UNIVERSIDADE FEDERAL DO ESPÍRITO SANTO

CENTRO DE CIÊNCIAS HUMANAS E NATURAIS

PROGRAMA DE PÓS-GRADUAÇÃO EM CIÊNCIAS BIOLÓGICAS

Revisão taxonômica de *Dissomphalus* Ashmead 1893 (Hymenoptera, Bethylidae) no Espírito Santo, Brasil

Wesley Dondoni Colombo

Vitória, ES

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Orientador: Celso Oliveira Azevedo

Dissertação submetida ao Programa de Pós-Graduação em Ciências Biológicas (Biologia Animal) da Universidade Federal do Espírito Santo como requisito parcial para a obtenção do grau de Mestre em Biologia Animal.

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SUMÁRIO

Resumo: Quarenta e duas espécies de *Dissomphalus* Ashmead, 1893 são revisadas, 21 espécies são descritas e ilustradas: *Dissomphalus botocudus* **sp. nov.**, *D. fredi* **sp. nov.**, *D. tupinikim* **sp. nov.**, *D. guarani* **sp. nov.**, *D. congo* **sp. nov.**, *D. rosangelae* **sp. nov.**, *D. w-aedeagus* **sp. nov.**, *D. amana* **sp. nov.**, *D. potyra* **sp. nov.**, *D. pyata* **sp. nov.**, *D. clovisi* **sp. nov.**, *D. kuara* **sp. nov.**, *D. miriamae* **sp. nov.**, *D. cacirus* **sp. nov.**, *D. mirim* **sp. nov.**, *D. secretus* **sp. nov.**, *D. caparao* **sp. nov.**, *D. capixaba* **sp. nov.**, *D. ibirapitanga* **sp. nov.**, *D. purius* **sp. nov.** e *D. taiabocu* **sp. nov.** Seis espécies são registradas pela primeira vez para o Espírito Santo: *D. brasiliensis* Kieffer, *D. bahiensis* Redighieri & Azevedo, *D. dumosus* Evans, *D. incomptus* Evans, *D. refertus* Alencar & Azevedo e *D. umbilicus* Azevedo. Três espécies são reidentificadas: *D. napo* Evans, *D. truncatus* Azevedo e *D. vallensis* Azevedo. Dos 15 grupos de espécies registrados para o gênero no Espírito Santo, os grupos de espécies *amplus*, *secretus* e *amana* são aqui propostos.

Abstract: Forty-two species of *Dissomphalus* Ashmead, 1893 are reviewed, 21 of them are described and illustrated: *Dissomphalus botocudus* **sp. nov.**, *D. fredi* **sp. nov.**, *D. tupinikim* **sp. nov.**, *D. guarani* **sp. nov.**, *D. congo* **sp. nov.**, *D. rosangelae* **sp. nov.**, *D. w-aedeagus* **sp. nov.**, *D. amana* **sp. nov.**, *D. potyra* **sp. nov.**, *D. pyata* **sp. nov.**, *D. clovisi* **sp. nov.**, *D. kuara* **sp. nov.**, *D. miriamae* **sp. nov.**, *D. cacirus* **sp. nov.**, *D. mirim* **sp. nov.**, *D. secretus* **sp. nov.**, *D. caparao* **sp. nov.**, *D. capixaba* **sp. nov.**, *D. ibirapitanga* **sp. nov.**, *D. purius* **sp. nov.** and *D. taiabocu* **sp. nov.** Six species are registered for the first time from Espírito Santo: *D. brasiliensis* Kieffer, *D. bahiensis* Redighieri & Azevedo, *D. dumosus* Evans, *D. incomptus* Evans, *D. refertus* Alencar & Azevedo and *D. umbilicus* Azevedo. Three species were reidentified: *D. napo* Evans, *D. truncatus* Azevedo and *D. vallensis* Azevedo. Among fifteen species-groups which recognized in the genus in Espírito Santo, *amana* species-group; *amplus* species-group and *secretus* species-group are newly proposed.

Apresentação

Biografia: o surgimento de um mestrando

Nasci no dia 22 de novembro de 1992, em São João de Petrópolis, carinhosamente conhecido como "Barracão", no interior do município de Santa Teresa – Espírito Santo. Santa Teresa é um município extraordinário, principalmente quando o assunto é biodiversidade. E claro, não posso deixar de comentar, local de nascimento do grande naturalista Augusto Ruschi, Patrono da Ecologia no Brasil.

Sou o filho mais novo e único homem dos três filhos dos meus pais, Frederico e Rosangela. Minha família é humilde e não muito diferente das demais que vivem na roça. Sempre fui apaixonado por dinossauros e meu quarto era repleto de brinquedos pré-históricos (hoje, eles estão com meus sobrinhos, mas ainda existem!). Provavelmente fui influenciado pela saga dos filmes dos dinossauros, principalmente o Jurassic Park, na década de 90, além dos meus próprios pais que compravam brinquedos relacionados.

Esta minha paixão só foi aumentando, na medida que ingressei na Escola Estadual de Ensino Fundamental e Médio "Frederico Pretti", em que tive aulas de Ciências e Biologia por sete anos com o querido Prof. Celso Luís Izabel. Este, provavelmente foi o professor que plantou a semente para que hoje eu estivesse aqui. Deixo aqui meus sinceros agradecimentos a este eterno mestre.

Com os recém 17 anos e concluindo o Ensino Médio, chegou o momento de escolher a tão almejada graduação. Muitas pessoas falavam para tentar Medicina, Engenharia, entre outras, mas eu queria ser, Paleontólogo. Sim, eu queria trabalhar com o majestoso *Tyrannosaurus rex* Osborn, 1905. Porém, Paleontologia é uma Pós-graduação, logo, eu deveria escolher entre a Biologia ou a Geologia. Eis que a Biologia venceu!

Curso escolhido e com o incondicional apoio da minha mãe, além de uma pitada de sorte, o Instituto Federal do Espírito Santo – *Campus* Santa Teresa (IFES-ST) lançou sua primeira seleção para cursos superiores, com vagas para o curso de Licenciatura em Ciências Biológicas. Nesta época, eu não pude tentar outras instituições ou sair de casa, pois minha mãe, infelizmente estava na fase terminal do câncer e meu avô acamado, logo, eu era necessário.

Com o sonho de ser Paleontólogo ali sempre que guiando, ingressei no Curso de Licenciatura em Ciências Biológicas do IFES-ST, em 2010. Logo no início da minha graduação, conheci a professora Isabel De Conte Carvalho de Alencar, na posição de professora da disciplina de Introdução a Biologia. Imediatamente conversei com a mesma

sobre minhas ideias e vontades em relação a trabalhar com dinossauros. Pois, a mesma era a única Zoóloga que estava, até o momento, no IFES-ST. Para minha surpresa, ela trabalhava com insetos e me convidou a conhecer este grupo. Aproveito para ressaltar que foi neste momento que descobri que existia Mestrado e Doutorado.

Comecei a trabalhar com a Prof. Isabel e juntos, no primeiro ano de graduação, organizamos uma Coleção Entomológica para o IFES-ST. No segundo ano, a mesma me propôs submeter um projeto para Iniciação Científica, visando bolsa. O tema proposto foi "*Os Impactos da Produção Bibliográfica de Benoit para Bethylidae*". O projeto foi aprovado, porém na mesma época fui chamado para estagiar no Laboratório de Biologia e o mesmo foi repassado para a Rayanne Ferreira Ayres. Então, meu contato com os Bethylidae foi adiado.

Foi trabalhando no Laboratório de Biologia que recebi de um aluno um escorpião vivo dentro de um pote para ser incluído na coleção do laboratório. Entretanto, fiquei curioso e queria saber mais daquele animal. Após este dia, "abandonei" os insetos e comecei a focar exclusivamente nos escorpiões. Recebi total apoio da minha orientadora Isabel, potencializando minhas habilidades.

A minha ligação com os escorpiões é tão significativa, que até hoje sou relacionado a eles, além de ter feito uma tatuagem de um deles na perna. Eles foram os objetos do meu primeiro artigo, da minha monografia de conclusão de curso, além da minha monografia da especialização em Ensino de Biologia.

Com a conclusão da minha graduação, eu queria mais, queria seguir para o mestrado e depois o doutorado. Eis que Isabel me indica para o seu orientador, o "tão temido" Celso Azevedo. Sim, eu tinha medo e profunda admiração, afinal ele era o "chefe" da minha "chefe" e se ela era extraordinária, ele estaria além da compreensão.

No primeiro ano que tentei a seleção do PPGBAN, não fui aprovado e fui obrigado a trabalhar em outros locais para me sustentar e confesso que achava que ser mestre não se passava de um sonho bobo. Cheguei inclusive a ser caixa de supermercado e não querer mais seguir o ramo da Biologia. Foi quando Isabel se mostrou muito mais que uma professora ou amiga, mas sim uma irmã, me apoiando e estimulando para não desistir.

Quando abriu novamente a seleção do PPGBAN no final do ano de 2014, fui novamente conversar com o professor Celso Azevedo sobre minha perspectiva de tentar o mestrado sob orientação dele. Porém eu não sabia nada de Bethylidae, nada de Taxonomia, nada de Sistemática, e tinha poucas chances de ser aprovado pela minha ignorância com o tal inglês. Lembro como se fosse ontem, no antigo escritório do Prof.

Celso Azevedo, a reunião que ele, Isabel e eu tivemos sobre a seleção de mestrado. Nesta mesma reunião, Celso me perguntou com o que eu gostaria de trabalhar e acreditem, eu disse: "*...com a mesma vespa que o Ricardo Kawada tirou foto e postou no Facebook*". Mas qual vespa? Não sabia... não conhecia nada daquele mundo. Então, Isabel disse: "*Dissomphalus*". Sim! Foi assim que escolhi meu objeto de estudo. Acho que posso dizer, foi amor à primeira foto.

Com o ingresso no mestrado em 2015 e com o desenrolar da minha dissertação percebi que não fui enganado nem pela Isabel e nem pela foto. *Dissomphalus* e Celso foram as melhores escolhas que eu poderia ter feito, e estou realmente agradecido por isto. Me descobri no mundo da Sistemática e não me vejo em outro caminho a não ser este. E a Paleontologia? Bom, acredito que será cena dos próximos capítulos.

1. Introduction

According to Moreira *et al.* (2008), the state of Espírito Santo is recognized as one of the richest area of the world in terms of species diversity. This high diversity has been detected for several biological groups (Thomaz & Monteiro 1997; Mendes & Padovan 2000; Passamani *et al.* 2005; Sarmento-Soares & Martins-Pinheiros 2014). Although the fauna of Hymenoptera from the Brazilian state of Espírito Santo has been poorly studied (Azevedo *et al.* 2015), several studies on parasitoid wasps demonstrate the state's potential to host new taxa (Azevedo & Santos 2000; Azevedo *et al.* 2002, Redighieri & Azevedo 2004, 2006, Alencar *et al.* 2007, Mugrabi *et al.* 2008).

Dissomphalus Ashmead, 1893 is the most abundant genus of Bethylidae in the Neotropical region (Azevedo 2003) and belongs to the subfamily Pristocerinae. This genus is distinguished from other Pristocerinae because its species have a pair of modifications in the second tergite of metasoma (Azevedo 1999a), the tergal process. Some *Dissomphalus*, however, lack the tergal process. Azevedo (2003) redefined the genus based on genitalia structures: the presence of two layers composing the aedeagus (ventral ramus and dorsal body).

Currently there are 267 known species of *Dissomphalus* valid for the world (personal data). For the Espírito Santo there are hitherto records of 40 species according to Azevedo (1999a, 2003), Redighieri & Azevedo (2004, 2006) and Alencar & Azevedo (2008).

2. Material and methods

2.1. Study Area

The Neotropical region comprises the territory from Mexico to southern South America (Amorim & Pires 1996) and is divided into several smaller units or biogeographic subregions. The state of the Espírito Santo is included in the Paranaense sub-region. According to Sydney *et al.* (2010), this sub-region corresponds largely to the Atlantic Forest.

The state of Espírito Santo has 78 municipalities and is located politically in southeastern Brazil (Fig. 1), limited to the north by the state of Bahia, to the east by the Atlantic Ocean, to the south by the state of Rio de Janeiro and the west by state of Minas Gerais, comprising a total area of 46,184.1 km² (Feitoza *et al.* 2001). It is noteworthy that the Atlantic Forest covers almost entirely the territory of this state.

Despite losing more than 90% of its natural ecosystems (Fundação SOS Mata Atlântica 1998), the state of Espírito Santo has a large number of protected areas, compared to the majority of Brazilian states (Mendes & Padovan 2000). Due to its great biological diversity, it is inserted in the Central Corridor of the Atlantic Forest, which includes 11 of the areas of highest priority and geographically more extensive in the region having the highest index of diversity of vascular plants in the world and a large number of endemic animals (Ayres *et al.* 2005). There are three major vegetation formations occurring in Espírito Santo, in three distinct geomorphological provinces (Martin *et al.* 1993): hillside forest, *tabuleiro* forest and *restinga* vegetation, and additionally mangroves.

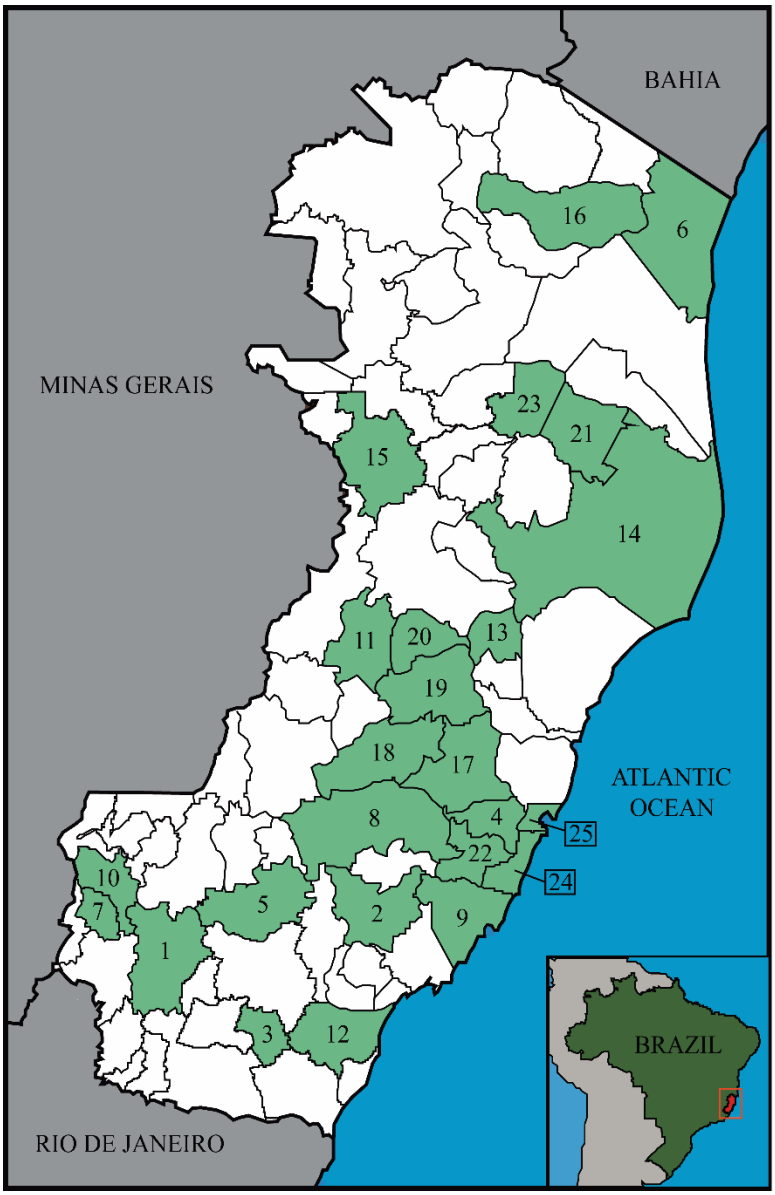

Figure 1. Localization of Espírito Santo State, showing municipalities with vouchered records. 1, Alegre; 2, Alfredo Chaves; 3, Atílio Vivacqua; 4, Cariacica; 5, Castelo; 6, Conceição da Barra; 7, Divino de São Lourenço; 8, Domingos Martins; 9, Guarapari; 10, Ibitirama; 11, Itaguaçú; 12, Itapemirim; 13, João Neiva; 14, Linhares; 15, Pancas; 16, Pinheiros; 17, Santa Leopoldina; 18, Santa Maria de Jetibá; 19, Santa Teresa; 20, São Roque do Canaã; 21, Sooretama; 22, Viana; 23, Vila Valério; 24, Vila Velha; 25, Vitória.

2.2. Material examined

The *Dissomphalus* specimens analized in the study were deposited in the collections of Canadian National Collection of Insects, Canada (CNCI, J. Huber); Florida State Collection of Arthropods, U.S.A. (FSCA, J. Wiley); Fundacíon Instituto Miguel Lillo, Argentina (FIML, V. Colomo); Instituto Nacional de Pesquisas da Amazônia, Brazil (INPA, M.L. Oliveira); Museu de Zoologia da Universidade de São Paulo, Brazil (MZSP, Carlos R.F. Brandão); Museum für Naturkunde, Germany (ZMBH, F. Koch); Museum of Comparative Zoology, Harvard University, U.S.A. (MCZH, S. Cover and P. Perkins); Royal Alberta Museum, Canada (PMAE, M. Buck); The Natural History Musuem, U.K. (BMNH, D, Notton); Universidade Federal do Espírito Santo, Brazil (UFES, M.T. Tavares) and Universidade Federal do Paraná, Brazil (DZUP, G. A.R. Melo). They summed up to 2,835 new specimens and 1,389 specimens previously studied. Samples were collected during the period 1996–2014, by different sampling methods: Malaise traps, Möricke, vacuuming and sweeping vegetation. The holotypes of all 42 previous described species and 423 paratypes of the *Dissomphalus* species were examined.

2.3. Characters and descriptions

The nomenclature of the integument generally follows Harris (1979). Terminology of external morphology generally follows Evans (1964) and Azevedo (1999a), and of genitalia follows Snodgrass (1941). The main characters analyzed were number of apical teeth of mandible; shape of median clypeal lobe; head texture and punctuation; vertex shape; mesosoma texture; mesosoma punctuation; presence or absence of tergal processes in metasoma tergite II; shape of tergal process; shape of posterior margin of hypopygium; shape and relative size of paramere, digitus, cuspis, basivolsella, and aedeagus (dorsal body and ventral ramus); presence of basal process; presence of basal bar; shape of genital ring; shape and relative size genital apodeme. Next abbreviations are used in the text: T1, T2, for metasomal tergites 1 and 2 consequently.

The data in the section of *Material examined* are literally transcribed as appear in the labels, but additional data are in brachets and corrected data are in braces. This section is organized into three subsection, they are *Types*, *Material revised* and *New material examined*. In the subsection *Types* we list the holotypes and paratypes when examined, in the subsection *Material revised* we list non-type specimens previously studied, and in the subsection *New material examined* we list the specimens never studied before.

2.4. Species identification

We followed the keys proposed by Azevedo (1999a, 2000, 2001, 2003), Redighieri & Azevedo (2004, 2006) and Alencar & Azevedo (2006, 2008) for the Neotropical species *Dissomphalus*.

2.5. Illustrations

The characters of the head, mesosoma and metasoma were photographed under a Leica Z16 APO stereomicroscope coupled to a Leica DFC 2 video camera by Leica Microsystems (Switzerland). Two different software programs were used to combine the images: Leica Application Suite V3.6.0 by Leica Microsystems (Switzerland), using the parameters max. process, precision optimize, and 15–40 patch size to combine images, and Helicon Focus (HeliconSoft), using the parameters A, B or C method; 100% full resolution; 1–4 radius; 1 smoothing; and 300 DPI. The characters of the genital structures were drawn in camera lucida adapted to a microscope and then scanned into Photoshop. For each specimen, illustrations were made as follows: head in dorsal view; tergal processes when present in dorsal or lateral view; dorsal, ventral and lateral view of the male genitalia. All photographs and drawings were based on holotypes.

3. Results

In this paper, we describe 21 species of *Dissomphalus* from the Espírito Santo; three species were reidentified, changing the status of occurance; six species are recorded for the first time; 38 species had accretion of new specimens and four species had no addition of new specimens. Thus, the state of Espírito Santo has now a total of 63 species of *Dissomphalus* recorded, ranging over 25 municipalities.

Genus *Dissomphalus* Ashmead, 1893

Dissomphalus Ashmead 1893: 41–42. Type-species: *Dissomphalus xanthopus* Ashmead, by original designation.
Ecitopria Wasmann 1899: 55–56, 127. Type-species: *Ecitopria crassicornis* Wasmann, by monotypy. Synonymized by Evans 1955: 290.
Psilobethylus Kieffer in Kieffer & Marshall 1906: 461–462. Type-species: *Psilobethylus luteus* Kieffer, by monotypy. Synonymized by Terayama 1995: 888.
Thaumatepyris Kieffer 1910a: 47. Type-species: *Thaumatepyris punctatus* Kieffer, by monotypy. Synonymized by Evans 1964: 41.
Glenobethylus Kieffer 1910a: 50. Type-species: *Glenobethylus montanus* Kieffer, by monotypy. Synonymized by Evans 1964: 41.
Parisobrachium Kieffer 1914: 237, 424. Type-species: *Rhabdepyris ? albipes* Kieffer, by monotypy. Synonymized by Azevedo 2008: 784.
Parecitopria Ogloblin 1930: 15. Type-species: *Parecitopria azarai* Ogloblin, by monotypy. Synonymized by Evans 1964: 41.

***brasiliensis* species-group**

Diagnosis. Male. Mandible tridentate. Clypeus broad. Aedeagal ventral ramus tubular. Aedeagal dorsal body small.

Remarks. This species-group contains two species: *D. brasiliensis* Kieffer, 1910 and *D. tubulatus* Redighieri & Azevedo, 2006 the former recorded from Espírito Santo for the first time in this study.

Distribution. Panama, Venezuela, Guiana, Suriname, Ecuador, Peru, Brazil (Rondônia, Acre, Paraíba, Espírito Santo and São Paulo) and Argentina.

***Dissomphalus brasiliensis* Kieffer, 1910**
(Figs 43, 44)

Dissomphalus brasiliensis Kieffer, 1910b: 295 (♂, holotype from Pará, CASC); Redighieri & Azevedo, 2006: 319–320.
Dissomphalus bispinulatus Evans, 1969: 13, 19–20. Synonymized by Redighieri & Azevedo 2006.
Dissomphalus hastatus Evans, 1979: 276–277, 281–283. Synonymized by Azevedo 1999b.

Diagnosis. Male. Body castaneous. Mandible tridentate. Median clypeal lobe broadly projected, with large sharp median tooth. Eye glabrous. Frons weakly coriaceous, punctures large, shallow. Vertex straight. Pronotal disc depressed forward. Notaulus and parapsidal furrow well impressed, former complete. Metapectal-propodeal complex with median carina failed anteriorly. T2 with shallow depression, touching posterior margin of T1, close to another, occupying median half of width of tergite, small tubercle with short setae, placed within median third of width of tergite. Genitalia: paramere with apex slightly concave; digitus with large basal projection; aedeagal ventral ramus much longer than dorsal body, wide, tubular, parallel, apex rounded; dorsal very short, produced upward, two pairs apical lobes; ventral pair small and arched upward, dorsal pair stout, tubular with small digitiform projection; basal ring subquadrate. Female unknown.

Remarks. This is the first record of this species (one specimen) from Espírito Santo.

Material examined. Types: Holotype ♂, BRAZIL, Pará, Baker col. (CASC, #17054). **New material examined:** BRAZIL, E[spírito] S[anto]: 1♂, Vila Velha, Res[erva] Jacaranema, 30.X.2002, arm[adilha] Malaise, [C.O.] Azevedo & eq[uipe] col.

Distribution. Panama, Venezuela, Guiana, Suriname, Ecuador, Peru, Brazil (Pará, Rondônia, Acre, Espírito Santo and São Paulo) and Argentina.

***conicus* species-group**

Diagnosis. Male. Median clypeal lobe trapezoidal, except D. filus Azevedo. Metasoma with pair of non-conspicuous lateral depressions, tubercle present, pit on top, tuft of setae present.

Remarks. This species-group contains 11 species: *D. cervoides* Azevedo, 2003, *D. curviventris* Azevedo, 2003, *D. truncatus* Azevedo, 2003, *D. conicus* Azevedo, *D. manus* Azevedo, *D. filus* Azevedo, 2003, *D. umbilicus* Azevedo, *D. h-ramus* Redighieri & Azevedo, *D. laminaris* Redighieri & Azevedo, *D. verrucosus* Redighieri & Azevedo and *D. botocudus* **sp. nov.**, the latter seven are recorded from Espírito Santo.

Distribution. Ranging from Costa Rica to southern Brazil, including some Caribbean islands.

***Dissomphalus conicus* Azevedo, 2003**
(Figs 45–47)

Dissomphalus conicus Azevedo, 2003: 32 (♂, holotype from Paraná, DZUP, figs 37–40); Redighieri & Azevedo, 2006: 307.

Diagnosis. Male. Black. Mandible bidentate. Median clypeal lobe trapezoidal. Frons strongly coriaceous. Vertex badly convex. T2 small, shallow lateral depression, tubercle wide, pit on top, dense tuft of setae directed backward. Posterior hypopygeal margin straight. Genitalia: paramere longer than basiparamere, apex arched inward, rounded, narrow, dorsal margin badly convex, ventral margin badly concave; basivolsella large, wide, rounded expansion directed upward in inner margin; aedeagal ventral ramus as long as dorsal body, laminar, surface vertical, wide with dorsal median emargination in lateral view; dorsal body with three pairs apical lobes; outer pair parallel, dorsal margin conical and angled medially upward in lateral view, ventral margin with two large and long teeth, apical margin of apical tooth serrated; dorsal and ventral inner pairs stout, membranous, dorsal one smaller, colliculate, dorsal margin serrated; base of aedeagus with long central tooth, slightly inclined upward. Female unknown.

Variations. Outer lobe of the aedeagal dorsal body without division of apical and subapical teeth.

Remarks. Twelve specimens of *D. conicus* were registered from Espírito Santo (Azevedo 2003; Redighieri &Azevedo 2006), and we add more 52 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Paraná, Ponta Grossa, Vila Velha, Reserve IAPAR, Br 376, 14.XI.1987, Malaise trap, Profaupar survey (DZUP).

Paratypes: 6♂, BRAZIL, Espírito Santo: Cariacica, Reserva Biológica de Duas Bocas, 17.IX–10.X.1996, C.O. Azevedo & E.H. Freitas col. (UFES). **Material revised:** 4♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP, UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Conceição da Barra, Parque Estadual de Itaúnas, 18º20'S 39º40W, 23–25.XI.2006, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES); 1♂, Conceição da Barra, Reserva Biológica Córrego Grande, Lagoa dos Guaxos, 18º16'S 39º48'W, 13-18.III.2006, Redighieri, ES; Furieri, KS & Van de Koken, AF col. (UFES); 4♂, Pancas, Faz[enda] Juliberto Stur, 19º12'S 40º47'O, 31.I–7.II.2003, armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 7♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 7♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02'S 40º41'O, 6–13.XII.2002, armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 6♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, 13–17.X.2008, 1♂, 17–23.X.2011 (UFES); 1♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Cariacica, RE[serva] BIO[lógica de] Duas Bocas, [20º16'S 40º28'W], 27.XI.2005, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 4♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 3–10.XII.2004, 8♂, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 4♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 2♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 4♂, Ibitirama, Parque Nacional Caparaó, 20º27'S 41º44'W, 06–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Ceará, Pernambuco, Distrito Federal, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná).

Dissomphalus h-ramus Redighieri & Azevedo, 2004

Dissomphalus h-ramus Redighieri & Azevedo, 2004: 330 (♂, holotype from Espírito Santo, UFES, figs 1–3); 2006: 307.
Dissomphalus truncatus: Redighieri & Azevedo 2004: 330, part.

Diagnosis. Male. Black. Mandible bidentate. Median clypeal lobe trapezoidal. Frons strongly coriaceous, very punctate. T2 with pair of small, elliptical sublateral depressions, wider than long, each depression with a prominent and flat-topped tubercle, pit on top, bearing tuft of setae directed slightly downward and inward. Posterior hypopygeal margin concave. Genitalia: paramere with acute apex, slightly arched inward, ventral and dorsal margin straight; ventral ramus slightly longer than dorsal body, laminar, surface horizontal, with two pairs of apical arms, outer pair rounded apex and acute inner projection below apex, inner pair short; dorsal body with two pairs apical lobes, outer pair tubular,sinuous, joined by calyx-shaped connection below, dorsal margin serrated apically, apex strongly arched downward, ventral margin with one or two sharpened teeth, apical one longer; apodeme extending beyond elliptical genital ring. Female unknown.

Variations. Ventral margin of the aedeagal dorsal body with two teeth, three teeth or three and two teeth the same genitalia.

Remarks. Sixty-two specimens of *D. h-ramus* were registered from Espírito Santo (Redighieri & Azevedo 2004; 2006), and we add more 67 new ones. Additionally, we considered as *D. h-ramus* one specimen previously identified as *D. truncatus* by Redighieri & Azevedo (2004).

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa (Estação Biológica de Santa Lúcia), 27.IX.2001, varredura C.O. Azevedo & R. Kawada col. (UFES). Paratypes: 4♂, same locality of holotype, 23.II–27.IX.2001, varredura C.O. Azevedo & R. Kawada col. (UFES). **Material revised:** 37♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06.IV.23–VII.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP), 1♂, varredura, 18♂, [armadilha] Malaise, C.O. Azevedo e eq[uipe] col. (UFES); 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 30.I–10.XII.2001, varredura C.O. Azevedo & R. Kawada col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 19°58’S 40°32’W, 11.IX.2003, varredura, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 7♂, Estação Biológica [de] Santa Lúcia, 13–17.X.2008. (UFES); 1♂, Estação Biológica [de] Santa Lúcia, 09–13.V.2006, armadilha Malaise, M. Tavares, C. Azevedo & eq[uipe] col. (UFES); 1♂, 15–19.X.2010, armadilha Malaise, M.T. Tavares & equipe col. (UFES); 2♂, 30.VII–04.VIII.2005, armadilha Malaise, M. Tavares, C. Azevedo & eq[uipe] col. (UFES); 1♂, 17–23.X.2011, [armadilha] Malaise, Tavares, M.T. & eq[uipe] col. (UFES); 1♂, 09–13.V.2006, [armadilha] Malaise, Tavares, M.T., Oliveira {Azevedo}, C.O. eq[uipe] col. (UFES); 1♂, 10.X.2002, varredura, Tavares,

M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 1♂, 17–23.X.2011, [armadilha] Malaise, Tavares, M.T. & eq[uipe] col. (UFES); 23♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 9♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º04'S 40º41'O, 29.XI–13.XII.2002, armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 6♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20°08S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 3♂, Santa Leopoldina, Bragança, 20º31'S 41º05'W, 8–15.X.2012, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 3–10.XII.2004, 1♂, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 2♂, Alfredo Chaves, Picadão, mata, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 4♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Bahia, Espírito Santo, Paraná and Santa Catarina).

Dissomphalus laminaris Redighieri & Azevedo, 2004

Dissomphalus laminaris Redighieri & Azevedo, 2004: 331 (♂, holotype from Espírito Santo, UFES, figs 6–9); 2006: 307–308.
Dissomphalus h-ramus: Redighieri & Azevedo 2004: 330, part.
Dissomphalus truncatus: Redighieri & Azevedo 2004: 330, part

Diagnosis. Male. Black. Mandible bidentate or tridentate. Median clypeal lobe trapezoidal. Frons strongly coriaceous, very punctate. T2 with pair of shallow or deep, rounded lateral depressions, tubercle present, flat-topped, small tuft of setae more or less dense. Posterior hypopygeal margin weakly concave. Genitalia: paramere with apex rounded, barely arched inward, series of small rounded teeth in ventral side; ventral ramus longer than dorsal body, straight, laminar, surface horizontal, apical half divided into two arms, outer one with apex rounded and inner one short and connected to dorsal body; dorsal body with two pairs apical lobes, outer pair laminar, straight, apex with two sharpened teeth, one directed upward or directed downward, several small teeth around; inner pair stout, membranous; basal process laminar, slightly arched upward; apodeme extending beyond elliptical genital ring. Female unknown.

Remarks. Twenty-eight specimens of *D. laminaris* were registered from Espírito Santo (Redighieri &Azevedo 2004; 2006), and we add more 53 new ones. Additionally,

we considered as *D. laminaris* one specimen previously identified as *D. h-ramus* and 21 specimens as *D. truncatus* by Redighieri and Azevedo (2004).

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Santa Teresa (Estação Biológica de Santa Lúcia), 23.II.2001, varredura C.O. Azevedo & R. Kawada col. (UFES); Paratypes: 6♂, same locality of holotype, 23.II–10.XII.2001, varredura C.O. Azevedo & R. Kawada col. (UFES). **Material revised:** 1♂, Sooretama, Reserva Biológica de Sooretama, 19º00'11.5''S 40º07'08''W, 22.IIi.2002, varredura, C.O. Azevedo e eq[uipe] col. (MZSP); 1♂, Santa Teresa, Est[ação] Biol[ógica de] S[an]ta Lúcia, 10.XII.2001, varredura, [C.O.] Azevedo & [R.] Kawada col. (UFES); 21♂, Santa Teresa, Estação Biológica de Santa Lúcia, 30.I–10.XII.2001, varredura C.O. Azevedo & R. Kawada col. (UFES); 7♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.iv.2001, armadilha Malaise, 6♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP); 6♂, C.O. Azevedo e eq[uipe] col. (UFES); 1♂, Vitória, Parque Estadual Fonte Grande, 30.VI.2001, varredura, Azevedo & Kawada col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 3♂, Conceição da Barra, Parque Estadual de Itaúnas, 18º20'S 39º40W, 23–25.XI.2006, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES); 3♂, Conceição da Barra, Reserva Biológica Córrego Grande, 18º14'S 39º49'W, 13.III.2006, [armadilha] Malaise, Redighieri, E. S. & eq[uipe] col. (UFES); 3♂, Pinheiros, Res[erva] Biol[ógica] do Córrego do Veado, 18º21'S 40º09'W, 09–17.VI.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 1♂, Pancas, Faz[enda] Juliberto Stur, 19º12'S 40º47'O, 24–31.I.2003, armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 1♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, Vitória, P[ar]q[ue] Est[adual] Fonte Grande, [20°18'S 40°20'W], 19.IV.2001, varredura, [C.O.] Azevedo & [R.] Kawada col. (UFES); 3♂, São Roque do Canaã, Alto Misterioso, 19º48'S 40º46''W, 02–11.XI.2007, armadilha Malaise, Waichert & eq[uipe] col. (UFES); 2♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 19º58'S 40º32'W, 11.IX.2003, varredura, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 2♂, 10.X.2002, varredura, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 1♂, 02.VIII.2005, varredura, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 1♂, 17–23.X.2011, [armadilha] Malaise, Tavares, M.T. & eq[uipe] col. (UFES); 1♂, 09–13.V.2006, [armadilha] Malaise, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 7♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04'S 40º44'O, 29.XI–6.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e

eq[uipe] col. (UFES); 3♂, Fazenda Paulo Seick, 20º02'S 40º41'O, 29.XI–6.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, Santa Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Santa Leopoldina, Bragança, 20º31'S 41º05'W, 8–15.X.2012, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 7♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Castelo, P[ar]q[ue] Estadual Forno Grande, [20º32'S 41º07'W], 13–15.X.2000, varredura, [C.O.] Azevedo & Santos col. (UFES); 7♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Matilde, RPPN Oiutrem, 20º33'S, 40º48'W 14–21.X.2009, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 3♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Paraíba, Pernambuco, Alagoas, Sergipe, Bahia, Espírito Santo and São Paulo).

Dissomphalus manus Azevedo, 2003
(Figs 48–52)

Dissomphalus manus Azevedo, 2003: 35 (♂, holotype from Espírito Santo, UFES, figs 44–46); Redighieri & Azevedo, 2006: 308.

Diagnosis. Male. Black; forewing subhyaline. Mandible with two apical teeth. Median clypeal lobe trapezoidal. Frons strongly coriaceous. Vertex nearly straight. T2 with very shallow lateral depression, tubercle pit-topped present, dense tuft of long setae, tubercle slightly closer median line than lateral margin of T2. Posterior hypopygeal margin straight. Genitalia: digitus with large basal projection; aedeagal ventral ramus longer than dorsal body, laminar, surface vertical, angled medially outward, apex dilated with sharp inner corner; dorsal body with two pairs apical lobes, outer pair angled medially outward, surface of apex scaled, with three teeth directed downward; inner pair large, stout, membranous, embracing outer pair both ventral and dorsally. Female unknown.

Variations. Aedeagal dorsal body with two or three teeth, as already reported for specimens from Sergipe by Redighieri & Azevedo (2006).

Remarks. Five specimens of *D. manus* were registered from Espírito Santo (Azevedo, 2003; Redighieri &Azevedo 2006), and we add more 16 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo, Cariacica, Reserva Biológica de Duas Bocas, 4.X.1996, varredura, C.O. Azevedo col. (UFES).

Paratypes: 3♂, same data of holotype, except 4.X.1996–6.II.1997, Azevedo & Santos col. (UFES). **Material revised:** 1♂, Sooretama, Reserva Biológica de Sooretama, 19º00'S 40º07'W, 21–24.III.2002, armadilha Möricke, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 3♂, Sooretama, Res[erva] Biol[ógica] de Sooretama, 18º21'S 40º09'W, 31.V–19.XI.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 2♂, Vitória, P[ar]q[ue] Est[adual] Fonte Grande, [20°18'S 40°20'W], 9.IX.2000–29.I.2001, varredura, [C.O.] Azevedo, [R.] Kawada & Santos col. (UFES); 2♂, Cariacica, Res[erva] Biol[ógica] Duas Bocas, Mata, [40°28'W], 1.VIII.1997, varredura, H. Santos-Sa col. (UFES); 1♂, Santa Leopoldina, Suíça, mata, 20º04'S 40º35'W, 5–12.XI.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 8♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES).

Distribution. Brazil (Alagoas, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo, Paraná and Santa Catarina).

Dissomphalus umbilicus Azevedo, 2003
(Figs 53–55)

Dissomphalus umbilicus Azevedo, 2003: 39 (♂, holotype from Paraná, DZUP, figs 53–56); Redighieri & Azevedo, 2006: 308, part.

Diagnosis. Male. Black. Mandible with two apical teeth. Median clypeal lobe trapezoidal. Frons strongly coriaceous. Vertex badly convex, corners rounded. T2 with pair of very shallow, elliptical sublateral depressions, each one with tubercle pit-topped, tuft of setae. Posterior hypopygeal margin straight. Genitalia: digitus with large basal expansion; aedeagal ventral ramus longer than dorsal body, laminar, surface vertical, apex irregularly convex; dorsal body with two pairs apical lobes, outer pair laminar, surface vertical, curved downward, apical margin trabeculate, inner pair stout, membranous, setay. Female unknown.

Variations. Apical margin of outer lobe of aedeagus slightly or strongly serrated or even not serrated as noted by Azevedo (2003).

Remarks. This is the first record of this species (13 specimens) from Espírito Santo.

Material examined. Types: Holotype ♂, BRAZIL, Paraná, São José dos Pinhais, Serra do Mar, Br277, km 54, 17.VIII.1987, Malaise trap, Profaupar survey (DZUP). **New material examined:** BRAZIL, Espírito Santo: 1♂, Pinheiros, Reserva Biológica Córrego do Veado, 18º21'S 40º10'W, 27.XI–06.XII.2011, armadilha Malaise, M.T. Tavares & eq[uipe] col. (UFES); 4♂, São Roque do Canaã, Alto Misterioso, 19º48'0,3S

40º46’29,8’’W, 02–11.XI.2007, armadilha Malaise, Waichert & eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04’S 40º44’O, 29.XI–6.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 2♂, Fazenda Paulo Seick, 20º04’S 40º44’O, 6–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, Castelo, P[ar]q[ue] Estadual Forno Grande, [20º32’S 41º07’W], 13–15.X.2000, varredura, [C.O.] Azevedo & Santos col. (UFES); 1♂, Alfredo Chaves, Picadão, mata, 20º27’S 40º42’W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 2♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Ibitirama, Parque Nacional Caparaó, 20º27’S 41º44’W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Distrito Federal, Espírito Santo, São Paulo and Paraná).

Dissomphalus verrucosus Redighieri & Azevedo, 2004

Dissomphalus verrucosus Redighieri & Azevedo, 2004: 330 (♂, holotype from Espírito Santo, UFES, figs 4, 5); 2006: 308.

Diagnosis. Male. Black. Mandible bidentate. Median clypeal lobe trapezoidal. Frons strongly coriaceous, very punctate. T2 with pair of shallow, elliptical lateral depressions, close to margin of T1, each depression with prominent flat-topped tubercle, pit on top, bearing tuft of setae inclined outward. Posterior hypopygeal margin straight. Genitalia: paramere with apex rounded, slightly arched inward, very wide, specially basally; ventral ramus shorter than dorsal body, laminar, surface horizontal, basal half wider, apex narrow, rounded, barely arched outward; dorsal body with two pairs apical lobes, outer pair wide, laminar, surface horizontal, apex rounded and arched upward, apical half of outer side with laminar projection directed upward with numerous warts in basal surface; inner pair stout, membranous and setae; apodeme extending beyond elliptical genital ring. Female unknown.

Variations. Depression of tergal process deeper; setae outer edge of depression thicker and more conspicuous.

Remarks. Seventeen specimens of *D. verrucosus* were registered from Espírito Santo (Redighieri & Azevedo 2004; 2006), and we add more 136 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Paraná, São José dos Pinhais, Serra do Mar, Br277, km 54, 17.VIII.1987, Malaise trap, Profaupar survey (DZUP). **Material revised.** 5♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S

40º32’W, 06–12.IV.2001, armadilha Malaise, 6♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP), 2♂, armadilha Malaise, 3♂, varredura, C.O. Azevedo e eq[uipe] col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Linhares, 01.IX.1999, V.L.R.M. Benassi col. (UFES); 2♂, João Neiva, Alto Bérgamo, mata, 19º44’S 40º26’W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, São Roque do Canaã, Alto Misterioso, 19º48’0,3S 40º46’29,8W, 02–11.XI,2007, [armadilha] Malaise, Waichert & eq[uipe] col. (UFES); 28♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, [19º58’S 40º32’W], 31.I–11.IX.2003, varredura, [C.O.] Azevedo & [R.] Kawada col. (UFES); 3♂, 13–17.X.2008, 2♂, 30.VII–04.VIII.2005, 5♂, 09–13.V.2006, armadilha Malaise, M. Tavares, C. Azevedo & eq[uipe] col. (UFES); 6♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04’S 40º44’O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 26♂, Fazenda Paulo Seick, 40º41’O 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, 29.XI.2002, [M.T.] Tavar{ES}[es] col. (UFES); 1♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08’S 40º36’W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 5♂, Santa Leopoldina, Bragança, 20º31’S 41º05’W, 8–15.X.2012, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 46♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 2♂, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25’S 41º00’W, 26.VIII–2.IX.2003, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 4♂, Alfredo Chaves, Picadão, mata, 20º27’S 40º42’W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Ibitirama, Parque Nacional do Caparaó, 20º29’S 41º43’W, 10–14.III.2006, R. Kawada col. (UFES).

Distribution. Brazil (Espírito Santo and São Paulo).

Dissomphalus botocudus Colombo & Azevedo, sp. nov.

(Figs 2, 23, 56–59)

Dissomphalus umbilicus: Redighieri & Azevedo 2006: 308, part.

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; median clypeal lobe trapezoidal, median tooth rounded; frons strongly coriaceous, punctate. Pronotal disc strongly coriaceous. T2 with tergal process with one pair of conspicuous lateral depressions, with tubercle, pit on top and tuft of setae. Posterior hypopygeal margin straight. Genitalia: paramere with rounded apex, slightly

arched inward, constricted, very wide, specially basally, higher than the basiparamere; aedeagal ventral ramus longer than dorsal body, rounded apical extension, laminar; aedeagal dorsal body with one pair of apical lobes, dorsal margin folded across its length, apical and ventral margins serrated, inner pair membranous, basal process present; apodeme extending beyond genital ring. Female unknown.

Variations. Vertex slightly rounded; tergal process closer to each other; paramere with narrow apex.

Remarks. Additionally, we reidentified one specimen previously identified as *D. umbilicus* by Redighieri & Azevedo (2006). This species is now included in *conicus* species-group by having the median clypeal lobe trapezoidal, and the T2 have one pair of lateral depressions, with tubercle, with pit on top and tuft of setae. However, the lateral depressions of the tergal process are non-conspicuous as in other species of this species-group. The aedeagal dorsal body of this species is similar to that of *D. curviventris* because the outer pair is wide and rounded in lateral view, dorsal margin is convex and ventral margin serrated, and the aedeagal ventral ramus similar to that of *D. umbilicus* Azevedo because the apex is inclined and slightly convex. The tergal process of this species has visible depressions.

This species goes to couplet 73 in the key proposed by Redighieri & Azevedo (2006) and should be read as:

73. Apex of aedeagal ventral ramus concave and not dilated; apex of aedeagal dorsal body very wide in lateral view, with ventral margin irregularly serrate.....*D. truncatus* Azevedo
- Apex of aedeagal ventral ramus rounded and dilated; apex of dorsal body rounded with ventral margin evenly serrate.....73a

73a. Shallow depression; aedeagal ventral ramus without rounded apical extension.....*D. curviventris* Azevedo
- Conpiscuous depression; aedeagal ventral ramus with rounded apical extension.....*D. botocudus* **sp. nov**.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: São Roque do Canaã, Alto Misterioso, 19º48’S 40°46’W, 02–11.XI.2007, [armadilha] Malaise, Waichert & eq[uipe] col. (UFES); Paratypes: 3♂ same locality of holotype, 02–11.XI.2007, [armadilha] Malaise, Waichert & eq[uipe] col. (UFES). **Material revised.** BRAZIL, Espírito Santo: 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19°58’S 40°31’W, 11.IV.2001, varredura, C.O. Azevedo & equipe col. (UFES).

Etymology. The epithet *botocudus* refers to botocudos indigenous who inhabited the Espírito Santo.

Distribution. Brazil (Espírito Santo).

dumosus species-group

Diagnosis. Male. Mandible tridentate, head very long, developed posteriorly the eye tops, median clypeal lobe much produced. Pronotal and metapectal-propodeal complexs elongate. T2 with pair of antero-lateral depressions. Paramere wide. Aedeagal ventral ramus very long and ventral side basiparamere much developed.

Remarks. This species-group contains two species: *D. dumosus* Evans, 1966 and *D. longicephalus* Azevedo, the former recorded from Espírito Santo for the first time in this study.

Distribution. Brazil (Pará, Espírito Santo and Santa Catarina).

Dissomphalus dumosus Evans, 1966

(Figs 60, 61)

Dissomphalus dumosus Evans, 1966: 109–110 (♂, holotype from Santa Catarina, MCZH, figs 10, 19); Azevedo, 1999b: 928–930

Diagnosis. Male. Black; forewing subhyaline. Mandible with three apical teeth. Median clypeal lobe subtrapezoidal. Frons coriaceous, densely punctate. Vertex straight, corner rounded. Head elongate, developed posteriorly eye. T2 with pair of subrounded lateral depressions, each one small setay tubercle, margins of anterior half of depression with many long setae. Posterior hypopygeal margin concave. Genitalia: paramere wide; digitus smooth upper margin; aedeagal ventral ramus very elongate, surpassing paramere apex, filamentous apically; dorsal body with two pairs apical lobes; outer pair laminar, vertical surfaces, wide base, narrowing apically in lateral view, apex inclined downward; inner lobe stout, membranous, densely setay; basal process with long and thick dorsal median filament; basal ring much developed in ventral side. Female unknown.

Variations. Inner lobe of aedeagal dorsal body much more densely setay than usually observed in other species of *Dissomphalus*.

Remarks. This is the first record of this species (two specimens) from Espírito Santo.

Material examined. Types: Holotype ♂, BRAZIL, Nova Teutonia, Santa Catarina, Oct. 4, 1965, F. Plaumann (MCZH, no. 31240J). **New material examined:** BRAZIL, E[spírito] S[anto]: 1♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, 10.X.2002, varredura, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 1♂, Santa

Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'W, 29.XI–6.XII.2002, Armadilha Malaise M. Tavares, C. Azevedo e eq[uipe] col. (UFES).

Distribution. Brazil (Espírito Santo and Santa Catarina).

***gilvipes* species-group**

Diagnosis. Male. Clypeus broadly projected forward. T2 with lateral tergal process, tufts of tergal process with most lateral seta distinctly longer than others.

Remarks. This species-group contains four species: *D. gilvipes* Evans, *D. krombeini* Azevedo, *D. alticlypeatus* Azevedo and *D. bicerutus* Azevedo, all recorded from Espírito Santo.

Distribution. Ranging from the southern Florida to northern Argentina.

***Dissomphalus alticlypeatus* Azevedo, 2003**
(Figs 62, 63)

Dissomphalus alticlypeatus Azevedo, 2003: 23 (♂, holotype from Pernambuco, PMAE, figs 23–25); Redighieri & Azevedo, 2006: 308.

Diagnosis. Male. Dark castaneous. Mandible with four apical teeth. Clypeus broadly projected, median lobe ill-defined, median carina high, angulate in profile. Frons weakly coriaceous. Vertex slightly convex. T2 with large, ovoid lateral depression, rounded pit, placed near anterior margin, tuft of setae, most lateral one directed outward, distinctly longer than others. Posterior hypopygeal margin concave with median callus. Genitalia: Apex of paramere with two small protuberances, dorsal margin angulate, much projected inward and downward, ventral margin nearly straight; aedeagal ventral ramus slightly longer than dorsal body, laminar, surface horizontal, narrowing evenly from base to truncate apex; dorsal body with two pairs apical lobes, outer pair evenly wide, apex with inner corner angulate and outer corner rounded in dorsal view; inner pair membranous, narrow and setay. Female unknown.

Variations. Clypeus broadly projected, clypeus projected or clypeus not projected.

Remarks. Three specimens of *D. alticlypeatus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 51 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Pernambuco, Caruaru, IV.1972, M. Alvarenga col. (PMAE). **Material revised.** 3♂, BRAZIL, E[spírito] S[anto]: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S, 40º32'W, 06–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP, UFES). **New material examined:** XII.2011, Malaise 5, M.T. Tavares & equipe col. (UFES); 2♂, Pancas,

Faz[enda] Juliberto Stur, 19º13'S 40º47'O, 24–07.II.2003, armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 2♂, Santa Teresa, Estação Biológica de Santa Lúcia, [19º58'S 40º32'W], 15–19.X.2010, 1♂, 13–17.X.2008, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES); 1♂, 10.X.2002, varredura, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 31.VII–7.VIII.2007, [armadilha] Malaise, [C.O.] Azevedo & eq[uipe] col. (UFES); 24♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 9♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º41'O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 2♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Guarapari, P[arque] E[stadual] Paulo César Vinha, 20º36'S 40º25'W, 26.X.2006, varredura, [M.T.] Tavares & equipe col. (UFES); 6♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 2♂, Castelo, P[ar]q[ue] Estadual Forno Grande, [20º32'S 41º07'W], 13–15.X.2000, varredura, [C.O.] Azevedo & Santos col. (UFES).

Distribution. Brazil (Pernambuco, Espírito Santo and São Paulo).

Dissomphalus bicerutus **Azevedo, 2003**
(Figs 64, 65)

Dissomphalus bicerutus Azevedo, 2003: 23 (♂, holotype from Paraná, DZUP, figs 26–28); Redighieri & Azevedo, 2006: 308–309.
Dissomphalus gilvipes: Azevedo 2003: 22, part.
Dissomphalus rectilineus: Redighieri & Azevedo 2006: 306, part.

Diagnosis. Male. Dark castaneous, nearly black. Mandible with three apical teeth. Clypeus broadly projected forward, median tooth small. Frons coriaceous. Vertex slightly convex, corners angled. Temples paralleled. T2 with subrounded lateral depression, tuft of setae, most lateral one directed outward, distinctly longer than others. Posterior hypopygeal margin strongly concave. Genitalia: paramere with basal half much wider than apical half; aedeagal ventral ramus slightly shorter than dorsal body, laminar, basal half with surface horizontal, wide, apical half with surface vertical, abruptly narrow, apex sharpened; dorsal body with two pairs apical lobes, outer pair with vertical surface, base wide in both lateral and dorsal views, narrowing into apex, apical margin serrated; inner pair membranous, stout and setose. Female unknown.

Variations. Depressions circular; parameral apex narrowing.

Remarks. Twenty-four specimens of *D. bicerutus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 289 new ones. Additionally, we reidentified one specimen previously identified as *D. gilvipes* by Azevedo (2003) and one specimen previously identified as *D. rectilineus* by Redighieri & Azevedo (2006) as *D. bicerutus.*

Material examined. Types: Holotype, Brazil, Paraná, São José dos Pinhais, Serra do Mar, Br277, km 54, 23.XI.1987, Malaise trap, Profaupar col. (DZUP). **Material revised.** BRAZIL, Espírito Santo: 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP); 12♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.iv.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP), 7♂, (UFES); 1♂, 26.XI.2001, varredura, Azevedo & Kawada col. (UFES). 2♂, Cariacica, Reserva Biológica de Duas Bocas, forest, 5–10.XII.1996, varredura Azevedo col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Conceição da Barra, Reserva Biológica Córrego Grande, 18º14'S 39º49'W, 13.III.2006, [armadilha] Malaise, Redighieri, E. S. & eq[uipe] col. (UFES); 1♂, Conceição da Barra, Reserva Biológica Córrego Grande, 18º16'S 39º47'W, 08-13.III.2006, [armadilha] Malaise, Redighieri, E S; Furieri, KS & Van de Koken, AF. col. (UFES); 5♂, Sooretama, Res[erva] Biol[ógica] de Sooretama, 18º21'S 40º09'W, 31.V–19.XI.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 23♂, João Neiva, Alto Bérgamo, mata, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, Linhares, Reserva Nat[ural] da Vale do Rio Doce, sede, 19º9'S 40º4'W, 07.V.2007, arm[adilha] Malaise, J. A. Rafael & F. F. Xavier F°. col. (UFES); 10♂, Pancas, Faz[enda] Juliberto Stur, 19º13'S 40º47'O, 24–07.II.2003, armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 3♂, São Roque do Canaã, Alto Misterioso, 19º48'0,3S 40º46'29,8W, 02–11.XI.2007, [armadilha] Malaise, Waichert & eq[uipe] col. (UFES); 37♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 19º58'S 40º32'W, 10.X.2005–14.XII.2011, varredura, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 20♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 50♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º04'S 40º41'O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 25♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Suíça, mata, 20º04'S 40º35'W,

5–12.XI.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 7♂, Santa Leopoldina, Bragança, 20º31'S 41º05'W, 8–15.X.2012, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 14♂, Domingos Martins, Parque Estadual Pedra Azul, 20º25'55S 41º00'53,8W, 26.VIII–02.IX.2003, [armadilha] Malaise, C.O. Azevedo & equipe col. (UFES); 61♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Castelo, Parque Estadual Forno Grande, 20º31'S 41º05'W, 25.IX–02.X.2013, [armadilha] Malaise, Barbosa, D. N. col. (UFES); 1♂, Alfredo Chaves, Picadão, mata, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 2♂, Alfredo Chaves, Matilde, RPPN Oiutrem, 20º33'S 40º48'W, 14–21.X.2009, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Atílio Vivácqua, Faz[enda] José Carlos Lustoza, 20º55'S 41º11'W, 20–27.II.2003, arm[adilha] Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 16♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 3♂, Ibitirama, Parque Nacional Caparaó, 20º29'S 41º43'W, 10–14.III.2006, R. Kawada col. (UFES); 7♂, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Alagoas, Bahia, Espírito Santo, Rio de Janeiro, São Paulo, Paraná and Santa Catarina).

Dissomphalus gilvipes **Evans, 1979**
(Figs 66, 67)

Dissomphalus gilvipes Evans, 1979: 278, 279, 283 (♂, holotype from Colombia, FSCA, fig. 7); Gordh & Móczár, 1990: 222, Azevedo, 1999b: 929, 931–932; 2003: 22-23; Redighieri & Azevedo, 2004: 330; 2006: 309.

Diagnosis. Male. Dark castaneous. Mandible with four apical teeth. Clypeus wholly broadly projected toward, small tooth, median carina slightly high. Frons coriaceous. Vertex straight. Notaulus and parapsidal furrow complete, former very convergent posteriorly. T2 with pair of subcircular lateral depressions, each one with linear tuft of setae, being lateral one especially longer than others. Posterior hypopygeal margin straight, with small median callus. Genitalia: paramere very wide, apex as conical projection; aedeagal ventral ramus as long as dorsal body, laminar, apex blunt, oblique with outer corner sharpened; dorsal body with two pairs apical lobes, outer pair narrowing apically in dorsal and lateral view; inner pair somewhat stout, membranous setay. Female unknown.

Variations. T2 with depressions shallower, closest to each other and tubercle inconspicuous.

Remarks. Thirteen specimens of *D. gilvipes* were registered from Espírito Santo (Azevedo, 2003; Redighieri & Azevedo, 2004; 2006), and we add more 42 new ones.

Material examined. Types: Holotype ♂, COLOMBIA, Dept. Valle, Central de Anchicaya, 30 km E Buenaventura, 560 m, 14–16 July 1975, R. Wilkerson, Malaise trap (FSCA). **Material revised.** BRAZIL, Espírito Santo: 6♂, Santa Teresa, Estação Biológica de Santa Lúcia, 30.I–23.VIII.2001, varredura C.O. Azevedo & R. Kawada col. (UFES); 3♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06-12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). 2♂, Cariacica, Reserva Biológica de Duas Bocas, floresta, 5–10.XII.1996, varredura Azevedo col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 2♂, Santa Teresa, Estação Biológica de Santa Lúcia, 10.X.2002, varredura, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 14♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 2♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º41'O, 29.XI-13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 5♂, Santa Leopoldina, Bragança, 20º31'S 41º05'W, 8–15.X.2012, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 12♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Cariacica, Res[erva] Biol[ógica] Duas Bocas, Mata, [20°16'S 40°28'W], 26.VI.1997, varredura, H. Santos-Sa col. (UFES); 3♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Alfredo Chaves, Matilde, RPPN Oiutrem, 20º33'S 40º48'W, 14–21.X.2009, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 1♂, Ibitirama, Parque Nacional Caparaó, 20º27'S 41º44'W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Colombia, Ecuador, Peru, Brazil (Amazonas, Pará, Rondônia, Alagoas, Sergipe, Mato Grosso, Distrito Federal, Espírito Santo, São Paulo and Paraná) and Bolivia.

***Dissomphalus krombeini* Azevedo, 1999**
(Figs 68, 69)

Dissomphalus krombeini Azevedo, 1999c: 52–54 (♂, holotype from U.S.A., PMAE, fig. 6); 2003: 20–21; Redighieri & Azevedo, 2006: 309.

Diagnosis. Male. Dark castaneous; wings hyaline. Mandible with four apical teeth. Clypeus broadly projected forward, median tooth minute, median carina slightly high, angled in profile, lateral lobes undefined. Frons weakly coriaceous. Vertex slightly convex. Notaulus short, very weak. Parapsidal furrow incomplete anteriorly. T2 with pair of shallow subcircular lateral depressions, small tubercle present, giving rise to linear tuft of setae, lateral one distinctly longer than others. Hypopygium short and wide, posterior margin slightly broadly concave. Genitalia: paramere with wide apex, truncate, arched inward, corners somewhat sharp, base dorsal margin much projected in- and downward; cuspis long and much arched; aedeagal ventral ramus nearly as long as dorsal body, basal three fourths wide with inner margin parallel and straight and outer margin slightly convex, apical fourth narrow with apex truncate and inclined, outer corner sharp; dorsal body with pair of apical lobe, outer margin bulging, inner margin weakly setose, apex narrow, basal process with median spine. Female unknown.

Variations. T2 with depressions circular.

Remarks. Seven specimens of *D. krombeini* were registered from Espírito Santo (Azevedo 2003; Redighieri &Azevedo 2006), and we add more 50 new ones.

Material examined. Types: Holotype ♂, U.S.A., Florida, Monroe Co., Sugarloaf Key, Kitching, hammock forest, 6.VI–29.VIII.1986, Malaise/FIT, S. & J. Peck col. (PMAE). **Material revised.** BRAZIL, Espírito Santo: 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). 6♂, Cariacica, Reserva Biológica de Duas Bocas, 24.IX–10.XII.1996, C.O. Azevedo & E.H. Freitas col. (UFES). **New material examined:** 1♂, Conceição da Barra, Parque Estadual de Itaúnas, 18º20’S 39º40W, 23–25.XI.2006, Moericke, M.T. Tavares & equipe col. (UFES); 6♂, Pinheiros, Res[erva] Biol[ógica] do Córrego do Veado, 18º21’S 40º09’W, 09–06.XII.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 1♂, Sooretama, Reserva Biológica de Sooretama, 11–19.XI.2011, [armadilha] Malaise, C.O. Azevedo col. (UFES); 1♂, Linhares, Cultura de Café, 01.IX.1999, V.L.R.M. Benassi col. (UFES); 4♂, Linhares, cultura de coco, [19º25’S 40º04’W], 13.VI–3.X.2008, arm[adilha] Möricke, E. F. Comério col. (UFES); 1♂, Linhares, Faz[enda] Benesfort, Povoação, Restinga arbórea, 8–10.X.2000, varredura, [C.O.] Azevedo & Schiffler col. (UFES); 1♂, João Neiva, Alto Bérgamo, mata, 19º44’S 40º26’W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES);

1♂, São Roque do Canaã, Alto Misterioso, 19º48’0,3S 40º46’29,8W, 02–11.XI.2007, [armadilha] Malaise, Waichert & eq[uipe] col. (UFES); 1♂, S[an]ta Teresa, R[eserva] B[iológica] S[an]ta Lúcia {=Estação Biológica [de] Santa Lúcia}, [19°56’S 40°36’W], 27.VII.2004, sweep, M.T. Tavares & eq[uipe] col. (UFES); 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, [19º58’ 40º32’W], 15–19.X.2010, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES); 20♂, Santa Teresa, Estação Biológica de Santa Lúcia, [19º58’ 40º32’W], 13–17.X.2008. (UFES); 5♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04’S 40º44’O, 29.XI–13.XII.2002, armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 2♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 3–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Guarapari, Parque Estadual Paulo César Vinha, restinga, 20º36’S 40º25’W, 15–23.V.2006, [armadilha] Malaise, Kawada, R & eq[uipe] col. (UFES); 3♂, Alfredo Chaves, Picadão, mata, 20º27’S 40º42’W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24’S 41º47’W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Dominican Republic, Saint Vincent, U.S.A. Dominica, Costa Rica, Ecuador and Brazil (Distrito Federal, Espírito Santo, São Paulo, Paraná and Santa Catarina).

***hemisphaericus* species-group**

Diagnosis. Male. Mandible bidentate. T2 with lateral pair elliptical pits, inner part of covered by translucid sclerite, so that hole hemispheric.

Remarks. This species-group contains six species: *D. ferocus* Azevedo, 2003, *D. vampirus* Azevedo, 2003, *D. hemisphaericus* Azevedo, 2003, *D. gordus* Azevedo, *D. undatus* Azevedo, and *Dissomphalus fredi* **sp. nov.**, the latter three species are recorded from Espírito Santo.

Distribution. Ecuador, Peru and Brazil (Amazonas, Pará, Rondônia, Espírito Santo, Rio de Janeiro, São Paulo, Paraná and Santa Catarina).

***Dissomphalus gordus* Azevedo, 2003**

(Figs 70, 71)

Dissomphalus gordus Azevedo, 2003: 46 (♂, holotype from Paraná, DZUP, figs 82–87); Redighieri & Azevedo, 2006: 309–310.

Diagnosis. Male. Black. Mandible with two apical teeth. Median clypeal lobe trapezoidal. Frons strongly coriaceous. Vertex straight. T2 with shallow rounded lateral depression, each one with elliptical setose pit, opening directed outward, so that is hemispheric in dorsal view. Posterior hypopygeal margin straight. Genitalia: paramere wider medially; aedeagus elliptical in dorsal view, ventral ramus shorter than dorsal body, laminar, surface vertical apically, apex rounded in lateral view; dorsal body with two pairs apical lobes, outer pair laminar apically, surface vertical, apex rounded in lateral view, setose below, inner pair membranous, stout and setose; basal process as stout filamentous expansion. Female unknown.

Variations. Vertex slightly concave; depressions of tergal process small or large, deep or shallow; aedeagal dorsal body higher or shorter than parameral apex.

Remarks. Two specimens of *D. gordus* were registered from Espírito Santo (Redighieri & Azevedo 2006) and we add 82 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Paraná, Antonina, Reserva 2♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 07.IV.2001, varredura, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 9♂, Pancas, Faz[enda] Juliberto Stur, 19º13'S 40º46'O, 24.I–07.II.2003, arm[adilha] Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 42♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 14♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 3♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º04'S 40º44'O, 29.XI–13.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, Santa Leopoldina, Suíça, 20º04'S 40º35'W, 5–12.XI.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 11♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 2♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES).

Distribution. Brazil (Espírito Santo, Rio de Janeiro, São Paulo, Paraná and Santa Catarina).

***Dissomphalus undatus* Azevedo, 2003**
(Figs 72–76)

Dissomphalus undatus Azevedo, 2003: 46 (♂, holotype from Rio de Janeiro, CNCI, figs 77–81); Redighieri & Azevedo, 2006: 310.

Diagnosis. Male. Black; forewing subhyaline. Mandible with two apical teeth. Median clypeal lobe trapezoidal. Frons strongly coriaceous, punctures large, shallow. Vertex nearly straight. T2 with lateral elliptical pit, hemispheric in dorsal view, inner margin covered by translucent expansion. Genitalia: digitus with long end; aedeagal ventral ramus much shorter than dorsal body, laminar, surface vertical, convex outside, apex sharpened, directed inward; dorsal body with two pairs apical lobes, outer pair laminar, surface vertical, waved, ventral margin strongly fringed, weaker apically, inner pair membranous, stout and setose. Female unknown.

Remarks. Six specimens of *D. undatus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more six new ones.

Material examined. Types: Holotype ♂, BRAZIL, Rio de Janeiro, Silva Jardim, VIII.1974, F. M. Oliveira col. (CNCI). **Material revised.** 4♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP), 2♂, C.O. Azevedo e eq[uipe] col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, [19º58'S 40º32'W], 10.X.2002, varredura, Tavares, M.T., Oliveira, C.O. & eq[uipe] col. (UFES); 1♂, 30.VII–04.VIII.2005, Armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 2♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 6–13.XII.2002, Armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º04'S 40º44'O, 6–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 1♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES).

Distribution. Brazil (Espírito Santo and Rio de Janeiro).

Dissomphalus fredi Colombo & Azevedo, sp. nov.
(Figs 3, 24, 77–80)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth. Median clypeal lobe trapezoidal, median tooth triangular. Frons strongly coriaceous, punctate. Pronotal disc strongly coriaceous. T2 with lateral pair of elliptical pits, bristles dense tufts present, their inner part of covered by translucid sclerite, so that hole hemispheric. Posterior hypopygeal margin weakly concave. Genitalia: paramere with apex rounded, slightly arched inward, very wide, specially basally;

basivolsella wide projection, hemispheric-shape; aedeagal ventral ramus longer than dorsal body, laminar, surface vertical, apex irregularly; aedeagal dorsal body with two pairs apical lobes, outer pair wide, rounded in lateral view, dorsal margin folded across its length, apical and ventral margins serrated, inner pair membranous and setose; apodeme not extending beyond genital ring. Female unknown.

Variations. Tergal process with dense tufts or not; paramere with narrow apex.

Remarks. This species is included in *hemisphaericus* species-group by having the tergal process hemispheric-shaped with their inner part of covered by translucid sclerite. This species not is similar other of species-group. This species is mainly different because has the tergal process with bristles dense tufts and basivolsella with wide projection.

This species goes to couplet 54 in the key proposed by Redighieri & Azevedo (2006) and should be read as:

54. Aedeagus not much wide, apex curved inward, outer dorsal body with corrugated surface and ventral margin strongly fringed, aedeagal ventral ramus .....*D. undatus* Azevedo
- Aedeagus much wide or much short, apex not curved inward, outer dorsal body without corrugated surface and ventral margin weakly fringed, aedeagal ventral ramus wide.....54a

54a. Posterior hypopygeal margin straight; paramere wider medially; aedeagal ventral ramus shorter than aedeagal dorsal body.....*D. gordus* Azevedo
- Posterior hypopygeal margin weakly concave; paramere very wide, specially basally; aedeagal ventral ramus larger than aedeagal dorsal body.....*D. fredi* **sp. nov.**

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25’S 41º00’W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES). Paratypes: 4♂, Santa Teresa, Estação Biológica de Santa Lúcia, 30.VII.2005–21.X.2014, [armadilha] Malaise, M. Tavares, C. Azevedo & eq[uipe] col. (UFES); 2♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04’S 40º44’O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02’S 40º41’O, 29.XI–06.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 9♂, same locality of holotype. 26.VIII–02.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 03–10.XII.2004, [armadilha] Malaise, Tavares e equipe col. (UFES); 1♂, Ibitirama, Parque Nacional do Caparaó, 20º29’S 41º43’W, 10–14.III.2006, R. Kawada col. (UFES); 26♂, Ibitirama, Parque Nacional do Caparaó, 20º27’S 41º44’W, 16–23.III.2013, C.O. Azevedo & F.B. Fraga col. (UFES).

Etymology. The epithet *fredi* is in allusion to the father’s first author name Frederico.

Distribution. Brazil (Espírito Santo).

***incomptus* species-group**

Diagnosis. Male. Tergal process reduced or absent. Aedeagal dorsal body with two pair of flagella.

Remarks. This species-group contains two species: *D. incomptus* and *D. microtuberculatus* Azevedo, 1999, the former recorded from Espírito Santo for the first time in this study.

Distribution. Brazil (Espírito Santo, São Paulo, Paraná and Santa Catarina) and Paraguay.

***Dissomphalus incomptus* Evans, 1964**
(Figs 81–86)

Dissomphalus incomptus Evans, 1964: 51–53 (♂, holotype from Santa Catarina, BMNH, figs 26, 29, 34); Azevedo, 1999b: 932–933

Diagnosis. Male. Dark castaneous. Mandible with three apical teeth. Median clypeal lobe roundedand median tooth. Frons weakly coriaceous, punctures small, shallow. Vertex slightly convex, corner rounded. Frontal angle ocellar triangle acute. Pronotal disc with anterior margintransverse rugosity. T2 with tergal process consisting of pair of setae. Genitalia: paramere short, about 0.5× as long as basiparamere, apical margin truncate, oblique, dorsal corner acute; base basiparamere constricted above genital ring; aedeagal ventral ramus long, but slightly shorter than dorsal body, laminar, surface horizontal, apical fourth diverging, apex rounded; dorsal body with four pairs apical lobes, dorsal pair with four pairs of prolongations; median pair laminar, surface horizontal, inner margin straight, outer margin convex, with inner apical cone; ventral pair with two pairs of ventral filaments directed downward, one smooth and other denticulate, inner pair short, stout, membranous and setose surface. Female unknown.

Remarks. This is the first record of this species (ten specimens) from Espírito Santo.

Material examined. Types: Holotype ♂, BRAZIL, Nova Teutonia, Santa Catarina, 2 May 1938, Fritz Plaumann (BMNH). **New material examined:** BRAZIL, Espírito Santo: 8♂, Linhares, 01.IX.1999, V.L.R.M. Benassi col. (UFES); 1♂, Castelo, Parque Nacional do Forno Grande, 25.IX–02.X.2013, [armadilha] Malaise, Barbosa, D. N. col. (UFES); 1♂, Ibitirama, Parque Nacional do Caparaó, 20º27’S 41º44’W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Argentina, Brazil (Espírito Santo, São Paulo, Paraná and Santa Catarina) and Paraguay.

laticephalus species-group

Diagnosis. Male. Mandible unusually long. Head with vertex strongly angled or unusually wide. Sides of head parallel or slightly divergent below. T2 with tergal process absent or very small.

Remarks. This species-group contains five species: *D. contractus*, *D. laticephalus*, *D. lobicephalus* and *D. mandibulatus* described by Azevedo (2003) and *D. cristatus* Redighieri & Azevedo, 2004, the latter species is recorded from Espírito Santo.

Distribution. Brazil (Espírito Santo, São Paulo, Paraná and Santa Catarina) and Paraguay.

Dissomphalus cristatus Redighieri & Azevedo, 2004

Dissomphalus cristatus Redighieri & Azevedo, 2004: 331–333 (♂, holotype from Espírito Santo, UFES, figs 10–13); 2006: 310.

Diagnosis. Male. Dark castaneous. Mandible tetradentate with basal tooth larger than others. Clypeus broad, slightly projected, with median conspicuous tooth, median carina high in lateral view. Front slightly shiny, weakly coriaceous, small and sparse punctures. Vertex barely convex, corner subangulate; occipital carina visible in dorsal view. T2 without tergal process. Posterior hypopygeal margin straight. Genitalia: Paramere with base as wide as apex; margin concave, apex rounded, directed inward in ventral view; dorsal margin with small projection basally; aedeagal ventral ramus slightly shorter than dorsal body, basal half wide and apical half narrow, long and slightly arched outward; aedeagal dorsal body laminar, surface vertical basally, apical half laminar, outer face strongly convex. Female unknown.

Remarks. One specimen of *D. cristatus* was registered from Espírito Santo (Redighieri & Azevedo, 2004), and we add one more.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa (Estação Biológica de Santa Lúcia), 23.II.2001, varredura C.O. Azevedo & R. Kawada col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, S[an]ta Teresa, R[eserva] B[iológica] S[an]ta Lúcia {=Estação Biológica [de] Santa Lúcia}, [19°56’S 40°36’W], 27.VII.2004, sweep, M.T. Tavares & eq[uipe] col. (UFES).

Distribution. Brazil (Espírito Santo, São Paulo and Paraná).

***longiclypeus* species-group**

Diagnosis. Male. Clypeus unidentate or subtrapezoidal. T2 with median depression transverse, elliptical, with two median setay tubercles.

Remarks. This species-group contains five species: *D. longiclypeus*, *D. multicoriaceus*, *D. serratus*, *D. gigantus* and *D. scamatus*, described by Azevedo (1999a), the latter two species are recorded from Espírito Santo.

Distribution. Surinam, Ecuador and Brazil (Amapá, Amazonas, Pará, Rondônia, Alagoas, Bahia, Distrito Federal, Espírito Santo, São Paulo, Paraná and Santa Catarina).

***Dissomphalus gigantus* Azevedo, 1999**
(Figs 87, 88)

Dissomphalus gigantus Azevedo, 1999a: 341 (♂, holotype from Paraná, DZUP, figs 75–81, 182, 183); Redighieri & Azevedo, 2006: 305.
Dissomphalus vallensis: Redighieri & Azevedo 2004: 329–330, part.

Diagnosis. Black. Mandible with two apical teeth. Median clypeal lobe subtrapezoidal. Front weakly coriaceous. Vertex slightly convex. T2 with elliptical median depression, with pair setose tubercles, far from each other more than own diameter, slightly directed toward each other. Genitalia: paramere wide with apex rounded; cuspis elongate; aedeagal ventral ramus shorter than dorsal body, narrowing slightly from base to apex, inner surface apex conspicuously setose; aedeagal dorsal body with two pairs apical lobes, both laminar, surface vertical and much close together outer lobe with apex arched bidentate, inner pair membranous and setose, wide in lateral view. Female unknown.

Remarks. Eleven specimens of *D. gigantus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 156 new ones. Additionally, we reidentified two specimens previously identified as *D. vallensis* by Redighieri & Azevedo (2004).

Material examined. Types: Holotype ♂, BRAZIL, Paraná, São José dos Pinhais, Serra do Mar, Br 277, km 54; 15.XII.1986; Malaise trap; Survey Profaupar (DZUP). **Material revised.** 2♂, BRAZIL, Espírito Santo: Santa Teresa (Estação Biológica de Santa Lúcia), 28.III–10.XII.2001, varredura C.O. Azevedo & R. Kawada col. (UFES); 10♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP), 1♂, varredura, C.O. Azevedo e eq[uipe] col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 4♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, [19º58’S 40º32’W], 13.X.2008–09.XI.2009, [armadilha] Malaise, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 84♂, Santa

Maria de Jetibá, Fazenda Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 46♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S, 40º41'O, 29.XI–13.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 2♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Santa Leopoldina, Bragança, 20º10'S 40º34'W, 8–15.X.2012, arm[adilha] Malaise, Azevedo, C.O. & eq[uipe] col. (UFES); 19♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES).

Distribution. Surinam and Brazil (Amapá, Amazonas, Alagoas, Bahia, Distrito Federal, Espírito Santo, São Paulo, Paraná and Santa Catarina).

Dissomphalus scamatus Azevedo, 1999
(Figs 89–91)

Dissomphalus scamatus Azevedo, 1999a: 343 (♂, holotype from Paraná, DZUP, figs 88–92, 186); Redighieri & Azevedo, 2004: 329; 2006: 305.
Dissomphalus punctatus: Redighieri & Azevedo 2006: 310–311, part.

Diagnosis. Male. Black. Mandible forming oblique cutting-edge, angulate medially. Clypeus with very large median tooth, as long as half length of clypeus medially. Front strongly coriaceous. Vertex straight. T2 with shallow, elliptical median depression, posterior margin concave medially, pair of conspicuous, elliptical and inclined tubercles, far from each other their smallest diameters, densely covered by setae. Genitalia: paramere wide; aedeagal ventral ramus as long as dorsal body, apical area laminar, surface vertical, ventral margin with row of 5–6 small ventral teeth, median area of ventral surface micro-scaled; dorsal body of aedeagus narrowing apically, apex denticulate in lateral view; inner surface densely setose. Female unknown.

Variations. Original description of genitalia was not based on the holotype. The size of the head varies between specimens.

Remarks. Six specimens of *D. scamatus* were registered from Espírito Santo (Redighieri & Azevedo, 2004; 2006), and we add more 45 new ones. Additionally, we reidentified two specimens previously identified as *D. punctatus* by Redighieri & Azevedo (2006) as *D. scamatus*.

Material examined. Types: Holotype ♂, BRAZIL, Paraná, Jundiai do Sui, Farm Monte Verde; 29.XII.1986; Malaise trap; Survey Profaupar, (DZUP). **Material revised.** BRAZIL, Espírito Santo: 3♂, Santa Teresa (Estação Biológica de Santa Lúcia),

27.IX.2001, varredura C.O. Azevedo & R. Kawada col. (UFES); 5♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP, UFES). **New material examined:** BRAZIL, Espírito Santo: 2♂, Pancas, Faz[enda] Juliberto Stur, 19º13'S 40º46'O, 31.I–7.II.2003, Armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 3♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 14♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, 30.VII.2005–21.X.2014, [armadilha] Malaise, M. Tavares, C. Azevedo & eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º41'O, 29.XI–6.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 5♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 2♂, Santa Leopoldina, Bragança, 20º10'S 40º34'W, 8–15.X.2012, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 3♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 15♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'S 41º44'W, 06–13.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Espírito Santo, São Paulo and Paraná).

microstictus species-group

Diagnosis. Male. Median clypeal lobe trapezoidal. Apex of aedeagal ventral ramus with latero-apical filament. Female: mandible tetradentate with subupper tooth smaller than uppermost one. Median clypeal lobe rounded, mid part elevated and thick in frontal view.

Remarks. This species-group contains 14 species: *D. balteus*, *D. divaricatus*, *D. forceps*, *D. incurvatus*, *D. osseus*, *D. paululus*, *D. perparvus*, *D. perventriosus*, *D. pilus*, *D. signatus*, *D. uncus*, *D. perturbatus*, *D. refertus*, described by Alencar & Azevedo (2008) and *D. microstictus* Evans, 1969, the latter three species are recorded from Espírito Santo.

Distribution. Panama, Venezuela, Trinidad and Tobago, Ecuador, Peru, Brazil, Bolivia and Argentina.

Dissomphalus microstictus Evans, 1969

(Figs 92, 93)

Dissomphalus microstictus Evans, 1969: 17 (♂, holotype from Argentina, FIML, figs 14, 19, 30); Redighieri & Azevedo, 2006: 322; Alencar & Azevedo, 2008: 4, 6–7.

Diagnosis. Male. Mandible with two apical teeth. Median clypeal lobe trapezoidal. Frons strongly coriaceous, densely punctate, punctures shallow, large. Vertex straight, corner somewhat rounded. Ocelli large. Head developed posteriorly eye. Metapectal-propodeal complex with only median carina. T2 with two depressions shallow, large, subcircular, nearly reaching posterior margin of T1, each one with minute setay median tubercle, lateral area of depression with setae. Hypopygeal slender stalk, posterior margin straight, corner rounded. Genitalia: paramere very wide, dorsal margin very evenly developed, apex produced and sharpened; volsella setay, digitus smooth in upper margin; aedeagal ventral ramus extremely short, slightly higher than base of paramere, laminar, wide, surfaces horizontal, inner margin parallel, outer margin convergent, apex narrow and rounded, outer margin with an apical filament very long, nearly with same size of ramus, slightly arched, dorsal body large, laminar, surfaces vertical, base wider in dorsal view, body is very wide in lateral view, with rounded apex directed downward, ventral margin complex, serrated with rounded teeth, inner surface setay. Female unknown.

Remarks. Six specimens of *D. microstictus* were registered from Espírito Santo (Redighieri & Azevedo, 2006). Alencar & Azevedo (2008) reidentified these specimens and transferred them to D. *perturbatus* and identified more two specimens as *D. microstictus*, and we add more 30 new ones.

Material examined. Types: Holotype ♂, ARGENTINA, Tucumán, El Solidad, Las Cejas, [~26º53’S 64º44’W], 3–19.VI.1966, L. Stange col. (FIML). **Material revised.** BRAZIL, Espírito Santo: 2♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–03.XII.2004, MT, Tavares & eq[uipe] col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 3♂, Pancas, Faz[enda] Juliberto Stur, 19º13’S 40º46’O, 24–31.I.2003, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 4♂, Sooretama, Res[erva] Biol[ógica] de Sooretama, 18º21’S 40º09’W, 31.V–14.XII.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES). 10♂, João Neiva, Alto Bérgamo, 19º44’S 40º26’W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 19º58’S 40º32’W, 11.IX.2003, varredura, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04’S 40º44’O, 6–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02’S 40º41’O, 29.XI–6.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 2♂, S[an]ta Leopoldina, Suíça, 20º04’S 40º35’W, 5–12.XI.2007, arm[adilha] Malaise, C.O. Azevedo

& eq[uipe] col. (UFES); 3♂, Santa Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25'S 41º00'W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–03.XII.2004, MT, Tavares & eq[uipe] col. (UFES); 2♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Amapá, Amazonas, Pará, Pernambuco, Alagoas, Sergipe, Bahia, Distrito Federal, Espírito Santo, Rio de Janeiro, São Paulo, Paraná and Santa Catarina), Bolivia and Argentina.

Dissomphalus perturbatus Alencar & Azevedo, 2008

Dissomphalus perturbatus Alencar & Azevedo, 2008: 17–19 (♂, holotype from Espírito Santo, UFES, figs 60–65).

Diagnosis. Male. Black. Mandible tridentate, uppermost tooth inconspicuous. Median clypeal lobe trapezoidal, median carina complete. Frons coriaceous, punctures large and shallow. T2 with pair of circular, large and shallow lateral depression, each depression with tubercle, which has small pit on top with one short seta directed backward, anterior inner margin with very short few setae and lateral margin with long setae. Posterior hypopygeal margin concave. Genitalia: paramere wide subapically in dorsal view; apex rounded and arched mesad. Dorsal margin of basiparamere somewhat concave. Cuspis long and arched, apex rounded, digitus with apex pointed and smooth in upper margin. Aedeagal ventral ramus shorter than dorsal body, laminar, surface horizontal, inner margin straight in ventral view, basally with ventral fold, filament inserted subapically, nearly as long as ramus, convergent, apex somewhat dilated, narrow, narrow and arched dorsad; dorsal body with three pairs apical lobes, outer pair laminar, surface vertical, wide, apex convergent, dorsal margin convex in lateral view and concave in dorsal view, ventral margin with apex produced, subapical strong concavity and projection straight and serrated, dorsal inner pair large and long, membranous and setay, ventral inner pair longer than dorsal one, membranous and setay. Apodeme of aedeagus extending beyond elliptical genital ring. Female unknown.

Remarks. Twenty-nine specimens of *D. perturbatus* were registered from Espírito Santo (Alencar & Azevedo, 2008), and we add more 32 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Terez{s}a, Estação Biológica de Santa Lúcia, [19º58'S 40º32W], 26–29.VII.2004, armadilha Malaise, M.T. Tavares e eq[uipe] col. (UFES). Paratypes: BRAZIL, Espírito Santo: 6♂, Santa Tereza, Estação Biológica de Santa Lúcia, 19º58'S 40º32W, armadilha Malaise, 06–12.IV.2001, C.O. Azevedo e eq[uipe] col. (MZSP), 1♂, same data as holotype (UFES). **Material revised.** 1♂, Santa Terez{s}a, Estação Biológica de Santa Lúcia, 19º58'S 40º32W, 07.VII.2007, varredura, Azevedo e eq col. (UFES); 3♂, Santa Maria de Jetibá, Fazenda Paulo Seick, [armadilha] Malaise, Tavares, Azevedo e eq[uipe] col., 20º04'S 40º44'W, 06–13.XII.2002 (UFES); 3♂, 29.XI–06.XII.2002 (UFES); 9♂, 20º02'S 40º44'W, 29.XI–06.XII.2002 (UFES); 4♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–03.XII.2004, [armadilha] Malaise, Tavares e eq[uipe] col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 10.X.2002, 2♂, 13–17.X.2008, varredura, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 1♂, 10.X.2002, varredura, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES); 6♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 3♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02'S 40º41'5O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 4♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25'S 41º00'W, 26.VIII–3.XII.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 5♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 5♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 4♂, Ibitirama, Parque Nacional Caparaó, 20º27'S 41º44'W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Pará, Espírito Santo).

Dissomphalus refertus Alencar & Azevedo, 2008

Dissomphalus refertus Alencar & Azevedo, 2008: 22–24 (♂, holotype from Rio de Janeiro, MZSP, figs 78–83).

Diagnosis. Male. Black. Mandible tridentate, uppermost tooth inconspicuous. Median clypeal lobe trapezoidal, median carina complete, tall in lateral view. Frons strongly

coriaceous, punctures large and shallow. T2 with pair of circular, large and shallow lateral depressions, each depression with pit with raised rims and with one short seta directed backward, lateral margin with few setae. Genitalia: paramere evenly wide in dorsal view; apex rounded and arched mesad. Cuspis long and arched, apex rounded. Digitus with apex pointed and smooth in upper margin. Aedeagal ventral ramus shorter than dorsal body, laminar, surface horizontal, inner margin straight in ventral view, ventrad except base flat with narrow fold, outer margin convex, basally with ventral fold, filament inserted subapically, nearly as long as ramus, sinuous, apex dilated, narrow, narrow and arched dorsad; dorsal body with three pairs apical lobes, outer pair laminar longer than paramere, surface vertical, wide, apex convergent, dorsal margin convex in lateral view and concave in dorsal view, ventral margin with subapical concavity and projection straight and serrated, dorsal inner pair small, membranous and setay, ventral inner pair longer than dorsal one, membranous and setay. Apodeme of aedeagus not extending beyond elliptical genital ring. Female unknown.

Remarks. This is the first record of this species (ten specimens) from Espírito Santo.

Material examined. Types: Holotype ♂, BRAZIL, Rio de Janeiro, Nova Iguaçu, Reserva Biológica de Tinguá, 22º34’S 43º26’W, 05–08.III.2002, armadilha Malaise, S. T. P. Amarante e eq. col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 3♂, Pinheiros, Res[erva] Biol[ógica] do Córrego do Veado, 18º21’S 40º09’W, 09–17.VI.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 3♂, Pancas, Faz[enda] Juliberto Stur, 19º13’S 40º46’O, 24–31.I.2003, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 2♂, Sooretama, Res[erva] Biol[ógica] de Sooretama, 18º21’S 40º09’W, 31.V–08.VI.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 2♂, 11–19.XI.2011, [armadilha] Malaise, C.O. Azevedo col. (UFES).

Distribution. Brazil (Sergipe, Espírito Santo).

***punctatus* species-group**

Diagnosis. Male. Tergal process with circular depression, margins not angulate, dense tufts of setae directed backward, tubercle absent.

Remarks. This species-group contains four species: *D. napo* Evans, 1979, *D. punctatus* Kieffer, *D. bahiensis* Redighieri & Azevedo and *Dissomphalus tupinikim* **sp. nov.**, the latter three recorded from Espírito Santo.

Distribution. Costa Rica, Panama, Ecuador, Peru, Brazil (Amazonas, Acre, Sergipe, Alagoas, Pernambuco, Paraíba, Mato Grosso, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Paraná) and Paraguay.

Dissomphalus bahiensis Redighieri & Azevedo, 2006
(Figs 94–97)

Dissomphalus bahiensis Redighieri & Azevedo, 2006: 329 (♂, holotype from Bahia, MZSP, figs 49, 50).

Diagnosis. Male. Black. Mandible with two apical teeth. Median clypeal lobe trapezoidal. Frons strongly coriaceous, punctures shallow. Vertex slightly convex. T2 with pair of sublateral setay tufts, which give risen directly from surface, without tubercle. Posterior hypopygeal margin straight. Genitalia: paramere elongate; dorsal margin straight, ventral margin sinuous; aedeagal ventral ramus much short than dorsal body, laminar, surface mostly horizontal, broad, apical margin inclined with small tooth; dorsal body de aedeagus with two pairs apical lobes; outer pair laminar, surface vertical, wide with apex rounded in lateral view, ventral margin serrate; inner pair membranous, stout and setay; basal process elongate, progressively narrowing apicad. Female unknown.

Remarks. This is the first record of this species (six specimens) from Espírito Santo. We allocated this species into *punctatus* species-group because of tergal processes has a circular depression, with margins not angulate, with dense tufts of setae directed backward, tubercles absent.

Material examined. Types: Holotype ♂, BRAZIL, Bahia, Porto Seguro, Estação Ecológica Pau Brazil, 16º23’17.6’’S 39º10’55’’W, 17.V.2002, armadilha Malaise, C.O. Azevedo e eq. col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 1♂, Conceição da Barra, Res[erva] Biol[ógica] Córrego Grande, 18º14’S 39º49’W, 13.III.2006, [armadilha] malaise, Redighieri, E. S. & eq[uipe] col. (UFES); 1♂, Sooretama, Res[erva] Biol[ógica] de Sooretama, 18º21’S 40º09’W, 31.V–08.VI.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 3♂, Vitória, [Par]q[ue] Est[adual] Fonte Grande, 11VII.2000–19.IV.2001, varredura, Azevedo, [C.O.] & Kawada [R.] col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 3–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES).

Distribution. Brazil (Bahia and Espírito Santo).

Dissomphalus punctatus (Kieffer, 1910)
(Figs 98, 99)

Thaumatepyris punctatus Kieffer, 1910a: 47 (♂, holotype from Peru, ZMHB).

Dissomphalus punctatus: Evans, 1964: 47 (♂, new combination, figs 24, 26, 33); Azevedo, 2003: 28–30; Redighieri & Azevedo, 2006: 310–311; Azevedo, 1999b: 492.
Glenobethylus montanus Kieffer, 1910a: 50 (♂, holotype, Pérou, Départ. de Cuzco, Plateau de Cosnipata, altitude de 1000 mètres, en janvier (Garlepp); ZMBH). Synonymized by Azevedo, 1999b: 492.
Dissomphalus montanus: Evans, 1964: 46, 48 (♂, new combination).
Dissomphalus napo: Redighieri & Azevedo 2004: 330, part.

Diagnosis. Male. Mandible with two apical teeth. Median clypeal lobe subtrapezoidal. Frons strongly coriaceous, densely punctuated. Ocellar triangle far from vertex crest. Vertex nearly straight. Metapectal-propodeal complex strongly rugulose. T2 with pair very shallow, small and rounded depressions, wholly covered by dense tuft of setae directed backward, depressions touching anterior margin tergite, distant each other about own diameter. Posterior hypopygeal margin straight. Genitalia: base of digitus setose; aedeagal ventral ramus sinuous and wide, apex filamentous directed outward; dorsal body with two pair of setay membranous, stout apical lobes, inner pair much bigger and setay, outer pair with vertical surface, base not membranous; aedeagal basal process elongate as filament; dorsal side of genital ring with median vumerange-shaped piece, slightly more protracted than ventral side. Female unknown.

Variations. Some specimens have variations in the depth and density of the depressions, shape paramere and margin of the dorsal body.

Remarks. Thirty-one specimens of *D. punctatus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 192 new ones. Additionally, we reidentified four specimens as *D. napo* by Redighieri & Azevedo (2004) as *D. punctatus*.

Material examined. Types: Holotype ♂, PERU, Cuzco, Cajon, Bergland, 1500m, 11.I.1901, Garlepp col. (ZMHB, #195). **Material revised:** BRAZIL, Espírito Santo: 4♂, Santa Teresa (Estação Biológica de Santa Lúcia), 23.IV–26.X.2001, varredura C.O. Azevedo & R. Kawada col. (UFES). 16♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–12.IV.2001, armadilha Malaise, 3♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP), 7♂, armadilha Malaise, 1♂, varredura (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Conceição da Barra, Res[erva] Biol[ógica] Córrego Grande, 18º14’S 39º49’W, 13.III.2006, [armadilha] malaise, Redighieri, E. S. & eq[uipe] col. (UFES); 2♂, Conceição da Barra, Parque Estadual de Itaúnas, 18°20’S 39°40W, 23–25.XI.2006, Armadilha Malaise, M.T. Tavares & eq[uipe] col. (UFES); 2♂, Pinheiros, Res[erva] Biol[ógica] do Córrego do Veado, 18º21’S 40º09’W, 09–17.VI.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 1♂, Pancas, Faz[enda] Juliberto Stur, 19º13’S 40º46’O, 24–31.I.2003, arm[adilha] Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 2♂, Sooretama, Reserva Biológica [de] Sooretama, 11–19.XI.2011, [armadilha] Malaise, C.O. Azevedo col.

(UFES); 29♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 2♂, São Roque do Canaã, Alto Misterioso, 19º48'S 40º46'W, 02–11.XI.2007, Armadilha Malaise, Waichert & eq[uipe] col. (UFES); 6♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 19º58'S 40º32'W, 26.VIII.2004–07.VIII.2007, varredura, [M.T.] Tavares & equipe col., [C.O.] Azevedo & eq[uipe] col. (UFES); 35♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 19º58'S 40º32'W, 30.VII.2004–23.X.2011, varredura, [M.T.] Tavares & equipe col., [C.O.] Azevedo & eq[uipe] col. (UFES); 24♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 14♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02'S 40º41'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 2♂, Santa Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 5♂, Santa Leopoldina, Suíça, 20º04'S 40º35'W, 5–12.XI.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 4♂, Santa Leopoldina, Bragança, 20º10'S 40º34'W, 8–15.X.2012, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Vila Velha, Res[erva] Jacaranema, 30.X.2002, arm[adilha] Malaise, [C.O.] Azevedo & eq[uipe] col. (UFES); 3♂, Cariacica, Res[erva] Biol[ógica] Duas Bocas, [20°16'S] 40°28'W], 4.X–10.XII.1996, varredura, H. Santos Sa col. (UFES); 1♂, 26.XI.1996, varredura, C.O. Azevedo col. (UFES); 7♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25'S 41º00'W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 33♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 4♂, Domingos Martins, [20°21'S 40°39'W], 05–12.VII.2003, arm[adilha] Malaise, R. Kawada col. (UFES); 2♂, Alfredo Chaves, Matilde, RPPN Oiutrem, 20°33'S 40°48'W, 14–21.X.2009, Armadilha Malaise, C.O. Azevedo & eq, col. (UFES); 3♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 9♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'S 41º44'W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Amazonas, Acre, Pernambuco, Alagoas, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Paraná).

***Dissomphalus tupinikim* Colombo & Azevedo, sp. nov.**
(Figs 4, 25, 100–102)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; median clypeal lobe trapezoidal, median tooth rounded; frons strongly coriaceous, punctate. Pronotal disc strongly coriaceous. T2 with pair tufts of setae directed backward, lateral, without depression and tubercle. Posterior hypopygeal margin straight. Genitalia: paramere with apex rounded, slightly arched inward, very wide, longer than basiparamere; volsella very wide; aedeagal ventral ramus smaller than dorsal body, laminar, narrow, fork at the base, rounded apex; dorsal body with two pairs apical lobes, outer pair wide and rounded in lateral view, apical and ventral margin with many setae, inner pair membranous; apodeme extending beyond genital ring. Female unknown.

Variations. Paramere slightly; dorsal body with apex weakly rounded.

Remarks. This species is now included in *punctatus* species-group by having the tergal process with tufts of setae directed backward and tubercles absent. This species has the genitalia similar to those of *D. punctatus*. However, this species has the median clypeal lobe subtrapezoidal, aedeagal dorsal body with apex short and apical and ventral margins of aedeagal dorsal body with many setae, whereas *D. punctatus* has the median clypeal lobe trapezoidal, aedeagal dorsal body with apex wide and apical and ventral margins of aedeagal dorsal body without many setae.

Theses species goes to couplet 80 on the key proposed by Redighieri & Azevedo (2006) and should be read as:

80. Apex of outer aedeagal dorsal body with ventral margin serrated, long filament present between pair outer.....*D. bahiensis* Redighieri & Azevedo
- Apex of outer aedeagal dorsal body without ventral margin serrated, long filament absent between pair outer.....80a

80a. Median clypeal lobe subtrapezoidal; aedeagal basal process elongate as filament present.....*D. punctatus* (Kieffer)
- Median clypeal lobe trapezoidal; aedeagal basal process elongate as filament absent.....*D. tupinikim* **sp. nov.**

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Alfredo Chaves, Picadão, 20º27’S 40º42’W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES). Paratypes: 1♂, Santa Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 31.V.2001, varredura, Azevedo & Kawada col. (UFES); 1♂, Santa Leopoldina, Alto Rio das Farinhas, 20º08’S 40º36’W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–03.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 2♂,

same locality of holotype. 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 3♂, Ibitirama, Parque Nacional do Caparaó, 20º29'S 41º43'W, 10–14.III.2006, R. Kawada col. (UFES); 2♂, Ibitirama, Parque Nacional do Caparaó, 20º27'S 41º44'W, 16–23.III.2013, C.O. Azevedo & F.B. Fraga col. (UFES).

Etymology. The epithet *tupinikim* refers to Tupinikim indigenous of Espírito Santo.

Distribuition. Brazil (Espírito Santo).

rufipalpis species-group

Diagnosis. Male. T2 with lateral pair of elliptical, inclined, elongated depression with linear and oblique tufts of setae.

Remarks. This species-group contains five species: *D. ellipticus* Evans, 1969, *D. rufipalpis* Kieffer, 1910, *D. inclinatus* Redighieri & Azevedo 2006, *D. infissus* Evans, 1969, and *Dissomphalus guarani* **sp. nov.**, the latter three recorded from Espírito Santo.

Distribution. Mexico to southern Brazil.

Dissomphalus inclinatus Redighieri & Azevedo, 2006

(Figs 103, 104)

Dissomphalus inclinatus Redighieri & Azevedo, 2006: 311 (♂, holotype from Espírito Santo, MZSP, figs 1–3).

Diagnosis. Male. Black. Mandible with two apical teeth. Median clypeal lobe trapezoidal. Frons strongly coriaceous, punctures shallow. Vertex straight. T2 with pair of large, subcircular sublateral depressions; each with tuft of dense setae, rectangular and inclined. Posterior hypopygeal margin straight. Genitalia: digitus with large basal projection; aedeagal ventral ramus shorter than dorsal body, laminar, surface horizontal, apex sharpened, base with bidentate process and inner margin waved; dorsal body with two pairs apical lobes; outer laminar, surface vertical, apex rounded in lateral view, dorsal margin wide basally; inner lobe stout, membranous and setay. Female unknown.

Variations. Some specimens have variations in the depth and density of the depressions.

Remarks. Two specimens of *D. inclinatus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more seven new ones.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). Paratype: 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e

eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 3♂, Santa Teresa, Est[ação] Biol[ógica] Santa Lúcia, [19º58'S 40º32'W], 30.VII–04.VIII.2005, [armadilha] Malaise, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º41'O, 29.XI–6.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Espírito Santo, Paraná and Santa Catarina).

Dissomphalus infissus Evans, 1969
(Figs 105, 106)

Dissomphalus infissus Evans, 1969: 14, 19, 22 (♂, holotype from Argentina, FIML, figs 14, 20, 28); Azevedo, 1999b: 929, 933–934; 2003: 27; Redighieri & Azevedo, 2006: 311.

Diagnosis. Male. Mandible with three apical teeth. Median clypeal lobe trapezoidal. Frons coriaceous, punctures small, shallow. Ocellar triangle distant from vertex. Vertex straight, small median depression, corner rounded. T2 with pair of very shallow and circular depressions, not reaching anterior margin, each depression with setay linear tubercle, inclined, posterior part directed inward, latero-anterior area depression sparse-setaed. Hypopygium with slender stalk, posterior margin straight, corner rounded. Genitalia: paramere short or wide, dorsal margin evenly very developed, apex concave, very produced dorsally; volsella with stout protuberance near digitus, base volsella with species-group of teeth; aedeagal ventral ramus very short, base wide, apical half narrow, slightly convergent, apex very sharpened, inner margin of base sinuous, outer margin expanded laterally, so that ramus surrounds dorsal body laterally, this margin with small tooth; aedeagal dorsal body very wide with apex in lateral view, laminar, lamina completely folded longitudinally in ventral side, inner lamina membranous, sinuous, setay inside, outer lamina with series of grooves; in dorsal view body is slightly wider in base; inner ventral margin base of genitalia angulate. Female unknown.

Remarks. Three specimens of *D. infissus* were registered from Espírito Santo (Azevedo, 2003; Redighieri &Azevedo, 2006), and we add more 12 new ones.

Material examined. Types: Holotype ♂, ARGENTINA, Oran, Abra Grande, Salta, 16–23 Feb. 1967, R. Golbach, (FIML). **Material revised:** BRAZIL, Espírito Santo: 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001,

armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP), 1♂, (UFES);1♂, Cariacica, Reserva Biológica de Duas Bocas, mata, 10X.1996, varredura Azevedo col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02'S 40º41'O, 29.XI–6.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 1♂, Santa Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, Armadilha Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 9♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Ibitirama, Parque Nacional do Caparaó, 20º27'S 41º44'W, 16–23.III2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Paraíba, Pernambuco, Alagoas, Espírito Santo, São Paulo, Paraná and Santa Catarina); Argentina.

***Dissomphalus guarani* Colombo & Azevedo, sp. nov.**
(Figs 5, 26, 107, 108)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; median clypeal lobe trapezoidal, median tooth triangular; frons strongly coriaceous, punctate. Disc pronotal coriaceous. T2 with lateral pair of elliptical and inclined depression, linear and elliptical tufts of setae present. Posterior hypopygeal margin weakly convex. Genitalia: paramere with apex rounded, constricted, arched inward, wide, longer than basiparamere; digitus with large basal projection, serrate; aedeagal ventral ramus smaller than dorsal body, laminar, narrow, rounded apex, tapering from base to apex, base with process, inner margin waved; dorsal body with two pairs apical lobes, outer pair laminar, surface vertical, apex rounded in lateral view, serrate, inner pair membranous, basal process bifurcated, serrate; apodeme extending beyond genital ring. Female unknown.

Remarks. This species is now included in *rufipalpis* species-group by having the tergal process with pair of elliptical and inclined depression with linear and elliptical tufts of setae. This species has the genitalia similar to those of *D. inclinatus*. However, this species has the aedeagal dorsal body serrate, ventral ramus is not bidentate and digitus is serrated, whereas *D. inclinatus* has the aedeagal dorsal body not serrate, ventral ramus is bidentate and digitus is not serrated.

This species goes to couplet 45 in the key proposed by Redighieri & Azevedo (2006) and should be read as:

45. Base aedeagal ventral ramus with process.....45a
- Base aedeagal ventral ramus without process.....46
45a. Base aedeagal ventral ramus with bifurcated process....*D. inclinatus* Redighieri & Azevedo
- Base aedeagal ventral ramus with process, but not bifurcated.....*D. guarani* **sp. nov.**

Material examined. Types: Holotype. ♂, BRAZIL, E[spírito] S[anto]: Santa Teresa, Estação Biológica de Santa Lúcia, [armadilha] Malaise, 17–23.X.2011. Tavares, M.T. & eq[uipe] col. (UFES). Paratypes: 2♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'57''S 41º44'42''W, 16–23.III.2013, [armadilha] Malaise, 1500m, C.O. Azevedo & F.B. Fraga col. (UFES).

Etymology. The epithet *guarani* refers to Guarani indigenous of Espírito Santo.

Distribuition. Brazil (Espírito Santo).

***setosus* species-group**

Diagnosis. Male. Clypeus broad with ill-defined median lobe. T2 with lateral depression composed of tuber with wide fovea, thick and conspicuous bristles on the border of each depression.

Remarks. This species-group contains nine species: *D. distans*, *D. divisus*, *D. filiformis*, *D. inflexus*, *D. crassus*, *D. firmus*, *D. setosus*, *D. spissus* described for Redighieri & Azevedo, 2006 and *Dissomphalus w-aedeagus* **sp. nov.**, the latter five are recorded from Espírito Santo.

Distribution. It is widespread in Neotropical region, from Mexico to South of Brazil, including some Caribbean islands.

***Dissomphalus crassus* Redighieri & Azevedo, 2006**
(Figs 109, 110)

Dissomphalus crassus Redighieri & Azevedo, 2006: 314–315 (♂, holotype from São Paulo, MZSP, figs 8, 9).

Diagnosis. Male. Black. Mandible with four apical teeth. Clypeus broadly projected forward, median lobe ill defined. Frons coriaceous punctures shallow, minute. Vertex concave. T2 with pair lateral depressions, almost reaching lateral margin tergite; lateral margin densely setose, pitted tubercle with tuft of setae. Hypopygeal margin of straight. Genitalia: paramere with dorsal margin wide; aedeagal ventral ramus slightly shorter than dorsal body, laminar, surface horizontal with base broad narrowing gradually, apex narrow; aedeagal dorsal body with two pairs apical lobes; outer pair laminar, surface

vertical, apex somewhat sharpened; inner pair stout, membranous and setay. Female unknown.

Variations. Some specimens have fewer setae on the side of the depression tergal process.

Remarks. Three specimens of *D. crassus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 107 new ones.

Material examined. Types: Holotype ♂, BRAZIL, São Paulo, Ubatuba, Parque Estadual da Serra do Mar, Núcleo Picinguaba, 23º21'43''S 44º49'22''W, 24–27.I.2002, armadilha Malaise, N.W. Perioto e eq. col. (MZSP). Paratypes: 1♂, BRAZIL, Espírito Santo: Sooretama, Reserva Biológica de Sooretama, 19º00'11.5''S 40º07'08''W, 06.VI.2002, varredura, C.O. Azevedo e eq[uipe] col. (MZSP); 2♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 2♂, Conceição da Barra, Parque Estadual de Itaúnas, 18º20'S 39º40W, 23–25.XI.2006, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES); 4♂, Pinheiros, Res[erva] Biol[ógica] do Córrego do Veado, 18º21'S 40º09'W, 27.XI–06.XII.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 5♂, Pancas, Faz[enda] Juliberto Stur, 19º13'S 40º46'O, 24–31.I.2003, armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 1♂, Linhares, Faz[enda] Bom Conselho, 1–3.X.2000, varredura, [C.O.] Azevedo & Schiffler col. (UFES); 1♂, Linhares, Povoação, 19º33'S 39º47'W, 13–14.XI.2008, K. S. Furieri & F. T. Gobbi col. (UFES); 6♂, Sooretama, Res[erva] Biol[ógica] de Sooretama, 18º21'S 40º09'W, 31.V–14.XII.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 4♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 10♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, [19º58'S 40º32'W], 23.IV–27.IX.2001, varredura, [C.O.] Azevedo & [R.] Kawada col. (UFES); 3♂, Santa Teresa, Est[ação] Biol[ógica] Santa Lúcia, [19°56'S 40°36'W], 08.X.2002–04.VIII.2005, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 1♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, 13–17.X.2008, (UFES); 8♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 9♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º41'O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 17♂, Santa Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES);

1♂, Vitória, P[ar]q[ue] Est[adual] Fonte Grande, [20°18’S 40°20’W], 15.VIII.2000, varredura, [C.O.] Azevedo, [R.] Kawada & Santos col. (UFES); 9♂, Cariacica, Res[erva] Biol[ógica] Duas Bocas, [20°16’S 40°28’W], 12.XI.1996–1.VII.1997, varredura, H. Santos Sa col. (UFES); 16♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 2♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25’S 41º00’W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Guarapari, P[arque] E[stadual] Paulo César Vinha, 20º36’S 40º25’W, 02–09.XI,2006, [armadilha] Malaise, B, Araújo & M, Santos col. (UFES); 2♂, Guarapari, P[arque] E[stadual] Paulo César Vinha, 20º36’S 40º25’W, 08–15.V.2006, [armadilha] Malaise, Kawada & eq[uipe] col. (UFES); 2♂, Alfredo Chaves, Matilde, RPPN Oiutrem, 20º33’S 40º48’W, 14–21.X.2009, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 2♂, Ibitirama, Parque Nacional Caparaó, 20º27’S 41º44’W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 2♂, Itapemerim, Fazenda Usina Paineiras, 20º56’S 41º03’W, 19–26.XI.2010, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES).

Distribution. Brazil (Espírito Santo, Rio de Janeiro and São Paulo).

Dissomphalus firmus Redighieri & Azevedo, 2006

(Figs 111, 112)

Dissomphalus firmus Redighieri & Azevedo, 2006: 318–319 (♂, holotype from São Paulo, MZSP, figs 17, 18).

Diagnosis. Male. Black. Mandible with four apical teeth. Clypeus broadly projected forward, median lobe ill defined. Frons coriaceous, punctures small, sparse. Vertex slightly convex. T2 with pair of lateral depressions, almost reaching lateral margin tergite; lateral margin setose, pitted tubercle with tuft of setae. Posterior hypopygeal margin narrowly concave medially. Genitalia: paramere with some conspicuous setae on ventral margin; aedeagal ventral ramus as long as dorsal body, laminar, surface horizontal, base broad, apical third narrow; dorsal body with two pairs apical lobes; outer pair laminar, surface vertical, apex rounded in lateral view; inner pair stout, membranous and setay. Female unknown.

Remarks. Two specimens of *D. firmus* were registered from Espírito Santo (Redighieri & Azevedo, 2006).

Material examined. Types: Holotype ♂, BRAZIL, São Paulo, Ribeirão Grande, Parque Estadual de Intervales, 24º18’16’’S 48º21’53’’W, 10-13.XII.2000, armadilha Malaise, M.T. Tavares e eq. col. (MZSP). Paratypes: 2♂, BRAZIL, Espírito Santo: Santa

Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 07.IV.2001, varredura, C.O. Azevedo e eq[uipe] col. (MZSP, UFES).

Distribution. Brazil (Espírito Santo, São Paulo, Paraná and Santa Catarina).

Dissomphalus setosus Redighieri & Azevedo, 2006

(Figs 113, 114)

Dissomphalus setosus Redighieri & Azevedo, 2006: 319 (♂, holotype from Espírito Santo, MZSP, figs 19–22).

Diagnosis. Male. Black. Mandible with two apical teeth. Clypeus broadly projected forward, median lobe ill defined. Frons weakly coriaceous, punctures shallow. Vertex nearly straight. T2 with pair of lateral depressions, reaching lateral margin of tergite; lateral margin setose, wide pitted tubercle with tuft of setae. Posterior margin hypopygium straight. Genitalia: paramere with wide base; ventral margin concave; inner surface with apical pegs; aedeagal ventral ramus as long as dorsal body, laminar, surface horizontal, apex with two rounded short teeth; aedeagal dorsal body with three pairs apical lobes, dorsal pair short, apex slightly arched outward, outer margin with median callus; median and ventral stout, membranous and setay, ventral one longer than others. Female unknown.

Variations. Some specimens have mandible tridentate, less setae on the side of the depression tergal process, depression with circular or subcircular shape and paramere shorter.

Remarks. Two hundred sixty-two specimens of *D. setosus* were registered from Espírito Santo (Redighieri &Azevedo, 2006), and we add more 249 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). Paratypes: 84♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–12.IV.2001, armadilha Malaise, 2♂, armadilha Möricke, 174♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 1♂, Pancas, Faz[enda] Juliberto Stur, 19º13’S 40º46’O, 24–31.I.2003, arm[adilha] Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, Linhares, Faz[enda] Bom Conselho, 1–3.X.2000, varredura, [C.O.] Azevedo & Schiffler col. (UFES); 1♂, Santa Teresa, Est[ação] Biol[ógica de] S[an]ta Lúcia, [19º58’S 40º32’W], 31.I.2001, varredura, Correa & L. Santos col. (UFES); 8♂, S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 19º58’S 40º32’W, 11.IX.2003–04.VIII.2005, varredura, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 196♂,

S[anta] Teresa, Est[ação] Biol[ógica de] Santa Lúcia, [19º58'S 40º32'W], 28.III.10.XII.2001, varredura, [C.O.] Azevedo & [R.] Kawada col. (UFES); 4♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04'S 40º44'O, 1♂, Faz[enda] Paulo Seick, 20º02'S, 40º41'O, 6–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 2♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Vitória, P[ar]q[ue] Est[adual] Fonte Grande, [20°18'S 40°20'W], 30.VI.2001, varredura, [C.O.] Azevedo & [R.] Kawada col. (UFES); 25♂, Cariacica, Res[erva] Biol[ógica] Duas Bocas, [20°16'S 40°28'W], 26.VIII–12.XI.1996, varredura, C.O. Azevedo col.; H. Santos Sa col.; E.H. Freitas col. (UFES); 2♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 2♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25'S 41º00'W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 2♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 2♂, Ibitirama, Parque Nacional do Caparaó, 20º29'S 41º43'W, 10–14.III.2006, R. Kawada col. (UFES).

Distribution. Brazil (Paraíba, Alagoas, Sergipe, Espírito Santo, São Paulo and Santa Catarina).

Dissomphalus spissus Redighieri & Azevedo, 2006
(Figs 115, 116)

Dissomphalus spissus Redighieri & Azevedo, 2006: 316, 318 (♂, holotype from Espírito Santo, MZSP, figs 15, 16).
Dissomphalus truncatus: Redighieri & Azevedo 2004: 330, part.
Dissomphalus setosus: Redighieri & Azevedo 2006: 319, part.

Diagnosis. Male. Black. Mandible with three apical teeth. Median clypeal lobe trapezoidal. Frons coriaceous, punctures shallow. Vertex straight. T2 with pair lateral depressions, reaching lateral margin of tergite; lateral margin setose, wide pitted tubercle with tuft of setae. Posterior hypopygeal margin straight. Genitalia: paramere wide; ventral margin concave; aedeagal ventral ramus as long as dorsal body, laminar, surface horizontal, apical half slightly sinuous, apex sharpened; aedeagal dorsal body with two pairs apical lobes; outer pair laminar, lateral part vertical, basal part horizontal covering dorsally inner pair basally; inner pair stout, membranous and setay. Female unknown.

Variations. Some specimens have mandible bidentate, less setae on the side of the depression tergal process, and paramere with straight apex.

Remarks. Sixty-nine specimens of *D. spissus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 62 new ones. Additionally, we reidentified one specimen previously identified as *D. truncatus* by Redighieri & Azevedo (2004) and one as *D. setosus* by Redighieri & Azevedo (2006) as *D. spissus*.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 09–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP); Paratypes: 12♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, 56♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP). **Material revised:** 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 30.I–10.XII.2001, varredura C.O. Azevedo & R. Kawada col. (UFES); 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 09–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 34♂, Santa Teresa, Est[ação] Biol[ógica de] S[an]ta Lúcia, [19º58'S 40º32'W], 23.II–10.XII.2001, varredura, [C.O.] Azevedo & [R.] Kawada col. (UFES); 1♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, [19º58'S 40º32'W], 30.VII–04.VIII.2005, [armadilha] Malaise, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 4♂, Santa Leopoldina, Bragança, 20º31'S 41º05'W, 8–15.X.2012, armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Vitória, P[ar]q[ue] Est[adual] Fonte Grande, [20°18'S 40°20'W], 9.IX.2000, varredura, [C.O.] Azevedo, [R.] Kawada & Santos col. (UFES); 2♂, Cariacica, Res[erva] Biol[ógica] Duas Bocas, [20°16'S 40°28'W], 4.X.1996, varredura, C.O. Azevedo col. (UFES); 3♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Ibitirama, Parque Nacional Caparaó, 20º27'S 41º44'W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 1♂, Castelo, Parque Estadual Fonte Grande, 13–15.X.2000, varredura, Azevedo & Santos col. (UFES); 15♂, Divino de São Lourenço, Parque Nacional Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Espírito Santo, São Paulo and Santa Catarina).

Dissomphalus w-aedeagus Colombo & Azevedo, sp. nov.
(Figs 6, 27, 117–120)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; clypeus broadly projected forward, median tooth ill defined; frons

weakly coriaceous, punctate. Pronotal disc weakly coriaceous. T2 with pair lateral depressions, reaching lateral margin tergite; lateral margin setose, wide pitted tubercle with tuft of setae. Posterior hypopygeal margin straight. Genitalia: paramere very narrow in dorsal or ventral view, apex rounded, larger than basiparamere; cuspis very long, extending digitus to the paramere base, very narrow; digitus small, serrate; aedeagal ventral ramus larger than dorsal body, wide, tubular, invaginated apex; aedeagal dorsal body with two pairs apical lobes, outer pair with apex irregular in lateral view, inner pair serrate, basal process weakly arched; apodeme not extending beyond genital ring. Female unknown.

Variations. Paramere wider in lateral view.

Remarks. This species is now included in *setosus* species-group by having the tergal process with lateral depression with pair of tubercles and lateral margin setose. This species has the tubular aedeagal ventral ramus, characteristic *brasiliensis* species-group. However, the aedeagal dorsal body is not as small as diagnosed for this species-group. Within the *setosus* species-group, this genitalia is totally different from other species, mainly because of the paramere is very narrow, in dorsal view and, the aedeagal ramus ventral is invaginated apex.

This species goes to couplet 11 on the key proposed by Redighieri & Azevedo (2006) and should be read as:

11. Paramere very narrow in dorsal or ventral view; aedeagal ventral ramus with invaginated apex; aedeagus w-shaped..... *D. w-aedeagus* **sp. nov.**
- Paramere wide or when narrow, only in dorsal view; aedeagal ventral ramus without invaginated apex; aedeagus never w-shaped.....11a

11a. Median clypeal carina high; aedeagal ventral ramus with apex rounded and curved outward.....*D. distans* Redighieri & Azevedo
- Median clypeal carina low; aedeagal ventral ramus with apex acute or when rounded, not curved outward.....31

Material examined. Types: Holotype. ♂, BRAZIL, E[spírito] S[anto]: Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27’57’’S 41º44’42’’W, 16–23.III.2013, [armadilha] Malaise, 1500 m, C.O. Azevedo & F.B. Fraga col. (UFES). Paratypes: 1♂, S[anta] Leopoldina, Bragança, 20º10’S 40º34’W, 08–15.X.2012, [armadilha] Malaise, C.O. Azevedo & equipe col. (UFES); 8♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27’57’’S 41º44’42’’W, 16–23.III.2013, [armadilha] Malaise, 1500m, C.O. Azevedo & F.B. Fraga col. (UFES).

Etymology. The epithet *w-aedeagus* refers to w-shaped aedeagus.

Distribuition. Brazil (Espírito Santo).

***tuberculatus* species-group**

Diagnosis. Male. Median clypeal lobe trapezoidal. T2 with lateral pair of tubercles slightly directed to each other, placed in pair of shallow depression or in horizontal surface.

Remarks. This species-group contains two species: *D. plaumanni* Evans, 1964 and *D. tuberculatus* Ashmead, the most recent is recorded from Espírito Santo.

Distribution. Saint Vincent, Costa Rica, Panama, Ecuador, Peru and Brazil (Pará, Espírito Santo, São Paulo and Paraná).

***Dissomphalus plaumanni* Evans, 1964**
(Figs 121, 122)

Dissomphalus crassus Redighieri & Azevedo, 2006: 314–315 (♂, holotype from São Paulo, MZSP, figs 8, 9).

Diagnosis. Male. Head black, mesosoma nearly black. Mandible with four apical teeth. Median clypeal lobe trapezoidal. Frons coriaceous, punctures large, shallow. Vertex slightly convex, rounded corner. T2 with pair rounded lateral depressions, each one tubercles, tuft of setae directed back- and inward, anterior margin depression with some setae. Genitalia: paramere very wide; cuspis thick; digitus with rounded dorsal expansion; aedeagal ventral ramus laminar, surface horizontal, very short, as short as basiparamere, wide, apex acute; aedeagal dorsal body with pair of apical lobes, laminar, wide, apex rounded in lateral view, compressed in dorsal view, inner surface stout, membranous and setose; genital triangular. Female unknown.

Remarks. Seventy-one specimens of *D. plaumanni* were registered from Espírito Santo (Azevedo, 2003; Redighieri & Azevedo, 2006), and we add more 198 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Santa Catarina, Nova Teutonia, 26 February 1945, Fritz Plaumann, (BMNH). **Material revised:** BRAZIL, Espírito Santo: 3♂, Sooretama, Reserva Biológica de Sooretama, 19º00’11.5’’S 40º07’08’’W, 21–27.III.2002, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP);43♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–12.IV.2001, armadilha Malaise, 1♂, armadilha Möricke, 4♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP); 18♂, Cariacica, Reserva Biológica de Duas Bocas, mata, 2.IX–10.XII.1996, varredura Azevedo & Santos col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 8♂, Pinheiros, Res[erva] Biol[ógica] do Córrego do Veado, 18º21’S 40º09’W, 09.VI–06.XII.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 4♂, Pancas, Faz[enda] Juliberto Stur, 19º12’S 40º47’O, 24–31.I.2003,

Armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col.(UFES); 1♂, Linhares, Povoação, 19º33’S 39º47’W, 13–14.XI.2008, K. S. Furieri & F. T. Gobbi col. (UFES); 3♂, Sooretama, Res[erva] Biol[ógica] de Sooretama, 19°03’18’S 40°08’43’’W, 06–14.XII.2011, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES); 32♂, João Neiva, Alto Bérgamo, 19º44’S 40º26’W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 7♂, São Roque do Canaã, Alto Misterioso, 19º48’S 40º46’W, 02–11.XI.2007, Armadilha Malaise, Waichert & eq[uipe] col. (UFES); 3♂, Itaguaçú, Alto Lajinha, Faz[enda] Binda, 19º48’S 40º48’W, 22–29.IX.2008, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 1♂, Vila Valério, Sítio Benincá, 18º58’S 40º27’W, 14–28.IX.2011, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 20♂, Santa Teresa, Est[ação] Biol[ógica de] S[an]ta Lúcia, 30.VII.2005–21.X.2014, Armadilha Malaise, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 2♂, Santa Teresa, Est[ação] Biol[ógica de] S[an]ta Lúcia, 10.X.2002, varredura, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES);); 8♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04’S 40º44’O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 7♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02’S 40º41’O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 3♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08’S 40º36’W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 2♂, Vitória, P[ar]q[ue] Est[adual] Fonte Grande, [20°18’S 40°20’W], 19.IV.2001, varredura, [C.O.] Azevedo & [R.] Kawada col. (UFES); 2♂, Cariacica, Reserva Biológica de Duas Bocas, 25–26.VI.2005, M.T. Tavares & equipe col. (UFES); 1♂, Viana, Formate, Fazenda Renadane, 20–30.V.1997, óleo, A. Falqueto & A. Ferreira col. (UFES); 20♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25’S 41º00’W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 3♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 3–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 5♂, Castelo, Parque Estadual Fonte Grande, 13–15.X.2000, varredura, Azevedo & Santos col. (UFES); 45♂, Alfredo Chaves, Picadão, 20º27’S 40º42’W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24’S 41º47’W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 20♂, Ibitirama, Parque Nacional do Caparaó, 20º27’S 41º44’W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Costa Rica, Panama, Ecuador, Peru and Brazil (Pará, Espírito Santo, São Paulo and Paraná).

ulceratus species-group

Diagnosis. Male. T2 with median depression, pair of tufts. Basal portion of the dorsal margin of the paramere much developed. Digitus wide medially. Cuspis elongated. Aedeagal ventral ramus with inner margin sinuous basally, wide, narrowing apically.

Remarks. This species-group contains five species: *D. dentiformis* Azevedo, *D. ulceratus* Evans, *D. concavatus* Azevedo, *D. rectilineus* Azevedo and *Dissomphalus congo* **sp. nov.**, the latter three recorded from Espírito Santo.

Distribution. Restricted to the central-eastern region of South America.

Dissomphalus concavatus Azevedo, 1999

(Figs 123–125)

Dissomphalus concavatus Azevedo 1999a: 346 (♂, holotype from Paraná, DZUP, figs 98–101, 188, 189); 2003: 58; Redighieri & Azevedo, 2004: 329; 2006: 306.
Dissomphalus rectilineus: Redighieri & Azevedo 2004: 329, part.; 2006: 306, part.

Diagnosis. Male. Black. Mandible with four apical teeth. Median clypeal lobe subtrapezoidal. Front strongly coriaceous. Vertex straight. T2 with median elliptical depression, tuft of setae directed back and inward, somewhat large, separated another by slightly more than own diameter. Hypopygium with median stalk conical, posterior margin concave. Genitalia: paramere wide, apical margin incline, slightly convex and irregular, dorsal apical corner tooth-shaped; aedeagal ventral ramus short, wide, laminar, surface subhorizontal, convex ventrally, progressively narrowing apically, apical margin inclined, inner corner angled; aedeagal dorsal body with two pairs apical lobes, outer pair laminar, surface vertical, convex externally, wide in lateral view, apex slightly arched downward, inner pair membranous, densely setose. Female unknown.

Variations. Some specimens showed median clypeal lobe trapezoidal, tergal process with shallow or deep, large or small depressions.

Remarks. Seventy-six specimens of *D. concavatus* were registered from Espírito Santo (Redighieri &Azevedo, 2004; 2006), and we add more 46 new ones. Additionally, we reidentified 31 specimens previously identified as *D. rectilineus* by Redighieri & Azevedo (2004, 2006) as *D. concavatus*.

Material examined. Types: Holotype ♂, BRAZIL, Paraná, Telemaco Borba, Reserve Samuel Klabin; 1–29.IX–15.XII.1986; Malaise trap; Survey Profaupar (DZUP).

Material revised: BRAZIL, Espírito Santo: 9♂, Santa Teresa (Estação Biológica de Santa Lúcia), 30.I–10.XII.2001, varredura C.O. Azevedo & R. Kawada col. (UFES); 2♂, Santa Teresa (Estação Biológica de Santa Lúcia), 30.I–10.XII.2001, varredura C.O. Azevedo & R. Kawada col.(UFES); 56♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.IV.2001, armadilha Malaise, 6♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP); 28♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.IV.2001, armadilha Malaise, 2♂, varredura, 1♂, Möricke, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 1♂, Pinheiros, Res[erva] Biol[ógica] Córrego de Veado, 18º21'S 40º09'W, 27.XI.–06.XII.2011, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES); 5♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, [19º58'S 40º32'W], 15.X.2010–23.X.2011, [armadilha] Malaise, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 16♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 6♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02'S 40º41'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 2♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 3–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Castelo, P[ar]q[ue] Estadual Forno Grande, [20º32'S 41º07'W], 13–15.X.2000, varredura, [C.O.] Azevedo & Santos col. (UFES); 1♂, Atílio Vivácqua, Serra das Torres, 21º0'S 41º13'W, 14–19.IV.2007, [armadilha] Malaise, Waichert & eq[uipe] col. (UFES); 5♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 6♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'S 41º44'W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Alagoas, Distrito Federal, Espírito Santo, São Paulo and Paraná).

Dissomphalus rectilineus Azevedo, 1999

(Figs 126–128)

Dissomphalus rectilineus Azevedo 1999a: 347 (♂, holotype from Paraná, DZUP, figs 102–108, 190); 2003: 58–59; Redighieri & Azevedo, 2004: 329, part.; 2006: 306, part.
Dissomphalus concavatus: Redighieri & Azevedo 2006: 306, part.

Diagnosis. Male. Black. Mandible with three apical teeth. Median clypeal lobe trapezoidal. Front strongly coriaceous. Ocellus posterior close to vertex crest. Vertex slightly convex. T2 with shallow, elliptical median depression, slightly elevated medially, pair of tufts of setae directed back and inward. Hypopygium with median stalk conical, posterior margin straight. Genitalia: paramere wide, apical margin concave and very irregular, corner tooth-shaped; digitus with base produced; aedeagal ventral ramus short, wide, laminar, surface subhorizontal and concave ventrally, progressively narrowing apically; aedeagal dorsal body wide in lateral view, laminar, surface vertical, apex rounded in lateral view, inner surface membranous and densely setose. Female unknown.

Variations. Median clypeal lobe subtrapezoidal, tergal process with shallow or deep, large or small depressions, hypopygium with posterior margin slightly concave and paramere slightly wide.

Remarks. Four hundred and seventy specimens of *D. rectilineus* were registered from Espírito Santo (Azevedo, 2003; Redighieri & Azevedo, 2004; 2006), and we add more 230 new ones. Additionally, we reidentified one specimen previously identified as *D. concavatus* by Redighieri & Azevedo (2006) as *D. rectilineus*.

Material examined. Types: Holotype ♂, BRAZIL, Paraná, São Jose dos Pinhais, Serra do Mar, BR 277, km 54; 23.X.1987; Malaise trap; Survey Profaupar (DZUP). **Material revised:** BRAZIL, Espírito Santo: 157♂, Santa Teresa (Estação Biológica de Santa Lúcia), 30.I–10.XII.2001, varredura C.O. Azevedo & R. Kawada col.(UFES); 112♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–12.IV.2001, armadilha Malaise, 3♂, armadilha Möricke, 133♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP); 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP); 19♂, Cariacica, Reserva Biológica de Duas Bocas, mata, 2.IX.1996–25.III.1997, varredura Azevedo & Santos col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Pancas, Faz[enda] Juliberto Stur, 19º13’S 40º46’O, 31.I–7.II.2003, [armadilha] Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 1♂, Linhares, Reserva Nat[ural] da Vale do Rio Doce, sede, 19º9’S 40º4’W, 07.V.2007, arm[adilha] Malaise, J. A. Rafael & F. F. Xavier Fº col. (INPA); 4♂, Sooretama, Reserva Biológica [de] Sooretama, 11.XI.–14.XII.2011, [armadilha] Malaise, C.O. Azevedo; M.T. Tavares & equipe col. (UFES); 6♂, João Neiva, Alto Bérgamo, 19º44’S 40º26’W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, Itaguaçú, Alto Lajinha, Faz[enda] Binda, 19º48’S 40º48’W, 22–29.IX.2008, arm[adilha]

Malaise, M.T. Tavares & equipe col. (UFES); 27♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, [19º58'S 40º32'W], 10.X.2002–07.VII.2007, varredura, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 30♂, 30.VII.2004–23.X.2011, [armadilha] Malaise, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 22♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 18♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02'S 40º41'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 6♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, S[anta] Leopoldina, Bragança, 20º10'S 40º34'W, 08–15.X.2012, [armadilha] Malaise, C.O. Azevedo & equipe col. (UFES); 3♂, Vitória, P[ar]q[ue] Est[adual] Fonte Grande, [20°18'S 40°20'W], 9.IX.2000–30.VI.2001, varredura, [C.O.] Azevedo, [R.] Kawada & Santos col. (UFES); 18♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25'S 41º00'W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 20♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 3–10.XII.2004, [armadilha] Malaise, 1♂, varredura, [M.T.] Tavares & eq[uipe] col. (UFES); 11♂, Castelo, P[ar]q[ue] Estadual Forno Grande, [20º32'S 41º07'W], 13–15.X.2000, varredura, [C.O.] Azevedo & Santos col. (UFES); 3♂, Atílio Vivácqua, Serra das Torres, 21º0'S 41º13'W, 14–19.IV.2007, [armadilha] Malaise, Waichert & eq[uipe] col. (UFES); 1♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 29♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 1♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º29'S 41º43'W, 10–14.III.2006, R. Kawada col. (UFES); 6♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'S 41º44'W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Pernambuco, Alagoas, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Paraná).

Dissomphalus congo Colombo & Azevedo, sp. nov.

(Figs 7, 28, 129, 130)

Dissomphalus rectilineus: Azevedo, 2003, 58–59, part.; Redighieri & Azevedo, 2004: 329, part.; 2006: 306, part.

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with three apical teeth; median clypeal lobe subtrapezoidal, median tooth triangular; frons

strongly coriaceous, punctate. Disc pronotal strongly coriaceous. T2 with shallow, elliptical median depression, slightly elevated medially, pair of tufts of setae directed back and inward. Posterior hypopygeal margin straight. Genitalia: paramere wide, apical margin concave and very irregular, longer than basiparamere; digitus with large apex; aedeagal ventral ramus smaller than dorsal body, laminar, rounded apex, progressively narrowing apically; aedeagal dorsal body with two pairs apical lobes, outer pair with apex rounded in lateral view, setay, inner pair membranous; apodeme extending beyond genital ring. Female unknown.

Variations. Paramere wider; ventral ramus with apex weakly rounded in lateral view; dorsal body with less seta.

Remarks. This species is now included in *ulceratus* species-group by having the tergal process with median depression with pair of tufts. This species not is similar other of species-group. This species is mainly different because has the paramere wide, in dorsal view and apex of the aedeagal dorsal body setay.

This species goes to couplet 2 in the key proposed by Azevedo (1999a) for *ulceratus* species-group and should be read as:

2. Median clypeal lobe subtrapezoidal with median tooth triangular; aedeagal ventral ramus short; aedeagal dorsal body with inner surface membranous and never densely setose..... *D. congo* **sp. nov.**
- Median clypeal lobe trapezoidal or when subtrapezoidal, without median tooth triangular.....2a
2a. Median clypeal lobe trapezoidal with large median tooth, vertex very angulate in the comers, ocellar triangle compact.....*D. rectilineus* Azevedo
- Median clypeal lobe subtrapezoidal with small median tooth, vertex with corners broadly rounded, ocellar triangle broad.....3

Material examined. Types: Holotype, ♂, BRAZIL, E[spírito] S[anto]: Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º29’S 41º43’W, 06–13.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES). Paratypes: 1♂, Santa Teresa, Reserva Biológica de Santa Lúcia, 05.XII.1996, varredura, C.O. Azevedo col. (UFES); 1♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04’S 40º44’O, 29.XI–6.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 7♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Ibitirama, Parque Nacional do Caparaó, 20º29’S 41º43’W, 10–14.III.2006, R. Kawada col. (UFES); 8♂, same locality of holotype. 06–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES). Material

revised. BRAZIL, E[spírito] S[anto]: 13♂, Cariacica, Res[erva] Biol[ógica de] Duas Bocas, 29.XI.1996, varredura, H. Santos Sá col. (UFES).

Etymology. The epithet *congo* refers to tipical dance of Espírito Santo.

Distribuition. Brazil (Espírito Santo).

vallensis species-group

Diagnosis. Male. Clypeus with only median tooth. T2 with median depression transverse, elliptical, not so deep, with pair lateral tubercles, tubercles directed to each other.

Remarks. This species-group contains 11 species: *D. bifurcatus* Azevedo, *D. bisserratus* Azevedo, *D. digitatus* Azevedo, *D. dilatatus* Azevedo, *D. planus* Azevedo, *D. polidentatus* Azevedo, *D. strictus* Azevedo, *D. triangularis* Azevedo, *D. vallensis* Evans, *D. extrarramis* Azevedo and *Dissomphalus rosangelae* **sp. nov.**, the latter two are recorded from Espírito Santo.

Distribution. It is widespread throughout Neotropical region, ranging from Mexico to South of Brazil, including some Caribbean islands.

Dissomphalus extrarramis Azevedo, 1999

(Figs 131–133)

Dissomphalus extrarramis Azevedo 1999a: 320 (♂, holotype from São Paulo, DZUP, figs 150, 151); 2003: 56; Redighieri & Azevedo, 2006: 307.

Diagnosis. Male. Black. Mandible with three apical teeth. Clypeus with large median tooth. Front strongly coriaceous. Vertex nearly straight. T2 with transverse, elliptical median depression, slightly deep, not so large, with pair of lateral setose tubercles, so that depression becomes biconcave in dorsal view, tubercle small, slightly directed to each other, their lateral margins very weakly setose. Genitalia: paramere with sharp apex; digitus with basal projection elongate, sharp; aedeagal ventral ramus elongate, sinuous, shorter than dorsal body; aedeagal dorsal body with two pairs apical lobes, outer pair laminar, surface vertical, arched downward apically, apex sharpened tooth, large and subquadratic ventral projection, ventral margin serrated; inner pair membranous, densely setose. Female unknown.

Variations. Some specimens show dorsal body aedeagus with one tooth and two teeth, may both be the same size or larger than the other. Presence or absence a ventral tooth covered by the inner lobe.

Remarks. Twelve specimens of *D. extrarramis* were registered from Espírito Santo (Azevedo, 2003; Redighieri & Azevedo, 2006), and we add more 66 new ones.

Material examined. Types: Holotype ♂, BRAZIL, São Paulo, São José do Barreiro, Serra da Bocaina, 4.XI.1965, F.M. Oliveira col. (DZUP). **Material revised:** BRAZIL, Espírito Santo: 11♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP); 1♂, Cariacica, Reserva Biológica de Duas Bocas, mata, 22.X.1996, armadilha janela, Azevedo & Santos col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 2♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, [19º58'S 40º32'W], 11.IX.2003, varredura, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 11♂, 30.VII.2004–23.X.2011, [armadilha] Malaise, M.T. Tavares, C. Azevedo & eq[uipe] col. (UFES); 21♂, Santa Maria de Jetibá, Faz[enda] Clarindo Krüger, 20º04'S 40º44'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 5♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02'S 40º41'O, 29.XI–13.XII.2002, Armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES); 1♂, S[anta] Leopoldina, Bragança, 20º10'S 40º34'W, 08–15.X.2012, [armadilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 3–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Alfredo Chaves, Matilde, RPPN Oiutrem, 20°33'S 40°48'W, 14–21.X.2009, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 10♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 13♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'S 41º44'W, 16–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Paraná).

***Dissomphalus rosangelae* Colombo & Azevedo, sp. nov.**
(Figs 8, 29, 134–140)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with three apical teeth; median clypeal lobe subtrapezoidal, large median tooth; frons strongly coriaceous, punctate. Pronotal disc strongly coriaceous. T2 with median depression elliptical, not so deep, pair of lateral tubercles, tubercles directed to each other. Posterior hypopygeal margin straight. Genitalia: paramere wide, apex narrow, smaller than basiparamere; aedeagal ventral ramus smaller than dorsal body, laminar, irregular apex, progressively narrowing apically, basal process weakly bifurcated; aedeagal dorsal body with three pairs apical lobes, external pair membranous with apex irregular in lateral

view, apical extension in dorsal view, wavy, middle pair sickle-shaped, inner pair serrate; apodeme not extending beyond genital ring. Female unknown.

Variations. Tergal process tubercles with little targeted.

Remarks. This species is now included in *vallensis* species-group by having the tergal process with median depression with pair of tubercles directed to each other. This species has the genitalia similar to those of *D. extrarramis*. However, the aedeagal dorsal body of *D. rosangelae* **sp. nov.** have three pairs apical lobes with apical extension and, aedeagal ventral ramus have basal process, whereas *D. extrarramis* have two pairs apical lobes without apical extension and, aedeagal ventral ramus not have basal process.

This species goes to couplet 8 in the key proposed by Azevedo (1999a) for the vallensis species-group and should be read as:

8. Outer lobe aedeagal dorsal body not serrated ventrally, without apical extension, dorsal view; aedeagal ventral ramus thin only in apex..... *D. strictus* Azevedo
- Outer lobe aedeagal dorsal body serrated ventrally, with apical extension, dorsal view; aedeagal ventral ramus progressively narrowing apically.....*D. rosangelae* **sp. nov.**

Material examined. Types: Holotype. ♂, BRAZIL, E[spírito] S[anto]: Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04'S 40º44'O, 29.XI–06.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES). Paratypes: 1♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, Santa Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 23.II.2001, varredura, Azevedo & Kawada col. (UFES); 6♂, same locality of holotype. 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 10♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º41'O, 29.XI–13.XII.2002, armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES).

Etymology. The epithet *rosangelae* is in allusion to the mother's first author name Rosangela *in memoriam*.

Distribuition. Brazil (Espírito Santo).

***amplus* species-group**

Diagnosis. Male. Head regularly wide. Mandible regularly long. T2 without tergal process. Aedeagal ventral ramus without apical filament. Aedeagal dorsal body without apical flagellae.

Remarks. This species-group contains five species: *D. amplus* Redighieri & Azevedo, 2006, *Dissomphalus clovisi* **sp. nov.**, *Dissomphalus kuara* **sp. nov.** *Dissomphalus pyata* **sp. nov.**, and *Dissomphalus miriamae* **sp. nov.**, all from Espírito Santo.

Distribution. Brazil (Espírito Santo).

Key to males of *amplus* species-group

1. Mandible bidentate..... 2
- Mandible tridentate; clypeus broadly projected; aedeagal ventral ramus laminar.....*D. amplus* Redighieri & Azevedo
2. Clypeus broadly projected, median lobe undefined.....3
- Median clypeal lobe trapezoidal.....4
3. Posterior hypopygeal margin weakly concave; paramere wide in dorsal view; basal process absent.....*D. clovisi* **sp. nov.**
- Posterior hypopygeal margin concave; paramere small in dorsal view; basal process present and ill defined.....*D. miriamae* **sp. nov.**
4. Paramere wide, in dorsal view, larger than basiparamere; aedeagal ventral ramus with apex weakly bifurcated; basal bar absent or ill defined.....*D. pyata* **sp. nov.**
- Paramere small, in dorsal view, as large as basiparamere; aedeagal ventral ramus with apex inverted and rounded; basal bar wide, Y-shaped.....*D. kuara* **sp. nov.**

Dissomphalus amplus Redighieri & Azevedo, 2006

(Figs 141, 142)

Dissomphalus amplus Redighieri & Azevedo, 2006: 331 (♂, holotype from Espírito Santo, MZSP, figs 55, 56).

Diagnosis. Male. Black. Mandible with three apical teeth. Clypeus broadly projected forward, median lobe ill defined, median carina partially divided in two. Frons nearly polished, punctures minute, sparse. Vertex slightly convex. T2 without process tergal. Posterior hypopygeal margin straight. Genitalia: aedeagal ventral ramus shorter than dorsal body, laminar, surface horizontal, wide, progressively narrowing apicad, inner margin with median indentation; Aedeagal dorsal body with two pairs apical lobes; outer pair laminar, surface vertical, wide in lateral view; inner pair membranous, stout and setay. Female unknown.

Remarks. This species is allocated in *amplus* species-group by having the tergal process absent. Eight specimens of *D. amplus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more six new ones.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 09–12.IV.2001, armadilha Möricke, C.O. Azevedo e eq[uipe] col. (MZSP). Paratypes: BRAZIL, Espírito Santo: 2♂, Sooretama, Reserva Biológica de Sooretama, 19º00’S 40º07’W, 21–27.III.2002,

armadilha Möricke, C.O. Azevedo e eq[uipe] col. (MZSP); 5♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 07–10.IV.2001, varredura, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 1♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 2♂, Santa Terez{s}a, Estação Biol[ógica] Santa Lúcia, 19°58'S 40°32'W, 7.VIII.2007, varredura, [C.O.] Azevedo & eq[uipe] col. (UFES); 1♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25'S 41º00'W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Castelo, Parque Estadual Fonte Grande, 13–15.X.2000, varredura, Azevedo & Santos col. (UFES).

Distribution. Brazil (Espírito Santo, Rio de Janeiro and Santa Catarina).

Dissomphalus clovisi Colombo & Azevedo, sp. nov.
(Figs 9, 143, 144)

Description. Male. Head and mesosoma black; metasoma dark castaneous or black. Mandible with two apical teeth; clypeus broadly projected forward, median tooth ill defined; frons weakly coriaceous, punctate. Pronotal disc coriaceous. T2 without tergal process. Posterior hypopygeal margin weakly concave. Genitalia: paramere wide in dorsal view, apex serrate, invagination serrate in ventral view, smaller than basiparamere; cuspis very wide; digitus sickle-shaped; aedeagal ventral ramus smaller than dorsal body, base narrow, wide middle part, apex narrow, laminar; aedeagal dorsal body with two pairs apical lobes, apex weakly bifurcated in dorsal view, inner pair weakly membranous; basal bar wide; apodeme extending beyond genital ring. Female unknown.

Remarks. This species is allocated in *amplus* species-group by having the tergal process absent. This species not is similar other of species-group. This species is mainly different because has the aedeagal ventral ramus with wide middle part and apex narrow; aedeagal dorsal body with apex weakly bifurcated and aedeagal dorsal body with basal bar wide.

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Santa Teresa, Est[ação] Biol[ógica] de Santa Lúcia, 26–29.VIII.2004, arm[adilha] Malaise, Tavares & equipe col. (UFES). Paratypes: 1♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º42'W, 06–13.XII.2002, armadilha Malaise, Tavares & Azevedo e eq[uipe] col. (UFES).

Etymology. The epithet *clovisi* is in allusion to the father's second author name Clovis.

Distribuition. Brazil (Espírito Santo).

***Dissomphalus kuara* Colombo & Azevedo, sp. nov.**
(Figs 10, 145, 146)

Description. Male. Head and mesosoma black; metasoma dark castaneous or black. Mandible with two apical teeth; median clypeal lobe trapezoidal, median tooth weakly triangular; frons coriaceous, punctate. Pronotal disc coriaceous. T2 without tergal process. Posterior hypopygeal margin straight. Genitalia: paramere wide in dorsal view, apex rounded, size equal to basiparamere; cuspis wide; digitus sickle-shaped; aedeagal ventral ramus smaller than dorsal body, base wide, apex inverted, rounded, laminar; aedeagal dorsal body with two pairs apical lobes, outer pair with apex ill defined, inner pair very membranous; basal process ill defined; basal bar wide, Y-shaped; apodeme extending beyond genital ring. Female unknown.

Remarks. This species is allocated in *amplus* species-group by having the tergal process absent. This species not is similar other of species-group. This species is mainly different because has the aedeagal ventral ramus with apex inverted and rounded; aedeagal dorsal body with apex ill-defined and aedeagal dorsal body with basal bar in Y-shaped.

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Santa Teresa, Estação Biológica [de] Santa Lúcia, 15–19.X.2010, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES). Paratypes: 4♂, Santa Teresa, Estação Biológica de Santa Lúcia, 15–19.X.2010, 1♂, 13–17.2008, [armadilha] Malaise, M.T. Tavares & equipe col. (UFES); 8♂, Santa Maria de Jetibá, Fazenda Clarindo Kruguer, 20º04'S 40º44'W, 29.XI–06.XII.2002, armadilha Malaise, M. Tavares & C. Azevedo e eq[uipe] col. (UFES); 1♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º42'W, 29.XI–06.XII.2002, armadilha Malaise, Tavares & Azevedo e eq[uipe] col. (UFES); 3♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 22♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 08–15.X.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Ibitirama, Parque Nacional do Caparaó, 20º29'S 41º43'W, 10–13.III.2006, R. Kawada col. (UFES); 1♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º29'S 41º43'W, 06–13.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Etymology. The epithet *kuara* refers to sun in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

***Dissomphalus pyata* Colombo & Azevedo, sp. nov.**
(Figs 11, 147–149)

Description. Male. Head and mesosoma black; metasoma dark castaneous or black. Mandible with two apical teeth; median clypeal lobe trapezoidal, median tooth weakly triangular; frons weakly coriaceous, punctate. Pronotal disc coriaceous. T2 without tergal process. Posterior hypopygeal margin straight. Genitalia: paramere small in dorsal view, apex rounded, larger than basiparamere; aedeagal ventral ramus smaller than dorsal body, apex weakly bifurcated, laminar; aedeagal dorsal body with one pair of apical lobes, inner pair with apex narrow in dorsal view, membranous; basal process larger than apical lobes, wide; apodeme extending beyond genital ring. Female unknown.

Remarks. This species is allocated in *amplus* species-group by having the tergal process absent. This species not is similar other of species-group. This species is mainly different because has the aedeagal ventral ramus with apex weakly bifurcated and aedeagal dorsal body with basal process larger than apical lobes.

Material examined. Types: Holotype ♂, BR[AZIL], E[spírito] S[anto]: Domingos Martins, Par[que] Est[adual] Pedra Azul, 20º25’55’’S 41º00’53’’W, 26.VIII–02.IX.2003, Arm[adilha] Malaise, C. O Azevedo & eq[uipe] col. (UFES). Paratypes: BRAZIL, Espírito Santo: 1♂, Santa Maria de Jetibá, Fazenda Clarindo Kruguer, 20º0/4’S 40º44’53’’W, 29.XI–06.XII.2002, armadilha Malaise, Tavares, Azevedo e equipe col. (UFES); 4♂, Domingos Martins, Par[que] Est[adual] Pedra Azul, 20º25’55’’S 41º00’53’’W, 26.VIII–02.IX.2003, Arm[adilha] Malaise, C. O Azevedo & eq[uipe] col. (UFES).

Etymology. The epithet *pyata* refers to strong in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

***Dissomphalus miriamae* Colombo & Azevedo, sp. nov.**
(Figs 12, 150, 151)

Description. Male. Head and mesosoma black; metasoma dark castaneous or black. Mandible with two apical teeth; clypeus broadly projected forward, median tooth weakly rounded; frons weakly coriaceous and punctate. Mesosoma. Weakly coriaceous. T2 without tergal process. Posterior hypopygeal margin concave. Genitalia: paramere small in dorsal view, apex rounded, arched, smaller than basiparamere; cuspis wide; digitus wide; aedeagal ventral ramus smaller than dorsal body, apex ill defined, laminar, narrow;

aedeagal dorsal body with one pair of apical lobes, inner pair with apex rounded in dorsal view, inner pair weakly serrate; basal process ill defined; apodeme extending beyond genital ring. Female unknown.

Remarks. This species is allocated in *amplus* species-group by having the tergal process absent. This species not is similar other of species-group. This species is mainly different because has the aedeagal dorsal body with one pair of apical lobes and inner pair weakly serrate.

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Santa Teresa, Est[ação] Biol[ógica] de Santa Lúcia, 28.III.2001, varredura, Azevedo & Kawada col. (UFES). Paratypes: 2♂, Santa Teresa, Est[ação] Biol[ógica] de Santa Lúcia, 31.V.2001, 2♂, 27.IX.2001, varredura, Azevedo & Kawada col. (UFES); 1♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º42'W, 29.XI–06.XII.2002, armadilha Malaise, Tavares & Azevedo e eq[uipe] col. (UFES); 1♂, Vitória, P[ar]q[ue] Est[adual] Fonte Grande, 30.VI.2001, varredura, Azevedo & Kawada col. (UFES).

Etymology. The epithet *miriamae* is in allusion to the mother's second author name Miriam.

Distribuition. Brazil (Espírito Santo).

amana species-group

Diagnosis. Male. T2 with lateral depression, tuft seta directed toward T1, tubercle absent.

Remarks. This species-group contains two species: *Dissomphalus amana* **sp. nov.** and *Dissomphalus potyra* **sp. nov.**, both from Espírito Santo.

Distribution. Brazil (Espírito Santo).

Key to males of *amana* species-group

1. Clypeus broadly projected forward; posterior hypopygeal margin weakly concave; paramere wide in dorsal view; basal process absent.....*D. amana* **sp. nov.**
- Median clypeal lobe trapezoidal; posterior hypopygeal margin weakly convex; paramere small in dorsal view; basal process long, narrow, slightly curved.....*D. potyra* **sp. nov.**

Dissomphalus amana Colombo & Azevedo, sp. nov.

(Figs 13, 30, 152, 153)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; clypeus broadly projected forward, median tooth weakly rounded; frons coriaceous, weakly punctate. Pronotal disc coriaceous. T2 with lateral depression composedtuft with weakly seta directed toward T1, tubercle absente. Posterior

hypopygeal margin weakly concave. Genitalia: paramere very wide in dorsal view, apex almost straight, larger than basiparamere; cuspis wide; digitus wide, sickle-shaped; aedeagal ventral ramus smaller than dorsal body, narrowing the base to the apex, apex rounded; aedeagal dorsal body with two pairs apical lobes, outer pair with apex narrow in dorsal view, inner pair membranous; apodeme extending beyond genital ring. Female unknown.

Variations. Dorsal body with apex weakly rounded.

Remarks. This species is allocated in *amana* species-group by having the tergal process with lateral depression with pair of tuft directed toward T1 and with tubercles absent. This species has the tergal process similar to *Dissomphalus potyra* **sp. nov.** However, the paramere of *D. amana* **sp. nov.** is very wide, in dorsal view, the aedeagal ventral ramus with apex rounded and aedeagal dorsal body without basal process, whereas *D. potyra* **sp. nov.** the paramere is small, in dorsal view, the aedeagal ventral ramus with apex bifurcated and aedeagal dorsal body with basal process.

Material examined. Types: Holotype, ♂, BRAZIL, E[spírito] S[anto]: Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–03.XII.2004, [Armadilha] Malaise, Tavares e eq[uipe] col. (UFES). Paratypes: 1♂, Santa Teresa, Est[ação] Biol[ógica de] Santa Lúcia, 08–10.X.2002, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 2♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04’S 40º44’W, 29.XI–06.XII.2002, armadilha Malaise, M. Tavares & C. Azevedo e eq[uipe] col. (UFES); 7♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02’S 40º42’W, 29.XI–13.XII.2002, armadilha Malaise, Tavares & Azevedo e eq[uipe] col. (UFES); 5♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08’S 40º36’W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Domingos Martins, P[ar]q[ue] Est[adual] Pedra Azul, 20º25’S 41º00’W, 26.VIII–02.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 21♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–10.XII.2004, [Armadilha] Malaise, Tavares e eq[uipe] col. (UFES).

Etymology. The epithet *amana* refers to the rain in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

Dissomphalus potyra Colombo & Azevedo, sp. nov.

(Figs 14, 31, 154–157)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; median clypeal lobe trapezoidal, median tooth triangular; frons coriaceous, punctate. Pronotal disc coriaceous. T2 with lateral depression composed tuft

with dense seta directed toward T1, tubercle absente. Posterior hypopygeal margin weakly convex. Genitalia: paramere small in dorsal view, apex rounded, larger than basiparamere; aedeagal ventral ramus larger than dorsal body, wide, apex bifurcated; aedeagal dorsal body with two pairs apical lobes, outer pair with apex rounded in dorsal view, inner pair membranous; basal process long, narrow, slightly curved; basal process wide; apodeme extending beyond genital ring. Female unknown.

Variations. Paramere with apex weakly rounded in dorsal view; basal process shorter.

Remarks. This species is allocated in *amana* species-group by having the tergal process with lateral depression with pair of tuft directed toward T1 and with tubercles absent. This species has the tergal process similar to *Dissomphalus amana* **sp. nov.** However, the paramere of *D. potyra* **sp. nov.** is small, in dorsal view, the aedeagal ventral ramus with apex bifurcated and aedeagal dorsal body with basal process, whereas *D. amana* **sp. nov.** with paramere very wide, in dorsal view, the aedeagal ventral ramus with apex rounded and aedeagal dorsal body without basal process.

Material examined. Types: Holotype, ♂, BRAZIL, E[spírito] S[anto]: Cariacica, Res[erva] Biológica de Duas Bocas, 25–26.VI.2005, M.T. Tavares & equipe col. (UFES). Paratypes: 3♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04’S 40º44’53’’W, 29.XI–06.XII.2002, armadilha Malaise, Tavares, Azevedo e equipe col. (UFES).

Etymology. The epithet *potyra* refers to flower in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

secretus species-group

Diagnosis. Male. T2 with lateral depressions or not, well-defined side pits, circular-shaped, higher edges, tubercle below surface of tergite, many setae at apex, bristles on edge depressions or not.

Remarks. This species-group contains four species: *Dissomphalus cacirus* **sp. nov.**, *Dissomphalus mirim* **sp. nov.** and *Dissomphalus secretus* **sp. nov.**, all from Espírito Santo.

Distribution. Brazil (Espírito Santo).

Key to males of *secretus* species-group

1. Median clypeal lobe subtrapezoidal; paramere short in dorsal view.....2
- Clypeus short; paramere wide in dorsal view..... *D. secretus* **sp. nov.**
2. Mandible tridentate; posterior hypopygeal margin straight; basal process with two projections with apex straight; apodeme extending beyond genital ring.....*D. mirim* **sp. nov.**

- Mandible bidentate; posterior hypopygeal margin weakly concave; basal process ill defined; apodeme not extending beyond genital ring.....*D. cacirus* **sp. nov.**

***Dissomphalus cacirus* Colombo & Azevedo, sp. nov.**
(Figs 15, 32, 158, 159)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Head. Mandible with two apical teeth; median clypeal lobe subtrapezoidal, median tooth weakly rounded; Frons weakly coriaceous, weakly punctate; vertex rounded in dorsal view. Pronotal disc coriaceous. T2 without depressions, well-defined side pits, circular-shaped, higher edges, tubercle below surface of tergite, many setae at apex. Posterior hypopygeal margin weakly concave. Genitalia: paramere wide in dorsal view, curved in ventral view, apex rounded, slightly arched, base with wide projection, larger than to basiparamere; basivolsella wide; cuspis wide; digitus short; aedeagal ventral ramus smaller than dorsal body, base narrow, rounded, apex narrow, weakly rounded, laminar; aedeagal dorsal body with one pair of apical lobes, apex rounded, inner pair weakly membranous; basal process ill defined; apodeme not extending beyond genital ring. Female unknown.

Remarks. This species is allocated in *secretus* species-group by having the tergal process with lateral depressions or not, with well-defined side pits, circular-shaped, higher edges, with a tubercle below the surface of tergite, many setae at the apex, with bristles on the edge of the depressions or not. This species not is similar other of species-group. This species is mainly different because has the genitalia with digitus short and aedeagal dorsal body with one pair of apical lobes.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Maria de Jetibá, Fazenda Clarindo Kruguer, 20º04’S 40º44’W, 06–13.XII.2002, armadilha Malaise, Tavares & Azevedo e eq[uipe] col. (UFES). Paratypes: 1♂, Santa Maria de Jetibá, Fazenda Clarindo Kruguer, 20º04’S 40º44’W, 06–13.XII.2002, armadilha Malaise, Tavares & Azevedo e eq[uipe] col. (UFES).

Etymology. The epithet *cacirus* refers to wasp in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

***Dissomphalus mirim* Colombo & Azevedo, sp. nov.**
(Figs 16, 33, 160–162)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with three apical teeth; median clypeal lobe subtrapezoidal, median tooth weakly triangular; frons weakly coriaceous, weakly punctate. Pronotal disc weakly coriaceous. T2 with shallow lateral depressions, well-defined side pits, circular, higher edges,

tubercle below surface of tergite, many setae at the apex, bristles on the edge depressions; Posterior hypopygeal margin straight. Genitalia: paramere wide in dorsal view, apex weakly serrated in ventral view, narrow, arched, smaller than to basiparamere; cuspis very short in ventral view; digitus wide; aedeagal ventral ramus smaller than dorsal body, laminar, base ill-defined, apex rounded, basal projection; aedeagal dorsal body with two pair of apical lobes, outer pair with apex weakly rounded, inner pair membranous; basal process with two projections, apex straight, wide; apodeme extending beyond genital ring. Female unknown.

Variations. Basal bar wider in dorsal view.

Remarks. This species is allocated in *secretus* species-group by having the tergal process with lateral depressions or not, with well-defined side pits, circular-shaped, higher edges, with a tubercle below the surface of tergite, many setae at the apex, with bristles on the edge of the depressions or not. This species not is similar other of species-group. This species is mainly different because has the aedeagal dorsal body with basal process with two projections.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, armadilha Malaise, [C.] Waichert & [K.] Furieri e col. (UFES). Paratypes: 1♂, Santa Teresa, Est[ação] Biol[ógica de] S[an]ta Lúcia, 23–II.2001, varredura, Azevedo & Kawada col. (UFES); 4♂, Santa Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, armadilha Malaise, [C.] Waichert & [K.] Furieri e col. (UFES); 1♂, Cariacica, Reserva Biológica de Duas Bocas, 29.IV.1997, Varredura, Santos Sa col. (UFES); 1♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 1230m, 20º27S 41º44W, 16–23.III.2013, [armadilha] Malaise, Azevedo, C. O. & Fraga, F. B. col. (UFES).

Etymology. The epithet *mirim* refers to small in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

Dissomphalus secretus Colombo & Azevedo, sp. nov.
(Figs 17, 34, 163, 164)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; clypeus short, median tooth weakly rounded; frons coriaceous, weakly punctate; vertex very rounded in dorsal view. Pronotal disc coriaceous. T2 without depressions, well-defined side pits, circular-shaped, higher edges, tubercle below surface of tergite, many setae at the apex; Posterior hypopygeal margin straight. Genitalia: paramere short in dorsal view, apex serrate and very setay in ventral view, smaller than

to basiparamere; aedeagal ventral ramus smaller than dorsal body, base wide, apex pointed, median part with projection, laminar; aedeagal dorsal body with two pairs apical lobes, outer pair with apex weakly rounded, inner pair very membranous; basal process ill defined; basal bar wide; apodeme extending beyond genital ring. Female unknown.

Variations. Paramere with base longer in dorsal view; dorsal body with apex more rounded.

Remarks. This species is allocated in *secretus* species-group by having the tergal process with lateral depressions or not, with well-defined side pits, circular-shaped, higher edges, with a tubercle below the surface of tergite, many setae at the apex, with bristles on the edge of the depressions or not. This species not is similar other of species-group. This species is mainly different because has the genitalia with paramere short and aedeagal ventral ramus with median part with projection.

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Linhares, Cultura de Café, 01.IX.1999, V.L.R.M. Benassi col. (UFES). Paratypes: 44♂, Linhares, Cultura de Café, 01.IX.1999, V.L.R.M. Benassi col. (UFES).

Etymology. The epithet *secretus* refers to the tubercle below surface of tergite in tergal process.

Distribuition. Brazil (Espírito Santo).

Species *incertae sedis*

The following 13 species remind out of any species-group: *D. cornutus* Evans, 1964, *D. connubialis* Evans, 1966, *D. differens* Redighieri & Azevedo, 2006, *D. excellens* Redighieri & Azevedo, 2006, *D. fimbriatus* Redighieri & Azevedo, 2006, *D. peculiaris* Redighieri & Azevedo, 2006, *D. scopatus* Redighieri & Azevedo, 2004, *D. trilobatus* Redighieri & Azevedo, 2006, *Dissomphalus caparao* **sp. nov.**, *Dissomphalus capixaba* **sp. nov.**, *Dissomphalus ibirapitanga* **sp. nov.**, *Dissomphalus purius* **sp. nov.** and *Dissomphalus taiabocu* **sp. nov.**

The new species described here, which are not placed in any species-group goes to couplet 29 in the key proposed by Redighieri & Azevedo (2006) and should be read as:

Key to males of *secretus* species-group

29. T2 without tubercles; aedeagal dorsal body with inner pair very serrated.....29a
- T2 with tubercles or without tubercles; aedeagal dorsal body without inner pair very serrated.....29b

29a. Paramere small, dorsal view; basal process without two wide projections; apodeme not extending beyond genital ring.....*D. caparao* **sp. nov.**

- Paramere wide, dorsal view; basal process with two wide projections; apodeme extending beyond genital ring.....*D. taiabocu* **sp. nov.**

29b. Mandible bidentate; clypeus with median tooth weakly triangular; tergal process with tubercles.....29c

- Tergal process with tuft seta having long bristle and distinct (*gilvipes* group).....30

29c. Median clypeal lobe trapezoidal; tergal process with depressions and large tubercles; paramere wide in dorsal view.....29d

- Median clypeal lobe subtrapezoidal; tergal process without depressions and small tubercles; paramere small in dorsal view.....*D. capixaba* **sp. nov.**

29d. Basivolsella with wide projection, hemispheric-shaped; aedeagal ventral ramus larger than aedeagal dorsal body; basal process ill defined.....*D. ibirapitanga* **sp. nov.**

- Basivolsella without such projection; aedeagal ventral ramus smaller than dorsal body; basal process folded up.....*D. purius* **sp. nov.**

Dissomphalus cornutus Evans, 1964

(Figs 165–169)

Dissomphalus cornutus Evans, 1964: 46, 52, 56–58 (♂, holotype from Santa Catarina, BMNH, figs 25, 31, 36); Azevedo, 2003: 68; Redighieri & Azevedo, 2004: 333.

Diagnosis. Male. Dark castaneous. Mandible with four apical teeth. Clypeus with tridentate median lobe, median carina divided longitudinally, forming inner lozengy concavity, angled, high in profile. Malar space broad. Frons very convex, coriaceous, punctures inconspicuous. Vertex straight, corner broadly rounded, head developed behind eye. Gena with post-genal incomplete medially on anterior side, pair of teeth on hypostomal carina. Notaulus straight, narrow, only in anterior half mesoscutum. Parapsidal furrow complete. T2 with shallow, inconspicuous submedian depression, pair of tufts of long setae, which give risen directly from surface, without tubercle. Genitalia: paramere with basal half wide, developed in- and downward, apical half very narrow, arched inward; cuspis long; aedeagal ventral ramus as long as dorsal body, evenly wide with blunt apex; aedeagal dorsal body with pair of apical lobes, wide basally, outer surface convex, inner surface membranous and setose. Female unknown.

Variations. Some specimens have the clypeus with median carina less prominent.

Remarks. Thirty-one specimens of *D. cornutus* were registered from Espírito Santo (Redighieri & Azevedo, 2004), and we add more two new ones. We suspect that there was a typo in the study, considering only three species and not 31.

Material examined. Types: Holotype ♂, BRAZIL, Santa Catarina, Nova Teutonia, 15 June 1937, Fritz Plaumann, (BMNH). **Material revised:** BRAZIL, Espírito Santo: 3♂, Santa Teresa (Estação Biológica de Santa Lúcia), 23.IV–27.IX.2001, varredura C.O. Azevedo & R. Kawada col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Domingos Martins, P[ar]q[ue] Est[adual da] Pedra Azul, 20º25’S 41º00’W, 26.VIII–2.IX.2003, Arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Domingos

Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES).

Distribution. Ecuador, Brazil (Espírito Santo, São Paulo, Paraná and Santa Catarina) and Argentina (Tucumán).

Dissomphalus connubialis Evans, 1966

(Figs 170, 171)

Dissomphalus connubialis Evans, 1966: 106 (♂, holotype from Santa Catarina, MCZH, figs 9, 17); Redighieri & Azevedo, 2006: 320–322.
Dissomphalus brasiliensis: Azevedo 2003: 65, part.

Diagnosis. Male. Dark castaneous, head Black; forewing subhyaline. Mandible with two apical teeth. Median clypeal lobe trapezoidal. Frons strongly coriaceous, punctures conspicuous. Vertex nearly straight. T2 with large, subtriangular lateral depression, slightly deep, dense short-setaed tuft in anterior half of depression, lateral margin with some setae. Hypopygium short, posterior margin concave. Genitalia: aedeagal ventral ramus as high as dorsal body and laterad to it, laminar, vertical surfaces, slightly sinuous, apex blunt; aedeagal dorsal body with three pairs apical lobes of about same size; inner pair elongated vesicle-shaped with rounded apex, median pair somewhat membranous, laminar, ventral, wide, densely setay internally; outer pair with apical projection inclined downward with serrated margin; basal process with three teeth somewhat directed upward, median tooth sharpened and slender, lateral teeth large with wide base and inner stub. Female known.

Variations. Some specimens showed variations in basal process and paramere wider. Redighieri & Azevedo (2006) suggest the transfer of this species to the *conicus* species-group. However, with better analysis of specimens, we realized that this species does not belong to conicus species-group.

Remarks. Eight specimens of *D. connubialis* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 100 new ones. Additionally, we reidentified 35 specimens previously identified as *D. brasiliensis* by Azevedo (2003).

Material examined. Types: Holotype ♂, BRAZIL, Nova Teutonia, Santa Catarina, Oct. 1963, F. Plaumann, (MCZH, nº. 31238). **Material revised:** BRAZIL, Espírito Santo: 2♂, Sooretama, Reserva Biológica de Sooretama, 19º00'11.5''S 40º07'08''W, 21–27.III.2002, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP); 5♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.IV.2001, armadilha Malaise, 1♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP); 35♂, Cariacica, Reserva Biológica de Duas Bocas, varredura or armadilha janela, 24.IX–26.XII.1996, Azevedo, Freitas &

Santos col. (UFES). **New material examined:** BRAZIL, Espírito Santo: 1♂, Conceição da Barra, Reserva Biológica Córrego Grande, Lagoa dos Guaxos, 18º16'S 39º48'W, 13-18.III.2006, Redighieri, ES; Furieri, KS & Van de Koken, AF col. (UFES); 6♂, Pinheiros, Res[erva] Biol[ógica] do Córrego do Veado, 18º21'S 40º09'W, 09.VI–06.XII.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 5♂, Pancas, Faz[enda] Juliberto Stur, 19º12'S 40º47'O, 24.I–7.II.2003, Armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 3♂, Sooretama, Res[erva] Biol[ógica] de Sooretama, 18º21'S 40º09'W, 31.V–08.VI.2011, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 2♂, João Neiva, Alto Bérgamo, 19º44'S 40º26'W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, Itaguaçú, Alto Lajinha, Faz[enda] Binda, 19º48'S 40º48'W, 22–29.IX.2008, arm[adilha] Malaise, M.T. Tavares & equipe col. (UFES); 6♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, 19°58'S 40°32`W, 12.X.2002, Aspirador, C.O. Azevedo col.; 2♂, 10.XII.2001–27.VII.2004, varredura, [C.O.] Azevedo & [R.] Kawada col.; 7♂, 13–17.X.2008; 5♂, 06.XI.2009–23.X.2011, [armadilha] Malaise, Tavares, M.T. & eq[uipe] col. (UFES); 8♂, Santa Maria de Jetibá, Fazenda Clarindo Kruguer, 20º04'S 40º44'W, 29.XI–06.XII.2002, armadilha Malaise, M. Tavares & C. Azevedo e eq[uipe] col. (UFES); 4♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º02'S 40º42'W, 29.XI–06.XII.2002, armadilha Malaise, Tavares & Azevedo e eq[uipe] col. (UFES); 1♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Santa Leopoldina, Bragança, 20º10'S 40º34'W, 8–15.X.2012, [armadilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 2♂, Santa Leopoldina, Suíça, 20º04'S 40º35'W, 5–12.XI.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 2♂, Cariacica, Reserva Biológica de Duas Bocas, 01.VIII..1997, varredura, Santos Sa col. (UFES); 1♂, Viana, Formate, Fazenda Renadane, 20–30.V.1997, óleo, A. Falqueto & A. Ferreira col. (UFES); 13♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Domingos Martins, Parque Estadual Pedra Azul, 20º25'55S 41º00'53,8W, 26.VIII–02.IX.2003, [armadilha] Malaise, C.O. Azevedo & equipe col. (UFES); 1♂, Domingos Martins, Restaurante Lago da Lua, 20º22'S 40º39'W, 08.VIII.2010, Coleta Manual, Santos, B. F. col. (UFES); 13♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise C.O. Azevedo & eq[uipe] col. (UFES); 1♂, Divino de São Lourenço, Limo Verde, 02.III.2003, varredura, C.O. Azevedo col. (UFES); 1♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15–

22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 12♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'S 41º44'W, 06–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES); 1♂, Alegre, Parque Estadual Cachoeira da Fumaça, 11–12.X.2000, varredura, Azevedo & Santos col. (UFES).

Distribution. Argentina (Salta), Brazil (Pernambuco, Sergipe, Bahia, Distrito Federal, Espírito Santo, Rio de Janeiro, São Paulo, Paraná and Santa Catarina).

Dissomphalus differens Redighieri & Azevedo, 2006
(Figs 172–176)

Dissomphalus differens Redighieri & Azevedo, 2006: 322–323 (♂, holotype from Espírito Santo, MZSP, figs 28, 29).

Diagnosis. Male. Black. Mandible with three apical teeth. Clypeus broadly projected forward, median lobe ill defined, median tooth conspicuous, sharpened. Frons coriaceous, punctures large, shallow. Vertex straight. T2 with pair short, wide setay pitted sublateral tubercles, closed to T1. Posterior hypopygeal margin straight. Genitalia: aedeagal ventral ramus short than dorsal body, apical half tubular, apex curved inward; aedeagal dorsal body with two pairs apical lobes; outer small, laminar, lateral part vertical, basal part horizontal covering dorsally inner pair basally; inner stout, membranous, large, embracing outer pair both dorsal and ventrally, dorsal surface slightly colliculate with irregular margins, inner surface strongly setay, apex of ventral part produced downward. Female unknown.

Variations. Some specimens showed variations in the depressions of tergal process and may be deeper or shallow and especially the presence of setae on the side of the depressions.

Remarks. Thirty-nine specimens of *D. differens* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 73 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). Paratypes: BRAZIL, Espírito Santo: 20♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.IV.2001, armadilha Malaise, 17♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 2♂, Pancas, Faz[enda] Juliberto Stur, 19º12'S 40º47'O, 24.I–7.II.2003, Armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 8♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, 19°58'S 40°32`W,

28.III.2001–27.VII.2004, varredura, [C.O.] Azevedo & [R.] Kawada col.; 1♂, 13–17.X.2008; 10♂, 30.VII.2004–23.X.2011, [armadilha] Malaise, Tavares, M.T. & eq[uipe] col. (UFES); 9♂, Santa Maria de Jetibá, Fazenda Clarindo Kruguer, 20º04'S 40º44'W, 29.XI–06.XII.2002, armadilha Malaise, M. Tavares & C. Azevedo e eq[uipe] col. (UFES); 2♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, Santa Leopoldina, Suíça, 20º04'S 40º35'W, 5–12.XI.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe] col. (UFES); 8♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 26.XI–3.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES); 1♂, Domingos Martins, Parque Estadual Pedra Azul, 20º25'55S 41º00'53,8W, 26.VIII–02.IX.2003, [armadilha] Malaise, C.O. Azevedo & equipe col. (UFES); 2♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 8–15.X.2007, arm[adilha] Malaise C.O. Azevedo & eq[uipe] col. (UFES); 2♂, Atílio Vivácqua, Serra das Torres, 21°0'30''S 41°13'22''W, 14–19.IV.2007, Armadilha Malaise, Waichert & eq[uipe] col. (UFES); 1♂, Itapemirim, Fazenda Usina Paineiras, 20°56'S 41°03'W, 19–26.XI.2010, [armadilha] Malaise, M.T. Tavares & eq[uipe] col. (UFES); 10♂, Ibitirama, Parque Nacional Caparaó, 20°29'S 41°43'W, 10–14.III.2006, R. Kawada col. (UFES); 16♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'S 41º44'W, 06–23.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Distribution. Brazil (Espírito Santo, Rio de Janeiro and São Paulo).

Dissomphalus excellens Redighieri & Azevedo, 2006

(Figs 177–180)

Dissomphalus excellens Redighieri & Azevedo, 2006: 327–328 (♂, holotype from São Paulo, MZSP, figs 45, 46).

Diagnosis. Male. Black. Mandible with three apical teeth. Clypeus broadly projected forward, median lobe ill defined. Frons somewhat weakly coriaceous, punctures shallow, sparse. Vertex slightly convex. T2 with pair of lateral depressions, almost reaching lateral margin of tergite; lateral margin weakly setose, pitted setay tubercle. Posterior hypopygeal margin straight. Genitalia: paramere wide, apex spine-shaped projection; aedeagal ventral ramus shorter than dorsal body, laminar, surface subhorizontal, apex dilated into triangular expansion; aedeagal dorsal body with two pairs apical lobes; outer pair laminar, surface vertical, progressively narrowing apicad; inner pair membranous, stout and setay, inner margin with basal excavation and median denticulation. Female unknown.

Remarks. Two specimens of *D. excellens* were registered from Espírito Santo (Redighieri & Azevedo, 2006).

Material examined. Types: Holotype ♂, BRAZIL, São Paulo, Salesópolis, Estação Biológica da Boracéia, 23º39'06.5''S 45º53'48''W, 02–05.IV.2001, armadilha Malaise, S.T.P. Amarante e eq. col. (MZSP). Paratypes: 2♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 09–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP, UFES).

Distribution. Brazil (Espírito Santo, Rio de Janeiro and São Paulo).

Dissomphalus fimbriatus Redighieri & Azevedo, 2006
(Figs 181, 182)

Dissomphalus fimbriatus Redighieri & Azevedo, 2006: 324 (♂, holotype from Espírito Santo, MZSP, figs 33, 34).

Diagnosis. Male. Black. Mandible with three apical teeth. Clypeus broadly projected forward, median lobe ill defined, median carina partially divided in two. Frons weakly coriaceous, punctures minute. Malar space broad, median width 0.5× mandible height. Vertex nearly straight. Gena post-genal weak medially on anterior side, pair of small teeth on hypostomal carina. Notaulus straight, narrow, only in anterior half mesoscutum. Parapsidal furrow complete. T2 with pair submedian tuft long setae, which give risen directly from surface, without tubercle. Posterior hypopygeal margin straight. Genitalia: paramere with dorsal margin very developed downward; cuspis elongate; aedeagal ventral ramus much longer than dorsal body, laminar, surface subhorizontal, apex rounded, slightly dilated; aedeagal dorsal body with two pairs apical lobes; outer pair laminar, surface vertical and convex, apex sharpened and arched downward; inner pair stout, membranous and setay. Female unknown.

Remarks. Fourteen specimens of *D. fimbriatus* were registered from Espírito Santo (Redighieri & Azevedo, 2006).

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). Paratypes: 6♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–12.IV.2001, armadilha Malaise, 7♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP).

Distribution. Brazil (Espírito Santo and São Paulo).

Dissomphalus peculiaris Redighieri & Azevedo, 2006
(Figs 183–185)

Dissomphalus peculiaris Redighieri & Azevedo, 2006: 328–329 (♂, holotype from Espírito Santo, MZSP, figs 47, 48).

Diagnosis. Male. Black. Mandible with four apical teeth. Clypeus broadly projected forward, median lobe ill defined. Frons coriaceous, punctures small, shallow. Vertex slightly convex. T2 with pair lateral depressions, reaching lateral margin tergite; lateral margin weakly setose, short, wide, pitted setay tubercle. Posterior margin hypopygium straight. Genitalia: paramere wide, much longer than basiparamere, dorsal margin nearly straight and developed in and downward; cuspis dilated; aedeagal ventral ramus longer than dorsal body, laminar, surface horizontal, base progressively narrowing apicad, apex rounded but narrow; aedeagal dorsal body with two pairs apical lobes, apex with small pares de lobes apical; outer pair laminar, surface vertical, wide in lateral view, apical margin with elongate dorsal tooth with apex directed downward; inner pair membranous, stout and setay. Female unknown.

Remarks. One specimen of *D. peculiaris* was registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 16 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 09–12.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 1♂, João Neiva, Alto Bérgamo, 19º44’S 40º26’W, 27.X–3.XI.2008, arm[adilha] Malaise, C.O. Azevedo & equipe col. (UFES); 2♂, Santa Teresa, Estação Biológica [de] Santa Lúcia, 09.V.2006–19.X.2010, [armadilha] Malaise, Tavares, M.T., Oliveira {Azevedo}, C.O. & eq[uipe] col. (UFES). 4♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04’S 40º44’O, 29.XI–6.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 4♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08’S 40º36’W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 5♂, Domingos Martins, Pico do Eldorado, 20º22’S 40º39’W, 26.XI–10.XII.2004, [armadilha] Malaise, [M.T.] Tavares & eq[uipe] col. (UFES).

Distribution. Brazil (Bahia, Espírito Santo, Rio de Janeiro and São Paulo).

Dissomphalus scopatus Redighieri & Azevedo, 2004

Dissomphalus scopatus Redighieri & Azevedo, 2004: 333 (♂, holotype from Espírito Santo, UFES, figs 14–17).

Diagnosis. Male. Black. Mandible with two apical teeth. Clypeus very long median tooth. Front strongly coriaceous, with shallow, large, dense punctures. Vertex straight, corner somewhat rounded, occipital carina visible in dorsal view. T2 with pair of tiny tufts, submedian, closer to median line than to the lateral margin of tergite, each tuft with few short setae directed backward. Posterior hypopygeal margin straight. Genitalia: Paramere longer than wide, apical margins biconcave, three sharpened projections; dorsal margin produced basally; aedeagal ventral ramus laminar, surface horizontal, wide base, acute apex, outer margin convex, inner margin nearly straight; aedeagal dorsal body with one pair of vertical laminae, arched apically downward, ventral margin, dense tuft of setae apically.

Remarks. Three specimens of *D. scopatus* were registered from Espírito Santo (Redighieri & Azevedo, 2004; 2006).

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 23.II.2001, varredura C.O. Azevedo & R. Kawada col. (UFES); **Material revised:** 1♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58'S 40º32'W, 06–09.IV.2001, armadilha Malaise, 1♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP).

Distribution. Brazil (Espírito Santo).

Dissomphalus trilobatus Redighieri & Azevedo, 2006
(Figs 186, 187)

Dissomphalus trilobatus Redighieri & Azevedo, 2006: 326 (♂, holotype from Espírito Santo, MZSP, figs 38, 39).

Diagnosis. Male. Black. Mandible with three apical teeth. Clypeus broadly projected forward, median lobe ill defined. Frons weakly coriaceous, punctures small. Vertex broadly straight. T2 with pair of lateral depressions, almost reaching lateral margin of tergite; lateral margin weakly setose, small pitted tubercle, tuft of setae. Posterior margin hypopygium slightly trilobada. Genitalia: paramere with dorsal margin very developed downward; aedeagal ventral ramus shorter than dorsal body, laminar, surface horizontal, base narrowing gradually apicad apex sharpened; aedeagal dorsal body with two pairs apical lobes; outer pair very short, apex rounded; inner pair membranous, stout and setay. Female unknown.

Variations. Some specimens showed paramere apex serrated.

Remarks. Seven specimens of *D. trilobatus* were registered from Espírito Santo (Redighieri & Azevedo, 2006), and we add more 24 new ones.

Material examined. Types: Holotype ♂, BRAZIL, Espírito Santo: Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 06–09.IV.2001, armadilha Malaise, C.O. Azevedo e eq[uipe] col. (MZSP). Paratypes: 3♂, Santa Teresa, Estação Biológica de Santa Lúcia, 19º58’S 40º32’W, 09-12.IV.2001, armadilha Malaise, 1♂, varredura, C.O. Azevedo e eq[uipe] col. (MZSP). **New material examined:** BRAZIL, Espírito Santo: 1♂, Conc[eição] da Barra, Res[erva] Biol[ógica] Córrego Grande, 18º14’S 39º49’O, 13.III.2006, [armadilha] Malaise, Redighieri, E. S. & eq[uipe] col. (UFES); 4♂, Pancas, Faz[enda] Juliberto Stur, 19º13’S 40º46’O, 31.I–7.II.2003, Armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 1♂, Sooretama, Reserva Biológica de Sooretama, 19°03’18’’S 40°08’43’’W, 06–14.XII.2011, arm[adilha] Malaise, M.T. Tavares & eq[uipe] col. (UFES). 1♂, Santa Maria de Jetibá, Fazenda Clarindo Krüger, 20º04’S 40º44’O, 29.XI–6.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 14♂, Santa Maria de Jetibá, Fazenda Paulo Seick, 20º04’S 40º44’O, 6–13.XII.2002, Armadilha Malaise, [M.T.] Tavares, [C.O.] Azevedo e eq[uipe] col. (UFES); 3♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08’S 40º36’W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES).

Distribution. Brazil (Paraíba, Pernambuco, Sergipe, Bahia, Espírito Santo, São Paulo and Santa Catarina).

Dissomphalus caparao Colombo & Azevedo, sp. nov.
(Figs 18, 35, 188, 189)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with three apical teeth; median clypeal lobe trapezoidal, median tooth triangular; frons coriaceous weakly punctate. Pronotal disc weakly coriaceous. T2 with lateral depressions, large, elliptical, shallow, few bristles on the edge, tubercle absent. Posterior hypopygeal margin straight. Genitalia: paramere small in dorsal view, apex rounded, slightly arched, smaller than to basiparamere; cuspis wide, rounded apex; digitus wide; aedeagal ventral ramus smaller than dorsal body, small base, rounded, apex narrow, weakly rounded, laminar; dorsal body with two pairs apical lobes, narrow apex, inner pair very serrated; basal process wide; apodeme not extending beyond genital ring. Female unknown.

Remarks. This species not have enough characteristics for be included in a species-group. This species not is similar other of species-group. This species has the genitalia similar to *Dissomphalus taiabocu* **sp. nov.** However, the paramere of *D. caparao* **sp. nov.** is small, in dorsal view; the aedeagal dorsal body without basal process with two projections and apodeme not extending beyond genital ring, whereas *Dissomphalus*

taiabocu **sp. nov.** the paramere is wide in dorsal view, the aedeagal dorsal body with basal process with two projections and apodeme extending beyond genital ring.

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15-22.III.2013, [armadilha] Malaise, 1500m, C.O. Azevedo & F.B. Fraga col. (UFES). Paratypes: 2♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24'S 41º47'W, 15–22.III.2013, [armadilha] Malaise, 1500m, C.O. Azevedo & F.B. Fraga col. (UFES).

Etymology. The epithet *caparao* refers to Serra do Caparaó.

Distribuition. Brazil (Espírito Santo).

Dissomphalus capixaba **Colombo & Azevedo, sp. nov.**
(Figs 19, 36, 190–192)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; median clypeal lobe trapezoidal, median tooth weakly triangular; frons weakly coriaceous, weakly punctate. Mesosoma. Coriaceous. T2 without depressions, lateral tubercle present, small, with weakly density of seta in top. Posterior hypopygeal margin straight. Genitalia: paramere small in dorsal view, rounded apex, arched, apex narrow in dorsal view, large tapering U-shaped in lateral view, smaller than to basiparamere; cuspis sharp apex; digitus very long, duckbill format in ventral view; aedeagal ventral ramus smaller than dorsal body, narrow base, laminar, narrow apex; dorsal body with two pairs apical lobes, apex weakly rounded, inner pair very furry; apodeme extending beyond genital ring. Female unknown.

Remarks. This species not have enough characteristics for be included in a species-group. This species not is similar other of species-group. This species is mainly different because has the genitalia with paramere with a large tapering U-shaped in lateral view; digitus very long, duckbill format in ventral view and aedeagal dorsal body with inner pair very furry.

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: João Neiva, Alto Bérgamo, 19º44'46''S 40º26'43''W, 27.X–03.XI.2008, arm[adilha] Malaise, C. O Azevedo & eq[uipe] col. (UFES). Paratypes: 1♂, Pancas, Faz[enda] Juliberto Stur, 19º13'S 40º46'W, 24–31.I.2003, arm[adilha] Malaise, Tavares e equipe. col. (UFES); 1♂, S[anta] Leopoldina, Alto Rio das Farinhas, 20º08'S 40º36'W, 14–24.V.2008, arm[adilha] Malaise, [C.] Waichert & [K.] Furieri col. (UFES); 1♂, S[an]ta Leopoldina, Suíça, 20º04'S 40º35'W, 5–12.XI.2007, arm[adilha] Malaise, C.O. Azevedo & eq[uipe]

col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 03–10.XII.2004, [Armadilha] Malaise, Tavares e eq[uipe] col. (UFES).

Etymology. The epithet *capixaba* refers to natives from the state of Espírito Santo in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

***Dissomphalus ibirapitanga* Colombo & Azevedo, sp. nov.**
(Figs 20, 37, 193, 194)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; median clypeal lobe trapezoidal, median tooth weakly triangular; frons coriaceous, punctate. Mesosoma. Very coriaceous. T2 with lateral depressions, large, elliptical, reaching edge tergite, shallow, bristles on edge, tubercle present, large, high density seta on top, slightly facing edge. Posterior hypopygeal margin weakly concave. Genitalia: paramere wide in dorsal view, apex rounded, slightly arched, larger than to basiparamere; basivolsella wide projection, hemispheric-shape; cuspis wide; digitus very wide; aedeagal ventral ramus larger than dorsal body, base wide, straight, apex strongly bifurcated, rounded, laminar; aedeagal dorsal body with two pairs apical lobes, outer pair with apex weakly rounded, inner pair very membranous; basal process ill defined; basal bar membranous; apodeme extending beyond genital ring. Female unknown.

Variations. Tergal process with depressions deepest; tubercle narrow with few density of seta on top; paramere with apex weakly rounded in dorsal view.

Remarks. This species not have enough characteristics for be included in a species-group. This species not is similar other of species-group. This species is mainly different because has the genitalia with basivolsella with wide hemispheric-shape projection; and aedeagal ventral ramus with apex strongly bifurcated.

Material examined. Types: Holotype ♂, BR[AZIL], E[spírito] S[anto]: Domingos Martins, Par[que] Est[adual] Pedra Azul, 20º25'S 41º00'W, 26.VIII–02.IX.2003, Arm[adilha] Malaise, C. O Azevedo & eq[uipe] col. (UFES). Paratypes: 1♂, Santa Maria de Jetibá, Faz[enda] Clarindo Kruguer, 20º04'S 40º44'O, 29.XI–06.XII. 2002, armadilha Malaise, M. Tavares, C. Azevedo e eq[uipe] col. (UFES); 12♂, Domingos Martins, Par[que] Est[adual] Pedra Azul, 20º25'S 41º00'W, 26.VIII–02.IX.2003, Arm[adilha] Malaise, C. O Azevedo & eq[uipe] col. (UFES); 1♂, Domingos Martins, Pico do Eldorado, 20º22'S 40º39'W, 03–10.XII.2004, [Armadilha] Malaise, Tavares e eq[uipe] col. (UFES); 1♂, Alfredo Chaves, Picadão, 20º27'S 40º42'W, 08–15.X.2007,

Arm[adilha] Malaise, C.O. Azevedo e eq[uipe] col. (UFES). 1♂, Ibitirama, Parq[ue] Nac[ional do] Caparaó, 20º27'S 41º44'W, 16–23.III.2013, [armadilha] Malaise, 1500m, C.O. Azevedo & F.B. Fraga col. (UFES).

Etymology. The epithet *ibirapitanga* refers to the tree pau-brasil in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

***Dissomphalus purius* Colombo & Azevedo, sp. nov.**
(Figs 21, 38, 195, 196)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; median clypeal lobe subtrapezoidal, median tooth triangular; frons coriaceous, weakly punctate. Mesosoma. Very coriaceous. T2 with lateral depressions, large, elliptical, shallow, bristles on edge, tubercle present, large, high density of seta on top, higth edge. Posterior hypopygeal margin weakly concave. Genitalia: paramere wide in dorsal view, rounded apex, arched, apex very narrow in dorsal view, smaller than to basiparamere; cuspis narrow; digitus sharp apex; aedeagal ventral ramus smaller than dorsal body, base very wide, laminar, very sharp apex; aedeagal dorsal body with two pairs apical lobes, outer pair with apex weakly rounded, inner pair very; basal process folded up; apodeme extending beyond genital ring. Female unknown.

Remarks. This species not have enough characteristics for be included in a species-group. This species has the genitalia similar to *Dissomphalus inclinatus*. However, the tergal process of *D. purius* **sp. nov.** has lateral depressions, large, elliptical, shallow, with bristles on the edge, tubercle present, large, with high density of seta on top, with higth edge, whereas *D. inclinatus* has tergal process with pair of large, subcircular sublateral depressions; each with tuft of dense setae, rectangular and inclined.

Material examined. Types: Holotype ♂, BR[AZIL], E[spírito] S[anto]: Domingos Martins, Pico do El Dourado, 20º22'S 40º39'W, 26.IX–03.XII.2004, [armadilha] Malaise, Tavares e eq[uipe] col. (UFES). Paratype: 1♂, Santa Maria de Jetibá, Faz[enda] Paulo Seick, 20º02'31,1''S 40º41'51,3''O, 29.XI–06.XII.2002, armadilha Malaise, M.T. Tavares, C.O. Azevedo e eq[uipe] col. (UFES).

Etymology. The epithet *purius* refers to Puri indigenous who inhabited the Espírito Santo.

Distribuition. Brazil (Espírito Santo).

***Dissomphalus taiabocu* Colombo & Azevedo, sp. nov.**
(Figs 22, 39, 197, 198)

Description. Male. Head and mesosoma black; metasoma dark castaneous. Mandible with two apical teeth; clypeus broad, median tooth rounded; frons coriaceous, punctate. Mesosoma. Very coriaceous. T2 without depressions, tubercle absent, very small lateral pits, few bristles. Posterior hypopygeal margin straight. Genitalia: paramere wide in dorsal view, apex rounded, slightly arched, larger than to basiparamere; cuspis wide; digitus wide, rounded apex; aedeagal ventral ramus smaller than dorsal body, base wide, rounded, narrow apex, rounded, laminar; aedeagal dorsal body with two pairs apical lobes, outer pair with narrow apex, inner pair very serrated; basal process with two projections; basal bar very wide; apodeme extending beyond genital ring. Female unknown.

Remarks. This species not have enough characteristics for be included in a species-group. This species is mainly different because has the genitalia with paramere short and aedeagal ventral ramus with median part with projection. This species has the genitalia similar to *Dissomphalus caparao* **sp. nov.** However, the paramere of *D. taiabocu* **sp. nov.** is wide in dorsal view, the aedeagal dorsal body with basal process with two projections and apodeme extending beyond genital ring, whereas *D. caparao* **sp. nov.** the paramere is small, in dorsal view; the aedeagal dorsal body without basal process with two projections and apodeme not extending beyond genital ring.

Material examined. Types: Holotype ♂, BRAZIL, E[spírito] S[anto]: Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24’S 41º47’W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES). Paratype: 1♂, Divino de São Lourenço, Parq[ue] Nac[ional do] Caparaó, 20º24’S 41º47’W, 15–22.III.2013, [armadilha] Malaise, C.O. Azevedo & F.B. Fraga col. (UFES).

Etymology. The epithet *taiabocu* refers to tusk in Tupi-Guarani.

Distribuition. Brazil (Espírito Santo).

4. Discussion

Dissomphalus is a highly diverse genus in the world, in specific Atlantic Forest hotspot, with distribution patterns and species richness gradients are randomly distributed throughout the biome.

The species have patterns within the biogeographic areas, making each area has an endemic fauna (Gaston 2000). The species here studied do not show these patterns compared with nearby states, but the vast most species are under the phytogeographical area of Atlantic Forest. de Vivo (1997) proposed a division of Atlantic Forest in four

subcentre according to the endemic taxa of mammalian fauna, which are: subcentre Northeast, with wide distribution of Amazonian species; subcentre of Bahia, which have similar shapes with the Amazon and east of Brazil; subcentre of Rio de Janeiro and south of the Espírito Santo and, subcentre South with endemic fauna, similar to the previous sub-center, but poorer.

According to Redighieri & Azevedo (2006), *Dissomphalus* clearly shows the division of the Atlantic in subcentres. *Dissomphalus bifurcatus* Azevedo, *D. completus* Azevedo and now *D. brasiliensis* are Amazonian species and occur in the Atlantic Forest biome. The new species described, all to date are endemic of the Espírito Santo, reenforcing the hypothesis of the subcentre of Rio de Janeiro and Espírito Santo have an endemic fauna.

There are species with restrited occurrences to few sites along the biome as *Dissomphalus scopatus*, which is endemic of Espírito Santo, *D. verrucosus* which has a large number of specimens to the Espírito Santo and only one for the state of São Paulo, *D. divisus* with restricted occurrence in Paraná, *D. inflexus* with restricted occurrence in Rio de Janeiro and *D. tubulatus* Redighieri & Azevedo with occurrence restricted to Paraíba. In contrast, there are other species that occur in various parts of the biome, as *Dissomphalus amplifoveatus*, *D. elegans*, *D. laminaris*, *D. conicus*, *D. gilvipes*, *D. gigantus*, *D. connubialis*, among others.

Redighieri & Azevedo (2006) recorded the subcenter of Rio de Janeiro and South of Espírito Santo as the region of greatest wealth and abundance, and the municipality of Santa Teresa (Estação Biológica de Santa Lúcia) in Espírito Santo, as the locality most abundant. In this work, we also recorded as more abundant the municipality of Santa Teresa, with 1,889 specimens of 4,224 analyzed, distributed in 48 species that occur in Espírito Santo, corresponding to 76% of the species recorded in the state (Fig 199). This municipality is also the one with the largest number of specimens collected, justifying this way, the large number of species in relation to other municipalities. Thus these data can be biased because the sampling effort is historically much higher there. Azevedo *et al.* (2003a) recorded 35 families of Hymenoptera parasitoids to an Atlantic Forest area of Estação Biológica de Santa Lúcia, Santa Teresa, Espírito Santo. At the time, this full corresponded to 57% of the parasitoid wasps found throughout the world.

The municipality of Santa Maria de Jetibá also has a large number of species (41 species). However only two field expeditions has been done in this municipality. We emphasize that Santa Teresa had several collections over 17 years and Santa Maria de

Jetibá had only one collection campaign. Therefore, perhaps Santa Maria de Jetibá is more diverse than Santa Teresa.

Most specimens are concentrated in the mountainous region of the state, mainly in the municipalities of Santa Teresa, Santa Maria de Jetibá, Domingos Martins, Santa Leopoldina, Alfredo Chaves in the central mountain region and the municipalities of Ibitirama and Divino São Lourenço in the Caparaó region. These regions represent four areas of high priority of conservation.

Other areas of the state are under sampled, such as Sooretama Biological Reserve at the municipalities of Sooretama, which is covered by *Tabuleiro* forest. This low and flat region has great potential to host undescovered species, mainly by the fact that with only 48 specimens of 15 species were recorded.

There still are areas covered by different king of vegetation, such as *Restinga* (sand coast vegetation) and mangrove. Thereby we are not able to make a deeper discussion regarding the influence of these ecosystems in the genus.

Azevedo *et al.* (2015) presented the first generic list of Hymenoptera genera from Espírito Santo. In this work, they listed 955 genera, of which 57% were cited for the first time. It is noteworthy that, despite losing more than 90% of its natural ecosystems (Fundação SOS Mata Atlântica, 1998), the state of Espírito Santo has a large number of protected areas, compared to the majority of Brazilian states (Mendes & Padovan, 2000). Because of its biological diversity, it is inserted in the Central Corridor of the Atlantic Forest, which includes 11 of the areas of highest priority and geographically more extensive in the region having the highest index of diversity of vascular plants in the world and housing also a great number of endemic animals (Ayres *et al.* 2005). According to Azevedo & Lanes (2010) within the states located inside areas of Atlantic Forest, the Espírito Santo presents the highest number of recorded species (46%) to Bethylidae compared to the entire biome, pointing out that the total species registered, the majority (29%) is owned by *Dissomphalus* genus.

Even with the large number of specimens analyzed here, Espírito Santo has 68% of the municipalities without sampling, and among the municipalities that have sampling, only 32% have more than 100 specimens collected (Fig. 199), showing that the potential for *Dissomphalus* genus is much higher. However, some localities were studied for the first time such as Parque Nacional do Caparaó. Most of the new species described here, are from this place. Therefore, we believe that with the increase in sampling in new places, certainly the number of species from Espírito Santo will increase. We emphasize

also that in this study, we found at least 50 morphospecies that may be new species that have been described by having only one specimen. We believe that with the increase in sampling, more specimens will be collected the same, allowing their descriptions with better confidence.

We cannot identify unique morphological patterns for *Dissomphalus* specimens from Espírito Santo. However, we can identify specific variations, such as the quantity of apical teeth dorsal body. When studied the vouchers of other states of the Atlantic Forest, we realized that they did not have many variations in the apical teeth aedeagal dorsal body. Species such as *Dissomphalus h-ramus*, *D. conicus* and *D. extrarramis* are examples, with at least three kinds of variations. The height the clypeus in profile is characteristic of *D. alticlypeatus*, however, only specimens of the Espírito Santo had at least three variations.

The main diagnostic features to identify *Dissomphalus* are in clypeus, tergal processes in metasomal II and mainly in the aedeagal dorsal body and ventral ramus. Of the 40 species that were recorded from the state of Espírito Santo. Three of them were specimens of the Espírito Santo with genitalia not dissected. After dissection, it was confirmed that they were reidentified, they are: *Dissomphalus napo* Evans, *D. vallensis* Evans and *D. truncatus* Azevedo. Therefore, these three species no longer have occurred to the Espírito Santo. Therefore, we emphasize that it is currently impossible to study the *Dissomphalus* genus without analyzing the genitalia of the species. According to Azevedo (2003), the study of genitalia characters that there are good characters for the systematics of *Dissomphalus*, as they show more diversity in form than the tergal process. We emphasize that sexual dimorphism for subfamily Pristocerinae (Hymenoptera, Bethylidae) is accentuated; including *Dissomphalus* genus therefore currently only males are studied taxonomically.

Currently one of the most reliable ways to study females, is when they are coupled with the male through phoretic copulation and molecular analysis of the association of couples. The females are smaller in size, wingless, and with vestigial or reduced eyes (Azevedo 1999a, Terayama 2001) and usually varying in color from light castaneous to dark castaneous (Fig. 40). Azevedo (2001) and Alencar & Azevedo (2008) described the morphology of genitalia of *Dissomphalus*, it is considered the most complex in the Family Bethylidae (Figs 41, 42).

Little is known about the habits of life of *Dissomphalus*. In relation to their hosts, it is suspected that are parasitoids of small beetles, among them some myrmecophilous

(Krombein 1979). There are records of a kind of genus *Cephalonomia* Westwood occurring in coffe plantations of the Espírito Santo, especially in the north, in the city of Linhares, (Benassi & Berti Filho 1989; Benassi 1995). This species, identified as *C. stephanoderis* Betrem is parasitoid pests that attack crops of *Coffea canephora* Pierre (Benassi & Busoli 2014). Here we find two species that were collected in coffee plantations, main crop grown in the state of the Espírito Santo, in the same municipality of the species *C. stephanoderis*, they are: *Dissomphalus krombeini* Azevedo and *D. secretus* **sp. nov.** However, they need to be more focused studies in this direction in order to verify the capability of the same for biological control.

With this study, the state of the Espírito Santo is replaced by 63 species of *Dissomphalus* recorded, corresponding to 67% of species *Dissomphalus* that occur in the Atlantic Forest. Within the reasons for this high diversity we can suggest some hypotheses. First, the heterogeneity of the sampled sites, ranging from the areas from sea level to 1,500 m of altitude (Parque Nacional do Caparaó); different kinds of vegetation, *Restinga* ecosystem (Guarapari), *Tabuleiro* forest (Sooretama Biological Reserve), among others; at least four different sampling methods: Malaise traps, Möricke, vacuuming and sweeping vegetation and finally, the great sampling effort.

Among the most abundant species, we can highlight *D. rectilineus*, *D. setosus*, *D. plaumanni* and *D. bicerutus*, species of which occur predominantly in the region with the highest number of specimens, justifying its abundance in relation to the other. Most new species was collected in areas never explored before, as Caparaó region.

Even with the large number of specimens, four species were recorded for previous work for Espírito Santo and in this work we have not found. They are *D. excellens*, *D. fimbriatus*, *D. firmus* and *D. scopatus*. These species were also recorded by a few specimens for the region, showing that they are rare.

Finally, *Dissomphalus* will be the most numerous and specious genus within the family Bethylidae, considering the 91 new species described by Mugrabi & Azevedo (in press) and now, 21 species described in this work, totaling 379 species.

5. Conclusion

Dissomphalus is a widely distributed genus in the Atlantic Forest, but some species have specific distribution patterns. Herein, we confirm the status of potential host new taxa. Despite the large quantity of specimens studied here, there are still gaps in sampling the area, pointing the great diversity of Atlantic Rainforest and Espírito Santo. Finally, we

conclude that the state of Espírito Santo is a place with the largest number of species recorded within the domain of the Atlantic Rainforest, totaling 63 valid species.

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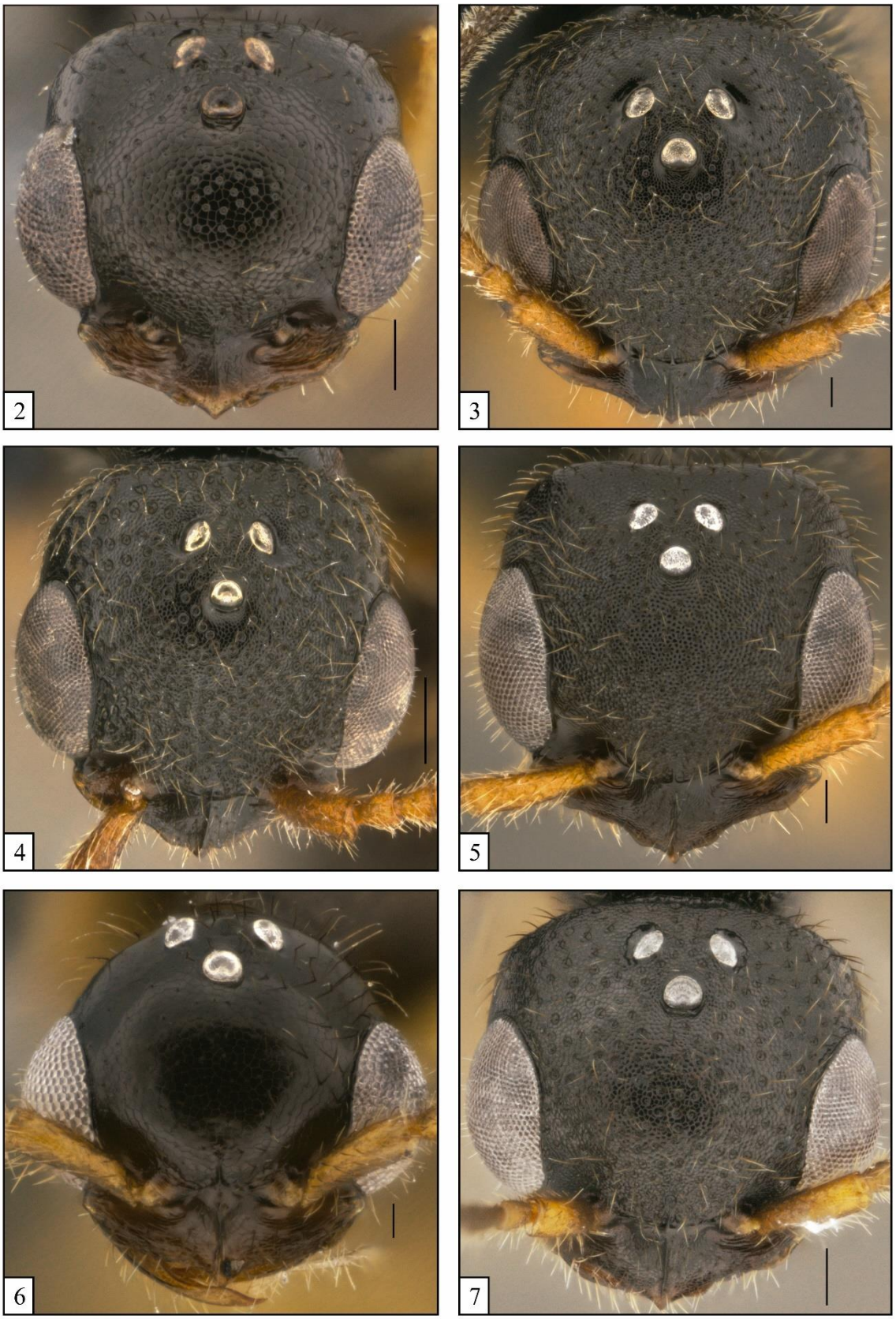

Figure 2–7. *Dissomphalus* spp., ♂, head, dorsal view. 2. *D. botocudus* **sp. nov.** 3. *D. fredi* **sp. nov.** 4. *D. tupinikim* **sp. nov.** 5. *D. guarani* **sp. nov.** 6. *D. w-aedeagus* **sp. nov.** 7. *D. congo* **sp. nov.** Scale bar = 100 μm.

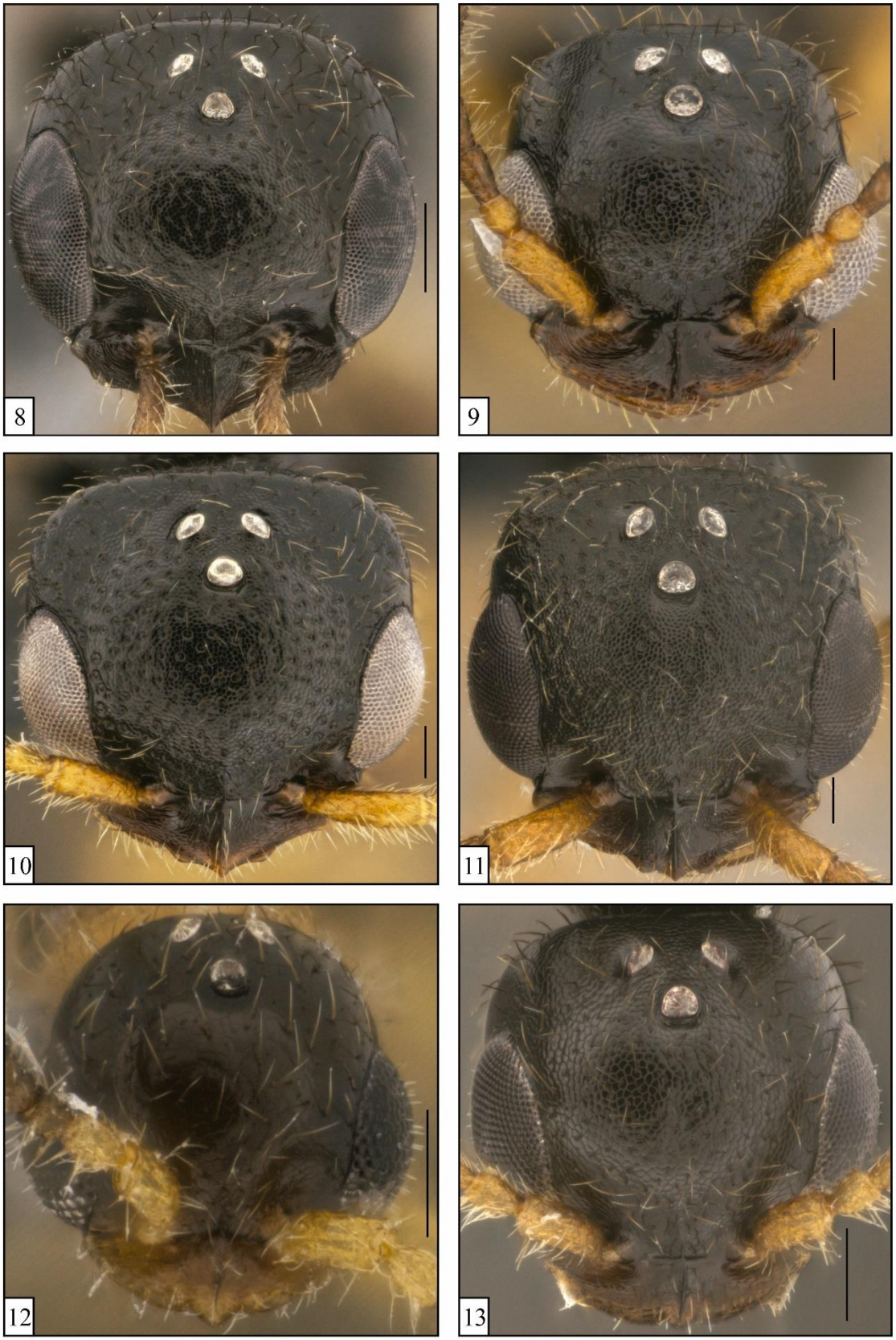

Figure 8–13. *Dissomphalus* spp., ♂, head, dorsal view. 8. *D. rosangelae* **sp. nov.** 9. *D. clovisi* **sp. nov.** 10. *D. kuara* **sp. nov.** 11. *D. pyata* **sp. nov.** 12. *D. miriamae* **sp. nov.** 13. *D. amana* **sp. nov.** Scale bar = 100 μm.

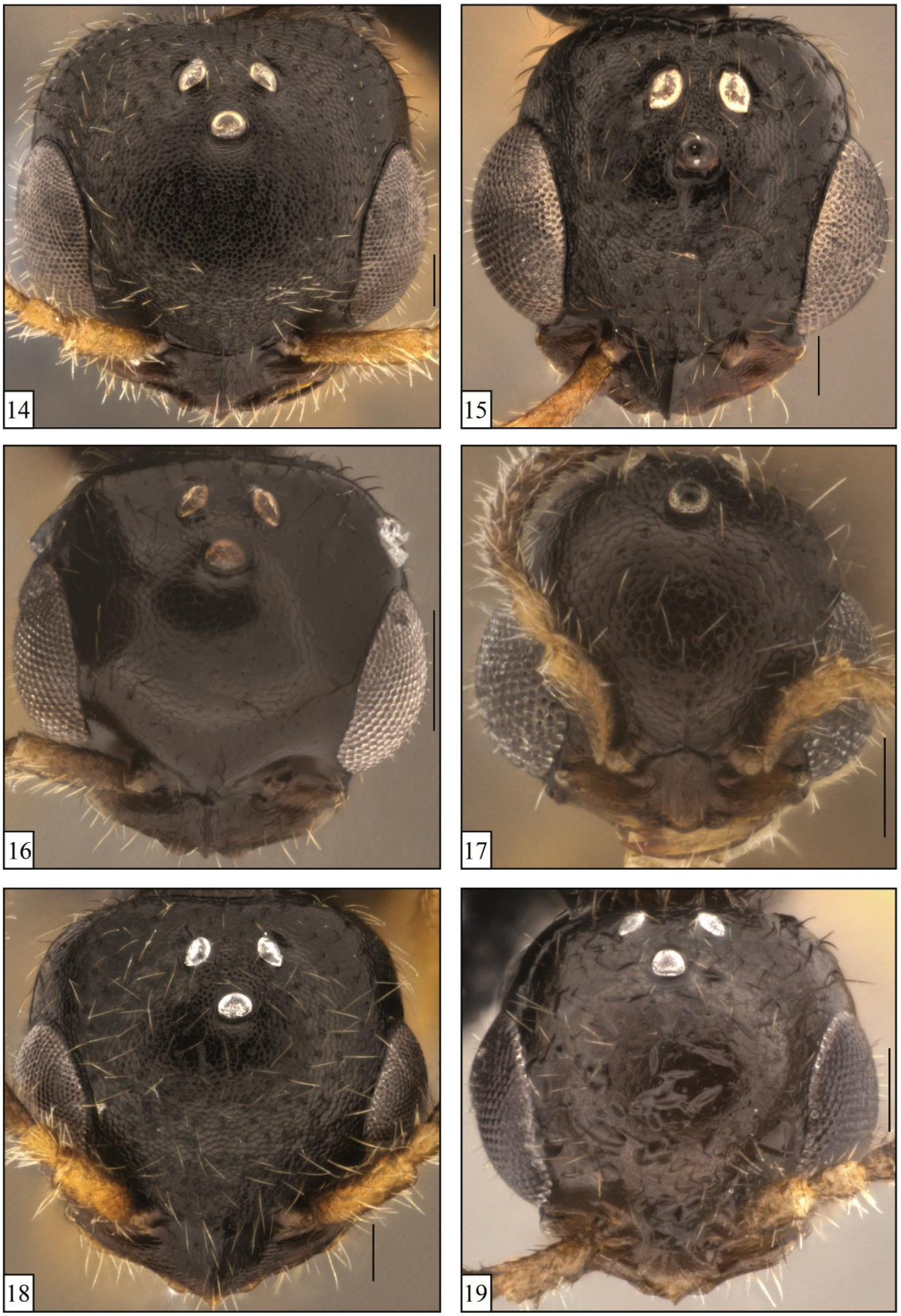

Figure 14–19. *Dissomphalus* spp., ♂, head, dorsal view. 14. *D. potyra* **sp. nov.** 15. *D. cacirus* **sp. nov.** 16. *D. mirim* **sp. nov.** 17. *D. secretus* **sp. nov.** 18. *D. caparao* **sp. nov.** 19. *D. capixaba* **sp. nov.** Scale bar = 100 μm.

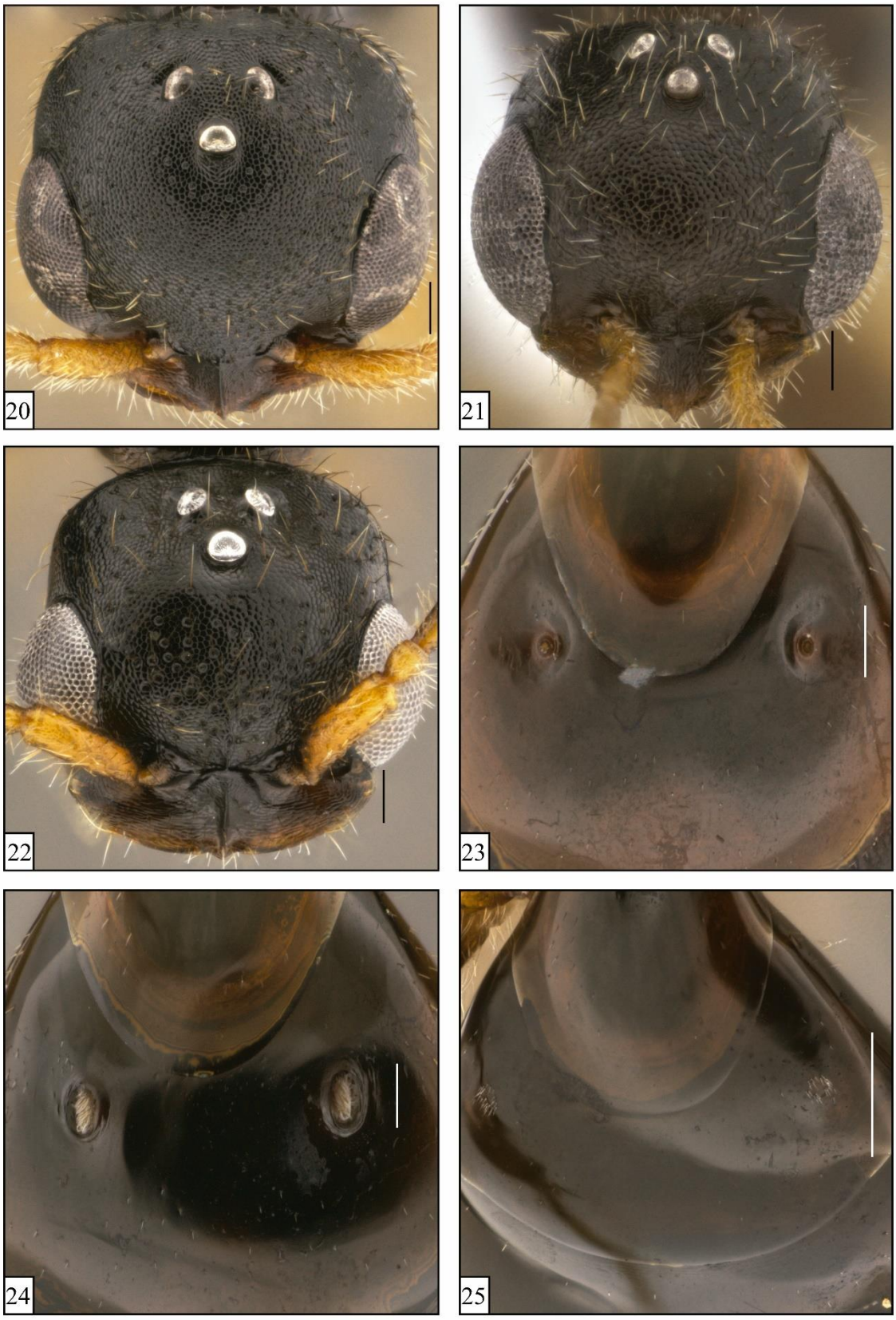

Figure 20–25. *Dissomphalus* spp., ♂. 20. *D. ibirapitanga* **sp. nov.** 21. *D. purius* **sp. nov.** 22. *D. taiabocu* **sp. nov.** 23. *D. botocudus* **sp. nov.** 24. *D. fredi* **sp. nov.** 25. *D. tupinikim* **sp. nov.** 20–22. Head, dorsal view. 23–25. T2, dorsal view. Scale bar = 100 µm.

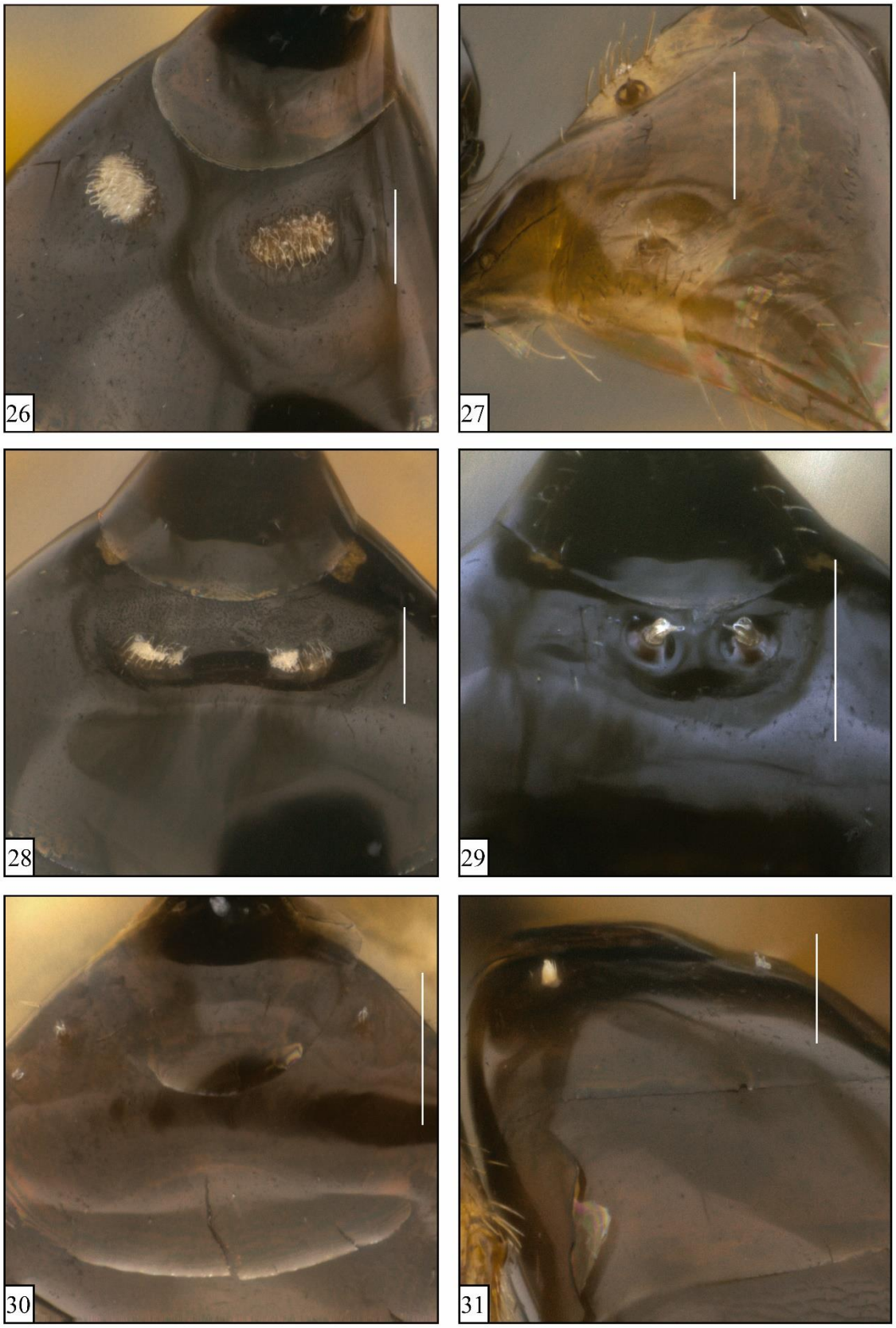

Figure 26–31. *Dissomphalus* spp., ♂, T2, dorsal view. 26. *D. guarani* **sp. nov.** 27. *D. w-aedeagus* **sp. nov.** 28. *D. congo* **sp. nov.** 29. *D. rosangelae* **sp. nov.** 30. *D. amana* **sp. nov.** 31. *D. potyra* **sp. nov.** postero-dorsal view. Scale bar = 100 µm.

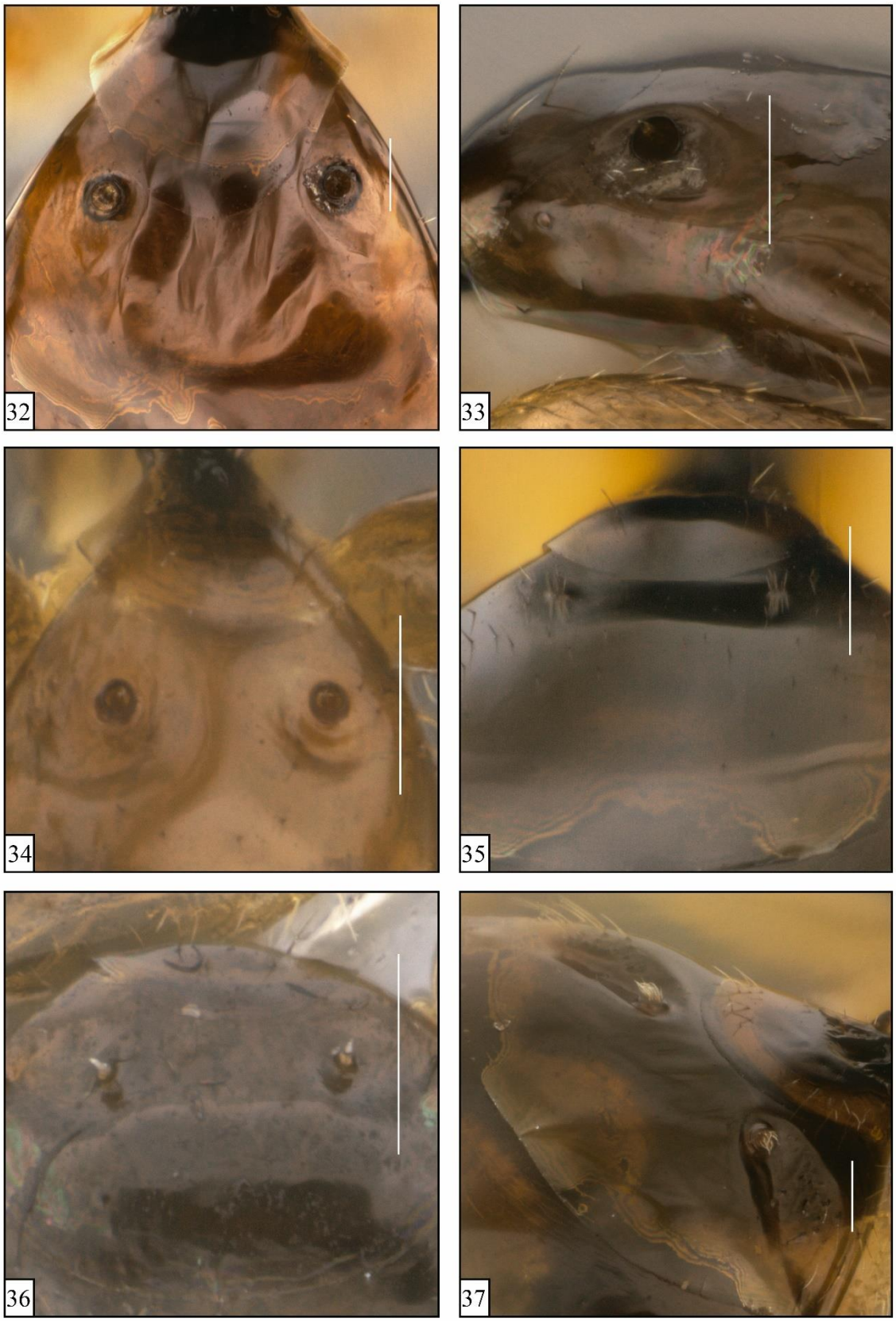

Figure 32–37. *Dissomphalus* spp., ♂. 32. *D. cacirus* **sp. nov.** T2, dorsal view. 33. *D. mirim* **sp. nov.** T2, latero-dorsal view. 34. *D. secretus* **sp. nov.** T2, dorsal view. 35. *D. caparao* **sp. nov.** T2, dorsal view. 36. *D. capixaba* **sp. nov.** T2, dorsal view. 37. *D. ibirapitanga* **sp. nov.** T2, porter-dorsal view. Scale bar = 100 µm.

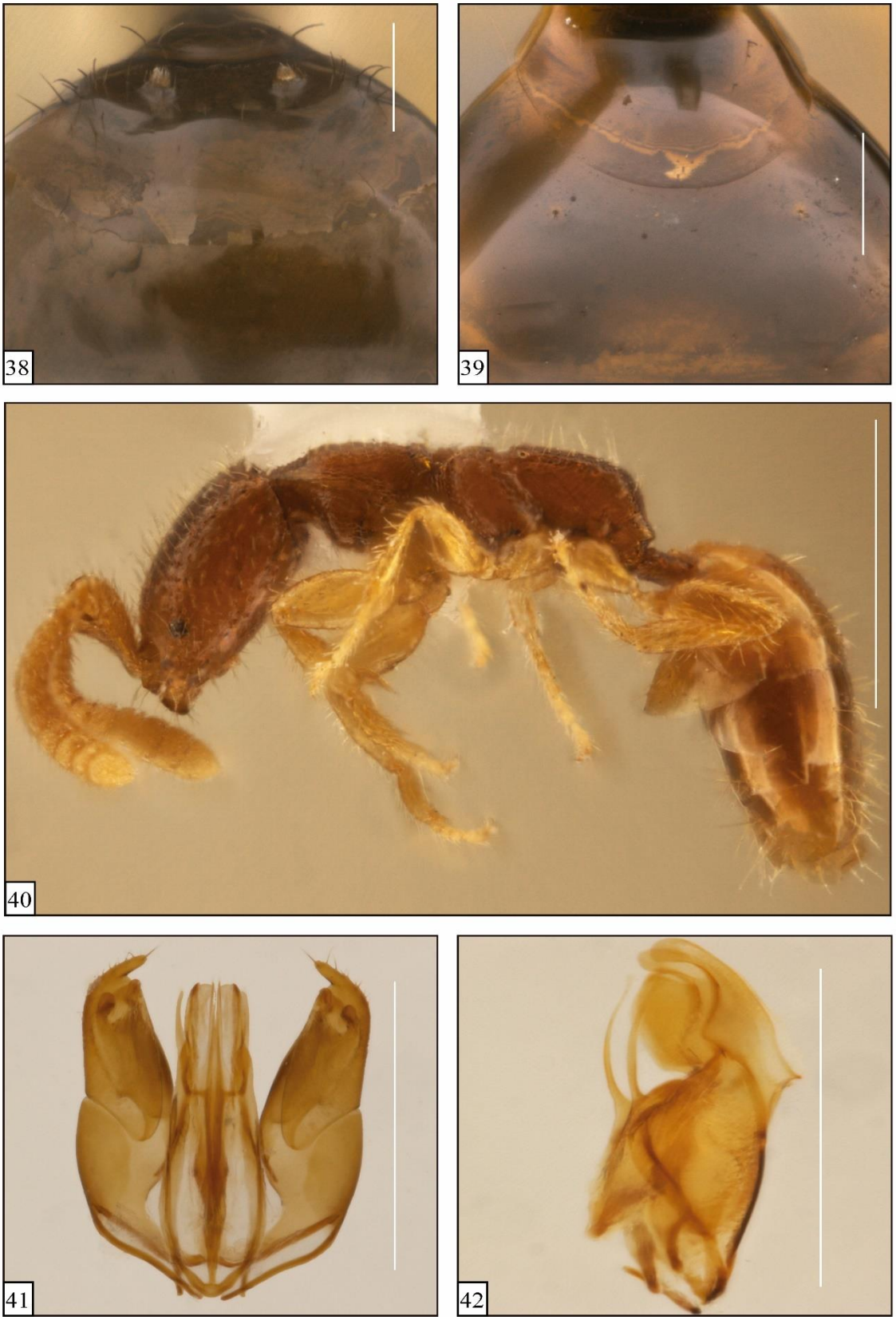

Figure 38–42. *Dissomphalus* spp. 38. *D. purius* **sp. nov.**, ♂, T2, dorsal view. 39. *D. taiabocu* **sp. nov.**, ♂, T2, dorsal view. 40. *Dissomphalus* sp., ♀, Cariacica, Espírito Santo, lateral view. 41. *D. tupinikim* **sp. nov.**, ♂, aedeagus, dorsal view. 42. *D. microsctictus*, ♂, aedeagus, lateral view. Scale bar = 100 µm for 38, 39, 41, 42 and 500 µm for 40.

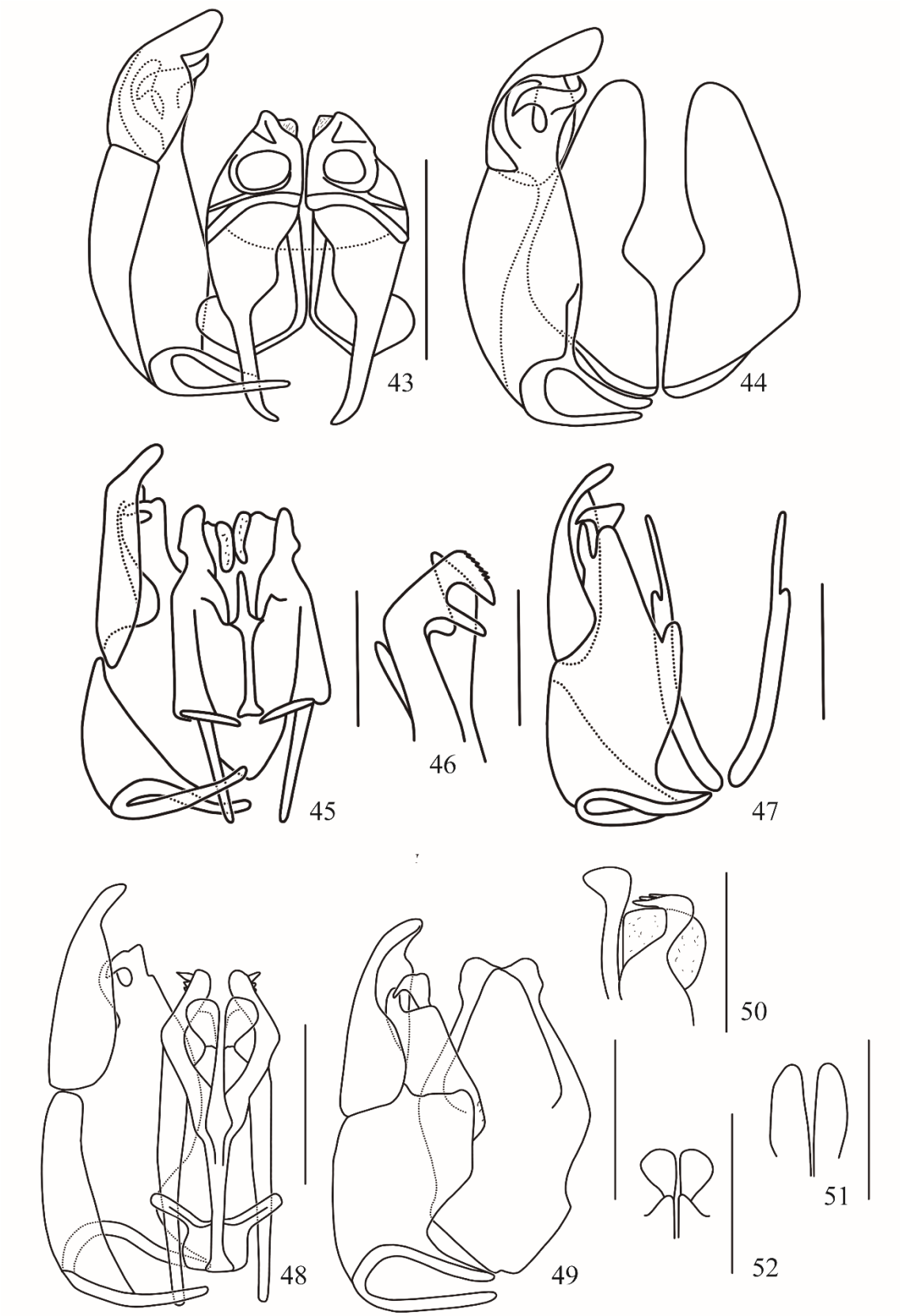

Figure 43–52. *Dissomphalus* spp., ♂, genitalia. 43, 44. *D. brasiliensis*. 43. Aedeagus, dorsal view. 44. Aedeagus, ventral view. 45–47. *D. conicus*. 45. Aedeagus, dorsal view. 46. Outer lobe of aedeagal dorsal body, lateral view. 47. Aedeagus, ventral view. 48–52. *D. manus*. 48. Aedeagus, dorsal view. 49. Aedeagus, ventral view. 50. Outer lobe of aedeagal dorsal body, lateral view. 51. External lobe of aedeagal dorsal body, dorsal view. 52. Inner lobe of aedeagal dorsal body, dorsal view.

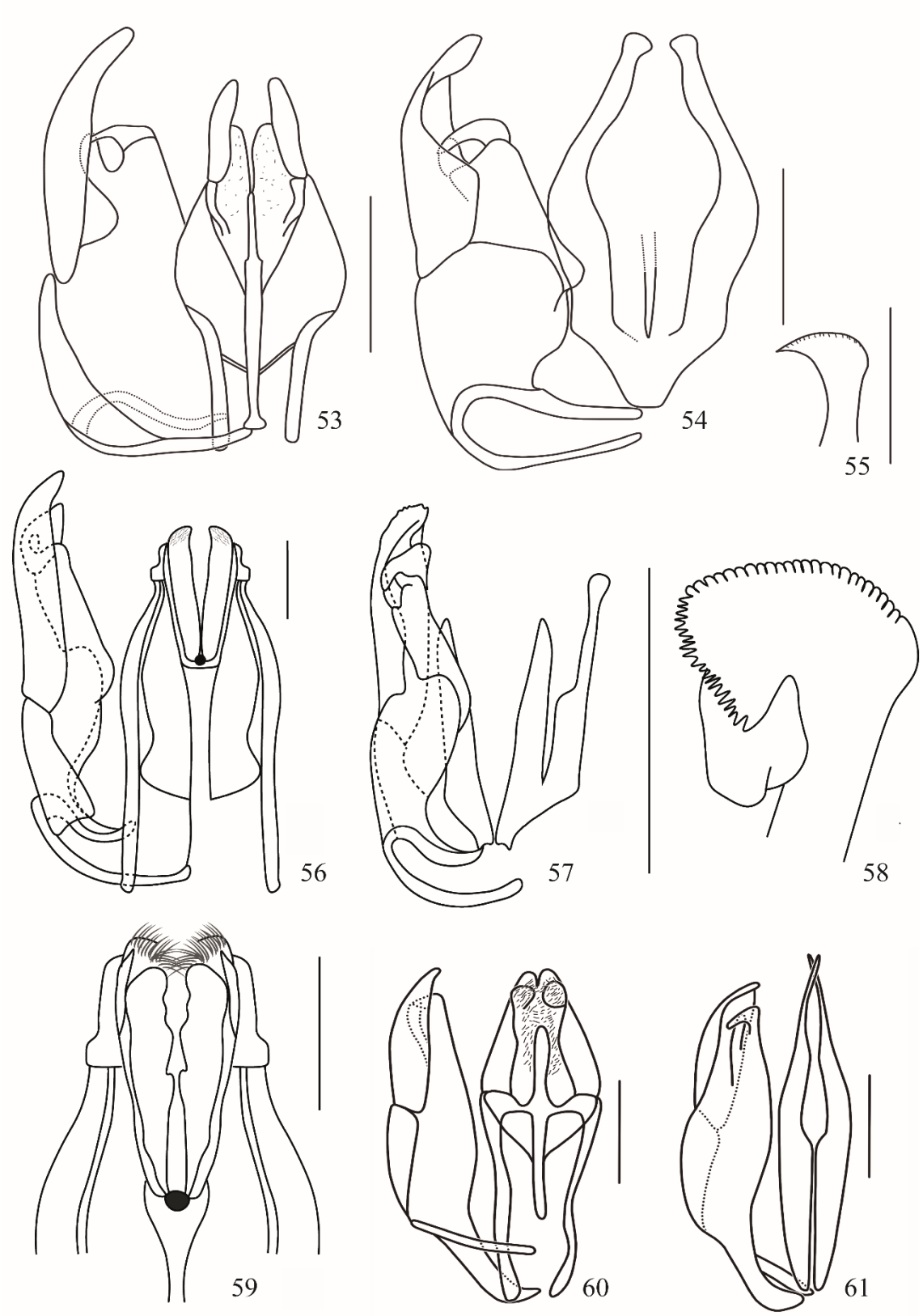

Figure 53–61. *Dissomphalus* spp., ♂, genitalia. 53–55. *D. umbilicus*. 53. Aedeagus, dorsal view. 54. Aedeagus, ventral view. 55. Outer lobe of aedeagal dorsal body, lateral view. 56–59. *D. botocudus* **sp. nov.** 56. Aedeagus, dorsal view. 57. Aedeagus, ventral view. 58. Outer lobe of aedeagal dorsal body, lateral view. 59. Dorsal body, dorsal view. 60–61. *D. dumosus*. 60. Aedeagus, dorsal view. 61. Aedeagus, ventral view.

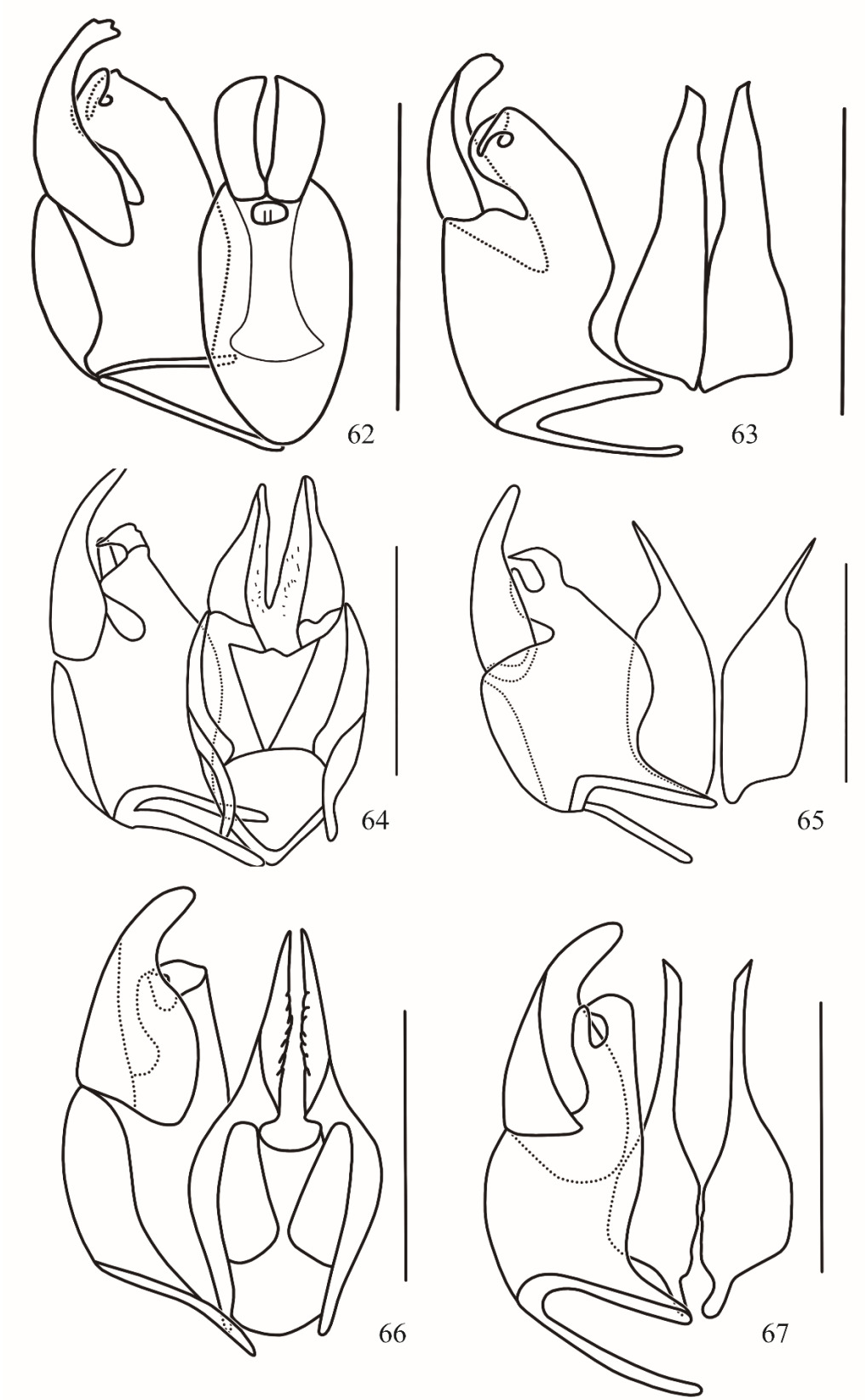

Figure 62–67. *Dissomphalus* spp., ♂, genitalia. 62, 63. *D. alticlypeatus*. 62. Aedeagus, dorsal view. 63. Aedeagus, ventral view. 64, 65. *D. bicerutus*. 64. Aedeagus, dorsal view. 65. Aedeagus, ventral view. 66, 67. *D. gilvipes*. 66. Aedeagus, dorsal view. 67. Aedeagus, ventral view.

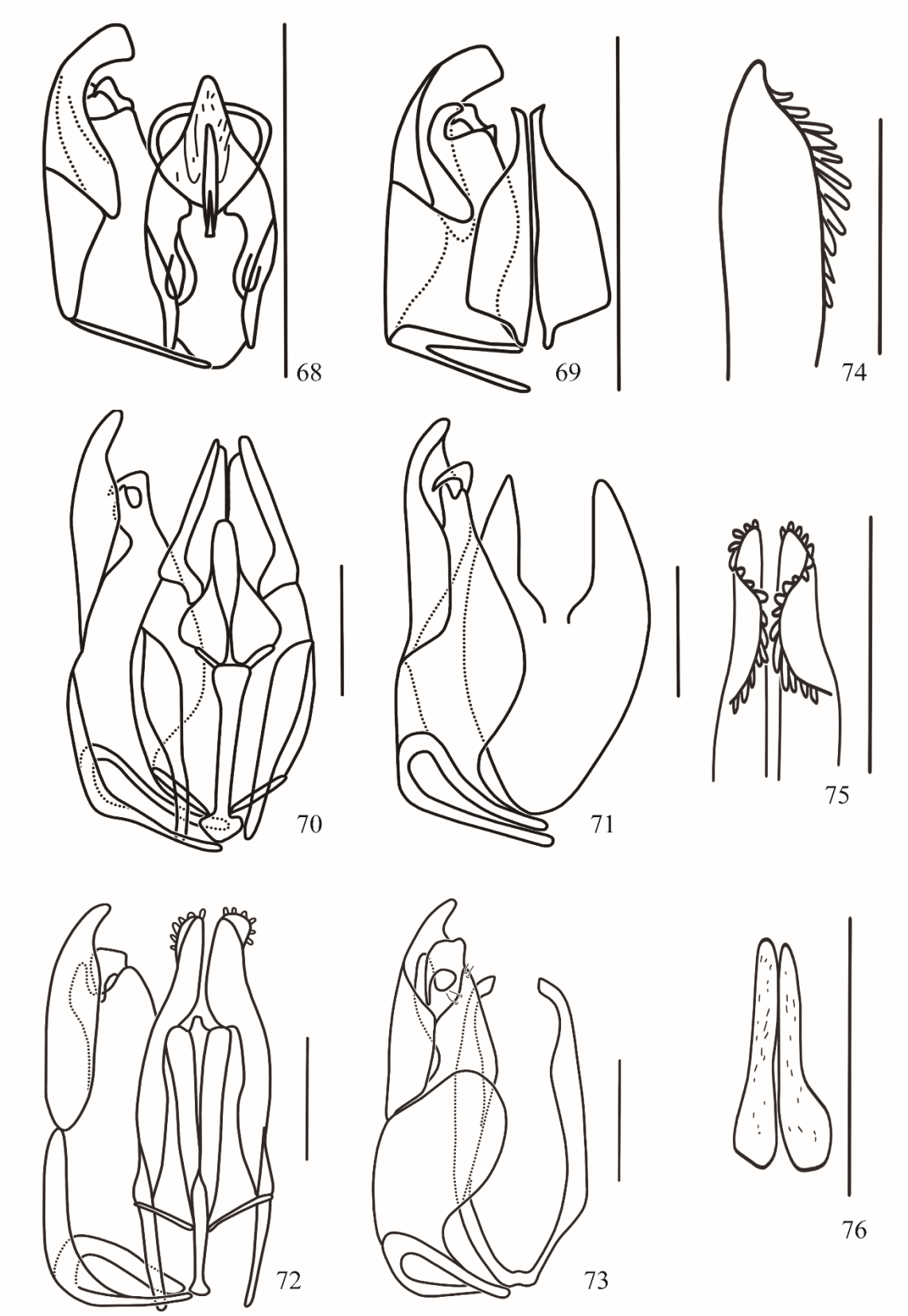

Figure 68–76. *Dissomphalus* spp., ♂, genitalia. 68, 69. *D. krombeini*. 68. Aedeagus, dorsal view. 69. Aedeagus, ventral view. 70, 71. *D. gordus*. 70. Aedeagus, dorsal view. 71. Aedeagus, ventral view. 72–76. *D. undatus*. 72. Aedeagus, dorsal view. 73. Aedeagus, ventral view. 74. Outer lobe of aedeagal dorsal body, lateral view. 75. Outer lobe of aedeagal dorsal body, ventral view. 76. Inner lobe of aedeagal dorsal body, dorsal view.

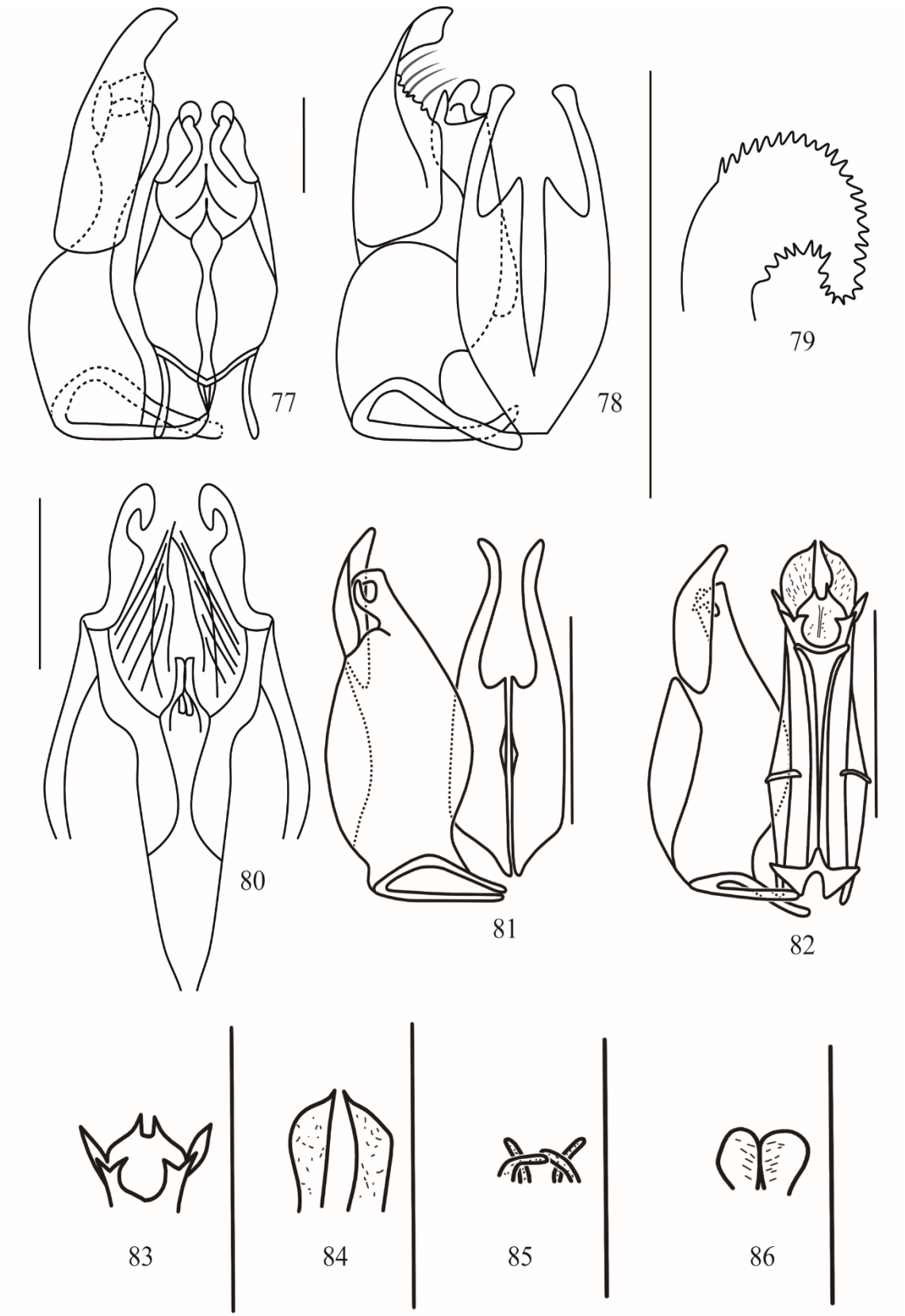

Figure 77–86. *Dissomphalus* spp., ♂, genitalia. 77–80. *D. fredi* **sp. nov.** 77. Aedeagus, dorsal view. 78. Aedeagus, ventral view. 79. Outer lobe of aedeagal dorsal body, lateral view. 80. Dorsal body, dorsal view. 81–86. *D. incomptus*. 81. Aedeagus, ventral view. 82. Aedeagus, dorsal view. 83. Dorsal lobe of aedeagal dorsal body, dorsal view. 84. Median lobe of aedeagal dorsal body, dorsal view. 85. Ventral lobe of aedeagal dorsal body, dorsal view. 86. Inner lobe of aedeagal dorsal body, dorsal view.

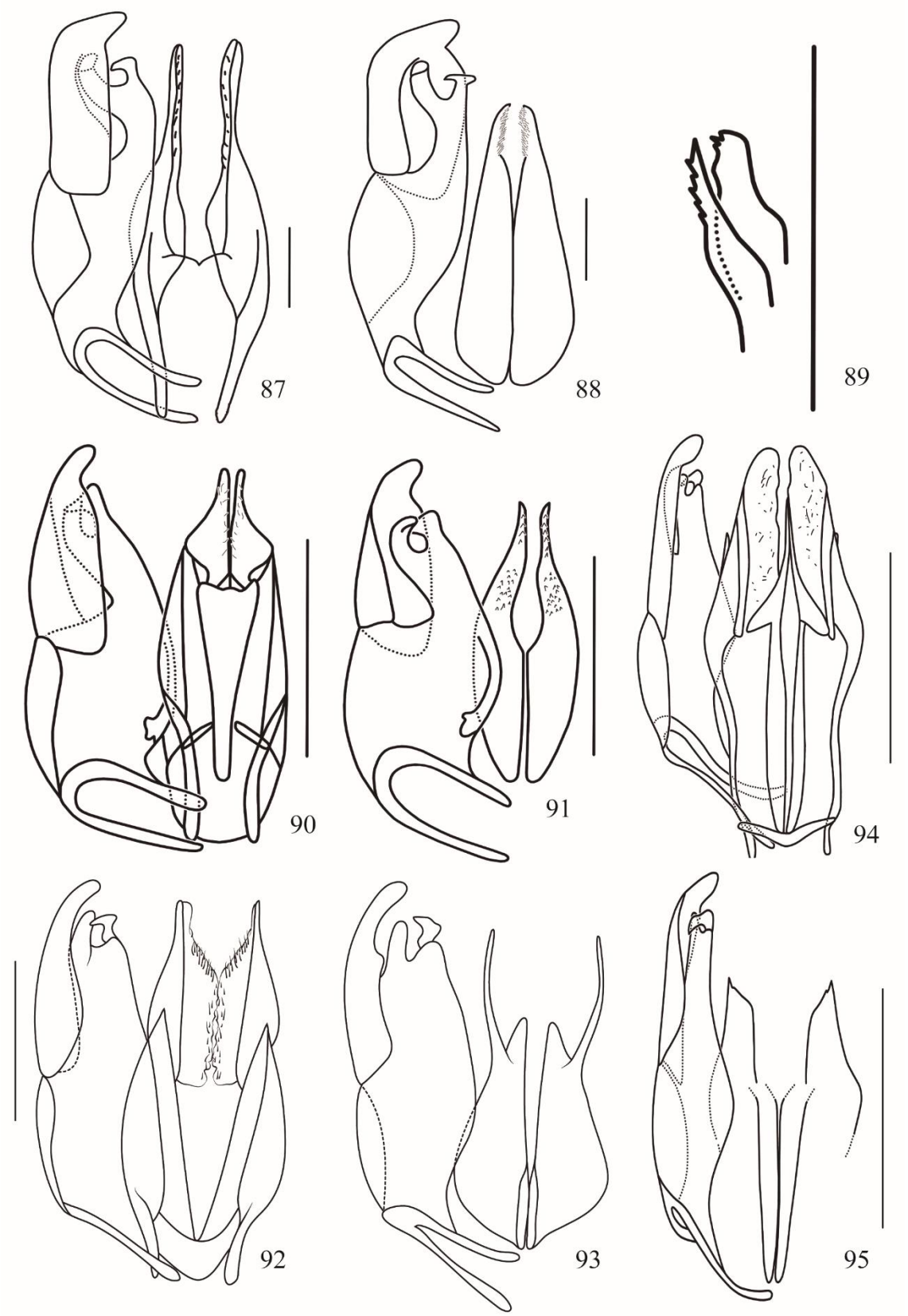

Figure 87–95. *Dissomphalus* spp., ♂, genitalia. 87, 88. *D. gigantus*. 87. Aedeagus, dorsal view. 88. Aedeagus, ventral view. 89–91. *D. scamatus*. 89. Outer lobe of aedeagal dorsal body, lateral view. 90. Aedeagus, dorsal view. 91. Aedeagus, ventral view. 92, 93. *D. microstictus*. 92. Aedeagus, dorsal view. 93. Aedeagus, ventral view. 94, 95. *D. bahiensis*. 94. Aedeagus, dorsal view. 95. Aedeagus, ventral view.

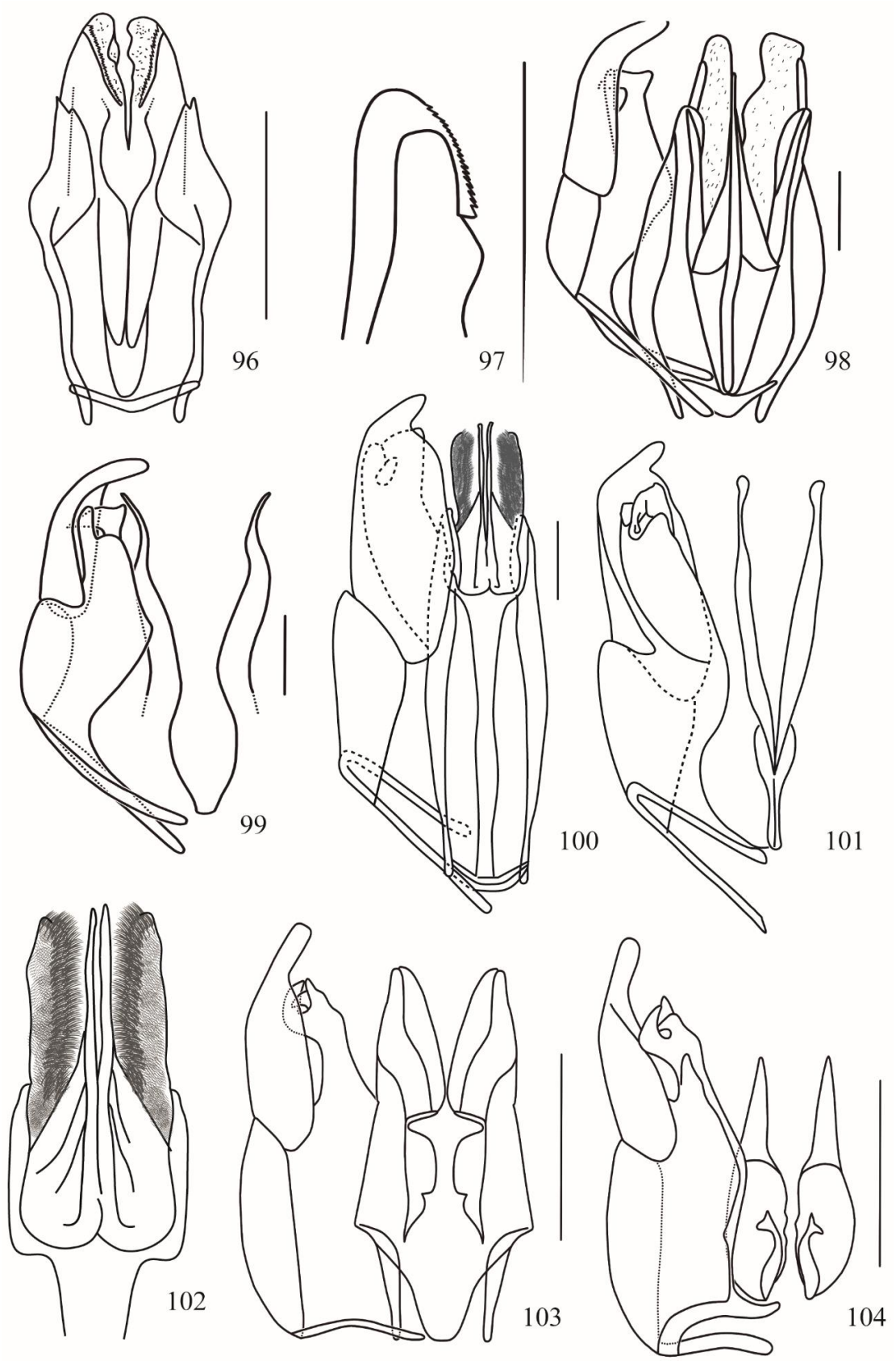

Figure 96–104. *Dissomphalus* spp., ♂, genitalia. 96, 97. *D. bahiensis*. 96. Dorsal body, ventral view. 97. Outer lobe of aedeagal dorsal body, lateral view. 98, 99. *D. punctatus*. 98. Aedeagus, dorsal view. 99. Aedeagus, ventral view. 100–102. *D. tupinikim* **sp. nov.** 100. Aedeagus, dorsal view. 101. Aedeagus, ventral view. 102. Dorsal body, dorsal view. 103, 104. *D. inclinatus*. 103. Aedeagus, dorsal view. 104. Aedeagus, ventral view.

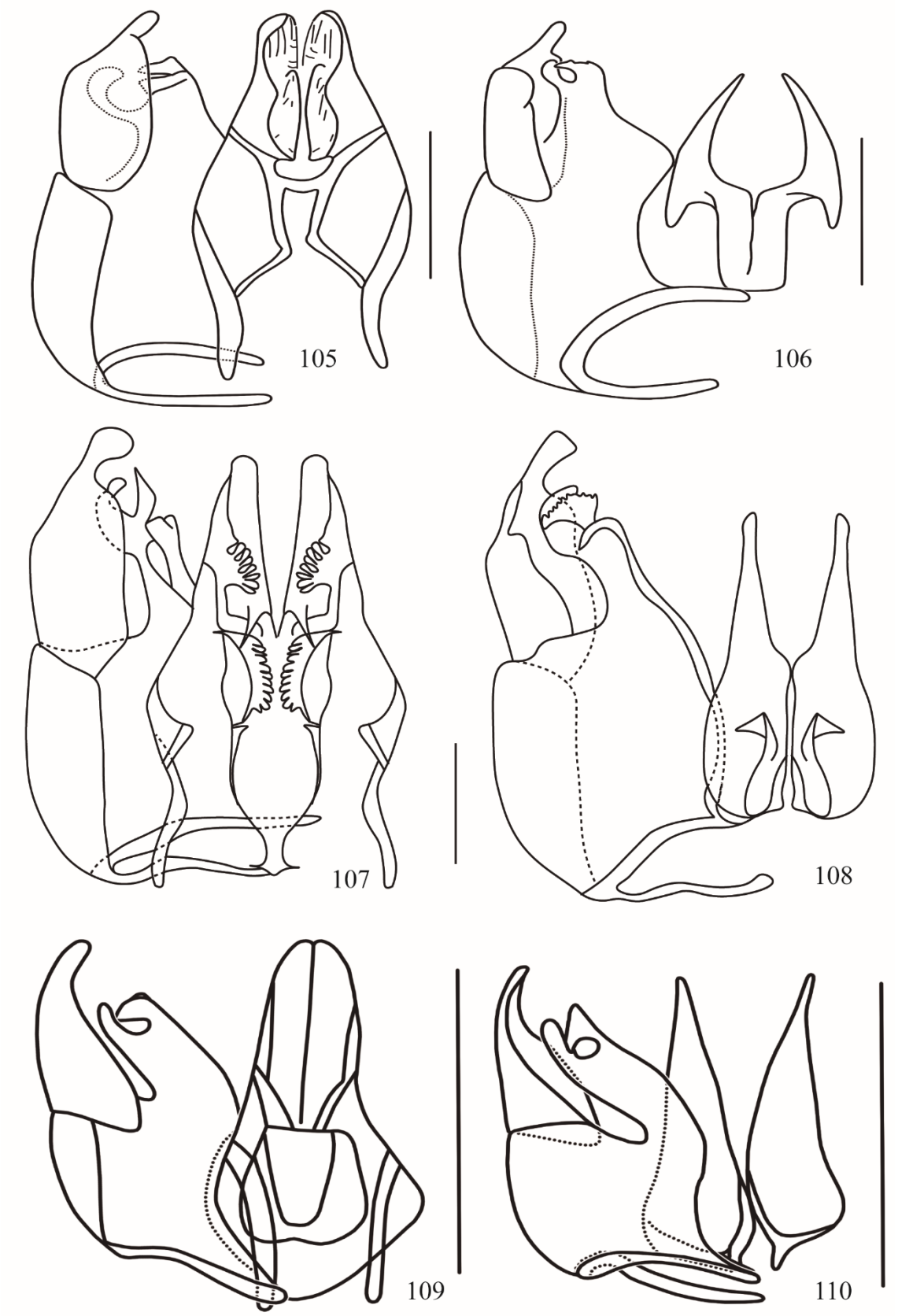

Figure 105–110. *Dissomphalus* spp., ♂, genitalia. 105, 106. *D. infissus*. 105. Dorsal body, ventral view. 106. Aedeagus, ventral view. 107, 108. *D. guarani* **sp. nov.** 107. Dorsal body, ventral view. 108. Aedeagus, ventral view. 109, 110. *D. crassus*. 109. Dorsal body, ventral view. 110. Aedeagus, ventral view.

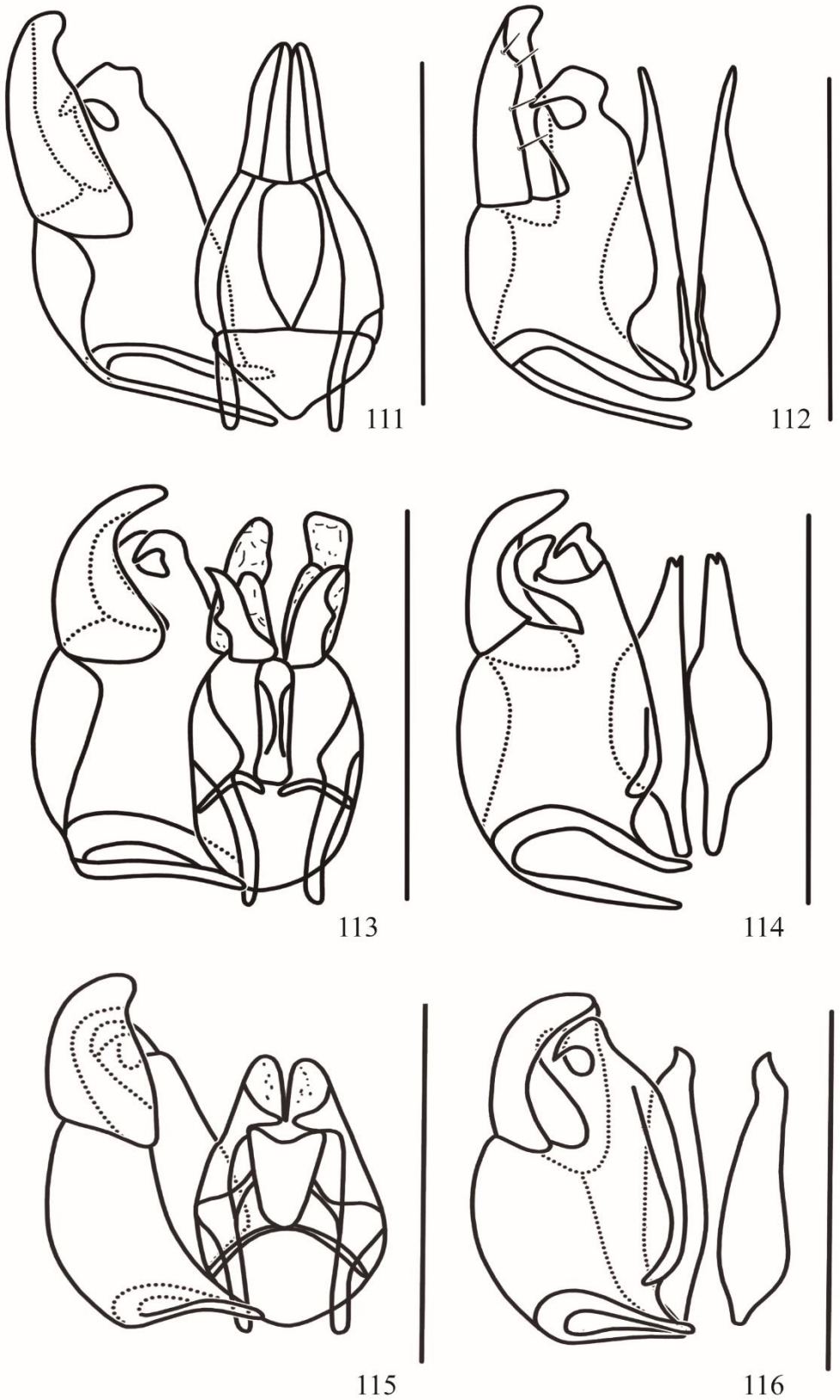

Figure 111–116. *Dissomphalus* spp., ♂, genitalia. 111, 112. *D. firmus*. 111. Dorsal body, ventral view. 112. Aedeagus, ventral view. 113, 114. *D. setosus*. 113. Dorsal body, ventral view. 114. Aedeagus, ventral view. 115, 116. *D. spissus*. 115. Dorsal body, ventral view. 116. Aedeagus, ventral view.

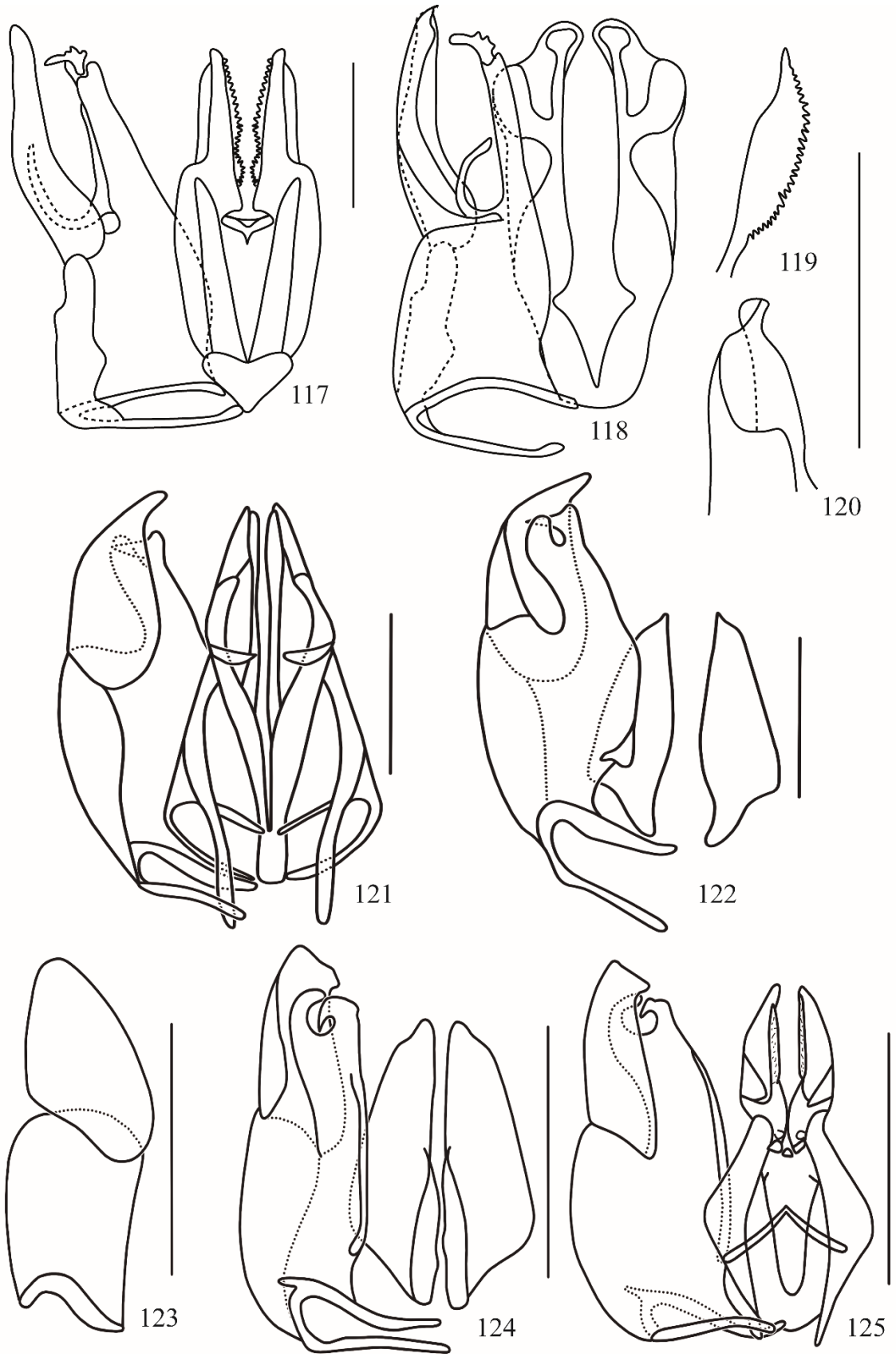

Figure 117–125. *Dissomphalus* spp., ♂, genitalia. 117–120. *D. w-aedeagus* **sp. nov.** 117. Aedeagal dorsal body, ventral view. 118. Aedeagus, ventral view. 119. Inner lobe of aedeagal dorsal body, lateral view. 120. Apex of aedeagal ventral ramus, dorsal view. 121, 122. *D. plaumanni*. 121. Aedeagus, dorsal view. 122. Aedeagus, ventral view. 123–125. *D. concavatus*. 123. Paramere, lateral view. 124. Aedeagus, ventral view. 125. Aedeagus, dorsal view.

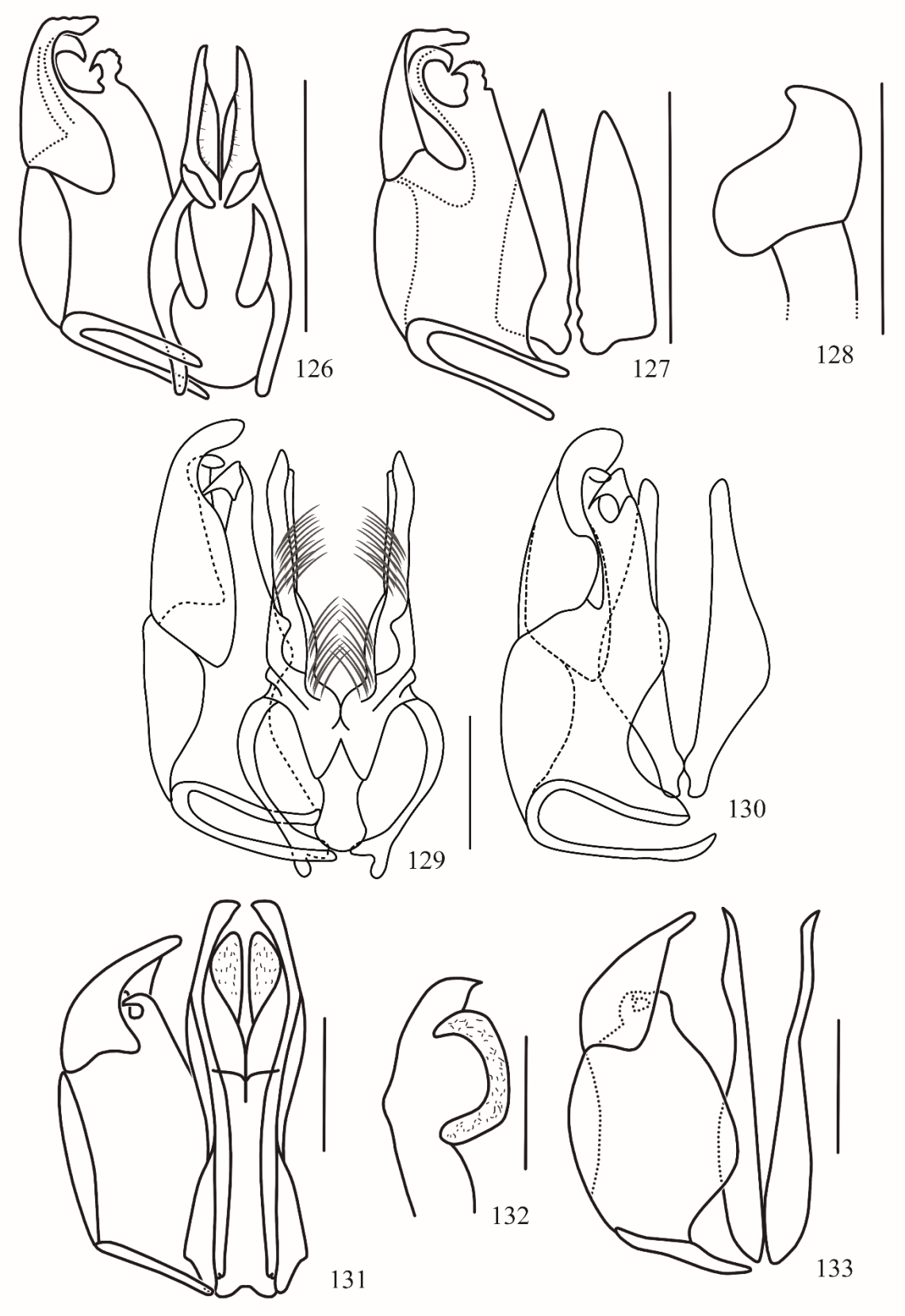

Figure 126–133. *Dissomphalus* spp., ♂, genitalia. 126–128. *D. rectilineus*. 126. Aedeagus, dorsal view. 127. Aedeagus, ventral view. 128. Paramere, lateral view. 129, 130. *D. congo* **sp. nov.** 129. Aedeagus, dorsal view. 130. Aedeagus, ventral view. 131–133. *D. extrarramis*. 131. Aedeagus, dorsal view. 132. Outer lobe of aedeagal dorsal body, lateral view. 133. Aedeagus, ventral view.

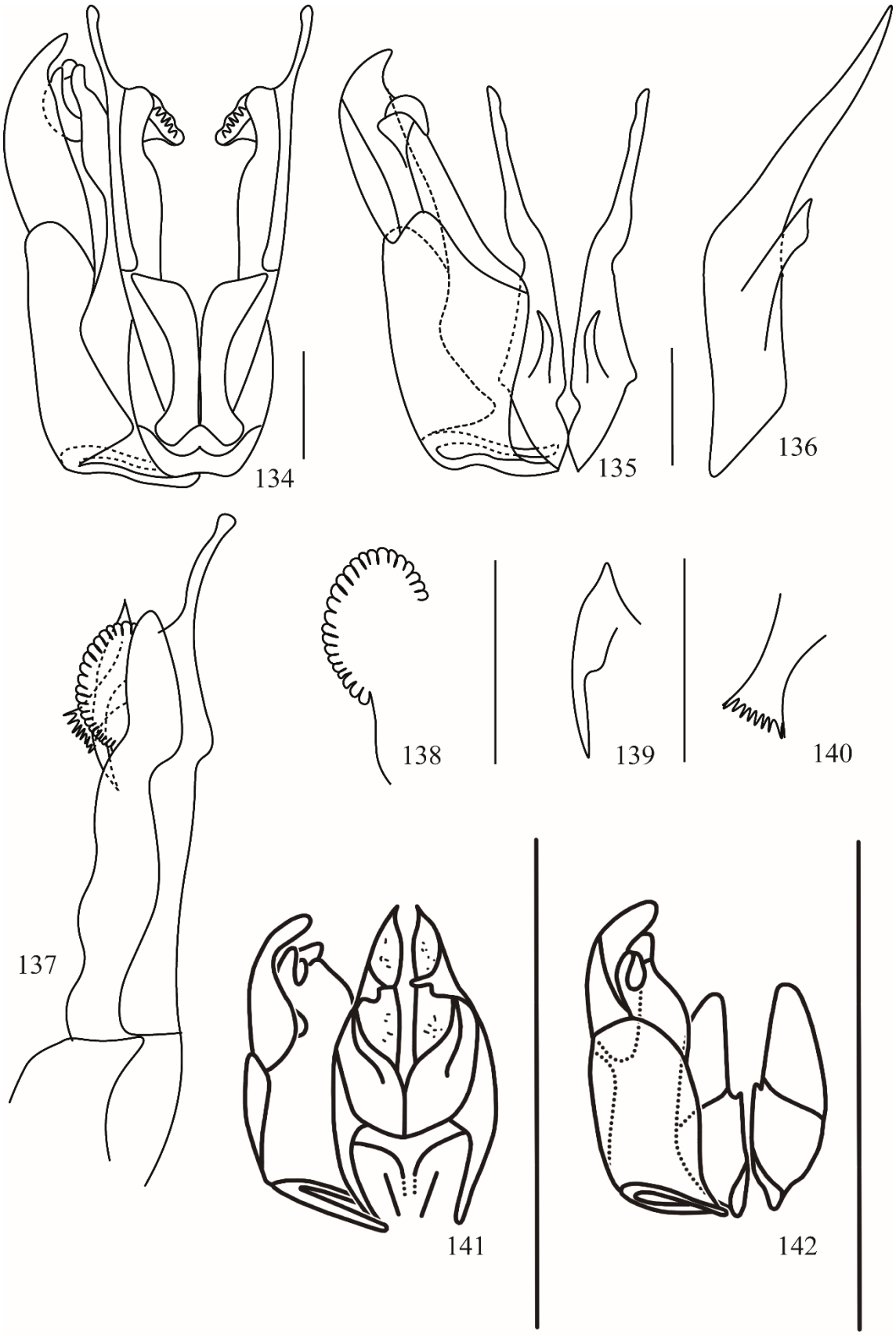

Figure 134–142. *Dissomphalus* spp., ♂, genitalia. 134–140. *D. rosangelae* **sp. nov.** 134. Aedeagus, dorsal view. 135. Aedeagus, ventral view. 136. Aedeagal ventral ramus, lateral view. 137. Aedeagal dorsal body, lateral view. 138. Inner lobe of aedeagal dorsal body, lateral view. 139. Median lobe of aedeagal dorsal body, lateral view. 140. External lobe of aedeagal dorsal body, lateral view.141, 142. *D. amplus*. 141. Aedeagus, dorsal view. 142. Aedeagus, ventral view.

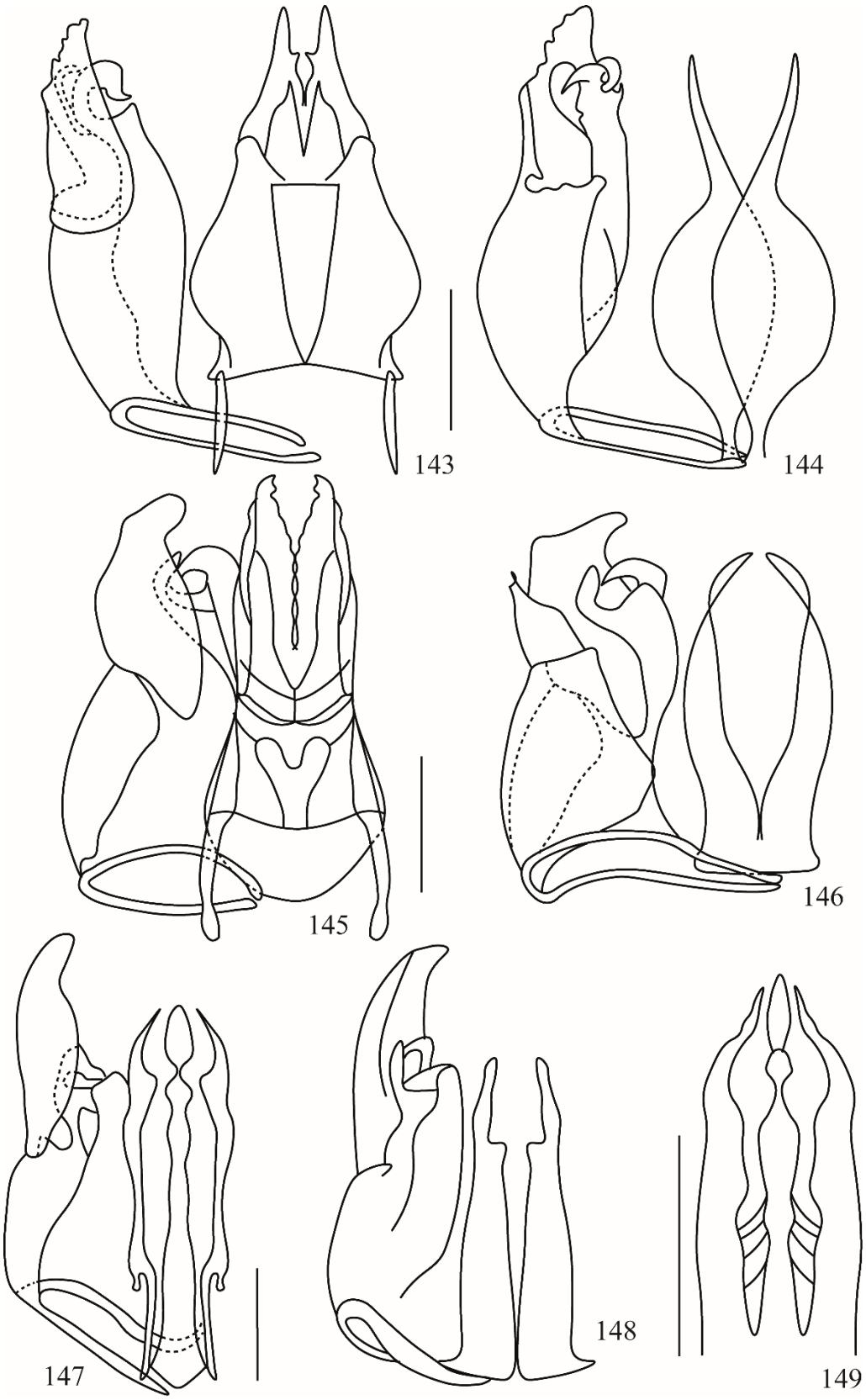

Figure 143–149. *Dissomphalus* spp., ♂, genitalia. 143, 144. *D. clovisi* **sp. nov.** 143. Aedeagus, dorsal view. 144. Aedeagus, ventral view. 145, 146. *D. kuara* **sp. nov.** 145. Aedeagus, dorsal view. 146. Aedeagus, ventral view. 147–149. *D. pyata* **sp. nov.**147. Aedeagus, dorsal view. 148. Aedeagus, ventral view. 149. Aedeagal dorsal body, dorsal view.

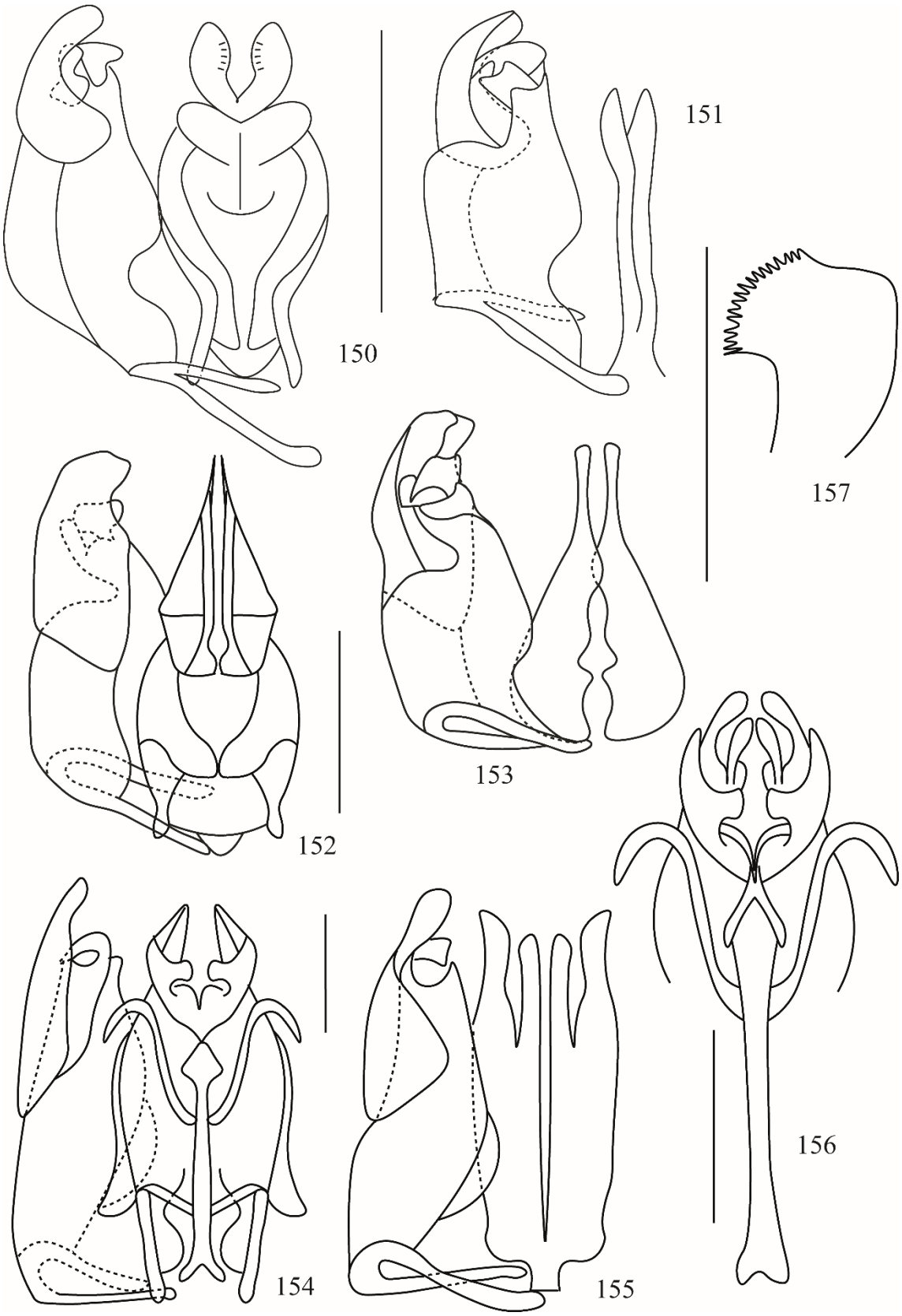

Figure 150–157. *Dissomphalus* spp., ♂, genitalia. 150, 151. *D. miriamae* **sp. nov.** 150. Aedeagus, dorsal view. 151. Aedeagus, ventral view. 152, 153. *D. amana* **sp. nov.** 152. Aedeagus, dorsal view. 153. Aedeagus, ventral view. 154–157. *D. potyra* **sp. nov.** 154. Aedeagus, dorsal view. 155. Aedeagus, ventral view. 156. Aedeagal dorsal body, dorsal view. 157. Outer lobe of aedeagal dorsal body, lateral view.

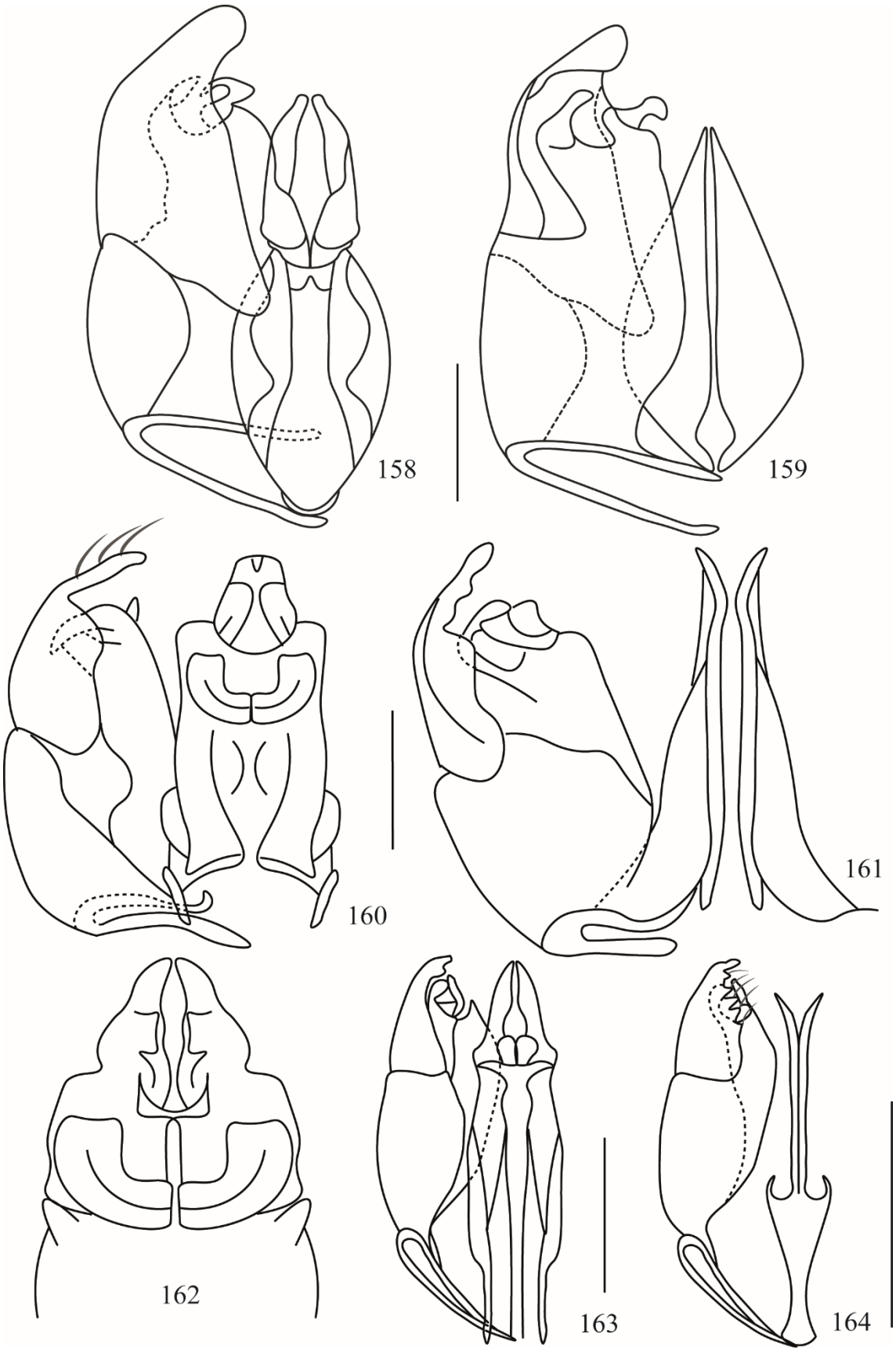

Figure 158–164. *Dissomphalus* spp., ♂, genitalia. 158, 159. *D. cacirus* **sp. nov.** 158. Aedeagus, dorsal view. 159. Aedeagus, ventral view. 160–162. *D. mirim* **sp. nov.** 160. Aedeagus, dorsal view. 161. Aedeagus, ventral view. 162. Aedeagal dorsal body, dorsal view. 163, 164. *D. secretus* **sp. nov.** 163. Aedeagus, dorsal view. 164. Aedeagus, ventral view.

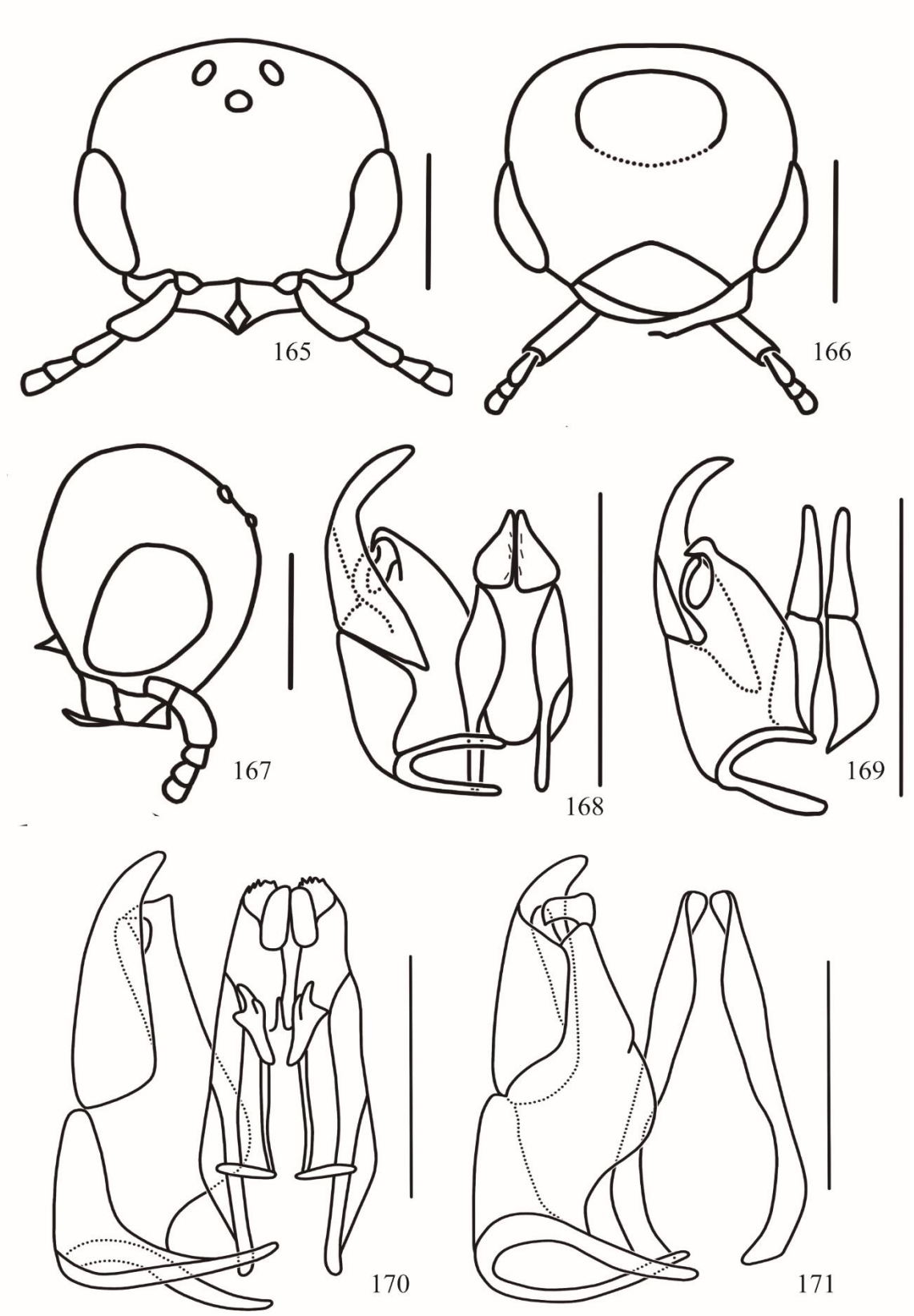

Figure 165–171. *Dissomphalus* spp., ♂, genitalia. 165–169. *D. cornutus*. 165. Head, dorsal view. 166. Head, ventral view. 167. Head, lateral view. 168. Aedeagus, dorsal view. 169. Aedeagus, ventral view. 170, 171. *D. connubialis*. 170. Aedeagus, dorsal view. 171. Aedeagus, ventral view.

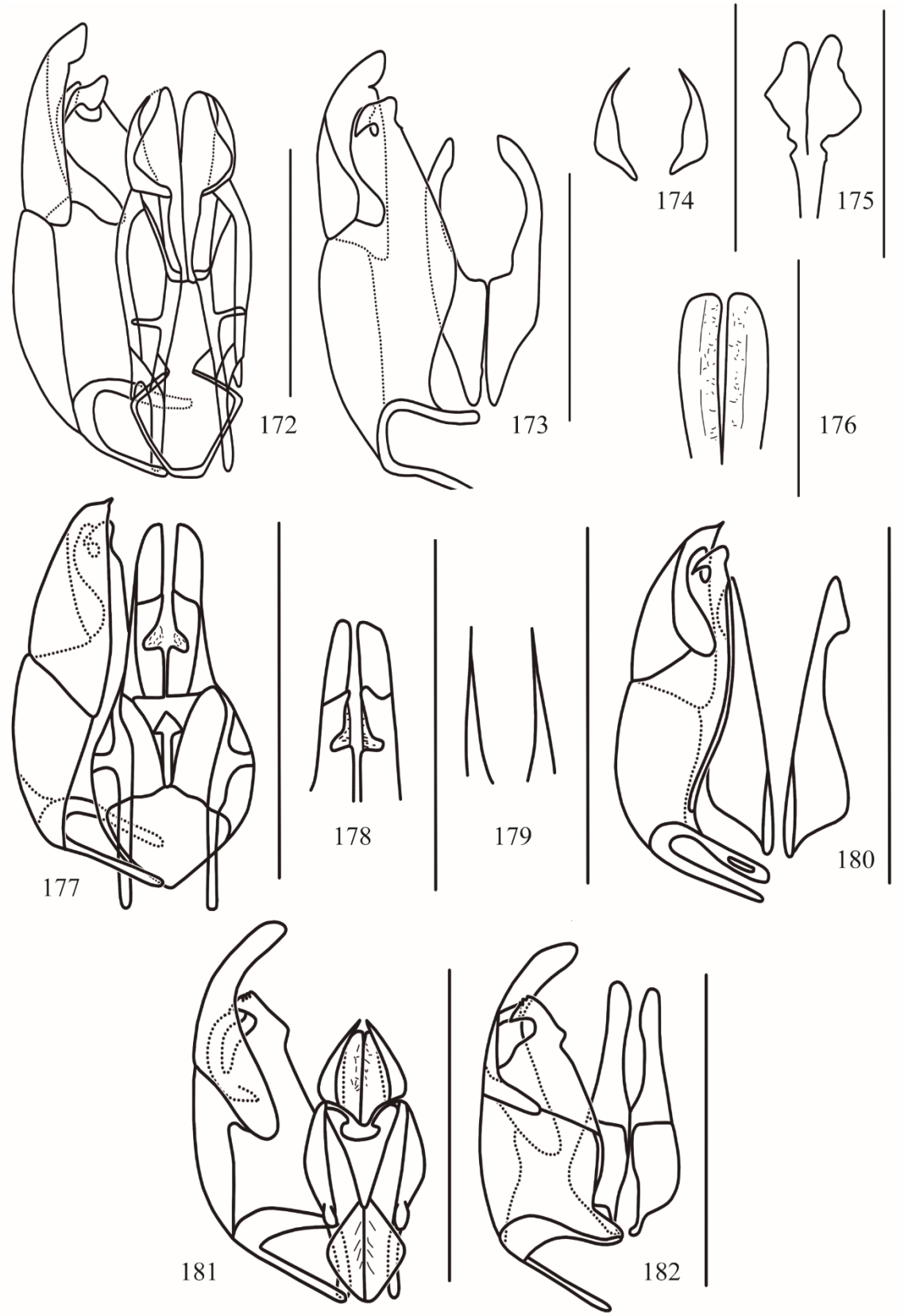

Figure 172–182. *Dissomphalus* spp., ♂, genitalia. 172–176. *D. differens*. 172. Aedeagus, dorsal view. 173. Aedeagus, ventral view. 174. External lobe of aedeagal dorsal body, dorsal view. 175. Median lobe of aedeagal dorsal body, dorsal view. 176. Inner lobe of aedeagal dorsal body, dorsal view. 177–180. *D. excellens*. 177. Aedeagus, dorsal view. 178. Inner lobe of aedeagal dorsal body, dorsal view. 179. External lobe of aedeagal dorsal body, dorsal view. 180. Aedeagus, ventral view. 181, 182. *D. fimbriatus*. 181. Aedeagus, dorsal view. 182. Aedeagus, ventral view.

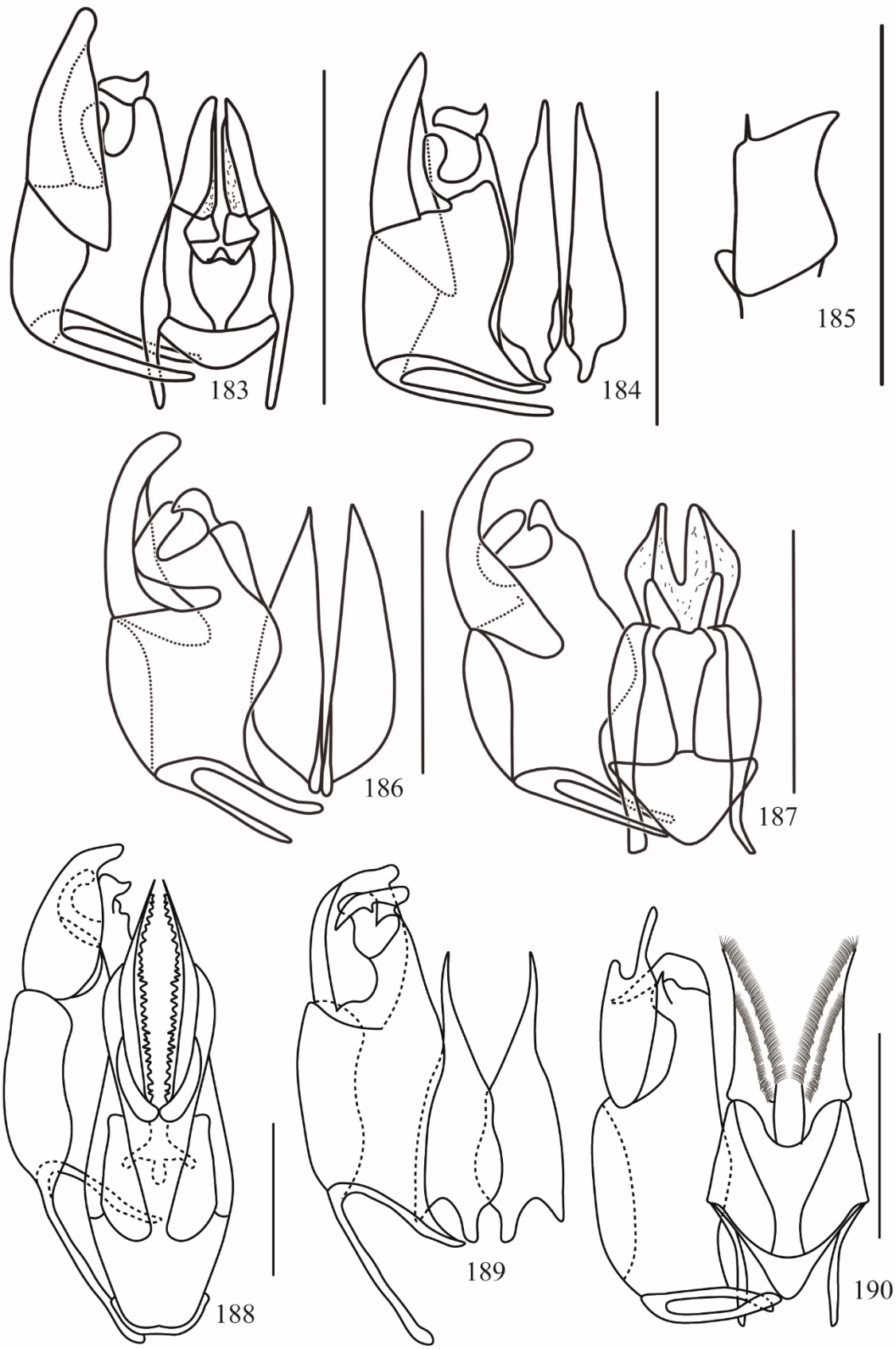

Figure 183–190. *Dissomphalus* spp., ♂, genitalia. 183–185. *D. peculiaris*. 183. Aedeagus, dorsal view. 184. Aedeagus, ventral view. 185. Paramere, lateral view. 186, 187. *D. trilobatus*. 186. Aedeagus, dorsal view. 187. Aedeagus, ventral view. 188, 189. *D. caparao* **sp. nov.** 188. Aedeagus, dorsal view. 189. Aedeagus, ventral view. 190. *D. capixaba* **sp. nov.** 190. Aedeagus, dorsal view.

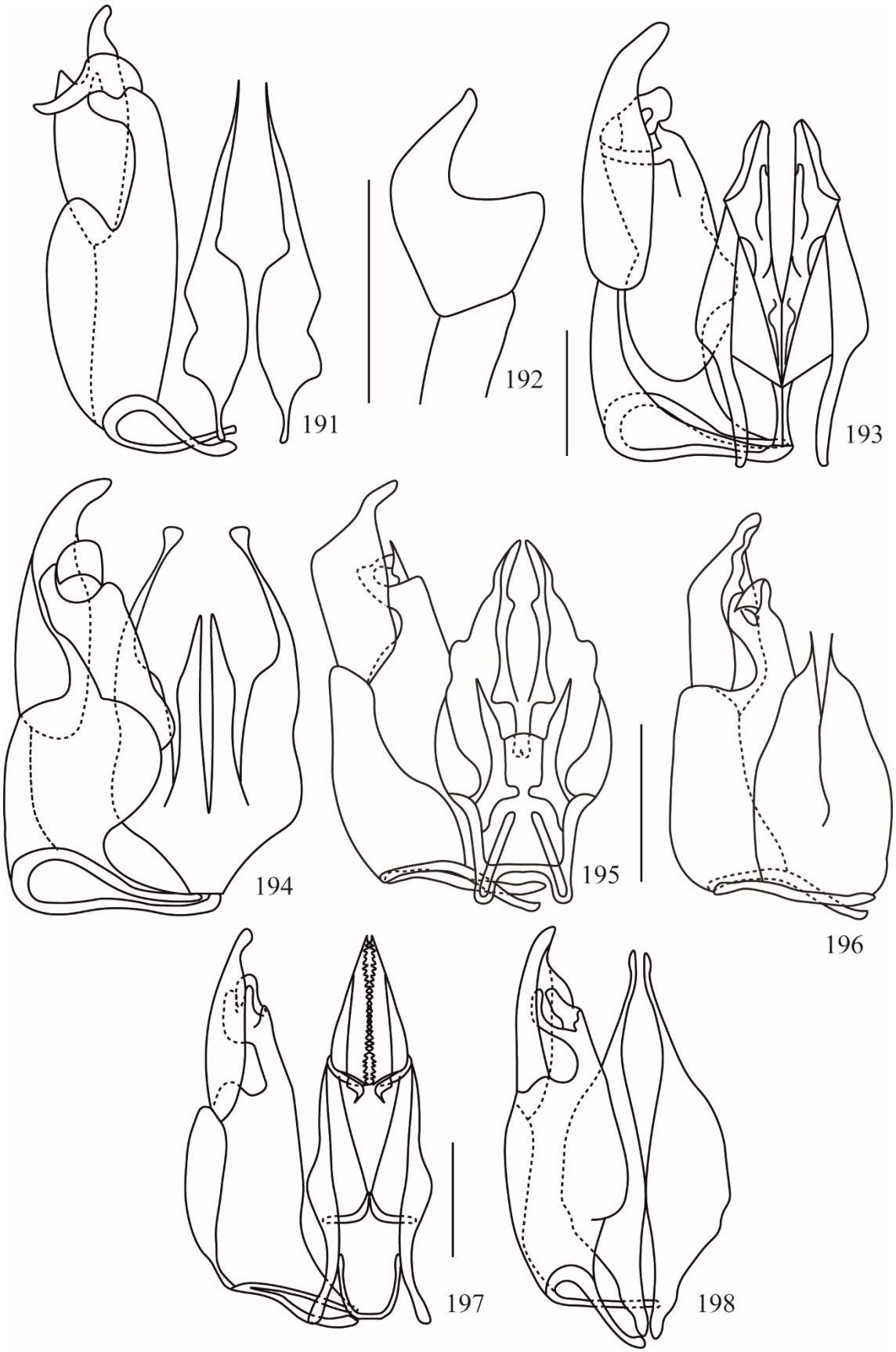

Figure 191–198. *Dissomphalus* spp., ♂, genitalia. 191, 192. *D. capixaba* **sp. nov.** 191. Aedeagus, ventral view. 192. Paramere, lateral view. 193, 194. *D. ibirapitanga* **sp. nov.** 193. Aedeagus, dorsal view. 194. Aedeagus, ventral view. 195–196. *D. purius* **sp. nov.** 195. Aedeagus, dorsal view. 196. Aedeagus, ventral view. 197, 198. *D. taiabocu* **sp. nov.** 197. Aedeagus, dorsal view. 198. Aedeagus, ventral view.

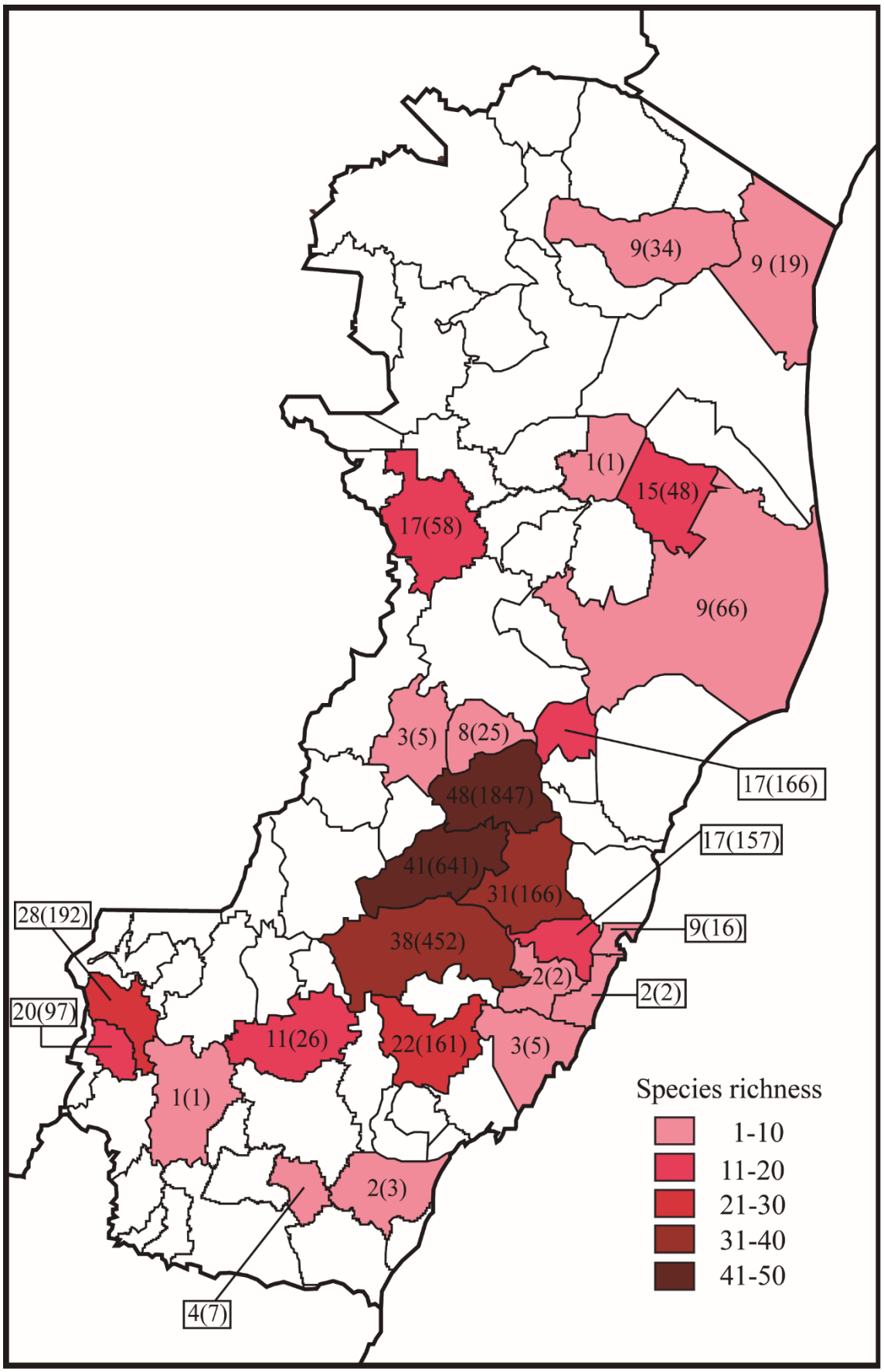

Figure 199. Espírito Santo State, showing the number of species recorded in each municipalities. In parenthesis the number of specimens recorded in each municipality. Names of the municipalities as in Fig. 1.