ZOOLOGIA 33(4): e20160034
ISSN 1984-4689 (online)
www.scielo.br/zool

TAXONOMY AND NOMENCLATURE

New species, new records, and a key to the Brazilian species of *Gelanor* (Araneae: Mimetidae)

Everton Nei Lopes Rodrigues[1], Erica Helena Buckup[2] & Antonio Domingos Brescovit[3]

[1]*Laboratório de Diversidade e Sistemática de Arachnida, Programa de Pós-Graduação em Biologia, Universidade do Vale do Rio dos Sinos. Avenida Unisinos 950, Cristo Rei, 93022-000 São Leopoldo, RS, Brazil. E-mail: enlrodrigues@unisinos.br*
[2]*Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul. Rua Dr. Salvador França 1427, 90690-000 Porto Alegre, RS, Brazil.*
[3]*Laboratório Especial de Coleções Zoológicas, Instituto Butantan. Avenida Vital Brazil 1500, 05503-900 São Paulo, SP, Brazil. E-mail: adbresc@terra.com.br*

ABSTRACT. *Gelanor* Thorell, 1969 comprises 11 Neotropical species. In this paper, two new species are described from Brazil: *Gelanor hoga* **sp. nov.**, based on males and females from the state of Amazonas, and *Gelanor cachimbo* **sp. nov.**, based on males from the state of Pará. Additionally, new records from Brazil are provided for *Gelanor altithorax* Keyserling, 1893, *Gelanor consequus* O. P.-Cambridge, 1902, *Gelanor juruti* Benavides & Hormiga, 2016, *Gelanor latus* (Keyserling, 1881), *Gelanor waorani* Benavides & Hormiga, 2016 and *Gelanor zonatus* (C.L. Koch, 1845) and a key to the Brazilian species and illustrations are provided.

KEY WORDS. Pirate spiders, Neotropical, Brazil, distribution, taxonomy.

Mimetidae includes 152 species divided among 13 genera (World Spider Catalog 2016). Members of this family are known as pirate spiders, because they typically feed on other spiders (Platnick & Shadab 1993). A recent review of *Gelanor*, a Neotropical group of spiders, was published by Benavides & Hormiga (2016), where they describe five new species and report eleven new synonymies. After review, *Gelanor* includes 11 species, all for Neotropical Region and only five are recorded in Brazil (Benavides & Hormiga 2016, World Spider Catalog 2016). According Benavides & Hormiga (2016), a single species, *Gelanor muliebris* Dyal, 1935, was described from Pakistan, but this species is misplaced in the genus.

In this paper, two new species of *Gelanor* are described from Brazil, one from the state of Amazonas: *Gelanor hoga* **sp. nov.**, based on males and females, and one from the state of Pará, *Gelanor cachimbo* **sp. nov.**, based on males. New records, a key to the species of Brazil and illustrations of the genitalia of both sexes are provided for *Gelanor* species.

MATERIAL AND METHODS

Specimens are deposited in the arachnological collection of the Instituto Butantan, São Paulo, São Paulo, Brazil (IBSP, curator A.D. Brescovit); Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil (INPA, C. Magalhães); Museu de Ciências Naturais da Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil (MCN, R. Ott); Museu Paraense Emílio Goeldi, Belém, Pará, Brazil (MPEG, A.B. Bonaldo); Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil (MZSP, R. Pinto da Rocha) and Staatliches Museum für Naturkunde, Karlsruhe, Germany (SMNK, H. Höfer).

The study of female genital structures was performed by immersing the epigynum in clove oil for approximately 30 minutes until the internal structures could be clearly visualized. For illustrations, structures were examined under a Leica® MZ9.5 stereomicroscope equiped with camera lucida. Terminology follows Shear (1981), Platnick & Shadab (1993) and Benavides & Hormiga (2016) with modifications in the terminology of conductor strutures. All measurements are expressed in millimetres and were taken using a scale reticle in the eyepiece of the stereomicroscope. Specimens are preserved in 70% ethanol. SEM images were taken with a FEI Quanta 250 scanning electron microscope from the Laboratório de Biologia Celular at the Instituto Butantan, São Paulo. Material used for SEM was dehydrated through a series of graded ethanol (80 to 100%), dried by critical-point drying method, mounted on metal stubs and sputter coated with gold. Abbreviations used in the text and figures: anterior

ZOOLOGIA An International Journal for Zoology

lateral eyes (ALE); anterior median eyes (AME); basal process of paracymbium (BP); conductor (C); copulation duct (CD); copulatory opening (CO); distal apophysis of conductor (DA = TA1 in Shear 1981); chemosensory setae (CS); cymbium (Cy); distal margin of cymbium (DM); embolus (E); fertilization duct (FD); median boss on margin of cymbium (MB); median process of conductor (MP = TA2 in Shear 1981); patella (Pa); paracymbium (PC); posterior lateral eyes (PLE); posterior median eyes (PME); spermatheca (S); median septum of epigynum (MS); subtegulum (ST); tegulum (T); tibia (Ti).

TAXONOMY

Mimetidae Simon, 1881

Gelanor Thorell, 1869

Type species: *Gelanor zonatus* (C.L. Koch, 1845)

Composition. Thirteen species, including two new species described here. *Gelanor* includes species exclusivelly from Neotropical Region. *Gelanor muliebris* Dyal, 1935, was described from Pakistan, but according Benavides & Hormiga (2016) this species is misplaced in the genus.

Gelanor hoga **sp. nov.**

Figs. 1-5

urn:lsid:zoobank.org:act:274BF7FD-0FCA-4518-AE56-305E40FDB73A

Types. Holotype male, Reserva Florestal Adolpho Ducke, 02°55'S, 59°59'W, Manaus, Amazonas, Brazil, 1992-1993, collected in wasp nests, sample 526, H. Höfer & T. Gasnier leg. (INPA). Paratypes: female, same data as holotype, sample 1511 (INPA); female, same data as holotype, sample 118 (INPA); male, same data as holotype, sample 183 (INPA).

Diagnosis. Males of *G. hoga* **sp. nov.** resemble those of *G. latus* by the distal apophysis of conductor long, acuminate and sclerotized at the apex (Figs. 1, 30), median process of conductor large, not pronounced next to embolus (Figs. 1, 30) and by the presence of a median boss on the margin of the cymbium (Figs. 1, 3, 30, 32, 67), but differs from this species by the distal apophysis of conductor slender (Fig. 1) and by the shape of basal process of paracymbium, which is a single projection (Figs. 1, 3). The female of *Gelanor hoga* **sp. nov.** resembles that of *G. latus* by the presence of pointed lateral projections on the epigynum (Figs. 4, 33, 71, 72) and by median septum short, but differs by the pointed lateral projections shorter (Fig. 4) and fertilization ducts adjacent to the posterior margin of epigynal plate (Fig. 5).

Description. Male (Holotype, INPA). Carapace pale yellow. Eyes with dark borders. Chelicerae yellow. Sternum, endites and labium pale yellow. Legs yellow, except coxae pale yellow. Abdomen yellow with white spots scattered on dorsum and venter. Dorsum, anteriorly, with two circular white spots bordered with brown. Spinnerets and colulus yellow. Male palpus with embolus sclerotized (Figs. 1, 2) and conductor slightly sclerotized, translucent (Fig. 1)

Measurements. Total length 4.90. Carapace: length 2.50, width 1.85, height 1.00. Sternum: length 1.30, width 1.00. Abdomen: length 2.40, width 1.80, height 1.80. Leg formula 1/2/4/3. Segment length I/II/III/IV: femur 5.20/4.65/2.90/2.90; patella 1.25/1.05/0.70/0.70; tibia 5.00/3.80/2.00/2.40; metatarsus 6.00/4.55/1.95/2.35; tarsus 2.50/1.70/0.75/0.80. Total 19.95/15.75/8.30/9.15. Palp, femur 4.65; patella 1.45; tibia 4.10; cymbium 0.75. Eyes, diameters: AME 0.21, ALE 0.10, PME 0.12, PLE 0.10. Interditances: AME-AME 0.12, AME-ALE 0.18, PME-PME 0.07, PME-PLE 0.27.

Female (Paratype, INPA). Carapace as in male. Eyes, chelicerae yellow, sternum, endites and labium as in male. Legs pale yellow, femora with a ventral brown spot. Abdomen oval, yellow with white spots scattered on dorsum and venter. Dorsum, anteriorly, with two circular white spots bordered with red-brown. Spinnerets and colulus as in male. Epigynum with spermathecae close together, oval and fertilization ducts large (Fig. 5).

Measurements. Total length 4.60. Carapace: length 2.20, width 1.75, height 1.15. Sternum: length 1.10, width 0.95. Abdomen: length 2.30, width 1.95, height 1.60. Leg formula 1/2/4/3. Segment length I/II/III/IV: femur 4.00/3.50/2.35/2.70; patella 1.45/1.15/0.70/0.70; tibia 3.70/2.80/1.60/1.90; metatarsus 3.75/3.00/1.60/1.90; tarsus 1.95/1.50/0.75/0.80. Total 14.85/11.95/7.00/8.00. Palp, femur 0.89; patella 0.44; tibia 0.95; tarsus 1.00. Eyes, diameters: AME 0.17, ALE 0.10, PME 0.11, PLE 0.10. Interditances: AME-AME 0.12, AME-ALE 0.21, PME-PME 0.06, PME-PLE 0.26.

Variation. Males (n = 2), total length 4.60-4.85, carapace length 2.45-2.50, width 1.85-1.89; femur I 5.20-5.45. Females (n = 2), total length 4.30-4.60, carapace length 2.20-2.25, width 1.75-1.79; femur I 4.00-4.25.

Distribution. Brazil (Amazonas).

Etymology. The specific name is a random combination of letters.

Material examined. Only the types.

Gelanor cachimbo **sp. nov.**

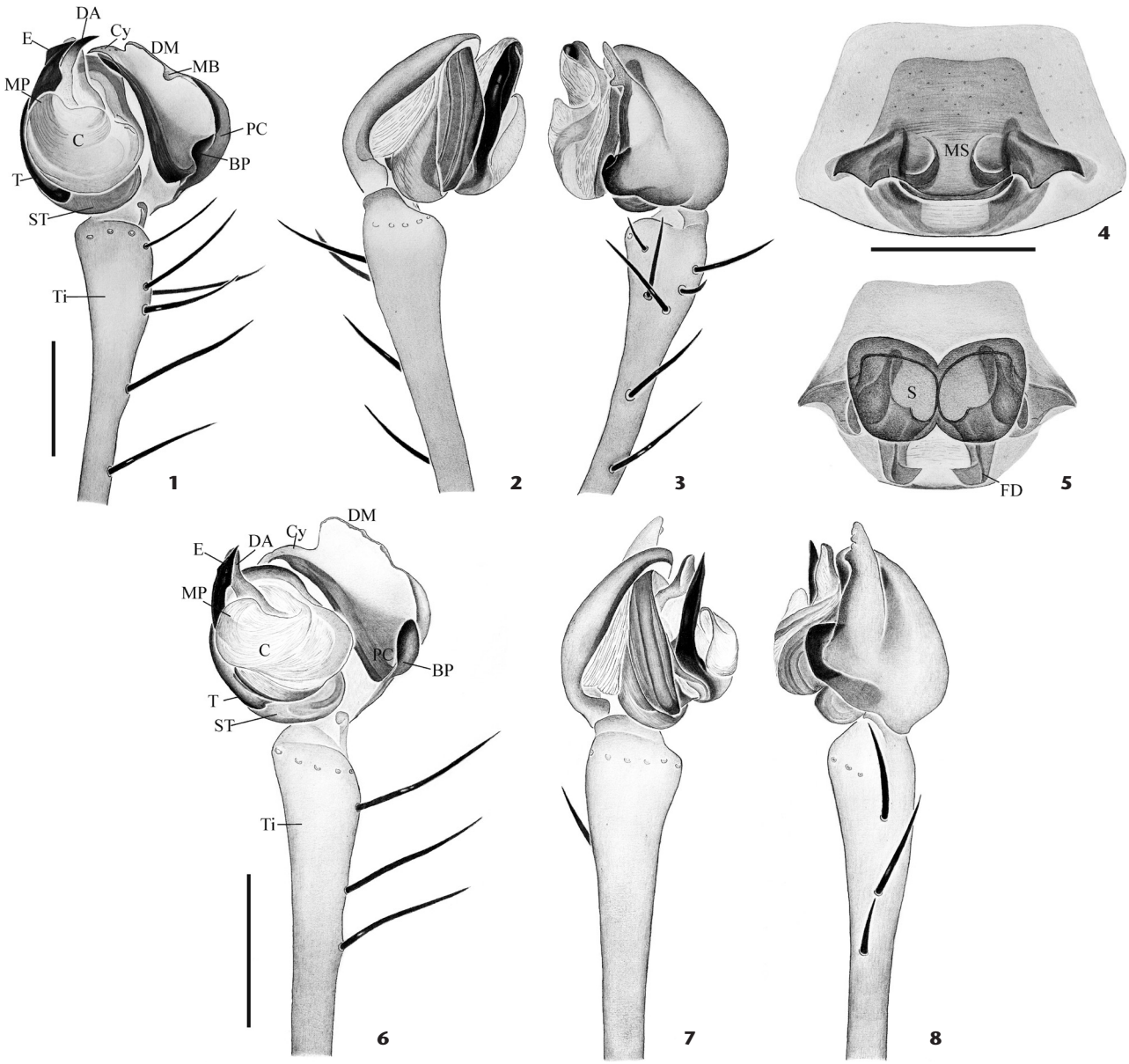
Figs. 6-8

urn:lsid:zoobank.org:act:63D57D99-85C7-4B44-9FA1-4E1BA857E0EC

Types. Holotype male, Campo de Provas Brigadeiro Velloso, Serra do Cachimbo, 09°16'18.6"S, 54°56'22.9"W, Novo Progresso, Pará, Brazil, 09.IX.2003, D.R. Santos-Souza leg. (MPEG 006207). Paratype male, same data as holotype (MPEG 006208).

Diagnosis. The male of *Gelanor cachimbo* **sp. nov.** resembles that of *G. hoga* **sp. nov.** by the median process of conductor wide near embolus (Figs. 1, 6), but differs by the distal apophysis of conductor and embolus not exceding the height of the cymbium apex (Figs. 6-8), by the shape of apex of the embolus, like an arrow-head, the developed cymbium and the distal margin projected and without median boss in ventral view (Fig. 6).

Description. Male. Holotype. Carapace yellow. Eyes with dark borders. Chelicerae yellow. Sternum pale yellow. Endites and labium yellow. Legs I-II yellow, except metatarsi and tarsi



Figures 1-8. (1-5) *Gelanor hoga* **sp. nov.**: (1-3) male palp: (1) ventral, (2) prolateral, (3) retrolateral; (4-5) epigynum: (4) ventral, (5) dorsal, clarified. (6-8) *Gelanor cachimbo* **sp. nov.**: (6-8) male palp: (6) ventral, (7) prolateral, (8) retrolateral. Scale Bars: 0.5 mm.

brown; legs III-IV pale yellow. Abdomen pale yellow with white spots scattered on dorsum. Dorsum, anteriorly, with two circular white spots bordered with brown; median to posterior with trasversal brown spots; venter with median transversal white spot. Spinnerets and colulus yellow. Male palpus with embolus sclerotized (Figs. 6-8), with apex like an arrow-head (Fig. 6); conductor barely sclerotized, translucent (Fig. 6); distal apophysis of conductor blunt and not sclerotized at apex (Figs. 6, 7); basal process of paracymbium as a finger (Fig. 6).

Measurements. Total length 4.40. Carapace: length 2.50, width 1.85, height 1.00. Sternum: length 1.15, width 0.95. Abdomen: length 1.95, width 1.40, height 1.25. Leg formula 1/2/4/3. Segment length I/II/III/IV: femur 4.50/4.00/2.60/2.90; patella 1.50/1.15/0.65/0.75; tibia 4.45/3.34/1.95/2.30; metatarsus 5.60/4.10/1.85/2.20; tarsus 2.25/1.60/0.75/0.75. Total 18.30/14.19/7.80/8.90. Palp, femora 4.10; patella 1.50; tibia 3.59; cymbium 0.60. Eyes, diameters: AME 0.18, ALE 0.11, PME 0.12, PLE 0.11. Interditances: AME-AME 0.12, AME-ALE 0.17, PME-PME 0.07, PME-PLE 0.25.

Female. Unknown.

Distribution. Brazil (Pará).

Etymology. The specific name is a noun in apposition, taken from the type locality.

Material examined. Only the types.

Gelanor altithorax Keyserling, 1893
Figs. 9-17, 45-52

Diagnosis. Males and females *Gelanor altithorax* can be distinguished from other species by the carapace projected in the median portion (Figs. 14-17).

Description. Male and female see Benavides & Hormiga (2016: 18-19).

Additional description. Male (IBSP 63060, Paulo Lopes, Santa Catarina). Male palpus (Figs. 9-11, 45-49) with embolus sclerotized (Fig. 9); conductor slightly sclerotized, translucent (Fig. 9); distal apophysis of conductor pointed (Figs. 45-47, 49) and sclerotized at apex (Figs. 9-11); basal process of paracymbium developed (Figs. 45-48) and sclerotized (Figs. 9, 11). Cymbial tarsal organ circular (Fig. 50).

Female (MCN 38439, Parque Estadual de Itapeva, Torres, Rio Grande do Sul). Epigynum with longitudinal median septum very broad anteriorly, narrowed medially and moderately prominent (Figs. 12, 51, 52), fertilization ducts shorter, not coiled and spermathecae developed, circular (Fig. 13).

Variation. Males (n = 5), total length 4.47-4.55, carapace length 2.25-2.55, width 1.75-2.10; femur I 4.10-4.85. Females (n = 5), total length 4.56-5.05, carapace length 2.25-2.45, width 1.70-1.95; femur I 3.00-4.15. The color pattern is quite variable in both sexes from dark brown to brown in carapace. The white spots in the abdomen can be further dispersed.

New records. Brazil, *São Paulo*: Peruíbe (Estação Ecológica Juréia/Itatins, 24°17', 24°40'S, 47°00', 47°30'W), 10 females, 17-21.III.1997, A.D. Brescovit leg. (IBSP 9635, 9723, 9806, 9858, 9900); Santa Rita do Passa Quatro (Parque Estadual de Vassununga, 21°43'S, 47°35'W), 2 females, 19-24.III.2002, Equipe Biota leg. (IBSP 63100, 6103); São Paulo (Parque Estadual da Cantareira, 23°24'5"S, 46°35'24"W), 1 male, 01.V.2001, R. Pinto-da-Rocha leg. (MCN 41950). *Santa Catarina*: Blumenau (Parque Natural Municipal Nascentes do Garcia, 27°01'S, 49°09'W), 1 male, 5 females, 21-28.I.2003, Equipe Biota leg. (IBSP 63019, 63021, 63025, 63038, 63043); Paulo Lopes (Parque Estadual da Serra do Tabuleiro, 27°55'S, 48°42'W), 2 males, 3 females, 10-20.I.2003, Equipe Biota leg. (IBSP 63057 30060, 63070, 63073, 63074). *Rio Grande do Sul*: Derrubadas (Parque Estadual do Turvo, 27°00', 27°20'S, 53°40', 54°10'W), 5 females, 11-18.I.2002, Equipe Biota leg. (IBSP 63111, 63113, 63115, 63118, 63128, 63132); male, 19-22.X.2004, R. Ott et al. leg. (MCN 39446), 1 male, 27-31.X.2003 (MCN 39451); Iraí (27°11'19"S, 53°15'6"W), 1 female, 20.XI.1975, A.A. Lise leg. (MCN 3129); Passo Fundo (Floresta Nacional, 28°18'47"S, 52° 10'55"W), 4 males, 11 females, 12.X.1985, A.A. Lise leg. (MCN 13626); Arroio do Meio (29°26'15"S, 51°56'15"W), 1 male, 09.I.1985, A.A. Lise leg. (MCN 12936); Torres (Parque Estadual de Itapeva, 29°20'S, 49 °45'W), 4 females, 10-14.I.2005, R. Ott et al. leg. (MCN 38439, 38575); Maquiné (29°39'S, 50°12'W), 2 males, 3 females, 18-27.I.2002, Equipe Biota leg. (IBSP 63003, 63006, 63008, 63013); Campo Bom (29°40'49"S, 51°3'13"W), 2 females, 29.IV.1988, C. J. Becker leg. (MCN 19432); São Leopoldo (29°45'39"S, 51°9'8"W), 1 female, 09.IV.1984, C. J. Becker leg. (MCN 12174); Porto Alegre (Morro Santana, 30°03'45"S, 51°11'15"W), 2 males, 15.XII.1989, A.A. Lise leg. (MCN 19173); Mariana Pimentel (30°18'45"S, 51°33'45"W), 1 male, 02.XII.1989, A.A. Lise leg. (MCN 19090); Cristal (riparian forest of Camaquã river, 31°01'01.7"S, 51°56'42.0"W), 1 male, 14.XI.2007, E.N.L. Rodrigues & P.E.S. Rodrigues leg. (MCN 52119).

Distribution. Brazil (Rio de Janeiro, São Paulo, Paraná, Santa Catarina and Rio Grande do Sul) and Argentina.

Remarks. Benavides & Hormiga (2016) synonymized *Gelanor lanei* with *G. altithorax*, but considered that the type specimen of *G. lanei* was "presumed lost". We examined this type and found that it was deposited in the collection of MZSP (originally it was deposited in the Departamento de Zoologia da Secretaria de Agricultura do Estado de São Paulo). The type specimen is an immature specimen of *Gelanor altithorax*.

Gelanor consequus O. P.-Cambridge, 1902
Figs. 18-24, 53-58

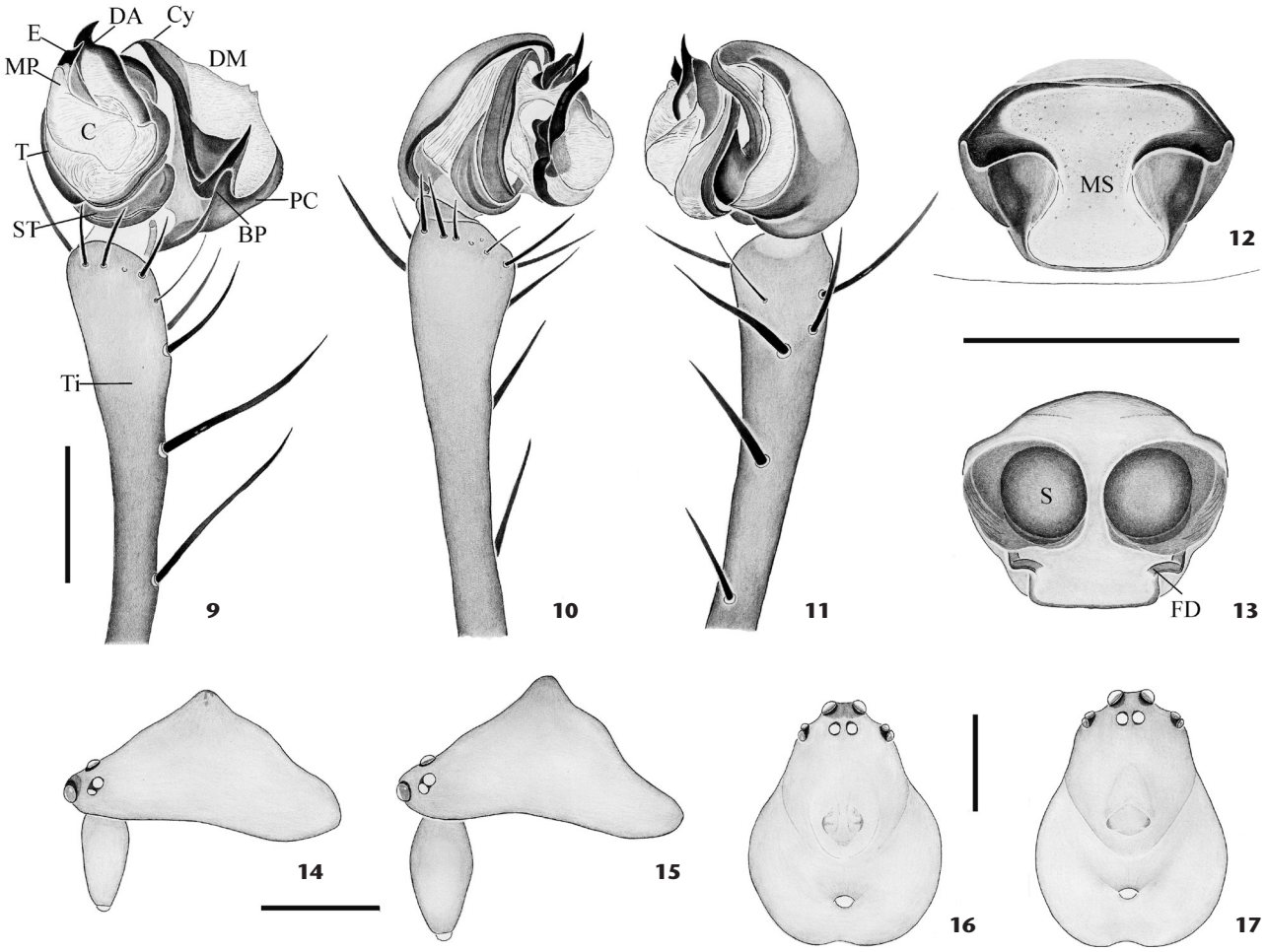
Diagnosis. Males of *Gelanor consequus* can be distinguished from other species by the shape of embolus, thin, like a spear (Figs. 19, 53, 54, 56, 57), median process of conductor sclerotized, shaped like a bird head in prolateral and retrolateral view (Figs. 19, 20, 55), small basal process of paracymbium as a thumb (Figs. 18, 20, 53-55) and distal apophysis of conductor blunt (Figs. 18-20, 54, 55, 57). The females can be distinguished from other species by protruding epigynum with two depressions separated by a narrow median septum (Figs. 21, 22, 58) and posterior margin with a median fissure (Figs. 22, 23, 58) and spermathecae elongated, kidney-shaped (Fig. 23).

Description. Male and female see Benavides & Hormiga (2016: 22-25).

Additional description. Male (MCN 23823, Beni, Bolivia, IBSP 63060, Paulo Lopes, Santa Catarina). Carapace (Fig. 29) brown with dark-brown, with a U-shaped median spot. Eyes with dark borders (Fig. 29). Palpus (Figs. 18-20, 53-57) with basal process of paracymbium ridged (Figs. 54, 55), distal apophysis of conductor unpointed, sclerotized at apex (Figs. 18-20, 53-57) and embolus not sclerotized, pointed (Figs. 19, 54, 57).

Female (MCN 23823, Beni, Bolívia). Epigynum with two oval depressions separated by a narrow median septum (Figs. 21, 22, 58); fertilization ducts long and thin (Fig. 23), distant from the posterior margin of epigynum (Fig. 23).

Variation. Males (n = 4), total length 3.70-3.89, carapace length 2.00-2.06, width 1.61-1.65; femur I 4.25-4.43. Females (n = 4), total length 3.75-4.00, carapace length 1.95-.2.20, width 1.55-1.65; femur I 3.60-3.89.



Figures 9-17. *Gelanor altithorax*: (9-11) male palp: (9) ventral, (10) prolateral, (11) retrolateral; (12-13) epigynum: (12) ventral, (13) dorsal, clarified; (14-15) carapace, lateral: (14) male, (15) female; (16-17) carapace, dorsal: (16) male, (17) female. Scale bars: 9-13 = 0.5 mm, 14-17 = 1 mm.

New records. Brazil, *Roraima*: Ilha de Maracá (Estação Ecológica de Maracá, 03°24'S, 61°42'W), 1 male, 1 female, 17-19. VIII.1987, A.A. Lise leg. (MCN 43859, 43886); 1 male, 7 females, 17-19.VIII.1987, A.A. Lise leg. (MCN 43882-43885, 44042, 43860), 1 male, 04.XII.1987, E.H. Buckup (MCN 43881); 1 male, 18-22. VIII.1987, R. Gribel leg. (MCN 43888). *Amazonas*: Coari (Igarapé Marta, Rio Urucu, 4°05'06"S, 63°08'30"W), 1 male, 25.VIII.1993, N.O. Aguiar & P. Bührnheim (MCN 52120); (Base de Operações Geólogo Pedro de Moura, Urucu, 04°52'11"S, 65°08'05"W), 1 male, 1 female, IX.2006, S. C. Dias leg. (MPEG 011848, 011849). Bolivia: Beni (El Trapiche, Estación Biológica Beni, 13°18'01"S, 65°13'60"W), 1 male, 1 female, 27-29.VI.1993, A.D. Brescovit leg. (MCN 23823).

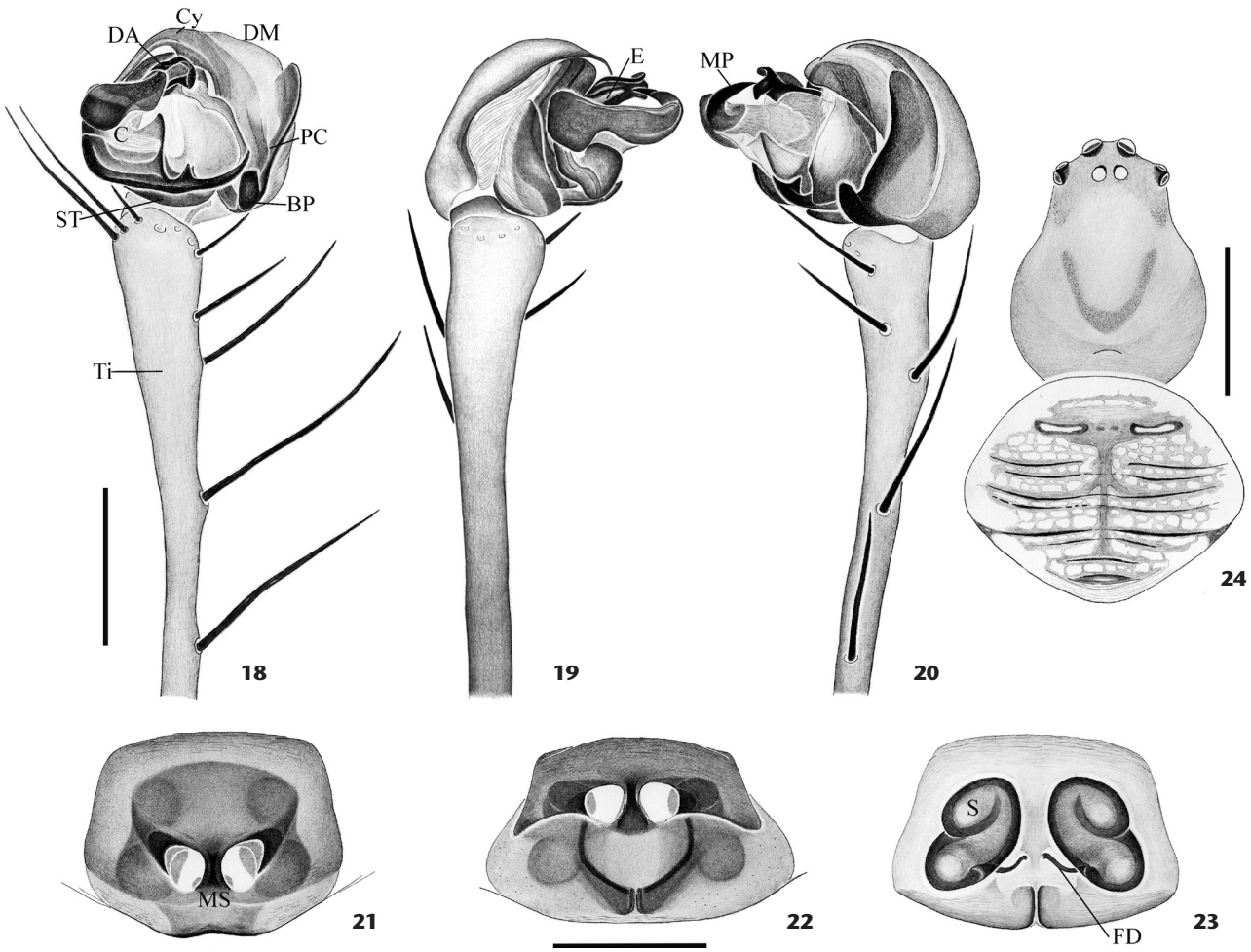
Distribution. Bolivia, Brazil (Roraima, Amazonas, Pará and Mato Grosso), Colombia, Costa Rica, Ecuador, French Guiana, Guyana, Mexico, Panama, Peru, and Venezuela.

Gelanor juruti Benavides & Hormiga, 2016

Figs. 25-29, 59-64

Diagnosis. The male of *Gelanor juriti* resembles that of *G. altithorax* by median process of conductor narrow near embolus, but differs in the distal apophysis of conductor slightly sclerotized and rounded at apex (Fig. 25, 59, 60, 62, 63), by distal margin of cymbium concave (Fig. 25) near of the basal process of paracymbium. The females of *Gelanor juriti* resembles that of *G. altithorax* by median septum of epigynum medialy narrow, widened anteriorly and posteriorly (Figs. 28, 64), but differs by lower posterior enlargement, oval spermathecae close together and fertilization ducts forming loops (Fig. 29). Males and females of *Gelanor juriti* distinguished from *G. altithorax* by carapace not acuminate in the median portion.

Description. Male and female see Benavides & Hormiga (2016: 35).



Figures 18-24. *Gelanor consequus*: (18-20) male palp: (18) ventral, (19) prolateral, (20) retrolateral; (21-23) epigynum: (21) ventral, (22) posterior, (23) dorsal, clarified. (24) habitus, male. Scale Bars: 18-23 = 0.5 mm, 24 = 1.25 mm.

Additional description. Male (IBSP 17843, Estação Ecológica Pau Brasil, Porto Seguro, Bahia). Palpus with embolus (Figs. 59-63) sclerotized (Figs. 25-27) and conductor translucent (Fig. 25).

Female (MPEG 006200, Novo Progresso, Pará). Epigynum with fertilization ducts like a horseshoe (Fig. 29) and copulatory opening anteriorly positioned (Fig. 64).

Variation. Males (n = 3), total length 3.65-4.10, carapace length 2.33-2.15, width 1.70-1.65; femur I 4.65-4.53. Females (n = 3), total length 4.03-4.05, carapace length 2.00-2.15, width 1.55-1.60; femur I 3.15-3.95.

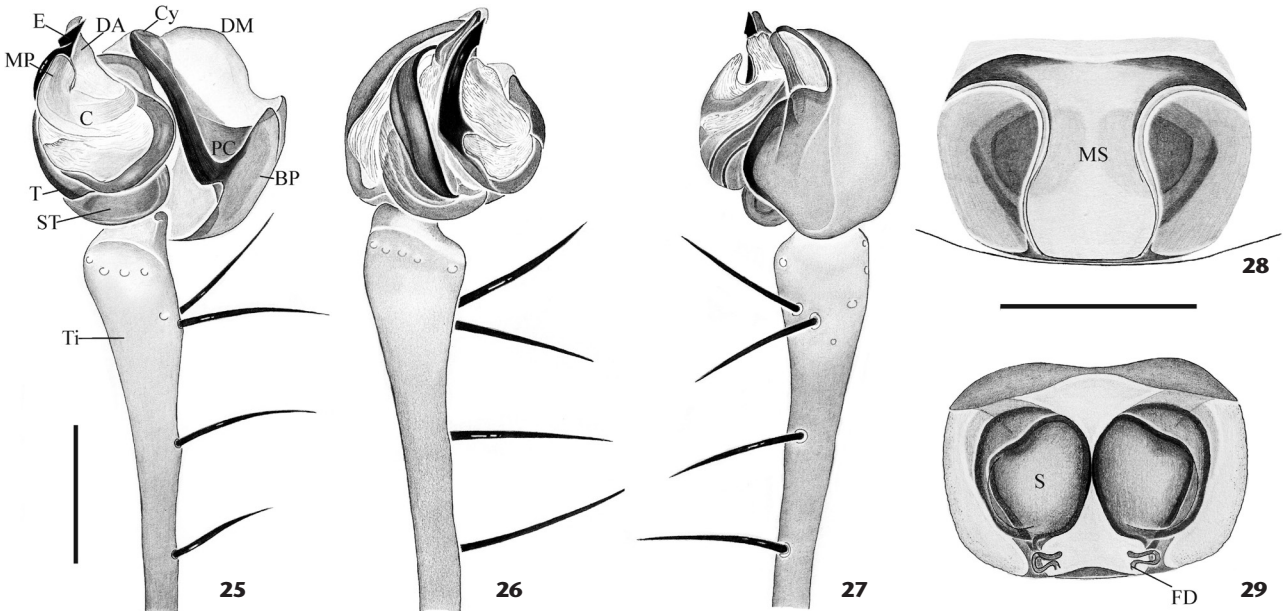
New records. Brazil, *Amazonas*: Coari (Base de Operações Geólogo Pedro de Moura, Urucu, 04°53'10"S, 65°11'24"W), 1 male, IX.2006, S.C. Dias leg. (MPEG 011845); (Base de Operações Geólogo Pedro de Moura, Urucu, 04°52'46"S, 65°09'50"W), 1 male, IX.2006, N.F. Lo Man Hung leg. (MPEG 011850); (04°52'46"S, 65°09'50"W), 1 male, IX.2006, D.F. Candiani leg. (MPEG 011851); (04°52'11"S, 65°08'05"W), 1 female, IX.2006, S.C. Dias leg. (MPEG 011852). *Pará*: Novo Progresso (Campo de Provas Brigadeiro Velloso, Serra do Cachimbo, 09°16'18.6"S, 54°56'22.9"W), 1 male, 15.IX.2003, A.B. Bonaldo leg. (MPEG 006202); 1 male, 15.IX.2003, A.B. Bonaldo leg. (MPEG 006206); (09°21'89"S, 55°02'01"W), 1 male, 16.IX.2003, A.B. Bonaldo leg. (MPEG 006201); 1 male, 11.IX.2003, A.B. Bonaldo leg. (MPEG 006199); 1 male, D.D. Guimarães leg. (MPEG 006191); (09°22'02.9"S, 55°01'11.9"W), 3 males and 1 female, 12.IX.2003, D. D. Guimarães leg. (MPEG 006200). *Bahia*: Porto Seguro (Estação Ecológica Pau Brasil, 16° 23'S 39° 10'W), 1 male, 20.IV.1998, A.D. Brescovit leg. (IBSP 17843).

Distribution. Brazil (Amazonas, Pará and Bahia), Venezuela and Guyana.

Gelanor latus (Keyserling, 1881)

Figs. 30-34, 65-72

Diagnosis. Males of *Gelanor latus* can be distinguished from other species by the basal process of paracymbium with two



Figures 25-29. *Gelanor juriti*: (25-27) male palp: (25) ventral, (26) prolateral, (27) retrolateral; (28-29) epigynum: (28) ventral, (29) dorsal, clarified. Scale Bars: 0.5 mm.

projections (Figs. 30, 66, 67). The female of *G. latus* resembles that of *G. hoga* new species by the presence of pointed lateral projections on the epigynum (Figs. 33, 71, 72) and by median septum short (Fig. 33), but differs by the fertilization ducts far from posterior margin of epigynal plate (Fig. 34).

Description. Male and female see Benavides & Hormiga (2016: 46-48).

Additional description. Male (MCN 10460, Itamarajú, Bahia). Male palpus with basal process of paracymbium (Figs. 30, 65-67) sclerotized (Fig. 30); embolus wide and sclerotized (Fig. 30); distal apophysis of conductor pointed and median boss in cymbium margin present (Fig. 30, 32, 65-67) and cymbium tarsal organ circular (Fig. 70).

Female (Juriti, Pará, MPEG 9206). Epigynum (Figs. 33, 34, 71,72) with spermathecae close together, oval (Fig. 34) and fertilization ducts large (Fig. 34).

Variation. Males (n = 2), total length 4.54-5.25, carapace length 2.62-3.40, width 2.06-2.45; femur I 4.83-6.15. Females (n = 5), total length 5.22-7.60, carapace length 2.55-3.55, width 1.99-2.60; femur I 5.02-5.75.

New records. Bolivia, *La Paz*: Forest of the Huarinilla river, near Coroico (16°10'60"S, 67°43'60"W, 1200-1500m), 31.VII.1993, A.D. Brescovit leg. (MCN 23797). Brazil, *Amazonas*: Manaus (3°06'00"S, 60°01'00"W, várzea), 1 male, 15.X.1987, H. Höfer leg. (SMNK); 1 female, Manaus (Fazenda Esteio, 60 km norte de Manaus, Reserva 1301, 02°35'S, 60°02'W), B.C. Klein leg., Malaise trap (INPA); (Reserva Biológica de Campina, INPA, 02°35'S, 60°02'W), 2 females, 15.II.1974, L. P. Albuquerque leg. (INPA); Coari (Base de Operações Geólogo Pedro de Moura, 04°54'15"S, 65°12'21"W), 1 female, IX.2006, D. Candiani leg. (MPEG 11847). *Pará*: Juriti (Sítio Três Irmãos, 02°27'51.4"S, 56°00'08.6"W), 1 female, 04.III.2006, D.R. Santos-Souza & S.C. Dias leg. (MPEG 9206); Novo Progresso (Campo de Provas Brigadeiro Velloso, Serra do Cachimbo, 02°22'02.9"S, 55°01'11.9"W), 1 female, 18.IX.2003, D. D. Guimarães leg. (MPEG 6187). *Bahia*: Itamarajú (Fazenda Jacarandá, 17°02'20"S, 39°31'51"W), 1 male, 08.XII.1977, J. A. Santos leg. (MCN 10460).

Distribution. Bolivia, Brazil (Roraima, Amazonas, Pará and Bahia), Colombia, Costa Rica, Ecuador, Guatemala, Guyana, French Guiana, Mexico, Nicaragua, Panama and Peru.

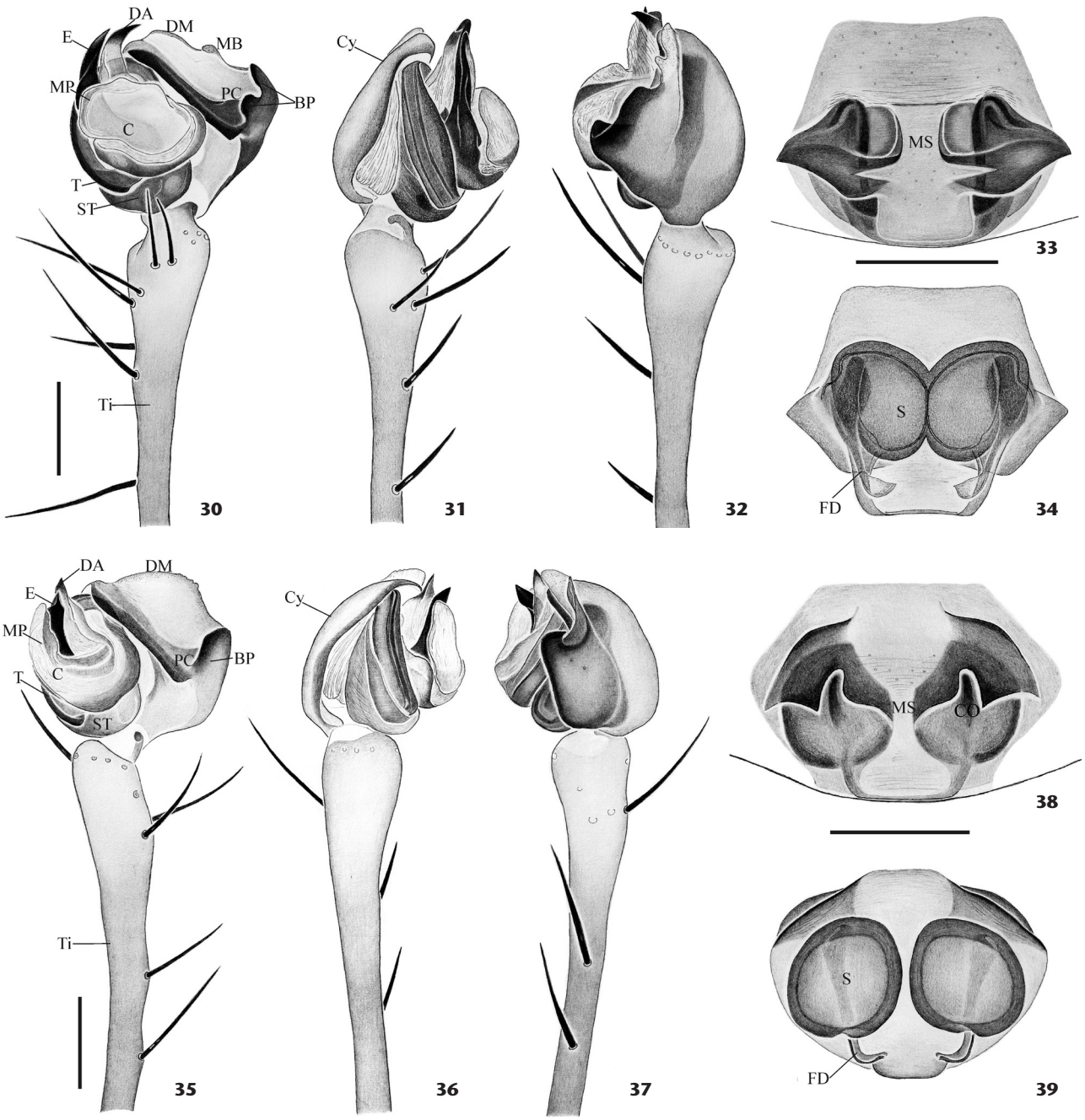
Gelanor waorani Benavides & Hormiga, 2016

Figs. 35-39

Diagnosis. The males of *Gelanor waorani* resembles those of *G. altithorax, G. juruti* and *G. zonatus* by median process of conductor lengthy, covering the embolus in ventral view embolus (Fig. 35), but it differs from other species to be longer (Figs. 35-37). Males can be recognized by their triangular white abdominal spots (Benavides & Hormiga 2016: fig. 45a). The females of *Gelanor waorani* resembles those of *G. altithorax* and *G. zonatus* by the spermathecae rounded (Fig. 39), but differs in the median septum of epigynum narrower (Fig. 38). Females have the largest copulatory openings (Fig. 38) in the genus (Benavides & Hormiga 2016: fig. 47b).

Description. Male and female see Benavides & Hormiga (2016: 55).

New records. Brazil, *Roraima*: Ilha de Maracá (Estação Ecológica de Maracá, 3°24'S, 61°42'W), 1 female, 18.XII.1987,



Figures 30-39. (30-34) *Gelanor latus*: (30-32) male palp: (30) ventral, (31) prolateral, (32) retrolateral; (33-34) epigynum: (33) ventral, (34) dorsal, clarified. (35-39) *Gelanor waorani*: (35-37) male palp: (35) ventral, (36) prolateral, (37) retrolateral; (38-39) epigynum: (38) ventral, (39) dorsal, clarified. Scale Bars: 0.5 mm.

E.H. Buckup leg. (MCN 44043). *Amazonas*: Manaus, (Reserva Florestal Adolpho Ducke, 02°55'S, 59°59'W), 1 female, 26.VII.1979, L.P. Albuquerque leg. (MCN 44044). *Pará*: Novo Progresso (Campo de Provas Brigadeiro Velloso, Serra do Cachimbo, 09°16'18.6"S, 54°56'22.9"W), 1 male, 20.III.2004, J. Ricetti leg. (MPEG 6198).

Distribution. Brazil (Roraima, Amazonas and Pará), Colombia and Ecuador.

Gelanor zonatus (C.L. Koch, 1845)

Figs. 40-44, 73-90

Diagnosis. The male of *Gelanor zonatus* resembles that of *G. juruti* by basal process of paracymbium developed and distal margin of cymbium wider apically, but differs by the embolus with recurved apex near the median process of conductor (Figs. 40, 73-76) and distal margin of cymbium with border serrated (Figs. 40, 41, 73-75). The females of *Gelanor zonatus* resembles those of *Gelanor juruti* by median septum of epigynum medially narrow, wider anteriorly and posteriorly (Fig. 43, 77), but differs by circular spermathecae (Fig. 44) and fertilization ducts close to each other (Fig. 44).

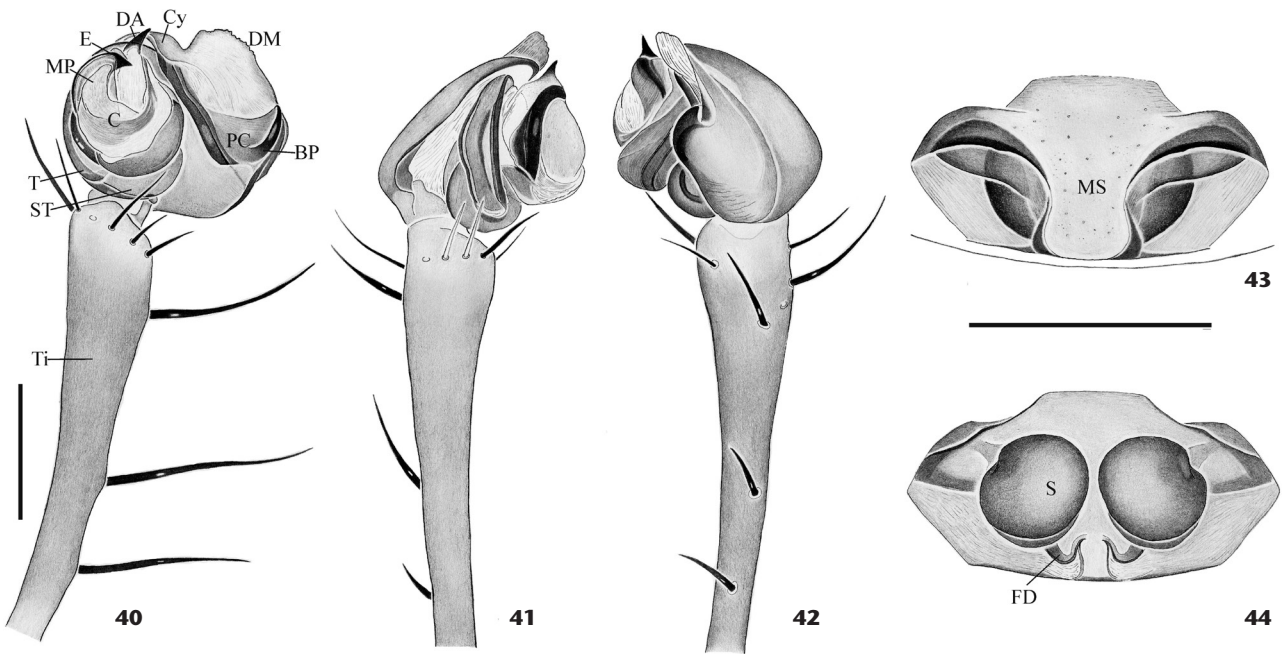
Description. Male and female see Benavides & Hormiga (2016: 65-67).

Additional description. Male (São Francisco de Paula, Rio Grande do Sul, MCN 29731). Male palpus with embolus sclerotized (Fig. 40); conductor slightly sclerotized, translucent (Fig. 40); median process of conductor narrow near embolus; distal apophysis of conductor pointed (Figs. 40-42, 73-76) and sclerotized at apex (Figs. 40-42); distal margin of cymbium with border serrated (Figs. 40, 41, 73-75) and basal process of paracymbium developed (Figs. 40, 73, 75).

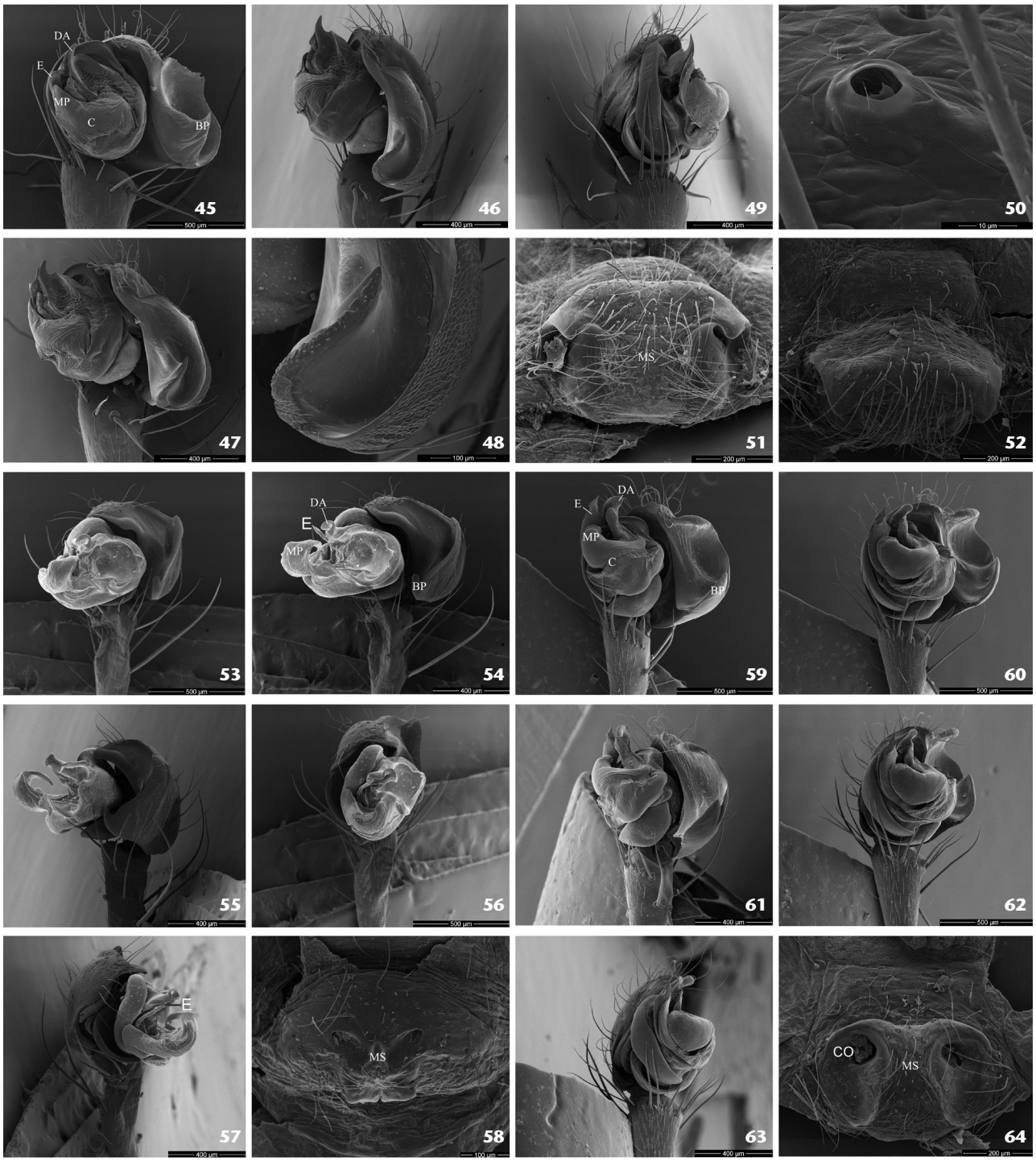
Female (São Francisco de Paula, Rio Grande do Sul, MCN 29731). Palp with cymbial tarsal organ circular (Fig. 78) and claws developed (Figs. 79, 80). Tarsus with accessory claws (Fig. 87) and chemosensory setae (Fig. 88). Chelicerae long and robust with cylindrical teeth (Figs. 89, 90).

Variation. Males (n = 10), total length 3.94-4.40, carapace length 2.00-2.45, width 1.55-1.79; femur I 3.95-4.55. Females (n = 10), total length 6.15-6.79, carapace length 2.25-2.75, width 1.79-2.30; femur I 3.55-4.35.

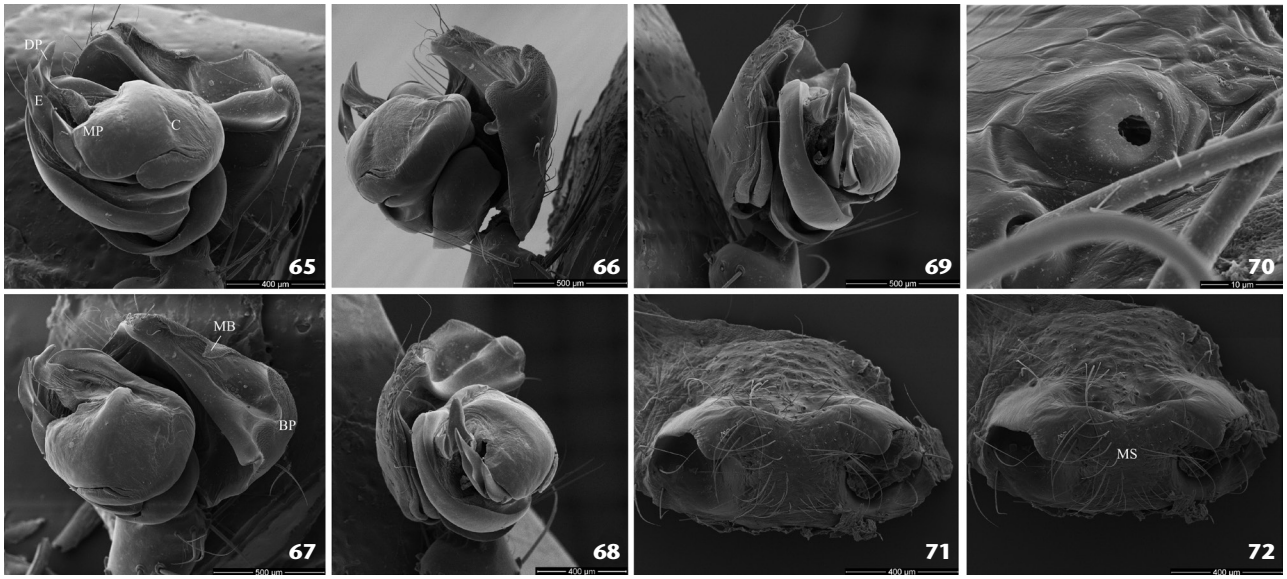
New records. Brazil, *Bahia*: Itamarajú (17°2'20"S, 39°31'51"W), 1 male, 09.X.1978, J. S. Santos leg. (MCN 10161); 1 male, 09.XII.1977, J. S. Santos leg. (MCN 10175); Uruçuca (14°35'34"S, 39°17'02"W), 1 male, 27.XI.1977, J. S. Santos leg. (MCN 10175). *Rio de Janeiro*: Resende (Parque Nacional de Itatiaia, 22°19', 22°45'S, 44°15', 44°50'W), 1 female, 08-15.VI.2001, Equipe Biota leg. (IBSP 63095); Petrópolis (Fazenda Ranchinho da Roça, 22°30'17"S, 43°10'56"W), 1 male, 15,16.VIII.2001, Equipe Biota leg. (IBSP 62992). Angra dos Reis (Ilha Grande, 23°8'26"S, 44°14'50"W), 2 males, 13-16.XI.1993, A.B. Bonaldo leg. (MCN 24861). *São Paulo*: Santa Rita do Passa Quatro (Parque Estadual de Vassununga, 21°44'S, 47°29'W), 1 female, 19-24.III.2002. Equipe Biota leg. (IBSP 63107); Peruíbe (Estação Ecológica Juréia/Itatins, 24°17', 24°40'S, 47°00', 47°30'W), 1 female, 17-21.III.1997, A.D. Brescovit leg. (IBSP 9774); 1 male, 1 female, 02.IV.1997, R. Bertani leg. (IBSP 9769). *Paraná*: Santa Helena (Refúgio Biológico de Santa Helena, 24°49'7"S, 54°21'48"W), 1 male, 1 female, 12-16.XI.1991, A.B. Bonaldo leg. (MCN 21789); Foz do Iguaçu (Refúgio Biológico de Bela Vista, 25°26'57"S, 54°33'18"W), 7 males, 4 females, 09-11.XI.1991, A.B. Bonaldo leg. (MCN 21727); Jundiaí do Sul (23°26'45"S, 50°15'33"W), 1 male, 23.XI.1987, A.D. Brescovit leg. (MCN 17186); female, 05.I.1987, Equipe Profaupar leg. (MCN 20169); Fênix (Reserva Estadual de Vila Rica, 23°54'S, 51°58'W), male, 22.XI.1987, A.D.



Figures 40-44. *Gelanor zonatus*: (40-42) male palp: (40) ventral, (41) prolateral, (42) retrolateral; (43-44) epigynum: (43) ventral, (44) dorsal, clarified. Scale Bars: 0.5 mm.

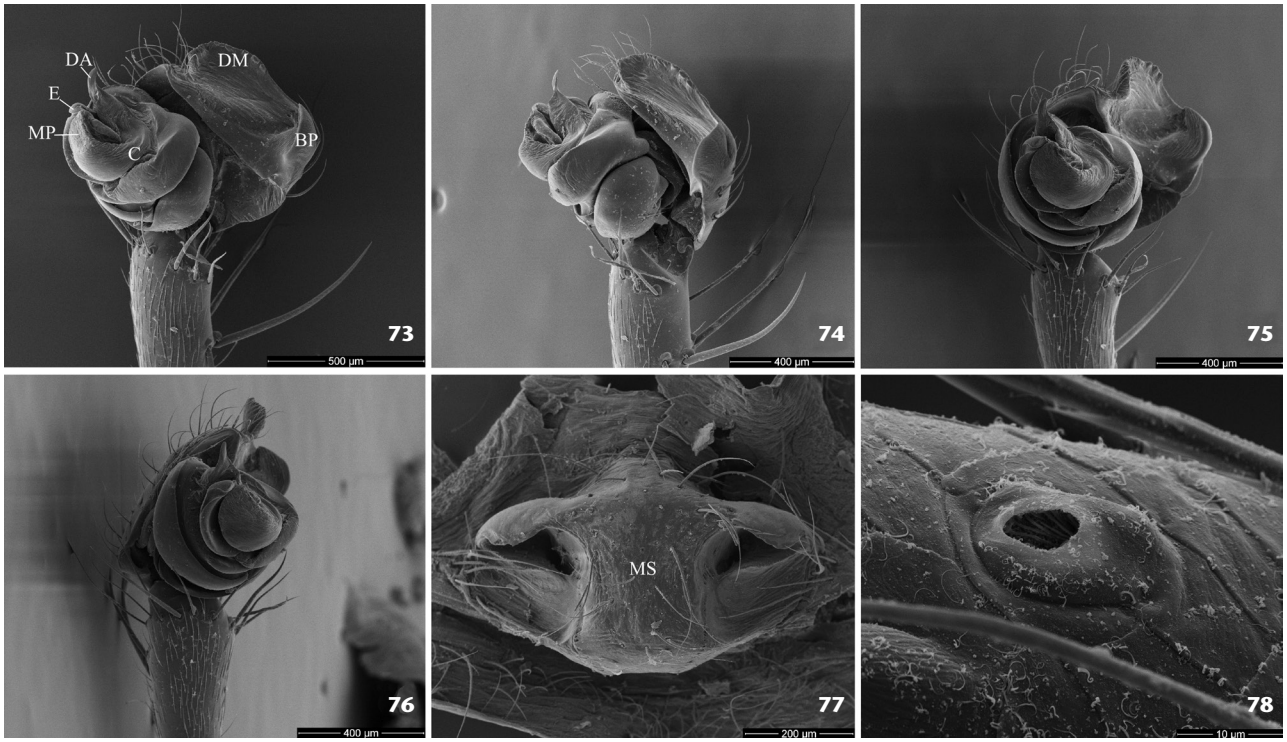


Figures 45-64. (45-48) *Gelanor altithorax*: (46-49) male palp: (45) ventral, (46) retrolateral, (47) retroventral, (48) paracymbium, detail. (49-52) *Gelanor altithorax*: (49, 50) male palp: (49) prolateral, (50) tarsal organ, cymbium; (51-52) epigynum: (51) ventral, (52) anterior. (53-58) *Gelanor consequus*: (53-57) male palp: (53) ventral, (54) retroventral, (55) retrolateral, (56) proventral, (57) prolateral; (58) epigynum: ventral. (59-64) *Gelanor juruti*: (59-63) male palp: (59) ventral, (60) ventral, (61) retroventral, (62) proventral, (63) prolateral; (64) epigynum: ventral.



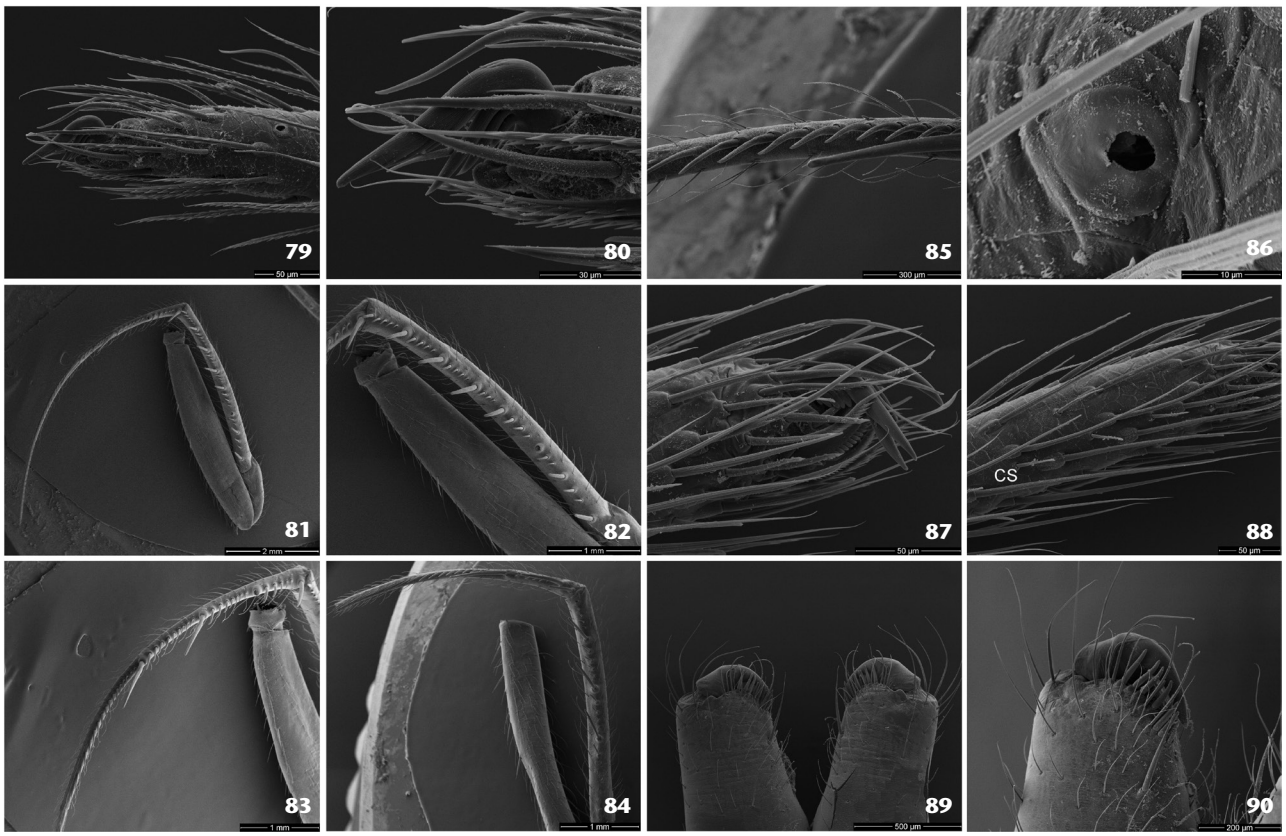
Figures 65-72. (65-68) *Gelanor latus*: (65-68) male palp: (65) ventroapical, (66) retrolateral, (67) retroventral, (68) proapical. (69-72) *Gelanor latus*: (69, 70) male palp: (69) prolateral, (70) tarsal organ; (71-72) epigynum: (71) posterior, (72) ventral.

Brescovit leg. (MCN 17202); Colombo (25°17′31″S, 49°13′26″W), 1 male, 1 female, 02.XII.1990, A.B. Bonaldo leg. (MCN 20658); Curitiba (25°25′40″S, 49°16′23″W), 2 males, 1 female, 02.XI.1987, A.D. Brescovit leg. (MCN 17160); 2 females, 01.XII.1990, A.B. Bonaldo leg. (MCN 20611); female, 26.X.1995, A.B. Bonaldo leg. (MCN 26712). *Santa Catarina*: Blumenau (Morro Spitzkoppf, 27°01′S, 49°07′ W), 1 female, 03.II.1996, A.B. Bonaldo & A. B. Kury leg. (MCN 27249); (Parque Natural Municipal Nascentes do Garcia, 27°01′S, 49°09′W), 6 males, 15 females, 21-28.I.2003, Equipe Biota leg. (IBSP 63016, 63017, 63020, 63022, 63023, 63026, 63027, 63029, 63030, 63033, 63035, 63037, 63039, 63040, 63041, 63044, 63045); Paulo Lopes (Parque Nacional da Serra do Tabuleiro, 27°55`S; 48°42`W), 4 males, 9 females, 10-20.I.2003, Equipe Biota leg. (IBSP 63051, 63058, 63061, 63062, 63065, 63071, 63076, 63078, 63079, 63082); Rancho Queimado (27°40′45″S, 49°01′27″W), 08-11.X.1994, A.B. Bonaldo leg. (MCN 25855); 1 male, 3 females, 13-15.I.1995, A.B. Bonaldo leg. (MCN 26383); 8 males, 12 females, 15-18.XI.1995. A.B. Bonaldo leg. (MCN 26786); Ilhota (Morro do Baú, 26°54′00″ S; 48°49′37″W), 1 male, 04.II.1996, A.B. Bonaldo & A. Kury (MCN 27251). *Rio Grande do Sul*: Derrubadas (Parque Estadual do Turvo, 27°00′, 27°20′S, 53°40′, 54°10′W), 2 females, 17.I.1985, A.A. Lise leg. (MCN 12878); 6 males, 17 females, 27-31.X.2003, R. Ott et al. (MCN 39439-39442); 6 males, 8 females, 19-22.X. 2004, R. Ott et al. leg. (MCN 39443, 39444, 39871); Tenente Portela (Porto Garcia, 27°22′15″S, 53°45′28″W), 1 male, 11.IX.1976, S. Scherer leg. (MCN 4563); 1 male, Nonoai (Parque Estadual de Nonoai, 27°25′19.56″S 53°2′41.28″W), 14.I.1985, A.A. Lise leg. (MCN 12840); Esmeralda (28°2′23″ S; 51°10′19″W), 2 males, 18 females, 24.V.1975, A.A. Lise leg. (MCN 2903); Garruchos (28°11′02″S, 55°38′20″W), 1 male, 18 females, 10.XII.1975, A.A. Lise leg. (MCN 3027); 3 males, 1 female, 08.XI.1979, H. Bischoff, A.A. Lise leg. (MCN 8675, 8679); Vacaria (28°30′43″S, 50°56′02″W), 1 female, 14.I.1974, A.A. Lise leg. (MCN 322); 1 male, 12.X.1884, L.A. Moura leg. (MCN 25841); Guabiju (28°32′27″S, 51°41′24″W), 1 female, 09.X.2000, I. Heydrich leg. (MCN 33533); 2 female, 31.X.2001, A. Franceschini leg. (MCN 34092); Cambará do Sul (29°02′52″S, 50°08′42″W), 2 males, 12 females, 24-26.XI.1993, M.A.L. Marques; A.B. Bonaldo; E.H. Buckup leg. (MCN 24258, 24426, 24428); 1 female, 20.X.1994, N. Silveira leg. (MCN 25821); 1 male, 8 females, 19-21.XII.1994, L.A. Moura leg. (MCN 25954); Caxias do Sul (29°10′04″S, 51°10′44″W), 3 males, 2 females, 19, 20.XI.1993, L.A. Moura leg. (MCN 24595); 2 males, 04.XI.1994, L.A. Moura leg. (MCN 25907); (Vila Oliva, 29°10′04″S, 51°10′44″W), 1 female, 10.IV.1992, L.A. Moura leg. (MCN 22116); Torres (Parque Estadual de Itapeva, 29°20′S, 49 °45′W), 2 males, 4 females, 10-14.I.2005, R. Ott et al.leg. (MCN 38840, 38576); (Colônia São Pedro), 1 female, 21.XI.1976, A.A. Lise leg. (MCN 4824); Nova Petrópolis (29°22′33″S, 51°06′43″W), 1 female, 20.XII.1973, A.A. Lise leg. (MCN 4311); Canela (29°21′53.01″S, 50°19′38.54″W), 1 female, 11.I.1966, A.A. Lise leg. (MCN 731); 2 females, 31.XII.1973, A.A. Lise leg. (MCN 2065); 3 females, 26.XII.1974, A.A. Lise leg. (MCN 2458); (Barragem dos Bugres, 29°21′53″S, 50°19′38″W), 3 males, 11 females, 23-25.XI.1998, L.A. Moura leg. (MCN 29857); 6 females, 13,14.XII.1999, A.B. Bonaldo leg. (MCN 31733); São Francisco de Paula (29°26 52″S, 50°35′02″W), 4 males, 12 females, 05.XI.1998, A.B. Bonaldo leg. (MCN 29731); 3 females, 18.XI.1997, M.A.L. Marques leg. (MCN 28731); 1 male, 1 female, 06.XI.1998, L.A. Moura leg. (MCN 29673); 1 male, 4 females, 04.XI.1998, A.B. Bonaldo leg. (MCN



Figures 73-78. *Gelanor zonatus*: (73-76) male palp: (73) ventral, (74) retrolateral, (75) ventral, (76) prolateral; (77-78) female: (77) epigynum, ventral, (78) tarsal organ, palp.

29681); (Usina Passo do Inferno, 29°26 52″S, 50°35'02″W), 3 females, 19.XI.1997, M.A.L. Marques leg. (MCN 28782); 4 males, 4 females, 19.XI, 1997, E.H. Buckup leg. (MCN 28829); Maquiné (Fepagro, 29°39'S, 50°12'W), 6 females, 18-27.I.2002, Equipe Biota leg. (IBSP 63001, 6305, 63011, 63012, 63014, 63015). São Pedro do Sul (29° 38'2″S, 54°14'15″W), 1 female, 11.I.1985, A.A. Lise leg. (MCN 12981). Montenegro (29° 41'15″S, 51°26'15″W), 1 male, 1 female, 29.IX.1977, H. Bischoff leg. (MCN 6611); 6 males, 2 females 06.X.1977, E.H. Buckup leg. (MCN 6885, in wasp nests); 1 male, 2 females, 20.X.1987, H. Bischoff leg. (MCN 6828); 3 males, 4 females, 17.XI.1977, A.A. Lise leg. (MCN 7222); 2 males, 4 females, 01.XII.1977 (MCN 7498); 5 males, 21 females, 20.XII.1977 (MCN 7624-7626); 2 males, 4 females, 01.XII.1977, A.A. Lise leg. (MCN 7498); General Câmara (29°56'15″S, 51°48'15″W), 1 female, 06-10.XI.1980, C.J. Becker leg. (MCN 9386); 1 female, 25.III.1982, T. Arigony leg. (MCN 10000); 5 males, 2 females,16.IX.1982, T. Arigony & A.A. Lise (MCN 10704, 10718); 1 male, 10.X.1982, E. H. Buckup leg. (MCN 10877); 1 female, 17.IX.1982, V. Pitoni leg. (MCN 10919); Triunfo (29° 56'34″S, 51°43'7″W), 3 males, 4 females, 15.IX.1977, E. H. Buckup leg. (MCN 6486); 1 male, 3 females, 20.X.1977, A.A. Lise leg. (MCN 6865); 1 male, 4 females, 28.XI.1977, H. Bischoff leg. (MCN 7300); (Parque Copesul de Proteção Ambiental, 29° 56'34″S, 51°43'7″W), 1 male, 1 female, 30.XI.1987, M. A. L. Marques leg. (MCN 17052); 1 female, 24.X.1988, C. C. Kessler leg. (MCN 17881); 2 females, 12.I.1989, M. H. Galileo leg. (MCN 18055); 5 males, 1 female, 21.IX.1989, E. H. Buckup leg. (MCN 18649); 3 males, 4 females, 24.X.1989, E. H. Buckup leg. (MCN 18825); 1 male, 14. XI.1989, E. H. Buckup (MCN 19019); 1 male, 3 females, 17.IX.1993, A.D. Brescovit leg. (MCN 23952); 1 male, 19.X.2000, E. Borsato leg. (MCN 33529); 1 female, 29, 30.IV.2003, R. Ott leg. (MCN 35726); 2 males, 7 females, 21.X.2003, A. Barcellos & L. Schmidt; R. Ott leg. (MCN 36455, 36481, 36519); 1 female, 30.XI.2004, R. Ott leg. (MCN 38200); 1 female, 06.I.2005, R. Ott leg. (MCN 38242); 3 males, 3 females, 25.VIII.2005, R. Ott leg. (MCN 39957, 39958); 6 males, 4 females, 18.IX.2006, R. Ott & A. Barcellos leg. (MCN 42085, 42154); 1 female, 12.XII,2006, R. Ott & A. Barcellos leg. (MCN 42678); 1 male, 31.VIII.2007, L. Schmidt leg. (MCN 43536); São Jerônimo (29°57'31″S, 51°43'21″W), 2 males, 30.IX.1982, J. Pinto leg. (MCN 10761); Campo Bom (29°41'15″S, 51°03'45″W), 1 male, 1 female, 28.XI.1979, C.J. Becker leg. (MCN 8776); 4 males, 5 females, 12.X.1980, C.J. Becker leg. (MCN 9349); 3 males, 2 females, 30.XI.1985, C.J. Becker leg. (MCN 13460); Novo Hamburgo (29°41'15″S, 51°11'15″W), 2 males, 10.IX.1982 (MCN 10936); 1 female, 20.VII.1982, C. J. Becker leg. (MCN 10936); 1 male, 21.X.1983, C.J. Becker leg. (MCN 11810); 1 male, 2 females, 07.X.1985, C.J. Becker leg. (MCN 14265); 1 female, 04.XI.1985, C.J. Becker leg. (MCN 14349); São Leopoldo (29°48'45″S, 51°11'15″W), 1 female, 26.XI.1982, C.J. Becker leg. (MCN 11136);



Figures 79-90. (79-84) *Gelanor zonatus*: (79, 80) female: (79) tarsal palp and claws, (80) palp, claws, detail; (81-84) leg I: (81) prolateral, (82) tibia, prolateral, (83) metatarsus, prolateral. (84) Leg II, prolateral. (85-90) *Gelanor zonatus*: (80-90) female: (85) leg II, prolateral, metatarsus, detail. (86-88) leg I: (86) tarsal organ, (87) claws and accessory claws, detail, (88) chemosensory setae. (89, 90) chelicerae: (89) frontal, (90) frontal, detail.

1 male, 12.XII.1983, C.J. Becker leg. (MCN 11861); Osório (29°56'15"S, 50°18'45"W), 1 male, 05.I.1985, A.A. Lise leg. (MCN 13020); Mariana Pimentel (30°19'50"S, 51°34'52"W), 1 female, 02.XII.1989, A.A. Lise leg. (MCN 19091); Porto Alegre (Morro Santana, 30°01'40" S; 51°13'43"W), 2 females, 17.V.1980, A.A. Lise leg. (MCN 9086); 1 female, 13.IX.1980, A.A. Lise leg. (MCN 9116); 1 female, 22.VIII.1981, A.A. Lise leg. (MCN 9833); 1 female, 15.XII.1989, A.A. Lise leg. (MCN 19172); Viamão (30°05'18"S, 51°01'26"W), 1 female, 30.VI.1976, A.A. Lise leg. (MCN 4200); 1 female, 30.V.2000, A.B. Bonaldo leg. (MCN 33157); (Estação Experimental Fitotécnica de Águas Belas, 30°05'18"S, 51°01'26"W), 24.I.1977, A.A. Lise leg. (MCN 5122); 2 females, 09.XII.1982, A.A. Lise leg. (MCN 11266, 11309); Bagé (31°18'45"S, 54°03'45"W), 2 males, 3 females, 28.X.1981, A.A. Lise leg. (MCN 9941).

Distribution. Bolivia, Brazil (Roraima, Amazonas, Pará, Pernambuco, Bahia, Goias, Mato Grosso, Minas Gerais, Rio de Janeiro, São Paulo, Paraná, Santa Catarina and Rio Grande do Sul), Colombia, Costa Rica, Ecuador, Guatemala, Guyana, French Guiana, Mexico, Nicaragua, Panama, Paraguay and Peru.

Key to the Brazilian species of the *Gelanor*

Males

1. Carapace very projected in the median portion, triangular shape in lateral view (Fig. 14); basal process of paracymbium with a pointed projection (Figs. 9, 11, 45-48) .... *Gelanor altithorax* Keyserling, 1893

1'. Carapace and basal process of paracymbium otherwise 2

2. Palp with embolus thin, like a spear (Figs. 19, 53, 54, 56, 57); median process of conductor sclerotized, shaped like a bird head, in prolateral and retrolateral view (Figs. 19, 20, 55); small basal process of paracymbium, thumb-shaped (Figs. 18, 20, 53-55); distal apophysis of conductor blunt, sclerotized (Figs. 18-20, 54, 55, 57) ..... *G. consequus* O. P.-Cambridge, 1902

2'. Palp with embolus wide (Figs. 1, 2, 6, 7); median process of conductor not sclerotized (Figs. 25, 35, 40); basal process of paracymbium developed (Figs. 35, 37, 40, 42); distal apophysis of conductor pointed (Figs. 30, 35, 40, 65, 66) or not sclerotized (Figs. 6, 8, 25).....3

3. Palp with median boss on the margin of the cymbium in ventral view (Figs. 1, 30, 65, 66) 4

3'. Palp without median boss in the margin of the cymbium in ventral view (Figs. 18, 25, 40, 53, 59) 5

4. Basal process of paracymbium with a single projection (Figs. 1, 3) ..... *Gelanor hoga* **sp. nov.**

4'. Basal process of paracymbium with two projections (Figs. 30, 65-67) ..... *Gelanor latus* (Keyserling, 1881)

5. Median process of conductor narrow (Figs. 6, 7), not covering the embolus in ventral view (Fig. 6); tip of embolus like an arrow-head (Fig. 6) ..... *Gelanor cachimbo* **sp. nov.**

5'. Median process of conductor large, covering the embolus in ventral view (Figs. 9, 25, 35, 73); tip of embolus otherwise... 6

6. Embolus curved, hook-like, apex transversal (Fig. 40). Sternum with a dark transversal stripe at coxae II level and four dark marks posterior to it (Benavides & Hormiga 2016: fig. 55f).... .....*Gelanor zonatus* (C.L. Koch, 1845)

6'. Embolus and sternum otherwise 7

7. Distal apophysis of conductor rounded at apex (Fig. 25, 59, 60, 62, 63); margin of cymbium concave (Figs. 25, 60, 62) near the basal process of paracymbium .... *Gelanor juruti* Benavides & Hormiga, 2016

7'. Distal apophysis of conductor pointed at apex (Figs. 35-37); margin of cymbium concave, but unnoted (Fig. 35). Males can be recognized by their triangular white abdominal spots (Benavides & Hormiga 2016: fig. 45a) .... *Gelanor waorani* Benavides & Hormiga, 2016

Females

1. Carapace very projected in the median portion, triangular shape in lateral view (Fig. 15) .... *Gelanor altithorax* Keyserling, 1893

1'. Carapace otherwise 2

2. Epigynum protruding, with two circular depressions separated by a narrow median septum (Figs. 21, 22, 58); posterior margin with a median fissure (Figs. 22, 23, 58); spermathecae elongated, kidney-shaped (Fig. 23)..... .....*G. consequus* O. P.-Cambridge, 1902

2'. Epigynum and spermathecae otherwise 3

3. Epigynum with sclerotized pointed lateral projections, median septum short (Fig. 33) 4

3'. Epigynum without sclerotized pointed lateral projections, median septum large (Fig. 28) 6

4. Epigynum with two median depressions (Fig. 4), spermathecae oval (Fig. 5) 5

4'. Epigynum without two depressions, spermathecae rounded (Figs. 38, 39). Females have the largest copulatory openings in the genus (Benavides & Hormiga 2016: fig. 47b)..... ..... *Gelanor waorani* Benavides & Hormiga, 2016

5. Epigynum with shorter pointed lateral projections, with a median projection (Fig. 4), fertilization ducts next to the posterior margin of epigynal plate (Fig. 5) .... *Gelanor hoga* **sp. nov.**

5'. Epigynum with larger pointed lateral projections, without a median projection (Figs. 33, 71, 72), fertilization ducts far from posterior margin of epigynal plate (Fig. 34) .... *Gelanor latus* (Keyserling, 1881)

6. Epigynum anteriorly wider (Figs. 43, 77); internally separate spermathecae (Fig. 44); fertilization ducts, close together, not forming loops..... .....*Gelanor zonatus* (C.L. Koch, 1845)

6'. Epigynum anteriorly not so wide (Figs. 28, 64); internally spermathecae close together, fused (Fig. 29); fertilization ducts distant from each other, forming loops..... ..... *Gelanor juruti* Benavides & Hormiga, 2016

ACKNOWLEDGEMENTS

We thank to curators of the arachnological collections by the loan of the material. Everton N.L. Rodrigues was supported by CNPq (process 445763/2014-0) and Antonio D. Brescovit is supported by CNPq (process 301776/2004-0). We also thank anonymous reviewers and the editor for their valuable comments.

LITERATURE CITED

Benavides LR, Hormiga G (2016) Taxonomic revision of the Neotropical pirate spiders of the genus *Gelanor* Thorell, 1869 (Araneae, Mimetidae) with the description of five new species. **Zootaxa 4065**: 1-72. doi: 10.11646/zootaxa.4064.1.1

Platnick NI, Shadab MU (1993) A review of the pirate spiders (Araneae, Mimetidae) of Chile. **American Museum Novitates 3074**: 1-30.

Shear WA (1981) Structure of the male palpal organ in *Mimetus*, *Ero*, and *Gelanor* (Araneoidea, Mimetidae). **Bulletin American Museum of Natural History 170**: 257-262.

World Spider Catalog (2016) **World Spider Catalog.** Bern, Natural History Museum, version 17, available online at: http://wsc.nmbe.ch [Accessed: 30/03/2016]

Submitted: 23 February 2016
Received in revised form: 9 April 2016
Accepted: 8 May 2016
Editorial responsibility: Ricardo Pinto da Rocha

Author Contributions: Found the new species: ENLR, EHB. Identified the specimens: ENLR. Wrote the paper: ENLR. Species diagnosis and descriptions: ENLR. Made the drawings: ENLR. MEV pictures: ADB.
Competing Interests: The authors have declared that no competing interests exist.