidae, making the subfamily Trichopelmatinae a part of Theraphosidae as well. The Trichopelmatinae share with the other Theraphosidae the following characters: increased number of labial cuspules (character 2) and clypeus absent (character 9).

Psalistops

Raven, (1985) distinguished *Psalistops* from other genera by having a strongly distinct maxillary heel and tarsus IV integral.

The analysis of specimens of *Psalistops* showed that all of them have an integral tarsus IV and that the maxillary heel is indeed distinct. However, one difference must be highlighted: the maxillary heel of *Psalistops* is not strongly distinct. In fact, it is quite similar to what is found in most Theraphosidae.

Both species of *Psalistops* form a monophyletic group, however, *Psalistops* is not considered as a sister group of *Trichopelma* anymore, being instead a sister group of *Reichlingia*, as both genera possess the incrassate spinnerets (character 74).

Trichopelma

Raven (1985) distinguished *Trichopelma* from other genera by having a strongly distinct maxillary heel and tarsus IV cracked.

The analysis of all specimens of *Trichopelma* revealed that neither of these characters are present in all species of *Trichopelma*, and as such, cannot be considered as diagnostic characters or synapomoprhies for the entire genus. However, according to the analysis, the presence of the cracked tarsus IV on females (character 67) only can be considered a synapomorphy of the genus, with some parallelisms in other groups and two reversions within *Trichopelma*. Additionally, the following synapomophies can be noted: presence of 18-spot pattern on abdomen dorsally (character 12); all PLS articles in clearly different sizes (character 71); and cymbium of males strongly forked (character 89).

Within *Trichopelma*, there is a trichotomy at the base. *Trichopelma maculatum* stands alone at one of the clades of this trichotomy, due to the number of labial cuspules (character 2), the strongly procurved anterior eye row (character 10) with some parallelisms, main stalk of spermathecae with two branches (character 77) with some

parallelisms, spermathecae with two distinct rounded receptacles (character 78) with some parallelisms, ventral apophysis (character 81) with one parallelism in *T. nitidum*, and embolus straight (character 92) with some parallelisms.

The second clade of this trichotomy is a grouping of most species from Dominican Republic (node 62). The synapomorphy of this group is the sparse scopula on legs I and II of males (character 57) with some parallelisms.

The third clade of the trichotomy is composed of all the remaining *Trichopelma* (node 84). These species share the number of labial cuspules (character 2), the presence of book lung combs (character 31) with some parallelisms and reversions, apophysis far from cuticular projection (character 82) with some parallelisms and apophysis aligned in a straight line with cuticular projection (character 83).

The node 84 also splits in two groups. The first one (node 87) is composed of all the *Trichopelma* from Cuba except *T. banksia* + *T.* sp. nov. 7, *T. coenobita* and *T. laselva*. The synapomorphies of this group are full scopula on female palps (character 50) with some parallelisms and reversions, full scopula on female legs I and II (character 52) with some parallelisms and reversions, and full scopula on male legs I and II (character 58) with some reversions.

The second group of node 84 is composed of all the *Trichopelma* from Jamaica and all the other remaining species. This group shares the number of maxillary cuspules (character 1) and the tapering and thick main stalk of spermathecae (character 78) with some parallelisms and reversions.

Trichopelma is a genus with many species that are very similar to each other. The characters that set species apart seem to concentrate mostly on the pattern of the abdomen, spermathecae, bulb and apophysis.

Conclusions

Based on the results herein presented, the following conclusions were obtained:

I- The subfamily Trichopelmatinae is monophyletic, and it includes the genera *Psalistops*, *Reichlingia* and *Trichopelma*.

II- All genera of Trichopelmatinae are herein transferred to the family Theraphosidae, and no longer belong to Barychelidae;

III- *P. montigena*, *P. tigrinus* and *P. zonatus* are synonyms of *P. melanopygius*;

IV- *T. corozalis* is a synonym of *T. insulanum*;

V- *P. maculosus* is a synonym of *P. fulvus*; additionally, they are both transferred to the genus *Trichopelma*;

VI- *P. venadensis* is transferred to the genus *Trichopelma*;

VII- The fossil species *P. hispaniolensis* is transferred to the genus *Trichopelma*;

VIII- A new species of *Psalistops* is described, increasing the distribution from the genus;

IX- 11 new species of *Trichopelma* are described, increasing the distribution from the genus;

X- *P. nigrifemuratus*, *T. spinosum*, *T. scopulatum* and *T. eucubanum* are considered as *nomina dubia*;

XI- *P. gasci* is transferred to the genus *Hapalopus*;

XII- *P. steini* is transferred to the genus *Trichopelma*;

XIII- *P. opifex* and *P. solitarius* are synonyms of *Schismatothele lineata*;

XIV- *T. astutum* is transferred to the genus *Euthycaelus*;

XV- *T. maddeni* is transferred to the genus *Holothele*;

XVI- *T. illetabile* does not belong to the genus *Trichopelma*, but instead to the subfamily Sasoninae. It is considered as *incertae sedis*;

XVII- *T. flavicomum* does not belong to the genus *Trichopelma*, but instead to the subfamily Sasoninae, and will likely compose a new genus within it;

XVIII- New occurrences of *T. coenobita*, *T. affine* and *T. maculatum* are documented;

XIX- The male of *T. coenobita* is described for the first time;

XX- Trichopelmatinae currently consists of 27 species (1 from *Reichlingia*, 2 from *Psalistops* and 24 from *Trichopelma*);

XXI- The results herein presented showed that the revision of Trichopelmatinae had a positive and revealing impact on the understanding of the relationships within and between Theraphosidae and Barychelidae. Most likely, a more comprehensive cladistic analysis, including more specimens from both families could help solve the current systematic standing of both the families and subfamilies included in them as a whole. Likewise, a revision of other key groups, such as Barychelinae, Sasoninae, Ischnocolinae and Schismatothelinae, would also greatly help in determining such relationships, especially given how there have been different interpretations regarding their systematic standing in the literature.

References

Banks, N. 1906. Arachnida from the Bahamas. **Bulletin of the American Museum of Natural History,** (22): 185-189.

Banks, N. 1909. Arachnida of Cuba. **Estación Central Agronómica de Cuba, Second Report.** (II): 150-174.

Bertani, R. & da Silva Jr., P. I. 2002. The first mygalomorph spider without spermathecae: *Sickius longibulbi*, with a revalidation of *Sickius* (Araneae. Theraphosidae, Ischnocolinae). **Journal of Arachnology**, 30: 519-526.

Bertani, R.; Mori, A. & Fukushima, C. S. 2017. Spiders of the São Paulo state islands, Brazil: redescription of *Stenoterommata crassimana* (Mello-Leitão, 1923) n. comb. (Araneae, Nemesiidae). **Zootaxa,** 4363(2): 237-248. doi:10.11646/zootaxa.4363.2.4

Bloom, T.; Binford, G.; Esposito, L. A.; Alayón, G. G.; Peterson, I.; Nishida, A.; Loubet-Senear, K. & Agnarsson, I. 2014**.** Discovery of two new species of eyeless spiders within a single Hispaniola cave. **Journal of Arachnology,** 42: 148-154. doi:10.1636/k13-84.1

Bond, J.E.; Hendrixson, B.E.; Hamilton, C.A. & Hedin, M. 2012. A reconsideration of the classification of the spider infraorder Mygalomorphae (Arachnida: Araneae) based on three nuclear genes and morphology. **PloS one,** 7(6): e38753.

Brescovit, A. & Oliveira, U. & Santos, A. 2011. Spiders (Araneae, Arachnida) from São Paulo State, Brazil: diversity, sampling efforts, and state-of-art. **Biota Neotropica,** (11): 717-747. doi: 10.1590/S1676-06032011000500035.

Brignoli, P. M. 1983. **A catalogue of the Araneae described between 1940 and 1981.** Manchester University Press., 755p.

Bryant, E. B. 1948. The spiders of Hispaniola. **Bulletin of the Museum of Comparative Zoology at Harvard College,** 100: 331-459.

Dunlop, J.A.; Penney, D.; Jekel, D. 2018. A summary list of fossils spiders and their relatives. *In:* **World spider catalog**. Natural History Museum Bern. available in: http://wsc.nmbe.ch, version 18.5, accessed on 11/04/2018.

Fischel, W. 1927. Über Sudamerikanische Aviculariiden. **Zoologischer Anzeiger,** 74: 59-74.

Franganillo, B. P. 1926. Arácnidos nuevos o poco conocidos de la Isla de Cuba. **Boletín de la Sociedad entomológica de España,** 9: 42-68.

Franganillo, B. P. 1930. Arácnidos de Cuba: mas arácnidos nuevos de la Isla de Cuba. **Memorias del Instituto Nacional de Investigaciones Cientificas,** 1: 47-99.

Franganillo, B. P. 1931. Excursiones arachnológicas, durante el mes de agosto de 1930. **Estudios de "Belen",** (25): 168-171.

Fukushima, C. S. & Bertani, R. 2017. Taxonomic revision and cladistic analysis of *Avicularia* Lamarck, 1818 (Araneae, Theraphosidae, Aviculariinae) with description of three new aviculariine genera. **ZooKeys, (**659):1-185, Suppl.1-5. doi:10.3897/zookeys.659.10717

Fukushima, C. S.; Bertani, R. & da Silva Jr., P. I. 2005. Revision of *Cyriocosmus* Simon, 1903, with notes on the genus *Hapalopus* Ausserer, 1875 (Araneae: Theraphosidae). **Zootaxa,** 846: 1-31.

Gallon, R. C. 2010. On some southern African Harpactirinae, with notes on the eumenophorines *Pelinobius muticus* Karsch, 1885 and *Monocentropella* Strand, 1907 (Araneae, Theraphosidae). **Bulletin of the British Arachnological Society,** 15: 29-48.

García, G. A. 2000. Las arañas endemicas de Cuba (Arachnida: Araneae). **Revista Ibérica de Aracnologia,** 2: 1-48. Disponível em http://sea-entomologia.org/PDF/RIA_2/R02-001-001.pdf

Gerschman de Pikelin, B. S. & Schiapelli, R. D. 1973. La subfamilia Ischnocolinae (Araneae: Theraphosidae). **Revista del Museo Argentino de Ciencias Naturales Bernardino Rivadavia, Entomologia,** 4: 43-77.

Goloboff, P. 1993. A reanalysis of mygalomorph spider families (Araneae). **American Museum Novitates,** (3056): 1-32.

Goloboff, P. A. 1995. A revision of the South American spiders of the family Nemesiidae (Araneae, Mygalomorphae). Part I: species from Peru, Chile, Argentina, and Uruguay. **Bulletin of the American Museum of Natural History,** (224): 1-189.

Goloboff, P.; Farris, J. & Nixon, K. 2003. TNT 1.1: tree analysis using new technology program and documentation, disponível em: www.zmuc.dk/public/phylogeny.

Goloboff, P. A.; Mattoni, C. I. & Quinteros, A. S. 2006 Continuous characters analyzed as such. **Cladistics**, 22: 589-601.

Guadanucci, J. P. L. 2004**.** Description of *Catumiri* n. gen. and three new species (Theraphosidae: Ischnocolinae). **Zootaxa,** (671): 1-14.

Guadanucci, J. P. L. 2014. Theraphosidae phylogeny: relationships of the "Ischnocolinae" genera (Araneae, Mygalomorphae). **Zoologica Scripta,** 43(5):508-518.

Guadanucci, J. P. L. & Weinmann, D. 2014**.** The spider genera *Euthycaelus* Simon and *Schismatothele* Karsch (Mygalomorphae, Theraphosidae). **Zootaxa,** 3795(3): 275-288. doi:10.11646/zootaxa.3795.3.3

Guadanucci, J. P. L.; Perafán, C. & Valencia-Cuéllar, D**.** 2017**.** The genus *Holothele* Karsch, 1879: the identity of the type species (Mygalomorphae, Theraphosidae). **Zoosystema**, 39(2): 263-271. doi:10.5252/z2017n2a5

Hedin, M. & Bond, J.E. 2006. Molecular phylogenetics of the spider infraorder Mygalomorphae using nuclear rRNA genes (18S e 28S): conflict and agreement with the current system of classification. **Molecular phylogenetics and evolution,** 41(2): 454-471.

Karsch, F. 1879. Arachnologische Beitrage. **Zeitschrift für die Gesammten Naturwissenschaften,** 52: 534-562.

Maréchal, P. 1996. *Psalistops gasci* n. sp., première Barychelidae de Guyane française (Araneae, Mygalomorphae). **Bulletin du Musee d'Histoire Naturelle de Paris,** 4A (18): 589-594.

Mello-Leitão, C. F. de. 1923. Theraphosideas do Brasil. **Revista do Museu Paulista,** 13: 1-438.

Mello-Leitão, C. F. de. 1939. Algumas aranhas de S.-Paulo e Santa Catarina. **Memórias do Instituto Butantan,** 12: 523-531.

Mello-Leitão, C. F. de 1946. Nuevos aracnidos sudamericanos de las colecciones del Museo de Historia Natural de Montevideo. **Comunicaciones Zoologicas del Museo de Historia Natural de Montevideo,** 2(35): 1-10.

Miranda, R.J. & Bermúdez, S. E. 2010. *Strophaeus sebastiani*, nueva espécie de Barychelidae (Araneae: Mygalomoprhae) de Panamá. **Boletín de la Sociedad Entomológica Aragonesa,** 47: 175-179.

Mori, A. & Bertani, R. 2016. On the genus *Cosmopelma* Simon, 1889 (Araneae, Barychelidae). **Zootaxa,** 4137(4): 520-534. doi:10.11646/zootaxa.4137.4.4

Özdikmen, H. & H. Demir. 2012. Two new names of the specific epithets *cubanum* and *maculatum* in *Trichopelma cubanum* (Banks, 1909) and *Trichopelma maculatum* (Franganillo, 1930) (Araneae: Barychelidae). **Serket,** 13: 118-120.

Passanha, V.; Indicatti, R. P.; Brescovit, A. D. & Lucas, S. M**.** 2014**.** Revision of the spider genus *Pycnothele* (Araneae, Nemesiidae). **Iheringia, Série Zoologia**, 104(2): 228-251. doi:10.1590/1678-476620141042228251

Panzera, A., Perdomo, C. & Pérez-Miles, F. 2011. *Schismatothele benedettii*, a new species of tarantula from amazonic Brazil (Araneae, Theraphosidae). **Bulletin of the British Arachnological Society**, 15: 130-132.

Penney, D. & Pérez-Gelabert, D. E. 2002. Comparison of the Recent and Miocene Hispaniolan spider faunas. **Revista ibérica de aracnología,** 6: 203-223.

Pérez-Gelabert, D. E. 2008. Arthropods of Hispaniola (Dominican Republic and Haiti): A checklist and bibliography. **Zootaxa,** (1831): 1-530.

Petrunkevitch, A. 1911. A synonymic index-catalogue of spiders of North, Central and South America with all adjacent islands, Greenland, Bermuda, West Indies, Terra del Fuego, Galapagos, etc. **Bulletin of the American Museum of Natural History,** 29: 1-791.

Petrunkevitch, A. 1925. Arachnida from Panama. **Transactions of the Connecticut Academy of Arts and Sciences,** 27: 51-248.

Petrunkevitch, A. 1926. Spiders from the Virgin Islands. **Transactions of the Connecticut Academy of Arts and Sciences,** 28: 21-78.

Petrunkevitch, A. 1928. Systema Aranearum. **Transactions of the Connecticut Academy of Arts and Sciences**, 29: 1-270.

Petrunkevitch, A. 1929. The spiders of Porto Rico. Part one. **Transactions of the Connecticut Academy of Arts and Sciences,** 30: 1-158.

Raven, R.J. 1985. The spider infraorder Mygalomorphae (Araneae): cladistics and systematics. **Bulletin American Museum of Natural History,** 182: 1-175.

Raven, R.J. 1994. Mygalomorph spiders of the Barychelidae in Australia and the western Pacific. **Memoirs of the Queensland Museum,** 35: 291-706.

Reichling, S. B. 1997**.** A diminutive new species of *Acanthopelma* from Belize (Araneae: Theraphosidae). **Bulletin of the British Arachnological Society,** 10: 337-340.

Ríos-Tamayo, D. 2017. Re-description of *Trichopelma cubanum* (Theraphosidae: Ischnocolinae) and comments about the familial placement of *Trichopelma*. **Munis Entomology and Zoology,** 12(1): 194-198.

Roewer, C. F. 1942. **Katalog der Araneae von 1758 bis 1940.** Bremen, Kommissions-Verlag von Natura. v.2, pt. 1, 1040p.

Rudloff, J.-P. 1997. Ergebnisse der Untersuchung einiger Spinnen aus der Sammlung des American Museum of Natural History (AMNH), New York (Araneae: Mygalomorphae). **Arachnologisches Magazin,** 5(3): 8-11.

Rudloff, J.-P. 2001. Anmerkungen zur systematischen Stellung von *Acanthopelma rufescens* F.O.P.-Cambridge, 1897 und *Acanthopelma annae* Reichling, 1997 (Ischnocolinae: Theraphosidae: Mygalomorphae), sowie die Einrichtung einer neuen Gattung *Reichlingia* gen. nov. (Mygalomorphae: Barychelidae: Trichopelmatinae). **Arthropoda**, 9(3): 14-20.

Schenkel, E. 1953. Bericht über einige Spinnentiere aus Venezuela. **Verhandlungen der Naturforschenden Gesellschaft in Basel,** 64: 1-57.

Schmidt, G. 1986. **Vogelspinnen: Lebensweise, Bestimmungsschlüssel, Haltung und Zucht.** Albrecht Philler Minden. 151 p.

Schmidt, G. 1997. Bestimmungsschlüssel für die Gattungen der Unterfamilie Theraphosinae (Araneae: Theraphosidae). **Arachnologisches Magazin,** 3: 1-27.

Schmidt, G. 2003. **Die Vogelspinnen: Eine weltweite Übersicht.** Neue Brehm-Bücherei, Hohenwarsleben. 383 p.

Simon, E. 1887.M.E.Simon communique quelques observations sur les aracnides. **Annales de la Société Entomologique de France, Serie 6,** (7): 158-159, 167, 175-176, 186-187, 193-195.

Simon, E. 1888. Etudes arachnologiques. 21e Mémoire. XXIX. Descriptions d'espèces et de genres nouveaux de l'Amérique centrale at des Antilles. **Annales de la Société Entomologique de France**, **Serie 6**, (8): 203-216.

Simon, E. 1889. Descriptions d'espèces africaines nouvelles de la famille des Aviculariidae. **Actes de la Société Linnéenne de Bordeaux,** 42: 405-415.

Simon, E. 1889. Arachnides. Voyage de M. E. Simon au Venezuela (décembre 1887-avril 1888). 4e Mémoire. **Annales de la Société Entomologique de France, Serie 6,** (9): 169-220.

Simon, E. 1891a. On the spiders of the island of St. Vincent. Part 1. **Proceedings of the Zoological Society of London,** (1891): 549-575.

Simon, E. 1891b. XXXVIII. Descriptions d'espèces et de genres nouveaux de la famille des Avicularíidae. **Annales de la Société Entomologique de France,** 60: 300-312.

Simon, E. 1903**. Histoire naturelle des araignées.** Paris. 1084p.

Strand, E. 1929. Zoological and palaeontological nomenclatorical notes. **Acta Universitatis Latviensis,** 20: 1-29.

Valerio, C.E. 1986. Mygalomorph spiders in the Barychelidae (Araneae) from Costa Rica. **Journal of Arachnology,** 14: 93-99.

Vedel, Vincent & Rheims, Christina & Murienne, Jerome & Brescovit, Antonio. 2013. Biodiversity baseline of the French Guiana spider fauna. **SpringerPlus,** 2(361): 1-19. doi: 10.1186/2193-1801-2-361.

Vellard, J. 1924. Etudes de zoologie. **Archivos do Instituto Vital Brazil,** 2: 1-32; 121-170.

World Spider Catalog. 2018. Natural History Museum Bern, online at http://wsc.nmbe.ch, version 19.0, accessed on accessed on 11/04/2018. doi: 10.2443

Wunderlich, J. 1988. Die fossilen Spinnen im dominikanischen Bernstein. **Beiträge zur Araneologie,** 2: 1-378.