

TAXONOMIC REVISION AND MORPHOLOGY OF THE
TRAPDOOR SPIDER GENUS *ACTINOPUS*
(MYGALOMORPHAE: ACTINOPODIDAE)
IN ARGENTINA

DUNIESKY RÍOS-TAMAYO

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ABSTRACT

The genus *Actinopus* Perty, 1833, is revised for Argentina, comprising a total of 23 species. The female of *A. insignis* (Holmberg, 1881) is described for the first time; the species is found in northern Buenos Aires, southern Santa Fe, and Uruguay. The female of *A. longipalpis* (Koch, 1842), previously known only from the male type from Uruguay, is described for the first time, and the species is newly cited for Argentina (Entre Ríos). Twenty new species are recognized, described and illustrated. Thirteen of the new species are based on males and females (*A. reycali*, sp. nov., from Jujuy and Salta; *A. claveri*, sp. nov., from Córdoba; *A. szumikae*, sp. nov., from Córdoba, southern Buenos Aires, Santa Fe and Corrientes; *A. coylei*, sp. nov., from Salta and Santiago del Estero, *A. argenteus*, sp. nov., from Santiago del Estero, Córdoba and Catamarca, *A. ramirezi*, sp. nov., from Misiones, *A. patagonia*, sp. nov., from Chubut, La Pampa, Río Negro and southern Buenos Aires, *A. gerschiapelliarum*, sp. nov., from Córdoba, northern Buenos Aires, southern Santa Fe, northern La Pampa and Canelones in Uruguay, *A. pampa*, sp. nov., from La Pampa, *A. septentrionalis*, sp. nov., from Salta, Tucumán, Catamarca, and Formosa, *A. taragui*, sp. nov., from Corrientes, Chaco, and Misiones, *A. excavatus*, sp. nov., from Córdoba, *A. casuhati*, sp. nov., from southern Buenos Aires). Only one of the new species described is based on females only (*A. indiamuerta*, sp. nov., from Tucumán); and the remaining six on males (*A. puelche*, sp. nov., from southern Buenos Aires and Uruguay, *A. cordobensis*, sp. nov., from San Luis and Córdoba, *A. magnus*, sp. nov., from Córdoba, *A. ariasi*, sp. nov., from Formosa, *A. palmar*, sp. nov., from Entre Ríos, and *A. balcarce*, sp. nov., from southern Buenos Aires). New morphological characters that can help solve phylogenetic relationships within the genus are described. A dichotomous key for all the species from Argentina is provided, as well as maps of the known geographic distribution for all the species. Three of the species treated here (*A. gerschiapelliarum*, *A. puelche*, and *A. insignis*) are recorded also for Uruguay.

INTRODUCTION

Actinopus (Perty, 1833) is the most diverse genus of the family Actinopodidae Simon, 1892, which comprises another two genera (*Missulena* Walckenaer, 1805, and *Plesiolena* Goloboff and Platnick, 1987). The genus *Actinopus* currently has 28 species described, and a large geographic distribution (all of South America except Chile) (World Spider Catalog, 2017). The representatives of this genus dig burrows, covered with a thick trapdoor, lined internally with a mixture of silk and dirt (fig. 1A, B). The lid is articulated by means of a silk hinge, usually on top of the lid, so that the door folds down of its own weight, closing the burrow (Coyle et al., 1990).

The taxonomy of this interesting genus and its subsequent phylogeny are very poorly understood; several populations remain unassigned to any species, and many specimens deposited in collections remain unidentified or misidentified. Even the identity of the type species (*A. tarsalis* Perty, 1833) had remained elusive for almost 180

years, until Miglio and colleagues (2012) recently redescribed it, based on specimens collected at the type locality, considering that older citations from other localities corresponded to misidentifications. The antiquity of the taxonomic descriptions, lack of illustrations, and the scarcity of characters mentioned in the literature contribute to the problematic nature of the taxonomy of the group. There is also a significant morphological homogeneity, which makes it hard to determine species. Both sexes have few characters—and often very subtle ones—to allow their distinction from other congeners.

But those are not the only problems with the taxonomy of *Actinopus*; these spiders are relatively uncommon in collections, because their cryptic habits require specialized collecting methods that are not used widely by collectors and arachnologists (such difficulty is shared with other groups of Mygalomorphae; Coyle, 1971, 1974; Goloboff, 1995; Bond, 2012; Engelbrecht and Prendini, 2012; Hamilton et al., 2016). The

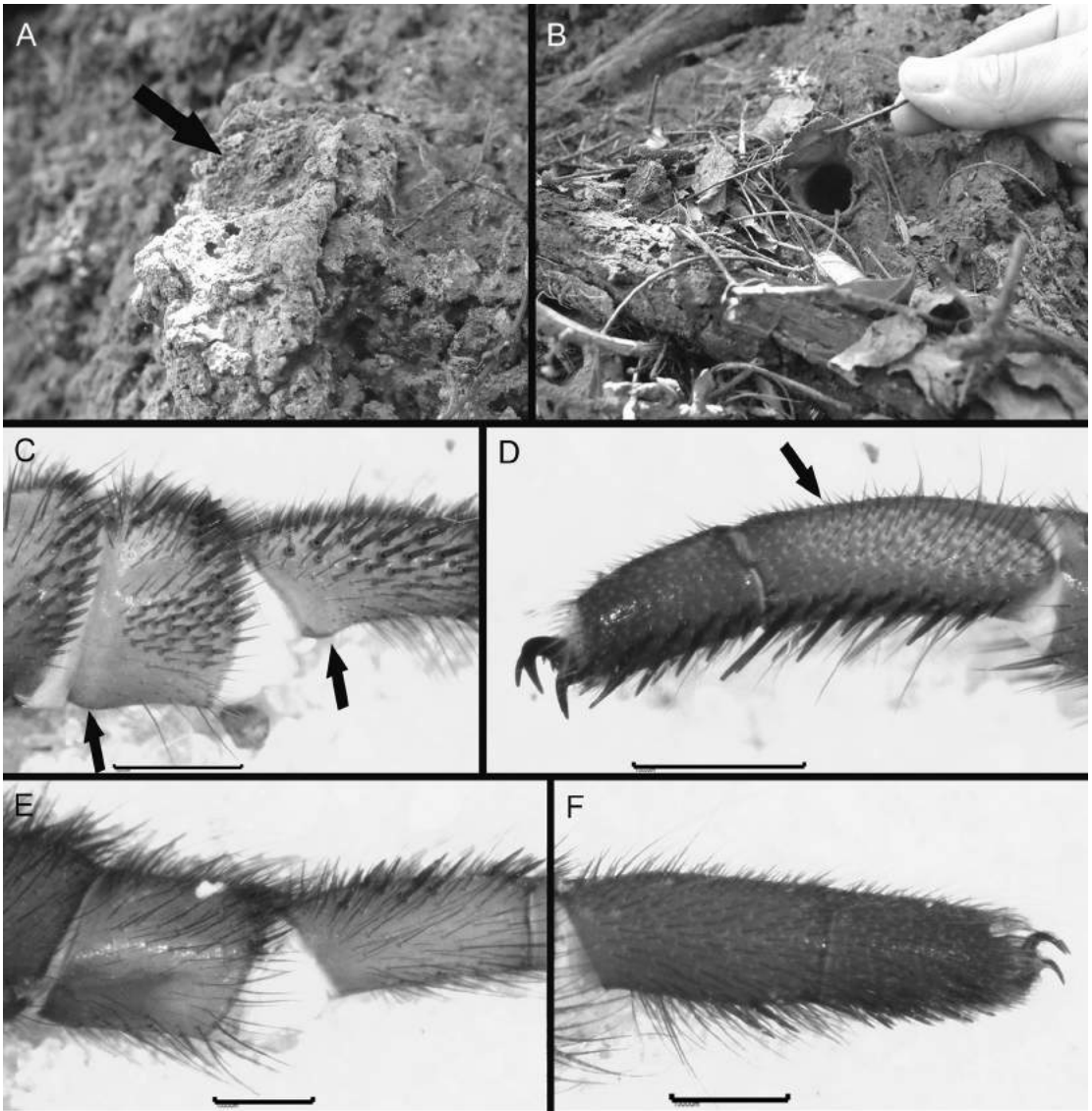


FIGURE 1. *Actinopus septemtrionalis*, sp. nov., burrows from Río Nío: A, trapdoor (indicated with arrow), closed; B, trapdoor open. *Actinopus indiamuerta*, sp. nov., C, nodules on tibia and metatarsus III; D, rigid hairs on metatarsus I. *Missulena occatoria*; E, tibia and metatarsus III, with no nodules; F, metatarsus I, with no rigid hairs. Scale bars = 1 mm.

difficulty in collecting them arises from females staying in their well-concealed burrows all their life. Proper collecting methods require identifying the lids or exposing the burrows through “shaving” the surface of the soil with a knife at appropriate microhabitats. On top of that, as these spiders have long life cycles and colonize

new habitats very slowly, the microhabitats where they can be found are relatively restricted (e.g., undisturbed, rarely or never flooded soils), thus making them even less likely to be found by casual collectors. However, once these microhabitats have been identified, and the eye trained to recognize their lids, females can be found in

abundance throughout the year (as evident in the lists of material examined in this paper), because they are semigregarious (often living in aggregations), and they are perennial and overwinter in their burrows. On the other side, males are wanderers, but only during their relatively brief adult life, leaving the burrow only after their last molt. This makes them more difficult to collect with specific techniques, as (unlike females) they cannot be found in situ. A productive method for obtaining males is with pitfall traps, but casual collectors sometimes come across them.

The first record of the genus *Actinopus* for Argentina is from near the end of the 19th century. Eduardo L. Holmberg, one of the first Argentinian naturalists (and an early science fiction writer), described *Actinopus insignis* (Holmberg, 1881, in the new genus *Aussereria*, now considered a synonym) from the province of Buenos Aires. The next reference to the genus in Argentina took 60 years—Mello-Leitão (1941) cited *A. rufipes* (Lucas, 1834) for Alta Gracia and Cabana (Córdoba), but these are extremely doubtful identifications. The next reference came sooner—only 21 years later, Schiapelli and Gerschman de Pikelin (1962) referred to another species of *Actinopus* from Argentina (giving neither a species identification nor further details, showing only the illustration of the spermathecae). A few years later the same authors (Schiapelli and Gerschman de Pikelin, 1965) showed a map with the distribution then known in Argentina (again, without distinguishing species), showing its presence in five provinces (Rio Negro, Misiones, Buenos Aires, Santa Fe, and Córdoba). The species *A. crassipes* (Keyserling, 1891), according to Schiapelli and Gerschman de Pikelin (1965) “está citada para Argentina,” but none of the preceding authors who treated this species (either in catalogs or identifications) had actually seen any specimens from Argentina (neither did Schiapelli and Gerschman de Pikelin, 1965; they illustrated the type). Apparently, following Schiapelli and Gerschman de Pikelin’s (1965) “citation” for Argentina the species began being cited for this country in spider catalogs

(e.g., World Spider Catalog, 2017). Similarly, *A. paranensis* Mello-Leitão, 1920 (with a description reproduced by Mello-Leitão, 1923, again as “new”) has been cited for Argentina in catalogs, apparently following Roewer (1942), who seems to have confused the state of Brazil, Paraná, with the city of Paraná in the Province of Entre Ríos, Argentina. This erroneous citation by Roewer (1942) propagated to subsequent catalogs and persists today. Mello-Leitão (1920, 1923), however, leaves no doubt as to the provenance of his specimens—Brazil. In fact, no specimen from Argentina examined here can be considered conspecific with any of these two species after examination of the type specimens of both *A. paranensis* Mello-Leitão, 1920, and *A. ceciliae* Mello-Leitão, 1931 (a synonym of *A. crassipes* (Keyserling, 1891); Silva-Moreira et al., 2010). Thus, the only named species (in addition to *A. insignis*) so far actually recorded from Argentina is *A. goloboffi* Ríos-Tamayo, 2014, an easily recognizable and highly autapomorphic species.

MATERIAL AND METHODS

The collecting efforts of the second author during a span of 20 years, together with other collectors at different times, has yielded many specimens of *Actinopus* from Argentina. This has allowed appreciation of the diversity and the very wide distribution of this group in Argentina. A total of 636 individuals (186 males, 297 females, and 153 juveniles) from 18 provinces of Argentina (all provinces, except San Juan, Mendoza, Neuquén, Santa Cruz, and Tierra del Fuego) were examined. More than half of the specimens (368, or approximately 60%, 224 of which are adults and 144 juveniles) were collected in field trips specifically dedicated to trapdoor collecting, made by the second author. Given that trapdoor spiders usually receive very little attention from collectors, this effort resulted in numerous interesting specimens besides *Actinopus*. Thus, Goloboff (1987) and Goloboff and Platnick (1992) have published several new species of *Neocteniza* (Idiopidae), and the recent paper of

Ferretti et al. (2017), describing several new species of *Idiops* (Idiopidae), is based mostly on specimens resulting from those collecting efforts.

All measurements are given in millimeters and were taken from the left side of the specimen. Measurements were taken as in Coyle (1974); those measurements not defined in that paper (e.g., structures present in *Actinopus* but not Antrodiaetidae) were taken analogously (e.g., using the maximum span or obvious limits). Total length was measured without spinnerets. All measurements were taken with a calibrated ocular micrometer in a stereoscope Olympus SZ4045. The images were captured with a 2500 Moticam camera of 5.0 M pixel coupled to a stereoscopic MOTIC trinocular/SMZ-168. Lengths of leg articles are always given in the same order: femur, patella, tibia, metatarsus, tarsus, and total.

Abbreviation and notation for leg spines follow Goloboff and Platnick (1987); describing the legs from I to IV and from proximal to distal (i.e., from femur to tarsus within each leg, from basal to apical within each segment); the sequence pro-lateral-dorsal-retrolateral-ventral (P-D-R-V) is always followed, using lowercase letters (p-d-r-v), when referring to bristles instead of spines. Variation in the sides of a specimen (in number of spines, cuspules, teeth, etc.) is indicated as two numbers separated by a slash ("/"); when describing variation in chaetotaxy, only surfaces with different numbers of spines are listed.

The copulatory bulb was separated using a microsurgical scalpel. The approach of Goloboff (1995) for positioning the bulb in illustrations was followed when taking photographs, using the subtegulum to position the bulb, instead of the general form of the bulb (much more variable than the subtegulum); this facilitates subsequent comparison between copulatory bulbs, by positioning the subtegula in equivalent positions. To better record structures and their variations, the photos were taken from three different views (these views correspond to the view in which the seminiferous tube is seen as originating in the subtegulum, the view opposite to this, and a view perpendicular to both). The strong, short, blunt spines of the rastel-

lum (present in all females and some males) are called "cusps" (fig. 3D). In males of certain species the cheliceral prolongation lacks cusps (fig. 3E). This is one of the characters introduced in this paper; observation of large series of males in some species (e.g., *A. ariasi*) showed no specific variability in this character, and thus it is very helpful in distinguishing some of the species. Spermathecae were clarified by immersion in clove oil, thus making transparent the opaque glandular tissues that cover the structure. In the descriptions and keys, a male palpal tibia with a width/length proportion greater than 0.33 is called "short and thickened," while a tibia with that proportion smaller than 0.31 is called "long and slender."

Collection sites were georeferenced by finding the locality specified in the label on Google Earth® and then recording the coordinates. In the case of the localities specified as distances from a city, the georeference given is only an approximation to the actual coordinates. The observed coordinates taken by the first author in situ (with a GPS in hand) are given in parentheses; otherwise, when estimated (i.e., when looked up in Google Earth), coordinates are given in square brackets. The maps were made with the program DIVA-GIS 7.5.0.0. (Hijmans et al., 2012).

ABBREVIATIONS

Anatomical abbreviations found in this study include: **ALE**, anterior lateral eyes; **AME**, anterior median eyes; **Ak**, apical keel; **ATA**, apical tegular apophysis; **Bk**, basal keel; **BTA**, basal tegular apophysis; **D**, dorsal; **D A**, dorsal apical; **D ANT**, dorsal anterior; **D B**, dorsal basal; **D POST**, dorsal posterior; **Mk**, medial keel; **NEA**, northeastern region of Argentina; **NOA**, northwestern region of Argentina; **P**, prolateral; **PA**, paraembolyc apophysis; **P A INF**, prolateral apical inferior; **P INF**, prolateral inferior; **PLE**, posterior lateral eyes; **PLS**, posterior lateral spinnerets; **P M**, prolateral medial; **PME**, posterior median eyes; **PMS**, posterior median spinnerets; **P SUP**, prolateral superior; **OQ**, ocular quadrangle; **R**, retrolateral; **R A**, retrolateral apical; **R ANT**, retrolateral anterior; **R**

INF, retrolateral inferior; **RMk**, retrolateral medial keel; **R SUP**, retrolateral superior; **V**, ventral; **V A**, ventral apical; **V ANT**, ventral anterior; **V ANT A**, ventral anterior apical; **V POST**, ventral posterior; **V POST A**, ventral posterior apical. In the notation of leg spines, an expression like D POST-R SUP, P SUP-D ANT indicates that the spines occupy the dorsal posterior to retrolateral superior surfaces, or the prolateral superior to dorsal anterior surfaces; 1:2 A, 3:4 B indicates that the spines or pseudoscapula referred to are in the apical half or basal three-fourths.

COLLECTIONS EXAMINED

Specimens examined for this study are deposited in the following institutions:

- CARTROUNNE Cátedra de Biología de los Artrópodos, Universidad Nacional del Nordeste, Corrientes, Argentina
 FML-ARAN Fundación “Miguel Lillo,” San Miguel de Tucumán, Argentina
 LZI Laboratorio de Zoología de Invertebrados II, Universidad Nacional del Sur, Bahía Blanca, Buenos Aires, Argentina
 MACN-Ar Museo Argentino de Ciencias Naturales “Bernardino Rivadavia,” Buenos Aires, Argentina
 MFA-ZI Museo Provincial de Ciencias Naturales “Florentino Ameghino,” Santa Fe, Argentina
 MNHN Museo Nacional de Historia Natural, Montevideo, Uruguay
 UNSL Universidad Nacional de San Luis, Colección Zoológica, San Luis, Argentina
 ZMB Museum für Naturkunde, Berlin, Germany

MORPHOLOGY

The spiders of the genus *Actinopus* have a small to medium size (8–27 mm), with a glabrous cuticle. Females and immatures have abundant lateral spines on the legs I and II, attributed to the construction of burrows, as well as catching prey (Raven, 1985); the legs III and

IV have their spines distributed more dorsally, which is thought to help them cling more strongly to the burrow walls with their posterior legs, thus freeing their front legs for predation (e.g., Coyle, 1981). The first explicit proposal of synapomorphies for the genus came from Goloboff and Platnick (1987): rastellum in a long projection; second and third pair of sternal sigilla confluent; third patella and tibia with short cusps; female tibia II with more spines than tibia I; and male palpal bulb with two apophyses (parembolic and basal).

CEPHALOTHORAX: wider in the anterior region; gradually narrowing in females in the posterior two-thirds (narrowing less abruptly than in *Missulena*). This transition is always very evident in females; in males it can be either similar, or much more gradual, making the cephalothorax more oval. Cephalothorax with marginal bristles between the anterior part and coxae III. Cephalic region high and strongly arched (only in *A. goloboffi* is it more sloping), with small bristles behind the OQ. Posterior margins of carapace lobed, with some very thin bristles. *Clypeus*: wide in females; chilum present; small bristles present on both clypeus and chilum. *Fovea*: strongly procurved and continuous (only in some cases, *A. goloboffi*, *A. balcarce*, and *A. excavatus*, it can be centrally interrupted). *Eyes*: Eight, in two rows, occupying about 75% of cephalic width. Anterior ocular row usually slightly procurved (sometimes straight). AME small, larger in some males. PME and PLE close to each other, sometimes almost touching; posterior eye row recurved, consisting of two dyads PME-PLE (in *Missulena*, PME well in advance of PLE, only slightly behind anterior row; in *Plesiolenia*, PME intermediate between anterior row and PLE). *Chelicerae* wide and robust, with internal dorsal bands of bristles reaching rastellum apex. Cheliceral apex with numerous recumbent thick bristles covering base of fang. Rastellum strongly developed, set on long projection; females with blunt cusps on marginal and dorsal surface of projection (dorsal cusps smaller). Males with a similar

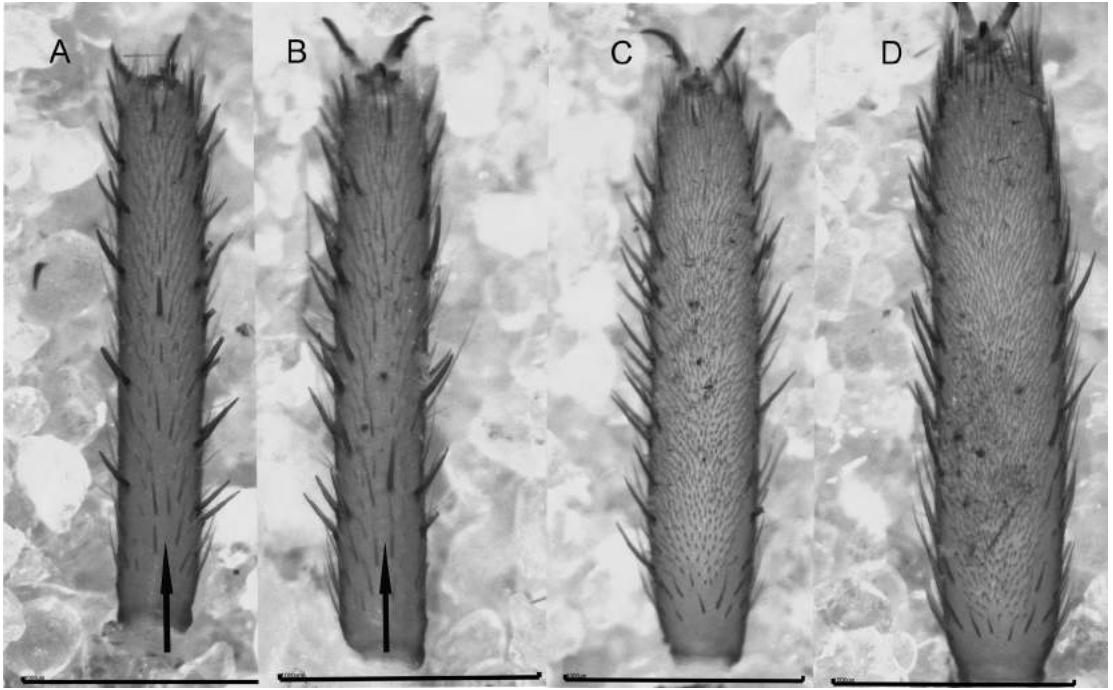


FIGURE 2. *Actinopus ariasis*, sp. nov. (male). Pseudoscopula distribution. A–D, tarsi I–II–III–IV. Black arrows indicates the glabrous band with marginal rows of bristles. Scale bars = 1 mm.

rastellum or with a bare projection (i.e., with no cusps). Fang groove with two rows of teeth, with denticles in the groove near the promarginal teeth; fang short and diagonal. *Maxilla* longer than wide (unlike *Missulena* and *Plesiolena*, where they are subquadrate). *Labium*: fused to the sternum, longer than wide. Females with cuspules on maxillae (1:3 ventral anterior, extending to the anterior face) and apex of labium; males with no cuspules (this differs from Australian *Missulena*, males of which have cuspules). *Sternum*: longer than wide, wider posteriorly, gradually tapering anteriorly (this is less so in Australian *Missulena*, with a more rounded sternum). Three pairs of sternal sigilla; anterior ones (I and II) either short or elongate; when elongate, they converge on the center of the sternum (even uniting completely in the center of the sternum in some species); when short, they are close to the sternal margin. In *Missulena* these sigilla are moderately elongate and deep, whereas in *Plesiolena* they are circular

and small. Third pair of sigilla elongate, almost reaching sternal center. Sternum center usually flat, sometimes with a slight (several species) or deep (*A. goloboffi*, *A. excavatus*, and *A. balcarce*) depression.

LEGS: Females with numerous retrolateral and prolateral spines on tibiae-metatarsi-tarsi of legs I–II (the numerous retrolateral spines on tibiae II are a diagnostic character). Patella III with abundant thorns on retrolateral and prolateral sides and margins, in females; males with similar arrangement, but spines longer. Tibia III with anterior submarginal crown of thorns (some species with additional marginal spines, apical to crown). Patella IV with short thorns D ANT and P SUP. Female legs without pseudoscopula, tarsus I divided medially by glabrous band with marginal bristles; legs I–II with more spines than III–IV. Spines elongate on anterior legs, short and thick on posterior legs (spines of posterior legs elongate in *Missulena* and *Plesiolena*). Females with small basal ventral nodule

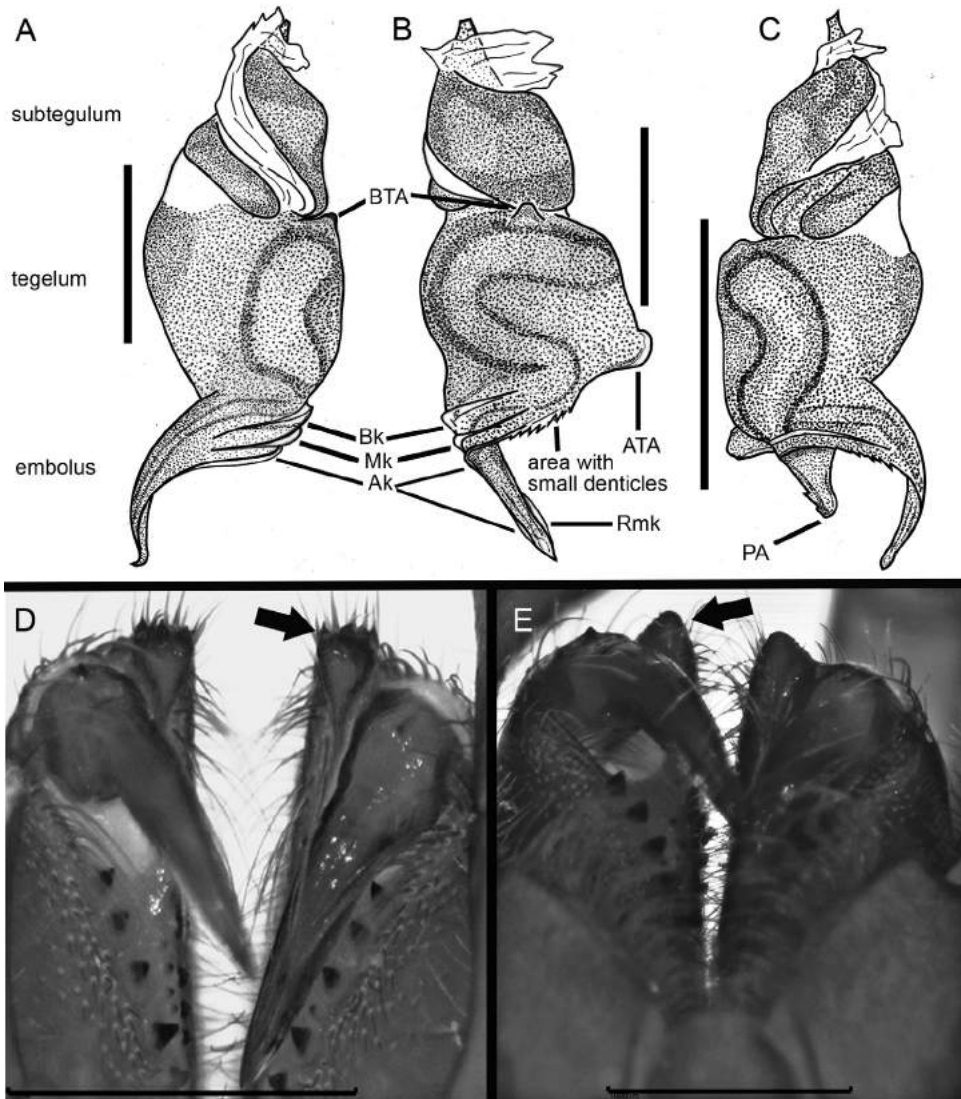


FIGURE 3. Copulatory bulb. A–B, *Actinopus patagonia*, sp. nov., male from Salina “Las Barrancas,” Buenos Aires. C, *Actinopus palmar*, sp. nov., male from El Palmar, Entre Ríos. D, true rastellum, *Actinopus gerschiapellarum*, sp. nov. E, cheliceral prolongation without cusps, *Actinopus cordobensis*, sp. nov. Scale bars = 1 mm.

in tibia and metatarsus III (fig. 1C; absent in *Missulena* and *Plesiolenia*, fig. 1E). Legs I–II with prolateral rigid hairs (fig. 1D), most abundant and visible on metatarsi (absent in *Missulena* and *Plesiolenia*, fig. 1F). Male legs with a scopula formed by stiff bristles (fig. 2A–D; this is what Pérez-Miles et al., 2017, termed a pseudoscopula, because it is formed by hairs differ-

ent from those forming the scopula found in Theraphosidae and other spider families). Pseudoscopula is scarce and apical on tarsus I (fig. 2A), segment divided (3:4 B) by glabrous band with marginal bristles; scarce on tarsus II (fig. 2B), on apical half, tarsus divided (1:2 B) by glabrous band with marginal bristles; pseudoscopula dense on tarsi III and IV (along the entire

segment) without a glabrous band (fig. 2C, D). The male palp is elongate (much longer than in Australian *Missulena*) and smooth, without spines. *Trichobothria* filiform, present on tibiae, metatarsi and tarsi; forming two short basal rows on tibiae; a dorsal row on metatarsus (occupying 3:4 A, in zigzag line), and a wide band on tarsus (in *Plesiolenia* and *Missulena*, forming a straight line).

ABDOMEN AND GENITALIA: Abdomen globose, covered with small bristles, some males with thick anterodorsal bristles. PMS small, unisegmented; PLS three-segmented. Numerous spigots, some spigots larger, interspersed among small ones, in all three segments. Female internal genitalia consisting of a pair of simple spermathecae without differentiated duct (in *Missulena* with elongate duct, in *Plesiolenia* with short duct, barely differentiated). Male genitalia: Copulatory bulb with tegulum robust, with two apophyses, a conical basal tegular one (BTA) and an apical one (ATA) (in *Missulena* and *Plesiolenia* the bulb is slender and without processes). Embolus curved onto itself with three keels (Bk, Mk, Ak); in some species Ak extends to apex of embolus. In some species, a retrolateral medial keel (RMk) is present as well (in *Missulena* and *Plesiolenia* the embolus has no keels). In some species, Ak may present a basal portion with small denticles along the edge. Parembolic apophysis (PA) absent (most species) or present (*A. palmar*, some Brazilian species).

NATURAL HISTORY

Little is known about the natural history of the group; if one were to judge from casual collections (e.g., specimens collected upon random encounters by general entomologists, in this case mainly males), one would conclude that these spiders are quite uncommon and have low population numbers. When specific collecting techniques are used instead, since they live in a wide variety of habitats, their burrows can be found in significant numbers, as the burrows tend to be aggregated. They are distributed from warmer areas (Panamá) to the cold

areas of the province of Chubut (Argentina), from lowland areas to mountain ranges of small elevation (in Argentina, up to 2000 m). They prefer sloping surfaces, like banks or ravines; in flat areas, they tend to be concentrated along river margins. They dig a burrow about 15–20 cm deep and 10–20 mm wide, internally lined with silk and earth processed with the rastellum (incorporated into the layers of silk). The door is beveled, with a hinge (when the ground is sloping, located at the top), which fits tightly into the burrow's opening. The door is built with silk mixed with detritus and elements of the surroundings, providing a very effective camouflage; it is not uncommon that small plants or lichens grow on the door itself, effectively improving the camouflage.

Males leave the nest after the final molt and are wanderers for the rest of their lives, searching for females. Females are sedentary; burrows are normally found in aggregations (Coyle et al., 1990). Although Ferretti et al. (2013) reported *Actinopus* spiderlings practicing ballooning for dispersal, it may well be that this method is practiced either occasionally or not very effectively, for the common aggregations observed in this genus suggest that spiderlings often settle close to their mother's burrows. Like other Mygalomorphae, females remain all their life in the nest, and continue to have molts after reaching maturity. When hunting, they leave the door slightly ajar, with palps and anterior legs on the edge of the burrow. The egg sacs are deposited, during the breeding season, at the end of the burrow, protecting them all the time with their bodies.

Very little is known about their natural enemies. Fungal infections by *Nomuraea atypicola*, attacking *Actinopus* populations in northern Argentina (Salta and Tucuman) have been described by Coyle et al. (1990). This same fungus has been found attacking a variety of spiders (Greenstone et al., 1987), but the results of the infection of burrow-dwelling spiders (e.g. *Actinopus*) are highly specific (Coyle et al., 1990). Some phoretic mites (apparently from the family Scutacaridae) were found on spiders of the genus

Actinopus; a similar association was found by Ebermann and Goloboff (2002) on spiders of the family Nemesiidae, with mites most commonly attached near the fovea.

DESCRIPTION OF NEW SPECIES

A majority of the specimens available for this study were females, since they were collected manually, with methods specific for trapdoor spiders. This is in contrast to the reports by Miglio (2009) and her colleagues (2012) for Brazil, who report having more males than females; this is no doubt because their specimens came from pitfall traps and general museum collections.

Of the new species, 12 are known from both sexes, five only from the male (two of them by a single individual, *A. balcarce* and *A. magnus*), and the five remaining species only from females. Describing new species based on few specimens (as it had to be the case for some of the new species) is of course far from ideal, but it is the only option for groups that are very rare or difficult to collect, such as these. In the particular case of Mygalomorphae, describing new species based on few or single specimens is very common (e.g., Griswold, 1987; Raven, 1994; Griswold and Ledford, 2001; Bond, 2012; Engelbrecht and Prendini, 2012). Often, it is only the description of these species based on few specimens that will enable the discovery of interesting characters and help clarify the relationships and evolution of the other, more common species.

It must be stressed that descriptions of new taxa made here are not based on unique autapomorphies for each species. With some exceptions where a species has identifiable autapomorphies, most diagnoses here are based on character mosaics, as there is obviously significant homoplasy in the evolution of many features in this genus. Some specific pairings between sexes may be dubious (as discussed explicitly in those cases: *A. insignis* and *A. gerschiapelliarum*; *A. casuhati* and *A. puelche*; *A. excavatus*); it is hoped that these questionable allocations will be clarified when additional specimens are collected.

TAXONOMY

Actinopus Perty, 1833

Actinopus Perty, 1833: 198, senior synonym of *Closterochilus* Ausserer, 1871: 141; Raven, 1985: 145.

Theragretes Ausserer, 1871: 142, Raven, 1985: 147.

Aussereria Holmberg, 1881: 170. Simon, 1892: 80.

TYPE SPECIES: *Actinopus tarsalis* Perty, 1833: 198, pl. 39, fig. 6 (holotype male, Piauí, Brasil, not located in MNHN, probably lost); C.L. Koch, 1842: 101, fig. 753; Simon, 1892: 80, figs. 80, 82; Lucas et al., 1978/1979: 133, figs. 3–6; Platnick, 2014; Miglio et al., 2012: 375–379, figs. 1–12.

EMENDED DIAGNOSIS: *Actinopus* can be distinguished from Migidae, *Missulena* Walckenaer, 1805, and *Plesiolenia* Goloboff and Platnick, 1987, by the presence of a rastellum on a long projection; the II and III pair of sternal sigilla short or elongate (if elongate, converging on the center of the sternum); the third patella and tibia with short cusps; the female tibia II has more spines than does tibia I; and the male palpal bulb has two tegular apophyses (a basal one and an apical one) (Goloboff and Platnick, 1987). In accordance with the phylogenetic analysis of the genus (D.R.-T. and P.A.G., in prep.), *Actinopus* can also be distinguished by a very procurved fovea; the base of the spermathecae without a differentiated duct (in *Missulena* with elongate duct, in *Plesiolenia* with short duct, barely differentiated); a single tooth on the male paired claws (*Missulena* and *Plesiolenia* have several teeth on the paired claws); the postlabial sigilla fused (two small sigilla, well marked on *Missulena* and *Plesiolenia*); copulatory bulb with three keels on the embolus (*Missulena* and *Plesiolenia* simple, without keels); and the male pedipalp longer than leg I (longer than in *Missulena* and *Plesiolenia*).

NOTE: In a recent paper, Wheeler et al. (2016) have published a tree where *Missulena* is more closely related to *Atrax* and *Hadronyche* (Hexathelidae) than to *Actinopus* (*Plesiolen*a is not included in that analysis). This makes Actinopodidae paraphyletic, and Hexathelidae polyphyletic. However, as discussed by Wheeler et al. (2016) that result is produced only when the analysis is constrained to obey the backbone of a previous phylogenomic analysis of Araneae, by Garrison et al. (2016). The tree of Garrison et al. (2016) includes many fewer taxa, and no representatives of either Actinopodidae or Hexathelidae; thus, the way in which hexathelids and actinopods are related in the constrained analysis of Wheeler et al. (2016) may be simply a byproduct of the constraints imposed on the relationships of the *other* taxa. The unconstrained analyses affected by Wheeler et al. (2016) did display Actinopodidae as a monophyletic group. For that reason, and at least until the results published by Wheeler et al. (2016) for the actinopods are corroborated by independent evidence, we continue to compare *Actinopus* with *Missulena* and *Plesiolen*a, as in the traditional classification.

DISTRIBUTION: All of South America with the exception of Chile.

KEY TO MALE *ACTINOPUS* SPECIES
FROM ARGENTINA

Males of *A. indiamuerta* are unknown.

1. Copulatory bulb thin and almost straight (figs. 4E–G, 6D–F, 8G–I); sigilla I–II small (fig. 8B) (type I morphology).....2
 - Copulatory bulb wide, strongly sinuous (figs. 10G–I, 12D–F, 13D–F, 15D–F, 16D–F, 18E–G, 21B–D, 23G–I, 25D–F, 26D–F, 27G–I, 29E–G, 31D–F, 32D–F, 34D–F, 36D–F, 38D–F, 39E–G, 41E–G); sigilla I–II elongate (fig. 10C).....4
2. Small size (body length <10.56 mm); color light brown or beige; spiniform bristles on dorsum of femora III and P on trochanter III.....3
 - Larger size (body length >12.96), color dark reddish brown (fig. 6A), without spiniform bristles on dorsum of femora III or P on trochanter III.....*A. reycali*, sp. nov.
3. Chelicerae with small anterior retrolateral keels (fig. 8D); bulb keels and ATA developed (fig. 8G, H).....*A. septemtrionalis*, sp. nov.
 - Chelicerae without keels; bulb keels very low, ATA scarcely visible (fig. 4G)*A. claveo*, sp. nov.
4. Thoracic fovea continuous, sternum center flat or with only a slight depression (fig. 23B) (type II morphology).....5
 - Thoracic fovea discontinuous, interrupted in the middle (fig. 41A); sternum with a deep central depression (fig. 41B) (type III morphology).....20
5. Copulatory bulb with embolus arising apically; ATB small; embolus thin (figs. 10G–I, 23G–I, 27G–I).....6
 - Copulatory bulb with embolus arising more medially; ATB large; embolus thick (figs. 12D–F, 13D–F, 15D–F, 16D–F, 18E–G, 21B–D, 25D–F, 26D–F, 29E–G, 31D–F, 32D–F, 34D–F, 36D–F, 38D–F, 39E–G, 41E–G)8
6. Abdomen with brown dorsum*Actinopus longipalpis* Koch, 1842
 - Abdomen with silvery gray dorsum (fig. 10D)7
7. Copulatory bulb with a depression near the base of embolus (fig. 27B), tibia II with less than 5 retrolateral spines (fig. 27E).....*A. pampa*, sp. nov.
 - Copulatory bulb without depression, tibia II with more than 10 retrolateral spines (fig. 10G–I).....*A. argenteus*, sp. nov.
8. AME small (≤ 0.16 mm) (figs. 12A, 15A, 16A, 18A, 26A, 34A, 36A).....9
 - AME large (≥ 0.20 mm) (figs. 13A, 21A, 25A, 29A, 31A, 32A).....15
9. RMk present (fig. 3B).....10
 - RMk absent.....12
10. Spiniform bristles on dorsal femur III (fig. 18D).....11

- No spiniform bristles on dorsal femur III
.....*A. taragui*, sp. nov.
- 11. Copulatory bulb with a parembolic apophysis (fig. 26D-F).....*A. palmar*, sp. nov.
- Copulatory bulb without paraembolic apophysis.....*A. gerschiapelliarum*, sp. nov.
- 12. Legs with lighter colored tarsi.....13
- Legs with lighter colored metatarsi and tarsi.....14
- 13. Many (14) retrolateral thorns on tibia II (fig. 34C).....*A. szumikae*, sp. nov.
- Few (<9) retrolateral thorns on tibia II (fig. 16C).....*A. coylei*, sp. nov.
- 14. ATA wide (fig. 12D, F).....*A. ariasi*, sp. nov.
- ATA narrow (fig. 15D, F).....
.....*A. cordobensis*, sp. nov.
- 15. Sternum center with slight depression.....16
- Sternum center flat.....17
- 16. ATA oriented upward (fig. 25D, F)
.....*Actinopus magnus*, sp. nov.
- ATA oriented laterally (fig. 29E, G)
.....*Actinopus patagonia*, sp. nov.
- 17. Cheliceral projection without cusps.....18
- Cheliceral rastellum with cusps.....19
- 18. RMk present, palp tibia long and slender (fig. 32B)*A. ramirezi*, sp. nov.
- RMk absent, palp tibiae short and thickened (fig. 13C).....*A. casuhati*, sp. nov.
- 19. Small size (body length <8.10 mm); color light brown, northern Buenos Aires.....
.....*Actinopus insignis* (Holmberg, 1881)
- Large size (body length >9.60), color dark brown, southern Buenos Aires
.....*A. puelche* sp. nov.
- 20. Anterior angle of coxa I-II with a projection (fig. 41B)
.....*Actinopus goloboffi* Ríos-Tamayo, 2014
- Projection present only on the anterior angle of coxae I, absent from II.....21
- 21. ATA well developed (fig. 39E, G), horizontally oriented; numerous (22) retrolateral thorns on tibiae II (fig. 39D).....
.....*A. excavatus*, sp. nov.
- ATA little developed (fig. 38D, F), oriented upward; few (7) retrolateral thorns on tibiae II (fig. 38B).....*A. balcarce*, sp. nov.

KEY TO FEMALE *ACTINOPUS* SPECIES
FROM ARGENTINA

Females of *A. puelche*, *A. cordobensis*, *A. magnus*, *A. ariasi*, *A. palmar*, and *A. balcarce* are unknown.

1. Spermathecae without lobes (figs. 5C, 7D, E, 9D, E) (type I morphology).....2
- Spermathecae with lobes (fig. 11C, 14C, 17D, E, 19C, D, 20D, 22E, F, 24D, 28E, 30C, D, 33C, D, 35D, E, 37D, E, 40C).....4
2. Dry thorn forests of Central Argentina (Córdoba); spermathecae as in figure 5C
.....*A. clavero*, sp. nov.
- Moisture forests of NW Argentina (Tucumán, Salta, Jujuy, Formosa); spermathecae as in figures 7D, E, 9D, E.....3
3. Tibia II with about 23 or fewer retrolateral spines (fig. 9C), body coloration yellowish; cephalothorax length 5.00–5.25
.....*A. septemtrionalis*, sp. nov.
- Tibia II with more than 30 retrolateral spines (fig. 7C), body coloration darker brown; cephalothorax length 5.40 or more
.....*A. reycali*, sp. nov.
4. Sternum flat or with a slight central depression (type II morphology).....5
- Sternum with a deep central depression (type III morphology).....16
5. Spermathecae with external lobes projected perpendicularly to the base (figs. 11C, 14C, 19C, D, 24D).....6
- Spermathecae with external lobes in the same direction as the base (figs. 17D, E, 20D, 22E, F, 28E, 30C, D, 33C, D, 35D, E, 37D, E).....9
6. Tibia II with about 90 retrolateral spines.....7
- Tibia II with 50 or fewer retrolateral spines...8
7. Fovea wide (fig. 14A) (width of fovea/cephalothorax ≈ 0.40).....*A. casuhati*, sp. nov.
- Fovea narrow (fig. 11A) (width of fovea/cephalothorax ≈ 0.17)*A. argenteus*, sp. nov.
8. Booklungs with dark markings; tibia III with apical thorns, apical to the crown of spines; northern Buenos Aires;
.....*A. gerschiapelliarum*, sp. nov.

- Booklungs with light markings; no thorns apical to the crown of the tibia III; northern Uruguay and eastern Entre Ríos (Argentina);.....*A. longipalpis* Koch, 1842
- 9. Sternum center flat.....10
- Sternum center with slight depression.....12
- 10. Tibia II with less than 40 retrolateral spines*A. indiamuerta*, sp. nov.
- Tibia II with more than 60 retrolateral spines..11
- 11. Small spiders (body length <15 mm); spermathecae with very subtle lobes (fig. 28E); body coloration yellowish brown*A. pampa*, sp. nov.
- Larger spiders (body length >17 mm); spermathecae with lobes small but well marked (fig. 33C, D); body coloration darker brown*A. ramirezi*, sp. nov.
- 12. Posterior sigilla anteriorly reaching the sternum center (fig. 30E).....13
- Posterior sigilla not reaching the sternum center (figs. 22D, 35F, 37F)14
- 13. Spermathecae wide, with small irregular lobes (fig. 30C, D), Patagonia*A. patagonia*, sp. nov.
- Spermathecae narrow, with one external lobe well defined and inclined inward (fig. 17D, E) north-eastern Argentina.....*A. coylei*, sp. nov.
- 14. Booklungs with light markings (fig. 28C)..15
- Booklungs with dark markings (fig. 35C)*A. szumikae*, sp. nov.
- 15. Spermathecae with a small external lobe and without inner lobe (fig. 22E-F), no prolateral spines on tibia I*A. insignis* (Holmberg, 1881)
- Spermathecae with a long external lobe and a small inner one (fig. 37D, E), four prolateral spines on tibia I (fig. 37C)*A. taragui*, sp. nov.
- 16. Thoracic fovea discontinuous, interrupted in the middle (fig. 42A)*A. goloboffi* Ríos-Tamayo, 2014
- Thoracic fovea continuous (fig. 40A)*A. excavatus*, sp. nov.

NOTE: The species treated here were separated into three different types of morphology, based

on easily observable characters, with the sole purpose to facilitate description and avoid repetition of characters. These types of morphology do not constitute monophyletic groups (except for type III), and are not intended as taxonomic groups. In the phylogenetic analyses (D.R.-T. and P.A.G., in prep.) the morphology of type I is paraphyletic in terms of type II, and type II is paraphyletic in terms of type III. The three types of morphology differ mainly in: number of retrolateral spines on tibia II (females), form of the postlabial sigilla and the sternum sigilla I-II, the shape of the spermathecae, the depth of the center of the sternum and thoracic fovea on males (complete or discontinuous dorsally).

SPECIES WITH MORPHOLOGY OF TYPE I

These species have a relatively small size (females 15–23 mm, males 10–13 mm), squared postlabial sigillum (fig. 9B), small sternal sigilla I–II (fig. 8B) and complete thoracic fovea. Females also have few retrolateral spines on tibia II (<30–49, figs. 5B, 7C, 9C), simple spermathecae without lobes, with the apex inclined outward (figs. 5C, 7D, E, 9D, E). Males have a stylized and straighter copulatory bulb (figs. 4E–G, 6D–F, 8G–I), with Bk little developed, the basal area of the Ak without denticles, and the embolus base very narrow. They are distributed in the provinces of Jujuy, Salta, Tucumán, Catamarca, Formosa, and Córdoba (fig. 43).

Three species have this type of morphology: *Actinopus claveri*, sp. nov., *Actinopus reycali*, sp. nov., and *Actinopus septemtrionalis*, sp. nov.

Actinopus claveri, sp. nov.

Figures 4A–H, 5A–D, 43

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36532): Córdoba. Nono [31°46' S 64°59' W], Jan. 1998, P. Goloboff and C. Szumik, 1♂. PARATYPES: 1♀ (MACN-Ar 36533), Córdoba. 15 km de Mina Claveri, Camino a Villa Carlos Paz [31°36' S 64°54' W], Jan. 1981, P. Grosso, A.

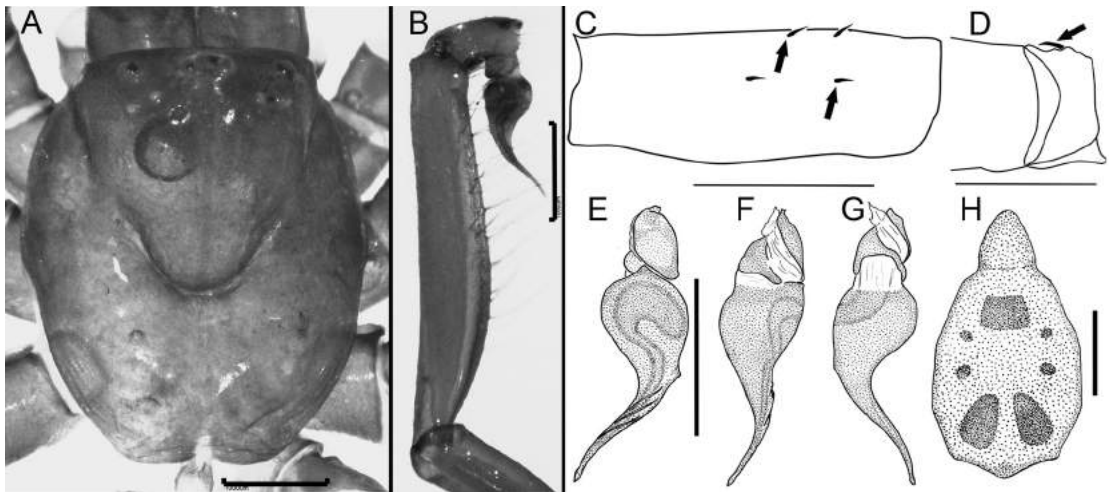


FIGURE 4. *Actinopus clavero*, sp. nov., male holotype (MACN-Ar 36532). A, carapace. B, palp. C-D, femur and trochanter III, spiniform bristles. E-G, copulatory bulb, three different views. H, sternum. Scale bars = 1 mm.

Zanetic and P. Goloboff. Same data as the holotype, 1 ♂ (MACN-Ar 36534).

ETYMOLOGY: The specific name is a noun in apposition that refers to the type locality.

DIAGNOSIS: Females of *A. clavero* can be distinguished by the short and slender spermathecae (fig. 5C). Males can be distinguished by the slender and almost straight bulb (fig. 4E-G) with very subtle, almost invisible keels and apophyses; they also differ from *A. reycali* by the presence of prolateral spiniform bristles on trochanter and femora III (fig. 4C-D).

DESCRIPTION: Holotype male (MACN-Ar 36532, figs. 4A-H). *Total length:* not taken because the abdomen is very compressed and deformed. *Carapace* (fig. 4A): length 3.72, width 3.24. *Cephalic region:* length 1.92, width 2.28; clypeus short, 10 bristles between each PME-PLE dyad; one larger medial bristle on both sides of the OQ. *Fovea:* length 0.66, width 1.44. *Eyes, diameters and interdistances:* AME 0.12, ALE 0.20, PME 0.12, PLE 0.08, OQ length 0.48, anterior width 1.84, 1.68 posterior width; AME-ALE 0.52, PME-PLE 0.24, AME-PME 0.28, ALE-PLE 0.24, AME-AME 0.28. *Chelicerae:* length 1.80, width 0.90, with internal dorsal bands of bristles reaching to the rastellum

base. Cheliceral apex with 9 recumbent and elongated bristles that cover the base of the fang. Rastellum with 8 marginal blunt cusps and 3 small dorsal attenuated ones. Cheliceral furrow with 3 large promarginal teeth and 5 retromarginal and 5 denticles, near the promarginal teeth. *Labium:* length 0.60, width 0.66. *Maxillae:* anterior length 0.72; 1.08 posterior length, width 0.84. *Sternum* (fig. 4H): Center flat; length 2.58, maximum width 1.92, minimum width 0.66. Postlabial sigillum deep, posterior sigilla poorly defined and shallow. PMS: length 0.32, PLS: length of basal:medial:apical segments 0.40:0.28:0.20. *Spigots:* could not be observed. *Lengths of legs and palp:* I: 4.20, 1.62, 2.64, 3.00, 1.50, 12.96. II: 3.90, 1.62, 2.46, 2.88, 1.44, 12.30. III: 2.82, 1.62, 3.00, 3.12, 1.56, 13.20. Palp: 4.38, 2.28, 3.78, -, 1.02, 11.46.

Chaetotaxy: Trochanter: III, 1 P SUP; I-II-IV, 0. Femora: I-IV, 0; III, 2-2/3-2-2 D. Patellae: I-II, 0; III, 11 P +9 on the margin, 1 P A, 2 D A +6 on the margin; IV, 36 P SUP-D ANT. Tibia: I, 1-1-1-1 R INF, 2-1-1-2-2-2 V, 1-1-2 V ANT, 1-2-3-1-1-2 V POST; II, 1-1-1-1-1 R INF, 2-1-1-2-2-2-V, 1-1-2 V ANT, 1-1-1-1-1-2 V POST; III, 1 D (1:2 B), with a crown of 19 thorns, 1-2-2 R, 1-1-2 V POST, 1-2 V ANT; IV, 2-2-2 v, 1-1-1 p, 1 r a.

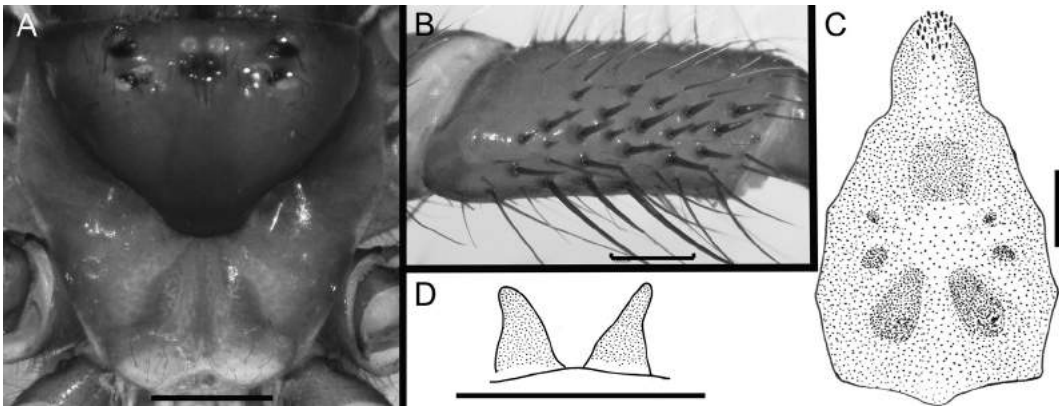


FIGURE 5. *Actinopus claverio*, sp. nov., female paratype (MACN-Ar 36533). A, carapace. B, tibia II, retrolateral. C, sternum. D, spermathecae. Scale bars = 1 mm.

Metatarsi: I, 1-1-1-5-1 V, 1-1-1-2-1-3-3 V ANT, 1-1-1-2-5-2-2-3 V POST; II, 1-1-1-1-1-1 V, 1-1-2-1-1-2 V ANT, 1-1-2-1-2-1-1-3 V POST; III, 1-1-2-1-1-2 P SUP-D ANT, 1-1-1-2 P, 1-2-2-2-1 V, 2-2-2-1-2 R; IV, 1-2-3 P, 1 D A, 1-1-2-2-4 R. Tarsi: I, 1-1-1-1 P INF, 2-1-1-1-1-4 R INF, 1-1-4 V; II, 1-1-1-1-1-1 P INF, 2-1-1-3-2-2-5 R INF, 1-1-1 V; III, 1-2-2-2 P INF (1:4 A), 2-2-2-2-1 R INF; IV, 1-3-2-2-3-2 P INF, 2 R A. Total number of retrolateral spines on tibiae I and II: 4 and 5 respectively. *Palp*: tibia long and slender (width/length: 0.19 ± 0.01) (fig. 4B). Bulb slim and slender, almost straight (fig. 4E–G). ATA barely visible; BTA little developed; slightly curved spermathecae. *Pseudoscapula*: Tarsi: I–II, sparse (uniformly distributed throughout the segment); III–IV, dense and uniform. Metatarsi: IV, sparse 3:4 A. *Trichobothria*: Tibiae: I 4-6; II-III 4-5; IV 5-4. Metatarsi: I-II 9; III 10; IV 7. Tarsi: I 9; II 8; III-IV 6. *Color*: Carapace and chelicerae reddish brown. Booklungs with light markings. Sternum light brown, labium and maxillae darker. Legs like carapace. Spinnerets light yellow.

Paratype female (MACN-Ar 36533, figs. 5A–D): *Total length*: 17.28. *Carapace* (fig. 5A): length and width 5.40, 17 bristles on each posterior margin. *Cephalic region*: length 3.24, width 4.68; clypeus short with 25 bristles, 4 between AME-ALE, 13 bristles between PME and 9 behind each PME-PLE dyad; 7 on both

sides of the OQ with one bigger central. *Fovea*: length 0.66, width 1.80. *Eyes, diameters and interdistances*: AME 0.12, ALE 0.32, PME 0.20, PLE 0.24, OQ 0.96, anterior width 3.00, 2.72 posterior width; AME-ALE 1.00, PME-PLE 0.20, AME-PME 0.48, ALE-PLE 0.44, AME-AME 0.28. *Chelicerae*: length 2.52, width 1.98, with bands of internal dorsal bristles reaching the rastellum base, dorsal anterior region with superficial grooves on 1:3 A. Cheliceral apex with 10 recumbent and elongated bristles covering the base of the fang. Rastellum with 12 marginal, blunt cusps, and 6 small dorsal ones. Fang groove with 6 large promarginal teeth and 5 retromarginal ones (a smaller one between 4th and 5th) and 8 denticles in the furrow, near the promargin. *Labium*: length 1.44, width 1.02, with 28 anterior cuspules. *Maxillae*: anterior length 1.38, 2.04 posterior length, width 1.38, width 1.40, with ~70 cuspules 1:3 V ANT, expanding to the anterior face. *Sternum* (fig. 5D): Center flat; length 3.78, maximum width 3.12, minimum width 1.14. Postlabial sigillum deep, posterior sigilla well defined. *Abdomen*: (poorly preserved) length 7.44, with small dark bristles. *PMS*: length 0.80; *PLS*: length of basal:medial:apical segments 0.88:0.40:0.40. *Spigots*: 3 large, 40 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article

4(45):5(43):2(50). *Lengths of legs and palp*: I: 3.36, 2.10, 1.68, 1.92, 0.90, 9.96. II: 3.60, 2.10, 1.62, 2.10, 0.90, 9.32. III: 3.30, 2.40, 1.20, 2.40, 0.90, 9.90. IV: 4.20, 2.70, 2.10, 2.40, 0.90, 10.20. Palp: 3.00, 1.80, 1.92, –, 2.10, 8.82.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 5 P SUP-D ANT, +11 on the margin, 2 R A, +5 on the margin; IV, 37 P SUP-D ANT +4 near the edge; palp, 1-1 P. Tibiae: I, 1 P A, 1-1-1-1-1 R INF, 1-1 V POST; II, 22 R INF, 1-1-1 V POST; III, 1 D B, with a crown of 19 thorns, 10 R; IV, 1 D A; palp, 8 P INF, 9 R INF. Metatarsi: I, 16 P INF, 13 R INF, 1-1-2 V POST; II, 11 P INF, 12 R INF, 1-1-2 V POST; III, 2-1-3-1-1-2 D ANT, 19 on row D POST-R (more abundant R A); IV, 8 P (1:2 A), 1 D A ANT, 1-1 V ANT (1:3 A). Tarsi: I, 8 P INF, 12 R INF, 2 V A; II, 11 P INF, 13 R INF, 1-2 V A; III, 13 R, 19 V-P; IV, 24 P-V; palp, 14 P INF, 18 R INF, 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 5B): 5 and 22 respectively. *Trichobothria*: Tibiae: I-III 3-5; IV 3-4. Metatarsi: I-II 9; III-IV 6. Tarsi: I 8; II 7; III-IV 5. *Color*: Carapace reddish brown, cephalic region and chelicerae darker. Abdomen light brown; booklungs with light markings. Sternum light reddish brown, labium and maxillae darker. Spinnerets yellowish. Legs like carapace, tarsi dark.

DISTRIBUTION: West of Córdoba province.

ADDITIONAL MATERIAL EXAMINED: None.

Actinopus reycali, sp. nov.

Figures 6A–G, 7A–E, 43

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36518). Salta, Parque Nacional “El Rey” [24°42' S 64°37' W], 10 Nov. 1976, M. Rumboll, 1 ♂. PARATYPES: 1 ♀ (MACN-Ar 36519), same locality, January 1981, Grosso and P. Goloboff. Campamento Vespucio [22°35' S 63°48' W], May. 1983, P. Goloboff, 3 ♀ (MACN-Ar 36520). Jujuy. Parque Nacional “Calilegua,” Puesto Mesada (23°42' S 64°52' W, 1129 m), 8 Dec. 2012, D. Ríos-Tamayo, 1 ♀ (MACN-Ar 36521).

ETYMOLOGY: The specific name, *reycali*, is an amalgamation of the names of the two National Parks where most specimens of this species were collected, Parque Nacional El Rey and Parque Nacional Calilegua.

DIAGNOSIS: Females of *A. reycali* can be distinguished by the shape of their spermathecae, robust and wide at the base (fig. 7D–E). Males can be distinguished from all members of the genus by the shape of the copulatory bulb (fig. 6D–F) with ATA little developed (larger in *A. septemtrionalis*) and AME large. Males also differ from *A. septemtrionalis* and *A. claverio* by their larger size and very dark color. Females differ from *A. septemtrionalis* and *A. claverio* by their larger size and a greater number of retrolateral thorns on the tibia II (fig. 7C), 28 in *A. reycali*, as opposed to 15 in *A. septemtrionalis* and 22 in *A. claverio*.

DESCRIPTION: Holotype male (MACN-Ar 36518, figs. 6A–G): *Total length*: 12.96. *Carapace*: rounded (fig. 6A), length 5.64, width 5.52. *Cephalic region*: length 3.18, width 3.36; clypeus short with 12 small bristles and bigger central one, 23 small bristles between PME, and 4–6 behind each PME-PLE dyad, some bristles on both sides of the OQ. *Fovea*: length 0.78, width 1.62. *Eyes, diameters and interdistances*: AME 0.28, ALE 0.40, PME 0.12, PLE 0.28, OQ length 0.92, 2.40 anterior width, 2.28 posterior width; AME-ALE 0.48, PME-PLE 0.08, AME-PME 0.36, ALE-PLE 0.40, AME-AME 0.24. *Chelicerae*: length 1.38, width 2.16, shallow transverse grooves on the dorsal area, complete in the anterior one; cheliceral apex with 13 recumbent and elongated bristles that cover the base of the fang. Rastellum with 6/7 marginal blunt cusps and 3–4 small dorsal attenuated ones. Cheliceral furrow with 5 large promarginal teeth and 7 retromarginal and 13 denticles, near the promarginal teeth. *Labium*: length 1.24, width 1.00. *Maxillae*: anterior length 1.44, 1.92 posterior, width 1.60. *Sternum*: center flat (fig. 6G); length 3.96, maximum width 3.36, minimum 1.02. Postlabial sigillum shallow, posterior sigilla well defined. *Abdomen*: length 5.40, with dark bristles, largest

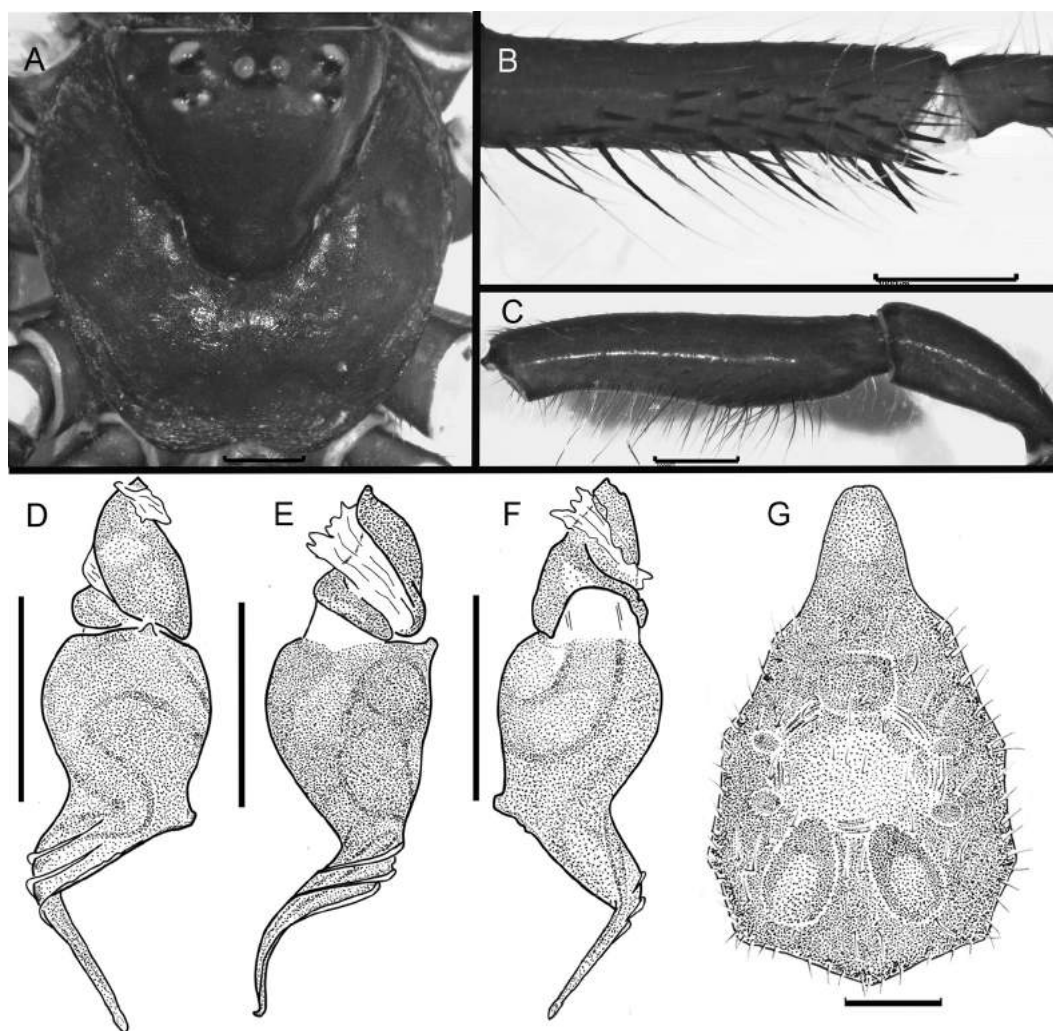


FIGURE 6. *Actinopus reycali*, sp. nov., male holotype (MACN-Ar 36518). A, carapace. B, right tibia II, retro-lateral. C, palpal tibia. D-F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

in the anterior dorsal part. PMS: length 0.60; PLS: length of basal:medial:apical segments 0.48:0.32:0.16. *Spigots* could not be observed (due to retraction). *Lengths of legs and palp*: I: 5.52, 2.10, 3.30, 3.90, 1.98, 16.80. II: 5.40, 2.22, 3.06, 3.72, 1.92, 16.32. III: 4.20, 2.40, 2.40, 3.66, 2.10, 14.76. IV: 5.40, 2.10, 3.90, 4.20, 2.40, 18.00. Palp: 5.70, 2.70, 4.44, -, 1.50, 14.34.

Chaetotaxy: Palp: 0. All femora: 0. Patellae: I-II, 0; III, 32 P SUP-D ANT +10 on the margin, 1-1-1 D (1:2 B), 4 R A (verticillate) +5 on the margin; IV, 35 P SUP-D ANT +5 near the edge.

Tibiae: I, 3 P A, 4 R INF, 1-1-1-1-1-2-1-1-2-1-2-3 V POST, 1-2-1 V ANT (1:2 A); II, 1-1-3-2-2-1-2-2-3-2-1 R INF (3:4 A), 1 V A, 2 V A ANT; III, 1 D M, with a crown of 19 thorns, 1-2-1-1-2-2 R (1:2 A); IV, 0. Metatarsi: I, 1-1-1-2-0-1-1-1-2 P INF, 1-1-2-1-1-2-1-1-1-1-3 R INF, 1-1-0-1 V (3:4 B); II, 1-1-1-2-1-1-2-2 P INF, 1-1-1-2-2-2-1-1-1-2-1-3 R INF, 2 V (1:3 B); III, 1-1-1-1-4-1-2-1-2-1-3-2-3 D ANT-P, 1-3 D (1:3 A), 2-1 V B, 27 on row D POST-R (more abundant R A); IV, 1-1-1-1-3-2-3-4 P, 1 D A ANT, 1-1 R (1:2 A). Tarsi: I, 1-1-1-1-1-1 P INF, 2-1-1-2-1-1-1-1 R INF, 1-2 V

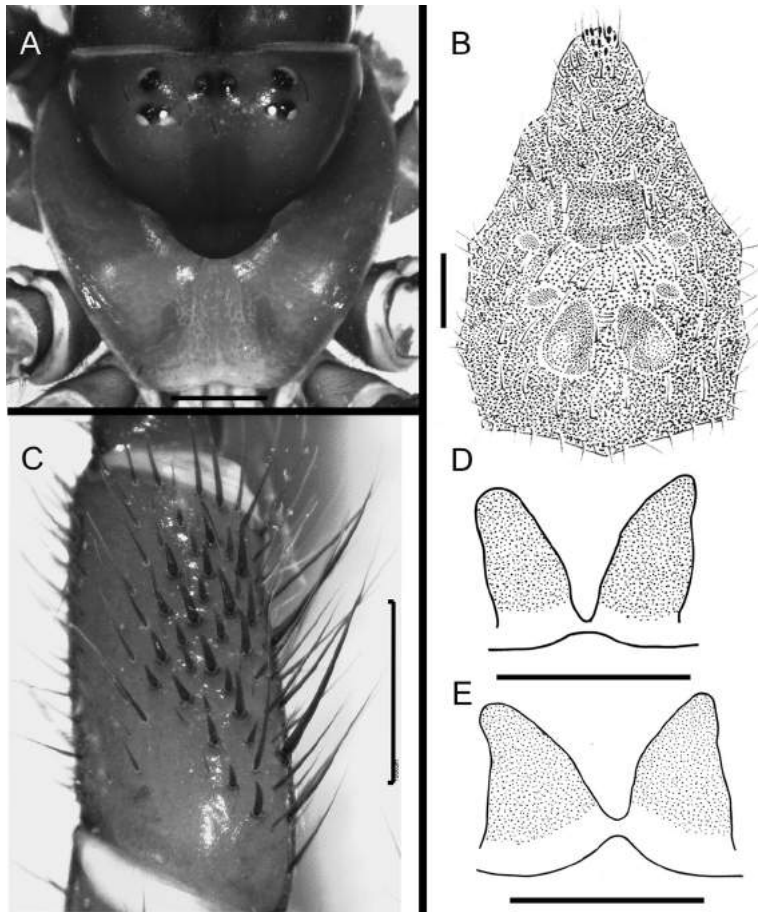


FIGURE 7. *Actinopus reycali*, sp. nov., female paratype (MACN-Ar 36519). A, carapace. B, sternum. C, tibia II, retrolateral view. D–E, spermathecae: D, Parque Nacional El Rey, Salta. E, Parque Nacional Calilegua, Jujuy. Scale bars = 1 mm.

(2:3 A); II, 2-1-1-1-1-1 P INF, 2-2-1-2-1-3 R INF, 1-2 V (1:2 A); III, 1-1-3-1-1-1-2-1 P, 1-2-1-2-3-2-2-3-1 R, 2-1 V (1:3 A); IV, 18 P, 1-0-1-1-1-3 R INF. Total number of retrolateral spines on tibiae I and II: 4 and 20 respectively. *Palp*: Tibia long and slender (width/length: 0.24 ± 0.01) (fig. 6C). Bulb (fig. 6D–F) stylized, slim and robust. ATA little developed, BTA developed and thin. *Pseudoscopula*: Tarsi: I–II, sparse (uniformly distributed throughout the segment, more abundant A); III–IV, dense and uniform. Metatarsi: II sparse (1:4 A); III, sparse (3:4 A); IV, dense (3:4 A). *Trichobothria*: Tibiae: I 5–6; II 4–5; III 4–6; IV 5–6. Metatarsi: I 12; II 14; III–IV 10. Tarsi: I

12; II 10; III–IV 12. *Color*: Carapace very dark reddish brown, chelicerae darker, almost black. Sternum, labium, and maxillae reddish brown. Abdomen brown, ventrally lighter, booklungs with light markings. Spinnerets light yellow. Legs like carapace with tarsi-metatarsi lighter.

Paratype female (MACN-Ar 36519, figs. 7A–E): *Total length*: 17.04. *Carapace* (fig. 7A): length 5.40, width 6.30, semirounded, with marginal bristles, 14 bristles on each posterior margin. *Cephalic region*: length 3.48, width 5.10; clypeus with 38 bristles, central one bigger, chilum with 22 bristles; 3–5 between AME-ALE and 25 between PME, 4–6 behind each PME-PLE

dyad and 3–4 on both sides of the OQ. Some small bristles on the posterior part of the cephalic region. *Fovea*: length 0.72, width 1.92. *Eyes*, diameters and interdistances: AME 0.16, ALE 0.44, PME 0.16, PLE 0.24, OQ length 1.04, anterior width 3.00, 3.12 posterior width; AME-ALE 0.80, PME-PLA 0.20, AME-PME 0.60, ALE-PLA 0.52, AME-AME 0.36. *Chelicerae*: Robust, length 2.22, width 3.60; cheliceral apex with 14 recumbent and elongated bristles covering the base of the fang. Rastellum with 12 marginal, blunt cusps, and 8 small dorsal ones. Fangs groove with 8 large promarginal teeth (2nd and 4th smaller) and 6 retromarginal ones and 10 denticles in the furrow, near the promargin. *Labium*: length 1.32, width 1.14, with 11 anterior cuspules. *Maxillae*: anterior length 1.62, posterior length 2.28, width 1.80, with ~90 cuspules 1:3 V ANT, extending to the anterior face. *Sternum*: Center flat (fig. 7B); length 4.50, maximum width 3.60, minimum width 1.32. Postlabial sigillum shallow, posterior sigilla superficial but well defined. *Abdomen*: length 2.72, covered in short bristles, longer in the dorsum. PMS: length 0.76; PLS: length of basal:medial:apical segments 1.00:0.40:0.20. *Spigots*: 6 large, 38 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 8(40): 8(38):4(60). *Lengths of legs and palp*: I: 3.78, 2.28, 1.92, 2.10, 1.14, 11.22. II: 3.90, 2.10, 1.92, 2.22, 1.02, 11.16. III: 3.60, 2.40, 1.32, 2.40, 0.90, 10.62. IV: 4.68, 2.40, 2.70, 2.70, 1.08, 13.56. Palp: 3.42, 2.10, 2.22, –, 2.40, 10.14.

Chaetotaxy: Femora: I-III-IV, 0; II, 10 P SUP (serial, small). Patella: I-II, 0; III, 2-2-4 P SUP-D ANT +9 on the margin P-D, 2 R A +6 on the margin; IV, 47 P SUP-D ANT +4 near the edge; palp, 1-1-1-1 P. Tibiae: I, 1-2-1 P A, 2-1-2 R INF, 1-1 V POST; II, 28 R (3:4 A), 1-1 V POST; III, 1 D B, with a crown of 17 thorns, 2-2-2-3 R (1:2 A); IV, 2/1 D A; palp, 1-1-2-1-1-1-1-2 P, 1-1-2-2-3-2-1-1-1 R, 1-1 v p. Metatarsi: I, 19 P INF, 15 R INF, 1-1-1-2 V POST; II, 15 P INF, 15 R INF, 1-1-2 V POST; III, 2-3-2-2-1-0-2 D ANT-P, 28 on row D POST-R (more abundant R A), 1 V A ANT; IV, 12 P (3:4 A), 1 V A ANT. Tarsi: I, 11 P INF, 11 R INF,

1-2 V (1:2 A); II, 2-2-2-1-2-2-2 P, 1-1-2-2-1-2 R, 2 V A; III, 18 R (2:3 A), 18 V-P (1:2 A); IV, 30 V-P; palp, 16 P, 18 R, 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 7C): 5 and 28 respectively. *Trichobothria*: Tibiae: I–II 4–5; III 4–6; IV 5–6. Metatarsi: I 12; II 11; III 13; IV 14. Tarsi: I–II 10; III 8; IV 9. *Color*: Carapace dark reddish brown, with the margin darker, chelicerae, and posterior part of the cephalic region darker. Abdomen brown, dorsally lighter, booklungs with light markings. Sternum light reddish brown, with labium and maxillae darker. Legs like carapace with light tarsi-metatarsi. Spinnerets light yellow.

DISTRIBUTION: Provinces of Jujuy and Salta.

ADDITIONAL MATERIAL EXAMINED: **Jujuy**. Parque Nacional “Calilegua,” 11.5 km O de la Intendencia [23°42' S 64°51' W], Sep. 1995, P. Goloboff and M. Ramírez, 1 ♀ (MACN-Ar 36523). Same locality, 200 m después de Mesada (23°41' S 64°52.0' W, 1153 m), 7 Dec. 2012, D. Ríos-Tamayo, 1 ♀, 1 immature (FML-ARAN 02218). Same locality, 1 km antes de Mesada (23°41' S 64°52' W, 1098 m), 9 Dec. 2012, D. Ríos-Tamayo, D. Fuenzalida, M.J. Barrionuevo and M.J. Lambaré, 1 ♀ (FML-ARAN 02219). Same locality, Sendero “El Negrito” (22°42' S 64°51' W, 794 m), 8 Dec. 2012, D. Ríos-Tamayo, D. Fuenzalida, and M.J. Lambaré, 1 immature (FML-ARAN 02220). Same locality, Camino a Mesada (23°42' S 64°51' W, 991 m), 9 Dec. 2012, D. Ríos-Tamayo, D. Fuenzalida, M.J. Barrionuevo and M.J. Lambaré, 1 ♀ (FML-ARAN 02221). Same locality, 1 km de Mesada (23°42' S 64°52' W, 1185 m), 7 Dec. 2012, D. Ríos-Tamayo, 1 ♀ (FML-ARAN 02222). Same locality, Camino a Mesada (23°42' S 64°51' W, 982 m), 9 Dec. 2012, D. Ríos-Tamayo, D. Fuenzalida, M.J. Barrionuevo, and M.J. Lambaré, 2 ♀ (FML-ARAN 02223). Same locality, Puesto Mesada [23°42' S 64°51' W], 27 Jan.–1 Feb., C. Szumik and P. Goloboff, 1 ♀, 3 immature (MACN-Ar 36524). 10 km S de Palma Sola, R.P. 6 [24°3' S 64°21' W], 10 Feb. 1995, P. Goloboff, 1 ♀, 2 immature (MACN-Ar 02224). Yala [24°7' S 65°24' W], 20 May 1983, P. Goloboff, 2 ♀, 1 immature (MACN-Ar 36525); same locality and collector, 5 imma-

ture (MACN-Ar 36526). 1 km de RP5, camino a Villa Maria (24°54' S 64°27' W), 10 May 2017, D. Ríos-Tamayo, C. Szumik, M.D. Casagrande, M.L. Juárez, G. Lanouette, 2 ♀ (FML-ARAN 02234). 18 km, E de Santa Clara [24°19' S 64°29' W], 4 May 1997, P. Goloboff, and S. Usqueda, 1 ♀ (MACN-Ar 36529). Serranía del Socabón, 1 km W de El Bananal [23°33' S 64°30' W], 16 May 1983, P. Goloboff, 3 ♀, 4 immature (MACN-Ar 36531). Finca El Bayú, Arroyo Colorado, 9.5 km S.E Santa Clara [24°20' S 64°37' W], 6 May, 1997, P. Goloboff and Usqueda, 1 ♀, 1 immature (FML-ARAN 02228).

Salta. Campamento Vespucio [22°35' S 63°48' W], 9–13 May, 1983, P. Goloboff, 4 ♀, 4 immature (MACN-Ar 36522). Camino a Zanja el Tigre, 5 km W de R.N. 34 [23°12' S 64°09' W], 30 Jan. 1995, P. Goloboff, 1 ♀, 1 immature (FML-ARAN 02216). La Quena [23°21' S 63°48' W], 4–5 Feb. 1995, C. Szumik and P. Goloboff, 3 ♀, 1 immature (FML-ARAN 02217). R.N. 34, 11 km N Embarcación [23°7' S 64°1' W], 21 Mar. 1988, P. Goloboff, F. Coyle, and R. Bennet, 1 ♀ (MACN-Ar 27104). 14 km O de Aguas Blancas [22°44' S 64°29' W], 20 Nov. 1994, M. Ramírez and P. Goloboff, 1 ♀ (MACN-Ar 36527). Same data, 1 ♀, 33 immature (no paratypes) (MACN-Ar 36528). Finca de Jakulica, 25 km N.W. de Aguas Blancas [22°34' S 64°31' W], 15–19 Nov. 1994, P. Goloboff and M. Ramirez, 1 ♀, 2 immature (MACN-Ar 36564). 1 km E de Hickman [23°13' S 63°33' W], 20 Mar. 1988, P. Goloboff, F. Coyle, and R. Bennet, 1 ♀, 1 immature (MACN-Ar 28416). 37.5 km W de Hickman [23°16' S 63°54' W], 20 Mar. 1988, same collectors, 1 ♀ (MACN-Ar 28415). Santa Rosa, Camino a toma de agua [24°16' S 62°44' W], 1 Feb. 1995, P. Goloboff, 2 ♀ (FML-ARAN 02225). Quebrada de Tilian (25°07' S 65°32' W), 3 May 2001, A. Chalup, 1 ♀ (FML-ARAN 02226). 2 km W de Hickman [23°13' S 63°35' W], 27 Jan. 1995, P. Goloboff, 1 ♀ (FML-ARAN 02227).

COMMENTS: Some of the specimens identified here as *A. reycali* have small differences in the morphology of the spermathecae, with slightly more slender and longer ducts. The inclusion of those specimens in *A. reycali* is tentative.

Actinopus septemtrionalis, sp. nov.

Figures 8A–I, 9A–E, 43

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36501). Tucumán, El Cadillal [26°36' S 65°12' W], 25 May. 1983, P. Goloboff. PARATYPES: 1 ♀ (MACN-Ar 36052), same data as holotype; Ruta 9 and Arroyo Saladillo [26°37' S 65°14' W], 3 Jan. 1985, P. Goloboff, 1 ♂ (MACN-Ar 36503), 1 ♀ (MACN-Ar 36504) (female with egg sac); Rio Loro, 21 Sep. 1994, P. Goloboff, 3 ♀ (MACN-Ar 36506), 1 ♂ (MACN-Ar 36505).

ETYMOLOGY: The specific epithet *septemtrionalis* (“from the north”) is a Latin adjective in reference to where the species occurs (northern Argentina).

DIAGNOSIS: *A. septemtrionalis* are relatively small; males can be distinguished from all other species of the genus by having a stylized and almost straight copulatory bulb (fig. 8G–I), with BTA and ATA developed (ATA smaller in *A. reycali*), as well as the small anterior retrolateral keels on chelicerae (fig. 8D). Females can be differentiated by the small and wide spermathecae (fig. 9D, E), and fewer retrolateral spines on tibia II (fig. 9C) than other females. Males differ from *A. reycali*, by the smaller size; an ATA developed; and by the presence of dorsal spiniform bristles on femur III and P on trochanter III (fig. 8F).

DESCRIPTION: Holotype male (MACN-Ar 36501, figs. 8A–I): *Total length:* 10.56. *Carapace* (fig. 8A): length 3.78, width 3.66. *Cephalic region:* length 2.10, width 2.40; clypeus short with one central bristle and 3–4 small ones to the sides, 13 bristles between PME-PME and 6 behind each PME-PLD dyad; one larger medial bristle on each side of the OQ. *Fovea:* length 0.54, width 1.20. *Eyes, diameters and interdistances:* AME 0.20, ALE 0.32, PME 0.16, PLE 0.20, OQOQ length 0.68, 1.84 anterior width, 1.80 posterior width; AME-ALE 0.40, PME-PLD 0.08, AME-PME 0.24, ALE-PLD 0.28, AME-AME 0.20. *Chelicerae:* Length 2.20, width 1.20, with small anterior retrolateral keels (fig. 8D); cheliceral apex with 8 recumbent and elongated bristles that cover the base of the fang. Rastellum with 7

marginal blunt cusps and 4–5 small dorsal attenuated ones. Cheliceral furrow with 7 large promarginal teeth and 5 retromarginal and 4 denticles near the promarginal teeth. *Labium*: length 0.88, width 0.78. *Maxillae*: anterior length 0.96, 1.44 posterior, width 1.00. *Sternum*: narrow, center flat (fig. 8B); length 2.80, maximum width 2.24, minimum 0.78. Postlabial sigillum deep, posterior sigilla poorly defined and shallow. *Abdomen*: Length 4.20, oval with dark bristles. PMS: length 0.40; PLS: length of basal:medial:apical segments 0.56:0.40:0.24. *Spigots*: 1 large, 9 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 2(18): 2(24):1(35). *Lengths of legs and palp*: I: 4.38, 1.80, 2.58, 3.00, 1.50, 13.26. II: 4.02, 1.62, 2.40, 3.00, 1.50, 12.54. III: 1.26, 1.62, 1.80, 2.88, 1.80, 9.36. IV: 3.90, 1.32, 3.00, 3.00, 1.92, 13.14. Palp: 4.56, 1.60, 4.20, –, 1.02, 11.38.

Chaetotaxy: Coxae: III, 1 P SUP; I-II-IV, 0. Femora: I-IV, 0; II, 1 D A, 1 D P M; III, 3 D (1:2 A). Patellae: I, 1 V POST A, 1 v a ant; II, 1 V POST A; III, 1 P +5 on the margin, 1-1-1 D, 18 R SUP +8 on the margin; IV, 30 P SUP-D ANT +5 near the edge. Tibiae: I, 1-1-2 V ANT, 1-1-1-1-1-2 V POST, 1-1-1 R INF; II, 1-1-2-1-1-1R INF (2:3 A), 1-1-1 V ANT, 1-1-1-1-1-1 V POST; III, 1 D (1:2 B), a crown of 18 thorns, 2 R A, 1-1-2 V POST (thin), 1 V A ANT (thin); IV, 1-1 P INF (1:4 A), 2-1-1-2 V (thin). Metatarsi: I, 2-1-1-1-2-1 R INF, 3-1-3-3 V (2:3 A); II, 2-1-1-2-1 R INF, 3-1-3-1-4 V; III, 1-2 P INF (1:3 A), 1-1-1-1-1-0-2 D POST, 1-1-2-1-0-1-2 D ANT, 1-2-2-3 R, 3-1 V (3:4 B); IV, 1-1-1-2-1-2-1-4 P, 1-1-2 R INF. Tarsi: I, 1-1 P INF (1:2 A), 1-1-1-1-1-1-1 R INF, 1-1 V; II, 1-1-1-1 P INF, 1-1-1-2-1-1-3 R INF, 1 V M; III, 1-1 P INF (1:4 A), 2-2-1-1R INF (3:4 A); IV, 1-2-2-2 P INF (1:2 A), 1-1-0-1 R INF (1:2 A). Total number of retrolateral spines on tibiae I and II: 3 and 6 respectively. *Palp*: Tibia long and slender (width/length: 0.19±0.02) (fig. 8E). Bulb slim and slender (fig. 8G–I). ATA and BTA developed; spermatic duct slightly curved. *Pseudoscopula*: Tarsi: I–II, sparse (uniformly distributed throughout the segment); III–IV, dense and uniform. Metatarsi: III, sparse 1:4 A; IV, sparse

3:4 A. *Trichobothria*: Tibiae: I 3-4; II 3-5; III 4-6; IV 4-5. Metatarsi: I-II 8; III 7; IV 6. Tarsi: I 6; II-III 5; IV 3. *Color*: Carapace and chelicerae light reddish brown. Abdomen light brown, booklungs with light markings (fig. 8C). Legs as the carapace with light tarsi-metatarsi. Spinnerets light yellow.

Paratype female (MACN-Ar 36052, fig. 9A–E): *Total length*: 15.24. *Carapace* (fig. 9A): length 5.16, width 4.32, with lateral marginal bristles, 12 bristles on each posterior margin. *Cephalic region*: Length 5.76, width 4.32; clypeus with 25 bristles and 10 on chilum. Three bristles between AME-ALE, 15 between PME and 3–5 on both sides of the OQ. *Fovea*: length 0.80, width 1.68. *Eyes, diameters and interdistances*: AME 0.12, ALE 0.32, PME 0.24, PLE 0.28, OQ length 0.88, anterior width 2.4, 2.28 posterior width; AME-ALE 0.64, PME-PLE 0.12, AME-PME 0.48, ALE-PLE 0.40, AME-AME 0.24. *Chelicerae*: length 2.52, width 1.80; chelicerae apex with 10–12 recumbent and elongated bristles covering the base of the fang; dorsal anterior region with transversal grooves. Rastellum with 9 marginal, blunt cusps, and 5 small dorsal ones. Fang groove with 5 large promarginal teeth and 5 retromarginal ones and 8 denticles in the furrow, near the promargin. *Labium*: length and width 1.00, with 13 anterior cuspules. *Maxillae*: anterior length 1.20, posterior length 1.68, width 1.40, with ~70 cuspules 1:3 V ANT, spreading to the anterior face. *Sternum* (fig. 9B): Length 3.44, maximum width 2.80, minimum width 0.96, flat center. Postlabial sigillum deep, posterior sigilla well defined. *Abdomen*: length 7.20, globose, with small bristles, long in the dorsum. PMS: length 0.56; PLS: length of basal:medial:apical segments 0.60:0.40:0.24. *Spigots*: 2 large, 19 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 3(24):3(35):2(40). *Lengths of legs and palp*: I: 2.88, 1.80, 1.40, 1.60, 0.80, 8.48. II: 2.96, 1.80, 1.40, 1.64, 0.80, 8.60. III: 2.80, 2.00, 1.00, 1.80, 0.68, 8.28. IV: 3.60, 2.00, 2.00, 2.08, 0.80, 10.48. Palp: 2.60, 1.60, 1.68, –, 1.80, 7.68.

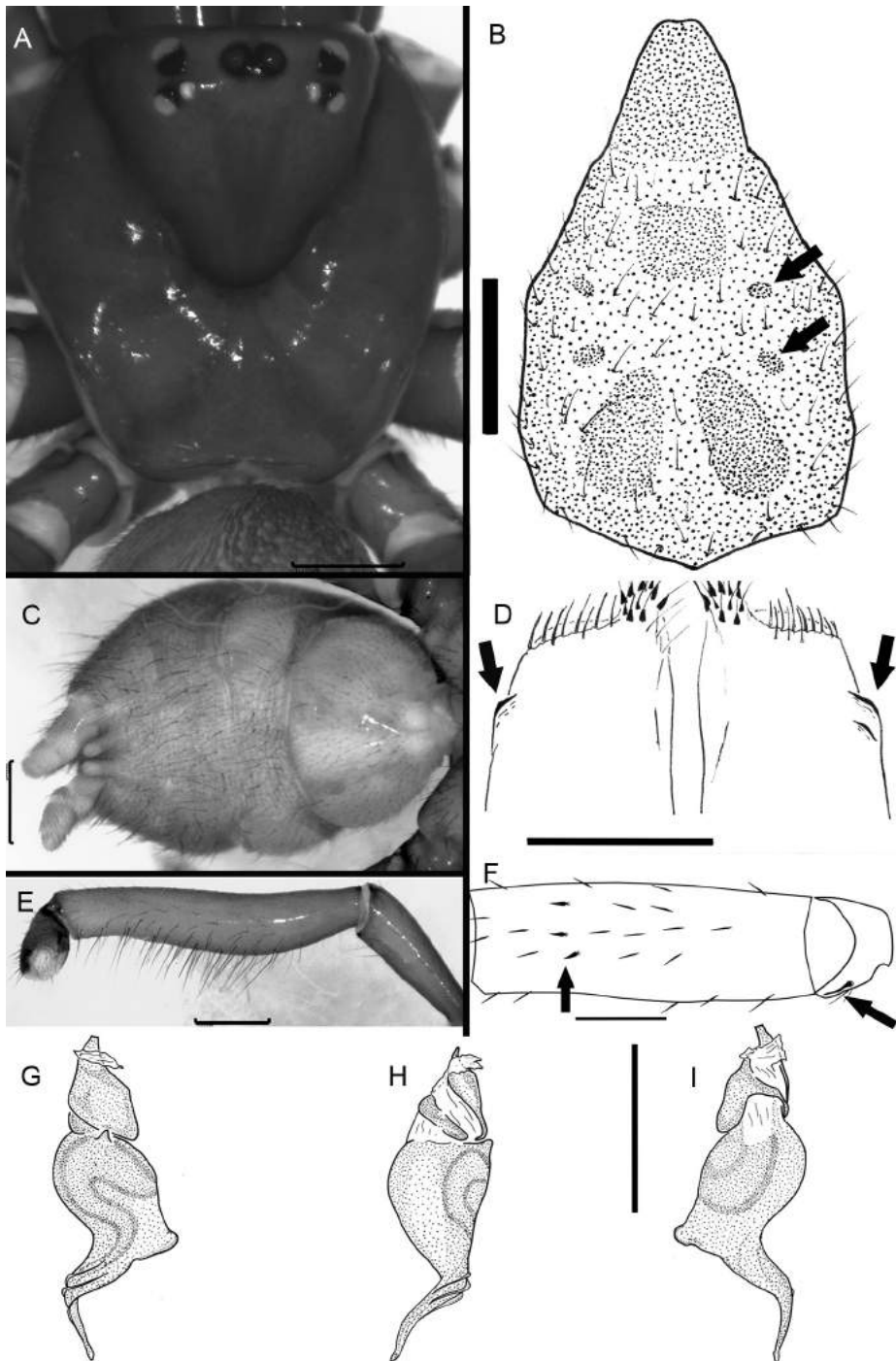


FIGURE 8. *Actinopus septentrionalis*, sp. nov., male holotype (MACN-Ar 36501). A, carapace. B, sternum (arrow indicates small medial sigilla). C, abdomen, ventral view. D, cheliceral keels. E, right palpal tibia. F, right femur and trochanter III, spiniform bristles. G–I, copulatory bulb, three different views. Scale bars = 1 mm.

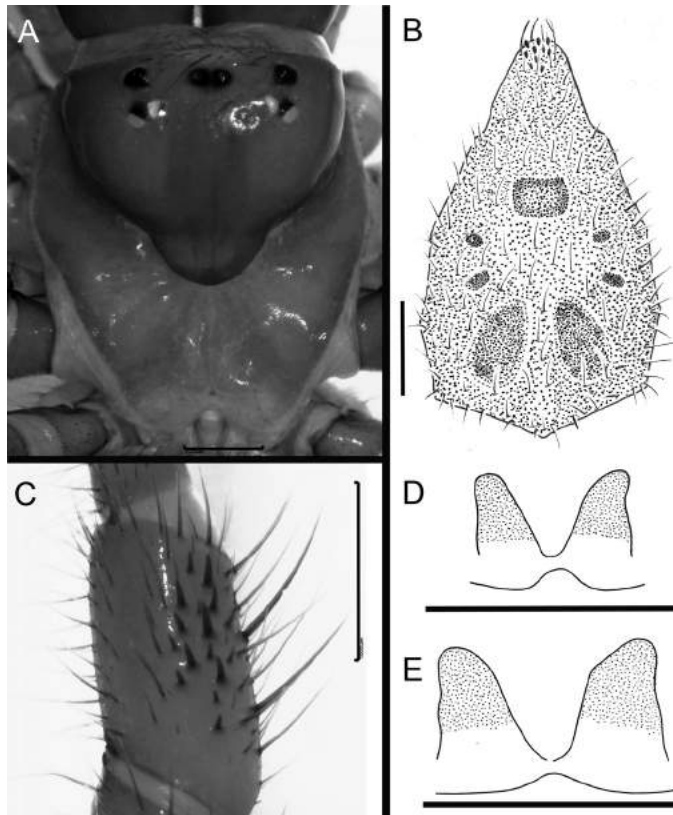


FIGURE 9. *Actinopus septemtrionalis*, sp. nov., female paratype (MACN-Ar 36052). A, carapace. B, sternum. C, right tibia II, retrolateral. D–E, spermathecae. D, El Cadillal, Tucumán. E, La Quena, Salta. Scale bars = 1 mm.

Chaetotaxy: Femora: I–II, 15 p sup (serial, small); III–IV, 0. Patellae: I–II, 0; III, 4 P (1:2 A) +9 on the margin, 2 R (1:2 A) +5 on the margin; IV, 34 P SUP-D ANT +5 near the edge; palp, 1(1:2 A)/ 1-1-1-1 P. Tibiae: I, 1-1 V POST; II, 15 R (3:4 A), 1-1 V POST; III, 1 D B, a crown of 17 thorns, 8 R; IV, 1 D A; palp, 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1 P, 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1 R INF. Metatarsi: I, 1-2-2-1-1-2-2 P INF, 1-1-1-1-1-2 R INF, 1-1-2 V POST; II, 1-2-2-1-2 P INF (1:3 A), 1-2-1-1-1-2 R INF, 1-1-2 V POST; III, 1-2-3-2-2-3 D ANT, 20 on row D POST-R (more abundant R A); IV, 13 P (1:2 A). Tarsi: I, 1-2-2-1-1 P INF, 1-1-1-2-3 R INF, 2 V A; II, 4-1-2-2-1 P INF, 1-1-2-3 R INF, 2 V A; III, 3-4-2-3-1 R, 31V-P; IV, 28 V-P; palp, 12 P (serial), 15 R INF (serial), 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 9C): 0 and 15 respectively. *Trichobo-*

thria: Tibiae: I 3–4; II 4–6; III 5–7; IV 6–6. Metatarsi: I–II 10; III 8; IV 5. Tarsi: I 7; II 8; III 7; IV 6. **Color:** Cephalothorax yellow brown, chelicerae darker on anterior region. Abdomen light brown, booklungs with light markings. Sternum, labium, and maxillae light yellow. Legs like carapace. Spinnerets light yellow.

DISTRIBUTION: Known from the provinces of Salta, Tucumán, Catamarca, and Formosa.

ADDITIONAL MATERIAL EXAMINED: **Tucumán.** El Cadillal [26°36' S 65°12' W], 25 May. 1983, P. Goloboff, 1 immature (MACN-Ar 36507). Horco Molle [26°46' S 65°19' W], 22 Apr. 1987, C. Szumik and P. Goloboff, 1 ♀ (MACN-Ar 27119); same locality, 10 Jun. 1994, P. Goloboff, 4 ♀, 2 juv (FML-ARAN 02190). Ticucho [26°31' S 65°14' W], 19 Jan. 2011, P. Goloboff and D. Ríos-Tamayo, 2 ♀ (FML-ARAN 02191); same locality and collectors,

- 1 ♀ (FML-ARAN 02192). Ca. Cochuna R.P. 330 (Km 34), 5 Jun. 1995, P. Goloboff, 1 ♀ (FML-ARAN 02193). Cochuna. R.P. 330 (km 37), 20 Dec. 1994, P. Goloboff, 3 ♀, 2 immature (FML-ARAN 02194). 2 km N Villa Padre Monti, Vía 310 (26°28' S 64°58' W), 7 Dec. 2010, P. Goloboff, D. Ríos-Tamayo, and C. Szumik, 2 ♀ (FML-ARAN 02195). Parque Nacional "Los Alisos" (27°13' S 65°58' W), 2–5 Nov. 2012, D. Ríos-Tamayo, 1 immature (FML-ARAN 02196). El Indio, 5 km, W [27°2' S 65°43' W], 24 Nov. 1994, P. Goloboff and M. Ramírez, 6 ♀ (FML-ARAN 02197). Rio Loro [26°36' S 65°10' W], 22 Apr. 1987, P. Goloboff, 2 ♀, 1 juv (MACN-Ar 27116); 18 Mar. 1988, P. Goloboff, F. Coyle and R. Bennet, 1 ♀ (MACN-Ar 27109). Raco [26°40' S 65°25' W], Jan. 1985, C. Szumik and P. Goloboff, 4 ♀, 6 immature (MACN-Ar 36508). Ruta Nacional 9, km 1247, Jan. 1994, P. Goloboff and C. Szumik, 2 ♀ (MACN-Ar 36509). Arroyo Saladillo, emp. Ruta 9 and 347 [26°39' S 65°14' W], 25 May. 1983, P. Goloboff, 18 ♀, 8 immature (MACN-Ar 36510). Escaba Abajo, Frente a Pte Colgante, (27°41' S 65°47' W), 21 Aug. 2013, D. Ríos-Tamayo and D. Fuenzalida, 2 ♀ (FML-ARAN 02198); Parte Posterior del Dique Escaba (arco 28) (27°39' S 65°45' W), same locality and collectors, 1 ♀ (FML-ARAN 02199). Camino Posterior Dique escaba (27°39' S 65°45' W), 22 Aug. 2013, D. Ríos-Tamayo and D. Fuenzalida, 1 ♀ (FML-ARAN 02200). Comunidad Batiruana, Area posterior del "Hostel YAQUANA" (27°38' S 65°44' W), 3 Oct. 2013, D. Ríos-Tamayo and D. Fuenzalida, 2 ♀ (FML-ARAN 02201). Comunidad Batiruana, frente a Hidroeléctrica (27°38' S 65°44' W), 2 Oct. 2013, D. Ríos-Tamayo and D. Fuenzalida, 1 ♀ (FML-ARAN 02202). Río Nío, R.P. 310, 21 km W R.P. 304 [26°26' S 64°55' W], 22 Dec. 1994, P. Goloboff, 3 ♀, 1 immature (FML-ARAN 02203). Entre Piedra tendida y Río Nío (26°26' S 64°55' W), 7 Dec. 2010, P. Goloboff, D. Ríos-Tamayo and C. Szumik, 2 ♀, 1 immature (FML-ARAN 02204). R.P. 321 cercano a "El Naranja," cerca de "Escuela Joaquin Molina" (26°42' S 65°2' W), 21 Apr. 2014, D. Ríos-Tamayo, V. Pereira and C. Szumik, 2 ♀, 2 immature (FML-ARAN 02205). Tafi del Valle [26°50' S 65°42' W], 28–30 Dec. 1994, P. Goloboff, 3 ♀ (FML-ARAN 02206). Same locality and collector, 2 ♀ (FML-ARAN 02207). Same locality, 11 Jan 1985, C. Szumik and P. Goloboff, 1 immature (MACN-Ar 36511). **Salta.** Los Laureles (ca. Chicoana) [25°6' S 65°32' W], 17 Mar. 1988, P. Goloboff, F. Coyle and R. Bennet, 2 ♀, 2 immature (MACN-Ar 27110). La Quena [23°21' S 63°48' W], 4–5 Feb. 1985, C. Szumik and P. Goloboff, 2 ♀, 2 immature (MACN-Ar 36512). Same locality, 14–15 May 1983, P. Goloboff, 1 ♀, 1 immature (MACN-Ar 36513). Metán [25°29' S 64°58' W], 13 May. 1983, P. Goloboff, 2 ♀ (MACN-Ar 36514). 10 km. N, Rosario de la Frontera [25°42' S 64°56' W], 24 May. 1983, P. Goloboff, 3 ♀, 1 immature (MACN-Ar 36515). Same locality and collector, 2 ♀, 3 immature (MACN-Ar 36516). R.P. 6, 5 km N de Palo Quemado (26°02' S 65°31' W, 1065 m), 11 Oct. 2012, D. Ríos-Tamayo, S. Arias, C. Szumik, V. Pereira and D. Casagrande, 1 ♀ (FML-ARAN 02208). R.P. 6, 3 km W of Potrerillos, Camping "El Paso de Zárate" (26°04' S 65°29' W, 911 m), 10 Dec. 2012, C. Szumik, V. Pereira and D. Casagrande, 1 ♀ (FML-ARAN 02209). R.P. 6, 4 km N.W of Potrerillos (26°03' S 65°29' W, 976 m), 11 Oct. 2012, D. Ríos-Tamayo, S. Arias, C. Szumik, V. Pereira and D. Casagrande, 1 ♀, 1 immature (FML-ARAN 02210). R.P. 6, 6 km N.W of Potrerillos (26°03' S 65°30' W, 992 m), 11 Oct. 2012, D. Ríos-Tamayo, S. Arias, C. Szumik, V. Pereira and D. Casagrande, 1 ♀, 1 immature (FML-ARAN 02211). R.P. 6, km 101, 13 km N.W. of Potrerillos (26°01' S 65°31' W, 1179 m), 12 Oct. 2012, D. Ríos-Tamayo, S. Arias, C. Szumik, V. Pereira and D. Casagrande, 1 ♀ (FML-ARAN 02212). R.P. 6, 7.4 km N.W. of Potrerillos (26°03' S 65°30' W), 12 Oct. 2012, D. Ríos-Tamayo, S. Arias, C. Szumik, V. Pereira and D. Casagrande, 1 ♀ (FML-ARAN 02213). R.P. 6, 18.3 km. N.W. of Potrerillos (25°59' S 65°31' W, 1174 m), 12 Oct. 2012, D. Ríos-Tamayo, S. Arias, C. Szumik, V. Pereira and D. Casagrande, 1 ♀ (FML-ARAN 02214). R.P. 6, 18.7 km. N.W. of Potrerillos (25°59' S 65°31' W, 1177 m), 12 Oct. 2012, D. Ríos-Tamayo, S. Arias, C. Szumik, V. Pereira and D. Casagrande, 1 ♀ (FML-ARAN 02215). R.P. 9, km 1634 (between Salta and S.S.de Jujuy), 19 Mar.

1988, P. Goloboff, F. Coyle, and R. Bennet, 4 ♀, 5 immature (MACN-Ar 28414). **Catamarca.** Singuil, Rio Casas Viejas [27°49' S 65°47' W], 19–21 Jan. 1987, P. Goloboff and C. Szumik, 6 ♀, 6 immature (MACN-Ar 27106). Same locality and collector, 4 ♀, 1 immature (MACN-Ar 27101). Entre La Viña y La Cascada, 7–11 Jan. 1987, P. Goloboff and C. Szumik, 1 ♀ (MACN-Ar 28410). El Colmenal, ruta 38, 20 km S de La Merced [28°19' S 65°36' W], 7 Feb. 1986, P. Goloboff and C. Szumik, 1 ♀ (MACN-Ar 27098). Salto de agua a 2 km arroyo arriba del camino entre La Viña y Dique Sumampa, en el 2° arroyo yendo de La Viña para Dique [28°3' S 65°35' W], 6 Feb. 1986, P. Goloboff, 1 ♀ (MACN-Ar 28408). 4 km E Andalgalá, margen Izq. del Río, lugar llamado “La Usina,” Jan 1986, P. Goloboff, 3 ♀, 12 immature (MACN-Ar 19821). Margen izq. Río la Viña, 1 km abajo de ruta 38 [28°2' S 65°35' W], 5 Feb. 1986, C. Szumik and P. Goloboff, 9 ♀, 7 immature (MACN-Ar 36517). **Formosa.** R.N Formosa: Seccional Río Teuco [24°18' S 61°48' W], 27 Jun.–5 Jul. 2010, M. Izquierdo, C. Kopuchian and L. Calderón, 1 ♀ (MACN-Ar 27307), tissue sample (MACN-Ar 27307-t1).

COMMENTS: Specimens from Tafi del Valle (FML-ARAN 02206; FML-ARAN 02207), in contrast to the others, are larger, robust, and with a darker color; they have, however, a very similar morphology of the spermathecae. Those specimens are assigned to the species with doubts; future studies may show that they actually belong to a different species. Likewise, the single female from Formosa (MACN-Ar 27307) has a similar spermathecal shape, but would significantly extend the known geographical distribution of the species. In the absence of males from that locality, that female from Formosa is tentatively identified as *A. septemtrionalis*

SPECIES WITH TYPE II MORPHOLOGY

The second morphological type identified has the largest number of species (15 species). They vary in size from 15 to 26 mm in females, and 8 to 20 mm in males. The number of retrolateral thorns on tibia II of females ranges from 50 to 160

or more (fig. 22C). The postlabial sigillum is triangular (fig. 35F) and the posterior sigilla I–II are elongated (fig. 17F). Most males of this morphological type have a short, robust, and more strongly bent copulatory bulb (fig. 21B–D); this feature is shared with the species with morphology type III; a few species (*Actinopus longipalpis* Koch, 1842, *A. pampa*, and *A. argenteus*) have a different bulb morphology, with a more rounded bulb and a very thin embolus, with ATA and BTA small. Females have spermathecae with apical lobes continuing in the direction of the duct (fig. 35D–E), a character shared by females with type III morphology; the females of *A. longipalpis*, *A. gerschiapelliarum*, *A. casuhati*, and *A. argenteus*, have spermathecae with lobes in a different orientation (projected perpendicularly to the base: figs. 11C, 14C, 19C, D, 24C). Most females with type II morphology have some spines apical to the apical crown of thorns on tibia III (except for *A. longipalpis*, *A. argenteus*, *A. taragui*, and *A. indiamuerta*). Species with this morphology are distributed in the provinces of Salta, Santiago del Estero, Córdoba, Santa Fe, Buenos Aires, Entre Ríos, Misiones, Chubut, Rio Negro, La Pampa, and San Luis (figs. 44 and 45).

SPECIES INCLUDED: *A. argenteus*, sp. nov., *A. ariasi*, sp. nov., *A. casuhati*, sp. nov., *A. cordobensis*, sp. nov., *A. coylei*, sp. nov., *A. gerschiapelliarum*, sp. nov., *A. indiamuerta*, sp. nov., *Actinopus insignis* (Holmberg, 1881), *Actinopus longipalpis* Koch, 1842, *A. magnus*, sp. nov., *A. palmar*, sp. nov., *A. pampa*, sp. nov., *A. patagonia*, sp. nov., *A. puelche*, sp. nov., *A. ramirezi*, sp. nov., *A. szumikae*, sp. nov., and *A. taragui*, sp. nov.

Actinopus argenteus, sp. nov.

Figures 10A–I, 11A–D, 44

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 31204): **Córdoba.** Reserva Natural Chancaní [31°20' S 65°27' W], 15–30 Jan. 2004, M. Izquierdo, 1 ♂. PARATYPES: ♀ ♂ (different vials) (MACN-Ar 36575, 36576 respectively). **Santiago del Estero.** Colonia Dora [28°35' S 62°56' W], 7–8 Feb. 1985, C. Szumik and P. Goloboff. **Córdoba:**

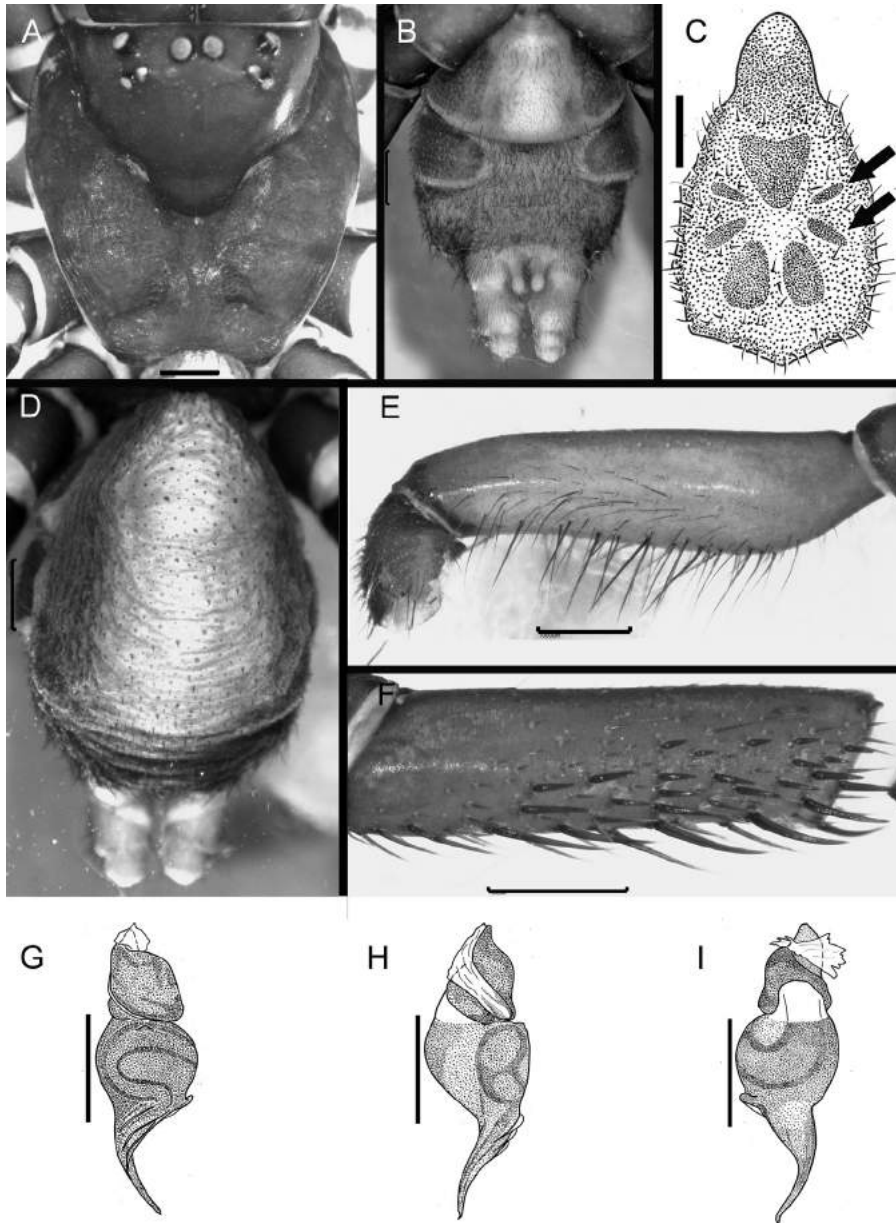


FIGURE 10. *Actinopus argenteus*, sp. nov., male holotype (MACN-Ar 31204). A, carapace. B, abdomen, ventral view showing the dark booklung markings. C, sternum (arrow indicates elongate medial sigilla). D, abdomen, dorsal view. E, pedipalp. F, tibia II, retrolateral view. G–I, copulatory bulb, three different views. Scale bars = 1 mm.

Same data as the male holotype, Mar. 1992, P. Goloboff and C. Szumik, 1 ♀ (MACN-Ar 27118).

ETYMOLOGY: The specific name, *argenteus*, is a Latin adjective meaning “silvery,” in reference

to the silver-grey coloration of the male abdominal dorsum.

DIAGNOSIS: Females of *A. argenteus* can be distinguished by the narrow sternum (fig. 11D),

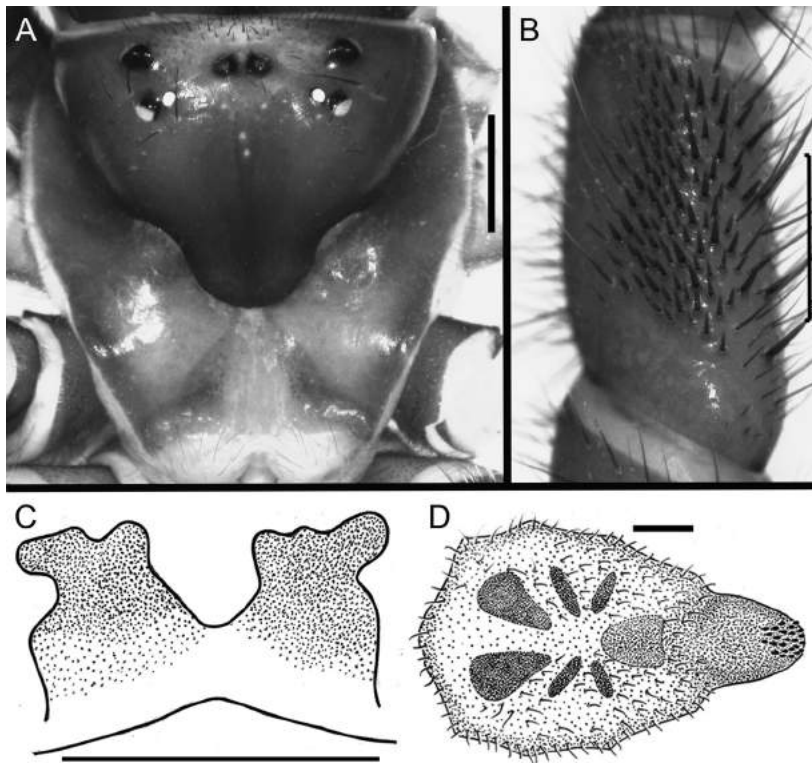


FIGURE 11. *Actinopus argenteus*, sp. nov., female paratype (MACN-Ar 36576). **A**, carapace. **B**, tibiae II, retrolateral view. **C**, spermathecae. **D**, sternum. Scale bars = 1 mm.

the spermathecae (fig. 11C) basally wide, with truncated fundus, with the apical margin concave and external lobes projected perpendicular to the duct. Differs from *A. gerschiapelliarum* and *A. casuhati* by their larger size and the absence of thorns distal to the crown of thorns on tibia III. Males can be recognized by the silvery-gray color of the abdominal dorsum (fig. 10D), similar to *A. pampa*, from which it is distinguished by the absence of a ventral concavity in the copulatory bulb and small ATA. Differs from *A. pampa* by the larger number of retrolateral thorns on tibiae II (fig. 10F).

DESCRIPTION: Holotype male (MACN-Ar 31204, figs. 10A–I): *Total length*: 14.64. *Carapace* (fig. 10A): length 5.88, width 5.52. *Cephalic region*: length 3.96, width 4.14; clypeus short with 5 small bristles between AME–ALE, 14 between PME and 3–4 bristles behind each PME–PLE dyad, 5 bristles on both sides of the OQ. *Fovea*: length 1.02, width

2.4. *Eyes, diameters and interdistances*: AME 0.32 (large), ALE 0.36, PME 0.24, PLE 0.24, OQ length 1.04, anterior width 3.08, 2.76 posterior width; AME–ALE 0.8, PME–PLE 0.12, AME–PME 0.48, ALE–PLE 0.56, AME–AME 0.24. *Chelicerae*: length 3.36, width 1.80, anterior dorsal half with slight transverse grooves; cheliceral apex with 12 recumbent and elongated bristles that cover the base of the fang. Cheliceral prolongation without cusps; furrow with 6 large promarginal teeth, 6 retromarginal, and 17 denticles near the promarginal teeth. *Labium*: length 1.26, width 1.26. *Maxillae*: anterior length 1.80, posterior length 2.28, width 1.62. *Sternum* (fig. 10C): Slightly depressed centrally; length 3.66, maximum width 3.06, minimum width 1.32. Postlabial sigillum shallow, posteriorly reaching the middle of the sternum; posterior sigilla well defined and shallow. *Abdomen* (fig. 10B, D): Length 5.52, with scarce and small bristles, thicker in the dorsum. PMS: length

0.56; PLS: length of basal:medial:apical segments 0.84:0.36:0.28. *Spigots*: 2 large, 14 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 3(12):4(21):2(34). *Lengths of legs and palp*: I: 5.70, 2.52, 3.12, 4.20, 2.40, 17.94. II: 5.46, 2.52, 3.24, 4.44, 2.40, 18.06. III: 4.50, 2.70, 2.52, 4.74, 2.70, 17.16. IV: 6.00, 2.88, 4.68, 5.16, 3.00, 21.72. *Palp*: 5.22, 2.64, 4.56, –, 1.50, 13.92.

Chaetotaxy: *Palp*: 0. All femora: 0. *Patella*: I-II, 0; III, 1-1-1-1-1-1 D, 40 P SUP +9 on the margin, 1-1 R +8 on the margin; IV, 69 P SUP-D ANT +4 near the edge. *Tibiae*: I, 2 R A, 1-1-1-1-2 V ANT, 1-1-1-2-1-2-1-2 V POST; II, 2-3-4-1-4-3-4 R, 1-1-1 V, 2 V A ANT, 1-1-1-1-1-3 V POST; III, 1-2 P, with a crown of 17 thorns, 2-1 R, 2-1-2 V A; IV, 1-2-3 P ANT, 2-1-1-1-2 V ANT, 2 V A POST. *Metatarsi*: I, 1-1-2 V, 1-1-1-2-3-2-2-3-2 V ANT, 3-1-4-2-2-1-3-1-2-2-1-4 V POST-R INF; II, 4-1-3-3-2-1-1-2 V, 1-1-2-2-2-2-2 V ANT, 2-1-1-4-3-4-4-5 V POST-R INF; III, 1-1-1-1-1-1 D POST, 2-1-1-1-1-1-1-1 D ANT, 1-1-2-1 V, 2-1-2-1-1-3-2 V ANT, 2-2-1-3-2-2-1-4-2-4 V POST-R INF; IV, 2-1-1-1-2-1 V, 1-1-1-1-2-4 V POST-R INF, 1-2-1-2-3-4 V ANT-P INF. *Tarsi*: I, 2-1-1-1-1-1-1-1 P INF, 1-1-3-2-1-1-3-2-6 R INF, 1-1 V A; II, 2-2-1-1-1-2-2-1-1 P INF, 2-2-1-1-2-4-5-7 R INF, 2 V A; III, 1-2-2-4-2-4-4 P INF, 1-1-3-3-4-1-2-1-1 R INF, 2-3-5 V ANT; IV, 2-3-1-3-3-4-2-2-3-3 P INF, 1-1-1-1-2-8 R INF, 1-1-1-3 V. Total number of retrolateral spines on tibiae I and II (fig. 10F): 2 and 21 respectively. *Palp*: Tibia long and slender (width/length: 0.28±0.02) (fig. 10E). Bulb (fig. 10G-I) rounded, embolus slender, ATA and BTA poorly developed. *Pseudoscopula*: *Tarsi*: I-II sparse (distributed throughout the segment, more abundant A); III-IV, dense and uniform. *Metatarsi*: I-II, without pseudoscopula; III-IV, scarce and apical. *Trichobothria*: *Tibiae*: I 4-6; II 5-7; III-IV 7-8. *Metatarsi*: I-II 10; III 9; IV 10. *Tarsi*: I 15; II-III 14; IV 12. *Color*: Carapace and chelicerae dark reddish brown. Abdomen light brown, dorsum silver grey; booklungs with dark markings. Legs like carapace, tarsi light; palp patella-tibia light.

Paratype female (MACN-Ar 36575, figs. 11A-D): *Total length*: 19.56. *Carapace* (fig.

11A): length 6.72, width 6.60, with 18 bristles on each posterior margin. *Cephalic region*: Length 3.84, width 5.70; clypeus with 60 bristles, chilum not visible, 7 bristles between AME-ALE (closer to ALE), 23 bristles between PME and 10-12 behind each PME-PLE dyad, 2 bristles central dorsal on line to the fovea; 13-15 small bristles on each side of the OQ. *Fovea*: length 0.60, width 1.14. *Eyes, diameters and interdistances*: AME 0.20, ALE 0.48, PME 0.24, PLE 0.28, AME-ALE 1.20, PME-PLE 0.24, AME-PME 0.72, ALE-PLE 0.68, AME-AME 0.32, OQ length 1.36, anterior width 3.92, 3.40 posterior width. *Chelicerae*: Length 3.90, width 2.58; cheliceral apex with 15 recumbent and elongated bristles covering the base of the fang. *Rastellum* with 12 blunt marginal cusps, and 10 smaller dorsal ones. Fang groove with 7 promarginal teeth and 5 retromarginal ones (1 small one between 2nd-3d, 3d-4th; and 4th-5th) and 20 denticles in the furrow, near the promargin. *Labium*: length 1.80, width 1.32, with 31 anterior cuspules. *Maxillae*: anterior length 1.98, posterior length 2.52, width 1.98, with +110 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 11D): With a slight central depression; length 4.80, maximum width 3.90, minimum width 1.56. Postlabial sigillum shallow, posterior sigilla shallow and well defined. *Abdomen*: Length 7.80, globose, with dark bristles. PMS: length 0.88; PLS: length of basal:medial:apical segments 1.12:0.32:0.24. *Spigots*: 2 large, 25 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 4(28):4(36):3(50). *Lengths of legs and palp*: I: 4.20, 2.70, 1.92, 2.40, 1.20, 12.42. II: 4.20, 2.58, 1.92, 2.58, 1.20, 12.48. III: 3.90, 3.00, 1.50, 2.88, 1.20, 12.48. IV: 4.80, 3.18, 2.70, 3.00, 1.02, 14.70. *Palp*: 3.90, 2.40, 2.70, –, 2.70, 11.70.

Chaetotaxy: *Metatarsi* and *tarsi* missing on the right leg III, only the left are described. All femora: 0. *Patellae*: I-II, 0; III, 7 R A, +12 on the margin, 2-6 P (1:2 A) +11 on the margin; IV, 53 P SUP-D ANT +4 on the edge; *palp*, 1-1-1-1 P. *Tibiae*: I, 1-1-2 P (1:2 A), 26 R INF, 1-1 V POST; II, ~90 R INF, 1-1-1 V POST; III, 1 D B, with a

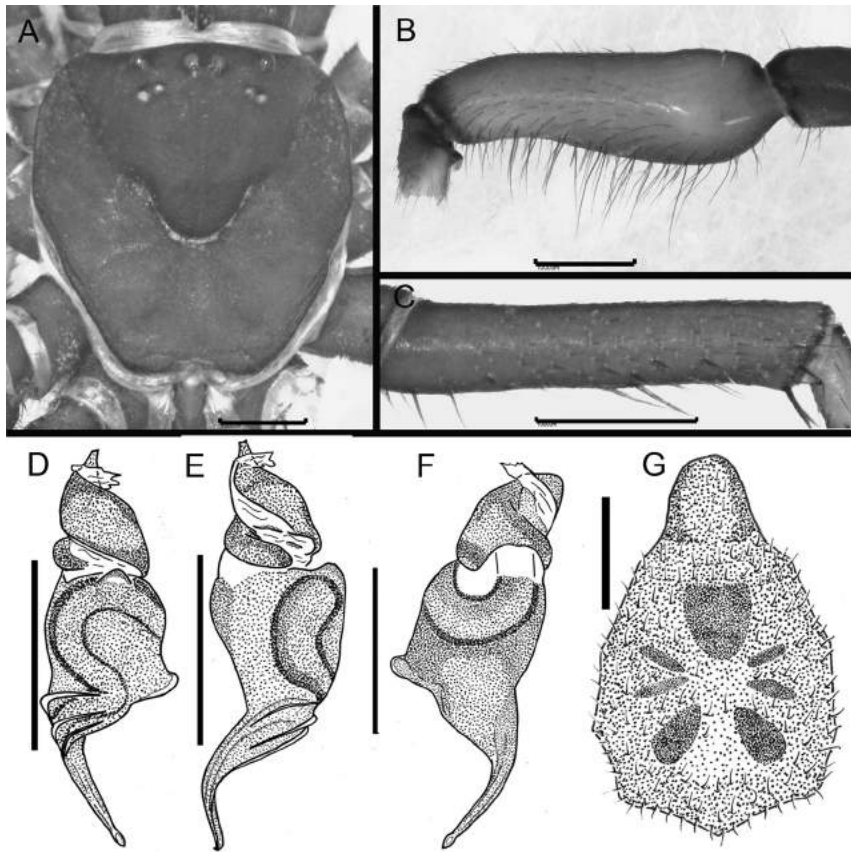


FIGURE 12. *Actinopus ariasi*, sp. nov., male holotype (MACN-Ar 36628). A, carapace. B, pedipalp. C, tibia II, retrolateral. D–F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

crown of 20 thorns, 33 R (3:4 A); IV, 0; palp, 16 P INF23 R INF. Metatarsi: I, 3-2-3-2-1-2-2-1-2-3 P INF, 24 R INF, 1-1/1-1-2 V POST; II, 1-1-2-1-3-1-3 P INF, 26 R INF, 1-1-2 V POST; III, 1-2-1-2-1-2 D ANT, 46 row D POST-R (more abundant R A), 1 V A POST; IV, 1-1-1-2-4 P, 2 V A. Tarsi: I, 2-1-2-1-1-1-1 P INF, 22 R INF, 1-2 V (1:2 A); II, 2-1-2-1-2-1-3-1-1 P INF, 2-1-3-3-3-1 R INF, 1-1-1-2 V; III, 23 R, 40 V-P; IV, 29 V-P; palp, 19 P, 24 R, 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 11B): 26 and 90 respectively. *Trichobothria*: Tibiae: I 4-4; II 5-6; III 7-5; IV 8-6. Metatarsi: I 12; II 18; III 12; IV 10. Tarsi: I 11; II 16; III 10; IV 8. *Color*: Carapace reddish brown; cephalic region dark with a triangular light spot on ocular area. Abdomen brown, booklungs with

dark markings. Spinnerets yellowish brown; labium and maxillae darker. Legs reddish brown.

DISTRIBUTION: Provinces of Santiago del Estero, Córdoba, and Catamarca.

OTHER MATERIAL EXAMINED: *Santiago del Estero*. Colonia Dora [28°35' S 62°56' W], Jan. 1985, C. Szumik and P. Goloboff, 3 ♀, 3 immature (MACN-Ar 36577). Same data, 7–8 Feb. 1985, C. Szumik and P. Goloboff, 3 immature (MACN-Ar 36578). *Córdoba*. Reserva Natural Chancaní [31°20' S 65°27' W], 6 Apr. 1987, P. Goloboff, 3 immature (MACN-Ar 36579). *Catamarca*. 10 km al Sur de Recreo [29°16' S 65°04' W], 9 Jan. 1998, P. Goloboff, 1 ♀ (MACN-Ar 36580). Singuil, El Chorro, 20–31 Jan. 1953, W. Patridge and S. Núñez, 2 ♀, 1 immature (MACN-Ar 27113).

COMMENTS: The specimens with catalog number MACN-Ar 27113, unlike other males assigned to this species, lacks the silver color on the back of the abdomen and the palp tibia is thick. However, they have a similar morphology of the copulatory bulb, the booklungs with dark markings, and the prolongation of the chelicerae is cusplless. We have chosen the most conservative action, and include those specimens in this species, despite the minor differences.

Actinopus ariasi, sp. nov.

Figures 12A–G, 44

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36628): *Formosa*: Reserva “El Bagual” [26°10' S 58°56' W], Nov. 2001–Feb. 2002, G. Scrochi, 1♂. PARATYPE: 1♂, same data (FML-ARAN 02187).

ETYMOLOGY: The species is named in honor of Joan Salvador Arias, for his assistance to the senior author (D.R.-T.) during his Ph.D studies.

DIAGNOSIS: Males of *A. ariasi* can be characterized by a copulatory bulb with thin embolus (fig. 12D–F), BTA and ATA developed, Ak not extending to the apex. Few retrolateral spines on tibia II (fig. 12C), similar to *A. magnus* and *A. cordobensis* (from which it differs by presenting a wider ATA).

Female: Unknown.

DESCRIPTION: Holotype male (MACN-Ar 36628, fig. 12A–G): *Total length*: 12.00. *Carpapace* (fig. 12A): length 3.72, width 3.60. *Cephalic region*: length 2.04, width 2.76; clypeus small with 16 bristles and 1 large central one; 5–6 bristles between PME and 3–4 behind each PME-PLP; 6 bristles on each side of the OQ, with central larger one. *Fovea*: length 0.54, width 1.08. *Eyes, diameters and interdistances*: AME 0.12 (small), ALE 0.24, PME 0.16, PLE 0.16; OQ width 0.72, anterior length 1.80, posterior length 1.60; AME-ALE 0.52, PME-PLP 0.08, AME-PME 0.32, ALE-PLP 0.40, AME-AME 0.16. *Chelicerae*: Length 1.80, width 0.90, shallow internal ridges on 1:2 A. Cheliceral

apex with 8 recumbent and elongated bristles that cover the base of the fang. Cheliceral prolongation without cusps; furrow with 8 large promarginal teeth and 5 retromarginal (small ones between 2nd-3d and 3d-4th) and 7 denticles, near the promarginal teeth. *Labium*: length 0.88, width 0.76. *Maxillae*: superior length 1.00, inferior length 1.68, width 1.32. *Sternum* (fig. 12G): Center flat; length 2.76, maximum width 2.36, minimum width 1.36. Postlabial sigillum deep, posterior sigilla well defined and shallow. *Abdomen*: Length 4.80, with dark bristles and 3 spiniform dorsal bristles. PMS: length 0.40; PLS: length of basal:medial:apical segments 0.52:0.32:0.04. *Spigots*: 1 large, 30 small on PMS; PLS, numbers of large (small) spigots on basal:medial:apical article 3(40):3(46):1(55). *Lengths of legs and palp*: I: 3.84, 1.50, 2.40, 2.88, 1.98, 12.60. II: 3.60, 1.50, 2.40, 3.00, 1.98, 12.48. III: 3.00, 1.38, 1.92, 3.24, 2.10, 11.64. IV: 3.90, 1.80, 3.54, 3.48, 2.28, 15.00. Palp: 3.72, 1.68, 3.42, –, 1.08, 9.90.

Chaetotaxy: Right tarsus III missing, only left described. Femora: 0. Patellae: I-II, 0; III, 15 P SUP-D ANT, 1 P A +9 on the margin, 1-1-1 D, 6 R A +7 on the margin; IV, 41 P SUP-D ANT, 1 P A. Tibiae: I, 1-1-2-3 V; II, 1-1-1-1-0-2 R INF, 1-2-1-4 V; III, 2-2-1-1 P, 2-1-3 R (1:2 A), 1-1-2 V, with an apical crown of 18 thorns; IV, 1-3-2-5 V. Metatarsi: I, 1-1-1-1-1-1 P INF, 2-2-2-2-2-1-1-2 R INF-V POST, 1-2-1 V (1:2 B); II, 1-1-1-2-1-2-1-3-2-2-4 R INF-V POST, 1-1-1-1-1-1 V ANT (1:2 A), 1-1-1 V (1:2 A); III, 1-1-1-2-1-2-1-2 P, 1-1-0-1 D ANT (3:4 B), 1-2-1-3-1-1-1-3 on row D POST-R, 1-1-1-2-2-2-1-3 V; IV, 2-1-2-2-1-1-1 P INF, 1 D A ANT, 1-2-1-1-2-2-2-1-5 V. Tarsi: I, 1-1-1-1-1 P INF, 1-1-2-1-1-3-1-2-6 R INF, 1 V M; II, 1-1-1-1-1-1-2-1-2 P INF, 1-1-1-2-1-5-1-4-4 R INF, 1-0-0-1 V; III, 1-1-1-1-0-1-2-1-1-2-2 P INF, 1-3-2-2-5-5-2 R INF; IV, 1-1-2-3-4-6-4-2 P INF, 1-3-1-2-1-1-1-2-1-2-1 R INF. Total number of retrolateral spines on tibiae I and II (fig. 12C): 0 and 6 respectively. *Palp*: Tibia short and thickened (width/length: 0.35±0.01) (fig. 12B). Bulb (fig. 12D–F) with

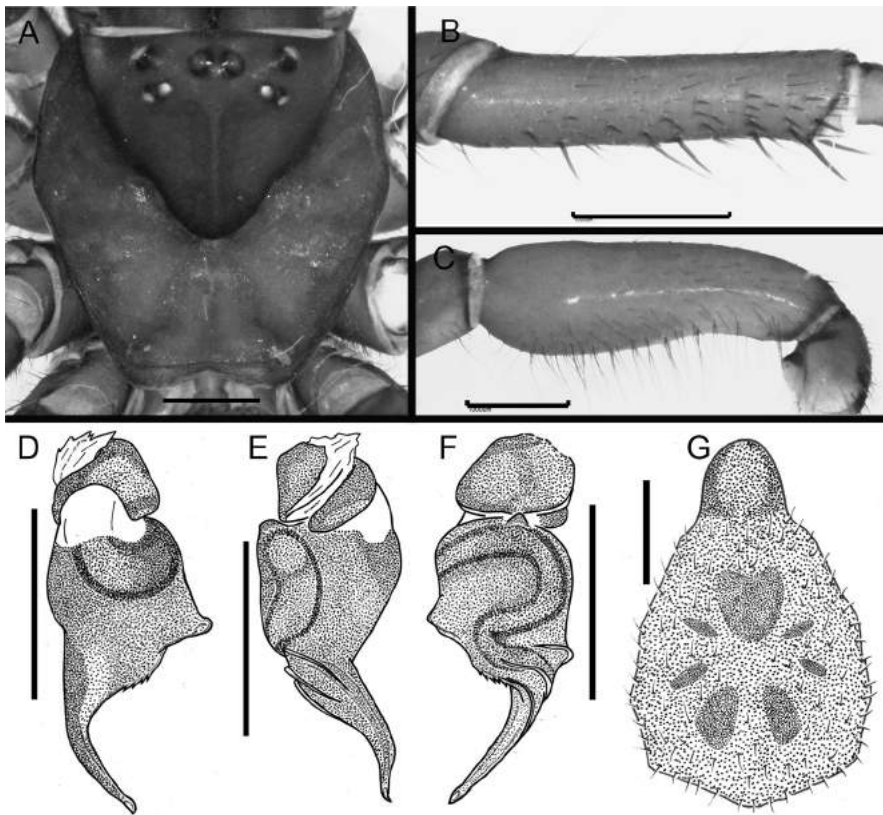


FIGURE 13. *Actinopus casuhati*, sp. nov., male holotype (MACN-Ar 36609). A, carapace. B, tibia II, retrolateral. C, pedipalp. D–F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

ATA and BTA well developed embolus with a series of denticles at the base. *Pseudoscopula*: Tarsi: I sparse (1:2 A); II sparse (3:4 A); III–IV, dense and uniform. Metatarsi: without pseudoscopula. *Trichobothria*: Tibiae: I–II 4–6; III–IV 6–6. Metatarsi: I–II 10; III 9; IV 8. Tarsi: I 8; II–III 9; IV 7. *Color*: Carapace dark reddish brown cephalothorax, cephalic region and chelicerae darker. Fovea almost black. Abdomen dark brown, booklungs with dark markings. Spinnerets yellowish. Legs like carapace with tarsi–metatarsi lighter; palp tibiae light.

DISTRIBUTION: Only known from the type locality.

OTHER MATERIAL EXAMINED: *Formosa*: Same data and collector as holotype, 83 ♂♂ (FML-ARAN 02188).

Actinopus casuhati, sp. nov.

Figures 13A–G, 14A–D, 45

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36609): **Buenos Aires**. Sierra de la Ventana [38°8' S 61°48' W], Mar. 1972, Cesari, 1 ♂. PARATYPE: 1 ♀ (LZI 0141). Parque Provincial “Ernesto Tornquist” [38°3' S 62°1' W], 8 Apr. 2010, G. Pompozzi.

ETYMOLOGY: The specific epithet *casuhati* comes from the indigenous Puel language; it is the name by which the Puelche aborigines knew the Ventania System.

DIAGNOSIS: Females of *A. casuhati* can be distinguished by the shape of their spermatheca (fig. 14C); basally wide, with well-truncated fundus, dorsally concave with external lobes projecting diagonally, and arising after a well-marked

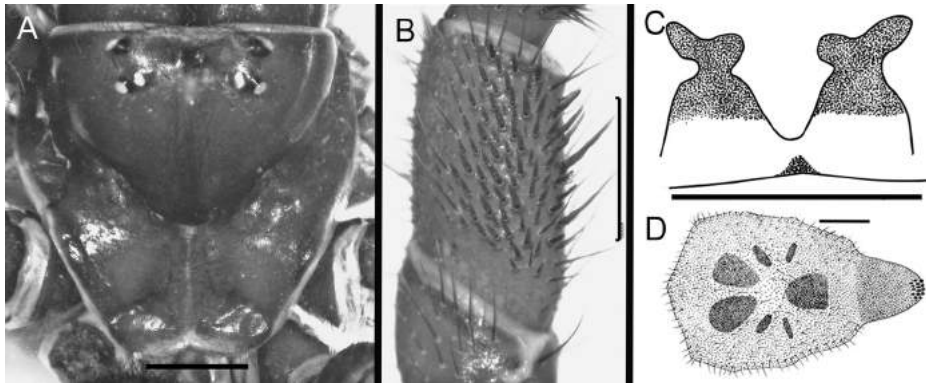


FIGURE 14. *Actinopus casuhati*, sp. nov., female paratype (LZI 0141). A, carapace. B, tibia II, retrolateral. C, spermathecae. D, sternum. Scale bars = 1 mm.

constriction (this last character is similar to *A. argenteus* and *A. gerschiapelliarum*). They differ from *A. argenteus* by the presence of spines apical to the crown on tibia III, and from *A. gerschiapelliarum* by their larger size and larger number of retrolateral thorns on tibiae II (fig. 14B); they differ from both by their dark brown coloration. Males can be differentiated by a copulatory bulb with ATA and BTA well developed (fig. 13D–F); and many retrolateral thorns on tibia II (this differentiates males from those of *A. coylei*, *A. ariasi*, and *A. cordobensis*). They differ from *A. szumikae* by the legs with metatarsi-tarsi lighter. Cheliceral prolongation without cusps (different from *A. insignis*, *A. gerschiapelliarum*, *A. taragui*, *A. puelche*, and *A. palmar*).

DESCRIPTION: Holotype male (MACN-Ar 36609, fig. 13A–G): *Total length:* 8.64. *Carapace* (fig. 13A): length 3.84, width 3.72. *Cephalic region:* length 2.10, width 2.40; clypeus small with a large bristle and 5–7 on both sides, 8 bristles between PME and 2–3 behind each PME-PLE; 4–6 small bristles and one large central on both sides of the OQ. *Fovea:* length 0.54, width 1.20. *Eyes, diameters and interdistances:* AME 0.20 (small), ALE 0.24, PME 0.12, PLE 0.16, OQ length 0.64, anterior width 1.92, 1.68 posterior width; AME-ALE 0.48, PME-PLE 0.08, AME-PME 0.20, ALE-PLE 0.36, AME-AME 0.20. *Chelicerae:* Length 1.72, width 1.00; cheliceral apex with 10 recumbent and elongated bristles that

cover the base of the fang. Cheliceral prolongation without cusps; furrow with 6 large promarginal teeth and 5 retromarginal ones (a small one between 2nd–3d, 3th–4th and 4th–5th) and 6 denticles, near the promarginal teeth. *Labium:* length 0.76, width 0.64. *Maxillae:* anterior length 0.60, posterior length 1.56, width 1.00. *Sternum:* Center flat (fig. 13G); length 2.52, maximum width 2.20, minimum width 0.78. Postlabial sigillum shallow, posterior sigilla well defined. *Abdomen:* length 3.12, large covered by bristles, thicker on dorsum. PMS: length 0.36; PLS: length of basal:medial:apical segments 0.36:0.30:0.18. *Spigots:* 2 large, 15 small on PMS; PLS, numbers of large (small) spigots on basal:medial:apical article 3(13):2(25):2(33). *Lengths of legs and palp:* I: 3.60, 1.38, 2.16, 2.64, 1.50, 11.28. II: 3.72, 1.38, 2.10, 2.82, 1.56, 11.58. III: 2.70, 1.50, 1.50, 2.70, 1.50, 9.90. IV: 3.60, 1.50, 2.70, 3.00, 1.74, 12.54. Palp: 3.84, 1.80, 3.42, –, 0.96, 10.02.

Chaetotaxy: Femora: I–II–IV, 0; III, 1 D A. Patellae: I–II, 0; III, 32 P SUP-D ANT +8 on the margin, 2-1-1-1 D (1:2 B), 7 R (1:2 A) +8 on the margin; IV, 42 P SUP-D ANT, 1 D B. Tibiae: I, 1-1-1 R INF, 1-1-1-1-3 V; II, 1-1-1-1-2-4-1-4 R INF, 1-2-2-1-2 V; III, 2-1 P (1:2 A), 1 D B, with an apical crown of 21 thorns, 2 R M, 1-1-1 V POST, 1-2 V ANT; IV, 1-1-1-1-1-2 P INF, 1-2-1-2-4 V. Metatarsi: I, 2-1-1-1-1 P INF, 2-2-2-1-1-1-2 R INF, 1-1-2-V POST; II, 1-1-1-2-2-1-2-1-4 V POST, 2-2-2-1-1-2 V ANT; III, 1-2-1-1-2 D ANT, 1-1-1-1-1 D POST, 2-2-1-2-3-2

V ANT-P INF, 1-2-1-1-2-1-2-1-4 V POST-R INF; IV, 2-2-1-1-2-1-2 P, 2-2-2-3-2-1-1-4 V. Tarsi: I, 1-1-1-1-1 P INF, 1-2-1-2-1-2-2-3 R INF, 1-2 V A; II, 1-1-2-1-1-1-1 P INF, 4-3-3-2-4-1-2 R INF, 1-1 V (1:2 A); III, 1-1-1-1-1-3-2-3 P INF, 1-2-3-2-1-4-2-1 R INF, 1 V A; IV, 2-1-2-1-1-4-3-2-3-1-2 P INF, 1-1-2-1-1-6-1-1-2-4 R INF. Total number of retrolateral spines on tibiae I and II (fig. 13B): 3 and 15 respectively. *Palp*: Tibiae short and thickened (width/length: 0.35±0.004) (fig. 13C). Bulb (fig. 13D-F) with ATA and BTA developed; embolus long, with a series of denticles at the base, without MRk; Ak extended to the apex. *Pseudoscopula*: Tarsi: I, sparse (A); II, sparse (1:2 A); III-IV, dense and uniform. Metatarsi: IV with a few apical small bristles. *Trichobothria*: Tibiae: I 3-2; II 4-3; III 5-3; IV 6-5. Metatarsi: I-II 10; III 7; IV 5. Tarsi: I-II 6; III-IV 7. *Color*: Carapace reddish brown, darker chelicerae; two triangular dark spots reaching the fovea. Abdomen dark brown, booklungs with dark markings. Sternum, labium, and maxillae lighter reddish brown. Spinnerets light yellowish. Legs like carapace with metatarsi-tarsi lighter; palp tibiae lighter.

Paratype female (LZI 0141, fig. 14A-D): *Total length*: 18.48. *Carapace* (fig. 14A): length 5.10, width 5.70; 15 bristles on each posterior margin. *Cephalic region*: length 3.30, width 4.80; clypeus small with 24 bristles, 16 on chilum; 17 bristles between PME and 8 behind each PME-PLE, 8 bristles and one larger on each side of the OQ. *Fovea*: length 0.84, width 2.28. *Eyes, diameters and interdistances*: AME 0.12, ALE 0.40, PME 0.28, PLE 0.24, OQ 1.04, anterior width 3.00, 2.68 posterior width; AME-ALE 0.96, PME-PLE 0.20, AME-PME 0.56, ALE-PLE 0.72, AME-AME 0.28. *Chelicerae*: Length 2.70, width 1.98, cheliceral apex with 12 recumbent and elongated bristles covering the base of the fang; dorsal anterior region with surface grooves. Rastellum with 9 marginal, blunt cusps, and 12 small dorsal ones. Fang groove with 7 promarginal teeth and 7 retromarginal ones (a small one between 4th-5th, 5th-6th and 6th-7th) and 15 denticles in the furrow, near the promargin. *Labium*: length 1.38, width 1.20, with 16 anterior cuspules. *Maxillae*:

anterior width 1.62, posterior width 2.10, length 1.62, with +100 cuspules 1:3 V ANT, extending to the anterior face. *Sternum*: Center flat (fig. 14D); length 3.60, maximum wide 3.18, minimum width 1.32. Postlabial sigillum shallow, posterior sigilla shallow and well defined. *Abdomen*: length 8.64, covered by dark bristles. PMS: length 0.88; PLS: length of basal:medial:apical segments 1.00:0.40:0.24. *Spigots*: 2 large, 48 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 5(60):7(65):6(73). *Lengths of legs and palp*: I: 3.30, 1.92, 1.50, 1.86, 0.84, 9.42. II: 3.30, 2.10, 1.50, 2.10, 0.72, 9.72. III: 3.00, 2.70, 1.20, 2.10, 0.90, 9.90. IV: 3.90, 2.58, 2.22, 2.40, 0.60, 11.70. Palp: 3.18, 1.92, 2.10, -, 2.22, 9.42.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III, 12 P (1:2 A) +10 on the margin, 18 R (1:2 A) +11 on the margin; IV, 82 P +3 near the edge; palp, 1-1 P A. Tibiae: I, 1-1-1 P A, 2-2-1-1/1 R INF, 1-1 V POST; II, 89 R INF, 1-1 V POST; III, 2-3 P (1:2 A), 1 D B, with a apical crown of 18 thorns and 2 apical (at the edge, anterior to the crown), 58 R; IV, 0; palp, 9 P INF, 21 R INF. Metatarsi I; 21 P INF, 8 R INF, 1-1-2 V POST; II, 12 P INF, 13 R INF, 1-1-1-2 V POST; III, 3-1-2-2-3-2-2-2-1-4 D ANT, 54 on row D POST-R (more abundant R A), 2 V A; IV, 19 P (3:4 A), 1 D A ANT, 1 V A ANT. Tarsi: I, 9 P INF, 12 R INF, 1 V A ANT; II, 13 P INF, 10 R INF, 2 V A; III, 27 R, 72 V-P; IV, 58 V-P; palp, 17 P INF, 17 R INF, 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 14B): 6/1 and 89 respectively. *Trichobothria*: Tibiae: I 4-5; II 5-6; III 5-7; IV 6-7. Metatarsi: I-III 12; IV 7. Tarsi: I 7; II-III 10; IV 8. *Color*: Carapace reddish brown; darker cephalic region with lighter ocular region. Chelicerae dark, almost black. Abdomen dark brown; booklungs with dark markings. Sternum light reddish brown, labium and maxillae darker. Spinnerets yellowish. Legs like carapace, tibia-metatarsi-tarsi lighter.

DISTRIBUTION: Province of Buenos Aires.

OTHER MATERIAL EXAMINED: *Buenos Aires*. Tandil [37°22' S 59°9' W], Mar. 1954, Andrae, 2♀ (MACN-Ar 36610). Sierra de la Ventana

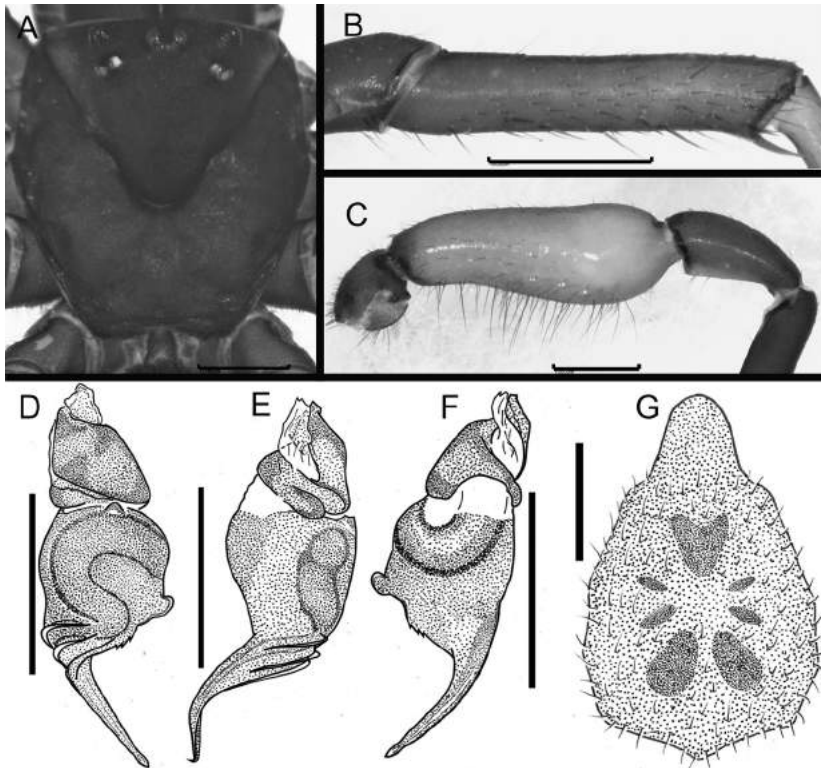


FIGURE 15. *Actinopus cordobensis*, sp. nov., male holotype (MACN-Ar 36613). A, carapace. B, tibia II, retro-lateral. C, pedipalp. D–F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

[38°8' S 61°48' W], no date, J. Rood, 1♂ and 1♀ (MACN-Ar 38194).

Actinopus cordobensis, sp. nov.

Figures 15A–G, 45

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36613): **Córdoba**: Campo Experimental INTA de Marcos Juárez [32°42' S 62°6' W], Feb.–Mar. 2011, no collector data, 1♂. PARATYPE: 1♂ (MACN-Ar 36614), Calamuchita [32°16' S 64°37' W], Jan. 1955, Viana.

ETYMOLOGY: The specific epithet refers to the province where the species is widely distributed.

DIAGNOSIS: *A. cordobensis* can be distinguished by an embolus without MRk and Ak not extending to the apex (fig. 15D–F), similar to *A. coylei*,

A. casuhati, *A. szumikae*, and *A. ariasi*; and different from the rest. It differs from the most similar species, *A. ariasi*, by the narrow ATA, and from *A. coylei* and *A. szumikae* by legs with metatarsi-tarsi lighter. Cheliceral prolongation without cusps, different from *A. insignis*, *A. gerschiapelliarum*, *A. taragui*, *A. puelche*, and *A. palmar*.

Female: Unknown.

DESCRIPTION: Holotype male (MACN-Ar 36613, fig. 15A–G): *Total length*: 8.28. *Carapace* (fig. 15A): length 3.30, width 3.12. *Cephalic region*: length 1.92, width 2.46; small clypeus, 15 small bristles, 10 between PME and 3–4 bristles behind each PME-PLE, 5 bristles on both sides of the OQ and a central larger one. *Fovea*: length 0.48, width 1.02. *Eyes, diameters and interdistances*: AME 0.16 (small), ALE 0.28, PME 0.12, PLE 0.20; OQ length 0.72, anterior width 1.80,

1.60 posterior width; AME-ALE 0.44, PME-PLE 0.00, AME-PME 0.32, ALE-PLE 0.40, AME-AME 0.20. *Chelicerae*: Length 1.62, width 0.84; cheliceral apex with 10 recumbent and elongated bristles that cover the base of the fang. Chelicerae prolongation without cusps; furrow with 5 large promarginal teeth and 5 retromarginal (a small one between 3d-4th and 4th-5th) and 7 denticles, near the promarginal teeth. *Labium*: length 0.80, width 0.72. *Maxillae*: anterior length 0.78, posterior length 1.32, width 1.00. *Sternum* (fig. 15G): Center flat; length 2.52, maximum width 2.20, minimum width 0.72. Postlabial sigillum shallow, sigilla I-II well defined. *Abdomen*: Length 1.74, covered with black bristles on the dorsum. PMS: length 0.40; PLS: length of basal:medial:apical segments 0.52:0.20:0.08. *Spigots*: 1 large, 18 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 1(19:2(25):2(38)). *Lengths of legs and palp*: I: 3.18, 1.38, 2.04, 2.70, 1.68, 10.98. II: 3.30, 1.38, 2.10, 2.58, 1.68, 11.04. III: 2.70, 1.44, 1.62, 2.70, 1.80, 10.26. IV: 3.60, 2.16, 2.88, 3.30, 1.98, 13.92. Palp: 3.30, 1.62, 3.00, -, 0.90, 8.82.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III; 21 P SUP-D ANT, 1 P A +8 on the margin, 1-1-1-1 D, 5 R A +9 on the margin; IV, 41 P SUP-D ANT. Tibiae: I; 1-0-3 V; II, 1-0-1-1-1-3 R INF, 1-1-2 V; III, 1-2 P (1:3 A), 1 D B, 1-1 R (1:3 A), 1-2-2 V, with an apical crown of 17 thorns; IV, 2-1 P (1:2 A), 1-2-2-1-4 V. Metatarsi: I, 1-1-2-2-1-1 R INF, 2-1-2-2-V; II, 1-1-1-1-2-2-1-2-4 R INF-V POST, 1-1-1-2 V ANT; III, 1-1-1-1 P INF, 1 D ANT B, 1-1-2-2-3 D POST-R, 1-3-2-2-2-4 V; IV, 1-2 P (1:2 A), 1-1-2-1-1-2-3-1-5 V. Tarsi: I, 1-1-1-1-1 P INF, 1-1-1-2-1-2-1-2-2 R INF, 1-1-1 V (1:2 A); II, 1-1-1-1-2 P INF, 1-1-2-1-3-7 R INF, 1-1-1 V (1:2 A); III, 2-2-1-1-1-3-3 P INF, 2-4-7-2-2 R INF, 1-2 V A; IV, 1-1-1-1-4-4-8 P INF, 1-1-2-1-2-2-3-2 R INF. Total number of retrolateral spines on tibiae I and II (fig. 15B): 0 and 7 respectively. *Palp*: Tibia short and thickened (width/length: 0.37±0.003) (fig. 15C). Bulb (fig. 15D-F), ATA and BTA developed; embolus slender with a series of denticles at the base, Ak not extending to the apex; MRk small. *Pseudo-*

scopula: Tarsus: sparse, I (1:3 A); II (1:2 A); III-IV, dense (uniformly distributed throughout the segment). Metatarsus: without pseudoscopula. *Trichobothria*: Tibiae: I 4-6; II 3-6; III 4-6; IV 4-7. Metatarsi: I 12; II-III 11; IV 6. Tarsi: I-II 9; III 10; IV 6. *Color*: Carapace dark reddish brown, cephalic region and chelicerae darker. Abdomen dark brown, booklungs with dark markings. Spinnerets yellowish. Sternum, labium, and maxillae lighter. Legs like carapace with tarsi-metatarsi lighter.

DISTRIBUTION: Provinces of San Luis, and central and southern Córdoba.

OTHER MATERIAL EXAMINED: **Córdoba**: Leones [32°39' S 62°17' W], 2 Jan. 1966, H.P. William, 1♂ (MACN-Ar 36615). 10 Feb. 1946, no collector, 1♂ (MACN-Ar 36616). Calamuchita (B, C, D, E) [32°16' S 64°37' W], Jan. 1955, Viana, 4♀ (each in different vial) (MACN-Ar 36617-36620 respectively). San Pellegrino, Sierra de Córdoba [30°47' S 64°17' W], Jan. 1942, Bridarolli, 1♂ (MACN-Ar 36621). **San Luis**: La Florida [33°7' S 66°0' W], 1 Feb. 1992, S. Tripole, 1♂ (CA 0162). 6 Feb. 1993, Ricaldone, 1♂ (CA 0228). Trapiche [33°6' S 66°3' W], 2 Feb. 1992, Pérez Chaca, 1♂ (CA 0163). San Francisco del Monte de Oro [32°36' S 66°7' W], 20 Mar. 2006, Albornoz, 1♂ (CA 0982).

Actinopus coylei, sp. nov.

Figures 16A-G, 17A-F, 44

TYPE MATERIAL: HOLOTYPE ♀ (MACN-Ar 36564): **Salta**. 1 km E de Hickman [23°13' S 63°33' W], 22 Mar. 1988, P. Goloboff, F. Coyle, and R. Bennet, 1♀. **PARATYPE**: male (MACN-Ar 36565). **Santiago del Estero**. Sumampa [29°21' S 63°28' W], Nov. 1954, Maldonado. 1♂.

ETYMOLOGY: The specific epithet is a patronymic in honor of Frederick A. Coyle, a student of Mygalomorphae, and collector of the type specimen.

DIAGNOSIS: Females of *A. coylei* can be distinguished by the shape of their spermathecae with a squared base and a long external lobe, slightly

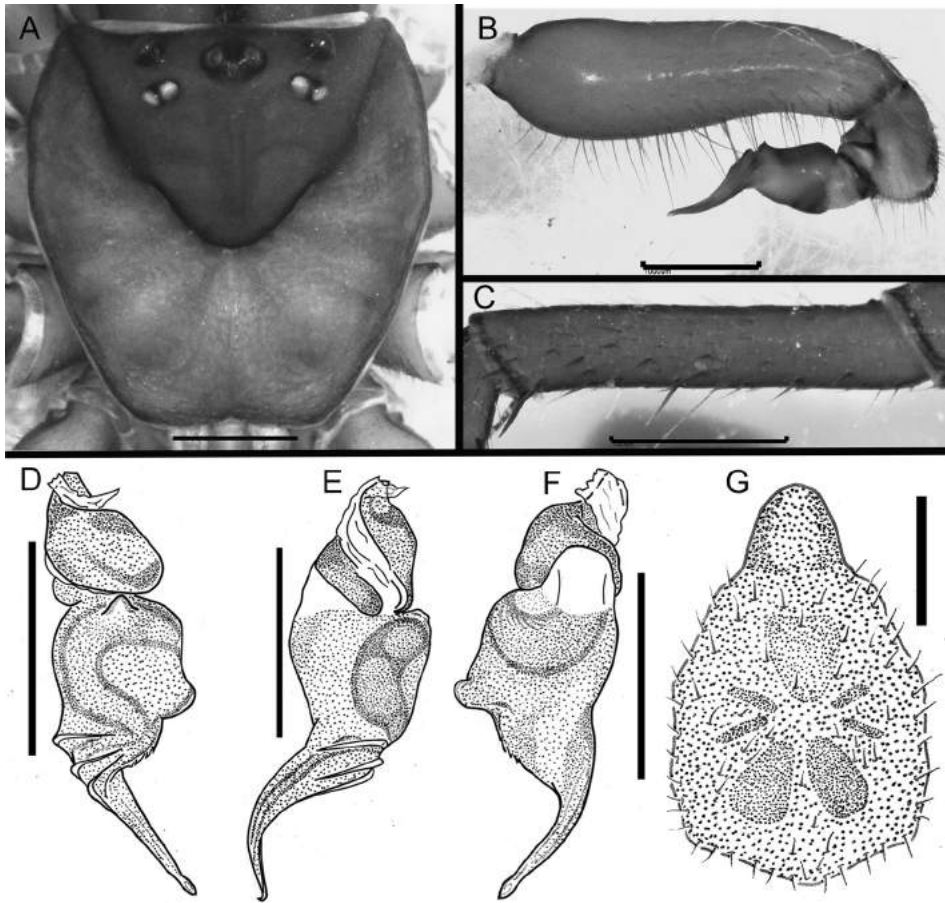


FIGURE 16. *Actinopus coylei*, sp. nov., male paratype (MACN-Ar 36565). A. Carapace. B. pedipalp. C. tibia II, retrolateral. D–F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

straight or curved inward (fig. 17D, E). It is distinguished from all other species (except *A. argenteus* and *A. patagonia*) by the sternal sigilla I–II well marked and posteriorly reaching the central depression of the sternum (fig. 17F). It differs from *A. argenteus* by having a wider sternum. Males differ from *A. argenteus* by the well-developed ATA and BTA (fig. 16D–F); they can be distinguished from all other species (except de *A. argenteus*, *A. casuhati*, *A. cordobensis*, *A. szumikae*, *A. ariasi*, and *A. pampa*) by the absence of MRk and the Ak not extending to the apex of the embolus. Cheliceral prolongation without cusps, different from *A. insignis*, *A. gerschiapelliarum*, *A. taragui*, *A. puelche*, and *A. palmar*.

DESCRIPTION: Paratype male (MACN-Ar 36565, figs. 16A–G): *Total length:* 8.88. *Carapace* (fig. 16A): length 3.90, width 3.18. *Cephalic region:* length 1.74, width 2.46; clypeus short with some small bristles and one larger central, 8 bristles between PME and 3 behind each PME-PLE dyad, 4–6 bristles on each side of the OQ. *Fovea:* length 0.54, width 1.38. *Eyes, diameters and interdistances:* AME 0.12 (small), ALE 0.32, PME 0.16, PLE 0.16, OQ length 0.60, anterior width 1.72, 1.60 posterior width; AME-ALE 0.40, PME-PLE 0.04, AME-PME 0.28, ALE-PLE 0.28, AME-AME 0.20. *Chelicerae:* length 1.56, width 0.90; cheliceral apex with 10 recumbent and elongated bristles covering the base of the fang;

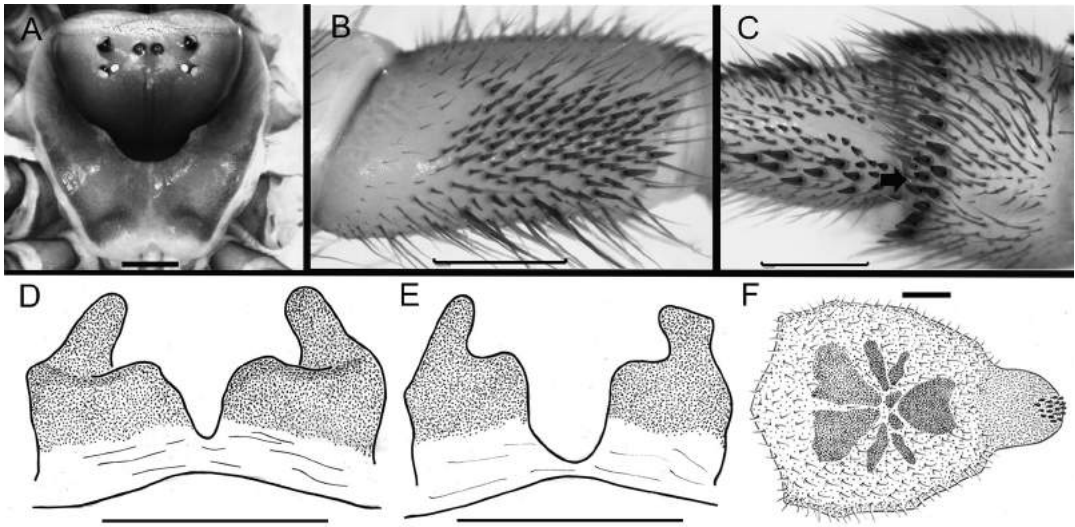


FIGURE 17. *Actinopus coylei*, sp. nov., female holotype (MACN-Ar 36564). A, carapace. B, tibia II, retrolateral. C, tibia III, apical thorns (anterior to the crown). D-E, spermathecae: D, 1 km E of Hickman. E, Finca Bateas del Bermejo. F, sternum. Scale bars = 1 mm.

cheliceral prolongation without cusps. Fang groove with 6 promarginal teeth, 5 retromarginal ones (one smaller between 3d-4th and 4th-5th) and 8 denticles in the furrow, near the promargin. *Labium*: length 0.64, width 0.76. *Maxillae*: anterior length 0.88, posterior length 1.40, width 0.96. *Sternum* (fig. 16G): Center flat; length 2.56, maximum width 2.08, minimum width 0.76. Postlabial sigillum shallow, posterior sigilla well defined and shallow. *Abdomen*: Length 3.42, small covered with small dark bristles, abundant in the dorsum, with 2 anterior spiniform bristles. PMS: length 0.52; PLS: length of basal:medial:apical segments 0.40:0.16:0.12. *Spigots*: could not be observed. *Lengths of legs and palp*: I: 3.88, 1.60, 2.44, 2.96, 2.00, 12.88. II: 3.72, 1.68, 1.80, 3.36, 2.20, 11.96. III: 2.92, 1.68, 1.80, 3.36, 2.20, 11.96. IV: 4.00, 1.80, 3.40, 3.68, 2.40, 15.28. Palp: 3.80, 1.80, 3.40, -, 1.00, 10.00.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 27 P SUP, 2 P A +8 on the margin, 1-1-1-1 D (1:2 B), 8 R (1:2 A) +9 on the margin; IV, 44 P SUP-D ANT +3 on the edge. Tibiae: I, 1 V ANT A, 1-1-2 V POST; II, 2-1-2-1-2 R INF (1:2 A), 1 V A ANT, 1-1-2 V POST; III, 1-1 P (1:2 A), 1 D B, with

crown of 17 thorns, 2-1 R (1:3 A), 1-1-1 V POST, 3 V A ANT; IV, 1-1 P, 1-1-4 V ANT, 1-1-2 V POST. Metatarsi: I, 1-1 P (1:2 A), 1-2-1-2-1 R INF, 1-1-1 V POST; II, 1-1 P (1:2 A), 1-2-2 V, 1-1-1-1-2-1-1-2 V POST; III, 1-1 P SUP, 2-1-1-1-3 R, 1-1-1-1-1-1 V, 1-1-1-1-1-2-V ANT, 1-1-1-1-2 V POST; IV, 1-2-2-1-3-1-2 P, 1 P A SUP, 1-1-2 V POST, 1-1-1-2-2 V ANT. Tarsi: I, 1-1-1-1 P INF, 1-1-2-2-1-5 R INF, 1-1 V A; II, 1-1-1-1-1-2 P INF, 2-2-2-1-1-2-3-2-2 R INF, 1 V M; III, 1-1-1-1-2-1-3 P INF, 1-1-1-1-5-2-3-1-1-2 R INF, 1-2 V A; IV, 2-2-1-1-2-6-2-2-1-2-4 P INF, 1-1-1-1-1-1-1-1-1-1 R INF, 1-1-1 V A. Total number of retrolateral spines on tibiae I and II (fig. 16C): 0 and 8 respectively. *Palp*: Tibia short and thickened (width/length: 0.33 ± 0.02) (fig. 16B). Bulb (fig. 16D-F), well-developed ATA and BTA; embolus with series of denticles at the base. *Pseudoscopula*: Tarsus: I, sparse A; II, sparse 1:2 A; III-IV, dense and uniform. Metatarsus: not present. *Trichobothria*: Tibiae: I 4-4; II 4-6; III 4-7; IV 7-8. Metatarsi: I-II 11; III 10; IV 7. Tarsi: I-II 9; III 10; IV 7. *Color*: Carapace reddish brown, cephalic region and chelicerae darker. Abdomen brown with small dorsal spots, booklungs with

dark markings. Sternum, labium, and maxillae yellowish brown. Legs like carapace, tarsi light. Spinnerets yellowish.

Holotype female (MACN-Ar 36564, fig. 17A-F): *Total length*: 23.16. *Carapace* (fig. 17A): length 8.16; width 8.16; 9 bristles on each posterior margin. *Cephalic region*: length 4.44, width 6.36; clypeus with 35 small bristles and one larger central; chilum with 50 bristles, 4 on each side of the OQ; 22 bristles between PME and 4-5 behind each PME-PLD dyad. *Fovea*: length 1.08, width 2.70. *Eyes, diameters and interdistances*: AME 0.24, ALE 0.44, PME 0.32, PLE 0.36, OQ length 1.40, anterior width 3.40; posterior width 3.40; AME-ALE 0.84, PME-PLD 0.12, AME-PME 0.52, ALE-PLD 0.76, AME-AME 0.44. *Chelicerae*: length, 2.82, width 4.38; small and thin bristles on the lateral proximal half and dorsal; cheliceral apex with two rows of recumbent and elongated bristles covering the base of the fang. *Rastellum* with 12 marginal, blunt cusps, and 7/8 small dorsal ones. Fang groove with 8 large retromarginal teeth (3d-5th-7th small), 6 promarginal ones, and 12 denticles in the furrow, near the promargin. *Labium*: length 1.62, width 1.56, with 18 anterior cuspules. *Maxillae*: anterior length 2.10, posterior length 3.00, width 2.10, with +130 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 17F): Large and wide, with slight central depression: length 5.22, maximum width 4.56, minimum width 1.74. Postlabial sigillum deep, posterior sigilla shallow and well defined; all reaching the center of the sternum. *Abdomen*: length 11.16, with dark bristles. PMS: length 1.00; PLS: length of basal:medial:apical segments 1.36:0.6:0.4. *Spigots*: 3 large, 30 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 8(43):9(48):4(56). *Lengths of legs and palp*: I: 3.90, 2.64, 1.68, 2.40, 1.14, 11.76. II: 3.90, 2.76, 1.80, 2.58, 1.08, 12.12. III: 3.78, 3.30, 1.50, 2.70, 1.08, 12.36. IV: 4.92, 3.54, 3.00, 3.00, 1.02, 15.48. Palp: 3.78, 2.64, 2.70, -, 2.76, 11.78.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 1-2-3 P (1:3 A), 10 on the margin, 58 R (1:3 A); IV, 55 P SUP-D ANT; palp, 1-1-1 P. Tibiae: I, 1-1-

1/0 P (1:3 A), 1-1-3-1-2/1-0-1-1-1-1 R INF, 1-1 V POS; II, +104 R (2:3 A), 1-1 V POST; III, 1 D B, with a crown of 17 thorns and 3 apical (at the apex, anterior to the crown; fig. 18C), 68 R (2:3 A); IV, 0; palp, 7 P INF, 17 R INF (2:3 A). *Metatarsi*: I, 21 P INF, 19 R INF, 1-1-1-2 V POST; II, 19 P INF, 20/25 R INF, 1-1-2 V POST; III, 21 D ANT, 50 on row D POST-R (more abundant R A), 30 D B small (in two fields of 13-17, separated by a glabrous band), 2 VA; IV, 1-1-2-2 P (1:2 A), 1 D A ANT, 2 VA. *Tarsi*: I, 11 P, 2-2-2-2-2-3-3 R INF (irregularly arranged), 1 V A; II, 13 P INF, 17 R INF, 2 V A; III, 82 V-P, 46 R; IV, 40 V-P. Total number of retrolateral spines on tibiae I and II: 8/5 and 104 respectively. *Trichobothria*: Tibiae: I 4-6; II 4-7; III 5-8; IV 5-7. *Metatarsi*: I 15; II 16; III 12; IV 11. *Tarsi*: I 10; II 12; III 13; IV 10. *Color*: Carapace reddish brown, darker cephalic region and lighter OQ. Chelicerae dark reddish brown, with lighter dorsal bands and dark spots in the dorsum. Abdomen brown, booklungs with light markings. Spinnerets yellowish. Sternum yellowish, dark sigilla; labium and maxillae brown yellowish. Legs brown, trochanter and dorsal part of the femora darker.

DISTRIBUTION: Provinces of Salta and Santiago del Estero.

OTHER MATERIAL EXAMINED: **Salta**. 1 km. E de Hickman [23°13' S 63°33' W], 22 Mar. 1988, P. Goloboff, F. Coyle, and R. Bennett, 1 immature (MACN-Ar 36566). Camino a Zanja el Tigre, 5 km. O, de R.N 34 [23°12' S 64°9' W], 30 Jan. 1995, P. Goloboff, 2 ♀ (FML-ARAN 02229). Finca Bateas del Bermejo, 7 km E de El Quimilár [23°19' S 63°51' W], 26 Jan. 1995, P. Goloboff, 1 ♀ (FML-ARAN 02230). La Quena [23°21' S 63°48' W], 14-15 May. 1983, P. Goloboff, 4 ♀ (MACN-Ar 36567); same data and collector, 3 ♀, 1 immature (MACN-Ar 36568); Same data and collector, 5 ♀, 5 immature (MACN-Ar 36569). Same data, 4-5 May 1985, C. Szumik and P. Goloboff, 2 ♀ (MACN-Ar 36570). Rosario de la Frontera [25°47' S 64°58' W], 21 May 1944, J. Vellard, 3 ♀, 1 immature (MACN-Ar 36571). 1 km E de Hickman [23°13' S 63°33' W], 22 Mar. 1988, P. Goloboff, F. Coyle, and R. Bennet, 1

immature (MACN-Ar 36604). **Santiago del Estero:** Rio Hondo [27°35' S 64°57' W], Aug. 1939, J. Canals., 1 ♀ (MACN-Ar 36572). Lujan [28°23' S 62°22' W], without collect data, J. Abalos, 1 ♀ (MACN-Ar 36573). Colonia Dora [28°36' S 62°56' W], Jun. 1992, P. Goloboff, 1 ♀ (MACN-Ar 28409). Tintina, empalme con RP6, a 3 km E de RP92 (26°59' S 62°40' W), 28 Mar. 2017, D. Ríos, C. Szumik, R. Gandolfo, A. Molina, 1 ♀ (FML-ARAN 02235). **Catamarca:** Singuil, El Chorro, 20–31 Jan. 1953, W. Patridge and S. Núñez, 2 ♀ (MACN-Ar 36574). 5 km de San Martín, RN 60 (29°12' S, 65°48' W), 1995, P. Goloboff, 3 ♀ (FML-ARAN 02236).

COMMENTS: Specimens from Catamarca, in contrast to the other males, are larger and present booklungs with light markings; they have, however, a very similar morphology of the copulatory bulb. The inclusion of those specimens in *A. coylei* is tentative.

Actinopus gerschiapelliarum, sp. nov.

Figures 18A–H, 19A–E, 44

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 19835): **Buenos Aires.** Campana [34°10' S 58°57' W], 26 Feb. 1980, P. Goloboff, 1 ♂. **PARATYPES:** 1 ♀, 3 immature (MACN-Ar 36587), Baradero [33°48' S 59°30' W], Dec. 1982, M. Ramírez and P. Goloboff. 15 km N Paso Obligado, 2 Apr. 1983, E. Maury and P. Goloboff, 1 ♂ (MACN-Ar 36588). San Pedro [33°40' S 59°39' W], 9 Nov. 1979, P. Goloboff, 1 ♀ (MACN-Ar 36589).

ETYMOLOGY: The specific epithet is a feminine genitive in plural, dedicated to the arachnologists Rita D. Schiapelli and Berta S. Gerschman de Pike-lin, for their contributions to arachnology, both for South America and particularly Argentina.

DIAGNOSIS: Males of *A. gerschiapelliarum* can be distinguished by having prolateral spiniform bristles on trochanter III and dorsal on femora III (fig. 18D). Copulatory bulb with ATA developed and BTA small (fig. 18E–G); Ak not extending to the apex; MRk small, similar to that of *A. insignis*, *A. patagonia*, *A. casuhati*, *A. puelche*,

and *A. magna*. Rastellum with cusps (fig. 18B), similar to that of *A. insignis*, *A. gerschiapelliarum*, *A. taragui*, *A. puelche*, and *A. palmar*. Females can be recognized by the shape and small size of their spermathecae (fig. 19C, D); basally wide, with fundus truncated, dorsally concave with external lobes projected perpendicular to the duct (these are similar to those of *A. argenteus* and *A. casuhati* from which *A. gerschiapelliarum* is distinguished by its smaller size and fewer retrolateral spines on tibia II; see fig. 19B).

DESCRIPTION: Holotype male (MACN-Ar 19835, figs. 18A–H): *Total length:* 9.48. *Carapace* (fig. 18A): length 2.70, width 2.34. *Cephalic region:* length 1.44, width 2.34; clypeus small with 1 long bristle and 6 smaller ones on both sides, 6 bristles between PME and 3 behind each PME-PLD dyad, 5 on each side of the OQ, and a larger central one. *Fovea:* length 0.36, width 0.72. *Eyes, diameters and interdistances:* AME 0.08 (small), ALE 0.20, PME 0.12, PLE 0.08, OQ length 0.48, anterior width 1.28, posterior width 1.16; AME-ALE 0.32, PME-PLD 0.04, AME-PME 0.20, ALE-PLD 0.24, AME-AME 0.16. *Chelicerae* (fig. 18B): length 1.60, width 0.60; cheliceral apex with 8 recumbent and elongated bristles that cover the base of the fang; rastellum with 5 large marginal cusps and dorsal bristles; furrow with 5 large promarginal teeth and 5 retromarginal and 5 serial denticles, near the promarginal teeth. *Labium:* length 0.52, width 0.56, labiosternal suture slightly marked. *Maxillae:* anterior length 0.72, posterior length 1.14, width 0.80. *Sternum* (fig. 18H): Center flat; length 2.00, maximum width 1.60, minimum width 0.54. Postlabial sigillum shallow, posterior sigilla well defined. *Abdomen:* length 3.78, covered by bristles, longer on dorsum. *PMS:* length 0.48 *PLS:* length of basal:medial:apical segments 0.60:0.30:0.18. *Spigots:* 1 large, 9 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 2(21):2(25):3(32). *Lengths of legs and palp:* I: 3.00, 1.20, 1.80, 2.20, 1.44, 9.64. II: 2.80, 1.20, 1.72, 2.20, 1.40, 9.32. III: 2.00, 1.12, 1.24, 2.08, 1.40, 7.84. IV: 2.80, 1.28, 2.20, 2.40, 1.60, 10.28. *Palp:* 3.40, 1.60, 3.20, –, 0.84, 9.04.

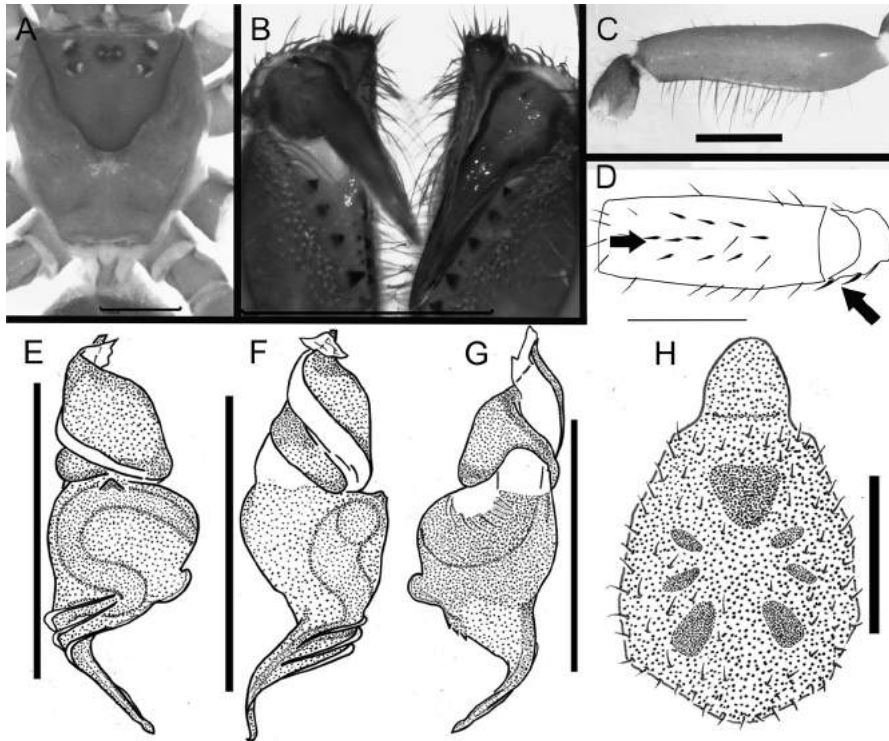


FIGURE 18. *Actinopus gerschiapelliarum*, sp. nov., male holotype (MACN-Ar 19835). A, carapace. B, chelicerae. C, pedipalp. D, femur and coxa III, dorsal, showing spiniform bristles. E-G, copulatory bulb, three different views. H, sternum. Scale bars = 1 mm.

Chaetotaxy: Trochanter: III, 1 P INF, 1 P SUP; I-IV, 0. Femora: III, 1-2-2-2-1 D; I-IV, 0. Patellae: I, 1 V POST; II, 1 V POST; III, 9 P SUP-D ANT +8 on the margin, 1 D B, 2 R A +5 on the margin; IV, 25 P SUP-D ANT with 4 near the edge. Tibiae: I, 1-1-1-2 R INF, 1-1-1-2-2-4 V; II, 1-1-2-2-2-2-4-2-1 R INF, 1-2-1-1-2-3 V; III, 1-1-1 P, 1 D B, with a crown of 14 thorns, 2-2-3 R (1:2 A), 3-2-2 V; IV, 1-2-1-4 V. Metatarsi: I, 1-1-1-2 P INF, 2-3-5-2-1-2-3-4 V; II, 1-2-1-1-2-2-2 R INF, 3-3-2-1-1-1-2-3 V; III, 1-1-1-3 D POST, 1-1-1-1 D ANT, 1-1-3-2-2-4 V; IV, 1-1-1-1-2 P INF, 2-2-2-4 V. Tarsi: I, 1-1-1-1-1-1-1 P INF, 2-1-2-2-3-3-2-3 R INF, 1-2-2-0-2-1 V; II, 2-1-2-2-1 P INF, 3-2-2-2-2-2-4-1-2-2 R INF, 1-1-1-1 V; III, 1-1-1-2-5 P INF (3:4 A), 1-2-1-4-1-2-1-1 R INF (3:4 A); IV, 2-2-3-3-5 P INF, 1 V A, 1-1-1-1-1-1-1 R INF. Total number of retrolateral spines on tibiae

I and II: 5 and 17 respectively. **Palp:** Tibiae long and slender (width/length: 0.28 ± 0.01) (fig. 18C). Bulb short, with ATA developed, BTA small, embolus with MRk small (fig. 18E-G) and a series of denticles at the base. **Pseudoscopula:** Tarsi: I-II, sparse (uniformly distributed throughout the segment); III-IV, dense and uniform. Metatarsi: without pseudoscopula. **Trichobothria:** Tibiae: I 2-4; II 3-4; III 3-3; IV 4-5. Metatarsi: I 7; II 8; III 7; IV 5. Tarsi: I 6; II 8; III 7; IV 6. **Color:** Carapace and chelicerae light reddish brown. Abdomen light brown, booklungs with dark markings. Sternum, labium, and maxillae brown yellowish. Spinnerets yellowish. Legs like carapace with tarsi-metatarsi-tibiae lighter.

Paratype female (MACN-Ar 36587, fig. 19A-E): **Total length:** 14.88. **Carapace** (fig. 19A): length 3.90, width 3.72; 16 bristles on each posterior mar-

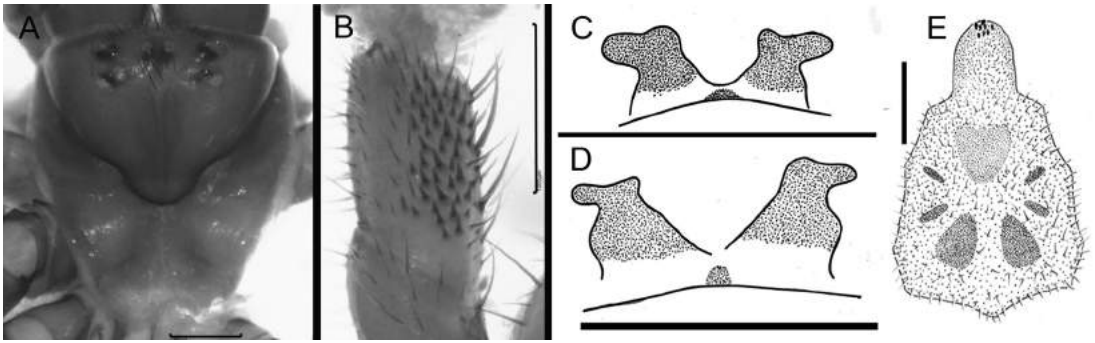


FIGURE 19. *Actinopus gerschiapelliarum*, sp. nov., female paratype (MACN-Ar 36587). A, carapace. B, tibia II, retrolateral. C-D, spermathecae: C, Baradero. D, San Pedro. E, sternum. Scale bars = 1 mm.

gin. *Cephalic region*: length 2.34, width 3.18; clypeus small with 16 small bristles, chilum with 9 bristles; 11 between PME and 6 bristles behind each PME-PLE dyad, 8 bristles on both sides of the OQ, one larger central. *Fovea*: narrow and short: length 0.52, width 1.20. *Eyes, diameters and inter-distances*: AME 0.16, ALE 0.32, PME 0.12, PLE 0.20, OQ length 0.64, anterior width 1.84, posterior width 1.68; AME-ALE 0.48, PME-PLE 0.12, AME-PME 0.24, ALE-PLE 0.32, AME-AME 0.20. *Chelicerae*: Length 1.98, width 1.38; chelicerae apex with 10 recumbent and elongated bristles covering the base of the fang. Rastellum with 8 marginal, blunt cusps, and 8 small dorsal ones. Fang groove with 5 promarginal teeth and 6 retromarginal ones (a small one between 5th-6th) and 9 denticles in the furrow, near the promargin. *Labium*: length 1.00, width 0.80, 8 anterior cuspules. *Maxillae*: anterior length 1.14, 1.50 posterior length, width 1.16, with +65/80 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 19E): Center flat; length 2.80, maximum width 2.48, minimum width 0.72. Postlabial sigillum deep, posterior sigilla shallow and well defined. *Abdomen*: Length 8.40, globose, large, covered with bristles, larger in the dorsum. PMS: length 0.52; PLS: length of basal:medial:apical segments 0.68:0.36:0.20. *Spigots*: 2 large, 14 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 2(18): 3(30):2(42). *Lengths of legs and palp*: I: 2.40, 1.56, 1.00, 1.40, 0.72, 7.08. II: 2.40, 1.56, 1.00, 1.48, 0.72, 7.16. III:

2.40, 1.72, 0.80, 1.68, 0.72, 7.32. IV: 3.00, 1.72, 1.68, 1.80, 0.68, 8.88. Palp: 2.20, 1.52, 1.60, -, 1.60, 6.92.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III, 5 P (1:2 A) +9 on the margin, 17 R (1:2 A) +12 on the margin; IV, 47 P; palp, 1-1-1 P. Tibiae: I, 1/4 R INF (1:3 A), 1-1 V POST; II, 48 R, 1-1-1 V POST; III, 1 D B, with apical crown of 20 thorns and 2 apical (at the apex, anterior to the crown), 36 R; IV, 0; palp, 7 P INF, 9 R INF, 1-1 V POST. Metatarsi: I, 14 P INF, 7 R INF, 1-1-2 V POST; II, 6 P INF, 5 R INF, 1-1-2 V POST; III, 3-1-1-1-1-1-2 D ANT, 32 on row D POST-R (more abundant R A), 8 smalls D B, 2 V A; IV, 10 P (3:4 A), 1 D A ANT, 2 V A. Tarsi: I, 8 P INF, 10 R INF, 1 V A; II, 10 P INF, 12 R INF, 1 V A; III, 17 R, 32 V-P; IV, 48 V-P; palp, 13 P INF, 13 R INF, 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 19B): 1/4 and 48 respectively. *Trichobothria*: Tibiae: I 4-5; II-III 3-6; IV 4-4. Metatarsi: I-II 9; III 8; IV 6. Tarsi: I-II 8; III-IV 6. *Color*: Carapace reddish brown, chelicerae darker. Abdomen light brown, booklungs with dark markings. Spinnerets yellowish. Sternum yellowish; labium, and maxillae darker. Legs like carapace.

DISTRIBUTION: ARGENTINA. Córdoba, north of Buenos Aires, south of Santa Fe and north of La Pampa. URUGUAY. Province of Canelones.

OTHER MATERIAL EXAMINED: ARGENTINA. **Buenos Aires**: 15 km N Puerto Obligado [33°30' S 59°55' W], 2 Apr. 1983, A. Zanetic and P. Goloboff, 2 ♀ (MACN-Ar 27107 and 28407). Vuelta de

Obligado [33°36' S 59°49' W], 21 Sep. 1980, P. Goloboff, 1 ♀ (MACN-Ar 36590). Atucha, F.C. Mitre [33°58' S 59°12' W], 1 Nov. 1981, A. Zanetic and P. Goloboff, 2 ♀ (MACN-Ar 36591). Jun. 1985, C. Szumik and P. Goloboff, 1 ♀. 27 Jul. 1984, P. Goloboff and M. Ramírez, 1 ♀ (MACN-Ar 28411). Puerto Obligado [33°36' S 59°49' W], 19 Mar. 1983, A. Zanetic and P. Goloboff, 1 ♀ (MACN-Ar 36593). Entre Otamendi y Campana, 20 Sep. 1982, P. Goloboff, 1 ♀, 3 immature (MACN-Ar 36594). San Pedro [33°40' S 59°39' W], 18 Nov. 1979, P. Goloboff 1 ♀ (MACN-Ar 36595). 9 Nov. 1979, P. Goloboff, 3 ♀ (each one in a different vial) (MACN-Ar 36596–36598 respectively). 17 Nov. 1979, P. Goloboff, 2 ♀ (in two different vials) (MACN-Ar 36599–36600 respectively). Las Palmas [34°3' S 59°8' W], 2 Nov. 1980, A. Zanetic and P. Goloboff, 1 ♀ (MACN-Ar 36601). Baradero [33°48' S 59°30' W], Feb. 1938, Dad. S. Viloga, Dol. Castillo, 1 ♂ (MACN-Ar 2041). **Santa Fe:** Fighiera (cerca de Arroyo Seco) [33°11' S 60°28' W], 15 Aug. 1981, A. Zanetic and P. Goloboff, 1 ♀ (MACN-Ar 36602). Florida [32°55' S 60°39' W], Oct. 1959, no collector, 2 ♀ (MACN-Ar 28420). **Córdoba:** Calamuchita, El Sauce [32°16' S 64°37' W], Dec. 1938, J. Viana, 1 ♂ (MACN-Ar 36603). La falda [31°5' S 64°28' W], Mar. 1951, J. Viana, 1 ♂ (MACN-Ar 36604). Interior de Hogar (no data), Jan. 2011, Mansilla, 1 ♂ (MACN-Ar 36605). Sierra de Córdoba [31°30' S 64°59' W], Jan. 1943, (no collector), 2 ♀ (MACN-Ar 36606). **La Pampa:** General Pico [35°39' S 63°45' W], 17 Apr. 1951, Williamson, 1 ♂ (MACN-Ar 36607). **Santiago del Estero:** locality and collector illegible, Mar. 1963, 1 ♂ (MACN-Ar 36608). **URUGUAY. Canelones,** Parque Roosevelt, 30 Mar. 1972, O. Trujillo-Cenoz, 1 ♂ (MNHN 275); same data, 22 Apr. 1979, J. Blengini, 1 ♂ (MNHN 1319).

COMMENTS: The specimens MACN-Ar 28420 (Florida, Santa Fe) are considered to belong to this species. One of them is in poor condition. They differ in the shape of the sternum and spermathecae, their larger size, and the sternal sigilla reaching the center of the sternum. In the absence of additional specimens, we prefer to be

conservative and consider these exemplars conspecific with *A. gerschiapelliarum*. Also, despite the distance, the specimen MACN-Ar 36608 (Santiago del Estero, no further data) is considered to belong to this species, because of the similarity in the rastellum cusps, leg color, book-lung markings, and morphology of the copulatory bulb. The specimens of Uruguay have only metatarsi-tarsi lighter, different from those of Argentinean specimens of *A. gerschiapelliarum* (with lighter tibiae-metatarsi-tarsi), but are similar in other characters.

Actinopus indiamuerta, sp. nov.

Figures 20A–D, 44

TYPE MATERIAL: HOLOTYPE ♀ (MACN-Ar 36626): *Tucumán:* Río India Muerta, Ruta 9 [26°32' S 65°15' W], Sep. 1994, P. Goloboff, 1 ♀.

ETYMOLOGY: The specific name is a noun in apposition that refers to the type locality.

DIAGNOSIS: Females of *A. indiamuerta* can be distinguished by their short spermathecae with an external lobe projected perpendicularly to the base (fig. 20D), and the wide labium, semicircular with few cuspules (fig. 20B). It also differs from all other species (except *A. gerschiapelliarum*) by the lower number of retrolateral spines on tibia II (fig. 20C).

Male: Unknown.

DESCRIPTION: Holotype female (MACN-Ar 36626, fig. 20A–D): *Total length:* 17.64. *Carapace* (fig. 20A): length 5.40, width 4.74, 25 bristles on each posterior margin. *Cephalic region:* length 2.70, width 4.38, clypeus with 35 small bristles and a large central one; chilum with 35 small bristles, 6–8 between AME-ALE, 12 bristles between PME; numerous bristles behind each PME-PLE and on each side of the OQ. *Foveae:* length 1.02, width 2.52. *Eyes, diameters and interdistances:* AME 0.16, ALE 0.36, PME 0.24, PLE 0.24, AME-ALE 0.84, PME-PLE 0.08, AME-PME 0.48, ALE-PLE 0.60, AME-AME 0.28, OQ length 1.28, anterior width 3.68, 3.56 posterior width. *Chelicerae:* Length 2.70; width 1.98; cheliceral

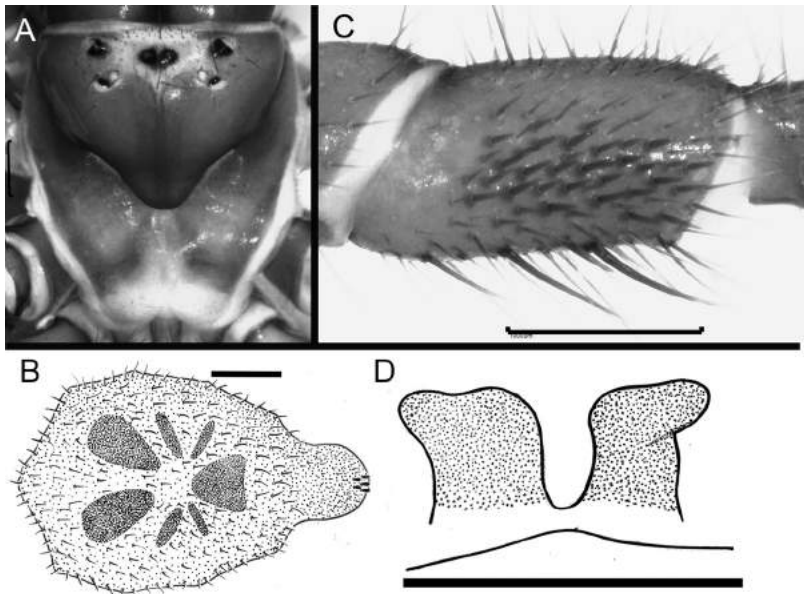


FIGURE 20. *Actinopus indiamuerta*, sp. nov., female holotype (MACN-Ar 36626). A, carapace. B, sternum. C, tibia II, retrolateral. D, spermathecae. Scale bars = 1 mm.

apex with 15 recumbent and elongated bristles that cover the base of the fang. Rastellum with 9 marginal, blunt cusps, and 12 small dorsal ones; cheliceral furrow with 6 promarginal teeth; 6 retromarginal (a small one between 5th-6th) and 9 denticles, near the promarginal teeth. *Labium*: length 0.96, width 1.14, semicircular with 5 anterior cuspules. *Maxillae*: anterior length 1.50, posterior length 1.98, width 1.38, with +120 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 20B): Center flat; length 3.84, maximum width 3.00, minimum width 1.14. Postlabial sigillum deep, posterior sigilla shallow and well defined. *Abdomen*: Length 9.12, globose, covered with small bristles. PMS: length 0.72; PLS: length of basal:medial:apical segments 0.96:0.44:0.36. *Spigots*: 3 large, 16 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 5(18):6(25):4(45). *Lengths of legs and palp*: I: 3.00, 1.92, 1.32, 1.68, 0.90, 8.82. II: 3.00, 1.92, 1.32, 1.80, 0.84, 8.88. III: 2.70, 2.22, 0.90, 1.92, 0.72, 8.46. IV: 3.60, 2.40, 2.16, 0.78, 11.10. Palp: 2.70, 1.92, 1.98, -, 2.04, 8.64.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III, 1 P A, +8 on the margin, 12 R (1:2 A) +11 on the margin; IV, 64 P SUP-D ANT, palp, 1-1 P. Tibiae: I, 1-1-2 R INF; 1-1 V POST; II, 36 R (3:4 A), 1-1-1-1 V POST; III, 1 D BAS, 26 R (3:4 A), with an apical crown of 19 thorns; IV, 0; palp, 7 P, 14 R INF. Metatarsi: I, 17 P INF, 16 R INF, 1-1-2 V POST; II, 9 P INF, 14 R INF, 1-1-2 V POST; III, 36 on row D POST-R (more abundant R Al), 19 D ANT, 1 V A; IV, 1-3-2-3 R INF, 1 D A ANT. Tarsi: I, 10 P INF, 20 R INF, 3 V A; II, 12 P INF, 26 R INF (more abundant A), 2 V A; III, 27 R, 38 V-P; IV, 44 V-P; palp, 10 P INF, 20 R INF, 3 V A. Total number of retrolateral spines on tibiae I and II (fig. 20C): 4 and 36 respectively. *Trichobothria*: Tibiae: I 5-5; II 4-6; III 3-5; IV 7-7. Metatarsi: I 11; II 10; III-IV 8. Tarsi: I 9; II-III 8; IV 7. *Color*: Carapace light reddish brown, chelicerae light with two dorsal light bands and a mottled of dark spots. Abdomen brown; booklungs with light markings. Sternum light reddish brown, labium and maxillae darker. Spinnerets yellowish. Legs like carapace.

DISTRIBUTION: Only the type locality.

OTHER MATERIAL EXAMINED: Same data and collector, 1 immature (MACN-Ar 36627).

Actinopus insignis (Holmberg, 1881)

Figures 21A–G, 22A–F, 44

Aussereria insignis. Holmberg, 1881: 171, pl. 1, fig. 2 (Dm).

Actinopus insignis. Simon, 1892: 80.

Actinopus insignis was described by Holmberg (1881), based on a male specimen from Chacabuco (Buenos Aires) under the genus *Aussereria*. Simon (1892) later placed *Aussereria* Holmberg, 1881, into the synonymy of *Actinopus* Perty, 1833. The original publication of the species, although extensive and quite detailed, does not provide characters to identify the species easily, and although figures are cited in the text, these figures were not published (possibly due to a printing error). The type material of *A. insignis* was destroyed in a flood in the basement of the house of Eduardo L. Holmberg, where his entire collection was housed (M.E. Galiano, personal commun. to P.A.G.).

TYPE MATERIAL: Holotype male from Chacabuco [34°39' S 60°28' W], Buenos Aires (destroyed). The description given below is from the male (MACN-Ar 36535), Buenos Aires. Castelar [34°40' S 58°40' W], Mar. 1966, A. Piran, 1 ♂; and the female (MACN-Ar 36536), Capital Federal [34°36' S 58°22' W], 14 Dec. 1980, A. Zanetic and P. Goloboff, 1 ♀.

EMENDED DIAGNOSIS: Females of *A. insignis* can be distinguished by the shape of their spermathecae that have an almost squared base and a slight external projection (fig. 22E, F). Males have large AME, a copulatory bulb with well developed ATA and BTA; Ak extending to the apex; MRk developed. No dorsal spiniform bristles on femur III (present in *A. gerschiapelliarum*). Females differ from *A. gerschiapelliarum* by the wider fovea and sternum; more abundant retrolateral thorns on tibia II; and presence of apical thorns to the crown of thorns on tibia III.

REDESCRIPTION: Male (MACN-Ar 36535, figs. 21A–G): *Total length*: 8.10. *Carapace* (fig. 21A): length 3.66, width 3.42. *Cephalic region*: length 2.10, width 2.28; clypeus short with one central bristle and some small ones to the sides; 19 small bristles between PME and 4–5 behind each PME-PLD dyad; 5 bristles on each side of the OQ. *Fovea*: length 0.48, width 0.96. *Eyes, diameters and interdistances*: AME 0.20, ALE 0.28, PME 0.12, PLE 0.16, OQ length 0.60, anterior width 1.88, 1.64 posterior width; AME-ALE 0.40, PME-PLD 0.00, AME-PME 0.20, ALE-PLD 0.16, AME-AME 0.20. *Chelicerae*: length 1.38, width 0.84, with shallow dorsal grooves; cheliceral apex with 9 recumbent and elongated bristles that cover the base of the fang. Rastellum with 8 marginal blunt cusps and 1–2 dorsal small attenuated ones. Cheliceral furrow with 5 large promarginal teeth and 5 retromarginal (a small one between 3d–4th and 4th–5th) and 6 denticles, near the promarginal teeth. *Labium*: length 0.76, width 0.66. *Maxillae*: anterior length 0.84, posterior length 1.38, width 0.96. *Sternum* (fig. 21E): Center flat; length 2.40, maximum width 2.20, minimum width 0.72. Postlabial sigillum shallow, posterior sigilla well defined. *Abdomen*: length 3.30, with dark bristles, largest in the dorsal part. Spinnerets: length (approximate, as they are highly compressed): PMS: length 0.36; PLS: length of basal:medial:apical segments 0.44:0.16:0.04. *Spigots*: could not be observed. *Lengths of legs and palp*: I: 4.20, 1.60, 2.48, 2.96, 1.80, 13.04. II: 4.00, 1.60, 2.40, 3.00, 1.80, 12.80. III: 2.80, 1.60, 1.76, 2.00, 1.68, 9.84. IV: 3.92, 1.76, 2.96, 3.20, 1.88, 13.72. Palp: 4.40, 2.00, 3.80, –, 0.96, 11.16.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 22 P SUP-D ANT +7 on the margin, 1-1 D (1:2 B), 3 R A +7 on the margin; IV, 25 P SUP-D ANT +4 near the edge. Tibiae: I, 1-2-2-1-4/1-1-3 V; II, 2-2-2-2-3-3 R INF, 1-2-2 V POST, 2 V A ANT; III, 1 P M, 1 D B, with a crown of 14 thorns, 1-1-1 R (1:2 A), 1 V A POST, 1-1 V ANT (1:2 A); IV, 1 V A ANT, with some bristles. Metatarsi: I, 1-1-1-1-0-2 / 1-2-1 V ANT, 1-2-1-2-1-1-1-3 / 2-1-2-2 V POST; II, 1-1 V

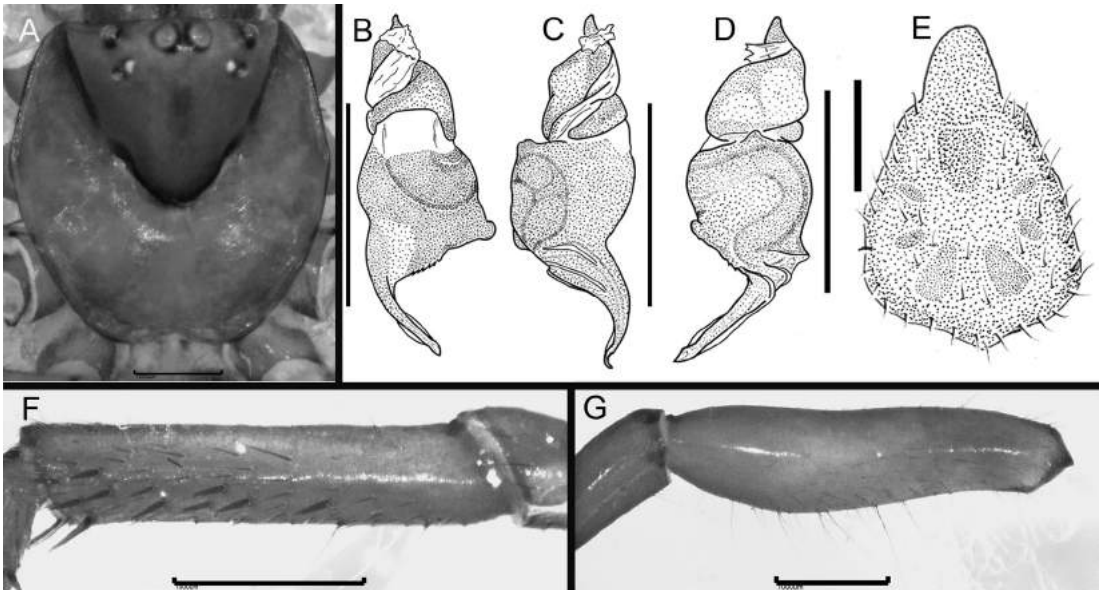


FIGURE 21. *Actinopus insignis* (Holmberg, 1881), male (MACN-Ar 36535). A, carapace. B–D, copulatory bulb, three different views. E, sternum. F, tibia II, retrolateral. G, palpal tibia. Scale bars = 1 mm.

(1:2 B), 1-2-1-1-2-1-1-4 V POST, 1-2-1-1-1 V ANT; III, 1-1-1-1 P INF, 1 D M, 1-1-2 R (1:2 A), 1-1-1-1 V POST; IV, 1 V A POST. Tarsi: I, 1-1-1-1 P INF, 1-1-3-1-2-2 R INF, 1-1 V (1:2 A); II, 1-1-1-1-1 P INF, 1-2-2-1-2-2-2 R INF, 1-1 V (1:2 A); III, 1-1-2 P A, 3 R A; IV, 2-2-1-2-1-3-1-1 P INF. Total number of retrolateral spines on tibiae I and II (fig. 21F): 0 and 10 respectively. *Palp*: Tibia long and slender (width/length: 0.27 ± 0.01) (fig. 21G). Bulb (figs. 21B–D) with ATA and BTA developed; Ak extending to the apex, with series of denticles at the base; MRk developed. *Pseudoscopula*: Tarsi: I–II, sparse (uniformly distributed throughout the segment); III–IV, dense and uniform. Metatarsi: IV, sparse 1:4 A. *Trichobothria*: Tibiae: I 5-3; II-IV 6-4. Metatarsi: I-III 6; IV 4. Tarsi: I-III 7; IV 4. *Color*: Carapace and cephalic region reddish brown, central ocular area light. Abdomen brown; booklungs with light markings. Sternum, labium, and maxillae reddish brown. Legs like carapace. Spinnerets yellowish.

Female (MACN-Ar 36536, figs. 22A–F): *Total length*: 17.52. *Carapace* (fig. 22A): length 5.16, width 5.40, with 15 bristles on each posterior

margin. *Cephalic region*: length 2.88, width 4.32; clypeus short with 40 bristles, chilum small with 20 bristles, 22 bristles between PME and 6–8 behind each PME-PLE dyad, 4–6 bristles on each side of the OQ. *Fovea*: wide; length 0.66, width 1.92. *Eyes, diameters and interdistances*: AME 0.16, ALE 0.40, PME 0.24, PLE 0.32, AME-ALE 0.84, PME-PLE 0.20, AME-PME 0.48, ALE-PLE 0.40, AME-AME 0.32, OQ length 1.00, anterior width 3.12, 2.88 posterior width. *Chelicerae*: Length 2.82, width 1.86; cheliceral apex with 12 recumbent and elongated bristles covering the base of the fang. Rastellum with 11 blunt, marginal cusps, and 5/7 small dorsal ones. Fang groove with 7 large promarginal teeth and 5 retromarginal ones (a small one between 4th and 5th) and 11 denticles in the furrow, near the promargin. *Labium*: length 1.44, width 1.20, with 10 anterior cuspules. *Maxillae*: anterior length 1.74, posterior length 2.40, width 1.60, with +100 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 22D): Center flat; length 4.00, maximum width 3.56, minimum width 1.44. Postlabial sigillum shallow, posterior sigilla well defined. *Abdomen*: length 9.36, globose, with

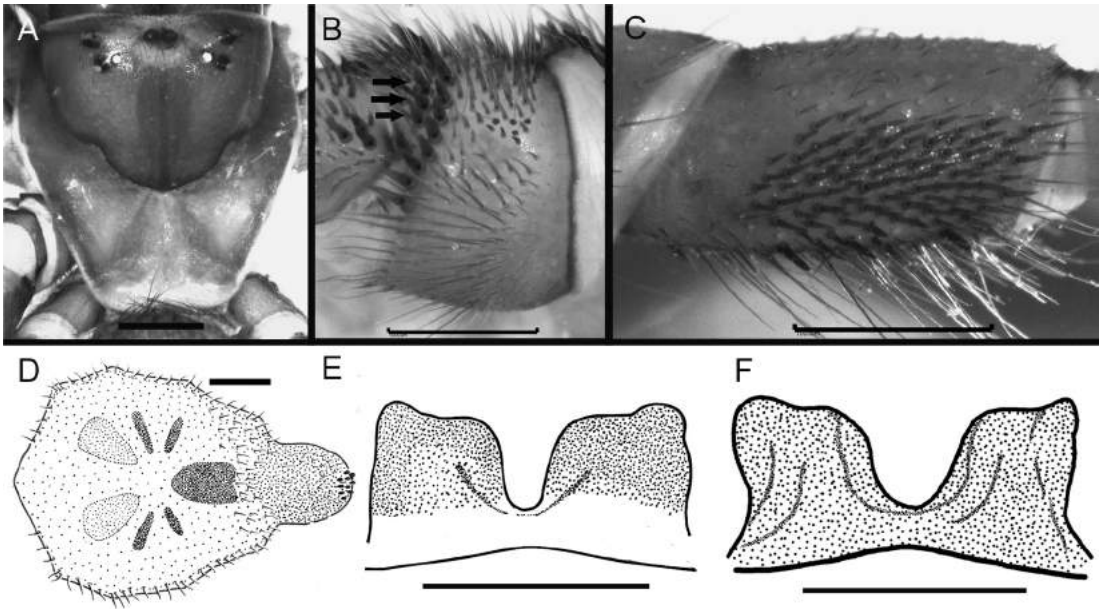


FIGURE 22. *Actinopus insignis* (Holmberg, 1881), female (MACN-Ar 36536). **A**, carapace. **B**, tibia III, apical thorns (anterior to the crown). **C**, tibia II, retrolateral. **D**, sternum. **E-F**, spermathecae: **E**, Capital Federal, Buenos Aires. **F**, Zárate, Buenos Aires. Scale bars = 1 mm.

bristles. PMS: length 0.68; PLS: length of basal:medial:apical segments 0.88:0.56:0.40. *Spigots*: 1 large, 30 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 5/7(38):8(60):3(53). *Lengths of legs and palp*: I: 2.70, 1.92, 1.32, 1.62, 0.78, 8.34. II: 2.40, 1.80, 1.32, 1.80, 0.78, 8.10. III: 2.70, 2.10, 1.20, 1.92, 0.84, 8.76. IV: 3.42, 2.10, 2.04, 2.04, 0.84, 10.44. Palp: 2.64, 1.80, 1.80, -, 1.86, 8.10.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 10 P (1:2 A) +10 on the margin, 10 R (1:2 A) +12 on the margin; IV, 64 P SUP-D ANT +5 near the edge; palp, 1-1-1 P. Tibiae: I, 15 R INF, 1-1-1 P (1:3 A); II, 1 D B, 95 R (3:4 A), 1-1 V POST; III, 1 P A, with a crown of 18 thorns and 4 apical (at the apex, anterior to the crown) (fig. 22B), 35 R; IV, 0; palp, 1-1-1-1-1 P, 1-2-2 R INF (1:2 A). Metatarsi: I, 18 P INF, 14 R INF, 1-1-2 V POST; II, 9 P INF (3:4 A), 8 R INF (3:4 B), 1-1-2 V POST; III, 6-3-2-2-1-1-2 D ANT, 36 on row D POST-R (more abundant R A), 2 V A, numerous small spines D B; IV, 12 P (3:4 A), 1 D ANT. Tarsi: I, 9 P INF, 14 R INF, 1 V A ANT; II, 12 P

INF, 9 R INF, 1 V A; III, 13 R, 48 V-P; IV, 46 V-P; palp, 19 P INF, 21 R INF, 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 22C): 15 and 95 respectively. *Trichobothria*: Tibiae: I 5-6; II-III 5-7; IV 8-7. Metatarsi: I 12; II-III 14; IV 11. Tarsi: I 12; II 14; III-IV 10. *Color*: Carapace reddish brown, darker cephalic region and chelicerae. Abdomen light brown; booklungs with light markings. Sternum yellowish, labium and maxillae darker. Legs like carapace, tarsi dark.

DISTRIBUTION: ARGENTINA. Provinces of Buenos Aires, Córdoba, and Isla Martín García. URUGUAY. Province of Maldonado.

OTHER MATERIAL EXAMINED: ARGENTINA. **Buenos Aires**. Zárate [34°6' S 59°2' W], 27 Feb. 1981, M. Ramírez and P. Goloboff, 2 ♀ (MACN-Ar 36537). Otamendi [34°14' S 58°53' W], 13 Feb. 1983, P. Goloboff, 1 ♀ (MACN-Ar 36538). Villa Malaver [34°33' S 58°32' W], 30 Nov. 1964, E. Maury, 4 ♀, 2 immature (MACN-Ar 36539); same data and collector, 1 ♀ (MACN-Ar 36540); same data and collector, 2 ♀ (MACN-Ar 36541); Alsina (Ferrocarril Mitre) [33°54' S 59°23' W],

12 Oct. 1981, Col. Goloboff, P., 1 ♀ (MACN-Ar 36542). Same data, 20 Jun. 1983, M. Ramírez and P. Goloboff, 1 ♀, 1 immature (MACN-Ar 36543). Atucha (Ferrocarril Mitre) [33°58' S 59°17' W], Aug. 1984, P. Goloboff, 1 ♀ (MACN-Ar 36544). Lima [34°2' S 59°11' W], 16 Nov. 1980, S. Grodzki, A. Zanetic, and P. Goloboff, 1 ♀ (MACN-Ar 36545). Same data, Dec. 1981, M. Ramírez and P. Goloboff, 1 immature (MACN-Ar 36546). Las Palmas (Ferrocarril Mitre) [34°4' S 59°10' W], 26 Apr. 1981, A. Zanetic and P. Goloboff, 1 ♀ (MACN-Ar 36547). Capital Federal [34°36' S 58°22' W], 14 Dec. 1980, A. Zanetic and P. Goloboff, 1 ♀ (MACN-Ar 36548). Same data, Jun. 1985, P. Goloboff, 3 ♀ (MACN-Ar 36549). Ramallo [33°29' S 60°0' W], 2 Apr. 1983, E. Maury and P. Goloboff, 1 ♂; 1 ♀, 5 immature (MACN-Ar 19831). 15 km N Puerto Obligado [33°30' S 59°56' W], 2 Mar. 1983, A. Zanetic and P. Goloboff, 1 ♀ (MACN-Ar 19841). 10 km N Puerto Obligado [33°31' S 59°53' W], 20 Mar. 1983, A. Zanetic and P. Goloboff, 1 ♂ (MACN-Ar 36550); same data and collector, 1 ♀ (MACN-Ar 36551). Adrogué [34°48' S 58°23' W], 2 May. 1971, C. Pujols, 1 ♂ (MACN-Ar 36552). Hurlingham [34°36' S 58°38' W], 29 Sep. 1955, no collector, 1 ♀ (MACN-Ar 38146). Moreno [34°39' S 58°47' W], Jan. 1965, E. Maury, 6 ♀ (MACN-Ar 38161). **Isla Martín García** [34°11' S 58°14' W]. 5 Mar. 2005, Bermeche, 1 ♂ (LZI 441). **Córdoba**. El Sauce. Calamuchita, [31°58' S 64°34' W]. Dec. 1941. M. Viana, 1 ♂ (MACN-Ar 36553). Material without collection data or collector, 1 ♀ (MACN-Ar 27094); 13 ♀ (MACN-Ar 27093). **URUGUAY. Maldonado**. Montevideo, Sayago [34°50' S 56°12' W], 15 May 1966, R. Capocasale, 1 ♀ (MNHN 453).

COMMENTS: The original description of *A. insignis* (despite being very detailed) mentions only a few characters that allow recognition. The most relevant characters are "AME almost as large as the diameter of the ALE" and "metatarsi with a light pseudoscapula at the apex." Only the males of the species here considered as *A. insignis* have those two characters. The other species found in

the same region (sympatric with *A. insignis*) is *A. gerschiapelliarum*, which does not present these characters. Other potentially relevant characters mentioned by Holmberg are "fovea ... a wide flange" (the fovea of *A. gerschiapelliarum*, is slightly narrower), and "lighter tarsi" (although the latter character is present in other species).

The most important character for distinguishing between *A. insignis* and *A. gerschiapelliarum* is the presence in *A. gerschiapelliarum* of serial spiniform bristles dorsally on femur III of males (fig. 18D), combined with differences in copulatory bulb morphology and shape of the sternum. As all the descriptions of spiders made by Eduardo L. Holmberg are very detailed and exhaustive (as noted by Schiapelli and Gerschman de Pikelin, 1958: 188; Gerschman de Pikelin and Schiapelli, 1962: 153; Gertsch and Platnick, 1979), it seems unlikely that he could have omitted this character, which is quite evident; the series of thorns on other legs and segments are explicitly mentioned in the description. This, therefore, suggests that the specimen described by Holmberg did not have the dorsal spiniform bristles on femur III of males. We have established the association between males and females in *A. insignis* and *A. gerschiapelliarum*, based on similarities in the form of the sternum and the width of the fovea. The females of *A. insignis* have a fovea (fig. 22A) and sternum (fig. 22D) wider than the specimens of *A. gerschiapelliarum*.

For mygalomorph spiders, eastern central Argentina and Uruguay share several species of various genera, e.g., *Catumiri parvum* (Keyserling, 1878); *Stenoterommata platensis* Holmberg, 1881; *Neocteniza australis* Goloboff, 1987; *Grammostola burzaquensis* Ibarra, 1946; *Plesiopelma longisternale* (Schiapelli and Gerschman, 1942); *Homoeomma uruguayense* (Mello-Leitão, 1946); *Mecicobothrium thorelli* Holmberg, 1882; *Xenomnesia platensis* Goloboff, 1989; *Eupalaestrus weijenberghi* (Thorell, 1894); among others.

The study of specimens from Uruguay (D. R.-T., in prep.) allowed observation of a large morphological variability. The first author exam-

ined the type specimen of *A. longipalpis* (kindly sent by Jason Dunlop and Anja Friederich) and this species is redescribed in this work by virtue of its presence in Argentina (Entre Ríos). Although the specimen is poorly preserved, several characters that are still observable (cheliceral prolongation without cusps; a very dark color; a rounded copulatory bulb; embolus with Bk little developed and without MRk) are different from those presented here for *A. insignis*. The original description of *A. liodon* mentions no characters that could assist in identifying the species, although the described specimen is 23 mm long, which is more than 2× larger than the male of *A. insignis* (8.1 mm). This species must be considered, for the time being, as a species inquirenda. From the above, we can conclude that *A. insignis* is different from both *A. longipalpis* and *A. liodon*.

Actinopus longipalpis Koch, 1842

Figures 23A–I, 24A–D, 44

Koch, 1842: 102, fig. 754.

TYPE MATERIAL: HOLOTYPE ♂ (ZMB 2107) from Uruguay: Montevideo [34°52' S 56°10' W]: C.L. Koch, 1842, examined.

DIAGNOSIS: Females of *A. longipalpis* differ from all other species by the shape of their spermathecae (fig. 24D); wide basally, with well-truncated fundus, concave dorsally with external lobes projected perpendicular to the duct (similar to *A. argenteus*, *A. casuhati*, and *A. gerschiapelliarum*). They differ from *A. argenteus* and *A. casuhati* by the smaller number of retrolateral spines on tibia II; and from *A. gerschiapelliarum* by the form and shape of their spermathecae. Males can be differentiated from all other species by a copulatory bulb rounded with a tapering embolus (fig. 23G–I), and a low number of retrolateral spines on tibiae II (fig. 23F). They differ from *A. pampa* and *A. argenteus* by the abdomen with a brown dorsum.

REDESCRIPTION: Male (ZMB 2107; figs. 23A–I): *Total length*: ~15.04 (abdomen shrunk). *Carapace* (fig. 23A): length 6.586, width 6.48. *Cephalic region*:

length 3.94, width 4.88; clypeus small. *Fovea*: length 0.94, width 2.06. *Eyes, diameters and interdistances*: AME 0.24 (large), ALE 0.48, PME 0.24, PLE 0.28, OQ length 1.24, anterior width 3.07, 2.83 posterior width; AME-ALE 0.67, PME-PLE 0.24, AME-PME 0.38, ALE-PLE 0.62, AME-AME 0.33. *Chelicerae*: Length 2.53, width 1.88; cheliceral apex with 12 recumbent and elongated bristles that cover the base of the fang. Cheliceral prolongation without cusps (fig. 23D); cheliceral furrow with 7 large promarginal teeth and 5 retromarginal ones (a small one between 3d–4th and 4th–5th) and 10 denticles, near the promarginal teeth. *Labium*: length 1.41, width 1.50. *Maxillae*: anterior length 2.06, posterior length 2.82, width 2.06. *Sternum*: Center with slight depression (fig. 23B): length 4.32, maximum width 3.76, minimum width 1.50. Postlabial sigillum shallow, reaching the center; posterior sigilla well defined. *Abdomen* (compressed, fig. 23C): length ~4.70. *Lengths of legs and palp*: I: 5.92, 2.82, 3.29, 4.23, 2.06, 18.32. II: 5.64, 2.63, 3.10, 4.51, 2.16, 18.04. III: 5.17, 2.91, 2.63, 5.26, 2.93, 18.90. IV: 6.39, 3.19, 4.98, 5.80, 3.00, 23.36. *Palp*: 5.82, 2.91, 4.88, –, 1.59, 15.20.

Chaetotaxy: All legs with numerous elongated bristles. Femora: I–IV, 0. Patellae: I–II: 0; III, 30 P SUP-D ANT +8 on the margin, 1-1-1 D (1:2B), 6 R A (on the margin); IV, 34 P SUP-D ANT. Tibiae: I, 0; II, 1-1-1 R INF; III, 1-2-1 R (1:2A), 1-1 P, with an apical crown of 16 thorns; IV, 1-2-3 P, 1-1-2-3-2 v. Metatarsi: I, 1-1 P INF, 1-1-1 R INF; II, 1-1-1 P INF (1:3 A), 1 R A; III, 1-1-2-2-2 P, 1-1-2 R INF, 1-1 R SUP; IV, 1-1-1-2-1-2-3 P, 3-2-2-3-2-3-1-2 V. Tarsi: I, 1-1-1-1-1-1 P INF (3:4 A), 1-1-2 R INF; II, 1-1-1-1-1-1 P INF, 1-2-2-2 R INF; III, 1-1-2-1-1-1-1 P INF, 1 R INF (1:2 A); IV, 1-3-1-4-2-2-1 P INF. Total number of retrolateral spines on tibiae I and II (fig. 23F): 0 and 3 respectively. *Palp*: tibiae long and slender (width/length: 0.29±0.01) (fig. 23E). Bulb (fig. 23G–I) with ATA developed, BTA little developed. *Pseudoscopula*: Tarsi: I–II, sparse apical; III–IV, dense and uniform. *Trichobothria*: Tibiae: I 5-4; II 4-5; III 5-6; IV 6-6. Metatarsi: I 10; II 9; III–IV 10 Tarsi: I–II–III 9; IV 10. *Color*: Carapace and chelicerae dark. Abdomen dark brown. Booklungs with dark

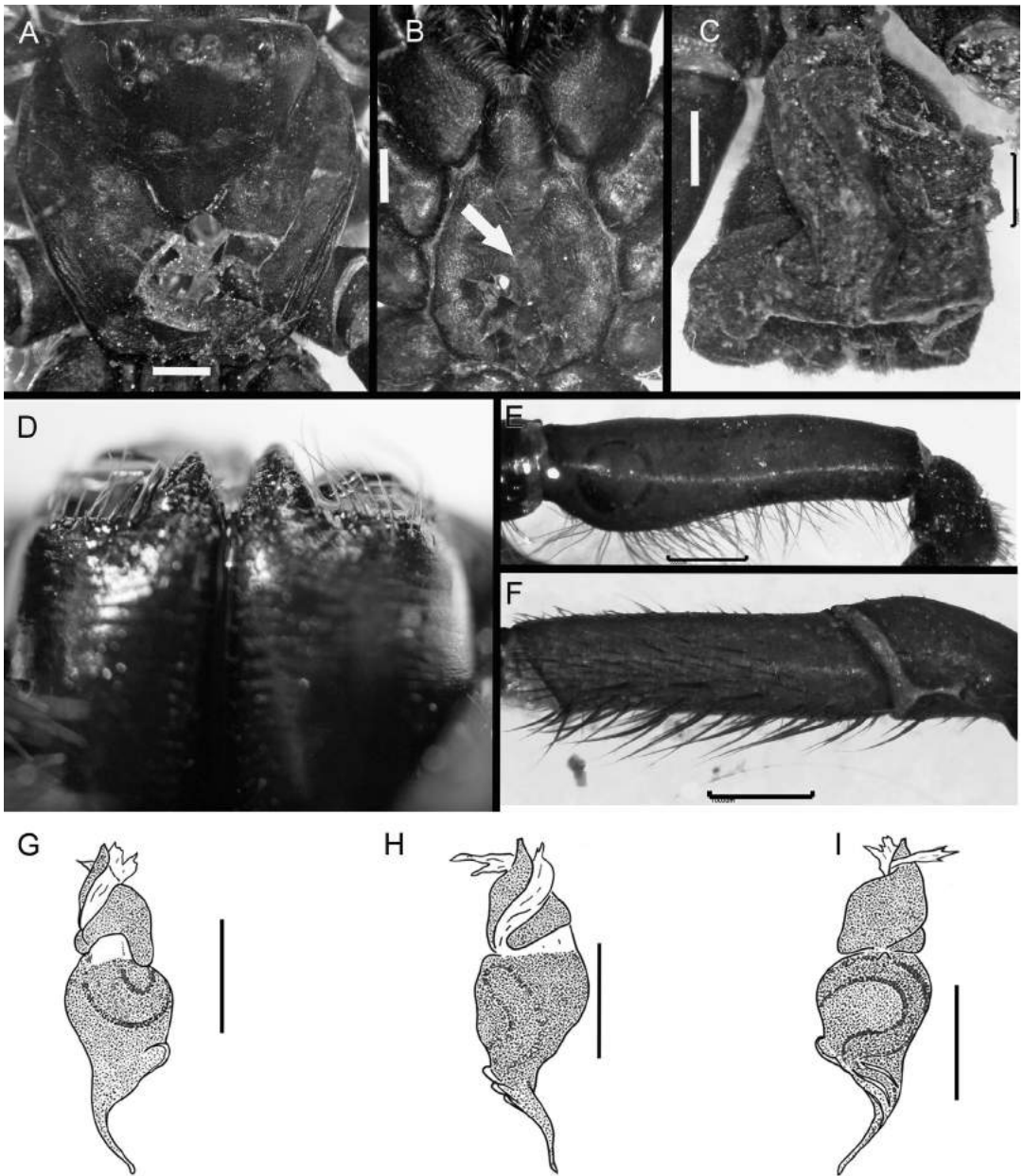


FIGURE 23. *Actinopus longipalpis* Koch, 1842., male holotype (ZMB 2107). A. carapace. B. sternum (white arrow indicate the presence of a slight depression). C. abdomen, dorsal view. D. chelicerae prolongation without cusps. E. palp. F. tibia II, retrolateral. G-I. copulatory bulb, three different views. Scale bars = 1 mm.

markings. Legs like carapace with lighter tibiae-metatarsi-tarsi; palp with lighter tibiae.

Female (MNHN 308, figs. 24A-D): *Total length*: 13.32. *Carapace* (fig. 24A): length 4.68, width 4.44;

with 15 bristles on each posterior margin. *Cephalic region*: length 2.76, width 3.96; clypeus small with 12 bristles, 6 on chilum; 2 bristles between AME-ALE, 10 bristles between PME and 4 behind each

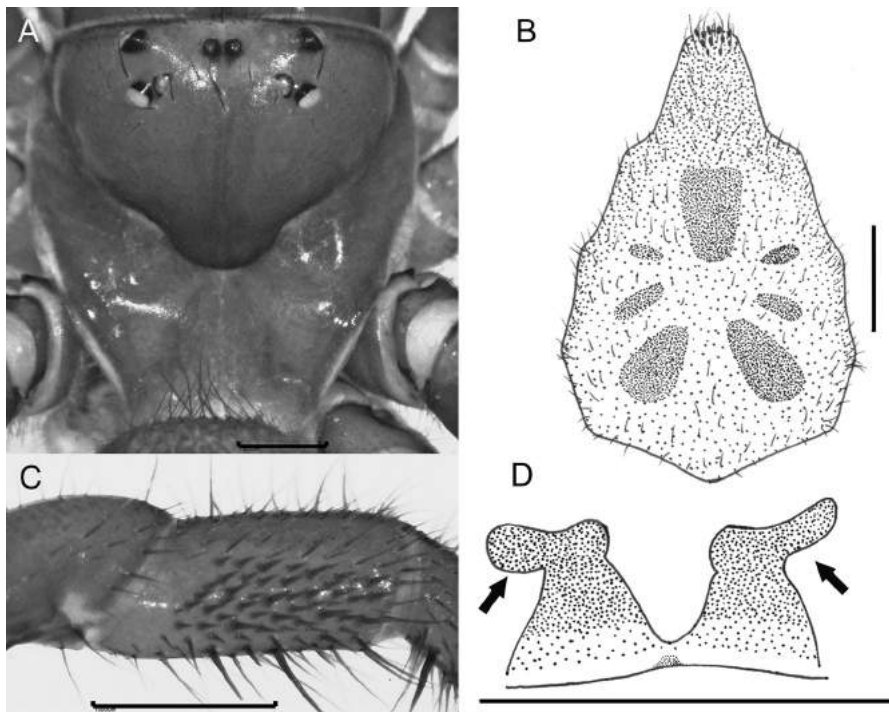


FIGURE 24. *Actinopus longipalpis* Koch, 1842, female (MNHN 308). **A**, carapace. **B**, sternum. **C**, tibia II, retrolateral. **D**, spermathecae (arrows indicate the presence of lobes projected perpendicularly to the base). Scale bars = 1 mm.

PME-PLE, 11 bristles and one larger on both sides of the ocular group. *Fovea*: length 0.72, width 2.16. *Eyes, diameters and interdistances*: AME 0.08, ALE 0.32, PME 0.20, PLE 0.28, OQ 1.00, anterior width 2.44, 2.28 posterior width; AME-ALE 0.76, PME-PLE 0.12, AME-PME 0.48, ALE-PLE 0.52, AME-AME 0.20. *Chelicerae*: Length 2.34, width 1.74, chelicerae apex with 18 recumbent and elongated bristles covering the base of the fang. Rastellum with 8 marginal, blunt cusps and 9 small dorsal small. Fang groove with 7 promarginal and 5 retro-marginal teeth (a small tooth between 3d–4th and 4th–5th) and 6 denticles in the furrow, near the promargin. *Labium*: length 0.72, width 0.90, with 9 anterior cuspules. *Maxillae*: anterior length 1.32, posterior length 1.80, width 1.20, with +70 cuspules 1:3 V ANT, expanding to the anterior face. *Sternum*: Center flat (fig. 24B), length: 4.02, maximum wide 2.70, minimum width 0.90. Postlabial sigillum deep, posterior sigilla shallow and well defined.

Abdomen: length 6.36, covered by dark bristles. Posterior median spinnerets: length 0.60; posterior lateral spinnerets with basal:medial article 0.80:0.36 (apical segment compressed). *Spigots*: 2/3 large, 20 small on PMS; PLS, numbers of large (small) spigots on basal:medial:apical article 4/2(20):3(22):(~30). *Lengths of legs and palp*: I: 2.52, 1.80, 1.20, 1.50, 0.78, 7.80. II: 2.52, 1.62, 1.20, 1.50, 0.78, 7.62. III: 2.40, 1.80, 0.90, 1.62, 0.66, 7.38. IV: 3.00, 1.80, 1.80, 1.92, 0.66, 9.18. Palp: 2.52, 1.50, 1.80, –, 1.80, 7.62.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 6 P A +7 on the margin, 11 R A +10 on the margin; IV, 42 P SUP-D ANT; palp, 0. Tibiae: I, 1-1 V POST; II, 45 R, 1-1 v post; III, 1 D B, with a apical crown of 20 thorns, 32 R; IV, 0; palp, 7 P INF (serials), 5 R INF (serials). Metatarsi: I, 13 P INF, 1-2-1-2 V POST; II, 1-2-1-3 P INF, 1-1-1-2 V POST; III, 1-1-2-1-1-1-3 D ANT-P SUP, 24 on row D POST-R (more abundant R A); IV, 1-2-3 P INF, 1 D A. Tarsi: I, 8 P INF (serial), 1-1-2-3-2 R

INF, 2 V A; II, 2-2-2-1-1-1 P INF, 1-1-5 R INF, 2 V A; III, 8 R, 27 V-P; IV, 32 V-P; palp, 13 P (serial), 11 R INF (serial), 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 24C): 0 and 45 respectively. *Trichobothria*: Tibiae: I 4-5; II 5-5; III-IV 5-6. Metatarsi: I 9; II 10; III 7; IV 6. Tarsi: I 8; II-III 7; IV 5. *Color*: Carapace yellowish brown; cephalic region and chelicerae darker. Abdomen light brown; booklungs with light markings. Sternum light yellowish, labium and maxillae darker. Spinnerets yellowish. Legs like carapace.

DISTRIBUTION: Northern and southern Uruguay and northern Argentina (Entre Ríos province).

OTHER MATERIAL EXAMINED: **URUGUAY**. *Artigas*. Arroyo Tres Cruces [30°16' S 57°11' W], leg. Robayna D., 1 ♂, 15 Feb. 1965, (MNHN 621); Arroyo Tamandú [30°28' S 56°33' W], leg. de Zolessi L.C and Gonzalez-Olazar, 1 ♀, 20 May. 1872, (MNHN 308). **ARGENTINA**: *Entre Ríos*: Rosario del Tala [32°18' S 59°8' W], leg. Buero, 1 ♂, no date, (MACN-Ar. 27099); San José, [32° 12' S 58° 13' W], A. Oliva, 1 ♂, Jan. 1989, (MACN-Ar 27096).

COMMENTS: None of the specimens from the vicinity of Montevideo examined by the senior author belong to *A. longipalpis*. Although the type locality of *A. longipalpis* is "Montevideo," it seems likely that Montevideo was simply the shipping port for the specimen.

Actinopus magnus, sp. nov.

Figures 25A–G, 45

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36622): *Córdoba*: Villa General Belgrano [31°58' S 64°33' W], 12 Mar. 2010, G. Villafarrie, 1 ♂.

ETYMOLOGY: The specific name, *magnus*, a Latin adjective, refers to the size of the species, with the largest male of all Argentine species.

DIAGNOSIS: Males of *A. magnus* can be distinguished by their large size. The copulatory bulb (fig. 25D–F) with Ak extending to the apex and MRk developed, different from all other species (except *A. puelche*, *A. patagonia*, and *A. ramirezii*;

from which *A. magnus* differs by the the low number of retrolateral spines in tibiae II; fig. 25B). Cheliceral prolongation without cusps, different from *A. insignis*, *A. gerschiapelliarum*, *A. taragui*, *A. puelche*, and *A. palmar*.

Female: Unknown.

DESCRIPTION: Holotype male (MACN-Ar 36622, fig. 25A–G): *Total length*: 15.60. *Carapace* (fig. 25A): length 6.00, width 5.88. *Cephalic region*: length 3.48, width 4.32; clypeus small with a central bristle and 12 on both sides, 26 bristles between PME and 10–12 behind each PME-PLE, 10–12 small bristles on each side of the OQ, a larger central bristle. *Fovea*: length 0.78, width 1.80. *Eyes, diameters and interdistances*: AME 0.40 (large), ALE 0.48, PME 0.48, PLE 0.32; OQ length 1.20, anterior width 3.24, 3.00 posterior width; AME-ALE 0.84, PME-PLE 0.12, AME-PME 0.48, ALE-PLE 0.64, AME-AME 0.24. *Chelicerae*: Length 2.52, width 1.62; cheliceral apex with 11 recumbent and elongated bristles that cover the base of the fang. Cheliceral prolongation without cusps; furrow with 6 large promarginal teeth and 5 retro-marginal (a small one between 3d-4th) and 19 denticles, near the promarginal teeth. *Labium*: length 1.44, width 1.14. *Maxillae*: anterior length 1.50, posterior length 2.40, width 1.62. *Sternum* (fig. 25G): With slight central depression; length 3.90, maximum width 3.42, minimum width 1.32. Postlabial sigillum shallow, posterior sigilla well defined and shallow. *Abdomen*: Length 6.48, large, covered by dark bristles. PMS: length 0.68; PLS: length of basal:medial:apical segments 0.76:0.36:0.20. Spigots: 3 large, 18 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 4(24):4(35):(65). *Lengths of legs and palp*: I: 6.00, 2.58, 3.30, 4.20, 2.22, 18.30. II: 5.82, 2.58, 3.30, 4.38, 2.34, 18.42. III: 4.74, 2.70, 2.34, 4.80, 2.70, 17.28. IV: 6.30, 2.88, 4.62, 5.22, 2.82, 21.84. Palp: 5.70, 2.70, 5.10, –, 1.68, 15.18.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III, 29 P SUP-D ANT +8 on the margin, 1-1-1 D, 5 R A +6 on the margin; IV, 58 P SUP-D ANT. Tibiae: I, 1-2-1-2 V; II, 1-1-1-2 R (1:2 A), 4 V A; III, 1-1 P (1:2 A), 1 D B, 1-1 R (1:2 A), 1-2 V (1:4 A), with na apical crown of 17 thorns; IV, 1-1-2 V ANT

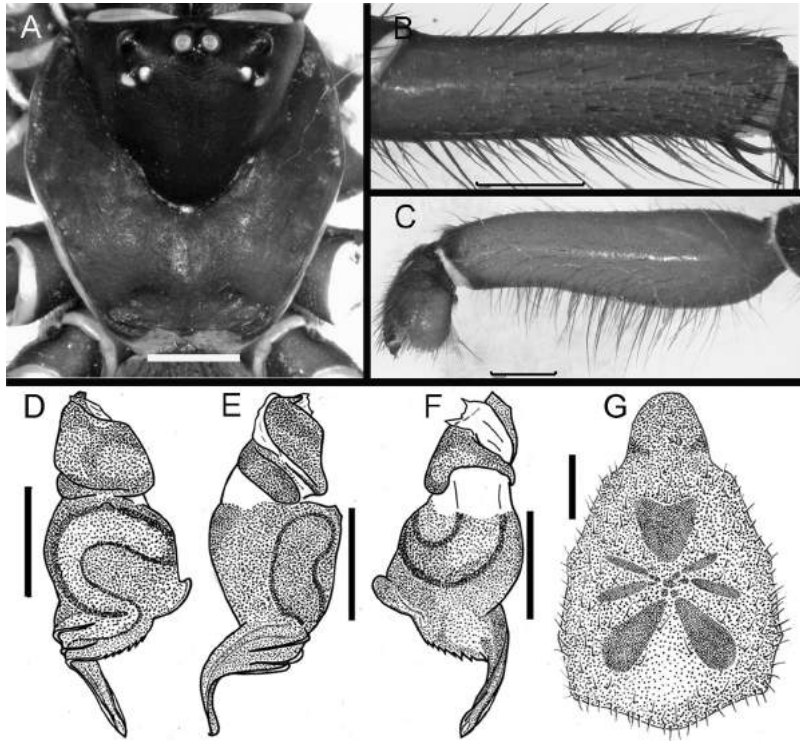


FIGURE 25. *Actinopus magnus*, sp. nov., male holotype (MACN-Ar 36622). A, carapace. B, tibia II, retrolateral. C, pedipalp. D-F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

(longer), 1-1-1 V POST. Metatarsi: I, 2-2-1-2 R INF-V POST, 1-1-1-1 V, 1-1-1 V ANT; II, 2-2-1-2-2 R INF-V POST, 1-1 V (1:2 B), 1-1-2 V ANT; III, 1-1-1-2 P INF, 1-1-1-1-1 D ANT, 1-1-2-1-1-3 D POST-R, 1-1 V, 1-1-2 V POST; IV, 1-1-2-3 P, 1-1-1 V POST (longer), 1-1-1 V, 1-1-2 V ANT (2:3 A). Tarsi: I, 1-1-1-2 P INF, 1-1-3-3-6 R INF, 1-1 V A; II, 1-1-1-1-1-2 P INF, 1-1-2-4-6-2-4 R INF, 1-2-1 V (1:2 A); III, 1-1-2-2-1 P INF, 2-2-1-2-1 R INF (2:3 A), 2 V A; IV, 2-4-2-4-5 P INF, 1 V A. Total number of retrolateral spines on tibiae I and II: 1 and 5 respectively. Anterior angle of coxae I projected. *Palp*: Tibia long and slender (width/length: 0.31 ± 0.01) (fig. 25C). Bulb (fig. 25D-F) robust, ATA and BTA developed; embolus short, with a series of denticles at the base; Ak extended to the apex and MRk well developed. *Pseudoscopula*: Tarsi: sparse, I (1:2 A); II (throughout the segment); III-IV, dense (uniformly distrib-

uted throughout the segment). Metatarsi: without pseudoscopula. *Trichobothria*: Tibiae: I-II 5-7; III 5-8; IV 5-7. Metatarsi: I 13; II 16; III 12; IV 9. Tarsi: I 10; II-III 11; IV 8. *Color*: Carapace dark reddish brown, cephalic region and chelicerae darker. Abdomen dark brown, booklungs with light markings. Spinnerets yellowish. Sternum, labium, and maxillae lighter reddish brown. Legs like carapace, palp tibiae light.

DISTRIBUTION: Known only from the type locality.

ADDITIONAL MATERIAL EXAMINED: None.

Actinopus palmar, sp. nov.

Figures 26A-G, 45

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 19826): *Entre Ríos*: Parque Nacional "El Palmar"

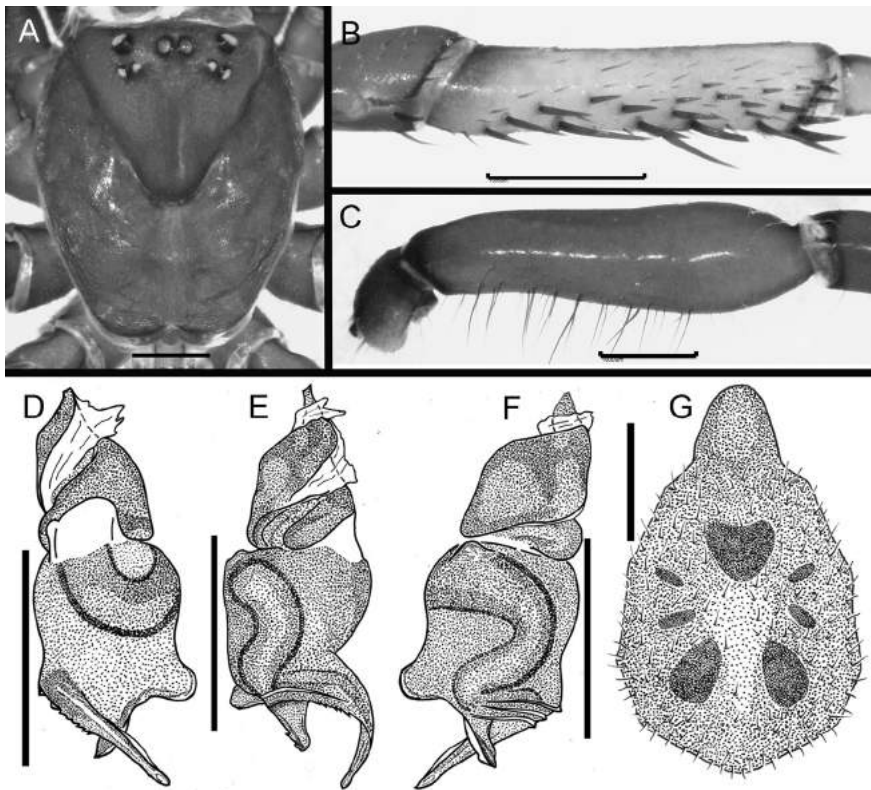


FIGURE 26. *Actinopus palmar*, sp. nov., male holotype (MACN-Ar 19826). A, carapace. B, tibia II, retrolateral. C, pedipalp. D-F, copulatory bulb showing the PA, three different views. G, sternum. Scale bars = 1 mm.

[31°51' S 58°19' W], 12–16 Feb. 1980, P. Grosso and P. Goloboff, 1♂.

ETYMOLOGY: The specific name is a noun in apposition that refers to the type locality.

DIAGNOSIS: Males of *Actinopus palmar* can be distinguished from those of all other Argentinian species by their copulatory bulb with a well-developed paraembolic apophysis (fig. 26D–F).

Female: Unknown

DESCRIPTION: Holotype male (MACN-Ar 19826, fig. 26A–G): *Total length:* 8.40. *Carapace* (fig. 26A): length 4.20, width 3.72. *Cephalic region:* length 2.40, width 2.76; clypeus short with a large central bristle and numerous to the sides; 9 bristles between PME and 3–4 behind each PME-PLE dyad; 6 bristles to the sides of the OQ, a central larger. *Fovea:* length 1.28, width 0.68. *Eyes, diameters and interdistances:* AME 0.16,

ALE 0.24, PME 0.16, PLE 0.16, OQ length 0.60, anterior width 1.72, posterior width 1.52; AME-ALE 0.40, PME-PLE 0.08, AME-PME 0.20, ALE-PLE 0.28, AME-AME 0.16. *Chelicerae:* Length 2.40, width 1.00; cheliceral apex with 10 recumbent and elongated bristles which cover the base of the fang. Rastellum with 8 marginal, blunt cusps, and 2–3 small dorsal ones; fang groove with 3/4 large promarginal teeth and 5 retromarginal and 8 denticles, near the promarginal teeth. *Labium:* length 0.64, width 0.80. *Maxillae:* superior length 1.00, inferior length 1.68, width 1.08. *Sternum* (fig. 26G): Center flat; length 2.88, maximum width 2.16, minimum width 0.80. Postlabial sigillum shallow, posterior sigilla poorly defined. *Abdomen:* Length 4.44, median with dark bristles, larger on dorsum. PMS: length 1.08; PLS: length of basal:medial:apical segments

1.56:1.08:0.48. *Spigots*: 1 large, 18 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 2(23):4(33):2(39). *Lengths of legs and palp*: I: 2.52, 1.04, 1.44, 1.88, 1.08, 7.96. II: 2.40, 1.00, 1.44, 1.88, 1.08, 7.80. III: 1.80, 1.00, 1.00, 1.76, 1.12, 6.68. IV: 2.40, 1.04, 1.80, 1.92, 1.16, 8.32. *Palp*: 2.88, 1.16, 2.64, –, 0.64, 7.32.

Chaetotaxy: Femora: I-II-IV, 0; III, 1-2-2-1-2-2-2 d. Patellae: I, 0; II, 1 V POST; III, 12 P SUP-D ANT, +9 on the margin, 2 R A +7 on the margin; IV, 38 P SUP-D ANT +3 near the edge. Tibiae: I, 1-1-1-1-1-1-1-1-1 R INF, 1-1-2-1-2-4 V; II, 1-1-1-2-2-2-1-2-3 R INF, 1-2-1-2-1-1-4 V; III, 1 D B, 2-1-1-3 V, with an apical crown of 14 thorns; IV, 2-2-2-4 V. Metatarsi: I, 1-2-1-2-1-2-1-2-3-1-2 R INF, 1-1-1-1-1-2-2-2 V; II, 1-1-2-2-2-1-1-3-2 R INF, 2-2-2-1-1-3 V; III, 1-1-1-1-1 D ANT, 1-1-1-4 on row D POST—R, 1-1-2-3 V; IV, 1-1-2-2-2 P, 2 V A. Tarsi: I, 1-1-1-1 P INF, 1-2-1-2-2-3-2-1-2-6 R INF, 1-1-2-1-1 V; II, 1-1-1-2-1-2 P INF, 1-2-3-2-3-4-3-4-5 R INF, 1-1-2-1-2 V; III, 1-1-2-1-4 P INF, 1-2-2 R INF; IV, 2-2-3-3-2-2 P INF, 1-1-1-1-1 R INF. Total number of retrolateral spines on tibiae I and II (fig. 26B): 9 and 15 respectively. *Palp*: tibia long and slender (width/length: 0.29±0.01) (fig. 26C); copulatory bulb (fig. 26D-F) with ATA and BTA well developed, embolus with small MRk and a series of denticles at the base, with well-developed PA. *Pseudoscopula*: Tarsi: I-II sparse (3:4 A); III-IV, dense and uniform; Metatarsi: without pseudoscopula. *Trichobothria*: Tibiae: I 4-4; II 4-5; III 4-7; IV 5-6. Metatarsi: I-II 7; III 5; IV 6. Tarsi: I 9; II-IV 6. *Color*: Carapace reddish brown, abdomen dark brown, booklungs with dark markings. Spinnerets yellowish. Legs like carapace with tarsi-metatarsi-tibiae lighter; palp tibia light.

DISTRIBUTION: Only from the type locality.

ADDITIONAL MATERIAL EXAMINED: None.

Actinopus pampa, sp. nov.

Figures 27A–J, 28A–E, 45

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar. 28419): **La Pampa**: Santa Rosa [36°37' S 64°17'

W], Apr.-May. 1967, Aravena, 1♂. **PARATYPE**: 1♀ (MACN-Ar 36623), Parque Nacional “Lihuél Calel” [37°59' S 65°35' W], Jan. 1983, P. Goloboff.

ETYMOLOGY: The specific name is a noun in apposition that refers to the type locality of the species.

DIAGNOSIS: Females of *A. pampa* can be recognized by their simple and very small spermathecae (fig. 28E), wide, subquadrate, with a very small apical lobe, similar to that of *A. ramirezi* from which it differs by its more rounded fovea (fig. 28A). Males can be distinguished by having a copulatory bulb with a rounded shape and stylized embolus (similar to that of *A. argenteus* and *A. longipalpis*) with a ventral depression in the tegulum (fig. 27B). Differs from all other species (except from *A. argenteus*) in the silvery color on the abdomen dorsum; differs from *A. argenteus* in having fewer retrolateral spines on tibia II.

DESCRIPTION: Holotype male (MACN-Ar. 28419, fig. 27A–J): *Total length*: 17.76. *Carapace* (fig. 27A): length 6.60, width 6.24. *Cephalic region*: Length 3.48, 4.68 width; clypeus short with one large bristle and 15 small ones on both sides; 6 bristles between AME-ALE, 9 small ones between PME and 3–4 behind each PME-PLE. 2–3 small bristles on each side of the OQ, the central larger. *Fovea*: length 0.96, width 2.64. *Eyes, diameters and interdistances*: AME 0.40 (large), ALE 0.48, PME 0.28, PLE 0.40, OQ length 1.28, anterior width 3.40, posterior width 3.20; AME-ALE 0.76, PME-PLE 0.16, AME-PME 0.48, ALE-PLE 0.60, AME-AME 0.20. *Chelicerae*: Length 3.24, width 1.86; cheliceral apex with 15 recumbent and elongated bristles that cover the base of the fang. Cheliceral prolongation without cusps; furrow with 6 large promarginal teeth and 6 retromarginal (a small denticle between 5th–6th) and 15 denticles, near the promarginal teeth. *Labium*: 1.26 length, 1.20 width. *Maxillae*: width 1.92, anterior length 2.10, posterior length 2.40. *Sternum* (fig. 27J): Center flat; length 4.62, maximum width 3.60, minimum width 1.38. Postlabial sigillum shallow, posterior sigilla well defined and shallow, separated from

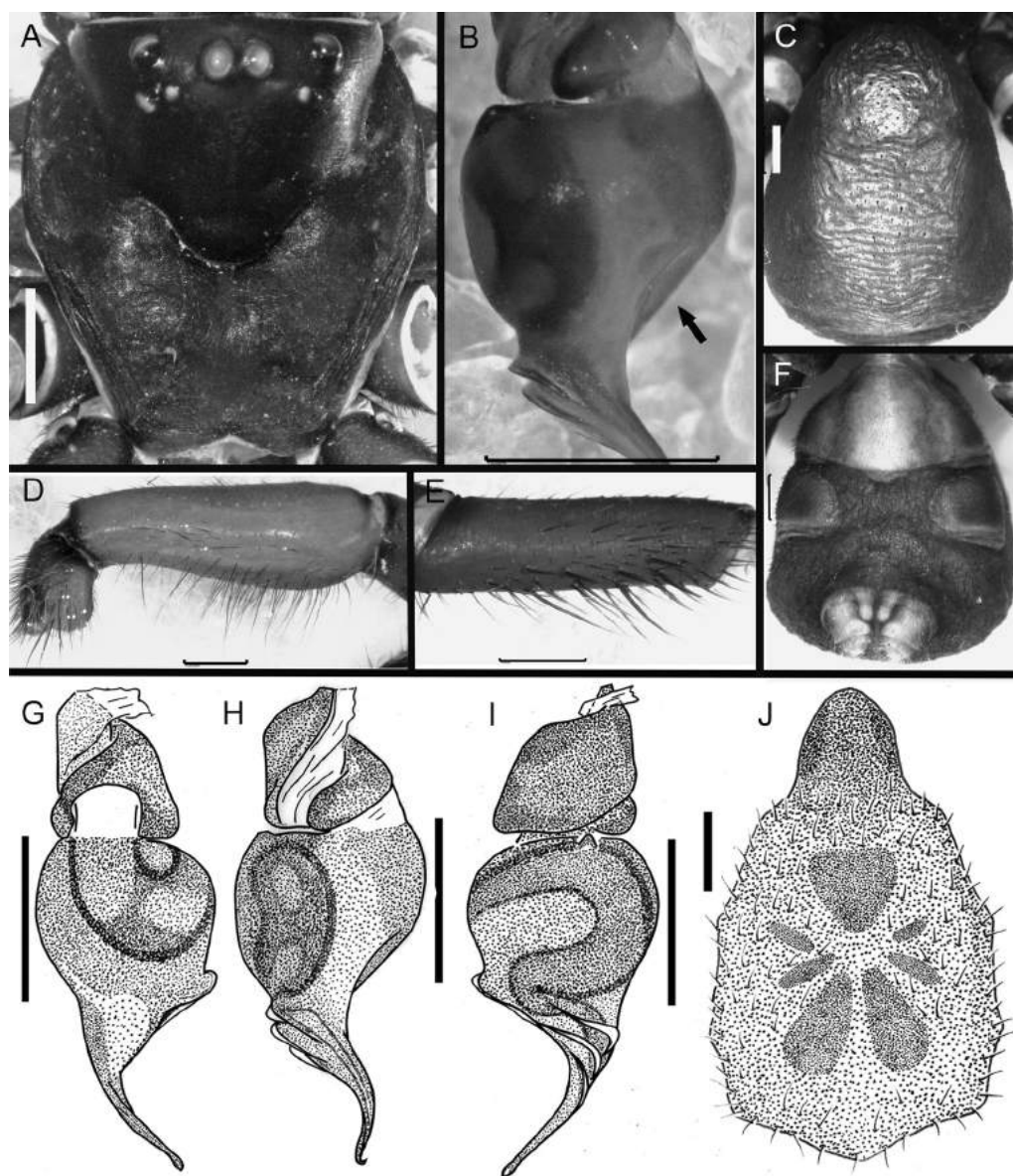


FIGURE 27. *Actinopus pampa*, sp. nov., male holotype (MACN-Ar 28419). A, carapace. B, copulatory bulb, depression at embolus base. C, abdomen, dorsal, showing silver color. D, pedipalp. E, tibia II, retrolateral. F, Abdomen, ventral. G–I, copulatory bulb, three different views. J, sternum. Scale bars = 1 mm.

margin. *Abdomen* (fig. 27C, F): length 7.20, covered by small bristles, thicker on dorsum. PMS: length 0.56; PLS: length of basal:medial:apical segments 0.72:0.28:0.20. *Spigots*: 1 large, 25 small on PMS; PLS, numbers of large (small) spigots on

basal:medial:apical article 2(30): (the other articles deformed, could not be observed). *Lengths of legs and palp*: I: 5.76, 2.70, 3.24, 4.14, 2.10, 17.94. II: 5.70, 2.70, 3.24, 4.32, 2.10, 18.06. III: 4.80, 2.88, 2.70, 4.80, 2.52, 17.70. IV: 6.00, 3.00,

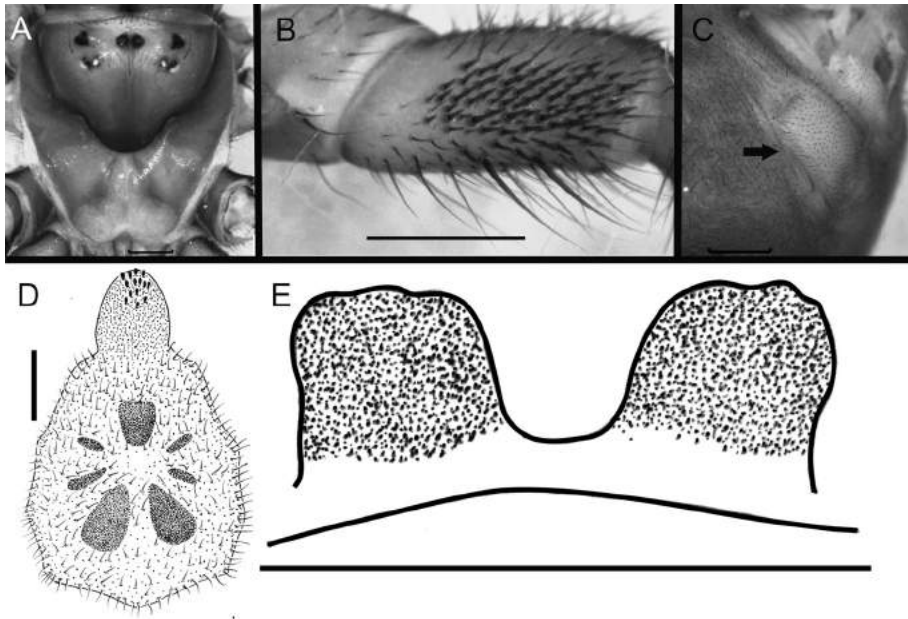


FIGURE 28. *Actinopus pampa*, sp. nov., female paratype (MACN-Ar 36623). A, carapace. B, tibia II, retrolateral. C, booklungs with light markings. D, sternum. E, spermathecae. Scale bars = 1 mm.

4.86, 5.40, 2.76, 22.02. Palp: 5.34, 2.64, 4.50, –, 1.50, 13.98.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 40 P SUP-D ANT +10 on the margin, 1-2-1-2-1-1 D, 7 R on the margin; IV, 50 P SUP-D ANT. Tibiae: I, 0; II, 1-1-1-2 R INF, 1-1 V POST; III, 1 P, with an apical crown with 18 thorns; IV, 2-1 P INF (1:2 A). Metatarsi: I, 2-1-2-3 V; II, 1-1-1-1 R INF, 1-2 V ANT (1:4 A), 1-1-1 v post; III, 1-1-2-1-2 P INF, 1 R A, 1 V A POST; IV, 2-1-2-2-3-2 V. Tarsi: I, 1-1-1-1-1 P INF, 2-2-1-3 R INF; II, 1-1-1-1-1-1 P INF, 1-5-3-5 R INF; III, 1-2-2-2-1-4 P INF, 1-1 R INF; IV, 1-3-3-4-3-4 P INF, 1-1-2-1-2-1 R INF. Total number of retrolateral spines on tibiae I and II (fig. 27E): 0 and 5 respectively. **Palp:** Tibia short and thickened (width/length: 0.36 ± 0.01) (fig. 27D). Bulb (fig. 27G–I) with a rounded tegulum, BTA and ATA poorly developed. **Pseudoscopula:** Tarsi: I-II sparse (uniformly distributed); III-IV, dense and uniform. Metatarsi: IV sparse and apical. **Trichobothria:** Tibiae: I-III 6-10; IV 10-12. Metatarsi: I 17; II 17; III 14; IV 10. Tarsi: I-II 10; III 12; IV 8. **Color:** Carapace, cephalic region and

chelicerae dark, almost black reddish brown. Legs like carapace with lighter tibiae-metatarsi-tarsi, palp with lighter tibia. Sternum reddish, labium and maxillae darker. Abdomen dark brown, dorsum silver. Booklungs with dark markings. Spinnerets yellowish.

Paratype female (MACN-Ar 36623, fig. 28A–E): **Total length:** 15.60. **Carapace** (fig. 28A): length 5.10, width 4.62, with 16 bristles on each posterior margin. **Cephalic region:** length 3.06, width 3.90; clypeus with 35 bristles, central larger, chilum short with 16 bristles; 28 bristles between PME, 5–7 behind each PME-PLE dyad; 10–12 bristles on each side of the OQ, central larger. **Fovea:** length 0.90, width 2.10. **Eyes, diameters and interdistances:** AME 0.14, ALE 0.32, PME 0.16, PLE 0.28, AME-ALE 0.80, PME-PLE 0.08, AME-PME 0.48, ALE-PLE 0.52, AME-AME 0.24, ocular region length 0.96, anterior width 2.68, posterior width 2.40. **Chelicerae:** Length 2.34, width 2.34; chelicerae apex with 11 recumbent and elongated bristles covering the base of the fang. Rastellum with 11 marginal, blunt cusps, and 6 small dorsal ones. Fang

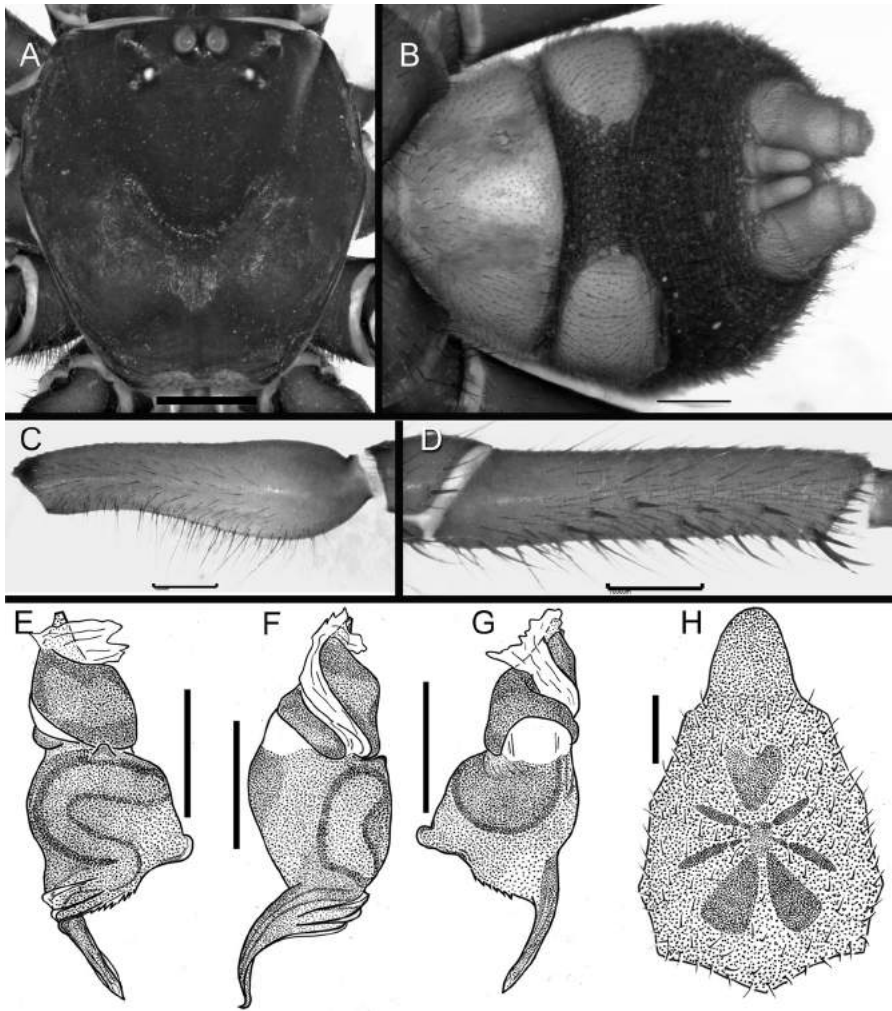


FIGURE 29. *Actinopus patagonia*, sp. nov., male holotype (MACN-Ar 27097). A, carapace. B, abdomen, ventral view. C, pedipalp. D, tibia II, retrolateral. E-G, copulatory bulb, three different views. H, sternum. Scale bars = 1 mm.

groove with 6 promarginal teeth and 5 retro-marginal ones and 12 denticles in the furrow, near the promargin. *Labium*: length 1.02, width 1.02, with 14 anterior cuspules. *Maxillae*: width 1.32, anterior length 1.56, posterior length 2.04, with +80 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 28D): Center flat; length 3.48, maximum width 3.00, minimum width 1.02. Postlabial sigillum shallow, posterior sigilla shallow and well defined, separated from margin. *Abdomen*: Globose, covered by

dark fine bristles. PMS: length 0.40; PLS: length of basal:medial:apical segments 0.60:0.28:0.20. *Spigots*: 2 large, 25 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 4(30):8(40):2(50). *Lengths of legs and palp*: I: 2.94, 1.98, 1.26, 1.62, 0.78, 8.58. II: 3.00, 1.98, 1.32, 1.74, 0.78, 8.82. III: 3.00, 2.10, 0.66, 1.98, 0.78, 8.52. IV: 3.78, 2.16, 2.16, 2.88, 0.78, 11.76. Palp: 2.70, 1.80, 1.80, -, 1.92, 8.22.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III, 10 P SUP-D ANT (1:2 A) +12 on the margin, 19 R (1:2

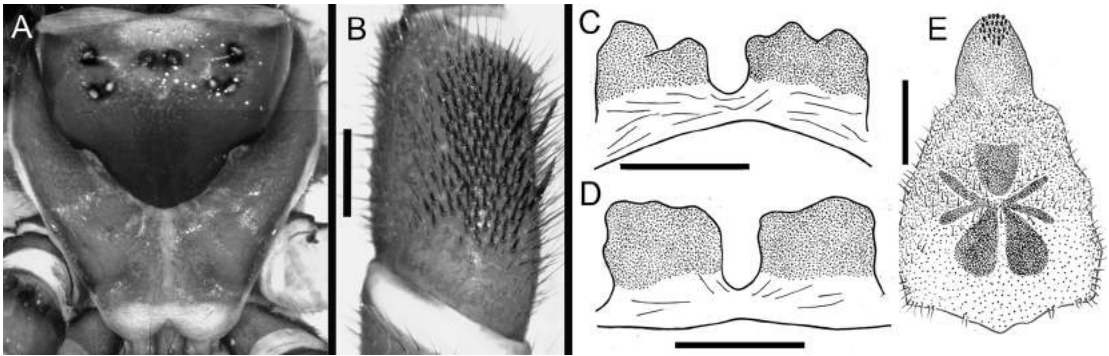


FIGURE 30. *Actinopus patagonia*, sp. nov., female paratype (MACN-Ar 27100). **A**, carapace. **B**, tibia II, retro-lateral. **C–D**, spermathecae. **C**, Isla de los Guanacos, Chubut. **D**, Punta San Blas, Buenos Aires. **E**, sternum. Scale bars = 1 mm.

A) +10 on the margin; IV, 56 P SUP-D ANT +5 near the edge; palp, 1-1-1 P, 1 V POST. Tibiae: I, 1-1-1 P A, 15 R INF, 1-1 V POST; II, 78 R INF, 1-1 v post; III, 3 P A, 1 D B, with an apical crown of 22 thorns and 3 apical (at the apex, anterior to the crown) 42 R; IV, 0; palp, 9 P INF, 20 R INF. Metatarsi: I, 16 P INF, 16 R INF, 1-1-2 V POST; II, 12 P INF, 10 R INF, 1-1-2 V POST; III, 2-1-2-3-2-1-1-2 D ANT, 33 on row D POST-R (more abundant R A), 3 V A; IV, 9 P (1:2 A), 1 D A ANT, 1 V A ANT. Tarsi: I, 9 P INF, 14 R INF, 2 V A; II, 13 P INF, 15 R INF, 2 V A; III, 23 R, 55 V-P; IV, 35 V-P. Total number of retrolateral spines on tibiae I and II (fig. 28B): 15 and 78 respectively. *Trichobothria*: Tibiae: I-II 4-7; III 5-9; IV 7-5. Metatarsi: I 12; II 14; III 11; IV 7. Tarsi: I 8; II 9; III 8; IV 4. *Color*: Carapace light reddish brown; clypeus with a light spot. Sternum reddish brown. Spinnerets yellowish. Abdomen light brown, booklungs with light markings. Legs like carapace.

DISTRIBUTION: Province of La Pampa.

ADDITIONAL MATERIAL EXAMINED: None.

***Actinopus patagonia*, sp. nov.**

Figures 29A–H, 30A–E, 45

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 27097): **Buenos Aires**. Salina Las Barrancas [38°48' S 62°57' W], Apr. 1960, no collector, 1 ♂. **PARATYPES**: *Chubut*. 1 ♀ (MACN-Ar 27100), Isla de los Guanacos, Caleta Valdés (Península de

Valdés) [42°28' S 63°37' W], 27 Dec. 1981, P. Domínguez and P. Goloboff; same data and collector, 4 ♀ (MACN-Ar 27091). **La Pampa**. Las Gaviotas, Caleu Caleu [38°43' S 63°46' W], 26 Apr. 2007, Tizón, 1 ♂ (LZI 0128).

ETYMOLOGY: The specific epithet is a noun in apposition concerning the region where the species occurs.

DIAGNOSIS: *A. patagonia* can be recognized by their large size. Females can be distinguished by having large spermathecae (fig. 30C, D), wide and subquadrate, with irregular apical lobes. They differ from *A. szumikae*, *A. argenteus*, *A. casuhati*, and *A. cordobensis* by the lighter color of their booklung markings. Males can be distinguished from those of all other species (except *A. ramirezi* and *A. magnus*) by having a copulatory bulb with well-developed ATA and BTA (fig. 29E–G) and denticles at the base of the Ak; MRk present and Ak extended to the apex (different from *A. coylei*, *A. argenteus*, and *A. pampa*, *A. longipalpis*, *A. cordobensis*, *A. szumikae*). Cheliceral prolongation without cusps (unlike *A. insignis*, *A. gerschiapellarum*, *A. taragui*, *A. puelche*, and *A. palmar*).

DESCRIPTION: Holotype male (MACN-Ar 27097, figs. 29A–H): *Total length*: 15.48. *Carapace* (fig. 29A): length 5.64, width 5.70. *Cephalic region*: length 3.18, width 4.44, with two posterior dark triangular markings, posteriorly reaching the fovea; clypeus with 16 bristles and a larger central one, 23 bristles between PME and

8–10 behind each PME-PLE; 6 bristles and a larger one on each side of the OQ. *Fovea*: length 0.78, width 1.68. *Eyes, diameters and interdistances*: AME 0.36 (large), ALE 0.40, PME 0.24, PLE 0.24, OQ length 1.20, anterior width 3.16, posterior width 2.72; AME-ALE 0.76, PME-PLE 0.16, AME-PME 0.40, ALE-PLE 0.6, AME-AME 0.20. *Chelicerae*: Length 3.00, width 1.56 with dorsal internal shallow ridges; numerous small posterior lateral bristles; cheliceral apex with 15 recumbent and elongated bristles that cover the base of the fang. Cheliceral prolongation without cusps; furrow with 6 large promarginal teeth and 5 retromarginal teeth (a small one between 2nd-3d, 3d-4th and two between 4th-5th) and 16 denticles, near the promarginal teeth. *Labium*: length 1.32, width 1.08. *Maxillae*: anterior length 1.56, 2.28 posterior length, width 1.62. *Sternum* (fig. 29H): With slight central depression; length 4.02, maximum width 3.42, minimum width 1.14. Postlabial sigillum shallow, reaching the center of the sternum; posterior sigilla well defined and shallow. *Abdomen*: Length 6.00, covered by thin bristles, with 8 spiniform dorsal-anterior bristles. PMS: length 0.72; PLS: length of basal:medial:apical segments 0.80:0.28:0.20. *Spigots*: 1 large, 29 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 3(42):5(40):2(56). *Lengths of legs and palp*: I: 6.36, 2.52, 3.72, 4.38, 2.52, 19.50. II: 6.30, 2.52, 3.72, 4.80, 2.52, 19.86. III: 5.40, 2.76, 2.88, 4.80, 3.00, 18.84. IV: 7.02, 2.76, 5.40, 5.82, 3.18, 24.18. Palp: 5.88, 2.76, 5.10, –, 1.44, 15.18.

Chaetotaxy: Femora: I-II-IV, 0; III, 1 D A. Patellae: I-II, 0; III, 34 P SUP-D ANT +10 on the margin, 1-1-1-2-1-1 D, 1-2-4 R A +10 on the margin; IV, 47 P SUP-D ANT with 5 near the edge, 1 D B. Tibiae: I, 1-2-3 V POST, 1-1-1 v, 2 V A ANT; II, 1-1-1-2-1-4 R INF, 2-2-2 v, 3 V A POST, 2 V A ANT; III, 1-1 P, 1 D B, with a crown of 18 thorns and 1 apical (at the edge, anterior to the crown), 1 R M, 2-1-3 V; IV, 1-1 P M, 2-3 V (1:2 A). Metatarsi: I, 1-1-1-1-1 V ANT, 1-2-1-1 V, 4-2-2-1-1-2-2-2 V POST-R INF; II, 4-3-1-3-1-1-3-1-3-4-1-4 R INF-V POST, 1-2-1-1 V, 1-2-1-1-1-2-V ANT; III, 1-2-1-1-1 D ANT,

1-2-2-1-2-3-2-5 on row D POST-R, 4-2-2-2-1 V, 2-1-2-1-1-1-3-3 V ANT-P INF; IV, 2-2-2-1-2-3-4 P, 1 D A ANT, 1-2-2-3-4 V. Tarsi: I, 1-1-2-1-2 P INF, 32 R INF, 2-0-2-2-3 V; II, 2-2-1-1-2-1-2-4 P INF, 48 R INF, 1-1-1-2-1-2 V; III, 2-2-2-1-1-3-2 P INF, 1-2-1-1-2-2-1 R INF, 1-2 V (1:3 A); IV, 2-2-2-5-3-1-3-1-2-2 P INF, 1-2-3-2-2 R INF. Total number of retrolateral spines on tibiae I and II (fig. 29D): 0 and 10 respectively. A projection in the anterior angle of coxae I. *Palp*: tibiae long and slender (width/length: 0.30±0.002) (fig. 29C). Bulb robust; ATA and BTA well developed; embolus short with Ak extending to apex with a series of denticles at the base; a MRk present (fig. 29E). *Pseudoscopula*: Tarsi: I-II, sparse, uniformly distributed throughout the segment, more abundant A; III-IV, dense and uniform. Metatarsi without pseudoscopula. *Trichobothria*: Tibiae: I 4-4; II 4-7; III 5-8; IV 6-5. Metatarsi: I-II 14; III 12; IV 9. Tarsi: I 12; II 11; III 14; IV 11. *Color*: Carapace dark reddish brown; cephalic region and chelicerae darker. Abdomen dark brown, booklungs with light markings (fig. 29B). Sternum, labium, and maxillae lighter reddish brown. Spinnerets yellowish. Legs like carapace; palp tibia light.

Paratype female (MACN-Ar 27100, figs. 30A–E): *Total length*: 25.56. *Carapace* (fig. 30A): length 9.60, width 9.36; ~38 bristles on each posterior margin. *Cephalic region*: length 5.64, width 7.20; clypeus with 90 bristles and one central large, chilum small with 40 bristles, 60 between PME and 15 bristles behind each PME-PL; 3–4 between ALE-PLE and 25 on each side of the OQ; two dark triangular markings behind OQ, posteriorly reaching the fovea, and numerous smaller bristles at the back of the cephalic region, more abundant around the fovea. *Fovea*: wide; length 1.62, width 3.78. *Eyes, diameters and interdistances*: AME 0.24, ALE 0.30, PME 0.24, PLE 0.30, OQ length 1.32, anterior width 4.32, 4.08 posterior width; AME-ALE 1.50, PME-PLE 0.24, AME-PME 0.84, ALE-PLE 0.72, AME-AME 0.48. *Chelicerae*: Length 4.50, width 2.76; cheliceral apex with 24 recumbent and elongated bristles covering the base of the fang; dorsal anterior

region with shallow ridges. Rastellum with 16 blunt marginal cusps, and 12 small dorsal ones. Fang groove with 6 promarginal teeth and 6 retromarginal ones (on the left chelicera, instead of the second tooth there is a group of 4 denticles; right normal) and 22–25 denticles in the furrow, near the promargin. *Labium*: length 2.28, width 2.10, with 36 anterior cuspules. *Maxillae*: anterior length 2.88, posterior length 3.78, width 2.70; +250 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 30E): Slight central depression; length 6.48, maximum width 6.00, minimum width 2.22. Postlabial sigillum shallow, separated from the labium, posterior sigilla shallow and well defined. *Abdomen*: length 10.44, globose, covered by long bristles, thicker on dorsum. PMS: length 1.00; PLS: length of basal:medial:apical segments 1.40:0.60:0.40. *Spigots*: 2 large, 40 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 8(58):7(60):3/4(+100). *Lengths of legs and palp*: I: 4.80, 3.60, 2.40, 3.00, 1.20, 15.00. II: 4.80, 3.60, 2.40, 3.24, 1.20, 15.24. III: 5.16, 4.44, 2.04, 3.60, 1.56, 16.80. IV: 6.72, 4.32, 3.96, 4.20, 1.32, 20.52. *Palp*: 4.80, 3.36, 3.48, –, 3.60, 15.24.

Chaetotaxy: Femora, 0. Patellae: I-II, 0; III, 10 P SUP +10 on the margin, 25 R A +20 on the margin; IV, 74 P SUP-D ANT +4 near the edge; palp, 1-1-1 P. Tibiae: I, 1-1-1 P (1:2 A), 26 R (2:3 A), 1-1 V POST M; II, +150 R, 1-1 V POST; III, 1 D B, with a crown of 26 thorns and 5 apical (at the apex, anterior to the crown), +100 R; IV, 3/1 P A; palp, 9 / 19 P INF, 43 R INF. Metatarsi: I, 30 P INF, 35 R INF, 1-1-2 V POST; II, 22 P INF, 38 R (more abundant R A), 1-1-2 V POST; III, 22 D ANT, +90 on row D POST-R (more abundant R A), 2 V A; IV, 28 P, 1 D ANT A. Tarsi: I, 11 P INF, 24 R INF, 1 V A; II, 18 P INF, 17 R INF, 2 V A; III, 40 R, +100 V-P; IV, 43 V-P; palp, 28 P INF, 45 R INF, 1/2 V A. Total number of retrolateral spines on tibiae I and II (fig. 30B): 26 and +150 respectively. *Trichobothria*: Tibiae: I 4-6; II 5-7; III 6-8; IV 7-8. Metatarsi: I 13; II 18; III 15; IV 14. Tarsi: I 10; II-III 13; IV 8. *Color*: Carapace reddish brown, with mottled darker spots on the back. OQ lighter in the middle; chilum and clypeus

with a large light spot (fig. 30A). Chelicerae dark reddish brown with lighter internal dorsal stripes. Abdomen dark brown, booklungs with light markings. Spinnerets yellowish. Sternum light reddish brown, labium and maxillae darker. Legs like carapace.

DISTRIBUTION: Provinces of Chubut, La Pampa, Río Negro, and southern Buenos Aires.

OTHER MATERIAL EXAMINED: *Chubut*: Península de Valdés, [42°28' S 63°37' W], 13 Nov. 1976, P. Domínguez, 5 ♀ (MACN-Ar 27092). *Río Negro*. Valcheta [40°50' S 63°1' W], Jan. 1945, (name collector illegible), 2 ♀ (MACN-Ar 27089). Viedma [40°50' S 63°1' W], Jan. 2012, H.A. Iuri, 1 ♀ (MACN-Ar 31206). *La Pampa*. Conhelo [36°0' S 64°35' W], Jan. 1939, M.E. Ibañez, 1 ♂ (MACN-Ar 36584). Santa Rosa [36°38' S 64°17' W], no date or collector, 1 ♂. *Buenos Aires*: Punta San Blas, Patagones, Escur. Carcelles Daguerre. Oceanográfico “San Luis” [40°33' S 62°15' W], Mar. 1932, no collector, 1 ♀ (MACN-Ar 36583). Sierra de la Ventana, Fortín Chaco, undated collection, E. Maury, C. Cesari, and P. Dominguez (MACN-28412). *Río Negro*. Balsa de Paso Córdoba (G. Roca), 24 Mar. 1959, no collector 1 ♀ (no spermathecae, MACN-27090), no data: only identified as *A. insignis*, 1 ♀ (MACN-Ar 36586). The specimen with catalog number MACN-27095 (no more data) resembles *A. patagonia* by the shape of its spermatheca, carapace, and sternum.

COMMENTS: The male and female were matched taking into account the similarities found in the overall size of the specimens, the light booklung markings, the similar form of the sternum, the slight depression in the center of the sternum, and the confluence of the posterior sigilla in the central depression of the sternum.

When Adolfo Doering sent the material of *Grammostola doeringi* (Holmberg, 1881) to E. Holmberg from the expedition to the Río Negro, as descriptive ecological data he commented the existence of spiders living in “extraordinary abundance on the steppe ... they live in vertical tubes... and carry a lid or mobile door” (Holmberg, 1881; Mello-Leitão, 1933). Gerschman de Pikelin and

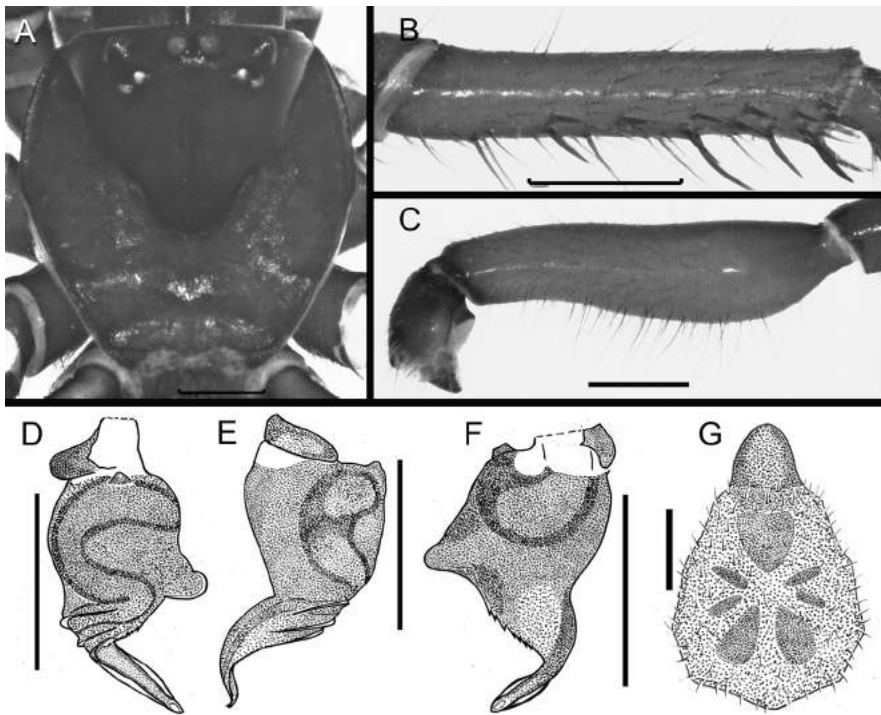


FIGURE 31. *Actinopus puelche*, sp. nov., male holotype (LZI 0132). A, carapace. B, tibia II, retrolateral. C, pedipalp. D–F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

Schiapelli (1962) pointed out that these trapdoors were most likely actinopodids. Based on biogeography, it is very likely that the observed specimens were representatives of *A. patagonia*.

Actinopus puelche, sp. nov.

Figures 31A–G, 45

TYPE MATERIAL: HOLOTYPE ♂ (LZI 0132): **Buenos Aires**. Sierra de la Ventana [38°8' S 61°48' W], 18 Apr. 2009, G. Pompozzi, 1♂. PARATYPE: 1♂ (MACN-Ar 36611), Tandil [37°22' S 59°9' W], 28 Apr. 1985, C. Scioscia.

ETYMOLOGY: The specific epithet is a noun in apposition. The Puelches were aborigines who lived in Buenos Aires and La Pampa prior to the arrival of the Spanish.

DIAGNOSIS: Males of *A. puelche* can be distinguished by having a copulatory bulb with ATA and BTA well developed (fig. 31D–F); embolus

with MRk well developed and Ak extended to the apex (different from *A. coylei*, *A. cordobensis*, *A. ariasi*, *A. casuhati*). Rastellum with cusps (similar to *A. insignis*, *A. gerschiapelliarum*, *A. taragui*, *A. puelche* and *A. palmar*). Differs from *A. patagonia* by its smaller size; thinner and more elongated palpal tibia (fig. 31C); and posterior sigilla not reaching the center of the sternum.

Female: Unknown.

DESCRIPTION: Holotype male (LZI 0132, fig. 31A–G): *Total length*: 9.60. *Carapace* (fig. 31A): length 3.72, width 3.72. *Cephalic region*: length 2.16, width 2.70; clypeus small, one large bristle in front of AME and 10 small ones on each side, 15 bristles between PME and 4–6 behind each PME-PLE dyad; 3 small bristles and one large central on each side of the OQ. *Fovea*: length 0.54, width 1.14. *Eyes, diameters and interdistances*: anterior ocular row straight; AME 0.20 (large), ALE 0.24, PME 0.12, PLE 0.16, OQ length 1.08, anterior width 2.12, posterior width

1.84; AME-ALE 0.52, PME-PLE 0.08, AME-PME 0.28, ALE-PLE 0.32, AME-AME 0.16. *Chelicerae*: length 2.08, width 1.08; cheliceral apex with 12 recumbent and elongated bristles which cover the base of the fang; rastellum with 8 marginal, blunt cusps, and 3/4 small dorsal ones; furrow with 6 large promarginal teeth and 6 retromarginal and 14 denticles, near the promarginal teeth. *Labium*: length 0.88, width 0.76. *Maxillae*: anterior length 0.96, posterior length 1.56, width 1.20. *Sternum* (fig. 31G): Center flat; length 2.96, maximum width 2.52, minimum width 0.78. Postlabial sigillum deep, posterior sigilla well defined and shallow. *Abdomen*: Length 3.60, covered by small bristles. PMS: length 0.48; PLS: length of basal:medial:apical segments 0.48:0.20:0.08. *Spigots*: 1 large, 22 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 1(30):2(35):(40). *Lengths of legs and palp*: I: 4.38, 1.74, 2.58, 3.30, 1.80, 13.80. II: 4.20, 1.74, 2.58, 3.24, 1.80, 13.56. III: 3.18, 1.80, 1.80, 3.42, 1.92, 12.12. IV: 4.32, 1.80, 3.30, 3.60, 1.92, 14.94. Palp: 4.80, 2.10, 3.90, –, 1.08, 11.88.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III, 20 P SUP-D ANT +9 on the margin, 1-1 D (1:2 B), 1-2-4 R (1:2 A) +8 on the margin; IV, 39 P SUP-D ANT +6 near the edge. Tibiae: I, 1-1 R INF, 1-1-1-3-1-2-4 V; II, 2-1-2-2-1-2 R INF, 1-1-2 V POST (1:2 A), 2 V ANT A; III, 1 P M, 1 D B, with an apical crown of 16 thorns, 2-1 R (1:2 A), 1-1-2 V POST, 2 V ANT A; IV, 1-1-1-1-2 v. Metatarsi: I, 2-2-3-1-1-1-1 V-V ANT, 2-1-2-2-1-2-1-1-2-3 V POST-R INF; II, 1-2-2-1-1-1-1-2 R INF, 4-3-3-3-1-4 V (verticillate); III, 1-1 P (1:3 A), 1-1-1-1-1-1 D ANT, 2-1-1-2-2 V, 1-1-2-0-3 D POST-R; IV, 2-1-3 P (1:2 A), 1-1 V (1:2 B), 1-0-1 V POST (2:3 A). Tarsi: I, 1-1-1 P INF (1:3 A), 1-1-1-2-1-3-4-2 R, 1 V A; II, 1-1-1-1-1-1 P INF, 1-1-2-1-2-4-2 R INF, 1 V A; III, 1-1-0-1-1 P INF, 1-1 R INF; IV, 1-1-3-1-1 P INF, 1-1-1 R (1:2 A). Total number of retrolateral spines on tibiae I and II (fig. 31B): 2 and 10 respectively. *Palp*: Tibia long and slender (width/length: 0.27 ± 0.01) (fig. 31C). Bulb robust; ATA and BTA developed; embolus short with a series of denticles at the

base; Ak extended to the apex and RMk developed. *Pseudoscopula*: Tarsi: I, sparse (A); II sparse and complete; III-IV, dense (uniformly distributed throughout the segment). Metatarsi: without pseudoscopula. *Trichobothria*: Tibiae: I 3-5; II 3-4; III 4-6; IV 5-6. Metatarsi: I-III 9; IV 6. Tarsi: I 8; II 9; III 8; IV 7. *Color*: Carapace reddish brown; ocular region and chelicerae darker. Abdomen dark brown; booklungs with light markings. Spinnerets light yellowish. Sternum light reddish brown, labium and maxillae darker. Legs like carapace, palp tibiae light.

DISTRIBUTION: ARGENTINA: South of the Buenos Aires province. URUGUAY: Rocha province.

OTHER MATERIAL EXAMINED: ARGENTINA: **Buenos Aires**. D'Orbigny, Pdo, Gral. Suárez [37°40' S 61°42' W], 21 Apr. 1984, J. M Gallardo, 1 ♂ (MACN-Ar 36612); 4 Apr. 1967, L. Demarchi, 5 ♂ (MACN-Ar 38191). URUGUAY: **Rocha**. La Coronilla, [33°54' S 53°31' W], 28 Feb. 1974, R. Benzo, 1 ♂ (MNHN 1346); Same data, 12 Mar. 1976, L. A de Gambardella, 1 ♂ (MNHN 1317); Laguna Negra [34°01' S 53°38' W], 18 Apr. 1973, M. Ruíz, 2 ♀ (MNHN 287).

COMMENTS: The specimens from Uruguay are included in this species by their similarity in the morphology and bulb shape. However, they exhibit some differences in their overall size, size of AME, and color of booklung markings. In the absence of additional specimens, we prefer to be conservative and consider these specimens conspecific with this species.

Actinopus ramirezi, sp. nov.

Figures 32A–G, 33A–E, 44

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36582): **Misiones**. Parque Nacional Iguazú, R.P. 101, entre El Timbó y El Palmital [25°39' S 54°30' W], 13–15 Sep. 1992, P. Goloboff and C. Szumik, 1 ♂. **PARATYPES**: same data and collectors, 2 ♀ (MACN-Ar 19830).

ETYMOLOGY: The specific epithet is a patronymic in honor of Martín J. Ramírez, a renowned

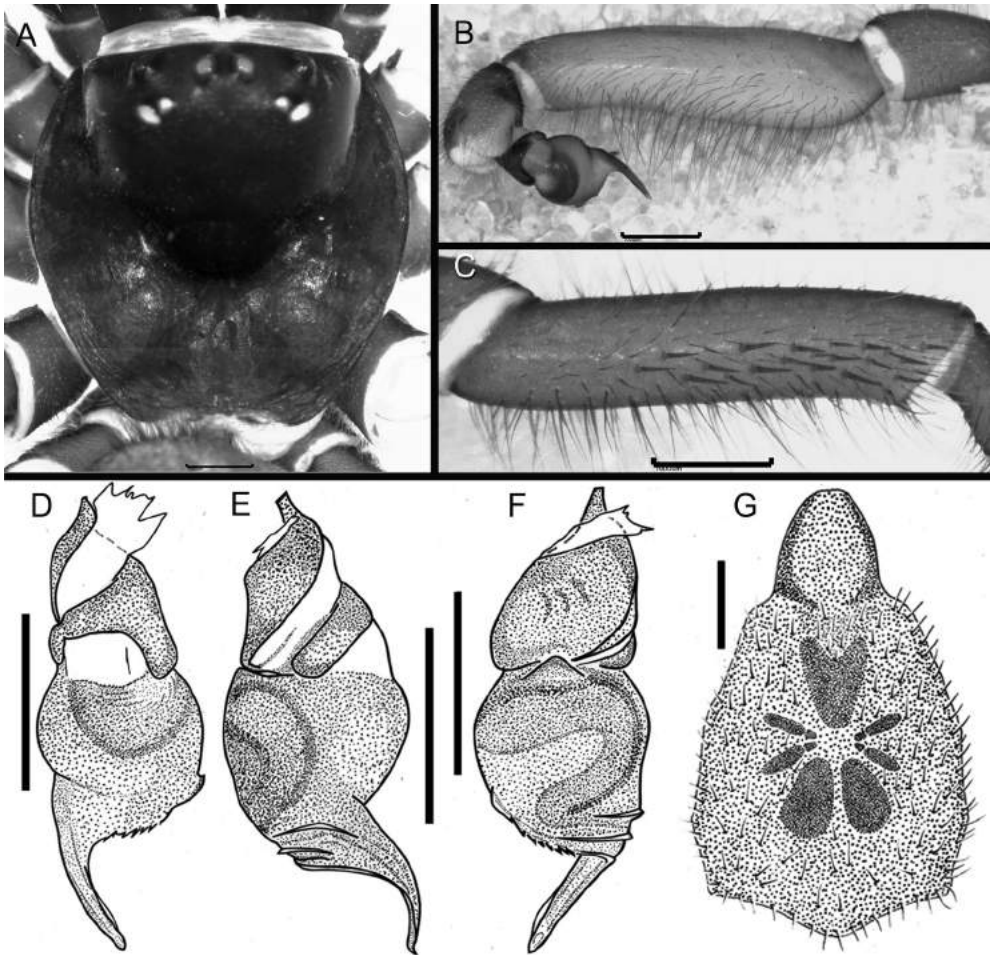


FIGURE 32. *Actinopus ramirezi*, sp. nov., male holotype (MACN-Ar 36582). A, carapace. B, pedipalp. C, tibia II, retrolateral view. D–F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

student of araneomorph spiders, who joined the junior author (P. A.G.) in many field trips.

DIAGNOSIS: Females of *A. ramirezi* can be distinguished by having a subsquared fovea (fig. 33A), small spermathecae, wide and subquadrate, with a small external lobe (fig. 33C, D), similar to *A. pampa* (from which it differs in its larger size). Males are distinguished by having a copulatory bulb with poorly developed ATA, well-developed BTA (fig. 32D–F), Ak base with denticles, and MRk present (similar to *A. szumikae* and *A. gerschiapelliarum*). Cheliceral prolongation without cusps (unlike

A. insignis, *A. gerschiapelliarum*, *A. taragui*, *A. puelche*, and *A. palmar*).

DESCRIPTION: Holotype male (MACN-Ar 36582, figs. 32A–G): *Total length*: 17.04. *Carapace* (fig. 32A): length 5.58, width 5.40, semi-rounded. *Cephalic region*: length 3.24, width 3.96; clypeus small with 1 large bristle and 27 small ones on both sides, 8 bristles between AME–ALE, 29 bristles between PME and 10 behind each PME–PLE dyad, 4 small bristles on row to fovea, 5 on each side of the OQ. *Fovea*: length 0.72, width 1.92, subsquare. *Eyes, diameters and interdistances*: AME 0.24 (large), ALE

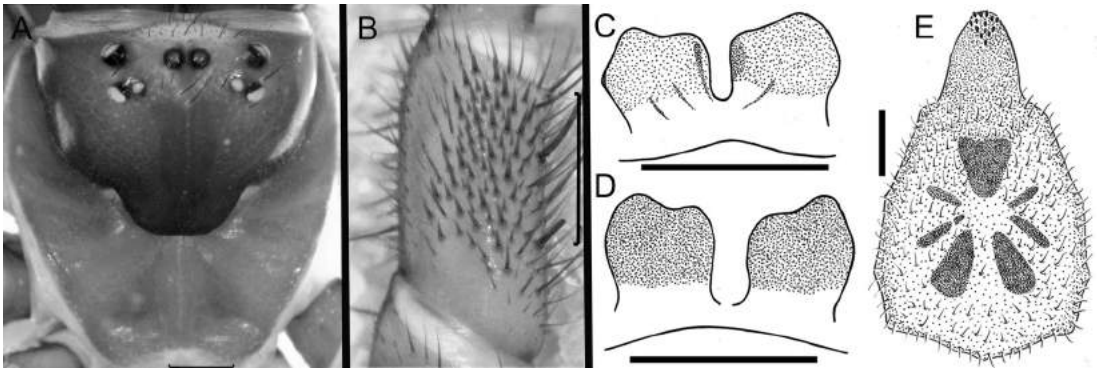


FIGURE 33. *Actinopus ramirezi*, sp. nov., female paratype (MACN-Ar 19830). A, carapace. B, tibia II, retro-lateral. C–D, spermathecae. C, Parque Nacional Iguazú. D, Parque Provincial Uruguay-í. E, sternum. Scale bars = 1 mm.

0.44, PME 0.24, PLE 0.36, OQ length 1.12, anterior width 2.96, posterior width 2.72; AME-ALE 0.60, PME-PLA 0.08, AME-PME 0.40, ALE-PLA 0.52, AME-AME 0.44. *Chelicerae*: Length 3.30, width 1.68, with shallow dorsal grooves; cheliceral apex with 14 recumbent and elongated bristles that cover the base of the fang. Cheliceral prolongation without cusps; furrow with 7 promarginal teeth, 7 retromarginal (a smaller one between 5th-6th and 6th-7th) and 9 denticles, near the promarginal teeth. *Labium*: length 1.52, width 1.20. *Maxillae*: anterior length 1.50, posterior length 2.28, width 1.60. *Sternum* (fig. 32G): Central slight depression; length 4.00, maximum width 3.48, minimum width 1.20. Postlabial sigillum deep, posteriorly reaching the middle of the sternum; posterior sigilla shallow, well defined and distant from the margin. *Abdomen*: Length 6.84, large, covered dorsally by small and thick bristles. PMS: length 0.56; PLS: length of basal:medial:apical segments 0.80:0.48:0.32. *Spigots*: 1 large, 28 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 4(48):5(40):2(50). *Lengths of legs and palp*: I: 6.00, 2.52, 3.60, 3.90, 2.40, 18.42. II: 5.52, 2.52, 3.42, 4.02, 2.40, 17.88. III: 4.80, 2.40, 2.64, 4.38, 2.58, 16.80. IV: 6.00, 2.70, 4.80, 4.80, 3.00, 21.30. Palp: 5.16, 2.46, 4.38, –, 1.38, 13.38.

Chaetotaxy: Palp: 0. All femora: 0. Patella: I-II, 0; III, 22 P SUP-D ANT +8 on the margin, 1 D B, 2-2-3 R (1:3 A) +9 on the margin; IV, 36 P

SUP-D ANT. Tibiae: I, 0; II, 20 R INF, 1-1 v post; III, 1 D B, with a crown of 17 thorns, 1-2-3-4-1 R (1:2 A); IV, 3-1-3 v (1:2 A). Metatarsi: I, 1-0-1 V POST, 1-1 V ANT (1:3 A); II, 1-1-1-1-2-1-3 R INF, 1-1 V ANT (1:2 A), 1-1 v post; III, 1-2-1-1-2-1-1-2-5 D POST-R, 1-1-1-1-1-1-4 D ANT-P, 1-2-2-2-1-1 V POST, 1-2-1-1-3-3-2-2 V ANT-P INF; IV, 2-1-2-3-1-3-2-3-2-4 P, 1 D A ANT, 1-1-2-2-3 R INF (1:2 A), 1-1-1-1 V. Tarsi: I, 1-1-1 P INF, 1-1-2-1-1-2 R INF; II, 1-1-1-1-1 P INF, 1-1-1-2-1-1-2 R INF; III, 1-1-2-2-1-2-2 P INF, 1-1-1-1-1-3-2 R INF (2:3 A); IV, 1-2-2-3-3-3-3-4 P INF, 2-1-3-3-2-2-1-4 R INF (3:4 A). Total number of retrolateral spines on tibiae I and II (fig. 32C): 0 and 20 respectively. *Palp*: Tibia long and slender (width/length: 0.29 ± 0.01) (fig. 32B). Copulatory bulb (fig. 32D–F) with a wide tegulum. ATA poorly developed, BTA well developed; embolus wide, with MRk and a series of denticles at the base. *Pseudoscopula*: Tarsi: I sparse (1:2 A, more abundant A); II sparse, distributed throughout the segment (more abundant A); III–IV, dense and uniform (uniformly distributed throughout the segment). Metatarsi: III sparse and apical; IV, sparse 1:2 A. *Trichobothria*: Tibiae: I 5-4; II 5-7; III 6-7; IV 7-5. Metatarsi: I 11; II 10; III 9; IV 7. Tarsi: I-III 9; IV 7. *Color*: Carapace reddish brown; cephalic region and chelicerae darker. Abdomen brown, booklungs with light markings. Sternum light reddish brown; labium and maxillae darker. Spinnerets

light brown. Legs like carapace; tarsi-metatarsi lighter; palp tibiae light.

Paratype female (MACN-Ar 19830, figs. 33A-E): *Total length*: 17.40. *Carapace* (fig. 33A): length 5.64, width 5.16, with 15 bristles on each posterior margin. *Cephalic region*: Length 3.48, width 4.32; clypeus with 48 bristles, chilum with 22; 3 bristles between AME-ALE, 29 between PME and 10 forming a band anterior to the fovea; 9 bristles behind each PME-PLE dyad, 4 on each side of the OQ. Numerous smaller bristles at the back of the cephalic region, more abundant in the lateral curves of the fovea. *Fovea*: length 0.72, width 1.92, subsquare. *Eyes, diameters and interdistances*: AME 0.16, ALE 0.40, PME 0.24, PLE 0.28, OQ length 1.00, anterior width 2.80, posterior width 2.60; AME-ALE 0.80, PME-PLE 0.12, AME-PME 0.44, ALE-PLE 0.48, AME-AME 0.28. *Chelicerae*: Length 2.70, width 1.80; small bristles on the posterior lateral part with shallow grooves on 1:2 A; cheliceral apex with 15 recumbent and elongated bristles covering the base of the fang. Rastellum with 12 blunt marginal cusps, and 10 smaller dorsal ones. Fang groove with 7 promarginal teeth, 6 retromarginal ones (three small internal ones near the 5th tooth), and 12 denticles in the furrow, near the promargin. *Labium*: length 1.40, width 1.20, with 15 anterior cuspules. *Maxillae*: anterior length 1.50, posterior length 2.16, width 1.60, with +110 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 33E): With slight central depression; length 4.00, maximum width 3.48, minimum width 1.20. Postlabial sigillum deep, posterior sigilla shallow and well defined, distant to the margin. *Abdomen*: Length 8.04, globose, covered by thin bristles. PMS: length 0.60; PLS: length of basal:medial:apical segments 0.80:0.36:0.16. *Spigots*: 2 large, 25 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 5(28):6(37):2(72). *Lengths of legs and palp*: I: 3.12, 1.80, 1.44, 1.80, 0.96, 9.12. II: 3.30, 1.80, 1.44, 1.92, 0.96, 9.42. III: 3.12, 2.40, 1.08, 2.10, 0.90, 9.60. IV: 3.90, 2.40, 2.40, 2.70, 0.96, 12.36. Palp: 3.00, 1.80, 1.92, -, 1.92, 8.64.

Chaetotaxy: All femora, 0. Patellae: I, 1 V A POST; II, 0; III, 1-3-3-4 P (1:2 A) +11 on the margin, 21 R A +12 on the margin; IV, 36 P SUP-D ANT; palp, 1-1-1 P, 1 V POST. Tibiae: I, 2-1-1 P, 13 R INF, 1-1 V POST; II, 81 R INF (3:4 A), 1-1-1 V POST; III, 1 D B, with a crown of 21 thorns and 3 apical (at the apex, anterior to the crown), 47 R; IV, 0; palp, 12 P INF, 21 R INF, 1-1 V POST. Metatarsi: I, 19 P INF, 17 R INF, 1-1-2 V POST; II, 22 P INF, 18 R INF, 1-1-2 V POST; III, 3-2-2-1-1-1-1-1-3 D ANT, 52 on row D POST-R (more abundant R A), 1-1-1-2-4 V; IV, 11 P, 1 D A ANT, 1-2-1 V ANT (1:3 A). Tarsi: I, 1-2-2-1-1-1 P INF, 14 R INF, 2 V A; II, 13 P INF, 13 R INF, 1-2-2 V (1:2 A)/2 V A; III, 28 R, 75 V-P; IV, 45 V-P; palp, 16 P INF, 19 R INF, 2 V A. Total number of retro-lateral spines on tibiae I and II (fig. 33B): 13 and 81 respectively. *Trichobothria*: Tibiae: I-II 4-5; III 5-6; IV 5-5. Metatarsi: I-IV 10. Tarsi: I 8; II 9; III 8; IV 7. *Color*: Carapace and cephalic region reddish brown, fovea dark; a central spot on the OQ lighter. Chelicerae with internal dorsal light bands. Abdomen brown, booklungs with light markings. Spinnerets lighter brown. Sternum light reddish brown; labium and maxillae darker. Legs like carapace.

DISTRIBUTION: Province of Misiones.

OTHER MATERIAL EXAMINED: *Misiones*. Parque provincial Urugua-í, R.P. 19, Cañadón cerca del Urugua-í [25°41' S 54°8' W], 16 Nov. 1992, P. Goloboff, 1 ♀ (MACN-Ar 27103). Yacupoi a 30 km de Puerto Bemberg, Arroyo Urugua-í [25°55' S 54°17' W], 6 Feb. 1951, J. Cranwell (Bachmann, A.), 1 ♀ (MACN-Ar 3330). Posadas [27°22' S 55°54' W], no date of collection, A. García, 2 ♀ (MACN-Ar 27115). Ruta 7, 3 km O de Aristóbulo del Valle [27°5' S 54°55' W], 21 Nov. 1992, P. Goloboff, 1 ♀ (MACN-Ar 28413).

Actinopus szumikae, sp. nov.

Figures 34A-G, 35A-F, 45

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36554): *Córdoba*. Alta Gracia "La Granja" [31°39' S 64°25' W], Jan. 1939, C. Bruch, 1 ♂. PARATYPES:

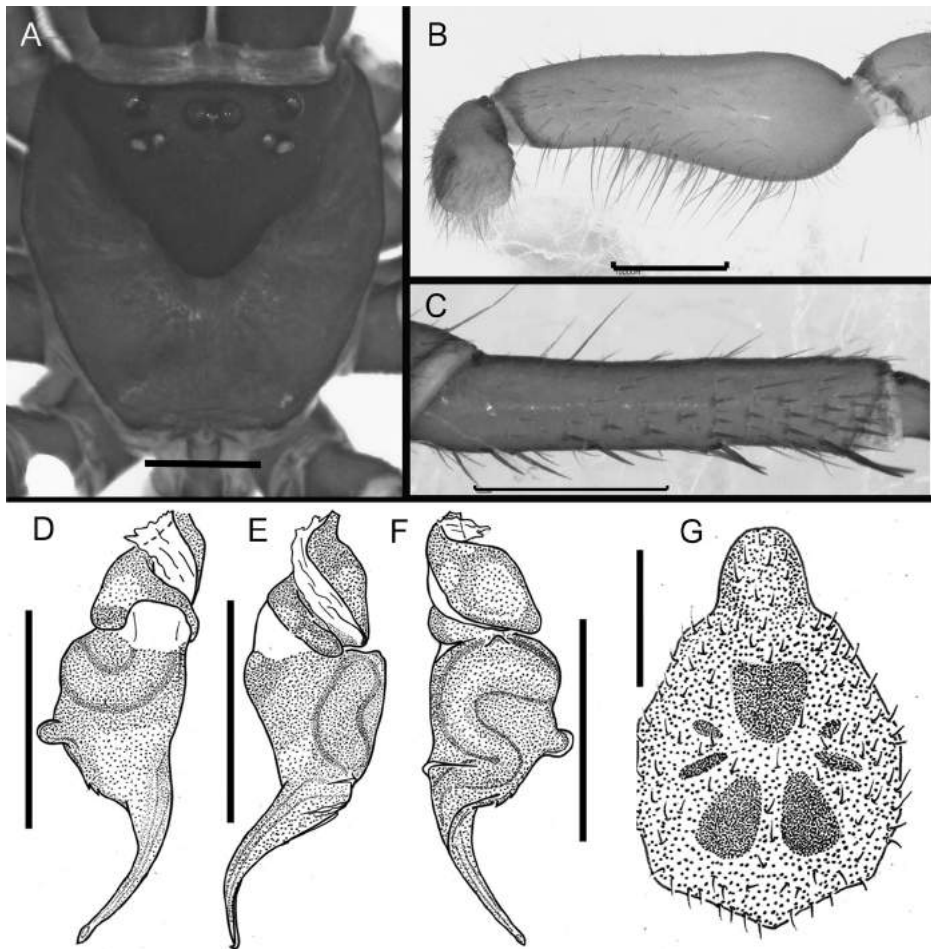


FIGURE 34. *Actinopus szumikae*, sp. nov., male holotype (MACN-Ar 36554). A, carapace. B, palp. C, tibia II, retrolateral. D–F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

1 ♀ (MACN-Ar 27111), same data and collector, La Cruz, Carlos Paz [31°24' S 64°31' W], 3 Feb. 1967, I. Di Tada, 1 ♂ (MACN-Ar 36555).

ETYMOLOGY: The specific name is in honor of Claudia Szumik, for her contributions to phylogenetic systematics and historical biogeography, and the collection of many of the specimens studied.

DIAGNOSIS: Males of *A. szumikae* differ from those of *A. argenteus* and *A. longipalpis* in having a copulatory bulb with well-developed ATA and BTA (fig. 34D–F) and cheliceral prolongation without cusps (different from *A. insignis*, *A. gerschiapelliarum*, *A. taragui*, *A. puelche*, and *A. palmar*). Females are very similar to those of *A.*

taragui, recognizable by subtle differences in the spermathecal shape, with a squared base and a long external lobe, straight or slightly curved outward (fig. 35D, E).

DESCRIPTION: Holotype male (MACN-Ar 36554, figs. 34A–G): *Total length:* 10.32. *Carapace* (fig. 34A): length 3.24, width 3.00. *Cephalic region:* length 1.80, width 2.40; clypeus short with littler bristles, 6 bristles between PME and 4 behind each PME-PLE dyad, 6 bristles on each side of the OQ. *Fovea:* length 0.54, width 1.08. *Eyes, diameters and interdistances:* AME 0.12 (small), ALE 0.24, PME 0.12, PLE 0.20, OQ 0.64 length, anterior width 1.68, 1.52 posterior width; AME-ALE 0.44, PME-PLE

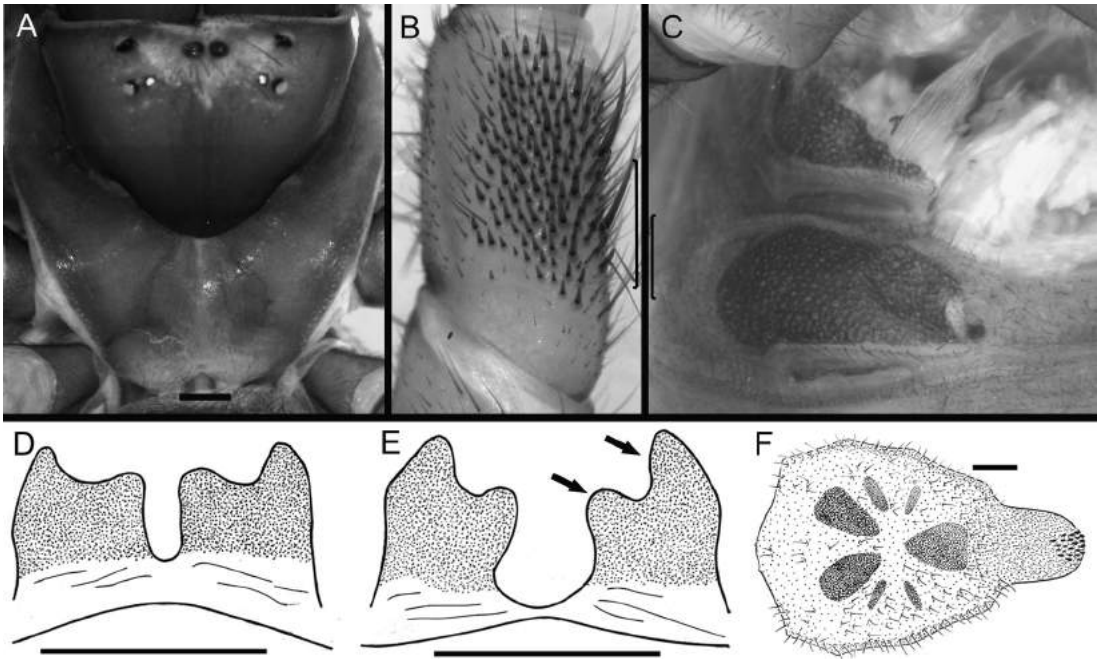


FIGURE 35. *Actinopus szumikae*, sp. nov., female paratype (MACN-Ar 27111). A, carapace. B, tibia II, retro-lateral. C, dark booklung markings. D–E, spermathecae (arrows indicate the presence of lobes continuing in the direction of the duct): D, Alta Gracia. E, Cabana. F, sternum. Scale bars = 1 mm.

0.04, AME-PME 0.24, ALE-PLA 0.28, AME-AME 0.24. *Chelicerae*: length 4.44, width 2.76; cheliceral apex with 12 recumbent and elongated bristles that cover the base of the fang. Cheliceral prolongation without cusps; furrow with 5 large promarginal teeth and 5 retromarginal and 4 denticles, near the promarginal teeth. *Labium*: length 0.76, width 0.68. *Maxillae*: anterior length 0.78, posterior length 1.32, width 0.96. *Sternum* (fig. 34G): Center flat; length 2.44, maximum width 2.16, minimum width 0.72. Postlabial sigillum shallow, posterior sigilla well defined and shallow. *Abdomen*: length 3.96, small with dark bristles and 3 spiniform dorsal bristles. PMS: length 0.40; PLS: length of basal:medial:apical segments 0.56:0.28:0.16. *Spigots*: 1 large, 9 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 2(18): 2(22):3(26). *Lengths of legs and palp*: I: 3.18, 1.38, 1.98, 2.52, 1.80, 10.86. II: 3.00, 1.38, 2.04, 2.58, 1.80, 10.80. III: 2.40, 1.38, 1.56, 2.70, 1.92, 9.96. IV: 3.30, 1.50, 2.70, 3.00, 2.10, 12.60. Palp: 3.12, 1.50, 3.00, –, 0.66, 8.28.

Chaetotaxy: Femora: I-II-IV, 0; III, 1 D A (small). Patellae: I-II, 0; III, 34 P SUP-D ANT, +10 on the margin, 1-1-1-1 D (3:4 B), 7 R A +8 on the margin; IV, 55 P SUP-D ANT +2 near the edge, 1/0 D B. Tibiae: I, 1-1-2 V ANT, 1-2-1-1-1 V POST, 1-1 R INF; II, 1 P A, 1-1-1-3-1-3-3-3 R, 2-1-1-2-1-2 V; III, 1-2 P, 1 D B, with a crown of 24 thorns and 2 apical (at the apex, anterior to the crown), 1-3-1 R, 1-1-1 V POST, 1-1-2 V ANT; IV, 1-2-1-1-2-1-2 P INF, 1/0 D A, 2-1-1-0-3 V. Metatarsi: I, 1-1-1-1-2 P INF (3:4 A), 2-1-1-2-2-1-3 R INF, 1-2-1-V (3:4 A); II, 1-2-1-2 P INF, 1-1-1-2-1-2-1-1-1-3 R INF, 2-2-0-1-2-1-1 V (3:4 A); III, 1-1-1-3-2-2-2-5 row D POST-R, 1-1-1-2-2-3-1-1-2-3 row D ANT-P, 2-1-2-2-1-1-3 V (3:4 A); IV, 1-1-2-1-1-2-2-2-3 P, 1-2-2-3-2-4 V. Tarsi: I, 1-1-1-1-1-2 P INF, 1-1-1-2-2-1-2-1-2-2-1-2-1-2 R INF, 1-0-1-1 V (1:2 A); II, 1-1-1-1 V, 1-1-1-1-1-1-2-2 P INF, 1-1-1-4-3-3-3-2-4 R INF; III, 3-2-2-2-3-5-2 P INF, 1-1-1-2-4-4-4-1-3-1-1-2 R INF, 1-1-2 V (1:2 A); IV, 1-1-2-2-1-1-3-3-4-2-3-4 P INF, 1-1-2-2-1-1-4 R INF, 1-1-1-2 V. Total number of retrolateral spines

on tibiae I and II (fig. 34C): 2 and 14 respectively. *Palp*: tibia short and thickened (width/length: 0.35 ± 0.02) (fig. 34B). Bulb with well-developed ATA and BTA; embolus elongate, with a series of denticles at the base, without MRk. *Pseudoscopula*: Tarsi: I sparse (1:2 A); II sparse (3:4 A); III-IV, dense and uniform. Metatarsi: without pseudoscopula. *Trichobothria*: Tibiae: I 3-4; II 4-6; III 5-7; IV 6-6. Metatarsi: I-II 10; III 8; IV 5. Tarsi: I 7; II 8; III 7; IV 6. *Color*: Carapace reddish brown, darker cephalic region and chelicerae. Abdomen brown with small dorsal spots, booklungs with dark markings. Sternum, labium and maxillae yellowish brown. Legs like carapace with lighter tarsi. Palps with patellae-tibiae light. Spinnerets yellowish.

Paratype female (MACN-Ar 27111, figs. 35A-F): *Total length*: 21.96. *Carapace* (fig. 35A): length 6.72, width 7.80, 24 bristles on each posterior margin. *Cephalic region*: length 4.02, width 6.18; clypeus with 30 small bristles, one larger central one; chilum with 40 bristles, 3 between AME-ALE, 37 bristles between PME and 21 behind each PME-PLE dyad; 12-14 small bristles on each side of the OQ. *Fovea*: length 0.84, width 0.96. *Eyes, diameters and interdistances*: AME 0.16, ALE 0.40, PME 0.20, PLE 0.32, OQ length 1.32, anterior width 3.72, 3.40 posterior width; AME-ALE 1.16, PME-PLE 0.20, AME-PME 0.76, ALE-PLE 0.76, AME-AME 0.36. *Chelicerae*: Length 4.44; width 2.76, with lighter bands where are the dorsal internal bristles; chelicerae apex with 17 recumbent and elongated bristles covering the base of the fang; dorsal anterior region with surface grooves. Rastellum with 17 marginal, blunt cusps, and 18 small dorsal ones. Fangs groove with 8 promarginal teeth (4 long and 4 small inter-leaved, starting on a large), 7 retromarginal ones, and 10 denticles in the furrow, near the promargin. *Labium*: length 1.68, width 1.50, with 40 anterior cuspules. *Maxillae*: anterior length 2.10, posterior length 3.00, width 1.98, with +130 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 35F): Center flat; length 5.1, maximum width 4.38, minimum width 1.62. Postlabial sigillum shallow, posterior sigilla shallow and well defined. *Abdomen*: length 10.80, globose, covered with small bristles. PMS: length 0.52; PLS: length of

basal:medial:apical segments 0.92:0.40:0.24. *Spigots*: 2/3 large, 30 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 5/7(45):7(35):3(45). *Lengths of legs and palp*: I: 4.02, 2.82, 1.86, 2.40, 1.20, 12.30. II: 4.02, 2.82, 1.86, 2.70, 1.20, 12.60. III: 4.08, 3.30, 1.50, 3.06, 1.14, 13.08. IV: 5.10, 3.54, 3.06, 3.06, 1.14, 15.90. *Palp*: 3.90, 2.70, 2.88, -, 3.00, 12.48.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 42 R A, 25 P A, 31 on the margin; IV, 123 P SUP-D ANT; *Palp*, 1 V POST, 6 P (serial). Tibia: I, 12 P, 36 R INF, 1-1 V POST; II, 1 P A, 125 R (3:4 A), 1-1 V POST; III, 2-5 P (1:2 A), 1 D B, with a crown of 30 thorns and 12 apical (at the apex, anterior to the crown), 108 R (3:4 A); IV, 2/1-2-1 P; *palp*, 14 P (serial), 36 R INF, 1-1 V POST. Metatarsi: I, 27 P INF, 30 R INF, 1-1-2 V POST; II, 24 P INF, 30 R INF, 1-1-2 V POST; III, 90 row D POST-R (more abundant R A), 20 D ANT, 45 D B (small, divided in two fields of 16-19 by a glabrous band), 3 V A; IV, 26 P, 1 D ANT A, 2 V A. Tarsi: I, 16 P INF, 20 R INF, 2 V A; II, 19 P INF, 18 R INF, 1-2 VA; III, 67 R, 90 V-P; IV, 80 V-P; *palp*, 27 P INF, 36 R INF, 2 V A. Total number of retrolateral spines on tibiae I and II (fig. 35B): 36 and 125 respectively. *Trichobothria*: Tibiae: I 4-5; II 5-6; III 6-6; IV 7-8. Metatarsi: I 14; II 15; III 12; IV 8. Tarsi: I 12; II 14; III 11; IV 9. *Color*: Carapace reddish brown, with a clear spot in the center of the OQ. Chelicerae reddish brown with clearer dorsal bands. Abdomen brown, booklungs with dark markings (fig. 35C). Sternum yellowish, labium and maxillary reddish brown. Legs like carapace. Spinnerets yellowish.

DISTRIBUTION: Provinces of Córdoba, south of Buenos Aires, Santa Fe, and Corrientes.

OTHER MATERIAL EXAMINED: **Córdoba**. Bosque Alegre [31°35' S 64°32' W], Oct. 1981, P. Goloboff, 1 ♀ (MACN-Ar 36556). Cabana [31°13' S 64°21' W], Jul. 1945, Birabén, 1 ♀ (MACN-Ar 36557); same data and collector, 1 ♀ (with 45 offspring) (MACN-Ar 36558). Villa Carlos Paz [31°25' S 64°29' W], Jan. 1981, P. Grosso, A. Zanetti, and P. Goloboff, 1 ♂ (MACN-Ar 36559). Departamento Punilla [31°25' S 64°37' W], Jan. 1967, Muller, 1 ♂ (MACN-Ar 36560). La Falda [31°5' S 64°28' W], Mar. 1951, Viana, 1 ♂ (MACN-Ar 36561). Villa

Rumipal (near the lake) [32°10' S 64°29' W], Jan. 2012, M. Izquierdo coll., 1♂ (MACN-Ar 31205). Arias [33°38' S 62°24' W], 27 Nov. 2013, C. Corbella, 1♀ (MACN-Ar 36562). **Buenos Aires.** Sur de La China, 25 km O de Olavarría [36°57' S 60°35' W], 19–20 Mar. 1959, E. Maury, 1♀ (MACN-Ar 36563). **Santa Fé.** Recreo, Dpto La Capital [31°29' S 60°43' W], Jan. 1959, G. Achenbach, 8♀ (MFA-ZI 1283). 2nd week Jan. 1948, same data and collector, 1♂ (MFA-ZI 234, identified as "*A. rufipes* (Lucas 1834) by B. Gerschman de Pikelin and R. Schiapelli). Feb. 1945, same data and collector, 1♀ (MFA-ZI 231, identified as *A. crassipes* (Keyserling, 1891) by R. Schiapelli and B. Gerschman de Pikelin). 2nd week Dec. 1948, same data and collector, 1♂ (MFA-ZI 233). Santa Clara de Buena Vista, Dpto. Las Colonias [31°45' S 61°19' W], Mar. 2008, R. Milesi, 1♂ (MFA-ZI 1346). Dpto La Capital [31°40' S 60°45' W], 28 Mar. 2011, J. Colombo, 1♂ (MFA-ZI 1449). Same data, 24 Dec. 1948, G. Achenbach, 1♂ (MFA-ZI 239, identified as *A. rufipes* (Lucas 1834) by R. Schiapelli and B. Gerschman de Pikelin). Same data, 8 Apr. 1984, no collector, 1♀ (MFA-ZI 625, identified as *A. crassipes* (Keyserling, 1891)). Same data, Oct. 1995, no collector, 1W♀ (MFA-ZI 1031, identified as *A. crassipes* (Keyserling, 1891)) [31°37' S 60°42' W]. Santo Tomé, Dpto. La Capital [31°37' S 60°42' W], 27 Nov. 2007, D. Rovano, 1♀ (MFA-ZI 1332 identified as *A. crassipes* (Keyserling, 1891)). Santa Fé, 10 Sep. 1951, no collector, 1♀ (MFA-ZI 683). Rafaela [31°16' S 61°29' W], Apr. 1976, A. M Luchetti, 1♀ (MACN-Ar 38286). Vera [29°28' S 60°13' W], no data, 1♀ (MACN-Ar 38195). **Catamarca:** La Cébila [28°43' S 66°22' W], 27–28 Jan. 1987, C. Szumik and P. Goloboff, 3♀ (MACN-Ar 27105).

COMMENTS: The male and female with catalog number MACN-27117 probably belong to this species; they do not have any collection data. They have similar spermathecae, foveas, and sternums; the male is lacking the copulatory bulbs. Specimens from Entre Ríos (listed below) are tentatively assigned to this species; their morphology and spermathecae are similar. Confirmation of this awaits the collecting of males from Entre Ríos.

SPECIMENS EXAMINED: **Entre Ríos.** Villa Urquiza, [31°38' S 60°23' W], 17 Jan. 1988, P. Goloboff and C. Szumik, 1♀ (MACN-Ar. 27112). Arroyo Perucho Verna [32°9' S 58°15' W], 1981, A. Zanetic and P. Goloboff, 1♀ (MACN-Ar 28418). Ruta 14 y Arroyo Gualeayán [32°57' S 58°34' W], 27 Sep. 1987, P. Goloboff and C. Szumik, 2♀, 2 immature (MACN-Ar 36581); same locality, Oct. 1987, P. Goloboff and C. Szumik, 1♀ (MACN-Ar 27114). Paraná [31°42' S 60°30' W], 8–10 Feb. 1980, P. Grosso and P. Goloboff, 1♀ (MACN-Ar 27108).

Actinopus taragui, sp. nov.

Figures 36A–G, 37A–F, 44

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36624). **Corrientes:** Capital [27°28' S 58°49' W], 13 May. 2007, G. Rubio, 1♂. **PARATYPE:** Misiones. 3♀, (together with 2 immatures, not paratypes, MACN-Ar 36625), Parque Provincial "Islas Malvinas," Arroyo Uruzú [25°58' S 54°11' W], Feb. 1988, P. Goloboff.

ETYMOLOGY: The specific name is a noun in apposition to the type locality; in the Guaraní language, it means "Corrientes."

DIAGNOSIS: Males of *A. taragui* present a copulatory bulb (fig. 36D–F) with Ak poorly developed, extending to the apex, and MRk reduced. They differ from *A. ariasi* by having more retrolateral spines on tibia II, but fewer than present in *A. ramirezi*. Males differ from both by the lighter color in apical leg segments (patellae to tarsi) and by the presence of rastellum. Females can be distinguished by the rectangular shape of the spermathecae (fig. 37D, E), with base wide and a lobe on the outer part. Differ from *A. szumikae* and *A. coylei* by the shape of the fovea; from *A. szumikae* also by the lower number of thorns apical to the apical crown on tibia III, and darker coloration; from *A. coylei* by the sigilla not reaching the center of the sternum.

DESCRIPTION: Holotype male (MACN-Ar 36624, fig. 36A–G): *Total length:* 7.44. *Carapace* (fig. 36A): length 3.30, width 3.06. *Cephalic region:* length 1.80, width 2.16; clypeus small with few small bristles, 9 bristles between PME and 4 behind

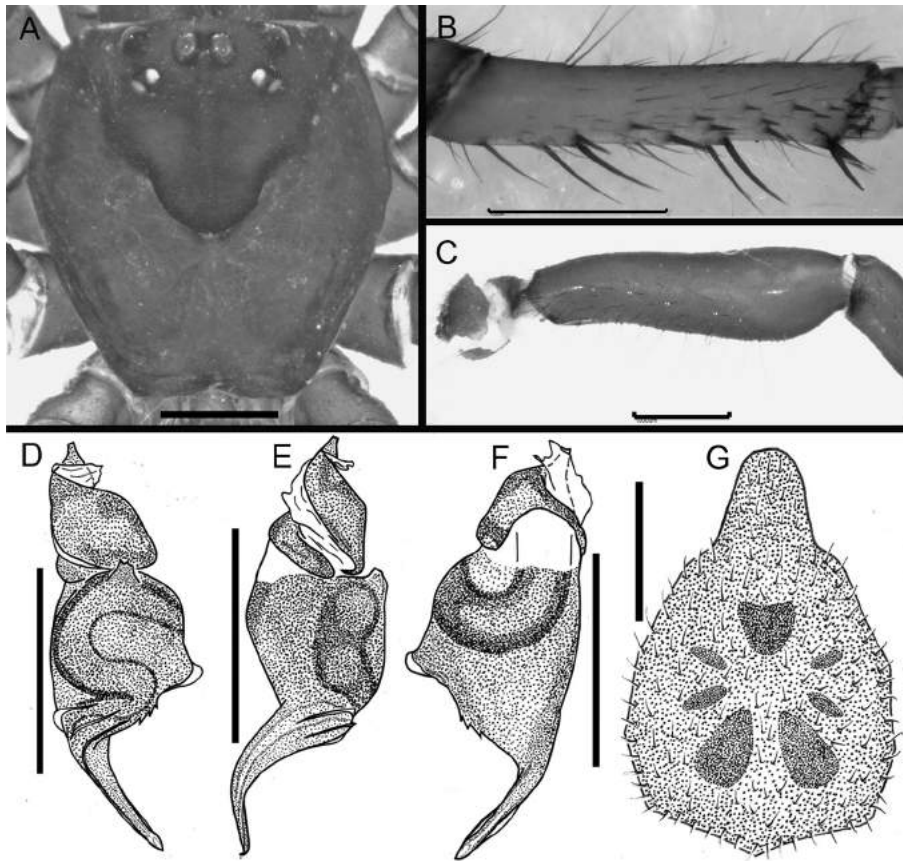


FIGURE 36. *Actinopus taragui*, sp. nov., male holotype (MACN-Ar 36624). A, carapace. B, tibia II, retrolateral. C, palpal tibia. D-F, copulatory bulb, three different views. G, sternum. Scale bars = 1 mm.

each PME-PLE, 6 on each side of the OQ. *Fovea*: length 0.54, width 1.08. *Eyes*, diameters and inter-distances: AME 0.16 (small), ALE 0.28, PME 0.12, PLE 0.16, OQ length 0.64, anterior width 1.60, 1.40 posterior width; AME-ALE 0.32, PME-PLE 0.08, AME-PME 0.32, ALE-PLE 0.20, AME-AME 0.20. *Chelicerae*: Length 2.76, width 1.38; cheliceral apex with 9 recumbent and elongated bristles that cover the base of the fang. Rastellum with 3-4 marginal cusps; cheliceral furrow with 6 large promarginal teeth and 6 retromarginal (small ones between 3d-4th and 4th-5th) and 9 denticles, near the promarginal teeth. *Labium*: length 0.68, width 0.76. *Maxillae*: anterior length 0.88, posterior length 1.44, width 1.04. *Sternum* (fig. 36G): Center slightly depressed; length 2.40, maximum width 2.08, mini-

mum width 0.76; postlabial sigillum shallow, posterior sigilla well defined and shallow. *Abdomen*: Length 2.82, small, covered with thin bristles, thicker and more numerous on the dorsum. *PMS*: length 0.32; *PLS*: length of basal:medial:apical segments 0.44:0.16:0.08. *Spigots*: 1 large, 6 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 2(10): (the other articles deformed, could not be observed). *Lengths of legs and palp*: I: 3.42, 1.44, 2.10, 2.70, 1.80, 11.46. II: 3.18, 1.38, 2.10, 2.70, 1.80, 11.16. III: 2.58, 1.50, 1.56, 2.82, 1.92, 10.38. IV: 3.30, 1.50, 2.70, 3.00, 2.10, 12.60. *Palp*: 3.60, 1.80, 3.12, -, 1.02, 9.54.

Chaetotaxy: All femora, 0. Patellae: I-II, 0; III, 22 P SUP-D ANT, +8 on the margin, 1-1-1 D (3:4 B), 6 R A +4 on the margin; IV, 44 P SUP-D ANT +4

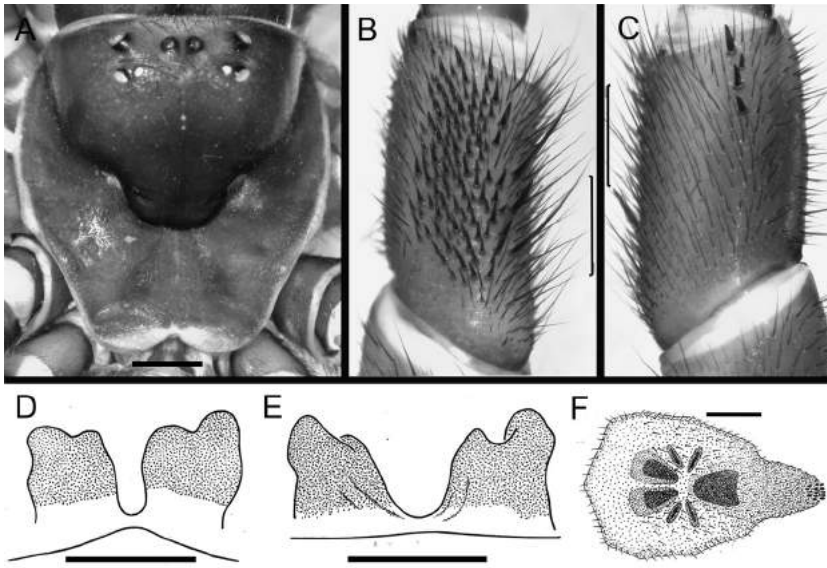


FIGURE 37. *Actinopus taragui*, sp. nov., female paratype (MACN-Ar 36625). A, carapace. B, tibia II, retrolateral. C, tibia I, prolateral. D–E, spermathecae. D, Parque Provincial “Islas Malvinas,” Misiones. E, Corrientes, Corrientes. F, sternum. Scale bars = 1 mm.

near the edge. Tibiae: I, 2 V ANT A, 1-1-1-1-2 V POST; II, 1-1-2-3-3-4 R, 1-3-2-4 V; III, 1 P, 1 D B, with an apical crown of 15 thorns, 1-1-1 R, 1-1-1 V POST, 2 V ANT A; IV, 2-2 v, 2 A POST, 1-1-2 V ANT. Metatarsi: I, 1-2-1-1-2-V POST, 2-0-2-1-1 V ANT; II, 1-1 V ANT, 1-1 V, 1-2-1-2-1-2-4 V POST-R INF; III, 1-1-2-2-4 on row D POST-R, 1-2-1 V POST, 1-1-0-1-1-1 V ANT, 1-1-1 D ANT; IV, 1-2-2-1-1 V ANT-P INF, 1-1-2 V POST. Tarsi: I, 1-1-1-1 P INF, 1-1-2-1-1-3-3 R INF, 1-1 V; II, 1-1-2-1-1 P INF, 1-1-3-1-4-2-3 R INF, 1-1 V; III, 1-1-1-1-1-1-2-2 P INF, 2-2-3-2-2 R INF (3:4 A); IV, 2-1-2-4-1-5 P INF, 2-1-2-1 R INF. Total number of retrolateral spines on tibiae I and II (fig. 36B): 0 and 14 respectively. *Palp*: tibia long and slender (width/length: 0.31 ± 0.01) (fig. 36C). Copulatory bulb (fig. 36D–F) thin, BTA and ATA developed, embolus with a series of denticles at the base. *Pseudoscopula*: Tarsi: I sparse (1:2 A); II sparse (3:4 A); III–IV, dense and uniform. Metatarsi: IV sparse and apical. *Trichobothria*: Tibiae: I 3–2; II 4–3; III 3–5; IV 6–6. Metatarsi: I–II 10; III 7; IV 6. Tarsi: I–II 7; III 9; IV 6. *Color*: Carapace dark reddish brown. Abdomen dark brown, with small bristles, booklungs with dark markings. Sternum, labium, and maxillae yel-

lowish. Legs like carapace; tarsi-metatarsi-tibiae and patellae lighter. Spinnerets yellowish.

Paratype female (MACN-Ar 36625, figs. 37A–F): *Total length*: 24.42. *Carapace* (fig. 37A): length 8.16, width 7.56, with 50 bristles on each posterior margin. *Cephalic region*: length 5.28, width 6.48; clypeus with 90 bristles and one central large; chilum with 70 bristles, 6–8 bristles between AME-ALE, 42 between PME; abundant bristles behind each PME-PLE dyad, and on each side of the OQ. *Fovea*: length 1.44, width 3.6. *Eyes, diameters and interdistances*: AME 0.20, ALE 0.48, PME 0.28, PLE 0.40, AME-ALE 1.00, PME-PLE 0.12, AME-PME 0.56, ALE-PLE 0.68, AME-AME 0.48, OQ length 1.28, anterior width 3.68, posterior width 3.56. *Chelicerae*: Length 4.20; width 2.70; chelical apex with 19 recumbent and elongated bristles covering the base of the fang; dorsal anterior region with shallow ridges. Rastellum with 12 marginal, blunt cusps, and 10 small dorsal ones. Fang groove with 7 promarginal teeth and 6 retromarginal (a small one between 3d-4th and 4th-5th; and 3 internal teeth next to the last two) and 12 denticles in the furrow, near the promargin. *Labium*: length 1.86, width 1.92, with 24 anterior

cuspules. *Maxillae*: anterior length 2.34, posterior length 3.00, width 2.34, with +120 cuspules 1:3 V ANT, expanding to the anterior face. *Sternum* (fig. 37F): Center slightly depressed; length 5.58, maximum width 4.62, minimum width 1.92. Postlabial sigillum deep, posterior sigilla shallow but well defined. *Abdomen*: Length 11.16, globose covered with small bristles. PMS: length 0.88; PLS: length of basal:medial:apical segments 1.00:0.72:0.40. *Spigots*: 4 large, 50 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 6(38):9(52):3(+70). *Lengths of legs and palp*: I: 4.74, 3.18, 2.34, 2.70, 1.20, 14.16. II: 4.74, 3.18, 2.28, 2.94, 1.20, 14.34. III: 4.32, 3.60, 1.80, 3.18, 1.20, 14.10. IV: 6.00, 3.36, 3.36, 3.60, 1.38, 17.70. Palp: 4.38, 2.88, 3.18, –, 3.00, 13.44.

Chaetotaxy: All femora: 0. Patellae: I-II, 0; III, 12 P A, +10 on the margin, 24 R (1:2 A) +16 on the margin; IV, 40 P SUP-D ANT +5 on the edge; palp, 1-1 V POST, 5 P (serial). Tibiae: I, 1-1-1-1 P (1:3 A), 24 R INF, 1-1 V POST; II, 120 R (3:4 A), 1 V POST between 1-1 V POST; III, 0/1 D BAS, 70 R (3:4 A), with apical crown of 19 thorns and 3 apical (at the apex, apical to the crown); IV, 0; palp, 13 P, 24 R INF. Metatarsi: I, 25 P INF, 25 R INF, 1-1-1-2 V POST; II, 27 P INF, 22 R INF, 1-1-1-2 V POST; III, 55 on row D POST-R (more abundant R A), 21 D ANT, 2 V A; IV, 16 P, 1 D ANT A. Tarsi: I, 9 P INF, 12 R INF, 2 V A; II, 15 P INF, 10 R INF, 2 V A; III, 25 R, 98 V-P; IV, 49 V-P; palp, 18 P INF, 29 R INF, 2 V A. Total number of retrolateral spines on tibiae I and II: 24 and 120 (fig. 37B) respectively. *Trichobothria*: Tibiae: I-II 6-7; III 6-9; IV 7-7. Metatarsi: I 12; II 16; III-IV 12. Tarsi: I 10; II-III 12; IV 8. *Color*: carapace dark reddish brown, dark chelicerae with light dorsal bands and dark dorsal spots. Abdomen brown, booklungs with dark markings. Sternum yellowish, labium and maxillae darker. Legs like carapace. Spinnerets yellowish.

DISTRIBUTION: Provinces of Corrientes, Chaco, and Misiones.

OTHER MATERIAL EXAMINED: **Corrientes**: Capital [27°28' S 58°49' W], 13 Apr. 2006, M. Chatelanaz, 1 ♀ (CARTROUNNE 7285). 13 May. 2007, G. Rubio, 1 ♂ (CARTROUNNE 8168). Paraje Yahapé, Departamento Berón de Astrada

[27°22' S 57°39' W], 6 Mar. 2008, G. Ávalos, 2 ♀ (CARTROUNNE 8170). Cerca de Galarza (grassland), no collector, 28 Apr. 2005, 1 immature (CARTROUNNE 8169). No date and collector, 1 ♂ (CARTROUNNE 8171). **Chaco**: San Bernardo [27°28' S 58°55' W], 16 Mar. 1991, O. Di Iorio, 1 ♂ (MACN-Ar 30737). No specific locality, 3 Apr. 2006, V. Fernandez, 1 ♂ (CARTROUNNE 8167). **Misiones**: San Ignacio, near banks of Paraná, Jan. 2012, P. Goloboff, 1 ♂ (FML-ARAN 02231).

COMMENTS: The specimens from Yahapé differ in the color of the booklung markings and the shape of the fovea. The specimen of San Ignacio, differs by its larger size and the legs with just metatarsi and tarsi lighter than the rest of the segments. In the absence of additional specimens, it seems best to include them in *A. taragui*, because of their similarity in other characters and their geographical proximity.

SPECIES WITH TYPE III MORPHOLOGY

The species with morphology of type III present a series of unique morphological characters in the genus such as: a discontinuous thoracic fovea that is interrupted in the middle (figs. 42A) and the sternum with a deep central depression (fig. 42B). They share with the species of type II the triangular shape of the postlabial sigillum and sternal I-II sigilla elongated, the abundance of retrolateral thorns on tibia II of females, and the lobed spermathecae. They are distributed in the provinces of Catamarca, Córdoba, and southern Buenos Aires (fig. 46).

Species included: *Actinopus balcarce*, sp. nov., *Actinopus excavatus*, sp. nov., *Actinopus goloboffi* Ríos-Tamayo, 2014.

Actinopus balcarce, sp. nov.

Figures 38A–G, 46

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 2864): Buenos Aires: Balcarce [37°51' S 58°15' W], Apr. 1950, C. de la Serna, 1 ♂.

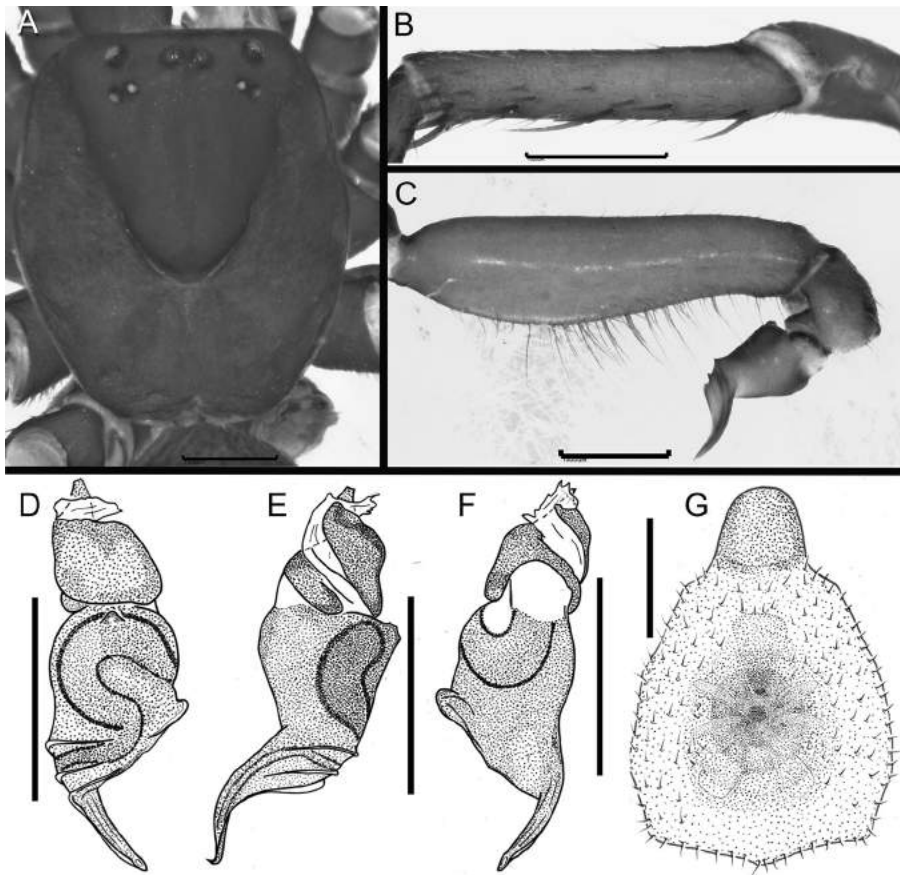


FIGURE 38. *Actinopus balcarce*, sp. nov., male holotype (MACN-Ar 2864). **A**, carapace showing the discontinuous thoracic fovea. **B**, tibia II, retrolateral. **C**, pedipalp. **D–F**, copulatory bulb, three different views. **G**, sternum showing the deep central depression. Scale bars = 1 mm.

ETYMOLOGY: The specific name is a noun in apposition that refers to the type locality.

DIAGNOSIS: *Actinopus balcarce* can be distinguished from *A. goloboffi* and *A. excavatus* by having the bulb with BTA developed and ATA little developed (fig. 38D–F), and by the lower number of retrolateral thorns on tibia II (fig. 38B). It differs from *A. goloboffi* by the absence of projections on the anterior angle of coxae I–II.

Female: Unknown.

DESCRIPTION: Holotype male (MACN-Ar 2864, figs. 38A–G): *Total length:* 11.28. *Carapace* (fig. 38A): length 4.08, width 3.60. *Cephalic region:* length 2.52, width 2.40; clypeus short with one central bristle and 10 small ones to the sides, 14 bristles

between PME and 4–6 behind each PME-PLE dyad, with one larger medial bristle on each side of the OQ. *Fovea* (fig. 38A): length 0.78, width 1.32. *Eyes, diameters and interdistances:* AME 0.12, ALE 0.24, PME 0.12, PLE 0.16, OQ length 0.68, anterior width 1.80, 1.72 posterior width; AME-ALE 0.48, PME-PLE 0.12, AME-PME 0.32, ALE-PLE 0.40, AME-AME 0.20. *Chelicerae:* Length 2.12, width 1.00; cheliceral apex with 9 recumbent and elongated bristles that cover the base of the fang. *Rastellum* with 9 marginal blunt cusps and 7 small dorsal attenuated ones. Cheliceral furrow with 5 large promarginal teeth and 6 retromarginal (3d-5th and 6th smaller) and 14 denticles, near the promarginal teeth. *Labium:* length 0.88, width 0.80, with basal

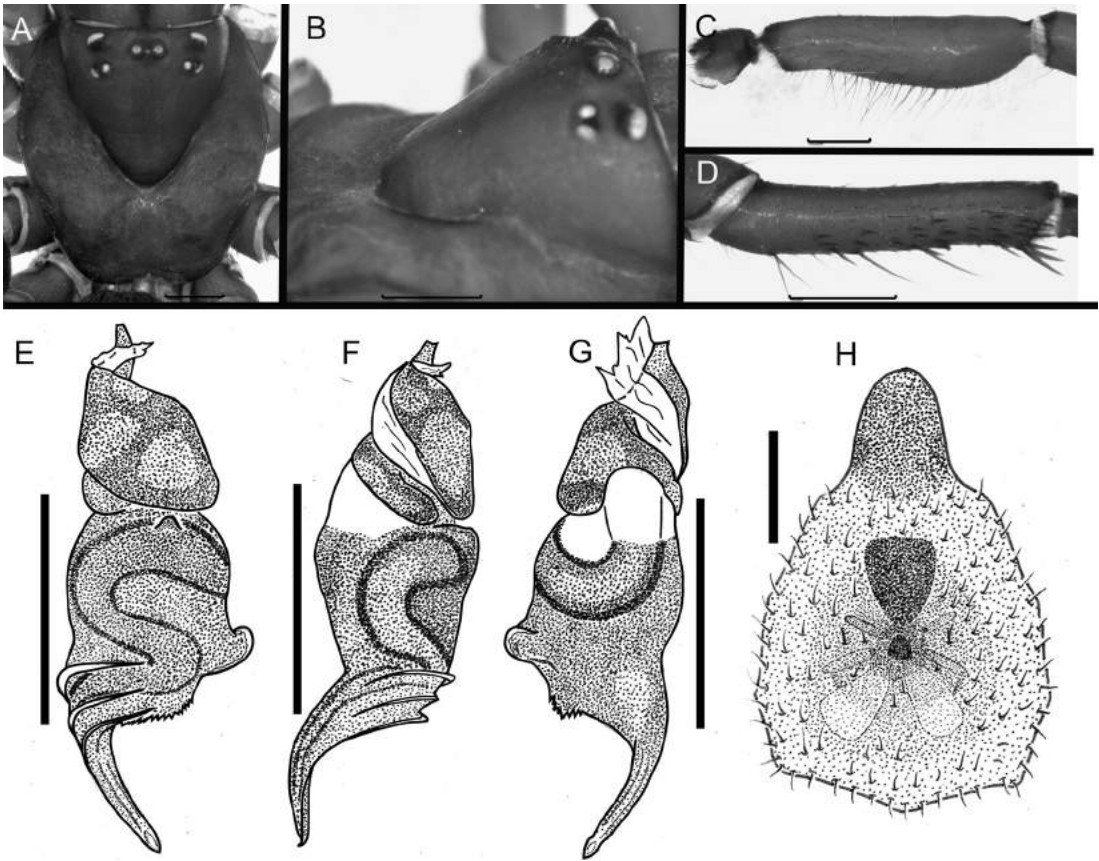


FIGURE 39. *Actinopus excavatus*, sp. nov., male holotype (MACN-Ar 36629). A, carapace. B, carapace showing the discontinuous thoracic fovea. C, pedipalp. D, tibia II, retrolateral. E-G, copulatory bulb, three different views. H, sternum. Scale bars = 1 mm.

shallow grooves. *Maxillae*: anterior length 0.90, posterior length 1.50, width 1.08. *Sternum* (fig. 38G): Length 2.48, maximum width 2.40, minimum width 0.78. Postlabial sigillum shallow, posterior sigilla shallow, converging in the central depression. *Abdomen*: Length 4.56, with dark bristles. PMS: length 0.36; PLS: length of basal:medial:apical segments 0.52:0.20:0.12. *Spigots*: 1 large, 15 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article (20):1(18):1(30). *Lengths of legs and palp*: I: 3.90, 1.56, 2.28, 2.76, 1.80, 12.30. II: 3.84, 1.56, 2.28, 3.00, 1.92, 12.60. III: 2.88, 1.62, 1.80, 3.00, 1.92, 11.22. IV: 3.90, 1.80, 3.00, 3.30, 2.10, 14.10. *Palp*: 4.56, 2.46, 3.60, –, 0.90, 11.61.

Chaetotaxy: Right legs II and IV missing, only left legs described. Trochanter: I-II-IV-palp 0; III, 1 P SUP, 1 R INF. Femora: I-II-IV-palp, 0; III, 1 D A. Patellae: I-II, 0; III, 1-2-2 P, 28 P SUP-D ANT +8 on the margin, 1 D B, 4 R A +9 on the margin; IV, 53 P SUP-D ANT. Tibiae: I, 1-2 R INF A, 2-1-2-2-1-3 V; II, 1-2-2-2 R INF (1:2 A), 2-1-1-2-1-3 V; III, 2-1-1-2 P, 1 D B, 1-1-1 R, 1-2 V POST (1:2 A), 2-0-1-2 V ANT, with a crown of 17 thorns; IV, 1-1-1 P INF (1:2 A), 1 R A, 1-1-1-1-3 V. Metatarsi: I, 2-2-2-1-3-4-3 R INF-V POST, 1-1-1 V (1:2 B), 1-1-1-1-1 V ANT; II, 2-1-1-1-1-1 P INF, 1-1-2-2-1-2-2 R INF, 2-2-1-2-1-1-3 V; III, 1-1-2-1-1-1-1-2 P, 1-1-0-1-2 D POST-R, 2-1-4-2-3-3 V, 1-1 D ANT (1:2 B); IV, 1-1-2-1-1-2-2 P, 1-1-1-0-1-4 V. Tarsi: I, 1-1-1-1 P INF,

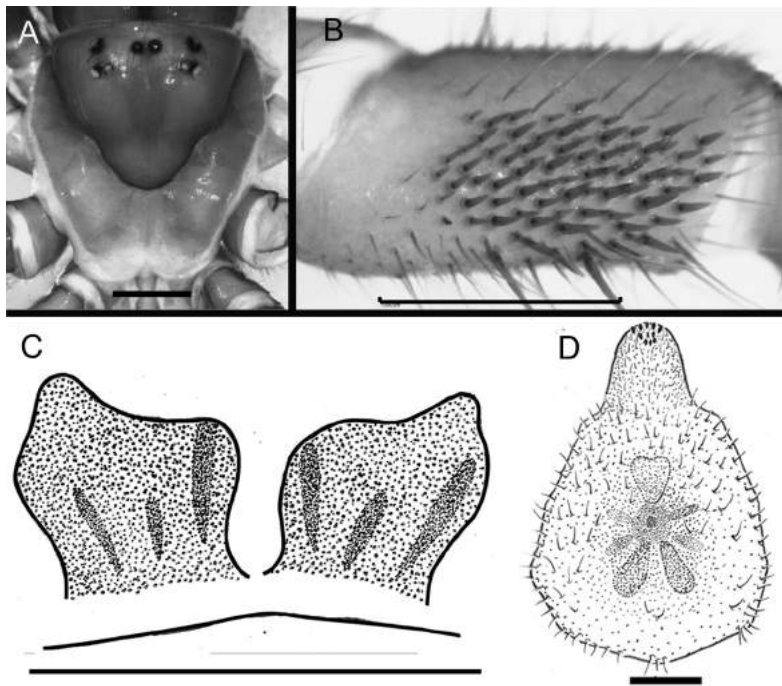


FIGURE 40. *Actinopus excavatus*, sp. nov., female paratype (MACN-Ar 36630). **A**, carapace. **B**, tibia II, retro-lateral. **C**, spermathecae. **D**, sternum showing the deep central depression. Scale bars = 1 mm.

1-1-2-2-1-3 R INF, 1-0-1 V; II, 1-1-1-1-1-2 P INF, 3-1-1-2-4-2-5 R INF, 1-1-2 V; III, 1-1-1-1-4 P INF, 1-2-3-1-2 R INF, 1 V A; IV, 2-1-3-2-3-2-5-4 P, 1 P A SUP, 1-2-1-1-1-2 R INF, 1 V A. Total number of retrolateral spines on tibiae I and II (fig. 38B): 3 and 7 respectively. *Palp*: Tibia long and slender (width/length: 0.27 ± 0.01) (fig. 38C). Bulb (fig. 38D-F), ATA poorly developed and BTA developed; embolus with a series of small denticles at the base and with Ak extending to the apex; MRk present. *Pseudoscopula*: tarsi: I-II, sparse (uniformly distributed throughout the segment); III-IV, dense and uniform. *Trichobothria*: Tibiae: I-III 4-3; IV 5-4. Metatarsi: I 9; II 10; III 9; IV 8. Tarsi: I 7; II 8; III-IV 6. *Color*: Carapace reddish brown, cephalic region and chelicerae darker. Abdomen brown, booklungs with dark markings. Spinnerets yellowish. Sternum, labium, and maxillae lighter reddish brown. Legs as the carapace, tarsi light. Palpal tibia light.

DISTRIBUTION: Only known from the type locality.

ADDITIONAL MATERIAL EXAMINED: None.

***Actinopus excavatus*, sp. nov.**

Figures 39A-H, 40A-D, 46

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar 36629): *Córdoba*: Calamuchita [$32^{\circ}16' S$ $64^{\circ}37' W$], Mar.-Apr, 1958, Viana, 1 ♂. **PARATYPE**: 1 ♀ (MACN-Ar 36630), Cerro Colorado [$30^{\circ}6' S$ $63^{\circ}55' W$], 20 Sep, 1959, March.

ETYMOLOGY: The specific name refers to the deep depression in the center of the sternum.

DIAGNOSIS: *Actinopus excavatus* can be distinguished from *A. goloboffi* by the absence of projections in the anterior angle of coxae I-II; males also differ by the presence of a thinner and more slender bulb (fig. 39E-G). Females differ from others of type III morphology by the spermathecae smaller and subquadrate (fig. 40C), with a small external apical lobe. The species differs from *A. balcarce*, by

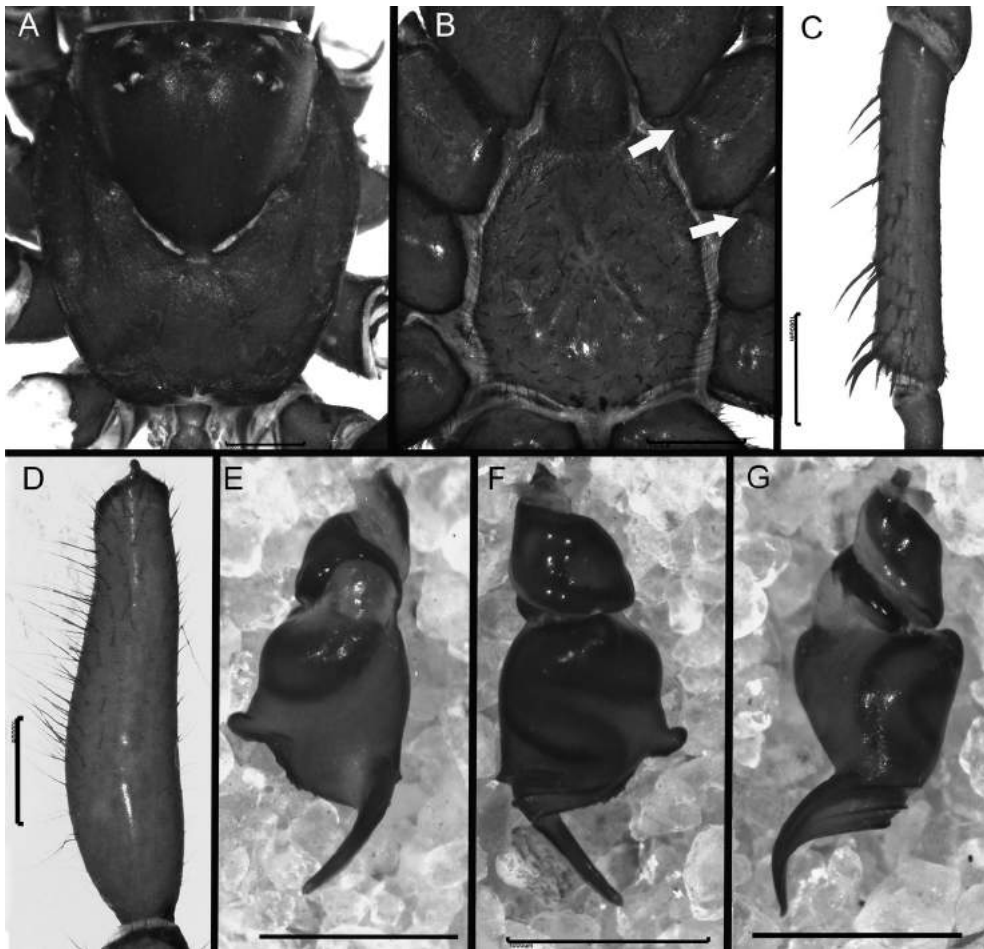


FIGURE 41. *Actinopus goloboffi* Ríos, 2014., male holotype (MACN-Ar 31441). A, carapace. B, sternum (white arrows indicate the projections). C, tibia II, retrolateral. D, pedipalp. E-G, copulatory bulb, three different views. Scale bars = 1 mm.

the poorly developed BTA, well-developed ATA, and the larger number of retrolateral thorns on tibia II.

DESCRIPTION: Holotype male (MACN-Ar 36629, figs. 39A–H): *Total length:* 11.40. *Carapace* (fig. 39A): length 4.32, width 4.20. *Cephalic region:* length 2.70, width 2.82; clypeus with a central bristle and 3–4 small ones to the sides, 14 bristles between PME and 4–5 behind each PME-PLE dyad; with 4–5 small bristles and a larger one on each side of the OQ, and 1-1 behind (along medial line). *Fovea* (fig. 39B): length 0.90, width 1.50. *Eyes, diameters and inter-*

distances: AME 0.12, ALE 0.32, PME 0.16, PLE 0.20, OQ length 0.76, anterior width 2.16, 3.06 posterior width; AME-ALE 1.52, PME-PLE 0.08, AME-PME 0.40, ALE-PLE 0.40, AME-AME 0.28. *Chelicerae:* Length 1.92, width 1.08, with shallow dorsal ridges. Cheliceral apex with 10 recumbent and elongated bristles that cover the base of the fang. Rastellum with 9 marginal blunt cusps and 4 small dorsal attenuated ones. Cheliceral furrow with 6 large promarginal teeth and 4 retromarginal and 10 denticles, near the promarginal teeth. *Labium:* length 0.88, width 0.80. *Maxillae:* anterior length 1.14, posterior length

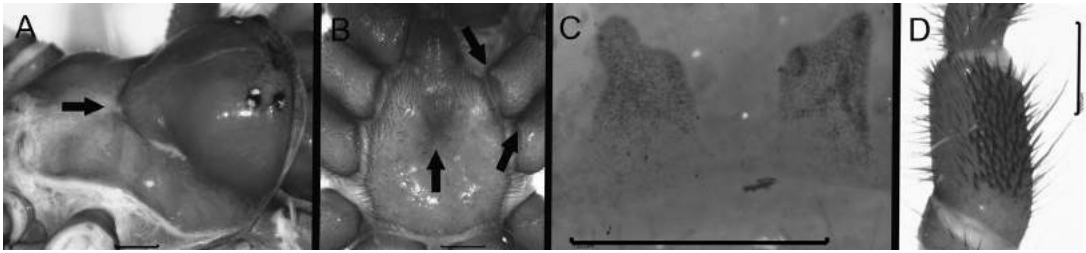


FIGURE 42. *Actinopus goloboffi* Ríos, 2014., female paratype (MACN-Ar 28417). A, carapace showing the discontinuous thoracic fovea. B, sternum and coxae showing the deep central depression and the projection in the anterior angle of coxae I-II. C, spermathecae. D, tibia II, retrolateral. Scale bars = 1 mm.

1.92, width 1.98. *Sternum* (fig. 39H): Length 3.00, maximum width 2.80, minimum width 0.84. Postlabial sigillum shallow, posterior sigilla shallow, converging toward central depression. *Abdomen*: Length 4.20, with dark bristles and lateral grooves. PMS: length 0.48; PLS: length of basal:medial:apical segments 0.48:0.20:0.08. *Spigots*: 1 large, 29 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 1(30):2(32):(50). *Lengths of legs and palp*: 4.50, 1.86, 2.70, 3.36, 2.10, 14.52. II: 4.32, 1.80, 2.58, 3.54, 2.10, 14.34. III: 3.30, 1.80, 2.10, 3.72, 2.40, 13.32. IV: 4.50, 1.98, 3.30, 3.90, 2.40, 16.08. *Palp*: 5.40, 2.70, 4.32, -, 1.08, 13.50.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III, 30 P SUP-D ANT +10 on the margin, 1 P A INF, 1 D B, 9 R A +10 on the margin; IV, 56 P SUP-D ANT, 1 P A. Tibiae: I, 1-1-1-1-1-1-3 R INF, 1-2-1-1-1-2-1-2-1-4 V; II, 2-2-1-2-3-2-4-3-3 R INF, 2-1-2-1-1-4 V; III, 1-1-2-1 P, 1 D B, with a crown of 22 thorns, 3-3-5-2-2 R, 1-3 V (1:2 A); IV, 1 P M, 2-2-4 V. Metatarsi: I, 2-1-1-2-2-1-2 V, 1-3-2-2-2-3-1-2-4 V POST-R INF, 2-2-3-1-3-1-1-2 V ANT; II, 1-1-1-1-1-1-1-1-1-1 P INF, 1-1-1-2-1-1-1-4-2-3-3-2-3-1-3 R INF-V POST, 3-1-2-1-4-4-1-3-3-1-3 V; III, 1-2-0-1-1-2 D POST, 1-1-1-1-1 D ANT, 2-3-1-1-2-1-2-3-3 V ANT-P INF, 1-2-2-1-3-1-5 V POST-R INF; IV, 2-2-1-1-3-2 P (3:4 A), 1-1 R (1:2 A), 2-0-2-3 V. Tarsi: I, 1-1-1-1-1-1-1 P INF, 1-2-2-2-1-1-4-3 R INF, 1-1-0-1-1 V; II, 1-2-2-2-1-2-2-1-1 P INF, 26 R INF, 1-1-1-1-1-2 V; III, 1-0-2-1-2-5-1-1-4 P INF, 4-1-2-1-2-2-1-3-6-4-1 R INF, 1 V A; IV, 1-2-1-3-1-3-4-1-4-3 P INF, 2-1-2-2-1-1-3 R INF. Total number of

retrolateral spines on tibiae I and II (fig. 39D): 9 and 22 respectively. *Palp*: Tibia long and slender (width/length: 0.28 ± 0.004) (fig. 39C). Bulb (fig. 39E-G), BTA poorly developed and ATA well developed; embolus with a series of denticles at the base and Ak extending to the apex. *Pseudoscapula*: tarsi: I-II, sparse (uniformly distributed throughout the segment); III-IV, dense and uniform. *Trichobothria*: Tibiae: I-II 3-4; III 4-5; IV 5-6. Metatarsi: I 10; II 12; III 11; IV 6. Tarsi: I 10; II-III 9; IV 7. *Color*: Carapace and chelicerae dark reddish brown. Abdomen dark brown, booklungs with dark markings. Spinnerets yellowish. Sternum, labium, and maxillae light reddish brown. Legs as the carapace, tarsi lighter.

Paratype female (MACN-Ar 36630, figs. 40A-D): *Total length*: 18.96. *Carapace* (fig. 40A): length 5.70, width 5.34, with 10 bristles on each posterior margin. *Cephalic region*: length 3.72, width 4.20; clypeus with 30 bristles, chilum with 15 small ones, 20 bristles between PME and 3-5 behind each PLE-PME dyad, 1-1 bristles in the line to the fovea, 6-8 bristles on each side of the OQ. *Fovea*: length 1.02, width 2.10. *Eyes, diameters and interdistances*: AME 0.12, ALE 0.28, PME 0.20, PLE 0.24, AME-ALE 0.80, PME-PLE 0.12, AME-PME 0.56, ALE-PLE 0.56, AME-AME 0.32, OQ length 0.96, anterior width 2.68, 2.60 posterior width. *Chelicerae*: Length 2.22, width 1.74, slight dorsal grooves 1:3 A. Cheliceral apex with 9 recumbent and elongated bristles covering the base of the fang; dorsal anterior region with surface grooves. Rastellum with 9 marginal, blunt cusps, and 11 small dorsal ones.

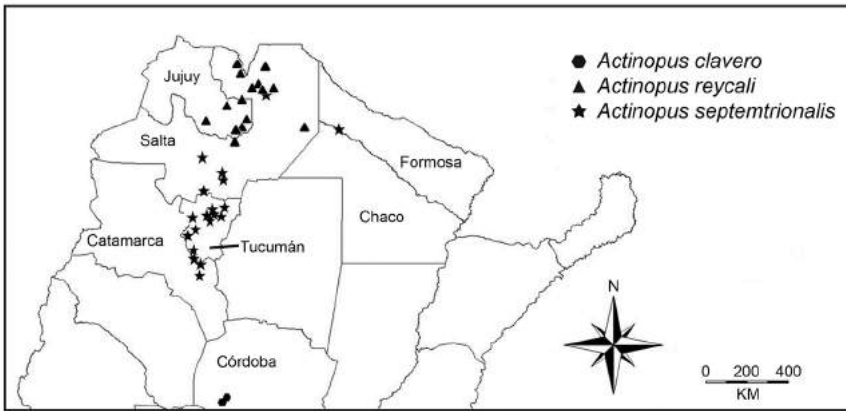


FIGURE 43. Known distribution of the species with type I morphology. *Actinopus clavero* sp. nov., *Actinopus reycali* sp. nov., *Actinopus septentrionalis* sp. nov.

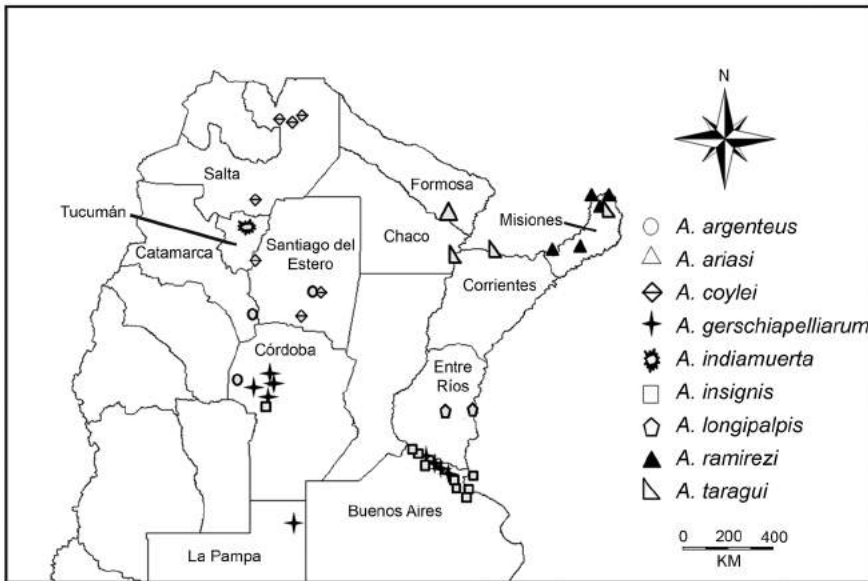


FIGURE 44. Known distribution of the species with type II morphology (part) in Argentina. *Actinopus argenteus* sp. nov., *Actinopus ariasi* sp. nov., *Actinopus coylei* sp. nov., *Actinopus gerschiapelliarum* sp. nov., *Actinopus indiamuerta* sp. nov., *Actinopus insignis* (Holmberg, 1881), *Actinopus longipalpis* Koch, 1842, *Actinopus ramirezi* sp. nov., *Actinopus taragui* sp. nov. Additional records (in Uruguay) for *A. gerschiapelliarum* and *A. longipalpis* are given in the list of specimens examined.

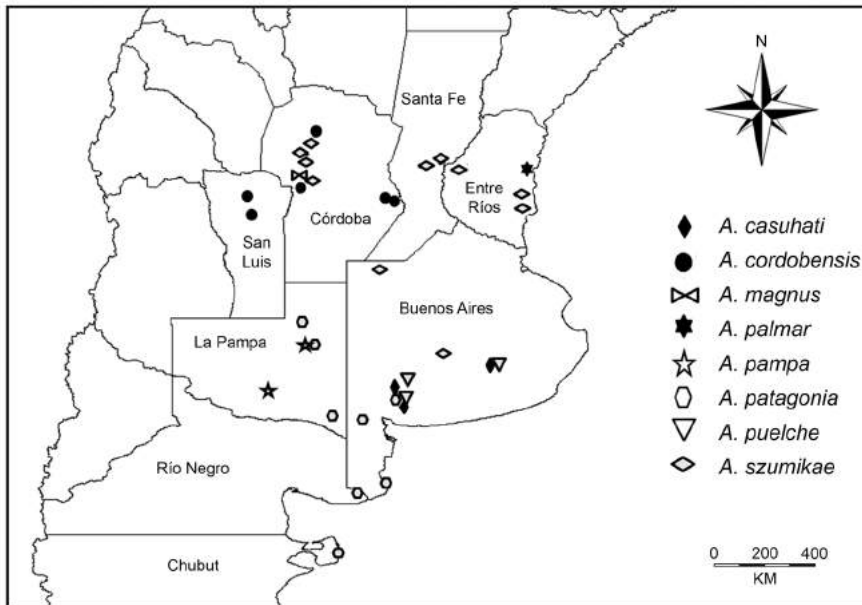


FIGURE 45. Known distribution of the species with type II morphology (part) in Argentina. *Actinopus casuhati* sp. nov., *Actinopus cordobensis* sp. nov., *Actinopus magnus* sp. nov., *Actinopus palmar* sp. nov., *Actinopus pampa* sp. nov., *Actinopus patagonia* sp. nov., *Actinopus puelche* sp. nov., *Actinopus szumikae* sp. nov. Additional records (in Uruguay) for *A. puelche* are given in the list of specimens examined.

Fang groove with 4 large promarginal teeth and 5 retromarginal ones (a small one between 3d-4th) and 6 denticles in the furrow, near the promargin. *Labium*: length 1.36, width 0.92, with 11 anterior cuspules. *Maxillae*: anterior length 1.44, posterior length 1.92, width 1.6, with +80 cuspules 1:3 V ANT, extending to the anterior face. *Sternum* (fig. 40D): Length 3.68, maximum width 3.56, minimum width 0.84. Postlabial sigillum shallow; posterior sigilla converging toward central depression. *Abdomen*: Length 7.80, with small bristles, long in the dorsum. PMS: length 0.60; PLS: length of basal:medial:apical segments 0.88:0.44:0.28. *Spigots*: 3 large, 35 small on PMS; PLS, numbers of large(small) spigots on basal:medial:apical article 6/8(63):10(60):6(65). *Lengths of legs and palp*: I: 2.70, 1.80, 1.26, 1.50, 0.78, 8.04. II: 2.82, 1.86, 1.26, 1.80, 0.78, 8.52. III: 2.82, 2.10, 0.90, 1.92, 0.78, 8.52. IV: 3.30, 2.16, 1.92, 2.10, 0.78, 10.26. Palp: 2.70, 1.80, 1.80, -, 1.86, 8.16.

Chaetotaxy: Femora: 0. Patellae: I-II, 0; III, 16 P (1:2 A) +11 on the margin, 26 R (1:2 A) +17 on the margin; IV, 61 P SUP-D ANT; palp, 1-1-1 P. Tibiae: I, 1 P A, 9 R INF, 1-1 V POST (1:3 A); II, 77 R (3:4 A), 1-1 V POST; III, 1 D B, with crown of 18 thorns and 6 apicals (on the apex, anterior to the crown) 58 R; IV, 1-1-1-1 P (1:2 A, thin); palp, 8 P (serial), 15 R INF (3:4 A). Metatarsi: I, 17 P INF, 12 R INF, 1-1-1-2 V POST; II, 1-1-2-1-1-2 P INF, 14 R INF, 1-1-2 V POST; III, 15 D ANT, 16 D B (7-9 divided by a glabrous line), 37 on row D POST-R (more abundant R A), 1 V A POST; IV, 8 P (3:4 A), 1 D A ANT, 1 V A ANT. Tarsi: I, 7 P INF, 11 R INF, 2 V A; II, 6 P INF (serial), 13 R INF, 2 V A; III, 38 R, 31 V-P; IV, 37 V-P; palp, 14 P INF, 20 R INF, 1 V A. Total number of retrolateral spines on tibiae I and II (fig. 40B): 9 and 77 respectively. *Trichobothria*: Tibiae: I 3-4; II 4-6; III 4-5; IV 5-5. Metatarsi: I 11; II 12; III 11; IV 5. Tarsi: I 11; II 12; III 10;

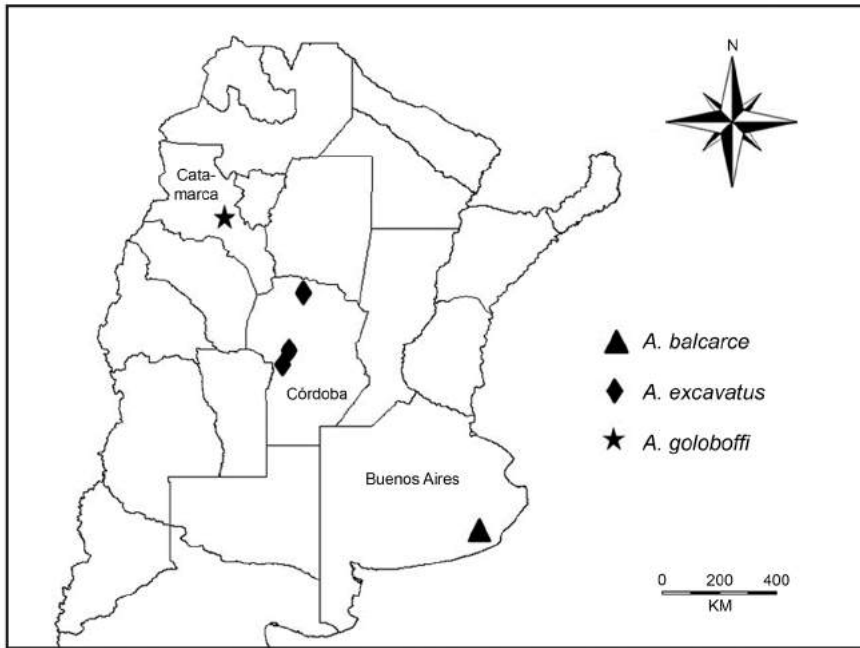


FIGURE 46. Known distribution of the species with type III morphology in Argentina. *Actinopus balcarce* sp. nov., *Actinopus excavatus* sp. nov., *Actinopus goloboffi* Ríos-Tamayo, 2014.

IV 6. *Color*: Carapace light reddish brown, chelicerae dark. Abdomen lighter brown, booklungs with dark markings. Sternum reddish brown, labium, and maxillae darker. Spinnerets yellowish. Legs as the carapace.

DISTRIBUTION: Province of Córdoba.

OTHER MATERIAL EXAMINED: **Córdoba**: El Sauce, Calamuchita [31°58' S 64°33' W], Dec, 1938, Exc. I.M. Viana, 1♂ (MACN-Ar 36631).

Actinopus goloboffi Ríos-Tamayo, 2014.

Figures 41A–G, 42A–D, 46

TYPE MATERIAL: HOLOTYPE ♂ (MACN-Ar. 31441): *Catamarca*: Andalgalá [27°36' S 66°18' W], 19 Oct, 1972, Enders, 1♂. **PARATYPE**: 1♀ (MACN-Ar. 28417), 3 km S.W. Andalgalá (camino a Belén) [27°35' S 66°20' W], 2 Feb., 1986, P. Goloboff and C. Szumik.

DIAGNOSIS: *Actinopus goloboffi* can be distinguished from other species of the genus (except *A. excavatus* and *A. balcarce*) by the discontinuous tho-

racic fovea, interrupted in the middle (fig. 41A), and the sternum with a deep central depression (fig. 41B). It differs from those two species by the presence of a projection in the anterior angle of coxae I–II (figs. 41B). Females can be recognized by the subquadrate spermathecae with the external lobe more developed than the internal lobe (fig. 42C).

DESCRIPTION: See Ríos-Tamayo, 2014: figs. 1–12.

DISTRIBUTION: Province of Catamarca.

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REFERENCES

- Bond, J. 2012. Phylogenetic treatment and taxonomic revision of the trapdoor spider genus *Aptostichus* Simon (Araneae, Mygalomorphae, Euctenizidae). *ZooKeys* 252: 1–209.
- Coyle, F. 1971. Systematics and natural history of the mygalomorph spider genus *Antrodiaetus* and related genera (Araneae: Antrodiaetidae). *Bulletin of the Museum of Comparative Zoology* 141: 269–402.
- Coyle, F. 1974. Systematics of the trapdoor spider genus *Aliatypus* (Araneae: Antrodiaetidae). *Psyche* 81: 431–500.
- Coyle, F. 1981. Notes on the behaviour of *Ummidia* trapdoor spiders (Araneae, Ctenizidae): burrow construction, prey capture, and the functional morphology of the peculiar third tibia. *Bulletin of the British Arachnological Society* 5:159–165.
- Coyle, F., P. Goloboff, and R. Samson. 1990. *Actinopus* trapdoor spiders (Araneae, Actinopodidae) killed by the fungus, *Nomuraea atypicola* (Deuteromycotina). *Acta Zoologica Fennica* 190: 89–93.
- Ebermann, E. and P. Goloboff. 2002. Association between neotropical burrowing spiders (Araneae: Nemesiidae) and mites (Acari: Heterostigmata, Scutacaridae). *Acarología* 42 (1): 173–184.
- Engelbrecht, I., and L. Prendini. 2012. Cryptic diversity of South African trapdoor spiders: three new species of *Stasimopus* Simon, 1892 (Mygalomorphae, Ctenizidae), and redescription of *Stasimopus robertsi* Hewitt, 1910. *American Museum Novitates* 3732: 1–42.
- Ferretti, N., G. Pompozzi, S. Copperi, and L. Schwerdt. 2013. Aerial dispersal by *Actinopus* spiderlings (Araneae: Actinopodidae). *Journal of Arachnology* 41 (3): 407–408.
- Ferretti, N., M. Nime, and C. Mattoni. 2017. Three new *Idiops* (Mygalomorphae: Idiopidae) from Argentina and redescription of the male of *I. hirsutipedis* Mello-Leitão, 1941. *Journal of Natural History*. [doi: 10.1080/00222933.2017.1319516]
- Garrison, N., et al. 2017. Spider phylogenomics: untangling the spider tree of life. *PeerJ* 4:e1719. [doi: org/10.7717/peerj.1719]
- Greenstone, M., C. Ignoffo, and R. Samson. 1987. Susceptibility of spider species to the fungus *Nomurea atypicola*. *Journal of Arachnology* 15: 266.
- Gerschman de Pikelin, B. and Schiapelli, R. 1962. Designación del neotypus de *Grammostola doeringi* (Holmberg, 1881) (Araneae): descripción del allotypus hembra y consideraciones sistemáticas. *Physis, Revista de la Sociedad Argentina de Ciencias Naturales*(C) 23: 153–155.
- Gertsch, W.J., and N.I. Platnick. 1979. A revision of the spider family Mecicobothriidae (Araneae, Mygalomorphae). *American Museum Novitates* 2687: 1–32.
- Goloboff, P.A. 1987. El genero *Neocteniza* Pocock, 1895 (Araneae, Mygalomorphae, Idiopidae) en la Argentina y Paraguay. *Journal of Arachnology* 15: 29–50.
- 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.A., and N.I. Platnick. 1987. A review of the Chilean spiders of the superfamily Migoidea (Ara-

- neae, Mygalomorphae). *American Museum Novitates* 2888: 1–15.
- Goloboff, P.A., and N.I. Platnick. 1992. New spiders of the mygalomorph genus *Neocteniza* (Araneae, Idiopidae). *American Museum Novitates* 3054: 1–9.
- Griswold, C. 1987. The African members of the trapdoor spider family Migidae (Araneae: Mygalomorphae). 1: The genus *Moggridgea* O.P. Cambridge, 1875. *Annals of the Natal Museum* 28 (1): 1–118.
- Griswold, C., and J. Ledford. 2001. A monograph of the migid trap-door spiders of Madagascar, with a phylogeny of world genera (Araneae, Mygalomorphae, Migidae). *Occasional Papers of the California Academy of Science* 151: 1–120.
- Hamilton, C.A., B.E. Hendrixson, and J.E. Bond. 2016. Taxonomic revision of the tarantula genus *Aphonopelma* Pocock, 1901 (Araneae, Mygalomorphae, Theraphosidae) within the United States. *ZooKeys* 560: 1–340. [doi: 10.3897/zookeys.560.6264]
- Hijmans, R.J., et al. 2012. DIVA-GIS 7.5 software. Data manual (available at www.diva-gis.org/).
- Holmberg, E. 1881. Arácnidos. In *Informe oficial de la Comisión científica agregada al Estado Mayor General de la Expedición al Rio Negro (Patagonia) ... bajo los órdenes del General D. Julio A. Roca. Entrega 1 (Zoología): 117–168. Buenos Aires: Imprenta de Ostwald y Martinez.*
- Koch, C.L. 1842. Die Arachniden, vol. 9: 57–108. Nürnberg: In der C.H. Zehschen Buchhandlung.
- Lucas, S., A. Cirelli, I. Knysak, and L. Zveibil. 1978/79. Aracnídeos coletados no Piauí durante a realização do Projeto Rondon XXII. *Memórias do Instituto Butantan* 42/43:127–138.
- Mello-Leitão, C.F. de. 1920. Tetrapneumones trionychias novas do Brasil. *Revista de Ciências* 4: 58–60.
- Mello-Leitão, C.F. de. 1923. Theraphosidae do Brasil. *Revista do Museu Paulista* 13: 1–438.
- Mello-Leitão, C. F. de.1933. Catalogo das aranhas argentinas. *Archivos da Escola Superior de Agricultura e Medicina Veterinaria, Rio de Janeiro* 10: 3–63.
- Mello-Leitão, C.F. de. 1941. Las arañas de Córdoba, La Rioja, Catamarca, Tucumán, Salta y Jujuy colectadas por los Profesores Birabén. *Revista del Museo de La Plata (Sección Zoología)* 2: 99–198.
- Miglio, L.T. 2009. Taxonomia das espécies brasileiras de *Actinopus* perty, 1983 (Araneae, Mygalomorphae, Actinopodidae). Master's thesis, Universidade Federal do Pará, Belém, Brazil, 107 pp.
- Miglio, L.T., M.T. Sylvania, and A. Bonaldo. 2012. On the identity of the type species of *Actinopus tarsalis* (Araneae: Actinopodidae). *Zoología* 29 (4): 375–379.
- Pérez-Miles, F., J.P.L. Guadanucci, J.P. Jurgilas, R. Becco, and C. Perafán. 2017. Morphology and evolution of scopula, pseudoscopula and claw tufts in Mygalomorphae (Araneae). *Zoomorphology* 136: 435. [doi.org/10.1007/s00435-017-0364-9]
- Raven, R.J. 1985. The spider infraorder Mygalomorphae (Araneae): cladistics and systematics. *Bulletin of the American Museum of Natural History* 182 (1): 1–180.
- Raven, R.J. 1994. Mygalomorph spiders of the Barychelidae in Australia and the Western Pacific. *Memoirs of the Queensland Museum* 35 (2): 291–706.
- Ríos-Tamayo, D. 2014. A new species of the genus *Actinopus* (Mygalomorphae, Actinopodidae) from Argentina. *Acta Arachnologica* 63 (2): 73–77.
- Roewer, C.F. 1942. *Katalog der Araneae von 1758 bis 1940*. Bremen: Natura.
- Schiapelli, R., and B. Gerschman. 1942. Arañas argentinas (la parte). *Anales del Museo Argentino de Ciencias Naturales* 40: 317–332.
- Schiapelli, R., and B. Gerschman de Pikelin. 1958. Arañas argentinas III. Arañas de Misiones. *Revista del Museo Argentino de Ciencias Naturales Bernardino Rivadavia* 3: 187–231.
- Schiapelli, R., and B. Gerschman de Pikelin. 1962. Importancia de las espermatecas en la sistemática de las arañas del suborden Mygalomorphae (Araneae). *Physis, Revista de la Sociedad Argentina de Ciencias Naturales (C)* 23: 69–75.
- Schiapelli, R., and B. Gerschman de Pikelin. 1965. Distribución de las arañas Mygalomorphae en la Argentina. *Anales 2º Congreso Latinoamericano de Zoología, São Paulo* 2: 15–17.
- Silva-Moreira, T., R.L.C. Baptista, A.B. Kury, A.P.L. Giupponi, E.H. Backup, and A.D. Brescovit. 2010. Annotated check list of Arachnida type specimens deposited in the Museu Nacional, Rio de Janeiro. II—Araneae. *Zootaxa* 2588: 1–91.
- Simon, E. 1892. *Histoire naturelle des araignées*, vol. 1: 1–256. Paris: Roret.
- Wheeler, W., et al. 2016. The spider tree of life: phylogeny of Araneae based on target-gene analyses from an extensive taxon sampling. *Cladistics*. [doi: 10.1111/cla.12182]
- World Spider Catalog. 2017. World spider catalog. Natural History Museum Bern. Available online (<http://wsc.nmbe.ch>), version 17.5, accessed July 10, 2017.

