PROGRAMA DE PÓS-GRADUAÇÃO EM ZOOLOGIA UNIVERSIDADE FEDERAL DO PARÁ MUSEU PARAENSE EMÍLIO GOELDI

MATHEUS TAVARES DE SOUZA

Sarcophaginae (Diptera: Sarcophagidae) da Amazônia Brasileira.

Novas espécies e ocorrências.

Belém
2019

MATHEUS TAVARES DE SOUZA

Sarcophaginae (Diptera: Sarcophagidae) da Amazônia Brasileira.

Novas espécies e ocorrências.

Dissertação apresentada ao Programa de Pós- Graduação em Zoologia, do convênio da Universidade Federal do Pará e Museu Paraense Emílio Goeldi, como requisito parcial para obtenção do título de Mestre em Zoologia.
Área de concentração: Evolução
Linha de Pesquisa: Sistemática e taxonomia

Orientadora: Profa. Dr. Maria Cristina Esposito
Co-orientador(a): Dr. Fernando da Silva Carvalho Filho

Belém
2019

Dados Internacionais de Catalogação na Publicação (CIP) de acordo com ISBD
Sistema de Bibliotecas da Universidade Federal do Pará
Gerada automaticamente pelo módulo Ficat, mediante os dados fornecidos pelo(a) autor(a)

S719s Souza, Matheus Tavares de
Sarcophaginae (Diptera: Sarcophagidae) da Amazônia Brasileira : Novas espécies e ocorrências / Matheus Tavares de Souza. — 2019.
135 f. : il. color.

Orientador(a): Profª. Dra. Maria Cristina Esposito
Coorientador(a): Prof. Dr. Fernando da Silva Carvalho-filho
Dissertação (Mestrado) - Programa de Pós-Graduação em Zoologia, Instituto de Ciências Biológicas, Universidade Federal do Pará, Belém, 2019.

1. Sarcophagidae. 2. Amazônia. 3. Chave dicotômica. I. Título.

CDD 576.8

FOLHA DE APROVAÇÃO

MATHEUS TAVARES DE SOUZA

Sarcophaginae (Diptera: Sarcophagidae) da Amazônia Brasileira.
Novas espécies e ocorrências.

Dissertação apresentada ao Programa de Pós-Graduação em Zoologia, do convênio da Universidade Federal do Pará e Museu Paraense Emílio Goeldi, como requisito parcial para obtenção do título de Mestre em Zoologia, sendo a COMISSÃO JULGADORA composta pelos seguintes membros:

Dra. MARIA CRISTINA ESPOSITO
Universidade Federal do Pará (Orientadora)

Dr. FERNANDO DA SILVA CARVALHO FILHO
Museu Paraense Emílio Goeldi (Co-orientador)

Dr. JOSÉ ANTONIO MARIN FERNANDES
Universidade Federal do Pará

Dr. ORLANDO TOBIA SILVEIRA
Museu Paraense Emílio Goeldi

Aprovada em: 22 de agosto de 2019.
Local de defesa: ICB - UFPA.

AGRADECIMENTOS

Agradeço ao programa de Pós-Graduação em Zoologia, no qual me proporcionou conhecimento na minha vida acadêmica.

À Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), pela concepção da bolsa.

À minha orientadora Maria Cristina Esposito e ao meu co-orientador Fernando da Silva Carvalho Filho, pela a ajuda que me dão em minhas pesquisas.

Aos membros da banca pelas dicas e correções realizadas nesse trabalho.

Aos doutores e técnicos do Museu Paraense Emílio Goeldi (MPEG) e da Universidade Federal do Pará (UFPA), que estão sempre dispostos em ajudar.

À minha família e amigos, pelo apoio, incentivo e descontração.

SUMÁRIO

Sarcophaginae (Diptera: Sarcophagidae) from the Brazilian Amazon Region
New species and new records.

ABSTRACT

The family Sarcophagidae (Diptera) has a cosmopolitan distribution, comprising 3.000 describeds species in 355 genera. Sarcophaginae is the most abundant and diverse subfamily in the new world. There are few studies about the family from Neotropical region, especially from Brazilian Amazon region, where there are few taxonomists. Therefore, this study enlarge the knowledge on the fauna of Sarcophaginae from the Brazilian Amazon, through descriptions and redescriptions of species and confection of dichotomous key to species of this region. This work was based on bibliographic survey and specimens from Brazilian Amazon housed in four entomological collections of Brazil. Morphological analysis, measurements and drawings of male species was presented. 132 species and 31 genera of Sarcophaginae from Brazilian Amazon have been found. Was made a description of a two new specie of the genus *Dexosarcophaga* and one *Rettenmeyerina*. A redescription of the monotypic genus Promayoa Dodge, 1966, was made with new illustrates. A keys to males are also provided, except for the species of the genus *Lepidodexia*, because the large number of undescribed Neotropical species of this genus would make any effort premature pending a complete revision of the fauna.

Keywords: Sarcophagidae, Amazon, Dichotomous key.

Sarcophaginae (Diptera: Sarcophagidae) da Amazônia Brasileira
Novas espécies e ocorrências.

RESUMO

A família Sarcophagidae (Diptera) tem distribuição cosmopolita e compreende cerca de 3.000 espécies e 355 gêneros descritos. Dentre suas subfamílias, Sarcophaginae é a mais diversa e ambundante no novo mundo. Há poucos estudos sobre a família para a região Neotropical, sobretudo para a região Amazônica onde há uma carência de taxonomistas no grupo. Sendo assim, o trabalho levantou as espécies da subfamília Sarcophaginae registradas para a Amazônia Brasileira e ampliou o conhecimento da fauna, através de descrição e redescrição de espécies e confecção de chave dicotômica para as espécies da região. O trabalho foi realizado com base na bibliografia atual e nos exemplares de quatro coleções entomológicas do Brasil. Foram feitas análises morfológicas, medições e ilustrações de espécimes machos. Foram encontrados 132 espécies e 31 gêneros de Sarcophagidae para a Amazônia Brasileira. Foram descritas duas espécies novas do gênero *Dexosarcophaga* e uma do gênero *Rettenmeyerina*. Foi feita uma redescrição da espécie *Promayoa peculiaris* Dodge, 1966, com novas ilustrações. Foi confeccionado uma chave dicotômica para as espécies ocorrentes na região, com exceção das espécies do gênero *Lepidodexia*, no qual não foram incluídas na chave pelo grande número de espécies neotropicais não descritas e a falta de revisão que este gênero precisa, tornando qualquer esforço prematuro.
Palavras-chaves: Sarcophagidae, Amazônia, Chave dicotômica.

INTRODUÇÃO GERAL

O bioma Amazônia compreende uma vasta extensão territorial, atingindo cerca de 6 milhões de Km² em nove países do norte da América do Sul, sendo mais da metade desta área pertencente ao território brasileiro (Murça-Pires & Prance 1985). Este bioma possui uma das florestas tropicais mais diversas do planeta, com cerca de 10% de todas as espécies descritas (Silva & Garda 2011). Apesar disso, muitas espécies de vários grupos taxonômicos ainda não foram descritos e/ou registrados para esta região, principalmente de invertebrados.

Hexapoda é o grupo mais diverso de organismos e possui cerca de 60% de todas as espécies conhecidas. Apesar do Brasil ser considerado o país com maior diversidade de insetos, a quantidade de estudiosos capazes de estudar esta diversidade é proporcionalmente baixa (Rafael *et al*. 2012). Estima-se que mais de 90% da diversidade biológica do Brasil e do Planeta ainda seja desconhecida (Silva & Garda 2011). Há uma grande defasagem no conhecimento da biodiversidade de insetos não só para a Amazônia, mas para o Brasil inteiro. A maioria dos grupos, por exemplo, não possuem inventários das espécies brasileiras conhecidas (Carvalho *et al*. 2012).

Diptera é a quarta maior ordem de Insecta, com cerca de 12% das espécies de organismos descritas para o mundo (Yeates 2007), as quais são conhecidas popularmente como moscas, mosquitos, carapanãs, piuns, maruins e mutucas, entre outros. Os espécimes desta ordem são caracterizados por apresentar o primeiro par de asas (mesotorácica) desenvolvido e membranoso e o segundo par (metatorácica) modificado em halteres ou balancins, tendo função de equilíbrio. Compreende cerca de 150.000 espécies descritas para o mundo (Carvalho *et al*. 2012). Na região Neotropical, são reconhecidas mais de 30.000 espécies e 118 famílias (Amorim 2009) e no Brasil estão registradas 11.159 espécies, distribuídos em 1.949 gêneros e 100 famílias (Carvalho *et al*. 2002, Rafael 2019).

A família Sarcophagidae possui cerca de 3000 espécies descritas e 112 gêneros, com cerca de 800 espécies conhecidas para a região Neotropical (Pape 1996) e 343 espécies e 42 gêneros espalhados pelo Brasil (Mello-Patiu 2019). São moscas geralmente robustas de tamanho médio a grande (3 a 25 mm). Os adultos geralmente possuem coloração cinza, com três faixas pretas longitudinais no tórax, corpo coberto com muitas cerdas e olhos vermelhos. A arista pode ser nua ou pilosa. O abdome é marrom ou preto, geralmente com polinosidade em padrão xadrez, listrado, riscado ou pintado com brilho acinzentado ou enegrecido (Pape 1996, Pape & Dahlem 2010, Carvalho *et al*. 2012).

A monofilia da família é apoiada por dados morfológicos (Pape 1992, Rognes 1997) e por dados

moleculares (Kutty *et al*. 2010, Marinho *et al*. 2012). São sinapomorfias do grupo as seguintes condições: Esternito 2 sobrepondo a margem do tergito 1+2; esternitos abdominais sem sétula alfa; esclerotização mediana do falo reduzida; oviduto com bolsa incubatória bilobada; espiráculo posterior das larvas, de segundo e terceiro instar, situado em uma cavidade e com o peritrema incompleto (Rognes 1997, Pape 1992, Pape & Arnaud 2001).

A família apresenta três subfamílias: Miltogramminae Paramacronychiinae e Sarcophaginae, sendo que as duas últimas formam um clado (Kutty *et al*. 2010). Miltogramminae, com cerca de 650 espécies e 38 gêneros descritos, é mais diversa no Velho Mundo (Pape & Dahlem 2010, Pape 1996). As espécies desta subfamília não possuem as três faixas longitudinais do tórax e nem o padrão ornamentado do abdome e se parecem superficialmente com alguns Tachinidae, tanto na aparência quanto no hábito parasita (Pape & Dahlem, 2010). Paramacronychiinae possui cerca de 90 espécies e 23 gêneros descritos, mas somente uma espécie, *Galopagomyia inoa* (Walker, 1849), ocorre na região neotropical, que é endêmica das Ilhas Galápagos (Pape 1996, Verves & Khrokalo 2006). Sarcophaginae é a subfamília mais diversa, com cerca de 1800 espécies e 52 gêneros descritos, apresentando o maior número de espécies no Novo Mundo (Pape & Dahlem 2010, Pape 1996).

A maioria dos sarcofagídeos são saprófagos, utilizando matéria orgânica em decomposição para alimentação e desenvolvimento dos seus imaturos, enquanto outras espécies são parasitas de vertebrados e invertebrados (Guimarães & Papavero 1999). Possuem grande importância na ciência forense, pois o tempo de desenvolvimento e comportamento das larvas podem ser utilizados na determinação do tempo pós morte de cadáveres humanos (Von Zuben *et al.* 1993). Também apresentam importância médica e veterinária, já que larvas de algumas espécies se desenvolvem em tecidos de animais vivos, causando miíases (Mello 2003, Gullan & Cranston 2007). Também são considerados como bioindicadores para avaliação e monitoramento da recuperação florestal, uma vez que apresentam uma rápida resposta, em termo populacionais, em relação às modificações antrópicas (Esposito *et al*. 2010, Sousa *et al*. 2011a, 2011b).

A maioria das espécies de Sarcophagidae, principalmente da subfamília Sarcophaginae apresentam poucas diferenças na morfologia externa, já que elas geralmente possuem listras pretas longitudinais no tórax, olhos vermelhos e abdome manchado. Por esse motivo, a caracterização das espécies é feita com base em características da genitália dos machos. A terminália masculina é tão importante que, apesar das terminálias femininas fornecerem importantes caracteres para estudos sistemáticos (Mello-Patiu & Santos 2001), fêmeas de muitas espécies tem sua identificação a nível especifico impossibilitada, se não estiverem associadas ao macho.

Apesar de nos últimos anos ter ocorrido um aumento considerável no número de especialistas e no número de artigos publicados sobre a fauna neotropical, o estudo sobre a fauna amazônica ainda permance incipiente. Na maioria das revisões publicadas há pouco ou nenhum material examinado das principais coleções amazônicas (INPA, MPEG) e de coleções que possuem muitos espécimes coletados nesta região (MZUSP). Desta forma, o número de espécies desta região ainda é submestimado, já que muitos gêneros e/ou espécies ainda não foram formalmente registrados para a esta região.

Além disso, há poucos especialistas trabalhando na região amazônica e com material desta região, o que tem resultado em uma concentração de estudos com a fauna da região Sul e Sudeste do Brasil (Vairo *et al*. 2011). A escassez de especialistas na região se reflete na quantidade de material identificado nas coleções entomológicas do Brasil, as quais muitas apresentam poucos exemplares identificados em nível genérico ou específico (Carvalho *et al*. 2002).

Para a região neotropical, até o momento, há somente uma chave de identificação para os gêneros de Sarcophagidae que ocorrem na América Central (Pape & Dahlem, 2010). Apesar da utilidade desta chave, ela não é tão fácil de ser utilizada, principalmente por alunos e pessoas que ainda não trabalham diretamente com o grupo, já que ela é muito extensa e possui muitos gêneros que não ocorrem na Amazônia ou apresenta características que são difíceis de interpretar. Com o intuito de facilitar o estudo da fauna neotropical, alguns autores têm publicado nos últimos anos chaves de identificação sobre faunas regionais (Buenaventura *et al.* 2009, Mulieri *et al*. 2010, Vairo *et* al. 2011). No entanto, ainda não há chave para os gêneros que ocorrem na Amazônia. Além disso, algumas espécies da Amazônicas ainda não estão bem caracterizadas já que as descrições originais são curtas e com imagens poucos informativas.

Devido aos problemas mencionados nos parágrafos anteriores, o processo de identificação dos gêneros e espécies que ocorrem na Amazônia brasileira ainda é lento e dicultoso, principalmente para estudantes iniciantes e pesquisadores não especialista, o que pode gerar impossibilidades ou erros na identificação. Desta forma, esse trabalho tem como objetivo incrementar o conhecimento sobre a fauna da família Sarcophagidae na região Amazônica, levantando as espécies da região, redescrevendo espécies mal caracterizadas e descrevendo possíveis novas espécies. Além disso, será confeccionada uma chave dicotômica para a identificação das espécies da região.

.

REFERÊNCIAS BIBLIOGRÁFICAS

Amorim DS (2009). Neotropical Diptera diversity: richness, pattems, and perspectives. In: Pape T; Bickel D, Meier R (eds) **Diptera Diversity**: status, challenges and tools. Koninklijke Brill, Leiden. 71-97.

Buenaventura E, Camacho G, Garcia A, Wolf M (2009). Sarcophagidae (Diptera) de importancia forense em Colombia: claves taxonômicas, nota sobre su biologia y distribuición. **Revista Colombiana de Entomologia 35**: 189-196.

Carvalho CJB, Couri MS, Toma R, Rafael JA, Harada AY, Bonatto SR, Loureiro AL, Gastal HAO (2002) Principais coleções brasileiras de Diptera: Histórico e Situação atual. In: Costa C, Vanin AS, Lobo JM, Melic A (eds) **Proyecto de Red Iberoamericano de Biogeografia Y Entomologia Sistemática 2**. Monografias Terceiro Milenio, Zaragoza 37-52.

Carvalho CJB; Rafael JA, Couri MS, Silva V (2012) Diptera. In: Rafael JA, Melo GAR, Carvalho CJB, Casari AS, Constantino R (eds) **Insetos do Brasil**: diversidade e taxonomia. Editora Holos, Ribeirão Preto, 701-743.

Esposito MC, Sousa JRP, Carvalho-Filho FS (2010) in press. Diversidade de Calliphoridae (Insecta: Diptera) na Base de Extração Petrolífera da Bacia do Rio Urucu, na Amazônia brasileira. **Acta Amazonica 40** (3): 579-584.

Guimarães JH, Papavero N (1999). **Myiasis of man and animals in the Neotropical Region**. Editora Plêiade, São Paulo, 308pp.

Gullan PJ, Cranston PS (2007). **Os insetos: um resumo de entomologia**. Editora Roca, São Paulo, 440 pp.

Kutty SN, Pape T, Wiegmann BM, Meier R (2010) in press. Molecular phylogeny of the Calyptratae (Diptera: Cyclorrhapha) with an emphasis on the superfamily Oestroidea and the position of Mystacinobiidae and McAlpine's fly. **Systematic Entomology 35**: 614-635.

Marinho MAT, Junqueira ACM, Paulo DF, Esposito MC, Villet MH, Azeredo-Espin AML (2012). Molecular phylogenetics of Oestroidea (Diptera: Calyptratae) with emphasis on Calliphoridae: Insights into the inter-familial relationships and additional evidence for paraphyly among blowflies. **Molecular Phylogenetics and Evolution 65**: 840-854.

Mello RP (2003). Chave para identificação das formas adultas das espécies da família Calliphoridae (Diptera, Brachycera, Cyclorrapha) encontradas no Brasil. **Entomologia y vectores 10** (2): 255-268.

Mello-Patiu CA, Santos JM (2001). Nephochaetopteryx Townsend, 1934: descriptions and comparative morphological notes on the female terminalia (Diptera: Sarcophagidae). **Studia Dipterologia 8**: 303 – 315.

Mulieri PR, Mariluis JC, Patitucci LD (2010). Review of the Sarcophaginae (Diptera: Sarcophagidae) of Buenos Aires Province (Argentina), with a key and description of a new species. **Zootaxa 2575**: 1-37

Murça-Pires J, Prance GT (1985). The Vegetation Types of the Brazilian Amazon. In: Prance GT, Lavejoy TE (eds) **Key environments**: Amazonia. Pergamon Press, Oxford, 109-145.

Pape T (1992). Phylogeny of the Tachinidae family-group (Diptera: Calyptratae). **Tijdschrift voor Entomologie 135**: 43-86.

Pape T (1996). **Catalogue of the Sarcophagidae of the World (Insecta: Diptera**). Memoirs of Entomology International, Stockholm, 558pp.

Pape T, Arnaud PH (2001). Bezzimyia - a genus of New World Rhinophoridae (Insecta, Diptera). **Zoologica Scripta 30**: 257-297.

Pape T, Dahlem GA (2010). Sarcophagidae In: Brown BV, Borkent A, Cumming JM, Wood DM, Woodley NE, Zumbado MA (eds.). **Manual of Central American Diptera 2**. NRC Research Press, Otawa, 1313-1335.

Rafael JA, Melo GAR, Carvalho CJB, Casari AS, Constantino R (2012) Prefácio. In: Rafael JA, Melo GAR, Carvalho CJB, Casari AS, Constantino R (eds) **Insetos do Brasil**: diversidade e taxonomia. Editora Holos, Ribeirão Preto, XIII-XIV.

Rognes K (1997). The Calliphoridae (Blowflies) (Diptera: Oestroidea) are not a monophyletic group. **Cladistics 13**: 27-66.

Silva JMC, Garda AA (2011). Padrões e Processos Biogeográficos na Amazônia. In: Carvalho CJB, Almeida EAB (eds). **Biogeografia da América do Sul**: padrões e processos. Editora Roca, São Paulo, 189–197.

Sousa JRP, Esposito MC, Carvalho-Filho FS (2011a). Compositon, Abundance and Richness of Sarcophagidae (Diptera: Oestroidea) in Forests and Forest Gaps with Diff erent Vegeta on Cover. **Neotropical Entomology 40** (1): 20-27.

Sousa JRP, Esposito MC, Carvalho-Filho FS (2011b). Diversity of Calliphoridae and Sarcophagidae (Diptera, Oestroidea) in continuous forest and gaps at different stages of regeneration in the Urucu oilfield in western Brazilian Amazonia. **Revista Brasileira de Entomologia 55** (4): 578–582.

Vairo KP, Mello-Patiu CA, Carvalho CJB (2011). Pictorial identification key for species of Sarcophagidae (Diptera) of potential forensic importance in southern Brazil. **Revista Brasileira de Entomologia 55**: 333-347

Verves YG, Khrokalo LA (2006). Review of Macronychiinae (Diptera, Sarcophagidae) of the world. **Vestnik zoologii 40**: 219-239.

Von Zuben CJ (1993). Competição larval em Chrysomya megacephala (Diptera: Calliphoridae): estimativa de perdas em biomassa e na fecundação e cálculo de conversão de alimento em biomassa. **Revista Brasileira de Entomologia 37** (4): 793-802.

Walker F (1849). List of the specimens of dipterous insects in the collection of the British Museum. Part IV. **British Museum**, London; 689-1172.

Yeates DK, Wiegmann BM, Courtney GW, Meier R, Lambkin C, Pape T (2007) in press. Phylogeny and systematics of Diptera: Two decades of progress and prospects. **Zootaxa 1668:**

565-59.

Capítulo 1

Sarcophaginae (Diptera: Sarcophagidae) from the Brazilian Amazon Region. New species and new records.

O capítulo I desta dissertação foi elaborado e formatado conforme as normas da publicação científica Zootaxa, as quais se encontram em anexo (Anexo 1)

Sarcophaginae (Diptera: Sarcophagidae) from the Brazilian Amazon Region. New species and new records.

MATHEUS TAVARES DE SOUZA[1], MARIA CRISTINA ESPOSITO[1], FERNANDO DA SILVA CARVALHO FILHO[2].

[1] *Instituto de Ciências Biológicas, Universidade Federal do Pará, Belém, PA, Brasil*.
E-mail: matheus.lag@gmail.com; esposito@ufpa.br
[2] *Coordenação de Zoologia, Entomologia, Museu Paraense Emílio Goeldi, Belém, PA, Brasil.*
E-mail: fernandofilho@museu-goeldi.br

Abstract

There are over 3,000 described species of Sarcophagidae (Insecta, Diptera, Oestroidea) worldwide, more than 800 are present in the Neotropical region and 343 species recorded from Brazil. Only two of the tree subfamilies occur in Brazil, being Sarcophaginae the most abundant and diverse, In the present paper, based on information from literature and from material deposited in four Brazilian entomological collections we provided the first revision about the species of Sarcophaginae from Brazilian Amazon. A total of 132 species in 31 genera of Sarcophaginae were recorded; 19 species are new records from the Brazilian Amazon, of which seven species and four genera (*Emblemasoma* Aldrich, *Hallina* Lopes, *Retttenmeyerina* Dodge and *Promayoa* Dodge) are new records from Brazil. Three new species (two *Dexosarcophaga* and one *Rettenmeyerina*) were described and illustrated. The specie *Promayoa peculiaris* was redescribed and illustrated. A key to males of all Brazilian Amazon species of Sarcophaginae, except *Lepidodexia*, was provided as well as illustrations of male terminalia of all species.

Key words: Brazilian Amazon, identification key, Neotropics, Sarcophagidae.

Introduction

Sarcophagidae, or flesh flies, are a cosmopolitan dipteran family in Oestroidea that comprises nearly 2,500 species described in 112 genera. Among these, approximately 750 species are recorded from the Neotropics (Carvalho *et al*. 2012). This taxon is one of the most diverse dipteran families in Brazil, inhabiting a wide range of environments, from plant pollination to urban habitats (D'Almeida 1988; Mulieri 2011; Pape 1996). The biology of the group is diverse and many

necrophagous species are important in the decomposition of organic matter, aiding in the recycling of nutrients (Pape 1996). For this reason, several species colonize corpses and have forensic importance (Von Zuben et al. 1993). Some species can cause myiasis in people and animals and, therefore, have medical-veterinary importance (Mello 2003, Gullan & Cranston 2007).

The monophyly of the family has been clearly supported by morphological and molecular data (Pape 1992, Rognes 1997, Kutty et al. 2010, Marinho et al. 2012). Morphological phylogenetic hypotheses were mainly based on features of the male genitalia, which in Sarcophaginae is very complex and has many sclerotized structures, such as juxta, vesica, hillae, harpes and expansions of paraphallus (Giroux *et* al. 2010, Buenaventura & Pape 2017).

The different species of flesh flies are morphologically similar externally, with gray bands and dark spots on the thorax and abdomen and have red eyes (Cumming & Wood 2009). For this reason, the male genitalia is useful in delimitating genera and species. Unlike other species of Oestroidea, the keys for species only allow the identification of male specimens (Pape & Dahlem 2010).

Despite this, few works contain illustrations or photographs of sarcophagidae male genitalia and keys for species identification. In order to facilitate the study of the neotropical fauna, some authors in the last few years have published identification keys for regional faunas (Buenaventura et al. 2009, Mulieri et al. 2010, Vairo et al. 2011).

The Brazilian fauna comprises 343 species and 42 genera, of which 65 are recorded from the Brazilian Amazon (Pape 1996; Mello-Patiu, 2019). This number is surely underestimated, since many species remain to be described or were not formerly recorded for this region.

So far, there is no key to the genera and species that occur in the Brazilian Amazon. Additionally, some species occurring in this region are not well characterized since their original descriptions are short and without informative images or drawings. Therefore, the identification of genera and species occurring in the Brazilian Amazon is still problematic.

Sarcophaginae are one of the three subfamilies, being the most diverse subfamily and most abundant in Brazil. In this project, we redescribe poorly characterized Sarcophaginae species and describe new species from the Brazilian Amazon. Moreover, we provide an elaborate identification key based on males, illustrating the male terminalia of all species. Digital images of external morphology and genitalia important for identification are published with updated distribution records.

Material & Methods

The specimens utilized in this study were taken on loan and will be deposited in their following institutions (name of the curator in charge):

DZUP - Departamento de Zoologia da Universidade Federal do Paraná, Curitiba, Paraná, Brazil (Cláudio José Barros de Carvalho);

INPA - Instituto Nacional de Pesquisas da Amazônia, Manaus, Amazonas, Brazil (Márcio Oliveira);

MPEG - Museu Paraense Emílio Goeldi, Pará, Brazil (Orlando Tobias Silveira);

MZUSP Museu de Zoologia da Universidade Federal de São Paulo, São Paulo, Brazil (Carlos Einicker Lamas).

The specimens from the Brazilian Amazon were analyzed and identified, which is defined herein as the area comprising the Amazon biome that is delineated by Amazon rainforest and its related ecosystems in Brazil. This area is distributed in the states of Acre, Amazonas, Roraima, Amapá, Pará, Rondônia, north half of Mato Grosso, western Maranhão and Tocantins.

In addition, species recorded from the Brazilian Amazon in the available literature were included in this work the, which is composed mainly of revisions, original descriptions and catalogues (Lopes 1969, Pape 1996). The term "new record" was utilized to the species recorded for the first time from the Brazilian Amazon.

Examined specimens were identified with dichotomic keys (Buenaventura & Pape 2015, Carvalho-Filho & Esposito 2011, 2012, Carvalho-Filho *et* al. 2014, Mello-Patiu & Salazar-Souza 2016, Pape & Dahlem 2010), by comparisons with original description and/or types. The key presented herein was based on the examined specimens in the collections listed above and on the information provided in literature.

Lepidodexia Brauer & Bergenstamm is a genus of Sarcophagidae with a large number of species. However, many of these species are extremely similar to each other and have no one recent revision about this genus. The species of the genus *Lepidodexia* were not included in the key because the large number of undescribed Neotropical species of this genus would make any effort premature pending a complete revision of the fauna.

For label data of type material, individual lines are separated with a forward slash (/), whereas individual levels are separated with a double forward slash (//) and all information is given exactly as written on the labels. For material other than types, full locality data, date of collection and collectors are reported.

To observe the terminalia, the abdomen was detached from the body and cleared in 10% KOH at room temperature for 24 hours, followed by neutralization in acetic acid, dehydration in

alcohol and washing in distilled water.

Terminalias were examined under a Zeiss Standard 25 ICS Transmitted Light Microscope and drawn with the aid of a drawing tube. Photographs were obtained with a Leica DFC295 camera attached to a Leica MZ16 stereomicroscope. Photo stacking was carried out in Helicon Focus 6. Drawings and photographs were processed using Adobe Photoshop® and Inkscape®. After examination and illustration, the cleared terminalia were stored in glycerin in plastic microvials pinned under their respective source specimens.

Terminology of adult morphology follows Cumming & Wood (2009). Phallic terminology follows Giroux *et al*. (2010), except for the terms "paraphallus" and "vesical lateral arm" which follow Whitmore *et al*. (2013) and Buenaventura & Pape (2017), respectively.

Results

A total of 132 species in 31 genera of Sarcophaginae were recorded from the Brazilian Amazon. Three species are new to science and described in this paper.. A key to males of Sarcophaginae, except the genus *Lepidodexia*, was also provided, containing 117 species.

Rettenmeyerina sp. nov.

(Figs 282-285**)**

Material examined. Holotype ♂ (MPEG), labeled as follows: Brazil Pará/ Serra Norte/ N1 Canga/ 31.X-3.XI.1985// Armadilha/ 1,6m/ Suspensa.

Description. Male: Body length: 4,0 mm. **Head.** Fronto-orbital, parafacial plates and postocular strip with silver polinosit. Fronto-orbital plate with a sequence of small setaes from the upper region till the pedicel. Frontal row black in all this extension. Four frontal setaes convergent (in the same size). Proclinate fronto-orbital seta present and reclinate well developed. Inner vertical seta well developed and outer not differentiated from the postocular setae, ocellar setae well developed than frontal setaes, back of head gray with black setae, gena black with gray polinosit with black setae, antenna brown, arista long and plumose on basal, palpus brown. **Thorax.** Dark brown with gray polinisit. Pre-sutural acrostichals seta without differentiation and 1 seta pos-sutural undeveloped. Chaetotaxy: dorsocentrals: 2 + 2, intra-alars: 2 + 2, supra-alar: 2 (anterior one shorter) + 3, postpronotals: 3, postalars: 2, Postalar wall with setaes; apical scutelars absite, subapicals scutelars: 2, basal scutelar: 1, discal escutelar:1, meron: 6 (in serie), katepisternal: 2 (in the same level),

notopleurals: 2, anepimerais: 2, proepimeral:1. Wings hyaline, vein R_1 without setaes; R_{4+5} with setaes in half basal from the base to cross-vein r-m, cell r4+5 open; Third costal section with setae ventrally. Legs. Dark brown. Fore femur with row of long setaes dorsal and ventral, mid femur with two medium setae in anterior face, two preapical posterior setae; ctenidium absent; Hind femur with row of ventral setaes and three dorsal setaes; fore tibia with a preapical seta on the margin antero-dorsal; mid tibia with a preapical seta on the margin antero-dorsal and a preapical seta on the margin postero-dorsal; **Abdomen.** Brown with gray-yellow polinosit; tergites 3 and 4 with a pair of lateral setaes marginal; Sternites 1 and 5 brown, sternites 2 to 4 yellowish with a brown strip central. Sternite 5 longer than large, with a short median fissure, arms elongated and narrowed, slightly divergent and lobules rounded bearing many short spine-like setae. **Terminalia.** Syntergosternite 7+8, epandrium, and cercus dark brown. Cercus dark brown, shorter than epandrium, slight curved ventrally. Surstylus almost triangular with somy setae along apical margin. Pregonite elongate, slight tapering toward to apex, with distal portion perpendicular to base. Postgonite slightly longer than pregonite, elongate and narrow, with rounded apex and some short setae on distal half. Phallus dark brown. Juxta sclerotized. Vesica small and narrow, strongly curved toward the apex of distiphallus.

Female unknown.

Remarks. The cerci and sternite five of this species is similar to species *R. serrata* Dodge, 1968, but *R.* **sp nova** differs from this principally in having a short and wide vesical, dorsal curved. In *R. serrata* the vesica is large and not cuverd. It's the first record of this genus from Brazilian Amazon, since the only species of this genus have been record only on Panama and northeast of Brazil (Ceará).

Distribution. Brazil (Pará).

***Dexosarcophaga* sp. Nov 1**

(Figs 63-67**)**

Material examined. Holotype ♂ (INPA), labeled as follows: BRASIL, AM, Manaus/ R. Ducke, 02-29.vii./1990, J.Vidal, malaise

Description. Male: Body length: 7,0 mm. **Head.** Fronto-orbital and parafacial plates covered with silver-yellowish microtrichia. Parafacial plate with setulae sparsely distributed along inner eye margin. Frontal vitta black, with row of 4-5 frontal setae. One reclinate fronto-orbital seta. Proclinate fronto-orbital absent. Outer vertical seta not differentiated from the postocular setae.

Ocellar setae well developed than frontal setaes Gena and postgena with silver-yellowish microtrichia and black setae. Antenna dark brown, arista long plumose on basal 2/3. Palpus black. **Thorax**. Chaetotaxy: acrostichals 0+1, dorsocentrals 3+3, intra-alars 2+2 (anterior one shorter), postpronotals 2, postalars 2, notopleurals 4 (2 strong primary setae and 2 short subprimaries setae), anepisternals 5, katepisternals 3, scutellum with 1 pair of basal setae, no lateral setae, 1 pair of apical setae and 1 pair of discal setae. Legs. Black. Midfemur with a ctenidium on posteroventral surface. Midtibia with 2 median seta on ventral face and 2 median ones on posterodorsal margin, hind tibia with 1 median anteroventral seta. Wing. Hyaline. Costal spine absent. Vein R 1 bare. Third costal section bare ventrally. **Abdomen**. Tergites dark brown in ground color. Tergites 3 to 5 with a band of silvery gray microtrichia on anterior 4/5 on dorsal and lateral surfaces. Syntergite 1+2 without median marginal setae; tergite 3 and 4 with a pair of median setae; tergite 5 with a complete row of marginal setae. **Terminalia**. Syntergosternite 7+8, epandrium, and cercus dark brown. Cercus shorter than epandrium, tapering distally, with pointed tip gently curved ventrally in lateral view. Cercal prong with convergent tip. Cercal base with many long setae and covered with setulae. Cercal prong with some long setae laterally and without setulae in the distal half. Surstylus triangular with long setulae in distal half. Pregonite longer than postgonite, shallowly sinuous on basal margin, distal half perpendicular to basal half and quadrangular apical margin bearing two small rounded projections; with a row of tiny setae on dorsal margin of basal half. Postgonite curved ventrally, with rounded apex and a well-developed seta on ventral margin. Phallus dark brown, with membranous area between basi- and distiphallus. Basiphallus narrow and elongate, without keels. Juxta rounded and separated from paraphallus. Paraphallus with a very long projection strongly curved toward the apex. Vesica elongate, composed of two branches, one short and pointed and one elongate that is clavate, bearing many pointed projections apically. Lateral and median styli small.

Remarks. *Dexosarcophaga* sp. nov. 1 and *Dexosarcophaga tracua* Carvalho-Filho & Esposito, 2011 are the only species that have vesica bearing many pointed projections apically. *Dexosarcophaga* sp. nov. 2 differs from *D. tracua* mainly in having paraphallus bearing a long projection.

Female unknown.

Distribution. Brazil (Amazonas)

***Dexosarcophaga* sp. Nov 2**

(Figs 68-72**)**

Type material. Holotype ♂ (MPEG), labeled as follows: BRASIL, AM. Barcelos, Rio/ Padauari. Com. Ararinha/ 00º30'18''N; 64º03'30''W// 04-08.vi. 2010. Suspensa/ lâmina d'agua, R. Dias, R./ Machado, J. A. Rafael.

Description. Male: Body length: 7,0 mm. **Head.** Fronto-orbital and parafacial plates covered with silver-yellowish microtrichia. Parafacial plate with setulae sparsely distributed along inner eye margin. Frontal vitta black, with row of 4-5 frontal setae. One reclinate fronto-orbital seta. Proclinate fronto-orbital absent. Outer vertical seta not differentiated from the postocular setae. Ocellar setae well developed than frontal setaes Gena and postgena with silver-yellowish microtrichia and black setae. Antenna dark brown, arista long plumose on basal 2/3. Palpus black. **Thorax**. Chaetotaxy: acrostichals 0+1, dorsocentrals 3+3, intra-alars 2+2 (anterior one shorter), postpronotals 2, postalars 2, notopleurals 4 (2 strong primary setae and 2 short subprimaries setae), anepisternals 5, katepisternals 3, scutellum with 1 pair of basal setae, no lateral setae, 1 pair of apical setae and 1 pair of discal setae. Legs. Black. Midfemur with a ctenidium on posteroventral surface. Midtibia with 2 median seta on ventral face and 2 median ones on posterodorsal margin, hind tibia with 1 median anteroventral seta. Wing. Hyaline. Costal spine absent. Vein R 1 bare. Third costal section bare ventrally. **Abdomen**. Tergites dark brown in ground color. Tergites 3 to 5 with a band of silvery gray microtrichia on anterior 4/5 on dorsal and lateral surfaces. Syntergite 1+2 without median marginal setae; tergite 3 and 4 with a pair of median setae; tergite 5 with a complete row of marginal setae. **Terminalia**. Syntergosternite 7+8, epandrium, and cercus dark brown. Cercus slight shorter than epandrium, tapering distally, with pointed tip curved ventrally in lateral view. Cercal prong parallel and separated. Cercal base with many long setae and covered with setulae. Cercal prong with some long setae laterally and without setulae. Surstylus triangular with long setulae in distal half. Pregonite elongate with rounded tip and distal half widened, with a row of small setae on the dorsal margin and a median rounded projection in the ventral margin. Postgonite claw-shaped, with pointed tip curved ventrally and with a long seta on ventral margin and a serrated margin just distal to this. Phallus dark brown, with membranous area between basi- and distiphallus. Basiphallus narrow and elongate, with two posterior longitudinal keels. Juxta elongate and membranous, not well demarcated. Vesica short, almost triangular in lateral view. Lateral and median styli very small; lateral styli elongate with spinose distal portion; median stylus small and tubular.

Remarks. This species is similar to *Dexosarcophaga bicolor* Lopes, 1975 in having vesica almost triangular in lateral view, from which differs mainly in having pregonite with tip enlarged

and rounded. In *D. bicolor* the tip of the pregonite is narrowed and bifid

Female unknown.

Distribution. Brazil (Amazonas)

***Promayoa peculiares* Dodge, 1966**

(Figs 262-266**)**

Material examined. Holotype ♂ (1♂, MPEG), labeled as follows: BRAZIL, Pará: Campus do MPEG/ 27.X.2005, rede entomológica/ F.S. Carvalho Filho; (1♂, MPEG) BRAZIL, Pará: Campus do MPEG/ 18.II.2014, flor de açaizeiro; (1♂, MPEG) BRAZIL, Pará: Campus do MPEG/ 22.II.2014; (1♂, MPEG) BRAZIL, Pará: Campus do MPEG/ 20.II.2014; (1♂, MPEG) jardim de área urbana, bairro do Marco/ 13.06.2007/ F.S. Carvalho Filho; (1♂, MPEG) Belém-Brasília/ Km 90/ 21.II.1971/ T. Pimentel.

Description. Male: Body length: 4,4 – 4,5 mm. **Head**. Fronto-orbital, parafacial plates and postocular strip with gray polinosit. Fronto-orbital plate with a sequence of small setaes from the upper region till the pedicel. Frontal row black in all this extension, three or four frontal setaes convergent (in the same size). Proclinate fronto-orbital seta absent and reclinate well developed. Inner vertical seta well developed. Outer vertical seta differentiated from postocular setae. Ocellar setae well developed than frontal setae. Back of head gray with black setae. Gena black with gray polinosit with black setae. Brown anenna. Arista long plumose on basal. Palpus black. **Thorax**. Drak brown with gray polinisit. Three brown narrow strip. Pre-sutural acrostichals seta without differentiation and 1 seta pos-sutural undeveloped. Chaetotaxy: dorsocentrals 2 + 3, intra-alars 2 + 2, supra-alar 1+ 3, postpronotals 3, postalars 2, Postalar wall without setaes, apical scutelars reduced, subapicals scutelars 1, basal scutelar 1, discal escutelar absent, meron: 4 (in serie), katepisternal 3, notopleurals 2, anepimerais 2, proepimeral 1. Wings hyaline, vein R_1 with setaes; R_{4+5} with setaes in half basal from the base to cross-vein r-m, cell r4+5 open; Third costal section without setae ventrally. Legs. Brown. Fore fêmur with row of long setaes dorsal and ventral. Mid femur with two medium setae in anterior face. Two preapical posterior setae. Two setae in ventral surface of basal half. Ctenidium absent. Hind femur with row of dorsal setaes and two ventral. Hind tibia with two posterior setaes in dorsal surface. Mid tíbia with two dorsal setae in anterior surface and two dorsal setaesin posterior surface. Fore tíbia with two dorsal setae in anterior surface ando ne ventral setae in distal halfof anterior surface. **Abdomen**. Brown with gray polinosit. Syntergite 1 + 2 with two lateral discal setae. Tergite 3 and 4 with a pair of lateral marginal setaes. Tergite 4

with a pair of marginal mid setae. Sternite brown. **Terminalia**. Sternite 5 wider than long, with a short median fissure, arms elongated and narrowed, slightly divergent and lobules rounded. Syntergosternite 7+8, epandrium, and cercus reddish brown. Cercus with tip curved ventrally, bearing pointed spine-like setulae dorsally. Surstylus almost triangular with spine-like setae apically. Pregonite elongate, with pointed tip and distal margin sinuous and curved. Postgonite almost straight and with a long seta on ventral margin. Phallus dark brown, with membranous area between basi- and distiphallus. Basiphallus narrow and elongate with proximal half curved. Juxta sclerotized, longer than wide, with ventral margin serrated. Vesica composed by one pair of elongated and pointed plates, proximal one longer. Lateral styli plate-like, with digitate margins; capitis rounded.

Female. unknown.

Distribution. Brazil (Pará, Amazonas), Suriname.

Remarks. The only know specimen of this species was there male holotype from Suriname, however the description and terminalia illustrations are poorly detailed. Thus, this is the first record from Brazil. Besides that, this work provide accurate informations about male terminalia of this species that was not included on Dodge's original description. In the original description by Dodge (1966), the vesica was not illustrated. The vesica consist in a small rounded sclerorized plate near to lateral spines. Pape (1996), in the Catalogue of Sarcophagidae of the world, propose a diagnosis to this genus. In this work, he mentioned that vesica is asymmetric, once distiphallus illustrations of Dodge not shows some lateral spines. Pape probably confused the distiphallus with the vesica. In this work, all the analyzed specimens do not show asymmetric terminalia and the spines was lost in the holotype that is not in good conditions.

Key to males of Sarcophaginae recorded from the Brazilian Amazon Region

1 Wing with vein R_1 dorsally setose … 2

- Wing with vein R_1 dorsally bare … 34

2 Wing with vein R_1 setose at full length … 3

- Wing with vein R_1 setose at basal half … 6

3 - Ctenidium absent. Postalar wall bare. Wings without spot. Sternite 5 without median cleft … *Sarcofahrtiopsis cupendipe* (Figs 288-289)

- Mid femur with posteroventral ctenidium. Postalar wall haired. Wings usually with apical dark spot. Sternite 5 with median cleft … 4

4 Sternite 4 with a group of median pointed setae. Cercal prong short and broadened … *Nephochaetopteryx pallidiventris* (Figs 115-117)
- Sternite 4 without median pointed setae. Cercal prong elongated and narrowed … 5

5 Palpus brown. Apex of surstylus pointed … *Nephochaetopteryx paraensis* (Figs 118-120)
- Palpus yellow. Apex of surtylus rounded … *Nephochaetopteryx utinguensis* (Figs 121-123)

6 Tegula and basicosta light (white and yellow) … *Ravinia effrenata* (Figs 267-270)
- Tegula dark (black or brown) and basicosta light (white or yellow) … 7

7 Proclinate fronto-orbital seta present … 8
- Proclinate fronto-orbital seta absent … 9

8 Distiphallus united with basiphallus. Sternite 5 without median cleft ... *Sarcofahrtiopsis cuneata* (Figs 286-287)
- Distiphallus articulate with basiphallus. Sternite 5 with median cleft … *Panava amazonica* (Figs 192-193)

9 Mid femur with apical posteroventral ctenidium … 10
- Mid femur without apical posteroventral ctenidium … 23

10 Cercus curved upward with spines. Gena with dark or light setae … 11
- Cercus not curved and without spines. Gena always with dark setae … 16

11 Fore trochanter with spines. Median stylus not exposed. Surstylus well developed, with apex placed close to the lateral margin of cercus. Lateral margin of distiphallus with many pointed projections … *Tripanurga albicans* (Figs 321-323)
- Fore trochanter without spines. Median stylus exposed. Surstylus small, with tip never placed close to the lateral margin of cercus. Lateral margin of distiphallus without projections … 12

12 Head with 7 to 12 fronto-orbital setae. Thorax with 3 postsutural dorsocentrals setae. Gena golden with light setae (white or yellowish). Cercus without spines … *Argoravinia* (*Raviniopsis*) *aurea* (Figs 5-7)

- Head with 5 to 6 fronto-orbital setae. Thorax with 4 postsutural dorsocentrals setae (first two undeveloped). Gena gray with black setae. Cercus with spines … 13

13 Lateral apophysis long with pointed apex … *Argoravinia* (*Argoravinia*) *alvarengai* (Fig 1)

- Lateral apophysis short with rounded apex … 14

14 Lateral apophysis very large, fully hiding the surstylus and projected above dorsal surface of cercus … *Argoravinia* (*Argoravinia*) *catiae* (Fig 2)

- Lateral apophysis narrow, hiding only basal portion of surstylus and most of the lateral portion of cercus … 15

15 Three pre-sutural dorsocentral setae. Lateral apophysis cone-shaped, not reaching the lateral margin of cercus… *Argoravinia* (*Argoravinia*) *rufiventris* (Fig 4)

- Two pre-sutural dorsocentral setae. Lateral apophysis tongue-shaped, reaching beyond lateral margin of cercus … *Argoravinia* (*Argoravinia*) *paraensis* (Fig 3)

16 Basiphallus without longitudinal keels … 17

- Basiphallus posteriorly with a pair of longitudinal keels … 18

17 Cercus, in frontal view, narrowed between the base and apex … *Dexosarcophaga* (*Dexosarcophaga*) *tupinamba* (Figs 58-59)

- Cercus, in frontal view, without constriction between the base and apex … *Dexosarcophaga* (*Dexosarcophaga*) sp. nov. 1 (Figs 63-67)

18 Anterior projection of the distiphallus with median concavity on its margin … 19

- Anterior projection of the distiphallus without concavity on its margin … 20

19 Cercus with apex acuminate. Distiphallus apically with small spines on external lateral surface. Vesica without lateral lobes … *Dexosarcophaga* (*Dexosarcophaga*) *rafaeli* (Figs 52-53)

- Cercus with apex acuminate. Distiphallus apically without spines on external lateral surface.

Vesica with lateral membranous lobes … *Dexosarcophaga* (*Dexosarcophaga*) *limitata*

20 Vesica well developed, almost reaching the same size than phallus … *Dexosarcophaga* (*Dexosarcophaga*) *ampullula* (Figs 15-17)
- Vesica smaller or same size than distiphallus … 21

21 Vesica, in lateral, triangular, without membranous lobes … *Dexosarcophaga* (*Dexosarcophaga*) sp. nov. 2 (Figs 68-72)
- Vesica, in lateral, non-triangular, composed of two membranous lobes distally ... 22

22 Basiphallus with a pair of posterior serrated keels. Lobes of vesica spinose … *Dexosarcophaga* (*Dexosarcophaga*) *tracua* (Figs 54-55)
- Posterior basiphallic keels smooth. Membranous lobes of vesica without spines … *Dexosarcophaga* (*Dexosarcophaga*) *bermudezi* (Figs 22-24)

23 Gena with white setae. Cercal prongs united. Median stylus long, longer than distiphallus. … *Malacophagomyia filamenta* (Figs 111-112)
- Gena with black setae. Cercal prongs separated. Median stylus short … 24

24 Surstylus and cercus with spines apically. Distiphallus with conspicuous pointed projections. Distiphallus not articulate with basiphallus … *Promayoa peculiares* (Figs 262-266)
- Surstylus and cercus without spines apically. Distiphallus without pointed projections. Distiphallus articulated with basiphallus … 25

25 Distiphallus without capitis. Distiphallus completely membranous … *Hallina egregia* (Figs 83 - 84)
Disiphallus with or without capitis. Distiphallus with sclerotized areas … 26

26 Surstylus with distal portion curved posteriorly. Postgonite claw-shaped with a long and stout seta on the anterior margin … *Sarcofahrtiopsis terezinhae* (Figs 290-292)
Surstylus with distal portion not curved posteriorly. Postgonite long and narrow with a long and slender setae … 27

27 Cercus, in lateral view, with rounded apex … 28
- Cercus, in lateral view, with pointed apex … 29

28 Distiphallus with a long and sclerotized capitis (about two-thirds of distiphallus length) … *Helicobia domquixote* (Figs 95-97)
- Distiphallus with short capitis … *Helicobia chapadensis* (Figs 93-94)

29 Cercus, in lateral view, with distal half narrow and straight … *Helicobia morionella* (Figs 98-100)
- Cercus, in lateral view, with distal half conical and curved … 30

30 Anterior margin of distiphallus with pointed projections … 31
- Anterior margin of distiphallus without pointed projections … 32

31 Juxta short, composed of a pair of stout lateral plates … *Helicobia aurescens* (Figs 85-87)
- Juxta composed of a sinuous and elongated projection and a pair of elongated and slender lateral plates … *Helicobia cametaensis* (Figs 90-92)

32 Distiphallus with distal portion composed by sclerotized plate … *Helicobia pilipleura* (Figs 104-106)
- Distiphallus with distal portion not composed by sclerotized plate … 33

33 Tip of median stylus not covered by distiphallus, visible in lateral view … *Helicobia pilifera* (Figs 101-103)
- Tip of median stylus covered by distiphallus, not visible in lateral view … *Helicobia borgmeieri* (Figs 88-89)

34 Distiphallus with a membranous projection covered with cuticular spines in the proximal portion of vesica … *Lepidodexia* sp.
- Distiphallus without a membranous projection covered with cuticular spines in the proximal portion of vesica … 35

35 Proclinate fronto-orbital seta present … 36

- Proclinate fronto-orbital setae absent … 41

36 Postalar wall haired. Terminalia reddish … 37
- Postalar wall bare. Terminalia dark (black or brown) … 38

37 Cerci without small spines in dorsal surface. Cercus not bifurcate apically … *Rettenmeyerina* sp. nov (Figs 282-285)
- Cerci with small spines in dorsal surface. Cerci bifurcate apically … *Duckemyia latifrons* (Figs 73-74)

38 Body covered with many small light setulae. Specie restricted to coastal area … *Tricharaea* (*Tricharaea*) *brevicornis* (Figs 319-320)
- Body not covered with small light setulae, like most of the other species of Sarcophagidae. Present in coastal and non coastal area … 39

39 Mid femur with small spines … *Tricharaea* (*Sarothromyia*) *femoralis* (Figs 317-318)
- Mid femur without small spines … 40

40 Surstylus with distal half narrowed. Surstylus with small spines in distal half … *Tricharaea* (*Sarcophagula*) *occidua* (Fig 316)
- Surstylus with distal half rounded and not narrow. Surstylus without small spines … *Tricharaea* (*Sarcophagula*) *canuta* (Fig 315)

41 Lower calypter with a row of long setae in the external margin extending to posterior margin … 42
- Lower calypter with a row of long setae in the external margin not extending to posterior margin … 61

42 Lower calypter with black setae in dorsal surface … 43
- Lower calypter without black setae in dorsal surface … 44

43 Sternites usually with light setulae. Cercus with dorsal incision. Surstylus with rounded apex. ... *Peckia* (*Squamatodes*) *ingens* (Figs 249-251)

- Sternites with black setulae. Cercus without dorsal incision. Surstylus with pointed apex. ... *Peckia* (*Squamatodes*) *trivittata* (Figs 252-253)

44 Gena with black and light setae (yellow, white or gold) … 45
- Gena only with black light setae (yellow, white or gold) … 52

45 Discal scutellar setae present. Dorsal surface of cercus with many spines. Ctenidium in mid femur present … 46
- Discal scutellar setae absent. Dorsal surface of cercus without spines. Ctenidium in mid femur absent … 47

46 Outer vertical seta stronger than postoculars. Juxta narrowed towards the apex … *Peckia* (*Euboettcheria*) *australis* (Figs 197-199)
- Outer vertical seta of same size as postoculars. Juxta not narrowed at the apex … *Peckia* (*Euboettcheria*) *anguilla* (Figs 194-196)

47 All occipital setae yellow … *Peckia* (*Peckia*) *gulo* (Figs 220-222)
- Occiput with at least one row of black setae just below postocular setae … 48

48 Parafacial with gray polinosity. Species restricted to coastal areas … 49
- Parafacial with yellow polinosity. Species present in many environments … 50

49 Lateral plate of juxta, in lateral view, pointed … *Peckia* (*Peckia*) *hillifera* (Figs 223-225)
- Lateral plate of juxta, in lateral view, squared … *Peckia* (*Peckia*) *lutzi* (Figs 226-229)

50 Juxta lateral plate wider than long … *Peckia* (*Peckia*) *chrysostoma* (Figs 217-219)
- Juxta lateral plate longer than wide … 51

51 Cercus with dorsal incision. Juxta lateral plate longer and distally wide laterally … *Peckia* (*Peckia*) *veropeso* (Figs 236-238)
- Cercus without dorsal incision. Juxta lateral plate with rounded apex laterally … *Peckia* (*Peckia*) *urceola*

52 Gena without black setae, all setae yellow, gold or white … 53
- Gena usually with black setae, all other setae yellow, gold or white … 54

53 Cercus, in lateral view, flattened and without median rounded projection. Inner lateral margin of cercus with dorsal spines … *Peckia* (*Peckia*) *uncinata* (Figs 233-235)
- Cercus, in lateral view, not flattened and with median rounded projection. Inner lateral margin of cercus without dorsal spines … *Peckia* (*Peckia*) *pexata* (Figs 230-232)

54 Ventral surface of abdomen with dark setae. Cercus with or without spines … 55
- Ventral surface of abdomen with light setae. Cercus without spines … 59

55 Lateral margin of cercus laterally projected above epandrium … *Peckia* (*Euboettcheria*) *epimelia* (Figs 203-204)
- Lateral margin of cercus not projected above epandrium … 56

56 Cercus apex without long and robust spines … *Peckia* (*Euboettcheria*) *collusor* (Figs 200-202)
Cercus apex with long and robust spines … 57

57 Surstylus with pointed apex and curved anteriorly … *Peckia* (*Euboettcheria*) *subducta* (Figs 205-207)
- Surstylus with rounded apex and not curved … 58

58 Cercus with a maximum of four pre-apical stout spines. Cercus apex pointed … *Peckia* (*Sarcodexia*) *florencioi* (Figs 239-241)
- Cercus with more than four pre-apical stout spines. Cercus apex rounded … *Peckia* (*Sarcodexia*) *tridentata* (Figs 246-248)

59 Tergite 5 with golden polinosity. Phallic tube with small and pointed projection nearly the juxta … *Peckia* (*Pattonella*) *intermutans* (Figs 208-210)
- Tergite 5 with gray pollinosity. Phallic tube without small and pointed projection nearly the juxta … 57

60 Cerci with L-shape in lateral view … *Peckia* (*Pattonella*) *smarti* (Figs 214-216)

- Cerci clubbed in lateral view … *Peckia* (*Pattonella*) *pallidipilosa* (Figs 211-213)

61 Mid femur with apical posteroventral ctenidium … 62
- Mid femur without apical posteroventral ctenidium … 102

62 Phallus with membranous harpes. Juxta covered with microtrichia … *Lipoptilocnema crispula* (Figs 107-110)
- Phallus without harpes. Juxta without microtrichia … 63

63 Fore trochanter with a group of spines … 64
- Fore trochanter without spines … 65

64 Cercus almost straight, without spines … *Villegasia almeidai* (Figs 324-326)
- Cerci sharply curved anteriorly, with spines … *Blaesoxipha* (*Tephromyia*) *hunteri* (Figs 8-10)

65 Tegula and basicosta light (white or yellow) … *Ravinia belforti*
- Tegula black and basicosta light (white or yellow) … 66

66 Gena silver with light setae. Surstylus with tuft of long hair-like setae … *Sinopiella rufopilosa* (Figs 296-298)
- Gena golden or silver with dark setae. Surstylus without tuft of long setae … 67

67 Thorax with one or more pair of presutural acrostichal setae. Terminalia (epandrium and phallus) completely black … 68
- Thorax usually without presutural acrostichal setae. Terminalia (epandrium and phallus) completely or partially reddish or orange … 78

68 Lateral and median styli with apex outer of distiphallus … 69
- Lateral and median styli with apex inner of distiphallus … 71

69 Vesica longer than distiphallus … *Dexosarcophaga* (*Dexosarcophaga*) *avispaensis* (Figs 18-21)
- Vesica smaller than distiphallus … 70

70 Median stylus slightly curved anteriorly … *Dexosarcophaga* (*Dexosarcophaga*) *pusilla* (Figs 49-51)

- Median stylus strongly curved anteriorly … *Dexosarcophaga* (*Dexosarcophaga*) *transita* (Figs 56-57)

71 Vesica with long ventral projection … 72

- Vesica without projection, with ventral surface rounded … 73

72 Apex of distiphallus rounded … *Dexosarcophaga* (*Dexosarcophaga*) *globulosa* (Figs 39-40)

- Apex of distiphallus with projection … *Dexosarcophaga* (*Dexosarcophaga*) *hugoi* (Figs 41-42)

73 Distal portion of distiphallus, including juxta, membranous … 74

- Distal portion of distiphallus, including juxta, sclerotized… 77

74 Vesica, in lateral view, with spine-like projections … *Dexosarcophaga* (*Dexosarcophaga*) *malaisei* (Fig 45- 48)

Vesica without spine-like projections … 75

75 Cercus with pointed apex … *Dexosarcophaga* (*Dexosarcophaga*) *currani* (Figs 35-38)

- Cercus with truncate apex … 76

76 Vesica subrectangular in ventral view. Pregonite stout and strongly curved ventrally. Dorsal surface of distiphallus without a small lobe … *Dexosarcophaga* (*Dexosarcophaga*) *campina* (Figs 28 - 31)

- Vesica horseshoe-shaped in ventral view. Pregonite narrow and strongly curved ventrally. Dorsal surface of the distiphallus with a small lobe … *Dexosarcophaga* (*Dexosarcophaga*) *wyatti* (Figs 60-62)

77 Apex of vesica laterally curved … *Dexosarcophaga* (*Dexosarcophaga*) *bidentata* (Figs 25-27)

- Apex of vesica not curved laterally … *Dexosarcophaga* (*Dexosarcophaga*) *carvalhoi* (Figs 32-34)

78 Ctenidium with normal spines (rounded). Vesica reduced, represented by a small rounded plate … *Oxyvinia uraricoera* (Figs 190-191)

- Ctenidium with flat spines laterally. Vesica well developed, represented by a prominent projection with various shapes … 79

79 Apical scutellar seta present, generally thin … 80
- Apical scutellar seta absent … 92

80 Lateral triangular extension above vesical absent … *Oxysarcodexia mineirensis* (Figs 171-172)
- Lateral triangular extension above vesical present … 81

81 Distiphallus with apical concavity … *Oxysarcodexia carvalhoi* (Figs 142-144)
- Distiphallus without apical concavity … 82

82 Three postsutural dorsocentral setae … *Oxysarcodexia grandis* (Figs 157-158)
- Two postsutural dorsocentral setae … 83

83 Cercus apex truncated … *Oxysarcodexia avuncula* (Figs 133-136)
- Cercus apex not truncated … 84

84 Thorax without yellow polinosity… *Oxysarcodexia fluminensis* (Figs 151-153)
- Thorax with yellow polinosity… 85

85 Cercus, in lateral view, sinuous … 86
- Cercus, in lateral view, straight or curved … 88

86 Vesica lobe without spines, with serrated margin … *Oxysarcodexia adunca* (Figs 124-126)
- Vesica lobe with many spines … 87

87 Vesica lobe broadened … *Oxysarcodexia insolita* (Figs 162-164)
- Vesica lobe narrowed … *Oxysarcodexia major* (Figs 168-170)

88 Cercus apex, in lateral view, pointed … *Oxysarcodexia bakeri* (Figs 137-139)
- Cercus apex, in lateral view, squared … 89

89 Vesica lobe without spines and sclerotized. Vesica lobe projection with bifid apex, in posterior view … *Oxysarcodexia berlai* (Figs 140-141)

- Vesica lobe with many spines and membranous. Vesica lobe projection with apex having only one tip, in posterior view … 90

90 Latero-anterior margim of distiphallus serrated … *Oxysarcodexia xanthosoma* (Figs 187-189)

- Latero-anterior margim of distiphallus non-serrated … 91

91 Distiphallus, in lateral view, with juxta margin curved upward ... *Oxysarcodexia amorosa* (Figs 127-129)

- Distiphallus, in lateral view, with juxta margin curved downward ... *Oxysarcodexia inflata* (Figs 159-161)

92 Mid femur, tibia and ventral surface of abdomen with hair-like setae. Vesica asymmetric … *Oxysarcodexia villosa* (Figs 184-186)

- Mid femur, tibia and ventral surface of abdomen without long setae. Vesica asymmetric or symmetric … 93

93 Thorax with three postsutural dorsocentrals setae and first setae never reduced .... *Oxysarcodexia augusta*

- Thorax with four postsutural dorsocentrals setae, with the first setae reduced … 94

94 Marginal median setae of tergite 4 reduced. Tergite 5 fully golden yellow. Distiphallus apex with membranous protuberance … *Oxysarcodexia intona* (Figs 165-167)

- Marginal median setae of tergite 4 developed. Tergite 5 partially Golden yellow or with other coloration. Distiphallus apex without membranous protuberance … 95

95 Terminalia dark (black or brown). Vesica lobe widened, surpassing apex of distiphallus … *Oxysarcodexia modesta* (Figs 173-176)

- Terminalia yellow. Vesica lobe not surpassing apex of distiphallus … 96

96 Vesica with sclerotized plate without membranous area … 97

- Vesica composed by membranous area … 98

97 Anterior setae of ventral surface of hind femur restricted to apical half . Vesica with pointed projection without serrated area … *Oxysarcodexia timida* (Figs 181-183)
- Anterior setae of ventral surface of hind femur also present in basal half.. Vesica with serrated plate … *Oxysarcodexia thornax* (Figs 179-180)

98 Cercus with distal half clubbed. Vesica with asymmetric lobe … *Oxysarcodexia fringidae* (Figs 154-156)
- Cercus with distal half not clubbed, in lateral view. Vesica with symmetric lobe … 99

99 Distal portion of vesica with long projection and curved upward … *Oxysarcodexia oculta* (Figs 177-178)
- Distal portion of vesica without long projection and curved upward … 100

100 Cercus, in lateral view, with tip curved posteriorly with dorsal and ventral pointed projection. Cerci, in posterior view, with divergent apex … *Oxysarcodexia confusa* (Figs 145-147)
- Cercus, in lateral view, with tip not curved posteriorly without dorsal and ventral pointed projections. Cerci, in posterior view, with parallel apex … 101

101 Distiphallus with triangular apex. Vesica lobe bifid … *Oxysarcodexia angrensis* (Figs 130-132)

- Distiphallus with rounded apex. Vesica lobe rounded without projections … *Oxysarcodexia diana* (Figs 148-150)

102 Scape and pedicel reddish … 103
- Scape and pedicel brown or black … 104

103 Gena golden with back setae. Wing with brown marks … *Malacophagula neotropica* (Figs 113-114)
- Gena gray with withe setae. Wings without brown marks … *Sarcophaga* (*Liopygia*) *ruficornis* (Figs 293-295)

104 Fore trochanter with a cluster of spines … 105

- Fore trochanter without a cluster of spines … 106

105 Cerci with pre-apical pointed apex … *Peckiamyia abnormalis* (Figs 254-257)
- Cerci without pre-apical pointed apex … *Peckiamyia minutipenis* (Figs 258-261)

106 Surstylus elongated with pointed apex curved posteriorly. Lateral stylus elongated, longer than distiphallus … *Chrysagria duodecimpunctata* (Figs 11-14)
- Surstylus short with rounded apex, not curved posteriorly. Lateral stylus shorther than distiphallus … 107

107 Apical scutellar setae absent. Sternite 4 with two cluster of strong setae on anterior margin. Antero-lateral margin of distiphallus with pointed projections … 108
- Apical scutellar setae present, sometimes small. Sternite 4 without cluster of setae on anterior margin. Antero-lateral margin of distiphallus without pointed projections … 109

108 Lateral and median styli stout and bearing many cuticular spines. Juxta membranous … *Thomazomyia adunca* (Figs 299-302)
Lateral and median styli slender without spines. Juxta sclerotized … 112

109 Scutellum without white setae … *Titanogrypa* (*Sarconeiva*) *fimbriata* (Figs 312-314)
- Lateral margin of scutellum with a cluster of white setae … 110

110 Antero-lateral margin of distiphallus lateral with many pointed projections … *Titanogrypa* (*Cucullomyia*) *alvarengai* (Figs 303-304)
- Antero-lateral margin of distiphallus without pointed projections … 111

111 Cercal prong divergent with tip convergent … *Titanogrypa* (*Cucullomyia*) *luculenta* (Figs 308-311)
- Cercal prong parallel … *Titanogrypa* (*Cuculomyia*) *larvicida* (Figs 305-307)

112 Mid tibia with long median anterior seta that extends beyond the apex of tibia. Apex of cercus curved anteriorly … *Peckia* (*Sarcodexia*) *lambens* (Figs 242-245)
- Mid tibia without a long median anterior seta that extends beyond the apex of tibia. Apex of

cercus not curved anteriorly … 113

113 Apex of cercus, in lateral view, pointed and narrow … 114
- Apex of cercus, in lateral view, rounded … 115

114 Cercal prong parallel and united … *Engelimyia inopsi* (Figs 79-82)
- Cercal prong divergent … *Emblemasoma emblemasoma* (Figs 75-78)

115 Gena gray or yellow with black setae … *Retrocitomyia urumajoensis* (Figs 278-281)
- Gena yellow or golden with yellow seta … 116

116 Juxta tightly curved anteriorly, forming approximately a 90º angle with phallic tube … *Retrocitomyia mizuguchiana* (Figs 271-274)
- Juxta slightly inclined anteriorly, never forming a 90° angle with phallic tube … *Retrocitomyia retrocita* (Figs 275-277)

Checklist of Sarcophaginae species recorded from the Brazilian Amazon Region

***Argoravinia* (*Argoravinia*) *alvarengai* Lopes, 1976**

(Figs 1)

Argoravinia alvarengai Lopes, 1976a:693. Brazil, Roraima, Suruma.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15'12''S 49º36'12''W/ Armadilha Pratos Amarelos/ 13 a 23. I. 2015// BRASIL-PARÁ, Cametá/ Cols: F. Carvalho, Jazon/ Quaresma, A. Quaresma/ D. Guimarães, K. Monteiro-/ Souza; 07 a 21. IV. 2015.

Distribution: NEOTROPICAL - Brazil (Roraima, Pará), Colombia, Venezuela.

***Argoravinia* (*Argoravinia*) *catiae* Carvalho-Filho & Esposito, 2012**

(Figs 2)

Argoravinia catiae Carvalho-Filho & Esposito, 2012:9. Brazil, Pará.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá; Mata/ Margem Rio Cupijó, Arm./ Suspensa, 13 a 29. I 2015/ 02º15'21''S 49º36'39''W// BRASIL-PARÁ, Cametá/ Cols: F. Carvalho, Jazon/ Quaresma, A. Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 23 a 29. I. 2015.

Distribution: NEOTROPICAL – Brazil (Pará).

***Argoravinia* (*Argoravinia*) *paraensis* Carvalho-Filho & Esposito, 2012**

(Figs 3)

Argoravinia paraensis Carvalho-Filho & Esposito, 2012:11. Brazil Pará.

Distribution: NEOTROPICAL – Brazil (Pará).

***Argoravinia* (*Argoravinia*) *rufiventris* (Wiedemann, 1830)**

(Figs 4)

Sarcophaga rufiventris Wiedemann, 1830:362. Brazil.

Sarcophaga modesta Wiedemann, 1830:363. Brazil.

Sarcophaga despensa Walker, 1861:309. Mexico.

Sarcophaga argenta Townsend, 1911:139. *Nomen nudum.*

Sarcophaga argentea Townsend, 1912b:358. Peru, Piura.

Sarcophaga fissa Aldrich, 1916:290. Honduras, Pt. Cortez.

Sarcophaga (*?Pierretia*) *sanctijosephi* Engel, 1931:150 (as sancti-josephi). Bolivia, Chiquitoq, San José.

Helicobia guianica Curran & Walley, 1934:479. Guyana, Kartabo.

Material examined: (1♂, MPEG) Igarapé-Açu/ Faz. B. Sucesso/ 12-9. 1964// Brasil, Pa/ Apol. Souza.

Distribution: NEARCTIC - Mexico (Baja California Sur, Sonora), USA (Louisiana, Texas). NEOTROPICAL - Argentina (no further data), Bolivia, Brazil (Ceará, Pará), Costa Rica, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico (Jalisco, Nayarít, Sinaloa, Veracruz), Panama, Peru, Puerto Rico, Trinidad & Tobago (Trinidad). AUSTRALASIAN/OCEANIAN - Marshall Is.

***Argoravinia* (*Raviniopsis*) *aurea* (Townsend, 1918)**

(Figs 5-7)

Raviniopsis aurea Townsend, 1918:160. Peru, Piura.

Pachygraphomyia spinosa Hall, 1933:260. Panama, Canal Zone, Barro Colorado.

Material examined: (1♂, MPEG) Belém PA – Brail/ Campus do MPEG/ Mata secundaria/ F. S. Carvalho – Filho.

Distribution: NEARCTIC - Mexico (Chihuahua). NEOTROPICAL - Belize, Brazil (Amazonas, Goiás, Pará, Paraná, Rio de Janeiro, Roraima, São Paulo), Costa Rica, Dominican Republic, French

Guyana, Guyana, Mexico (Veracruz), Panama, Peru, Surinam, Trinidad & Tobago (Trinidad). AUSTRALASIAN/OCEANIAN – Marshall.

***Blaesoxipha* (*Tephromyia*) *hunteri* Hough, 1898**

(Figs 8-10)

Sarcophaga (*Tephromyia*) *hunteri* Hough, 1898:207. USA, Kansas.

Protodexia synthetica Townsend, 1912a:117. USA, Massachusetts, Melrose Highlands.

Protodexia deaurata Blanchard, 1942b:349. Argentina, Córdoba.

Protodexia ogloblini Blanchard, 1942b:353. Argentina, San Luis.

Sarcophaga hunteri ssp. *aenigma* Reinhard, 1947:103. USA, New York, Long Island, Babylon.

oglobini: Lopes (1969:80); incorrect subsequente spelling of *ogloblini* Blanchard, 1942.

Remarks: First record for Brazilian Amazon.

Distribution: NEARCTIC - Canada (Alberta, British Columbia, Manitoba, Quebec, Saskatchewan), Mexico (Sonora), USA (Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Massachusetts, Maryland, Michigan, Mississippi, Missouri, Montana, Nebraska, North Dakota, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, Vermont, Washington, Wyoming). NEOTROPICAL - Argentina (Chubut, Córdoba, San Luis), Brazil (Rio de Janeiro, Pará), Costa Rica, El Salvador, Paraguay, Uruguay.

***Chrysagria duodecimpunctata* Townsend, 1935 (New record)**

(Figs 11-14)

Chrysagria duodecimpunctata Townsend, 1935:73. Brazil, Pernambuco, Tapéra.

Sarcofahrtiamyia tenta Hall, 1937a:353. Argentina, Misiones, Bonpland ["Bompland"].

Material examined: (1♂, MPEG) Brasil Pará/ Benevides/ Col. I. Cruz/ 12. V. 1988.

Distribution: NEARCTIC - Mexico (San Luis Potosí), USA (Florida). NEOTROPICAL - Argentina (Misiones), Brazil (Minas Gerais, Pará, Pernambuco, Rio de Janeiro, Roraima), Colombia, Dominica, Guatemala, Jamaica, Mexico (Chiapas, Jalisco), Peru.

***Dexosarcophaga* (*Dexosarcophaga*) *ampullula* (Engel, 1931) (New record)**

(Figs 15-17)

Bercaea ampullula Engel, 1931:142. Argentina, Lapango.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Mata/ 02º15’17’’S 49º36’51’’W/ Malaise; 07 a 15. IV. 2015// BRASIL-PARÁ, Cametá/ Cols: I.S. Gorayeb, J. Borges /

B. F. dos Anjos, W. Carvalho / Luís Lopes, J.A. Rodrigues/ 07 a 21. IV. 2015.

Remarks: First record for Brazilian Amazon.

Distribution: NEOTROPICAL - Argentina (no further data), Brazil (Goiás, Mato Grosso, Pará, Rio de Janeiro, São Paulo).

***Dexosarcophaga* (*Dexosarcophaga*) *avispaensis* Mello, 1986**

(Figs 18-21)

Dexosarcophaga avispaensis Mello, 1986:347. Peru, Avispas, Madre de Dios.

Distribution: NEOTROPICAL – Brazil, Peru.

***Dexosarcophaga* (*Dexosarcophaga*) *bermudezi* Silva & Mello-Patiu, 2010**

(Figs 22-24)

Dexosarcophaga (*Bezzisca*) *bermudezi* Silva & Mello-Patiu, 2010:90. Panama, Los Santos.

Material examined: (1♂, MPEG) Brasil – Pará - Bragança/ Mata do lobão/ Armadilha borboleta/ 14 – 15. VIII. 2008/ R. C. O. Santos.

Distribution: NEOTROPICAL – Brazil (Pará), Panama (Los Santos)

***Dexosarcophaga* (*Dexosarcophaga*) *bidentata* Dodge, 1966**

(Figs 25-27)

Dexosarcophaga bidentata Dodge, 1966:680. Trinidad & Tobago, Trinidad, Santa Cruz.

Distribution: NEOTROPICAL – Brazil, Trinidad & Tobago (Trinidad).

***Dexosarcophaga* (*Dexosarcophaga) campina* Carvalho-Filho, Gorayeb, Soares & Souza, 2018**

(Figs 28-31)

Dexosarcophaga (*Dexosarcophaga) campina* Carvalho-Filho, Gorayeb, Soares & Souza, 2018: 4. Brazil, Pará, Cametá.

Material examined: (1♂, INPA) Brasil, Amazonas/ Parque nacional Jaú/ 29. VII – 08. VIII. 2001/ 015446S, 613523W// Arm. Malaise/ Campina arbustiva/ Henrique & Vidal.

Distribution: NEOTROPICAL – Brazil (Pará)

***Dexosarcophaga* (*Dexosarcophaga*) *carvalhoi* Lopes, 1980**

(Figs 32-34)

Farrimyia carvalhoi Lopes, 1980a:7. Brazil, Minas Gerais, Pirapora.

Distribution: NEOTROPICAL - Brazil (Minas Gerais, São Paulo, Amazonas).

***Dexosarcophaga* (*Dexosarcophaga) currani* Dodge, 1968 (New record)**

(Figs 35-38)

Dexosarcophaga currani Dodge, 1968b:428. Panama, Canal Zone, Barro Colorado I.

Material examined: (1♂, INPA) Brasil, AM, Manaus, ZF2/ Km 14, Torre, 023521 S -/ 600655 W, 16 – 19. VII. 2004/ Lencol: Luz mista e BLB/ 40 mts altura, J. A. Rafael/ 40 mts altura, J. A. Rafael,/ C. S. Motta, F. F. Xavier Fº,/ J. M. F. Ribeiro & S. Trovisco.

Remarks: First record for Brazil.

Distribution: NEOTROPICAL – Brazil (Manaus), Panama.

***Dexosarcophaga* (*Dexosarcophaga*) *globulosa* Lopes, 1946**

(Figs 39-40)

Dexosarcophaga globulosa Lopes, 1946a:129. Brazil, Rio de Janeiro, Grajaú.

Material examined: (1♂, MPEG) Brasil, PA, Cametá/ Campina/ Arm. Suspensa Baixa/ 17-23. I. 2015.

Distribution: NEOTROPICAL - Brazil (Bahia, Ceará, Mato Grosso, Pará, Rio de Janeiro), Guyana.

***Dexosarcophaga* (*Dexosarcophaga*) *hugoi* Pape, 1996**

(Figs 41-42)

Farrimyia lopesi Mello, 1990:373. Brazil, Roraima, Rio Uraricoera, Ilha de Maracá [Junior secondary homonym of *Dexosarcophaga lopesi* Dodge, 1968]

Dexosarcophaga hugoi Pape, 1996.

Distribution: NEOTROPICAL - Brazil (Roraima)

***Dexosarcophaga* (*Dexosarcophaga*) *limitata* (Lopes, 1975)**

(Figs 43-44)

Bezzisca limitata Lopes, 1975a:264. Brazil, Rio de Janeiro, Angra dos Reis, Japuhyba.

Distribution: NEOTROPICAL - Brazil (Pará, Rio de Janeiro).

Dexosarcophaga (*Dexosarcophaga*) malaisei Dodge, 1968 (New record)

(Figs 45-48)

Dexosarcophaga malaisei Dodge, 1968b:431. Panama, Canal Zone, Barro Colorado I.

Remarks: First record for Brazilian Amazon.

Distribution: NEOTROPICAL – Brasil, Panama.

***Dexosarcophaga* (*Dexosarcophaga*) *pusilla* Lopes, 1975**

(Figs 49-51)

Dexosarcophaga pusilla Lopes, 1975b:289. Brazil, Ceará, Pacatuba.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Brazil (Ceará, Pará), Costa Rica, Panama.

***Dexosarcophaga* (*Dexosarcophaga*) *rafaeli* (Tibana & Lopes, 1990)**

(Figs 52-53)

Bezzisca rafaeli Tibana & Lopes, 1990:672. Brazil, Roraima, Rio Uraricoera, Ilha de Maraca.

Distribution: NEOTROPICAL - Brazil (Roraima).

***Dexosarcophaga* (*Dexosarcophaga*) *tracua* Carvalho-Filho, Sousa & Esposito 2011**

(Figs 54-55)

Dexosarcophaga (*Bezzisca*) *tracua* Carvalho-Filho, Sousa & Esposito 2011:53. Brazil, Pará.

Distribution: NEOTROPICAL – Brazil (Pará)

***Dexosarcophaga* (*Dexosarcophaga*) *transita* Townsend, 1917**

(Figs 56-57)

Dexosarcophaga transita Townsend, 1917a:221. Brazil, Mato Grosso, Chapada.

Sarcophaga scelesta Hall, 1931a:285. USA, Texas, Menard.

Tetradiscalis steinbachi Enderlein, 1928a:22 (as J. Steinbachi). Bolivia, Sara.

Sarcophaga excitans Curran & Walley, 1934:486. Guyana, Kartabo.

Sarcophaga scelesta ssp. aduncta Hall, 1933:275. Panama.

Dexosarcophaga halli Dodge, 1968b:429. Panama, Canal Zone, Barro Colorado I.

aduncа: Lopes (1969:42); incorrect subsequent spelling of *aduncta* Hall, 1933.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá; Mata/ Margem Rio Cupijó, Arm./ Suspensa, 13 a 29. I 2015/ 02º15’21’’S 49º36’39’’W// BRASIL-PARÁ, Cametá/ Cols: F. Carvalho, Jazon/ Quaresma, A. Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 23 a 29. I. 2015.

Remarks: First record for Brazilian Amazon.

Distribution: NEARCTIC - USA (Texas). NEOTROPICAL - Brazil (Ceará, Mato Grosso, Minas Gerais, Pará), Costa Rica, Guyana, Panama.

***Dexosarcophaga* (*Dexosarcophaga*) *tupinamba* Carvalho-Filho, Sousa & Esposito 2013**

(Figs 58-59)

Dexosarcophaga (Bezzisca) tupinamba Carvalho-Filho, Sousa & Esposito 2013:64. Brazil, Pará, Maranhão.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Brazil (Pará, Maranhão).

***Dexosarcophaga* (*Dexosarcophaga*) *wyatti* Mello-Patiu & Pape 2000 (New Record)**

(Figs 60-62)

Dexosarcophaga (*Dexosarcophaga*) *wyatti* Mello-Patiu & Pape 2000:184. Guiana.

Material examined: (1♂, INPA) Brasil, AM, Manaus, ZF2/ Km 14, Torre, 023521 S -/ 600655 W, 16 – 19. VII. 2004/ Lencol: Luz mista e BLB/ 40 mts altura, J. A. Rafael/ 40 mts altura, J. A. Rafael,/ C. S. Motta, F. F. Xavier Fº,/ J. M. F. Ribeiro & S. Trovisco.

Remarks: First record for Brazil.

Distribution: NEOTROPICAL – Brazil (Amazonas), Guiana

***Duckemyia latifrons* Kano & Lopes, 1969**

(Figs 73-74)

Duckemyia latifrons Kano & Lopes, 1969:92. Brasil, Amazonas, Manaus, Reserva Ducke.

Distribuição: NEOTROPICAL - Brasil (Amazonas).

***Emblemasoma emblemasoma* (Dodge, 1968) (New record)**

(Figs 75-78)

Pessoamyia emblemasoma Dodge, 1968b:446. Panama, Canal Zone, Barro Colorado I.

Material examined: (1♂, DZUSP) Vilhana, RO/ 11/02/1986/ C. Elias, leg./ POLONOROESTE.

Remarks: First record for Brazil.

Distribution: NEOTROPICAL – Brazil (Roraima), Panama.

***Engelimyia inops* (Walker, 1849)**

(Figs 79-82)

Sarcophaga inops Walker, 1849:816. [Unknown.]

Sarcophaga (Paraphrissopoda) cassidifera Engel, 1931:152. Bolivia, El Cairo.

Paraphrissopoda bosqi Blanchard, 1939:828. Argentina, Misiones.

ionops: Lopes & Tibana (1982:294); incorrect subsequent spelling of *inops* Walker, 1849.

Material examined: (1♂, INPA) BRA, AM, Urucu/ Ig. 15/ 04º 50' 37,5''S, 65º 20' 26,8''W// Pensylvania/ 26 – 27. Xi. 2007/ col.: Couceiro, S. / R. M// Diptera/ Sarcophagidae/ Leg. Fusari, L. M.

Distribution: NEOTROPICAL - Argentina (Misiones), Bolivia, Brazil (Amazonas, Espirito Santo, Mato Grosso, Minas Gerais, Pará, Rio de Janeiro, Santa Catarina, São Paulo), Costa Rica, Panama, Peru.

***Hallina egregia* (Hall, 1933) (New Record)**

(Figs 83-84)

Sarcophaga egregia Hall, 1933:276. Panama, Canal Zone, Fort Randolph and Fort Sherman.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Remarks: First record for Brazil.

Distribution: NEOTROPICAL - Brazil (Pará), Panama, Trinidad & Tobago (Trinidad).

***Helicobia aurescens* (Lahille, 1907)**

(Figs 85-87)

Sarcophaga parvula Lahille, 1907:87. Argentina, Catamarca, Chumbicha. [Junior primary homonym of Sarcophaga parvula Wiedemann, 1830.]

Helicobiopsis aurescens Townsend, 1927:313. Brazil, São Paulo, Itaquaquecetuba.

Opsophyto? *lahillei* Blanchard, 1939:842. New name for *Sarcophaga parvula* Lahille, 1907.

Material examined: (1♂, MPEG) S. Antônio Imbé/ S. M. MADALENA E. Rio/ Brasil VII – 1980/ M. Alvarenga lag.

Distribution: NEOTROPICAL - Argentina (Catamarca, Corrientes, Misiones), Brazil (Rio de Janeiro, Pará, São Paulo).

***Helicobia borgmeieri* Lopes, 1939**

(Figs 88-89)

Helicobia borgmeieri Lopes, 1939:510. Brazil, Goiás, Campinas.

Distribution: NEOTROPICAL - Brazil (Goiás, Pará, São Paulo).

***Helicobia cametaensis* Carvalho-Filho, Gorayeb, Soares & Souza, 2018**

(Figs 90-92)

Helicobia cametaensis Carvalho-Filho, Gorayeb, Soares & Souza, 2018: 6. Brazil, Pará, Cametá.

Distribution: NEOTROPICAL – Brazil (Pará)

***Helicobia chapadensis* (Tibana & Lopes, 1985)**

(Figs 93-94)

Helicobiomima chapadensis Tibana & Lopes, 1985:193. Brazil, Mato Grosso, Chapada dos Guimarães.

Distribution: NEOTROPICAL - Brazil (Mato Grosso, Roraima).

***Helicobia domquixote* Carvalho-Filho, Gorayeb, Soares & Souza, 2018**

(Figs 95-97)

Helicobia domquixote Carvalho-Filho, Gorayeb, Soares & Souza, 2018:7. Brazil, Pará, Cametá

Material examined: (1♂, INPA) Brasil, Amazonas, Rio/ Abacaxis, Flona P. Rosa/ 05º 15' 09''S – 59º 41' 52''W// 28 – 29. V. 2008, J. A. Rafael/ e equipe, Arm. Luminosa/ no dossel.

Distribution: NEOTROPICAL – Brazil (Pará)

***Helicobia morionella* (Aldrich, 1930)**

(Figs 98-100)

Sarcophaga morionella Aldrich, 1930:31. Cuba, Habana.

Oxyhelicobia chacoana Blanchard, 1942a:63. Argentina, Chaco, Charata.

Material examined: (1♂, INPA) INPA. Manaus/ AM. Br./ 11. VI. 76. Nilce.

Distribution: NEARCTIC - Bermuda, Mexico (Baja California Norte, Mexico, San Luis Potosí, Sonora), USA (California, Florida, Georgia, North Carolina, Texas). NEOTROPICAL - Argentina (Chaco), Bahamas (Andros, Eleuthera, Exuma Cays), Brazil (Amazonas, Mato Grosso, Rio de Janeiro, São Paulo), Colombia, Costa Rica, Cuba, Dominica, El Salvador, Guatemala, Haiti, Jamaica, Mexico (Jalisco, Nayarít, Revillagigedo Is, Sinaloa, Veracruz), Puerto Rico, American Virgin Is. AUSTRALASIAN/OCEANIAN - Hawaiian Is (Hawaii, Kauai, Lanai, Maui, Midway, Molokai, Niihau, Oahu).

***Helicobia pilifera* Lopes, 1939**

(Figs 101-103)

Helicobia pilifera Lopes, 1939:508. Brazil, Rio de Janeiro, Gávea.

Material examined: (1♂, MPEG) Brasil. PA, Cametá/ Campina/ Arm. Malaise/20-23. I. 2015.

Distribution: NEOTROPICAL - Argentina (Misiones), Brazil (Ceará, Mato Grosso, Rio de

Janeiro, Pará, São Paulo), Trinidad & Tobago (Trinidad).

***Helicobia pilipleura* Lopes, 1939**

(Figs 104-106)

Helicobia pilipleura Lopes, 1939:514. Brazil, Rio de Janeiro, Grajahú.

Material examined: (1♂, INPA) Brasil: ES, Linhares/ Reserva Natural vale/ Estrada Experimentral na/ M. P. Sapo PT – 19 YPT// BRA, ES, Linhares/ Res. Natural vale/ Est. Exp. Na M. P. Sapo/ PT – 19. YPT/ F. G. Rampinelli: et. Al. Leg.

Distribution: NEOTROPICAL - Argentina (Misiones), Brazil (Bahia, Espirito Santo, Minas Gerais, Pará, Pernambuco, Rio de Janeiro, Santa Catarina, São Paulo), Ecuador, Peru.

***Lepidodexia* (*Chlorosarcophaga*) *calliphorina* (Enderlein, 1928)**

Robineauella calliphorina Enderlein, 1928a:23. *Nomen nudum*.

Robineauella calliphorina Enderlein, 1928b:147. Paraguay.

calliphornia: Enderlein (1928b:147); incorrect subsequent spelling of de *Robineauella calliphorina* Enderlein, 1928.

calliphorinia: Lopes (1968a:341); incorrect subsequent spelling of *calliphorina* Enderlein, 1928.

Distribution: NEOTROPICAL - Brazil (Pará, Paraná, Rio de Janeiro, São Paulo), Ecuador, Paraguay.

***Lepidodexia* (*Geijskesia*) *brevigaster* Lopes, 1945**

Geijskesia brevigaster Lopes, 1945b:295. Suriname.

Distribution: NEOTROPICAL - Brazil (Amazonas), Suriname.

***Lepidodexia* (*Harpagopyga*) *pacta* (Townsend, 1934)**

Pachygraphiops pacta Townsend, 1934:204. Brazil, Pará, Rio Tapajos, Boa Vista.

Harpagopyga divergens Curran & Walley, 1934:477. Guyana, Kartabo.

Distribution: NEOTROPICAL - Brazil (Pará), Guyana, Trinidad & Tobago (Trinidad).

***Lepidodexia* (*Notochaeta*) *bogotana* (Enderlein, 1928)**

Udamoctis bogotana Enderlein, 1928a:25. Colombia, Bogota.

Distribution: NEOTROPICAL - Brazil, Colombia.

***Lepidodexia* (*Notochaeta*) *carvalhoi* Lopes, 1984**

Notochaeta carvalhoi Lopes, 1984:384. Brazil, Pará, Rio Parú.

Distribution: NEOTROPICAL - Brazil (Pará).

***Lepidodexia* (*Notochaeta*) *comata* Aldrich, 1925**

Notochaeta comata Aldrich, 1925:22. Costa Rica, Cartago, La Suiza.

Notochaeta viridis Lopes, 1950:353, 355. Peru, Junin, Chanchamayo.

Distribution: NEOTROPICAL - Brazil, Costa Rica, Peru.

***Lepidodexia* (*Notochaeta*) *distincta* Lopes, 1947**

Notochaeta distincta Lopes, 1947:378. Brazil, Amazonas, Manaus.

Distribution: NEOTROPICAL - Brazil (Amazonas), Ecuador, Mexico (Chiapas), Peru.

***Lepidodexia* (*Notochaeta*) *ignota* Lopes, 1947**

Notochaeta ignota Lopes, 1947:380. Brazil, Amazonas, Rio Negro, Umarituba.

Distribution: NEOTROPICAL - Brazil (Amazonas).

***Lepidodexia* (*Notochaeta*) *parva* Lopes, 1946**

Notochaeta parva Lopes, 1946d:519. Brazil, Pará, Belém, Utinga.

Distribution: NEOTROPICAL - Brazil (Pará), Ecuador.

***Lepidodexia* (*Notochaeta*) *subpolita* Aldrich, 1916**

Notochaeta subpolita Aldrich, 1916:53. Guatemala, Los Amates.

Distribution: NEOTROPICAL - Brazil (Pará), Guatemala, Guyana.

***Lepidodexia* (*Notochaeta*) *vittata* Lopes, 1968**

Notochaeta vittata Lopes, 1968:345. Colombia, Western Cordillera, Cali District. **Distribution:** NEOTROPICAL - Brazil (Pará), Colombia, Ecuador, Panama, Peru. AUSTRALASIAN/OCEANIAN - Marshall Is.

***Lepidodexia* (*Orodexia*) *opima* (Wiedemann, 1830)**

Sarcophaga opima Wiedemann, 1830:364. Brazil ["Brazilien"].

Orodexia ornata Townsend, 1927:341. Brazil, São Paulo, Itaquaquecetuba. [Secondary homonym of *Orobrachycoma ornata* Townsend, 1927 and *Orosarcophaga ornata* Townsend, 1927; priority to be decided by first reviser.]

Distribution: NEOTROPICAL - Brazil (Amapá, Bahia, Ceará, Minas Gerais, Pernambuco, Rio de Janeiro, São Paulo).

***Lepidodexia* (*Pachygraphomima*) *fulviventris* Lopes, 1980**

Pachygraphomima fulviventris Lopes, 1980b:422. Brazil, Pará, Belém, Aurá.

Distribution: NEOTROPICAL - Brazil (Pará).

***Lepidodexia* (*Pachygraphomima*) *gomesi* Lopes, 1980**

Pachygraphomima gomesi Lopes, 1980b:421. Brazil, Belém-Brasília road, Gurus.

Distribution: NEOTROPICAL - Brazil (Pará).

***Lepidodexia* (*Xylocamptopsis*) *teffeensis* Townsend, 1927**

Xylocamptopsis teffeensis Townsend, 1927:367. Brazil, Amazonas, Tefe.

Distribution: NEOTROPICAL - Brazil (Amazonas).

***Lipoptilocnema crispula* Lopes, 1938 (New Record)**

(Figs 107-110)

Sarcophaga crispula Lopes, 1938a:281. Brazil, Rio de Janeiro.

Material examined: (1♂, INPA) Brasil, Amazonas, Rio Preto/ Da Eva, Ramal Baixo Rio, Km 4/ 02º 43' 46,2''S/ 59º 41' 42''W/ 23 – 26. II. 2015 – Arapuca Guerra, K. F. G; lourido, G. M/ Col.

Remarks: First record for Brazilian Amazon.

Distribution: NEOTROPICAL - Brazil (Amazonas, Ceará, Rio de Janeiro, São Paulo).

***Malacophagomyia filamenta* (Dodge, 1964)**

(Figs 111-112)

Sarcophaga filamenta Dodge, 1964:240. Suriname, Paramaribo.

Material examined: (1♂, MPEG) Belém – PA – Brail/ Parque Utinga/ 30. VI. 2007/ Acathinafulica/ F.S. Carvalho- Filho

Distribution: NEOTROPICAL - Bolivia, Brazil (Pará, Rio de Janeiro), Surinam.

***Malacophagula neotropica* Bequaert, 1925**

(Figs 113-114)

Malacophagula neotropica Bequaert, 1925:208. Brazil, Pará, Belém.

Distribution: NEOTROPICAL - Brazil (Goiás, Pará).

***Nephochaetopteryx pallidiventris* Townsend, 1934**

(Figs 115-117)

Nephochaetopteryx pallidiventris Townsend, 1934:203. Brazil, Pará, Rio Tapajós, Boa Vista.

Nephochaetopteryx angrensis Dodge, 1968a:281. Brazil, Rio de Janeiro, Angra dos Reis, Japuhyba.

Distribution: NEOTROPICAL - Brazil (Pará, Rio de Janeiro).

***Nephochaetopteryx paraensis* Dodge, 1968**

(Figs 118-120)

Nephochaetopteryx paraensis Dodge, 1968a:285. Brazil, Pará, Alcoba River, Tocantins.

Distribution: NEOTROPICAL - Brazil (Pará).

***Nephochaetopteryx utinguensis* Tibana & Hime, 1985**

(Figs 121-123)

Nephochaetopteryx utinguensis Tibana & Hime, 1985:342. Brazil, Pará, Belém.

Distribution: NEOTROPICAL - Brazil (Pará).

***Oxysarcodexia adunca* Lopes, 1975 (New Record)**

(Figs 124-126)

Oxysarcodexia adunca Lopes, 1975c:475. Brazil, Espirito Santo, Conceição da Barra.

Material examined: (1♂, INPA) Brasil, Amazonas/ Barcelos, Serrinha/ 0º25’05’’N, 63º23’05’’W/VII-VIII.2007// Malaise em floresta/ A. S. Filho, T. Krolow.

Remarks: First record for Brazilian Amazon.

Distribution: NEOTROPICAL - Brazil (Amazonas, Espirito Santo, Rio de Janeiro).

***Oxysarcodexia amorosa* (Schiner, 1868)**

(Figs 127-129)

Sarcophaga amorosa Schiner, 1868:314. Brazil.

Distribution: NEARCTIC - Mexico (San Luis Potosí, Sonora). NEOTROPICAL - Brazil (Bahia, Ceará, Mato Grosso, Minas Gerais, Pará, Rio de Janeiro, Santa Catarina), Colombia, Costa Rica, Ecuador, Guyana, Mexico (Jalisco), Panama, Peru.

***Oxysarcodexia angrensis* (Lopes, 1933)**

(Figs 130-132)

Sarcophaga angrensis Lopes, 1933b:153. Brazil, Rio de Janeiro, Angra dos Reis.

Sarcophaga articulata Hall, 1933:284. Panama, Canal Zone, Los Cascadas.

Sarcophaga kartabo Curran & Walley, 1934:487. Guyana, Kartabo.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/ Km11 sul Cametá, Campina;/ 02º15’12’’S 49º36’12’’W/ Armadilha VanSomeren-Rydon/ 07 a 15. IV. 2015// BRASIL-PARÁ,

Cametá/ Cols: F. S. Carvalho Fh., Jazon/ Quaresma, A Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 07 a 21. IV. 2015.

Distribution: NEOTROPICAL - Brazil (Goiás, Mato Grosso, Pará, Rio de Janeiro, São Paulo), Costa Rica, Ecuador, Guyana, Panama, Peru, Trinidad & Tobago (Trinidad), Venezuela.

***Oxysarcodexia augusta* Lopes, 1946**

Oxysarcodexia augusta Lopes, 1946c:84. Brazil, Rio de Janeiro, Guanabara, Méier.

Distribution: NEOTROPICAL - Argentina (Misiones), Brazil (Minas Gerais, Pará, Rio de Janeiro, Santa Catarina).

***Oxysarcodexia avuncula* (Lopes, 1933)**

(Figs 133-136)

Sarcophaga avuncula Lopes, 1933b:156. Brazil, Rio de Janeiro, Guanabara, Manguinhos.

Material examined: (1♂, MPEG) Brasil, PA, Cametá/ Campina/ Arm. Suspensa Baixa/ 17-32. I. 2015.

Distribution: NEOTROPICAL - Argentina (Misiones), Bolivia, Brazil (Ceará, Federal District, Goiás, Mato Grosso, Minas Gerais, Pará, Rio de Janeiro, Santa Catarina, São Paulo), Colombia, Ecuador, Mexico (Oaxaca), Paraguay, Peru, Trinidad & Tobago (Trinidad).

***Oxysarcodexia bakeri* (Aldrich, 1916)**

(Figs 137-139)

Sarcophaga bakeri Aldrich, 1916:270. Cuba, Habana.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEARCTIC - Mexico (Baja California Sur, Sonora, Zacatecas), USA (Texas). NEOTROPICAL - Bahamas (New Providence), Brazil (Bahia, Federal District, Goiás, Mato Grosso, Pará, Pernambuco), Chile (Tarapacá), Cuba, Dominica, Ecuador, El Salvador, Guadalupe, Haiti, Honduras, Jamaica, Mexico (Chiapas, Guerrero, Sinaloa, Tabasco, Yucatán), Puerto Rico, Turks & Caicos Is.

***Oxysarcodexia berlai* Lopes, 1975**

(Figs 140-141)

Oxysarcodexia berlai Lopes, 1975c:473. Brazil, Pará, Belém, Utinga.

Distribution: NEOTROPICAL - Brazil (Maranhão, Pará, Pernambuco), Colombia.

***Oxysarcodexia carvalhoi* Lopes, 1946**

(Figs 142-144)

Oxysarcodexia carvalhoi Lopes, 1946c:92. Brazil, Minas Gerais, Cordisburgo.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km22 ao sul de Cametá;/ Mata; Armadilha Suspensa/ 02º10'12,28''S 49º32'13,44''W/4 a 17. XI. 2014// BRASIL-PARÁ, Cametá/ 4 a 12. XI. 2014; Cols.:/ F. Carvalho, Jazon Quaresma/ Jacielma Borges, D. Guimarães.

Distribution: NEOTROPICAL - Brazil (Ceará, Mato Grosso, Minas Gerais, Pará, Rio de Janeiro, São Paulo), Ecuador, Guyana.

***Oxysarcodexia confusa* Lopes, 1946**

(Figs 145-147)

Oxysarcodexia confusa Lopes, 1946c:96. Brazil, Rio de Janeiro, Miguel Pereira.

Material examined: (1♂, INPA) BRASIL, AM, Borba, Rio/ Abacaxis, Paxiúba/ 04º 28' 48''S 58º 34' 24''W// 02 – 04. Vi. 2008, J. A. Rafael/ e equipe, Malaise.

Distribution: NEOTROPICAL - Argentina (Misiones), Brazil (Amazonas, Minas Gerais, Paraná, Rio de Janeiro, Santa Catarina, São Paulo)

***Oxysarcodexia diana* (Lopes, 1933) (New record)**

(Figs 148-150)

Sarcophaga diana Lopes, 1933b:154. Brazil, Rio de Janeiro, Angra dos Reis.

Distribution: NEARTIC - Mexico (Morelos, San Luis Potosí). NEOTROPICAL - Argentina (Misiones), Brazil (Ceará, Mato Grosso, Paraná, Pará, Rio de Janeiro, Santa Catarina, São Paulo), Ecuador, El Salvador, Mexico (Chiapas), Paraguay, Trinidad & Tobago (Trinidad).

***Oxysarcodexia fluminensis* Lopes, 1946**

(Figs 151-153)

Oxysarcodexia fluminensis Lopes, 1946c:104. Brazil, Rio de Janeiro, Guanabara, Grajau.

Material examined: (1♂, MPEG) Brasil, Pa, Cametá/ Campina/ Arm. Mosca/ 15-20. I. 2015.

Distribution: NEOTROPICAL - Brazil (Pará, Rio de Janeiro, São Paulo).

***Oxysarcodexia fringidea* (Curran & Walley, 1934)**

(Figs 154-156)

Sarcophaga fringidea Curran & Walley, 1934:488. Guyana, Georgetown.

Oxysarcodexia lopesi Dodge, 1966:687. Brazil, Amazonas, Rio Negro, Carvoeiro.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15’12’’S 49º36’12’’W/ Armadilha de moscas/ 07 a 15. IV. 2015// BRASIL-PARÁ, Cametá/ Cols: F. S. Carvalho Fh., Jazon/ Quaresma, A Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 07 a 21. IV. 2015.

Distribution: NEOTROPICAL - Bolivia, Brazil (Amazonas, Bahia, Espirito Santo, Maranhão, Mato Grosso, Minas Gerais, Pará, Pernambuco, Rio de Janeiro), Colombia, Guyana, Peru, Venezuela.

***Oxysarcodexia grandis* Lopes, 1946**

(Figs 157-158)

Oxysarcodexia grandis Lopes, 1946c:82. Brazil, Rio de Janeiro, Angra dos Reis.

Distribution: NEOTROPICAL - Brazil (Pará, Paraná, Rio de Janeiro, São Paulo), Colombia, Ecuador, Peru.

***Oxysarcodexia inflata* Lopes, 1975**

(Figs 159-161)

Oxysarcodexia inflata Lopes, 1975c:470. Brazil, Maranhão, Rosario, Igarapé Paraqueú.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Brazil (Maranhão, Pará, Pernambuco).

***Oxysarcodexia insolita* Lopes, 1946 (New record)**

(Figs 162-164)

Oxysarcodexia insolita Lopes, 1946c:89. Guyana, Esequibo River, Moraballi Creek.

Material examined: (1♂, INPA) BRASIL, AM, Maués, Rio/ Abacaxis, Flona Pau Rosa/ 05º 15’ 09’’S – 58º 41’ 52’’ W 35// m, 26- 28. V. 2008, J. A. Rafael/ e equipe, Malaise.

Distribution: NEOTROPICAL - Brazil (Amazonas), Guyana, Mexico (Chiapas, Veracruz), Trinidad & Tobago (Trinidad).

***Oxysarcodexia intona* (Curran & Walley, 1934)**

(Figs 165-167)

Sarcophaga intona Curran & Walley, 1934:489. Guyana, Kartabo.

intonsa: Lopes (1969:26); incorrect subsequent spelling of *intona* Curran & Walley, 1934.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal

Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Brazil (Amazonas, Ceará, Espirito Santo, Maranhão, Minas Gerais, Pará, Pernambuco), Guyana.

***Oxysarcodexia major* Lopes, 1946**

(Figs 168-170)

Oxysarcodexia major Lopes, 1946c:88. Brazil, Rio de Janeiro, Guanabara, Grajaú.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Mata/ 02º15'17''S 49º36'51''W/ Arm. Suspensa 15m/ 13 a 29. I. 2015// BRASIL-PARÁ, Cametá/ Cols: I.S. Gorayeb, J. Borges / C. A. C. Favacho, W. Carvalho, / Luís Lopes, J.A. Rodrigues/ 23 a 29. I. 2015.

Distribution: NEOTROPICAL - Brazil (Mato Grosso, Pará, Rio de Janeiro), Colombia, Ecuador, El Salvador, Mexico (Veracruz), Peru, Trinidad & Tobago (Trinidad).

***Oxysarcodexia mineirensis* Souza, 2015 (New record)**

(Figs 171-172)

Oxysarcodexia mineirensis Souza, 2015:223. Brazil, Minas Gerais, Uberlândia.

Material examined: (1♂, INPA) BRASIL, Amazonas,/ Maués, Rio Abacaxis,/ 05º 15' 09''S – 58º 41' 52''W // 27 – 29. V. 2008 J. A. Rafael/ e equipe, armadilha/ suspensa no dossel.

Remarks: First record for Brazilian Amazon.

Distribution: NEOTROPICAL – Brazil (Amazonas, Minas Gerais, Amazonas)

***Oxysarcodexia modesta* Lopes, 1946**

(Figs 173-176)

Oxysarcodexia modesta Lopes, 1946c:129. Brazil, Rio de Janeiro, Guanabara, Gávea.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km22 ao sul de Cametá;/ Campina;/ 02º17'07,97''S 49º40'17,80''W/ 4 a 12. XI. 2014// BRASIL-PARÁ, Cametá/ 4 a 12. Xi. 2014; Cols.:/ F. Carvalho, Jazon Quaresma/ Jacielma Borges, D. Guimarães.

Distribution: NEOTROPICAL - Brazil (Minas Gerais, Pará, Rio de Janeiro, São Paulo), Peru.

***Oxysarcodexia occulta* Lopes, 1946**

(Figs 177-178)

Oxysarcodexia occulta Lopes, 1946c:112. Brazil, Rio de Janeiro, Guanabara, Corcovado.

Distribution: NEOTROPICAL - Brazil (Ceará, Pará, Rio de Janeiro), Colombia, Ecuador, Panama.

***Oxysarcodexia thornax* (Wiedemann, 1830)**

(Figs 179-180)

Musca auriflua Wiedemann, 1830:364. Unavailable name [Originally proposed in synonymy with Musca tessellata Fabricius, 1805 and not validated by subsequent usage.]

Sarcophaga thornax Walker, 1849:814. [Unknown.]

Sarcophaga pudica Rondani, 1850:174. Brazil, São Paulo, S. Sebastian.

Sarcophaga aurifinis Walker, 1853:325. Brazil.

Hybopygia auricauda Enderlein, 1928a:41. *Nomen nudum*.

Oxysarcodexia neotropicale Prado & Fonseca, 1932:36. Brazil, São Paulo, São Paulo.

Material examined: (1♂, MPEG) Belo Monte, PA, Brasil/Arm. Drosophilidae/ H. Medeiros/ 24. II. 2016/ M1T2P4A3.

Distribution: NEOTROPICAL - Argentina (Catamarca, Jujuy, Misiones,), Bolivia, Brazil (Amazonas, Ceará, Espirito Santo, Goiás, Mato Grosso, Minas Gerais, Pará, Paraíba, Paraná, Pernambuco, Rio de Janeiro, Rio Grande do Sul, Santa Catarina, São Paulo), Ecuador, Guyana, Paraguay, Peru.

***Oxysarcodexia timida* (Aldrich, 1916)**

(Figs 181-183)

Sarcophaga timida Aldrich, 1916:283. Guatemala, Puerto Barrios.

Sarcophaga sanguisuga Hall, 1933:283. Panama, Canal Zone.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Bolivia, Brazil (Ceará, Maranhão, Pará, Rio de Janeiro), Costa Rica, El Salvador, Guatemala, Honduras, Panama, Peru Venezuela.

***Oxysarcodexia villosa* Lopes, 1946**

(Figs 184-186)

Oxysarcodexia villosa Lopes, 1946b:458. Brazil, Pará.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Brazil (Pará).

***Oxysarcodexia xanthosoma* (Aldrich, 1916)**

(Figs 187-189)

Sarcophaga xanthosoma Aldrich, 1916:274. Guatemala, Los Amates.

Distribution: NEARTIC - Mexico (San Luis Potosí, Sonora). NEOTROPICAL - Argentina (Misiones), Brazil (Amazonas, Ceará, Espirito Santo, Mato Grosso, Minas Gerais, Pará, Rio de Janeiro, São Paulo), Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Mexico (Jalisco, Veracruz), Panama, Peru.

***Oxyvinia uraricoera* Tibana & Lopes, 1990**

(Figs 190-191)

Oxyvinia uraricoera Tibana & Lopes, 1990:669. Brazil, Roraima, Rio Uraricoera, Ilha de Maracá.

Distribution: NEOTROPICAL - Brazil (Roraima).

***Panava amazonica* Carvalho-Filho, Sousa & Esposito 2011**

(Figs 192-193)

Panava amazonica Carvalho-Filho, Sousa & Esposito 2011:51. Brazil, Pará

Distribution: NEOTROPICAL – Brazil (Pará).

***Peckia* (*Euboettcheria*) *anguilla* (Curran & Walley, 1934)**

(Figs 194-196)

Sarcophaga anguilla Curran & Walley, 1934:484. Guyana, Kartabo.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15'12''S 49º36'12''W/ Armadilha VanSomeren-Rydon/ 07 a 15. IV.2015// BRASIL-PARÁ, Cametá/ Cols: F. S. Carvalho Fh., Jazon/ Quaresma, A Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 07 a 21. IV. 2015.

Distribution: NEARTIC - Mexico (San Luis Potosí). NEOTROPICAL - Argentina (La Rioja, Tucumán), Brazil (Ceará, Mato Grosso, Pará, Rio de Janeiro, São Paulo), Costa Rica, Guyana, Nicaragua, Panama.

***Peckia* (*Euboettcheria*) *australis* (Townsend, 1927) (New record)**

(Figs 197-199)

Musca tessellata Fabricius, 1805:285. Central America ["America meridionali"]. [Junior primary homonym of *Musca tessellata* Geoffroy, 1785 and *Musca tessellata* Fabricius, 1794]

Euboettcheria australis Townsend, 1927a:306. Brazil, São Paulo, Itaquaquecetuba.

Ctenolioproctia venusta Enderlein, 1928a:27. Paraguay.

Stephanostoma humerale Prado & Fonseca, 1932a:38. Brazil, São Paulo, São Paulo.

tesselata: Mattos (1926:67); incorrect subsequent spelling of tessellata Fabricius, 1805.

Material examined: (1♂, INPA) 1-VII-2001 FAZENDA 3 CO-/ QUEIROS, 12 Km 0 Km 90 estr./ P. Velho – Humaitá, Canu-/ Tama, AM, O. Mielke Leg.

Remarks: First record for Brazilian Amazon.

Distribution: NEOTROPICAL - Argentina (Misiones), Brazil (Amazonas, Mato Grosso, Rio Grande do Sul, Santa Catarina, São Paulo), Paraguay

***Peckia* (*Euboettcheria*) *collusor* (Curran & Walley, 1934)**

(Figs 200-202)

Sarcophaga collusor Curran & Walley, 1934:485. Guyana, Kartabo.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15'12''S 49º36'12''W/ Armadilha de moscas/ 07 a 15. IV. 2015// BRASIL-PARÁ, Cametá/ Cols: F. S. Carvalho Fh., Jazon/ Quaresma, A Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 07 a 21. IV. 2015.

Distribution: NEOTROPICAL - Argentina (no further data), Bolivia, Brazil (Bahia, Ceará, Mato Grosso, Pará, Paraná, Rio de Janeiro, Santa Catarina), Costa Rica, Guyana, Panama, Trinidad & Tobago (Trinidad).

***Peckia* (*Euboettcheria*) *epimelia* (Lopes 1938)**

(Figs 203-204)

Sarcophaga epimelia Lopes, 1938a:284. Brazil, São Paulo, São Paulo.

Distribution: NEOTROPICAL - Brazil (Mato Grosso, Pará, São Paulo).

***Peckia* (*Euboettcheria*) *subducta* (Lopes 1935)**

(Figs 205-207)

Sarcophaga subducta Lopes, 1935a:41. Brazil, Rio de Janeiro, Guanabara, Corcovado.

Distribution: NEOTROPICAL - Brazil (Minas Gerais, Pará, Mato Grosso), Colombia, Ecuador, Peru.

***Peckia* (*Pattonella*) *intermutans* (Walker, 1861)**

(Figs 208-210)

Sarcophaga intermutans Walker, 1861:308. Mexico.

Sarcophaga occipitalis Thomson, 1869:532. Peru, Callao.

Sarcophaga cotyledonea Aldrich, 1916:187. Brazil, Rio de Janeiro.

Pattonella magnifica Enderlein, 1928a:39. Paraguay.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15'12''S 49º36'12''W/ Armadilha VanSomeren-Rydon/ 07 a 15. IV.2015// BRASIL-PARÁ, Cametá/ Cols: F. S. Carvalho Fh., Jazon/ Quaresma, A Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 07 a 21. IV. 2015.

Distribution: NEOTROPICAL - Brazil (Ceará, Goiás, Mato Grosso, Pará, Rio de Janeiro, Santa Catarina, São Paulo), Costa Rica, Ecuador, Guatemala, Guyana, Honduras, Mexico (Jalisco), Panama, Paraguay, Peru, St. Lucia, Trinidad & Tobago (Tobago, Trinidad).

***Peckia* (*Pattonella*) *pallidipilosa* (Curran & Walley, 1934)**

(Figs 211-213)

Sarcophaga pallidipilosa Curran & Walley, 1934:483. Guyana, Kartabo.

Material examined: (1♂, INPA) BRASIL, AM, Manaus/ ReservaDucke/ 2º53'S 59º59'W/ A.F. Oliveira col,// carcaça suína/ 23.iv.2003/ Adlto: 13. V. 2003 (8:15).

Distribution: NEOTROPICAL - Brazil (Amazonas), Guyana.

***Peckia* (*Pattonella*) *smarti* Lopes, 1941**

(Figs 214-216)

Pattonella smarti Lopes, 1941:367. Guyana, Esequibo river, Maraballi Creek.

Distribution: NEOTROPICAL - Brazil (Pará), Guyana, Peru.

***Peckia* (*Peckia*) *chrysostoma* (Wiedemann, 1830)**

(Figs 217-219)

Sarcophaga chrysostoma Wiedemann, 1830:356. American Virgin Is, St. Thomas ["Brasilien und Westindien"]

Musca chrysops Wiedemann, 1830:356. Unavailable name. [Originally proposed in synonymy with Sarcophaga chrysostoma Wiedemann, 1830 and not validated by subsequent usage.]

Phrissopodia maculata Macquart, 1843:254. Guyana Francesa, Cayenne.

Stephanostoma townsendi Prado & Fonseca, 1932:37. Brazil, São Paulo, São Paulo.

Sarcophaga clotho Curran & Walley, 1934:482. Guyana, Kartabo. [[Junior primary homonym of Sarcophaga clotho Brèthes, 1920.]

Sarcophaga clotho var. *impura* Curran & Walley, 1934:483. Guyana, Kartabo.

Chrysostomomyia bergi Blanchard, 1939:831. Argentina, Misiones; Argentina, "Patagonia".

chrysotoma: Lopes & Tibana (1991:152); incorrect subsequent spelling of *chrysostoma* Wiedemann, 1830.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEARCTIC - Mexico (Baja California Sur, Morelos, Sonora), USA (Florida). NEOTROPICAL - Argentina (Misiones, "Patagonia"), Brazil (Ceará, Pará, São Paulo), Chile (Tarapacá), Costa Rica, Dominica, Guatemala, Guyana, Jamaica, Galápagos Is (Albemarle, Indefatigable, Narborough, Tower), Mexico (Jalisco), Nicaragua, Panama, Peru, Trinidad & Tobago (Tobago, Trinidad), American Virgin Is. AUSTRALASIAN/OCEANIAN - Cook Is

***Peckia* (*Peckia*) *gulo* (Fabricius, 1805)**

(Figs 220-222)

Musca gulo Fabricius, 1805:283. América Central ["America meridionali"].

Peckia lamanensis Robineau-Desvoidy, 1830:335. Guyana Francesa, La Mana.

Sarcophaga immanis Walker, 1849:815. Honduras.

Sarcophaga gravis Walker, 1849:827. [Desconhecido.]

Sarcophaga wiedemanni Aldrich, 1916:193. Colombia, Santa Marta.

gula: Hardy (1932:279); incorrect subsequent spelling of *gulo* Fabricius, 1805.

wiedemani: Lopes (1958:223); incorrect subsequent spelling of *wiedemanni* Aldrich, 1916.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Brazil (Pará), Colombia, Costa Rica, Ecuador, French Guiana, Guatemala, Guyana, Honduras, Mexico (Jalisco), Panama.

***Peckia* (*Peckia*) *hilifera* (Aldrich 1916)**

(Figs 223-225)

Sarcophaga hillifera Aldrich, 1916:210. USA, Florida, Miami.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15’12’’S 49º36’12’’W/ Armadilha VanSomeren-Rydon/ 05 a 20. XI. 2015// BRASIL-PARÁ, Cametá/ Cols: I. S. Gorayeb, Luiz Lopes/ F. Carvalho Fh., B. F. dos Anjos, L./ A. Quaresma, D. R. Guimarães/ 05 a 20. XI. 2015.

Distribution: NEARTIC - USA (Alabama, Florida). NEOTROPICAL - Bahamas (Bimini Is, Exuma Cays, New Providence), Brazil (Pará), Cuba, Puerto Rico, Trinidad & Tobago (Trinidad).

***Peckia* (*Peckia*) *lutzi* (Lopes, 1958)**

(Figs 226-229)

Paraphrissopoda lutzi Lopes, 1958:224. Brazil, Rio de Janeiro, Guanabara, Manguinhos.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Camarão / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Brazil (Pará, Rio de Janeiro).

***Peckia* (*Peckia*) *pexata* (Wulp, 1895)**

(Figs 230-232)

Sarcophaga pexata Wulp, 1895:269. Mexico, Guerrero, Chilpancingo; Mexico, Guerrero, Acapulco; Veracruz, Atoyac; Yucatán.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15'12''S 49º36'12''W/ Armadilha VanSomeren-Rydon/ 07 a 15. IV.2015// BRASIL-PARÁ, Br-422/ Km22 ao sul de Cametá;/ Campina;/ 02º17'07,97''S 49º40'17,80''W/4 a 12. XI. 2014.

Distribution: NEOTROPICAL - Bolivia, Brazil (Ceará, Pará, Rio de Janeiro), Costa Rica, Ecuador, Mexico (Guerrero, Jalisco, Veracruz, Yucatán), Trinidad & Tobago (Trinidad).

***Peckia* (*Peckia*) *uncinata* (Hall, 1933) (New Record)**

(Figs 233-235)

Sarcophaga uncinata Hall, 1933:271. Panama, Canal Zone, Corozal.

Material examined: (1♂, MZUSP) Vilhena, RO/ 01/X/1986/ C. Elias, leg./ POLONOROESTE.

Distribution: NEOTROPICAL - Brazil (Pará, Rio de Janeiro), Costa Rica, Panama, Peru, Trinidad & Tobago (Tobago).

***Peckia* (*Peckia*) *urceola* (Hall, 1933) (New Record)**

Sarcophaga urceola Hall, 1933:273. Panama, Canal Zone, Barro Colorado I.

Distribution: NEOTROPICAL - Brazil, Panama.

***Peckia* (*Peckia*) *veropeso* Carvalho-Filho, Soares, Souza & Gorayeb, 2016**

(Figs 236-238)

Peckia (*Peckia*) *veropeso* Carvalho-Filho, Soares, Souza & Gorayeb, 2016:234. Brazil, Pará

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL – Brazil (Pará)

***Peckia* (*Sarcodexia*) *florencioi* (Prado & Fonseca, 1932)**

(Figs 239-241)

Paraphrissopoda aberrans Mattos, 1919:59. *Nomen nudum*.

Ctenoprosballia florencioi Prado & Fonseca, 1932:36. Brazil, São Paulo, São Paulo.

Sarcophaga dentifera Hall, 1937b:208. Argentina, Misiones, Iguazú.

Neosarcodexia deaurata Kreibohm, 1940:166. Argentina.

Neosarcodexia deaurata Blanchard, 1942a:60. Argentina, San Luis, Beazley. [Junior primary homonym of Neosarcodexia deaurata Kreibohm, 1940.]

Distribution: NEOTROPICAL - Brazil (Mato Grosso, Pará, Rio Grande do Sul, Santa Catarina, São Paulo), Argentina (Misiones, San Luis).

***Peckia* (*Sarcodexia*) *lambens* (Wiedemann, 1830)**

(Figs 242-245)

Sarcophaga lambens Wiedemann, 1830:365. West Indies ["Westindien"]. [See discussion on p. 48.]

Sarcophaga amata Wiedemann, 1830:367. Central America ["Südamerika"]. [See discussion on p. 48.]

Sarcophaga innota Walker, 1861:308. Mexico.

Sarcodexia sternodontis Townsend, 1892:106. Jamaica, Kingston.

Sarcophaga pyophila Neiva & Faria, 1913:17. Brazil, Rio de Janeiro.

Sarcophaga freirei Mattos, 1919:75. Brazil, São Paulo.

Cricobrachia anisitsiana Enderlein, 1928a:19. Paraguay, Asuncion.

Liopygia tesselata Enderlein, 1928a:42. *Nomen nudum*.

Ctenoprosballia butantani Prado & Fonseca, 1932:36. Brazil, São Paulo, São Paulo.

Sarcodexia anisitsiana var. *minuta* Kreibohm, 1940:165. *Nomen nudum*.

Sarcodexia anisitsiana var. *diminuta* Blanchard, 1942a:95. Argentina, Tucumán.

anisitiana: Engel (1931:147); incorrect subsequent spelling of *anisitsiana* Enderlein, 1928.

anitsiana: Lopes (1969:33); incorrect subsequent spelling of *anisitsiana* Enderlein, 1928.

anitsisiana: Blanchard (1942a:55); incorrect subsequent spelling of *anisitsiana* Enderlein, 1928.

dimunuta: Blanchard (1942a:95); incorrect subsequent spelling of *diminuta*.

piophila: Lopes (1969:34); incorrect subsequent spelling of *pyophila* Neiva & Faria, 1913.

sternodontes: Lopes (1969:33); incorrect subsequent spelling of *sternodontis*.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15’12’’S 49º36’12’’W/ Armadilha VanSomeren-Rydon/ 07 a 15. IV.2015// BRASIL-PARÁ, Cametá/ Cols: F. S. Carvalho Fh., Jazon/ Quaresma, A Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 07 a 21. IV. 2015.

Distribution: NEARCTIC - USA (Florida, Georgia, Texas). NEOTROPICAL - Argentina (Misiones, Tucumán), Bahamas (Grand Bahama, New Providence), Bolivia, Brazil (Ceará, Mato Grosso, Pará, Rio de Janeiro, Santa Catarina, São Paulo), Chile (Tarapacá), Colombia, Costa Rica, Cuba, El Salvador, Guyana, Haiti, Jamaica, Mexico (Jalisco, Nuevo León, Tamaulipas), Panama, Paraguay, Peru, Puerto Rico, St. Vincent, Trinidad & Tobago (Tobago). AUSTRALASIAN/OCEANIAN - Cook Is.

***Peckia* (*Sarcodexia*) *tridentata* (Hall, 1937)**

(Figs 246-248)

Sarcophaga tridentata Hall, 1937b:209. Brazil, Obrilonys.

Distribution: NEOTROPICAL - Brazil.

***Peckia* (*Squamatodes*) *ingens* (Walker, 1849)**

(Figs 249-251)

Sarcophaga ingens Walker, 1849:816. [Unknown.]

Adiscochaeta abnormis Enderlein, 1928a:45. Paraguay.

Squamata bicapitata Townsend, 1931:78. *Nomen nudum*.

Material examined: (1♂, MPEG) BRASIL-PARÁ, BR-422/Km11 sul Cametá, Campina;/ 02º15'12''S 49º36'12''W/ Armadilha de moscas/ 07 a 15. IV. 2015// BRASIL-PARÁ, Cametá/ Cols: F. S. Carvalho Fh., Jazon/ Quaresma, A Quaresma/ D. Guimarães; K. Monteiro-/ Souza; 07 a 21. IV. 2015.

Distribution: NEOTROPICAL - Argentina, Brazil (Ceará, Pará, Mato Grosso, Minas Gerais, Rio de Janeiro, São Paulo) Colombia, Costa Rica, Guyana, Mexico, Nicarágua, Panama, Paraguay, Peru, Puerto Rico, Venezuela.

***Peckia* (*Squamatodes*) *trivittata* (Curran, 1927)**

(Figs 252-253)

Squamatodes trivittata Curran, 1927:3. Brazil, Mato Grosso, Chapada.

Sarcophaga spitzi Lopes, 1933a:69. Brazil, Goiás, Campinas.

sptzi: Lopes (1933:69); incorrect original spelling of *spitzi*.

Material examined: (1♂, MPEG) Brasilia. D.F./ Col. Braalio Dias// Areial. P. N/ Manhã. II.VIII.71

Distribution: NEOTROPICAL - Brazil (Goiás, Mato Grosso, Minas Gerais, Pará, São Paulo).

***Peckiamyia abnormalis* (Hall, 1937)**

(Figs 254-257)

Sarcophaga abnormalis Hall, 1937b:211. Colombia.

Distribution: NEOTROPICAL - Bolivia, Brazil (Amazonas, Pará, Rio de Janeiro), Colombia, Guyana.

***Peckiamyia minutipenis* (Hall, 1937)**

(Figs 258-261)

Sarcophaga minutipenis Hall, 1937b:210. Brazil, Mato Grosso, Chapada.

Material examined: (1♂, INPA) Brasil, AM, Barcelos, Rio/ Aracá, Comum. Bacuquara/ 00º09'17.5''N, 63º10'35.2''W// 12 – 14. VI. 2010, suspensa/ lâmina d'agua, R. Machado;/ R. Freitas Silva; J. A. Rafael.

Distribution: NEOTROPICAL - Bolivia, Brazil (Amazonas, Mato Grosso), Trinidad & Tobago (Trinidad).

***Promayoa peculiares* Dodge, 1966**

(Figs 262-266)

Promayoa peculiaris Dodge, 1966:697. Suriname, Paramaribo.

Material examined: (1♂, MPEG) BRAZIL, Pará: Campus do MPEG, 27.X.2005, rede entomológica, F.S. Carvalho Filho (1♂, MPEG); idem, 18.II.2014, flor de açaizeiro (1♂, MPEG); idem, 22.II.2014 (1♂, MPEG); idem, 20.II.2014 (1♂, MPEG); jardim de área urbana, bairro do Marco, 13.06.2007, F.S. Carvalho Filho (1♂, MPEG); Belém-Brasília, Km 90, 21.II.1971, T. Pimentel (1♂, MPEG).

Distribution: NEOTROPICAL – Suriname, Brazil (Pará).

***Ravinia belforti* (Prado & Fonseca, 1932)**

Euravinia belforti Prado & Fonseca, 1932:38. Brazil, São Paulo, São Paulo.

Dienchaeta auriceps Enderlein, 1928:16. *Nomen nudum*.

belfordi: Lopes (1975b:272); grafia incorreta de *belforti* Prado & Fonseca, 1932.

Distribution: NEOTROPICAL - Argentina, Brazil (Ceará, Goiás, Mato Grosso, Minas Gerais, Pará, Paraná, Rio de Janeiro, São Paulo), Colombia, Paraguay, Trinidad & Tobago (Trinidad).

***Ravinia effrenata* (Walker, 1861)**

(Figs 267-270)

Sarcophaga effrenata Walker, 1861:309. Mexico.

Sarcophaga xanthopyga Wulp, 1895:271. Mexico, Guerrero, Amula; Mexico, Guerrero, La Venta; Mexico, Morelos, Cuernavaca; Mexico, Veracruz, Orizaba.

Sarcophaga conjungens Wulp, 1895:272. Mexico, Veracruz, Atoyac.

Sarcophaga adamsii Hall, 1928:345. Jamaica.

adamsi: Lopes (1969:23); incorrect original spelling of *adamsii* Hall, 1928.

conjugens: Lopes (1969:23); incorrect original spelling of conjungens Wulp, 1895.

effreneta: Hall (1931b:181); incorrect original spelling of *effrenata* Walker, 1861.

Distribution: NEARTIC - Mexico (Baja California Norte, Morelos, San Luis Potosí, Sonora), USA (Arizona, Texas). NEOTROPICAL - Brazil (Pará), Bahamas (Eleuthera), Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Jamaica, Mexico (Guerrero, Jalisco, Nayarít, Sinaloa, Tamaulipas, Veracruz), Panama, Peru.

***Retrocitomyia mizuguchiana* Tibana & Xerez, 1985**

(Figs 271-274)

Retrocitomyia mizuguchiana Tibana & Xerez, 1985:485. Brazil, Minas Gerais, Pirapora.

Distribution: NEOTROPICAL - Brazil (Minas Gerais, Pará).

***Retrocitomyia retrocita* (Hall, 1933)**

(Figs 275-277)

Sarcophaga retrocita Hall, 1933:280. Panama, Corazal.

Paraphrissopoda setifacies Lopes, 1945a:450. Colombia, Gorgona I.

Peckia irwini Dodge, 1966:693. El Salvador, Quezaltepeque.

Distribution: NEOTROPICAL - Brazil (Pará, Rio de Janeiro, Roraima), Colombia, El Salvador, Guyana, Panama, Peru.

***Retrocitomyia urumajoensis* Lopes, 1985**

(Figs 278-281)

Retrocita urumajoensis Lopes, 1985:3. Brazil, Pará, Bragança, Urumajó.

Distribution: NEOTROPICAL - Brazil (Pará).

***Sarcofahrtiopsis cuneata* (Townsend, 1935)**

(Figs 286-287)

Cataphyto cuneata Townsend, 1935:72. Brazil, Pernambuco, Tapéra.

Material examined: (1♂, MPEG) Jacareacanga/ Pará Brasil X – 1959/ M. Alvarengai leg.

Distribution. NEOTROPICAL - Brazil (Ceará, Pernambuco, Pará, Rio de Janeiro), Costa Rica, Dominica, Trinidad & Tobago (Trinidad), Venezuela.

***Sarcofahrtiopsis cupendipe* Carvalho-Filho & Esposito, 2014**

(Figs 288-289)

Sarcofahrtiopsis cupendipe Carvalho-Filho & Esposito, 2014: 119. Brazil, Pará, Belém.

Distribution: NEOTROPICAL - Brazil (Pará).

***Sarcofahrtiopsis terezinhae* Carvalho-Filho & Souza, Soares, 2017**

(Figs 290-292)

Sarcofahrtiopsis terezinhae Carvalho-Filho & Souza, Soares, 2017:350. Brazil, Pará.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL – Brazil (Pará).

***Sarcophaga* (*Liopygia*) *ruficornis* (Fabricius, 1794)**

(Figs 293-295)

Musca ruficornis Fabricius, 1794:314. Asia.

Myophora fulvicornis Robineau-Desvoidy, 1830:341. Bangladesh.

Liopygia friederichsiana Enderlein, 1928a:42. *Nomen nudum*.

Sarcophaga muspratti Zumpt, 1950:165. Africa do Sul, Natal, Durban.

Distribution: NEARCTIC - Canada (Quebec), USA (California, District of Columbia, Florida, Massachusetts, New York, North Carolina, Pennsylvania). NEOTROPICAL - Brazil (Pará, Rio de Janeiro), Panama. PALAEARCTIC - Saudi Arabia. AFROTROPICAL - Botswana, Madagascar, Socotra, South Africa, Zaire. ORIENTAL - Bangladesh, Bhutan, China (Guangdong), India (Andhra Pradesh, Assam, Bihar, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal), Indonesia (Sumatra), Japan (Ryukyu Is), Laccadive Is, Malaysia (West Malaysia), Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand. AUSTRALASIAN/OCEANIAN - American Samoa, Australia (Northern Territory, Queensland), Guam, Hawaiian Is (Kauai, Oahu), Indonesia (Maluku), New Caledonia, Northern Marianas, Papua New Guinea (Papua New Guinea), Western Samoa.

***Sinopiella rufopilosa* Lopes & Tibana, 1982**

(Figs 296-298)

Sinopiella rufopilosa Lopes & Tibana, 1982:296. Brazil, Mato Grosso, Sinop.

Distribution: NEOTROPICAL - Brazil (Amazonas, Mato Grosso).

***Thomazomyia adunca* Lopes, 1988 (New record)**

(Figs 299-302)

Thomazomyia adunca Lopes, 1988:244. Ecuador, Chico, Rio Frio.

Material examined: (1♂, INPA) BRASIL, AM, Manaus, ZF2/ Km -14, Terra, 023521S-/ 600655W, 18-21.v.2004/ lençol: luz mista e BLB// 40mts altura, J. A. Rafael,/ F.B. Baccaro, F.F. Xavier Fº/ & A. Silfa Fº

Remarks: First record for Brazilian Amazon.

Distribution: NEOTROPICAL - Brazil (Amazonas), Ecuador.

***Titanogrypa* (*Cucullomyia*) *alvarengai* Lopes, 1976**

(Figs 303-304)

Cuculomyia alvarengai Lopes, 1976b:752. Brazil, Roraima, Surumu.

Distribution: NEOTROPICAL - Brazil (Roraima).

***Titanogrypa* (*Cucullomyia*) *larvicida* (Lopes, 1935) (New record)**

(Figs 305-307)

Sarcophaga larvicida Lopes, 1935b:470. Brazil, Rio de Janeiro.

Sarcophaga despecta Lopes, 1935a:42. Brazil, Rio de Janeiro, Angra dos Reis. [Junior primary homonym of *Sarcophaga despecta* Thomson, 1869.]

Sarcophaga luculenta Lopes, 1938a:209. New name for *Sarcophaga despecta* Lopes, 1935.

despecte: Lopes (1935a:43); incorrect original spelling of *despecta*.

lutulenta: Lopes (1969:59); incorrect subsequent spelling of *luculenta* Lopes, 1938.

Material examined: (1♂, MPEG) Belo Monte, PA, Brasil/ Arm. Drosophilidae/ H. Mendeiros/ 24. II. 2016/ M1T2P2A1.

Remarks: First record for Brazilian Amazon.

Distribution: NEOTROPICAL - Brazil (Rio de Janeiro, Rio Grande do Norte).

***Titanogrypa* (*Cucullomyia*) *luculenta* (Lopes, 1935)**

(Figs 308-311)

Sarcophaga despecta Lopes, 1935a:42. Brazil, Rio de Janeiro, Angra dos Reis. [Junior primary homonym of *Sarcophaga despecta* Thomson, 1869.]

Sarcophaga luculenta Lopes, 1938a:209. New name for *Sarcophaga despecta* Lopes, 1935.

despecte: Lopes (1935a:43); incorrect original spelling of *despecta*.

lutulenta: Lopes (1969a:59); incorrect subsequent spelling of *luculenta* Lopes, 1938.

Material examined: (1♂, MPEG) As Pedras, PA/ A. Cuminá miri/ Brasil IX. X. 1969/ Hxp. Ferm. Amar.

Distributio: NEOTROPICAL - Brazil (Pará, Rio de Janeiro).

***Titanogrypa* (*Sarconeixa*) *fimbriata* (Aldrich 1916) (New record)**

(Figs 312-314)

Sarcophaga fimbriata Aldrich, 1916:292. Jamaica, Portland.

Sarcophaga larvivorax Lopes, 1935b:475. Brazil, Rio de Janeiro.

Remarks: First record for Brazilian Amazon

Distribution: NEARCTIC - Mexico (San Luis Potosí, Sonora), NEOTROPICAL - Argentina (Salta), Brazil (Bahia, Pará, Rio de Janeiro, Santa Catarina), Dominica, Dominican Republic, Jamaica, Mexico (Jalisco), Peru.

***Tricharaea* (*Sarcophagula*) *braziliensis* (Townsend, 1927)**

Pseudosarcophagula Braziliensis Townsend, 1927:354. Brazil, Amazonas, Tefe.

Desvoidyella aurata Enderlein, 1928:21. Paraguay.

Distribution: NEOTROPICAL - Brazil (Amazonas), Paraguay.

***Tricharaea* (*Sarcophagula*) *canuta* Wulp, 1896**

(Figs 315)

Sarcophagula canuta Wulp, 1896:289. Mexico, Veracruz, Orizaba.

Distribution. NEARCTIC - Mexico (Baja California Sur, San Luis Potosí, Sonora), USA (Florida, Texas). NEOTROPICAL - Brazil, Colombia, Costa Rica, Cuba, Dominica, Ecuador, El Salvador, Galápagos Is (Charles, Chatham, Indefatigable, James), Guatemala, Honduras, Jamaica, Mexico (Nayarít, Sinaloa, Veracruz), Paraguay, Peru. AUSTRALASIAN/OCEANIAN - Marshall Is.

***Tricharaea* (*Sarcophagula*) *occidua* (Fabricius, 1794)**

(Figs 316)

Musca occidua Fabricius, 1794:315. West Indies ["Americae meridionalis"].

Tachina pusilla Wiedemann, 1830:337. West Indies ["Westindien"]. [Junior secondary homonym of Musca pusilla Macquart, 1848.]

Sarcophaga sugens Wiedemann, 1830:367. Brazil.

Sarcophaga parvula Wiedemann, 1830:368. Brazil.

Sarcophaga parva Walker, 1853a:321. Brazil, Pará.

Sarcophaga despecta Thomson, 1869:540. Ecuador, Puna I.

Sarcophagula imbecilla Wulp, 1896a:289. Mexico, Veracruz.

Material examined: (1♂, INPA) BRASIL Roraima/ Normandia Serra/ Malaise – V – 1990// J. A. Rafael/ R. A. Rocha/ J. Vidal.

Distribution: NEARCTIC - Mexico (Baja California Sur, San Luis Potosí, Sonora), USA (Arizona, California, Florida, Texas). NEOTROPICAL - Argentina (Entre Rios), Bolivia, Brazil (Amazonas, Ceará, Goiás, Maranhao, Mato Grosso, Pará, Rio de Janeiro, Roraima, São Paulo), Chile (Tarapacá), Colombia, Cuba, Dominica, Ecuador, El Salvador, Galápagos Is (Indefatigable, Bartolomé), Guyana, Haiti, Mexico (Guerrero, Jalisco, Nayarít, Sinaloa, Tamaulipas, Veracruz), Panama, Paraguay, Peru, Puerto Rica, Venezuela. AUSTRALASIAN/OCEANIAN - Australia (no further data), French Polynesia (Marquesas Is, Society Is), Hawaiian Is (Hawaii, Kauai, Maui, Molokai, Oahu).

***Tricharaea* (*Sarothromyia*) *femoralis* (Schiner, 1868)**

(Figs 317-318)

Sarcophila femoralis Schiner, 1868:315. Brazil.

Sarcophaga brevispina Thomson, 1869:539. Brazil, Rio de Janeiro, Guanabara.

brevissima: Thomson (1869:540); incorrect original spelling of *brevispina*.

Distribution: NEOTROPICAL - Bahamas (Exuma Cays, Great Inagua), Brazil (Bahia, Ceará, Pará, Pernambuco, Rio de Janeiro, São Paulo), Cuba, Dominica, Honduras, Panama, Puerto Rico, Surinam, Turks & Caicos Is.

***Tricharaea* (*Tricharaea*) *brevicornis* (Wiedemann, 1830)**

(Figs 319-320)

Tachina brevicornis Wiedemann, 1830:299. Uruguay, Montevideo.

Dexia? *albicans* Walker, 1858:204. Brazil, Amazonas.

Tricharaea scatophagina Thomson, 1869:541. Brazil, Rio de Janeiro, Guanabara.

Sarcophaga canescens Thomson, 1869:539. Brazil, Rio de Janeiro, Guanabara.

Leucoravinia quadraticephala Townsend, 1928:143. Peru, Rio Huallaga, nr Playa Sonape.

Euleucomyia australis Townsend, 1934c:202. Brazil, Rio de Janeiro, Bôa Viagem.

Xenagria mallogaster Blanchard, 1939:800. Argentina, Buenos Aires, Adrogué.

Tricharaea penai Dodge, 1965:90. Chile, Llanquihue, Maullín River.

Tricharaea bilineata Dodge, 1966:700. Peru, Tingo Maria.

Tricharaea engeli Dodge, 1966:699. Bolivia, Fortin Esteros.

Liopygia pellita Enderlein, 1928a:42. Nomen nudum.

Distribution: NEOTROPICAL - Argentina (Buenos Aires), Bolivia, Brazil (Amazonas, Rio de Janeiro), Chile (Llanquihue), Peru, Uruguay. AUSTRALASIAN/OCEANIAN - Australia (Australian Capital Territory, New South Wales, Victoria).

***Tripanurga albicans* (Wiedemann, 1830)**

(Figs 321-323)

Sarcophaga albicans Wiedemann, 1830:363. Brazil.

Glaucosarcophaga knabi Townsend, 1917b:45. Mexico, Veracruz.

Material examined: (1♂, MPEG) Brasil, Pará/ Serra Norte/ Manganês/ 19-X-1984//T. Pimentel// MPEG IP 12182262.

Distribution. NEOTROPICAL - Argentina, Bolivia, Brazil (Goiás, Mato Grosso, Minas Gerais, Pará, Paraná, Rio de Janeiro, São Paulo), Chile (Tarapacá), Costa Rica, Mexico (Veracruz), Peru, Venezuela.

***Villegasia almeidai* (Lopes, 1938)**

(Figs 324-326)

Sarcophaga almeidai Lopes, 1938b:346. Brazil, Rio de Janeiro, Manguinhos.

Material examined: (1♂, MPEG) Magalhães Barata, Pará, Brasil/ Vila de Calafate/ Manguezal Açaiteua/ Arm. de Garrafa Pet/ Isca de Caranguejo / 14-18.I.2017/ Souza, C.C col.

Distribution: NEOTROPICAL - Brazil (Pará, Rio de Janeiro).

Acknowledgments

We are grateful to all collections and curators which send the specimens and made this work possible. This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001.

References

Aldrich JM (1916). Sarcophaga and allies in North America. In: Indiana LF (ed).Thomas Say Foundation of the entomological society of America. **Murphey-Bivins Co. Press 1**: 1-301.

Aldrich JM (1925). New Diptera or two-winged flies in the United States National Museum. **Proceedings of the United States National Museum 66** (18): 1-36

Aldrich JM (1930). Notes on the types of American two-winged flies of the genus Sarcophaga and a few related forms, described by the early authors. **Proceedings of the United States National Museum 78** (12): 1-39.

Allen HW (1926). North American species of two-winged flies belonging to the tribe Miltogrammini. **Proceedings of the United States National Museum 68** (9): 1-106.

Amorim DS (2009). Neotropical Diptera diversity: richness, pattems, and perspectives. In: Pape T; Bickel D, Meier R (eds) **Diptera Diversity**: status, challenges and tools. Koninklijke Brill, Leiden. 71-97.

Bequaert J (1925). The arthropod enemies of mollusks, with description of a new dipterous parasite from Brazil. **The Journal of Parasitology 11** (4): 201-212.

Blanchard EE (1939). Los sarcofágidos argentinos. Contribución a su conocimiento. **Physis 17**: 791-856.

Blanchard EE (1942a). Parasitos de Alabama argillacea Hbn. en la republica Argentina. **Anales de la Sociedad Cientifica Argentina 134**: 54-63, 93-104.

Blanchard EE (1942b). Nuevos dipteros e himenopteros parasitos de la Republica Argentina. **Revista de la Sociedad Entomológica Argentina 11**: 340-379.

Carvalho CJB, Couri MS, Toma R, Rafael JA, Harada AY, Bonatto SR, Loureiro AL, Gastal HAO (2002) Principais coleções brasileiras de Diptera: Histórico e Situação atual. In: Costa C, Vanin AS, Lobo JM, Melic A (eds) **Proyecto de Red Iberoamericano de Biogeografia Y Entomologia Sistemática 2**. Monografias Terceiro Milenio, Zaragoza 37-52.

Carvalho CJB; Rafael JA, Couri MS, Silva V (2012) Diptera. In: Rafael JA, Melo GAR, Carvalho CJB, Casari AS, Constantino R (eds) **Insetos do Brasil**: diversidade e taxonomia. Editora Holos, Ribeirão Preto, 701-743.

Carvalho-Filho FS, Esposito MC (2011). Panava a senior synonym of Wulpisca, and description of new species of Panava and Dexosarcophaga (Bezzisca) from the Brazilian Amazon (Diptera, Sarcophagidae). **Zootaxa 2808**: 49-56.

Carvalho-Filho FS, Esposito MC (2012). Revision of Argoravinia Townsend (Diptera: Sarcophagidae) of Brasil with the description of two new species. **Zootaxa 3256:** 1-26.

Carvalho-Filho FS, Esposito MC, Silva AA (2014). A further new species of Sarcofahrtiopsis Hall (Diptera: Sarcophagidae) associated with faeces of the disk-winged bat (Thyroptera Spix: Chiroptera) in Brazil and the redescription of the female terminalia of S. cuneata (Townsend). **Zootaxa 3889** (1): 118-126.

Carvalho-Filho FS, Soares JMM, Souza CC, Gorayeb IS (2016). Peckia veropeso sp. nov., a flesh fly (Diptera: Sarcophagidae) from the Brazilian Amazon associated with riparian habitats. **Zootaxa**

4067 (2): 233-238.

Carvalho-Filho FS, Souza JRP, Esposito MC (2014). New Species and New Records of Dexosarcophaga Townsend (Diptera: Sarcophagidae) from Brazil with a Key to Species of the Subgenus Bezzisca. **Neotropical Entomology 43**: 63-67.

Carvalho-Filho FS, Souza CC, Soares JMM (2017). A new species of Sarcofahrtiopsis (Insecta, Diptera, Sarcophagidae) from mangrove forests in the Brazilian Amazon, with a key to species identification. **Acta Amazonica 47**: 349-354.

Cumming JM, Wood DM (2009). Adult morphology and terminology. In: Brown BV, Borkent A, Cumming JM, Wood DM, Woodley NE, Zumbado MA (Eds.): **Manual of Central American Diptera I**. NRC Research Press, Ottawa 9-50.

Curran CH (1927). Four new American Diptera. **American Museum Novitates 275**: 1-4.

Curran CH, Walley GS (1934). Sarcophagidae. In: Curran CH (ed) The Diptera of Kartabo, Bartica District, British Guiana, with descriptions of new species from other British Guiana localities. **Bulletin of the American Museum of Natural History 66**: 287-532.

Dodge HR (1964). New sarcophagine flies (Diptera: Sarcophagidae). **Journal of the New York Entomological Society 71**: 238-243.

Dodge HR (1965). A new Tricharaea Thomson with unusual variation in male chaetotaxy (Diptera: Sarcophagidae). **The Pan-Pacific Entomologist 41**: 90-92.

Dodge HR (1966). Some new or little-known Neotropical Sarcophagidae (Diptera), with a review of the genus Oxysarcodexia. **Annals of the Entomological Society of America 59**: 674-701.

Dodge HR (1968a). Nine new Nephochaetopteryx from Brazil (Diptera: Sarcophagidae). **Journal of Kansas Entomological 41**: 277-287.

Dodge HR (1968b). The Sarcophagidae of Barro Colorado Island, Panama (Diptera). **Annals of the Entomological Society of America 61**: 421-450.

Enderlein G (1928a). Klassifikation der Sarcophagiden. Sarcophagiden-Studien I. - Archiv für **Klassifikatorirische und Phylogenetische Entomologie 1**: 1–56.

Enderlein G (1928b). Sarcophagiden-Studien II. **Konowia 7**: 147-153

Engel EO (1931). Die Ausbeute der deutschen Chaco-Expedition 1925/26. -- Diptera. XXVI. Anthomyidae, XXVII. Muscidae und XXVIII. Sarcophagidae. **Konowia 10**: 133-154.

Esposito MC, Sousa JRP, Carvalho-Filho FS (2010) in press. Diversidade de Calliphoridae (Insecta: Diptera) na Base de Extração Petrolífera da Bacia do Rio Urucu, na Amazônia brasileira. **Acta Amazonica 40** (3): 579-584.

Fabricius JC (1794). **Entomologia Systematica emendata et aucta. Vol. 4**. Hafniae. 472 pp.

Fabricius JC (1805). Systema antliatorum secundum ordines, genera, species adiecta synonymis, locis, observationibus, descriptionibus. **Carolum Reichard**, Brunsvigae 372pp.

Giroux MT, Pape T, Wheeler A (2010) in press. Towards a phylogeny of the flesh flies (Diptera:

Sarcophagidae): morphology and phylogenetic implications of the acrophallus in the subfamily Sarcophaginae. **Zoological Journal of the Linnean Society 155**: 740778.

Guimarães JH, Papavero N (1999). **Myiasis of man and animals in the Neotropical Region**. Editora Plêiade, São Paulo, 308pp.

Gullan PJ, Cdranston PS (2007). **Os insetos: um resumo de entomologia**. Editora Roca, São Paulo, 440 pp.

Hall DG (1928). Sarcophaga pallinervis and related species in the Americas. **Annals of the Entomological Society of America 21**: 331-352.

Hall DG (1931a). New Texas Sarcophaginae (Diptera: Calliphoridae). **Entomological News 42**: 280-286.

Hall DG (1931b). New North American Sarcophagidae. **Annals of the Entomological Society of America 24**: 181-182.

Hall DG (1933). The Sarcophaginae of Panama (Diptera: Calliphoridae). **Bulletin of the American Museum of Natural History 66**: 251-285.

Hall DG (1937a). Sarcophaginae. In: Diptera of Patagonia and south Chile. **British Museum (Natural History) 7**; London. 347-375.

Hall DG (1937b). New muscoid flies (Diptera) in the United States National Museum. **Proceedings of the United States National Museum 84**: 201-216.

Hardy GH (1932). Some new Australian sarcophagid flies: and notes on others. **Australian Zoologist 7**: 275-281.

Hough G (1898) Description of Sarcophaga (Tephromyia) hunteri - Pp. 207-210 In: Hunter SJ (ed) Parasitic influences on Melanoplus. **Kansas Univ. Quart 7**: 205-210.

Kreibohm GA (1940). Contribución al conocimiento de algunos enemigos naturales de la oruga de la hoja del algodonera (Alabama argillacea Hubn.). Lucha biológia. **Revista industrial agrícola de Tucumán 30**: 163-171.

Lahille F (1907). La langosta y sus moscas parasitarias. **Anales del Ministerio de Agricultura. Sección de Zootecnia, Bacteriología, Veterinaria y Zoología 3**: 1-136.

Lopes HS (1933a). Sarcophagas do Brasil. **Anales del Ministerio de Agricultura. Sección de Zootecnia, Bacteriología, Veterinaria y Zoología 10**: 66-71.

Lopes HS (1933b). Sôbre algumas espécies de Sarcophaga do Brasil com descrição de cinco especies novas (Dipt. Sarcophagidae). **Revista de Entomologia 3**: 153-158.

Lopes HS (1935a). Algumas espécies de Sarcophaga do Brasil. **Revista de Entomologia 5**: 38-46.

Lopes HS (1935b). Sôbre duas espécies do Sarcophaga cujas larvas são predadoras (Dipt. Sarcophagidae). - **Revista de Entomologia 5**: 470-479.

Lopes HS (1938a). Sobre quatro novas espécies de Sarcophagideos do Brasil (Diptera). **Livro Jubilar Prof. Lauro Travassos 3**: 279-285.

Lopes HS (1938b). Notas sôbre Sarcophagidae neotropicos. Um novo gênero e algumas novas espécies. **Memórias do Instituto Oswaldo Cruz 33**: 333-348.

Lopes HS (1939). Contribuição ao conhecimento do genero Helicobia Coquillett (Dipt. Sarcophagidae). **Revista de Entomologia 10**: 497-517.

Lopes HS (1941). Sôbre alguns sarcofagídeos neotrópicos da coleção do Museu Britânico (Diptera). **Arquivo de Zoologia do Estado de São Paulo 2**: 357-387.

Lopes HS (1945a). Sôbre dois sarcophagídeos neotrópicos da coleção do Museu Britânico. **Revista Brasileira de Biologia 16**: 450-456.

Lopes HS (1945b). Sôbre um novo gênero de "Sarcophagidae" de Surinam (Diptera). **Revista Brasileira de Biologia 5**: 295-298.

Lopes HS (1946a). Novos Sarcofagideos neotrópicos representados na coleção do Imperial Institute of Entomology (Diptera Sarcophagidae). **Revista Brasileira de Biologia 6**: 117-131.

Lopes HS (1946b). Um novo gênero e três novas espécies de Sarcophagidae do Brasil (Diptera). **Revista Brasileira de Biologia 6: 453-462**.

Lopes HS (1946c). Contribuição ao conhecimento das espécies do gênero Oxysarcodexia Townsend, 1917 (Diptera Sarcophagidae). **Boletim da Escola Nacional de Veterinária 1**: 62-134.

Lopes HS (1946d). Contribuição ao conhecimento das espécies do gênero Notochaeta Aldrich, 1916. **Memórias do Instituto Oswaldo Cruz 42**: 503-550.

Lopes HS (1947). Sôbre o gênero "Notochaeta" Aldrich, 1916, com descrições de duas espécies novas do Amazonas (Diptera, Sarcophagidae). **Revista Brasileira de Biologia 7**: 375-382.

Lopes HS (1950). Novas espécies neotrópicas de Notochaeta Aldrich e Dexosarcophaga Townsend (Diptera, Sarcophagidae). - **Revista Brasileira de Biologia 10**: 353-364

Lopes HS (1958). Considerações sobre as espécies de Peckia Desvoidy, 1830 e de gêneros afins. (Diptera-Sarcophagidae). **Anais da Academia Brasileira de Ciências 30** (2): 211239.

Lopes HS (1968). Notes on the types of some Neotropical sarcophagid flies described by Enderlein (Diptera, Sarcophagidae). **Revista Brasileira de Biologia 28**: 337-349.

Lopes HS (1969). Family Sarcophagidae. In: Papavero N (ed.) A catalog of the Diptera of the Americas south of the United States. **Departmento de Zoologia, Secretaria da Agricultura 103**. São Paulo 1-88.

Lopes HS (1975a). Bezzisca, new genus of Dexosarcophagina (Diptera, Sarcophagidae). **Revista Brasileira de Biologia 34**: 259-270.

Lopes HS (1975b). Sarcophagid flies (Diptera) from Pacatuba, State of Ceará. **Revista Brasileira de Biologia 34**: 271-294.

Lopes HS (1975c). New or little known Oxysarcodexia (Diptera, Sarcophagidae). **Revista Brasileira de Biologia 35**: 461-483.

Lopes HS (1976a). On the species of Argoravinia Townsend (Diptera, Sarcophagidae). **Revista brasileira de Biologia. 36**: 693-696.

Lopes HS (1976b). On the genus Cuculomyia Roback (Diptera, Sarcophagidae). **Revista brasileira de Biologia 36**: 745-757.

Lopes HS (1980a). On some Sarcophagidae (Diptera) from Pirapora, State of Minas Gerais, Brazil. **Revista Brasileira de Biologia 40**: 5-8.

Lopes HS (1980b). On Pachygraphia Brauer et Bergenstamm and Pachygraphgomima n. gen. (Diptera, Sarcophagidae, Johnsoniini). **Revista Brasileira de Biologia 40**: 415-442.

Lopes HS (1984). On some species of Notochaeta (Diptera, Sarcophagidae), with descriptions of seven new species. **Revista Brasileira de Entomologia 28**: 379-387.

Lopes HS (1985). Descriptions of six new species of Retrocitomyia Lopes (Diptera, Sarcophagidae). **Boletim do Museu Nacional Rio de Janeiro Zoologia 309**: 1-8.

Lopes HS (1988). Old and new Neotropical Sarcophagidae (Diptera). - **Mems Inst. Oswaldo Cruz** 83: 239-251.

Lopes HS (1990). On the genera of Sarcophagidae (Diptera) showing proclinate frontorbital bristles in males. **Revista Brasileira de Biologia 50**: 279-292.

Lopes HS, Tibana R (1982). Sarcophagid flies (Diptera) from sinop, state of Mato Grosso, Brazil. **Memórias do Instituto Oswaldo Cruz 77**: 285-298.

Lopes HS, Tibana R (1991). Sarcophagidae (Diptera) de Roraima, Brasil. **Acta Amazonica 21**: 151-157.

Kano R, Lopes HS (1969). A new genus of Sarcophagidae from the Amazon (Diptera). **Anais da Academia Brasileira de Ciências 41**: 91-94.

Kutty SN, Pape T, Wiegmann BM, Meier R (2010) in press. Molecular phylogeny of the Calyptratae (Diptera: Cyclorrhapha) with an emphasis on the superfamily Oestroidea and the position of Mystacinobiidae and McAlpine's fly. **Systematic Entomology 35**: 614-635.

Macquart (1843). Diptères exotiques nouveaux ou peu connus. Tome deuxième. **Mémoires de la Société Royale des Sciences, de L'Agriculture et des Arts de Lille**: 162-460.

Macquart (1848). Diptères exotiques nouveaux ou peu connus. Suite de 2 supplément. **Mémoires de la Société Royale des Sciences, de L'Agriculture et des Arts de Lille 2**: 161-237.

Macquart (1851). Diptères exotiques nouveaux ou peu connus. Suite de 4.e supplément publié dans les Mémoires de 1849. **Mémoires de la Société Royale des Sciences, de L'Agriculture et des Arts de Lille** 134-294.

Marinho MAT, Junqueira ACM, Paulo DF, Esposito MC, Villet MH, Azeredo-Espin AML (2012). Molecular phylogenetics of Oestroidea (Diptera: Calyptratae) with emphasis on Calliphoridae: Insights into the inter-familial relationships and additional evidence for paraphyly among blowflies. **Molecular Phylogenetics and Evolution 65**: 840-854.

Mattos WB (1919). As Sarcophagas de S. Paulo. **These, Faculdade de Medicina e Cirurgia de São Paulo**; iii + 116 + xii pp; 3 pls.

Mello RP (2003). Chave para identificação das formas adultas das espécies da família Calliphoridae (Diptera, Brachycera, Cyclorrapha) encontradas no Brasil. **Entomologia y vectores 10** (2): 255-268.

Mello-Patiu CA (1986). Sobre uma nova espécie de Dexosarcophaga Townsend, 1917 (Diptera, Sarcophagidae). **Revista brasileira de Biologia 46**: 347-351.

Mello-Patiu CA (1990). Uma nova espécie de Farrimyia Dodge, 1965 (Diptera, Sarcophagidae). **Memórias do Instituto Oswaldo Cruz 84**: 373-376.

Mello-Patiu CA (2018). **Sarcophagidae in Catálogo Taxonômico da Fauna do Brasil**. <http://fauna.jbrj.gov.br/fauna/faunadobrasil/1151>.

Mello-Patiu CA, Santos JM (2001). Nephochaetopteryx Townsend, 1934: descriptions and comparative morphological notes on the female terminalia (Diptera: Sarcophagidae). **Studia Dipterologia 8**: 303 – 315.

Murça-Pires J, Prance GT (1985). The Vegetation Types of the Brazilian Amazon. In: Prance GT, Lavejoy TE (eds) **Key environments**: Amazonia. Pergamon Press, Oxford, 109-145.

Neiva A, Faria G (1913). Notas sôbre um caso de miiase humana ocasionada por larvas de Sarcophaga pyophila n.sp. [Myiasis humana, verursacht durch Larven von Sarcophaga pyophila, n.sp.]. **Memórias do Instituto Oswaldo Cruz 5**: 16-23.

Pape T (1992). Phylogeny of the Tachinidae family-group (Diptera: Calyptratae). **Tijdschrift voor Entomologie 135**: 43-86.

Pape T (1996). **Catalogue of the Sarcophagidae of the World (Insecta: Diptera**). Memoirs of Entomology International, Stockholm, 558pp.

Pape T (1987). Revision of Neotropical Metopia Meigen (Diptera: Sarcophagidae). **Systematic entomology 12**: 81-101.

Pape T, Arnaud PH (2001). Bezzimyia - a genus of New World Rhinophoridae (Insecta, Diptera). **Zoologica Scripta 30**: 257-297.

Pape T, Dahlem GA (2010). Sarcophagidae In: Brown BV, Borkent A, Cumming JM, Wood DM, Woodley NE, Zumbado MA (eds.). **Manual of Central American Diptera 2**. NRC Research Press, Otawa, 1313-1335.

Prado A, Fonseca F (1932). Algumas espécies novas de Sarcophagas da cidade de São Paulo (Diptera. Stephanostomatidae). **Revista medico-Cirúrgica do Brasil 40**: 35-39.

Rafael JA (2018). **Diptera in Catálogo Taxonômico da Fauna do Brasil**. <http://fauna.jbrj.gov.br/fauna/faunadobrasil/252>.

Rafael JA, Melo GAR, Carvalho CJB, Casari AS, Constantino R (2012) Prefácio. In: Rafael JA, Melo GAR, Carvalho CJB, Casari AS, Constantino R (eds) **Insetos do Brasil**: diversidade e taxonomia. Editora Holos, Ribeirão Preto, XIII-XIV.

Reinhard HJ (1947). New North American muscoid Diptera. **Journal of Kansas Entomological Society 20**: 95-116.

Reinhard HJ (1963). New American Sarcophagidae (Diptera). **Entomological News 74**: 75-83.

Richards OW (1935). A note on the genus *Pachyophthalmus* B. & B. (Dipt. Tachinidae, Miltogramminae). - **Stylops London 4**: 209-213.

Robineau-Desvoidy JB (1830). Essai sur les myodaires. **Mémoires Présentés par Divers Savans a L'Académie Royale fes Sciences de L'Institut de France 2**: 1-813

Rognes K (1997). The Calliphoridae (Blowflies) (Diptera: Oestroidea) are not a monophyletic group. **Cladistics 13**: 27-66.

Rondani C (1850). Osservazioni sopra alquante specie di esapodi ditteri del Museo Torinese. **Nuovi annali dele scienze naturali 3**: 165-197.

Schiner LR (1868). Diptera. In: Scherzer K. Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859 unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. **Zoologischer Theil. Zweiter Band. 1. Abtheilung B** Wien 388 pp.

Séguy E (1931). Étude sur un nouveau type de diptère parasite Pachyophthalmus aurifacies n.sp. **Z. Parasitenk 3**: 780-785.

Silva JMC, Garda AA (2011). Padrões e Processos Biogeográficos na Amazônia. In: Carvalho CJB, Almeida EAB (eds). **Biogeografia da América do Sul**: padrões e processos. Editora Roca, São Paulo, 189–197.

Silva KP, Mello-Patiu CA (2010). New species of Dexosarcophaga Townsend from Panama with an illustrated key to species of the subgenus Bezzisca (Diptera: Sarcophagidae). **Journal of Natural History 44**: 89-106.

Sousa JRP, Esposito MC, Carvalho-Filho FS (2011a). Compositon, Abundance and Richness of Sarcophagidae (Diptera: Oestroidea) in Forests and Forest Gaps with Diff erent Vegeta on Cover. **Neotropical Entomology 40** (1): 20-27.

Sousa JRP, Esposito MC, Carvalho-Filho FS (2011b). Diversity of Calliphoridae and Sarcophagidae (Diptera, Oestroidea) in continuous forest and gaps at different stages of regeneration in the Urucu oilfield in western Brazilian Amazonia. **Revista Brasileira de Entomologia 55** (4): 578–582.

Thomson CG (1869). Diptera. Species nova descripsit. **Kongliga svenska fregatten Eugenies resa omkring jorden under befäl af C.A. Virgin, åren 1851-1853 2**: 443-614

Tibana R, Hime NC (1985). Redescrição de Nephochaetopteryx pallidiventris Townsend, 1934 e descrição de N. utinguensis, sp.n. (Diptera, Sarcophagidae). **Revista brasileira de Biologia 44**: 339-345.

Tibana R, Lopes HS (1985). On Brazilian Sarcophagidae (Diptera) with description of two new genera and four new species. **Revista Brasileira de Entomologia 29**: 189-198

Tibana R, Lopes HS (1990). New and old Sarcophagidae (Diptera) from Roraima, Brazil. **Revista**

brasileira de Biologia 50: 669-674.

Tibana R, Xerez R (1985). Uma nova espécie de Retrocitomyia Lopes, 1982 (Diptera, Sarcophagidae). **Revista brasileira de Biologia 45**: 485-488.

Townsend CHT (1892). A dexiid parasite of a longicorn beetle. **Journal of Institute of Jamaica 1**: 105-106.

Townsend CHT (1893). A tachinid reared from cells of a mud-dauber wasp. **Bulletin of Ohio Agricultural Experiment Station 1**, Technical series 165-166.

Townsend CHT (1911). Announcement of further results secured in the study of muscoid flies. **Annals of the Entomological Society of America 4**: 127-152.

Townsend CHT (1912a). Foundation of some new genera and speices of muscoid flies mainly on reproductive and early-stage characters. **Journal of the New York Entomological Society 20**: 107-119.

Townsend CHT (1912b). Descriptions of new genera and species of muscoid flies from the Andean and Pacific coast regions of South America. **Proceedings of the United States National Museum 43**: 301-367.

Townsend CHT (1917a). Second paper on Brazilian Muscoidea collected by Herbert H. Smith. **Bulletin of the American Museum of Natural History 34**: 221-322.

Townsend CHT (1917b). New genera and species of American muscoid Diptera. **Proceedings of The Biological Society of Washington 30**: 43-50.

Townsend CHT (1918). New genera of Amobiinae (Diptera) **Insecutor inscitiae menstruus 5**: 157-165.

Townsend CHT (1927). Synopse dos genero muscoideos da região humida neotropical da America, com generos e especies novas. **Revista do Museu Paulista 15**: 203-385.

Townsend CHT (1928). New Muscoidea from humid tropical South America. **Wiener Entomologische Zeitung 44**: 143-154.

Townsend CHT (1931). Notes on American oestromuscoid types. **Revista de Entomologia 1**: 65-104.

Townsend CHT (1934). New Neotropical oestromuscoid flies. **Revista de Entomologi**a **4**: 201-212, 390-406.

Townsend CHT (1935). New muscoid genera, mainly from the Neotropical Region. **Revista de Entomologia 5**: 68-74.

Verves YG, Khrokalo LA (2006). Review of Macronychiinae (Diptera, Sarcophagidae) of the world. **Vestnik zoologii 40**: 219-239.

Von Zuben CJ (1993). Competição larval em Chrysomya megacephala (Diptera: Calliphoridae): estimativa de perdas em biomassa e na fecundação e cálculo de conversão de alimento em biomassa. **Revista Brasileira de Entomologia 37** (4): 793-802.

Walker F (1849). List of the specimens of dipterous insects in the collection of the British Museum. Part IV. **British Museum**, London; 689-1172.

Walker F (1853). Diptera. In. Van Voorst J, Paternoster R. Insecta Saundersiana: or characters of undescribed insects in the collection of William Wilson Saunders, Esq., F.R.S., F.L.S., &c. **Vol. 1 Diptera – by Francis Walker F.L.S**. London. 253-414

Walker F (1858). Characters of undescribed Diptera in the collection of W.W. Saunders, Esq., F.R.S., &c. **Transactions of the Entomological Society of London 5**: 190-235.

Walker F (1861). Characters of undescribed Diptera in the collection of W.W. Saunders, Esq., F.R.S. &c. **Transactions of the Entomological Society of London 5** (2): 297-334.

Wiedemann CRW (1830). Aussereuropäische zweiflügelige Insekten. Als Fortsetzung des Meigenschen Werkes. **Schulz**, Hamm; 2: xii + 684 pp.

Wulp FM (1895). Fam. Muscidae. In: Godman FD, Salvin O (eds). **Biologia Centrali-Americana. Class Insecta. Diptera. Vol. 2**. London 265-272.

Wulp FM (1896). Fam. Muscidae. In: Godman FD, Salvin O. In: Godman, F.D. & Salvin, O. (eds). **Biologia Centrali-Americana. Class Insecta. Diptera. Vol. 2**. London. 281-288, 289-304.

Yeates DK, Wiegmann BM, Courtney GW, Meier R, Lambkin C, Pape T (2007) in press. Phylogeny and systematics of Diptera: Two decades of progress and prospects. **Zootaxa 1668:** 565-59.

Zumpt F (1950). Further notes and descriptions of Sarcophaga species from the Ethiopian Region (Diptera: Calliphoridae). ***Proceedings of the Entomological Society* of *London* 19**: 162-173.

Figure captions

Figures 1-7. **1.** *Argoravinea* (*Argoravinea*) *alvarengai*, epandrium, surtylus and cercus, left lateral view. **2.** *Argoravinia* (*Argoravinia*) *catiae*, epandrium, surtylus and cercus, left lateral view. **3.** *Argoravinia* (*Argoravinia*) *paraenses*, epandrium, surtylus and cercus, left lateral view. **4.** *Argoravinia* (*Argoravinia*) *rufiventris*, epandrium, surtylus and cercus, left lateral view. **5-7.** *Argoravinia* (*Raviniopsis*) *aurea.* **5.** epandrium, surtylus and cercus, left lateral view. **6.** Distiphallus, left lateral view. **7.** Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 8-17. **8-10.** *Blaesoxipha* (*Tephromyia*) *hunter.* **8.** Epandrium, surtylus and cercus, left lateral view. **9.** Distiphallus, left lateral **10.** Distiphallus, ventral view. **11-14.** *Chrysagria duodecimpunctata*. **11.** Epandrium, surtylus and cercus, left lateral view. **12.** Cercus, frontal view **13.** Distiphallus, left lateral **14.** Distiphallus, ventral view **15-17.** *Dexosarcophaga*

(*Dexosarcophaga*) *ampullula*. **15.** Epandrium, surtylus and cercus, left lateral view. **16.** Cercus, frontal view **17.** Distiphallus, left lateral view. Scale bars: 0,2**5** mm.

Figures 18-24. **18-21.** *Dexosarcophaga* (*Dexosarcophaga*) *avispaensis*. **18**. Epandrium, surtylus and cercus, left lateral view. **19**. Cercus, frontal view **20**. Distiphallus, left lateral view **21**. Distiphallus, ventral view **22-24.** *Dexosarcophaga* (*Dexosarcophaga*) *bermudezi.* **22**. Epandrium, surtylus and cercus, left lateral view. **23**. Cercus, frontal view **24**. Distiphallus, left lateral view. Scale bars: 0,2**5** mm.

Figures 25-31. **25-27**. *Dexosarcophaga* (*Dexosarcophaga*) *bidentata*. **25**. Epandrium, surtylus and cercus, left lateral view. **26**. Cercus, frontal view **27**. Distiphallus, left lateral view. **28-31**. *Dexosarcophaga* (*Dexosarcophaga) campina*. **28.** Epandrium, surtylus and cercus, left lateral view. **29.** Cercus, frontal view **30.** Distiphallus, left lateral view. **31.** Distiphallus, ventral view**.** Scale bars: 0,2**5** mm.

Figures 32-38. **32-34**. *Dexosarcophaga* (*Dexosarcophaga*) *carvalhoi*. **32**. Epandrium, surtylus and cercus, left lateral view. **33**. Cercus, frontal view **34**. Distiphallus, left lateral view. **35-38**. *Dexosarcophaga* (*Dexosarcophaga) currani* . **35**. Epandrium, surtylus and cercus, left lateral view. **36.** Cercus, frontal view **37.** Distiphallus, left lateral view. **38.** Distiphallus, ventral view**.** Scale bars: 0,2**5** mm.

Figures 39-44. **39-40**. *Dexosarcophaga* (*Dexosarcophaga*) *globulosa*. **39**. Epandrium, surtylus and cercus, left lateral view. **40**. Cercus, frontal view. **41-42**. *Dexosarcophaga* (*Dexosarcophaga*) *hugoi*. **41**. Epandrium, surtylus and cercus, left lateral view. **42**. Cercus, frontal view. **43-44**. *Dexosarcophaga* (*Dexosarcophaga*) *limitata*. **43**. Epandrium, surtylus and cercus, left lateral view. **44**. Cercus, frontal view. Scale bars: 0,2**5** mm.

Figures 45-51. **45-48**. Dexosarcophaga (*Dexosarcophaga*) malaisei. **45.** Epandrium, surtylus and cercus, left lateral view. **46.** Cercus, frontal view **47.** Distiphallus, left lateral view. **48.** Distiphallus, ventral view**. 49-51**. *Dexosarcophaga* (*Dexosarcophaga*) *pusilla* **49**. Epandrium, surtylus and cercus, left lateral view. **50**. Cercus, frontal view **51**. Distiphallus, left lateral view. Scale bars: 0,2**5** mm.

Figures 52-57. **52-53**. *Dexosarcophaga* (*Dexosarcophaga*) *rafaeli*. **52.** Epandrium, surtylus and cercus, left lateral view. **53.** Distiphallus, left lateral view. **54-55**. *Dexosarcophaga* (*Dexosarcophaga*) *tracua*. **54.** Epandrium, surtylus and cercus, left lateral view. **55.** Distiphallus,

left lateral view. **56-57**. Dexosarcophaga (*Dexosarcophaga*) *transita*. **56.** Epandrium, surtylus and cercus, left lateral view. **57.** Distiphallus, left lateral view. Scale bars: 0,2**5** mm.

Figures 58-62. **58-59.** *Dexosarcophaga* (*Dexosarcophaga*) *tupinamba* **58.** Epandrium, surtylus and cercus, left lateral view. **59.** Distiphallus, left lateral. **60-62.** *Dexosarcophaga* (*Dexosarcophaga*) *wyatti***. 60.** Epandrium, surtylus and cercus, left lateral view. **61.** Distiphallus, left lateral view. **62.** Distiphallus, ventral view**.** Scale bars: 0,2**5** mm.

Figures 63-67. *Dexosarcophaga* sp. Nov 1. **63**. Pregonite and postgonite. **64**. Epandrium, surtylus and cercus, left lateral view. **65**. Cercus, frontal view **66**. Distiphallus, left lateral view. **67**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 68-72 *Dexosarcophaga* sp. Nov 2. **68**. Pregonite and postgonite. **69**. Epandrium, surtylus and cercus, left lateral view. **70**. Cercus, frontal view **71**. Distiphallus, left lateral view. **72**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 73-78. **73-74.** *Duckemyia latifrons*. **73**. Epandrium, surtylus and cercus, left lateral view. **74**. Distiphallus, left lateral view. **75-78.** *Emblemasoma emblemasoma*. **75**. Epandrium, surtylus and cercus, left lateral view. **76**. Cercus, frontal view **77**. Distiphallus, left lateral view. **78**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 79-84. **79-82.** *Engelimyia inops*. **79**. Epandrium, surtylus and cercus, left lateral view. **80**. Cercus, frontal view **81**. Distiphallus, left lateral view. **82**. Distiphallus, ventral view. **83-84**. *Hallina egregia*. **83**. Epandrium, surtylus and cercus, left lateral view. **84**. Distiphallus, left lateral view**.** Scale bars: 0,25 mm.

Figures 85-97. **85-87** *Helicobia aurescens*. **85**. Epandrium, surtylus and cercus, left lateral view. **86**. Distiphallus, left lateral view. **87**. Distiphallus, ventral view. **88-89.** *Helicobia borgmeieri*. **88**. Epandrium, surtylus and cercus, left lateral view. **89**. Distiphallus, left lateral view. **90-92.** *Helicobia cametaensis.* **90**. Epandrium, surtylus and cercus, left lateral view. **91**. Distiphallus, left lateral view. **92**. Distiphallus, ventral view. **93-94.** *Helicobia chapadensis*. **93**. surtylus and cercus, left lateral view. **94**. Distiphallus, left lateral view. **95-97.** *Helicobia* domquixote. **95.** Epandrium, surtylus and cercus, left lateral view. **96**. Distiphallus, left lateral view **97**. Distiphallus, ventrall view. Scale bars: 0,25 mm.

Figures 98-106. **98-100.** *Helicobia morionella.* **98**. Epandrium, surtylus and cercus, left lateral view. **99**. Distiphallus, left lateral view. **100**. Distiphallus, ventral view. **101-103.** *Helicobia pilifera.* **101**.

Epandrium, surtylus and cercus, left lateral view. **102**. Distiphallus, left lateral view. **103**. Distiphallus, ventral view. **104-106.** *Helicobia pilipleura* **104**. Epandrium, surtylus and cercus, left lateral view. **105**. Distiphallus, left lateral view. **106**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 107-114. **107-110**. *Lipoptilocnema crispula.* **107**. Epandrium, surtylus and cercus, left lateral view. **108**. Cercus, frontal view **109**. Distiphallus, left lateral view. **110**. Distiphallus, ventral view. **111-112** *Malacophagomyia filamenta*. **111**. Epandrium, surtylus and cercus, left lateral view. **112**. Distiphallus, left lateral view. **113-114**. *Malacophagula neotropica*. **113**. Epandrium, surtylus and cercus, left lateral view. **114**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 115-123. **115-117**. *Nephochaetopteryx pallidiventris*. **115**. Epandrium, surtylus and cercus, left lateral view. **116**. Distiphallus, left lateral view. **117**. Distiphallus, ventral view. **118-120**. *Nephochaetopteryx paraensis.* **118**. Epandrium, surtylus and cercus, left lateral view. **119**. Distiphallus, left lateral view. **120**. Distiphallus, ventral view. **121-123**. *Nephochaetopteryx utinguensis.* **121**. Epandrium, surtylus and cercus, left lateral view. **122**. Distiphallus, left lateral view. **123**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 124-129. **124-126.** *Oxysarcodexia adunca.* **124**. Epandrium, surtylus and cercus, left lateral view. **125**. Distiphallus, left lateral view. **126**. Distiphallus, ventral view. **127-129**. *Oxysarcodexia amorosa.* **127**. Epandrium, surtylus and cercus, left lateral view. **128**. Distiphallus, left lateral view. **129**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 130-139. **130-132.** *Oxysarcodexia angrensis*. **130**. Epandrium, surtylus and cercus, left lateral view. **131**. Distiphallus, left lateral view. **132**. Distiphallus, ventral view. **133-136.** *Oxysarcodexia avuncula.* **133**. Epandrium, surtylus and cercus, left lateral view. **134.** Cercus, ventral view. **135**. Distiphallus, left lateral view **136**. Distiphallus, ventral view. **137-139.** *Oxysarcodexia bakeri* **137.** Epandrium, surtylus and cercus, left lateral view. **138**. Distiphallus, left lateral view. **139**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 140-147. **140-141.** *Oxysarcodexia berlai* **140.** Surtylus and cercus, left lateral view. **141**. Distiphallus, left lateral view. **142-144.** *Oxysarcodexia carvalhoi* **142.** Epandrium, surtylus and cercus, left lateral view. **143**. Distiphallus, left lateral view. **144**. Distiphallus, ventral view. **145-147.** *Oxysarcodexia confusa* **145.** Epandrium, surtylus and cercus, left lateral view. **146**. Distiphallus, left lateral view. **147**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 148-156. **148-150**. *Oxysarcodexia diana* **148**. Epandrium, surtylus and cercus, left lateral view. **149**. Distiphallus, left lateral view. **150**. Distiphallus, ventral view. **151-153**. *Oxysarcodexia fluminensis* **151**. Epandrium, surtylus and cercus, left lateral view. **152**. Distiphallus, left lateral view. **153**. Distiphallus, ventral view. **154-156**. *Oxysarcodexia fringidea* **154**. Epandrium, surtylus and cercus, left lateral view. **155**. Distiphallus, left lateral view. **156**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 157-164. **157-158**. *Oxysarcodexia grandis* **157**. Epandrium, surtylus and cercus, left lateral view. **158**. Distiphallus, left lateral view. **159-161**. *Oxysarcodexia inflata* **159**. Epandrium, surtylus and cercus, left lateral view. **160**. Distiphallus, left lateral view. **161**. Distiphallus, ventral view. **162-164**. *Oxysarcodexia insolita* **162**. Epandrium, surtylus and cercus, left lateral view. **163**. Distiphallus, left lateral view. **164**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 165-172. **165-167**. *Oxysarcodexia intona* **165**. Epandrium, surtylus and cercus, left lateral view. **166**. Distiphallus, left lateral view. **167**. Distiphallus, ventral view **168-170**. *Oxysarcodexia major*. **168**. Epandrium, surtylus and cercus, left lateral view. **169**. Distiphallus, left lateral view. **170**. Distiphallus, ventral view. **171-172**. *Oxysarcodexia mineirensis*. **171**. Epandrium, surtylus and cercus, left lateral view. **172**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 173-180. **173-176.** *Oxysarcodexia modesta.* **173**. Epandrium, surtylus and cercus, left lateral view. **174**. Cercus, ventral view. **175**. Distiphallus, left lateral view **176**. Distiphallus, ventral view. **177-178.** *Oxysarcodexia oculta*. **177**. Epandrium, surtylus and cercus, left lateral view. **178**. Distiphallus, left lateral view. **179-180.** *Oxysarcodexia thornax.* **179**. Epandrium, surtylus and cercus, left lateral view. **180**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 181-189. **181-183**. *Oxysarcodexia timida* **181**. Epandrium, surtylus and cercus, left lateral view. **182**. Distiphallus, left lateral view. **183**. Distiphallus, ventral view. **184-186**. *Oxysarcodexia villosa* **184**. Epandrium, surtylus and cercus, left lateral view. **185**. Distiphallus, left lateral view. **186**. Distiphallus, ventral view. **187-189**. *Oxysarcodexia xanthosoma* **187**. Epandrium, surtylus and cercus, left lateral view. **188**. Distiphallus, left lateral view. **189**. Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 190-196. **190-191**. *Oxyvinia uraricoera* **190.** Surtylus and cercus, left lateral view. **191.** Distiphallus, left lateral view. **192-193.** *Panava amazonica*. **192.** Epandrium, surtylus and cercus, left lateral view. **193.** Distiphallus, left lateral view.**194-196.** *Peckia* (*Euboettcheria*) *anguilla* **194**.

Epandrium, surtylus and cercus, left lateral view. **195.** Cercus, frontal view. **196**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 197-202. **197-199**. *Peckia* (*Euboettcheria*) *australis* **197**. Epandrium, surtylus and cercus, left lateral view. **198.** Cercus, frontal view. **199**. Distiphallus, left lateral view. **200-202**. *Peckia* (*Euboettcheria*) *collusor* **200**. Epandrium, surtylus and cercus, left lateral view. **201.** Cercus, frontal view. **202**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 203-207. **203-204**. *Peckia* (*Euboettcheria*) *epimelia* **203**. Epandrium, surtylus and cercus, left lateral view. **204**. Distiphallus, left lateral view. **205-207**. *Peckia* (*Euboettcheria*) *subducta* **205**. Epandrium, surtylus and cercus, left lateral view. **206.** Cercus, frontal view. **207**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 208-216. **208-210**. *Peckia* (*Pattonella*) *intermutans* **208**. Epandrium, surtylus and cercus, left lateral view. **209.** Cercus, frontal view. **210**. Distiphallus, left lateral view. **211-213**. *Peckia* (*Pattonella*) *pallidipilosa* **211**. Epandrium, surtylus and cercus, left lateral view. **212.** Cercus, frontal view. **213**. Distiphallus, left lateral view. **214-216**. *Peckia* (*Pattonella*) *smarti* **214**. Epandrium, surtylus and cercus, left lateral view. **215.** Cercus, frontal view. **216**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 217-229. **217-219**. *Peckia* (*Peckia*) *chrysostoma* **217**. Epandrium, surtylus and cercus, left lateral view. **218.** Cercus, frontal view. **219**. Distiphallus, left lateral view. **220-222**. *Peckia* (*Peckia*) *gulo* **220**. Epandrium, surtylus and cercus, left lateral view. **221.** Cercus, frontal view. **222**. Distiphallus, left lateral view. **223-225**. *Peckia* (*Peckia*) *hilifera.* **223**. Epandrium, surtylus and cercus, left lateral view. **224.** Cercus, frontal view. **225**. Distiphallus, left lateral view. **226-229**. *Peckia* (*Peckia*) *lutzi* **226**. Cercus, frontal view. **227.** Epandrium, surtylus and cercus, left lateral view. **228**. Distiphallus, left lateral view. **229.** Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 230-241. **230-232**. *Peckia* (*Peckia*) *pexata* **230**. Epandrium, surtylus and cercus, left lateral view. **231.** Cercus, frontal view. **232**. Distiphallus, left lateral view. **233-235**. *Peckia* (*Peckia*) *uncinata* **233**. Epandrium, surtylus and cercus, left lateral view. **234.** Cercus, frontal view. **235**. Distiphallus, left lateral view. **236-238**. *Peckia* (*Peckia*) *veropeso* **236**. Epandrium, surtylus and cercus, left lateral view. **237.** Cercus, frontal view. **238**. Distiphallus, left lateral view. **239-241**. *Peckia* (*Sarcodexia*) *florencioi* **239**. Epandrium, surtylus and cercus, left lateral view. **240.** Cercus, frontal view. **241**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 242-253. **242-245**. *Peckia* (*Sarcodexia*) *lambens* **242**. Epandrium, surtylus and cercus, left lateral view. **243.** Cercus, frontal view. **244**. Distiphallus, left lateral view. **245.** Distiphallus, ventral view. **246-248**. *Peckia* (*Sarcodexia*) *tridentata.* **246**. Epandrium, surtylus and cercus, left lateral view. **247.** Cercus, frontal view. **248**. Distiphallus, left lateral view. **249-251**. *Peckia* (*Squamatodes*) *ingens* **249**. Epandrium, surtylus and cercus, left lateral view. **250.** Cercus, frontal view. **251**. Distiphallus, left lateral view. **252-253**. *Peckia* (*Squamatodes*) *trivittata* **252**. Epandrium, surtylus and cercus, left lateral view. **253**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 254-261. **254-257**. *Peckiamyia abnormalis* **254**. Epandrium, surtylus and cercus, left lateral view. **255.** Cercus, frontal view. **256**. Distiphallus, left lateral view. **257.** Distiphallus, ventral view. **258-261**. *Peckiamyia minutipenis* **258**. Epandrium, surtylus and cercus, left lateral view. **259.** Cercus, frontal view. **260**. Distiphallus, left lateral view. **261.** Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 262-266. *Promayoa peculiares*. **262**. Epandrium, surtylus and cercus, left lateral view. **263**. Distiphallus, left lateral view. **264.** Distiphallus, ventral view. **265.** Sternite 5. **266.** Pregonite and postgonite. Scale bars: 0,25 mm.

Figures 267-274. **267-270**. *Ravinia effrenata* **267**. Epandrium, surtylus and cercus, left lateral view. **268.** Cercus, frontal view. **269**. Distiphallus, left lateral view. **270.** Distiphallus, ventral view. **271-274**. *Retrocitomyia mizuguchiana* **271**. Epandrium, surtylus and cercus, left lateral view. **272.** Cercus, frontal view. **273**. Distiphallus, left lateral view. **274.** Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 275-281. **275-277**. *Retrocitomyia retrocita* **275**. Epandrium, surtylus and cercus, left lateral view. **276.** Cercus, frontal view. **277**. Distiphallus, left lateral view. **278-281**. *Retrocitomyia urumajoensis* **278**. Epandrium, surtylus and cercus, left lateral view. **279.** Cercus, frontal view. **280**. Distiphallus, left lateral view. **281.** Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 282-285. *Rettenmeyerina* sp. nov. **282**. Epandrium, surtylus and cercus, left lateral view. **283**. Distiphallus, left lateral view. **284.** Pregonite and postgonite. **285.** Sternite 5. Scale bars: 0,25 mm.

Figures 286-292. **286-287**. *Sarcofahrtiopsis cuneata* **286**. Epandrium, surtylus and cercus, left lateral view. **287**. Distiphallus, left lateral view. **288-289**. *Sarcofahrtiopsis cupendipe* **288**. Epandrium, surtylus and cercus, left lateral view. **289**. Distiphallus, left lateral view. **290-292**.

Sarcofahrtiopsis terezinhae **290**. Epandrium, surtylus and cercus, left lateral view. **291.** Cercus, frontal view. **292**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 293-302. **293-295**. *Sarcophaga* (*Liopygia*) *ruficornis* **293**. Epandrium, surtylus and cercus, left lateral view. **294.** Cercus, frontal view. **295**. Distiphallus, left lateral view. **296-298**. *Sinopiella rufopilosa* **296**. Epandrium, surtylus and cercus, left lateral view. **297**. Distiphallus, left lateral view. **298.** Distiphallus, ventral view. **299-302**. *Thomazomyia adunca* **299**. Epandrium, surtylus and cercus, left lateral view. **300.** Cercus, frontal view **301**. Distiphallus, left lateral view. **302.** Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 303-311. **303-304**. *Titanogrypa* (*Cucullomyia*) *alvarengai*. **303**. Epandrium, surtylus and cercus, left lateral view. **304**. Distiphallus, left lateral view. **305-307.** *Titanogrypa* (*Cucullomyia*) *larvicida* **305**. Epandrium, surtylus and cercus, left lateral view. **306.** Cercus, frontal view. **307**. Distiphallus, left lateral view. **308-311**. *Titanogrypa* (*Cucullomyia*) *luculenta* **308**. Epandrium, surtylus and cercus, left lateral view. **309.** Cercus, frontal view. **310**. Distiphallus, left lateral view. **311.** Distiphallus, ventral view. Scale bars: 0,25 mm.

Figures 312-320. **312-314**. *Titanogrypa* (*Sarconeiva*) *fimbriata* **312**. Epandrium, surtylus and cercus, left lateral view. **313.** Cercus, frontal view. **314**. Distiphallus, left lateral view. **315.** *Tricharaea* (*Sarcophagula*) *canuta*, epandrium, surtylus and cercus, left lateral view. **316.** *Tricharaea* (*Sarcophagula*) *occidua*, epandrium, surtylus and cercus, left lateral view. **317-318.** *Tricharaea* (*Sarothromyia*) *femoralis*. **317.** Surtylus and cercus, left lateral view. **318**. Distiphallus, left lateral view. **319-320.** *Tricharaea* (*Tricharaea*) *brevicornis*. **319.** Epandrium, surtylus and cercus, left lateral view. **320**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 321-326. **321-323**. *Tripanurga albicans* **321**. Epandrium, surtylus and cercus, left lateral view. **322**. Distiphallus, left lateral view. **323.** Distiphallus, ventral view. **324-326**. *Villegasia almeidai* **324**. Epandrium, surtylus and cercus, left lateral view. **325.** Cercus, frontal view. **326**. Distiphallus, left lateral view. Scale bars: 0,25 mm.

Figures 327-330. **327.** *Oxysarcodexia xanthossoma* head, without proclinate fronto-orbital seta. **328.** *Titanogrypa* (*Sarconeixa*) *fimbriata*, with proclinate fronto-orbital seta in the circle. **329.** *Argoravinia* (*Raviniopsis*) *aurea* mid femur, with ctenidium in the circle. **330.** *Helicobia pilifera* wing, with vein R1 haired in the circle. Scale bars: 1 mm.

CONCLUSÕES GERAIS

Com base na identificação dos materiais das coleções e nos estudos feitos, foram obtidas as seguintes conclusões:

- Do total de 343 espécies e 42 gêneros de Sarcophagidae para o Brasil, foram encontrados 132 espécies e 29 gêneros para Amazônia brasileira.

- Foram encontradas 15 novas ocorrências para a região amazônica e 4 são novas ocorrências para o Brasil.

- 3 espécies novas foram encontradas nas coleções e foram descritas.

ANEXO

Information for authors

Aim and scope

Zootaxa is a peer-reviewed international journal for rapid publication of high quality papers on any aspect of systematic zoology, with a preference for large taxonomic works such as monographs and revisions. *Zootaxa* considers papers on all animal taxa, both living and fossil, and especially encourages descriptions of new taxa. All types of taxonomic papers are considered, including theories and methods of systematics and phylogeny, taxonomic monographs, revisions and reviews, catalogues/checklists, biographies and bibliographies, identification guides, analysis of characters, phylogenetic relationships and zoogeographical patterns of distribution, descriptions of taxa, and nomenclature. Open access publishing option is strongly encouraged for authors with research grants and other funds. For those without grants/funds, all accepted manuscripts will be published but access is secured for subscribers only. All manuscripts will be subjected to peer review before acceptance. *Zootaxa* aims to publish each paper within one month after the acceptance by editors.

Based on length, two categories of papers are considered.

1) Research article

Research articles are significant papers of four or more printed pages reporting original research. Papers between 4 and 59 printed pages are published in multi-paper issues of 60, 64 or 68 pages. Monographs (60 or more pages) are individually issued and bound, with ISBNs.

Zootaxa encourages large comprehensive taxonomic works. There is no upper limit on the length of manuscripts, although authors are advised to break monographs of over 1000 pages into a multi-volume contribution simply because books over 1000 pages are difficult to bind and too heavy to hold.

Very short manuscripts with isolated descriptions of a single species are generally discouraged, especially for taxa with large number of undescribed species. These short manuscripts may be returned to authors without consideration. Short papers on species of economic, environmental or phylogenetic importance may be accepted at the discretion of editors, who will generally encourage and advise authors to add value to the paper by providing more information (e.g. checklist of or key to species of the genus, biological information.....). Short papers of 4 or 5 pages accepted for publication may be shortened for publication in the Correspondence section.

2) Correspondence

High quality and important short manuscripts of normally 1 to 4 pages are considered to fill blank pages in multi-paper issues. Zootaxa publishes the following six types of correspondence:

- opinions and views on current issues of interests to systematic zoologists (e.g.Zootaxa 1577: 1-2)
- commentary on or additions/corrections to papers previously published in *Zootaxa*(e.g. Zootaxa 1494: 67-68)
- obituary in memory of deceased systematic zoologists (e.g. Zootaxa 545: 67-68)
- taxonomic/nomenclatural notes of importance

- book reviews meant to introduce readers to new or rare taxonomic monographs (interested authors/publishers must write to subject editors before submitting books for review; editors then prepare the book review or invite colleagues to prepare the review; unsolicited reviews are not published)
- and short papers converted from manuscripts submitted as research articles but are too short to qualify as formal research articles.

These short contributions should have no more than 20 references and its total length should not exceed four printed pages (except editorials). Neither an abstract nor a list of key words is needed; major headings (Introduction, Material and methods...) should NOT be used, except for new taxon heading and references. A typical correspondence should consist of (1) a short and concise title, (2) author name and address (email address), (3) a series of paragraphs of the main text,and (4) a list of references if any. For correspondence of 3 or 4 pages, the first or last paragraph may be a summary.

Commentaries on published papers are intended for scholarly exchange of different views or interpretations of published data and should not contain personal attack; authors of concerned papers may be invited to reply to comments on their papers.

Special issues

Special issues with collected papers such as a Festschrift (see Zootaxa 1325 and Zootaxa 1599) within the scope of the journal are occasionally published. Guest editors should send the proposal to the chief editor for approval and instructions. Although guest editors for special issues are responsible for organising the peer review of papers collected within these issues, they must follow Zootaxa's style, stardard and peer review procedures. If any papers by the guest editors are to be included in the special issue, then these papers must be handled by editors/colleagues other than the editor(s) involved. Special issues must be 60 or more pages. Normally funding is required to offset part of the production cost. Author payment for open access is strongly encouraged. Reprints can be ordered for the entire issue or for individual papers.

Preparation of manuscripts

1) *General.* All papers must be in English. Authors whose native language is not English are encouraged to have their manuscripts read by a native English-speaking colleague before submission. Nomenclature must be in agreement with the *International Code of Zoological Nomenclature* (4th edition 1999), which came into force on 1 January 2000. Author(s) of species name must be provided when the scientific name of any animal species is first mentioned (the year of publication needs not be given; if you give it, then provide a full reference of this in the reference list). Authors of plant species names need not be given. Metric systems should be used. If possible, use the common font Times New Roman and use as little formatting as possible (use only bold and *italics* where necessary and indentions of paragraphs except the first). Special symbols (e.g. male or female sign) should be avoided because they are likely to be altered when files are read on different machines (Mac versus PC with different language systems). You can code them as m# and f#, which can be replaced during page setting. The style of each author is generally respected but they must follow the following general guidelines.

2) The title should be concise and informative. The higher taxa containing the taxa dealt with in the paper should be indicated in parentheses: e.g. A taxonomic revision of the genus *Aus* (Order: family).

3) The name(s) of all authors of the paper must be given and should be typed in the upper case (e.g.

ADAM SMITH, BRIAN SMITH & CAROL SMITH). The address of each author should be given in *italics* each starting a separate line. E-mail address(es) should be provided if available.

4) The abstract should be concise and informative. Any new names or new combinations proposed in the paper should be mentioned. Abstracts in other languages may also be included in addition to English abstract. The abstract should be followed by a list ofkey wordsthat are not present in the title. Abstract and key words are not needed in short correspondence.

5) The arrangement of the main text varies with different types of papers (a taxonomic revision, an analysis of characters and phylogeny, a catalogue etc.), but should usually start with an introduction and end with a list of references. References should be cited in the text as Smith (1999), Smith & Smith (2000) or Smith *et al.* (2001) (3 or more authors), or alternatively in a parenthesis (Smith 1999; Smith & Smith 2000; Smith *et al*. 2001). All literature cited in the text must be listed in the references in the following format (see a sample page here in PDF).

A) Journal paper:

Smith, A. (1999) Title of the paper. *Title of the journal in full*, volume number, issue number if possible & page range.

B) Book chapter:

Smith, A. & Smith, B. (2000) Title of the Chapter. *In*: Smith, A, Smith, B. & Smith, C. (Eds), *Title of Book*. Publisher name and location, pp. x–y.

C) Book:

Smith, A., Smith, B. & Smith, C. (2001) *Title of Book*. Publisher name and location, xyz pp.

D) Internet resources

Author (2002) Title of website, database or other resources, Publisher name and location (if indicated), number of pages (if known). Available from: http://xxx.xxx.xxx/ (Date of access).

Dissertations resulting from graduate studies and non-serial proceedings of conferences/symposia are to be treated as books and cited as such. Papers not cited must not be listed in the references.

Please note that:

(1) journal titles must be written in full (not abbreviated)

(2) journal titles and volume numbers are followed by a ","

(3) page ranges are connected by "n dash", not hyphen "-", which is used to connect two words.

For websites, it is important to include the last date when you see that site, as it can be moved or deleted from that address in the future.

On the use of dashes: (1) Hyphens are used to link words such as personal names, some prefixes and compound adjectives (the last of which vary depending on the style manual in use). (2) En-dash or en-rule (the length of an ‘n’) is used to link spans. In the context of our journal that means

numerals mainly, most frequently sizes, dates and page numbers (e.g. 1977–1981; figs 5–7) and also geographic or name associations (Murray–Darling River; a Federal–State agreement). (3) Em-dash or em-rule (the length of an 'm') are used far more infrequently, and are used for breaks in the text or subject, often used much as we used parentheses. In contrast to parentheses an em-dash can be used alone; e.g. What could these results mean—that Niel had discovered the meaning of life? En-dashes and em-dashes should not be spaced.

6) Legends of illustrations should be listed after the list of references. Small illustrations should be grouped into plates. When preparing illustrations, authors should bear in mind that the journal has a matter size of 25 cm by 17 cm and is printed on A4 paper. For species illustration, line drawings are preferred, although good quality B&W or colour photographs are also acceptable. See a guide here for detailed information on preparing plates for publication.

7) Tables, if any, should be given at the end of the manuscript. Please use the table function in your word processor to build tables so that the cells, rows and columns can remain aligned when font size and width of the table are changed. Please do not use Tab key or space bar to type tables.

8) Keys are not easy to typeset. In a typical dichotomous key, each lead of a couplet should be typed simply as a paragraph as in the box below:

1 Seven setae present on tarsus I ; four setae present on tibia I; leg I longer than the body; legs black in color ... Genus A

- Six setae present on tarsus I; three setae present on tibia I; leg I shorter than the body; legs brown in color ... 2

2 Leg II longer than leg I ... Genus B

- Leg II shorter than leg I ... Genus C

Our typesetters can easily convert this to a proper format as in this PDF file.

Deposition of specimens

Whenever possible, authors are advised to deposit type specimens in national or international public museums or collections. Authors are also advised to request registration numbers of deposited material in advance of the acceptance of papers to avoid unnecessary delay of publication. Some countries (e.g. Australia) require that primary type specimens be deposited in collections of the country of origin; authors are advised to take this into consideration.

Submission

Please follow the above basic guidelines and check if your manuscript has been prepared according to the style and format of the journal. Authors are encouraged to submit manuscripts by e-mail as attachments to the subject Editors responsible for your taxa or subject areas; manuscripts on small insect orders without subject editors should be submitted to Dr Ernest Bernard (ebernard@utk.edu) or Dr Andrew Whittington (awhittington@flyevidence.co.uk); manuscripts on other invertebrate taxa without subject editors should be submitted to the Chief editor.

Prior to submitting a manuscript and figures to an editor, please check our website if there are two or more editors per subject, and then contact one of these to announce your intention to submit a manuscript for review. Please indicate the size of the manuscript, the number of figures and the

format of these files. Your editor can then respond with special instructions, especially for the submission of many image files.

When you submit your manuscript to your editor, it will be more expedient to the review process if you offer the names of three or more potential reviewers with their complete postal and email addresses. It is also important to include the following statements in your cover letter:

1) All authors agree to its submission and the Corresponding author has been authorized by co-authors; 2) This Article has not been published before and is not concurrently being considered for publication elsewhere (including another editor at Zootaxa); 3) This Article does not violate any copyright or other personal proprietary right of any person or entity and it contains no abusive, defamatory, obscene or fraudulent statements, nor any other statements that are unlawful in any way.

Otherwise, your manuscript will not be processed.

For manuscripts with numerous illustrations, which might be saved as separate TIFF or JPG files, for the purpose of review, it will be easier and more efficient for the subject editors and reviewers to have the figures converted into one larger PDF (Portable Document Format) file, instead of requiring the subject editor to save many files, cutting and copying these into a string of messages/files to the reviewers. You should retain the original figures in a higher resolution format for the final production of the accepted paper. For the text, PDF file along with RTF (Rich Text format) files are preferred. The advantage of submitting a rtf file for the text part of the manuscript is that the reviewers can emend the manuscript electronically. If you can not prepare PDF files, then submit text in RTF and the figures in TIFF (line drawing scanned at 600 dpi and half tone at 300 dpi; please use LZW compression, if you can, to reduce the size of e-files for easy transmission); if halftone TIFF files are too big (exceeding 2 MB), then submit them in jpeg. See here for detailed information on preparing plates for publication.

Vector files (charts, maps etc) are best submitted as EMF.

If you do not have access to e-mail, you can send three copies of the manuscript by post. Please double space your ms and leave ample margins for printed manuscripts.

Authors of accepted papers will be asked to submit an electronic version of the manuscript so that the publisher needs not to re-key or scan the ms. At this stage, the text part of the ms must be submitted as RTF or MS Word files and figures as TIFF files. Authors please be aware that line drawings must be scanned at 600 to 1200 dpi as line art (=1 bit); they must NOT be scanned as 8 bit or full colour images. Please read details here.

In submitting the final version of revised manuscript to editors, authors are asked to provide the following information to all proper typesetting and indexing of the manuscript:

1) Corresponding author name and email

2) Author last name and running title (<60 characters; to be used in footer)

3) Number of plates and cited references

4) High taxon name (i.e. taxon section in Zootaxa website) and number of new taxa described in the paper

Authors need to complete and return an Assignment of Copyright form when paper is accepted for publication. Authors of institutions that do not allow transfer of copyrights to publishers (e.g. government institutions such as USDA, CSIRO) should attach a copyright waiver or similar documents.

Review process

When a manuscript is received by the Editor, he/she will have it reviewed by at least two peers qualified to evaluate the manuscript and he/she normally asks the reviewers to complete the review in one month. However, the reviewing process will normally take longer, depending on the length of the manuscript and reviewer's responses.

Publication

Once the manuscript is accepted by your subject editor, final files, produced according to Zootaxa requirement, will be forwarded by your subject editor to the chief editor, who will then link with author and the printer to ensure that the paper is published without unnecessary delay. Normally the proof will be sent to the author for checking 1 to 3 weeks after the final files are accepted. The paper will usually be published with two weeks (for larger papers it will take longer) once the corrections to the proof are received.

Page charge and colour plates. There is no page charge for publishing with *Zootaxa*. Publication of colour figures/photographs in online edition is also free of charge (print version in black and white). If colour plates in the print edition are desired, authors will be asked to contribute towards the full cost. Current rates: 300 USD for the first colour page; 200 USD for each additional colour page.

Open access. Zootaxa endorses the open access of taxonomic information and has published more open access taxonomic papers than any other journal. Authors who have funds to publish are strongly encouraged to pay a fee of 20 US$ per printed page to give free online access of their papers to all readers at this site or their own site. Open access papers are read by more people and are expected to have higher citation rates.

Open access can be ordered before or after publication.

Reprints. Each author will be given a free e-reprint (PDF) for personal use (printing a copy for own use or exchange with other researchers, but not for deposition in a library/website/ftp-site for public access).

Printed copies of each paper/monograph in the form of the regular reprint can also be produced by the Publisher for purchase by authors at cost to authors, with a discount based on the number of copies ordered.

LISTA DE ARTIGOS PUBLICADOS DURANTE A PÓS GRADUAÇÃO

CARVALHO-FILHO, FERNANDO DA SILVA ; GORAYEB, INOCÊNCIO DE SOUSA ; SOARES, JÉSSICA MARIA MENEZES ; DE SOUZA, MATHEUS TAVARES . Flesh flies
(Diptera: Sarcophagidae) from a white-sand habitat in the Brazilian Amazon, with the description of four new species. ZOOTAXA, v. 4504, p. 401-417, 2018.

CARVALHO-FILHO, FERNANDO DA SILVA; MARTINS, MARLÚCIA BONIFÁCIO; SOUZA, MATHEUS TAVARES DE; REEMER MENNO. Revision of the Neotropical genus Domodon Reemer (Diptera: Syrphidae), with description of three new species. ZOOTAXA, v. 4648 (3), p. 523-536, 2019.

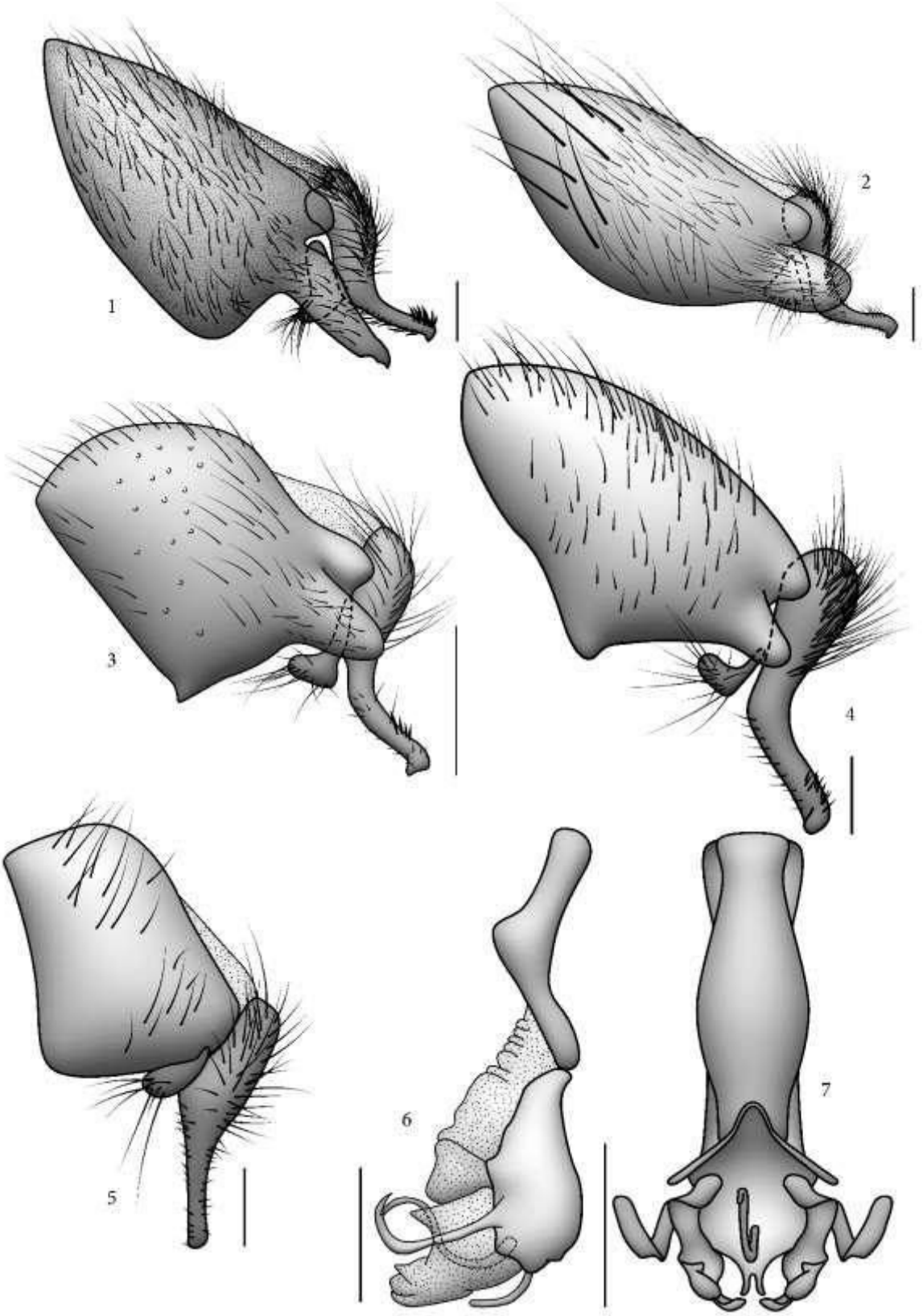


Figure 1-7

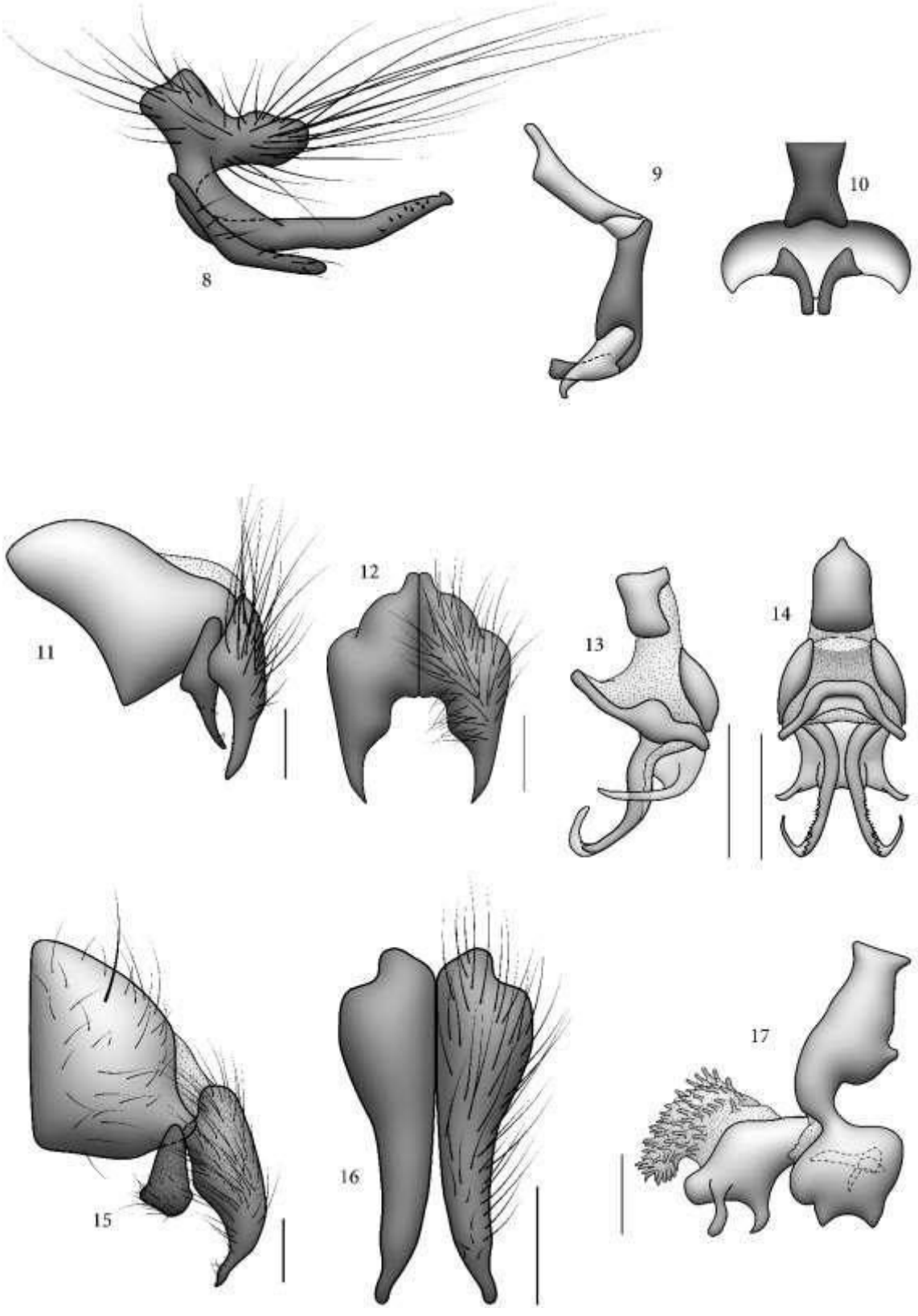


Figure 8-17

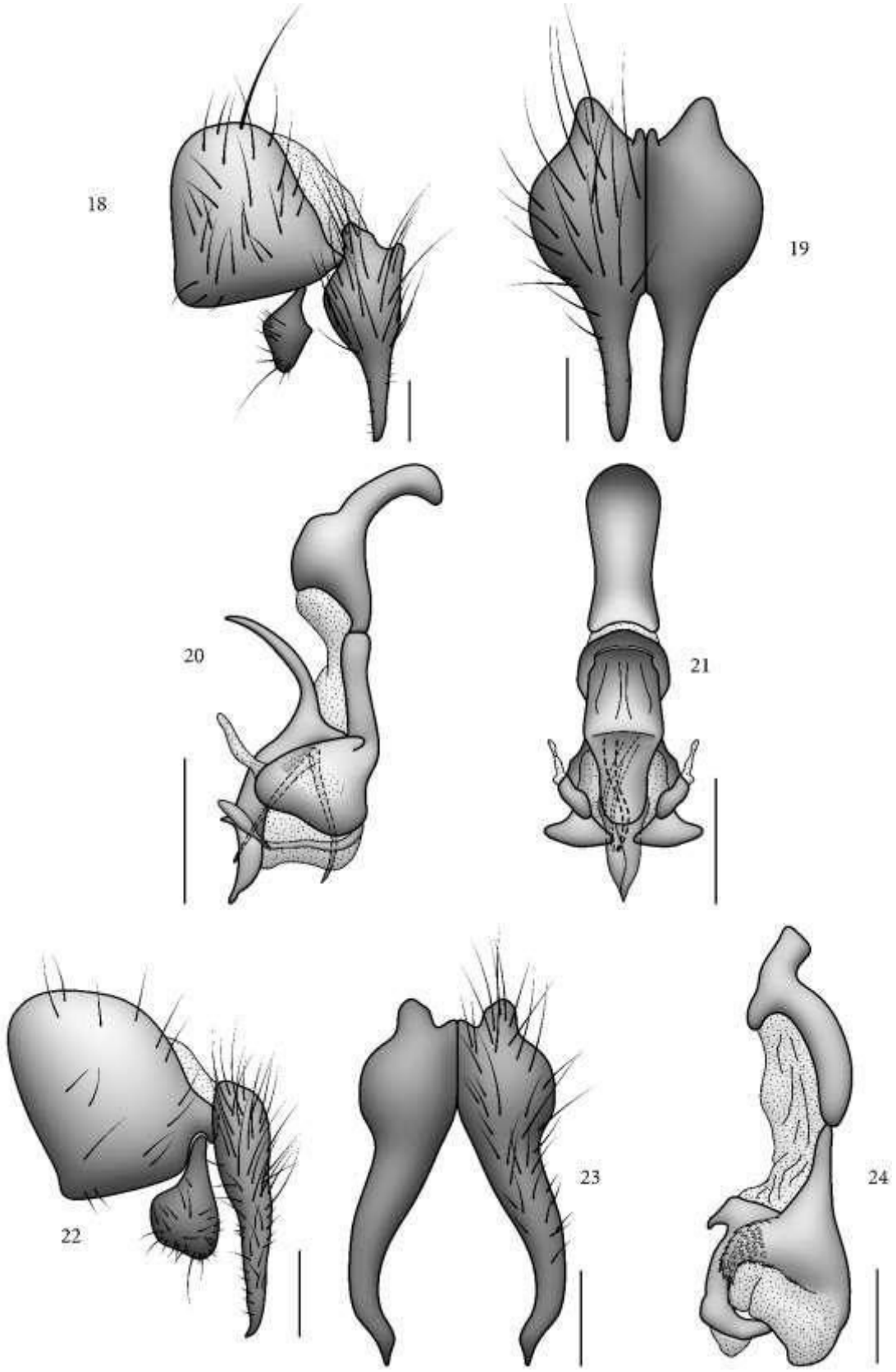


Figure 18-24

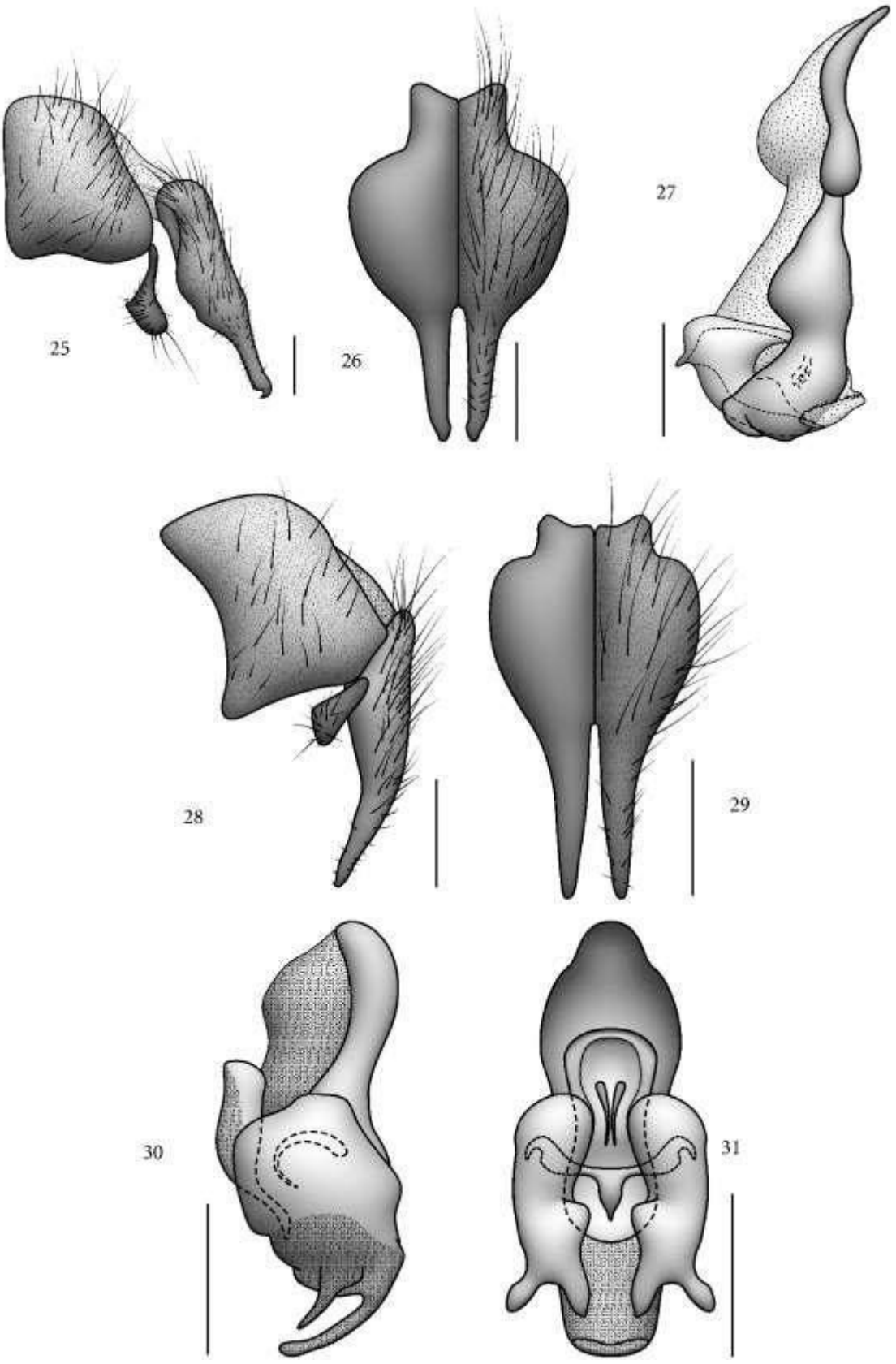


Figure 25-31

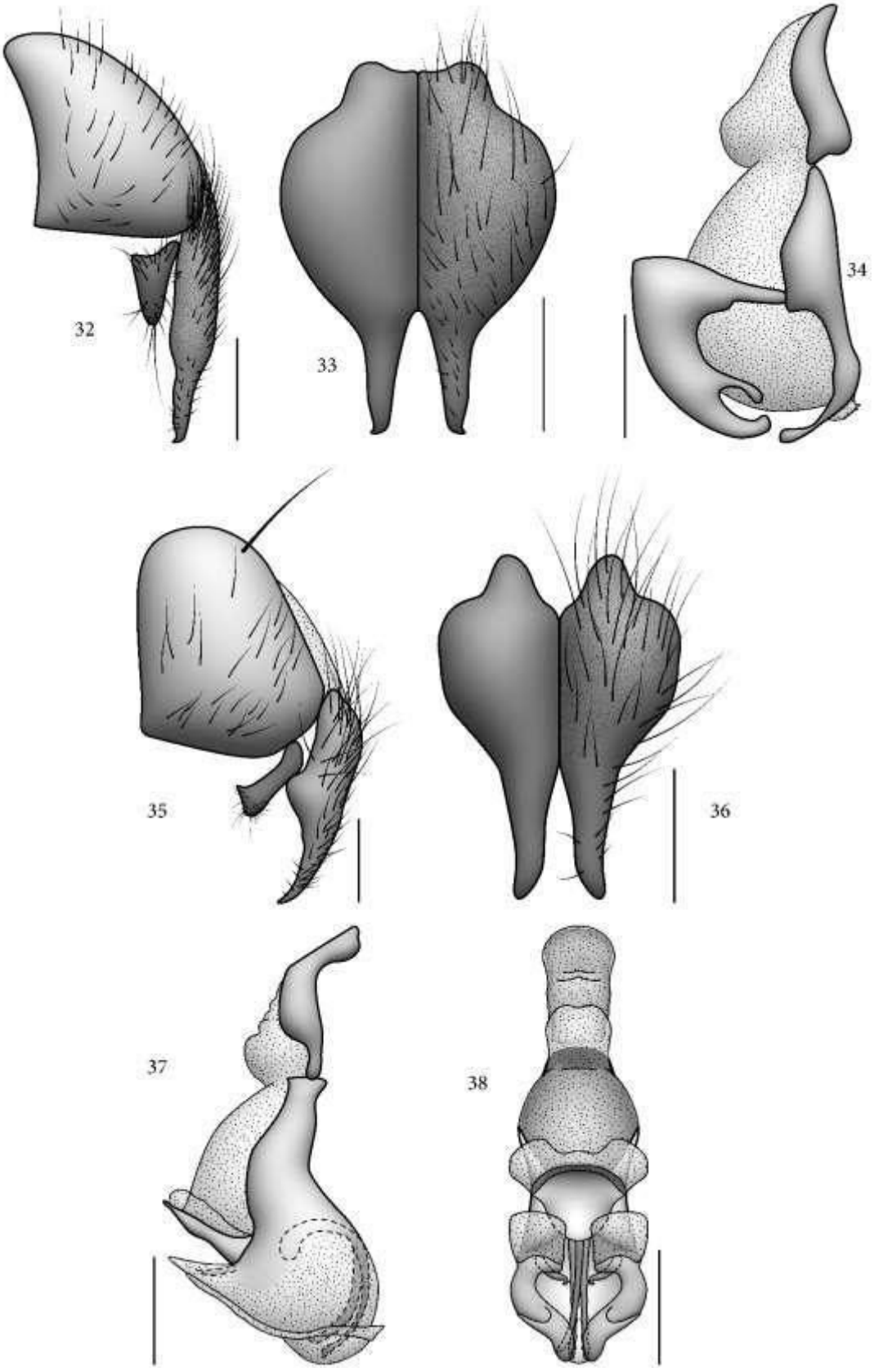


Figure 32-38

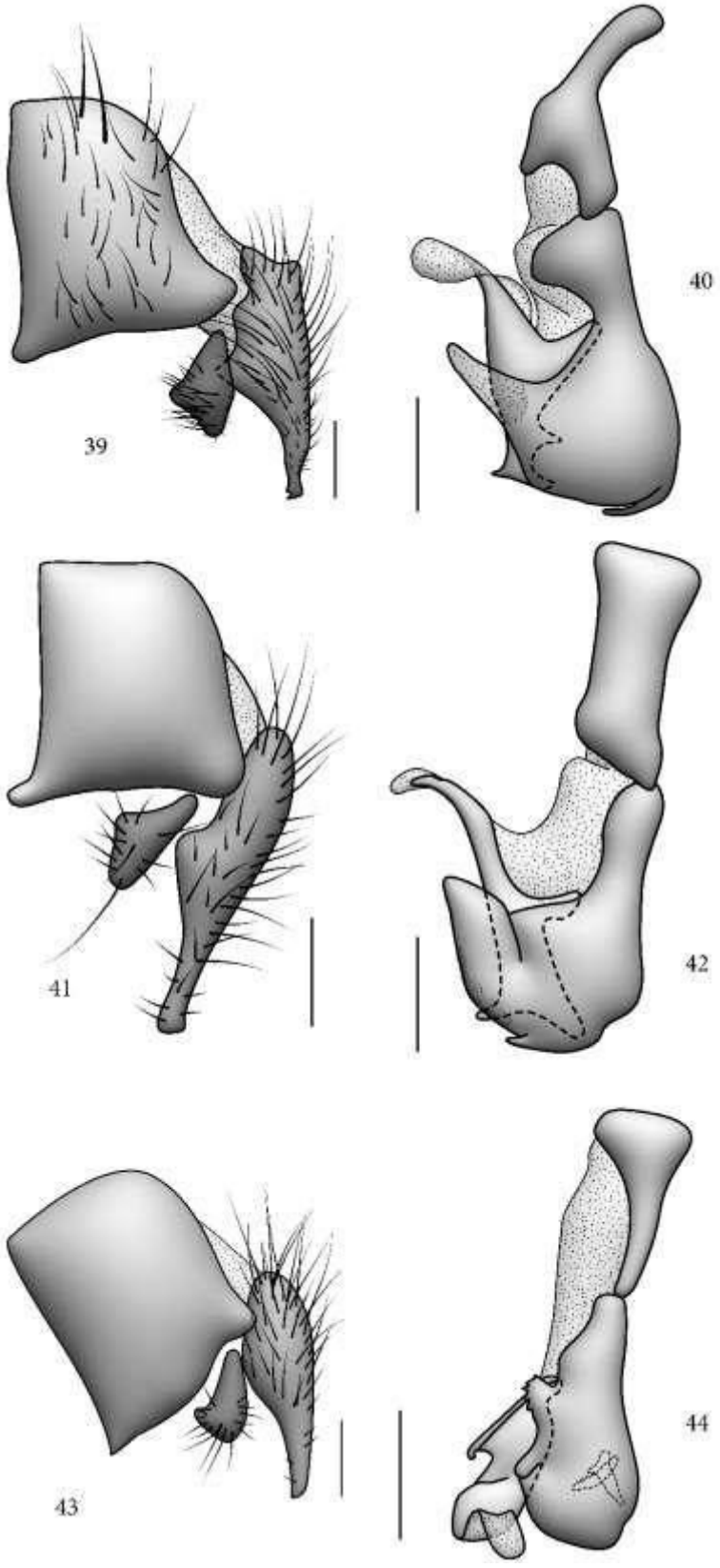


Figure 39-44

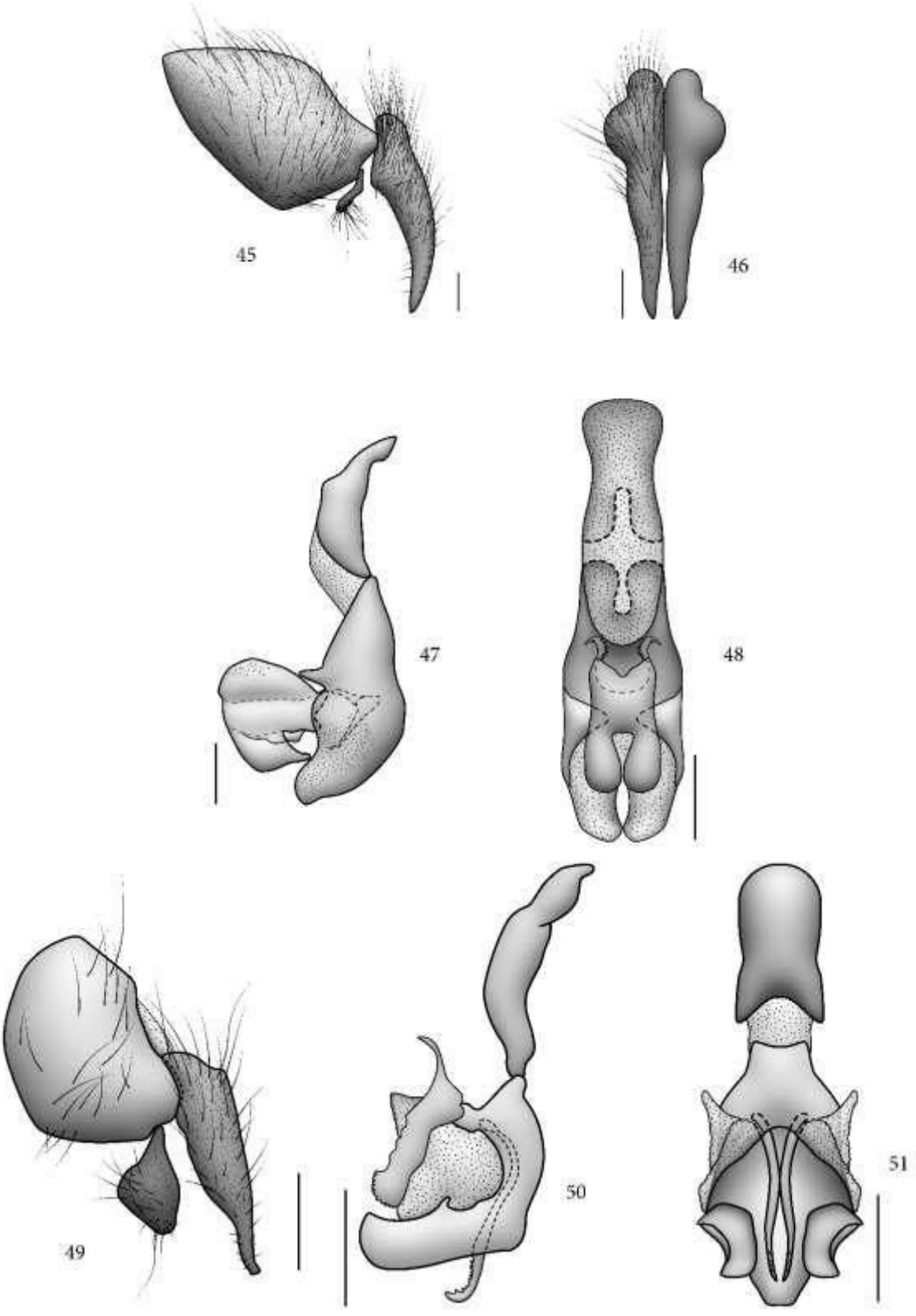


Figure 45-51

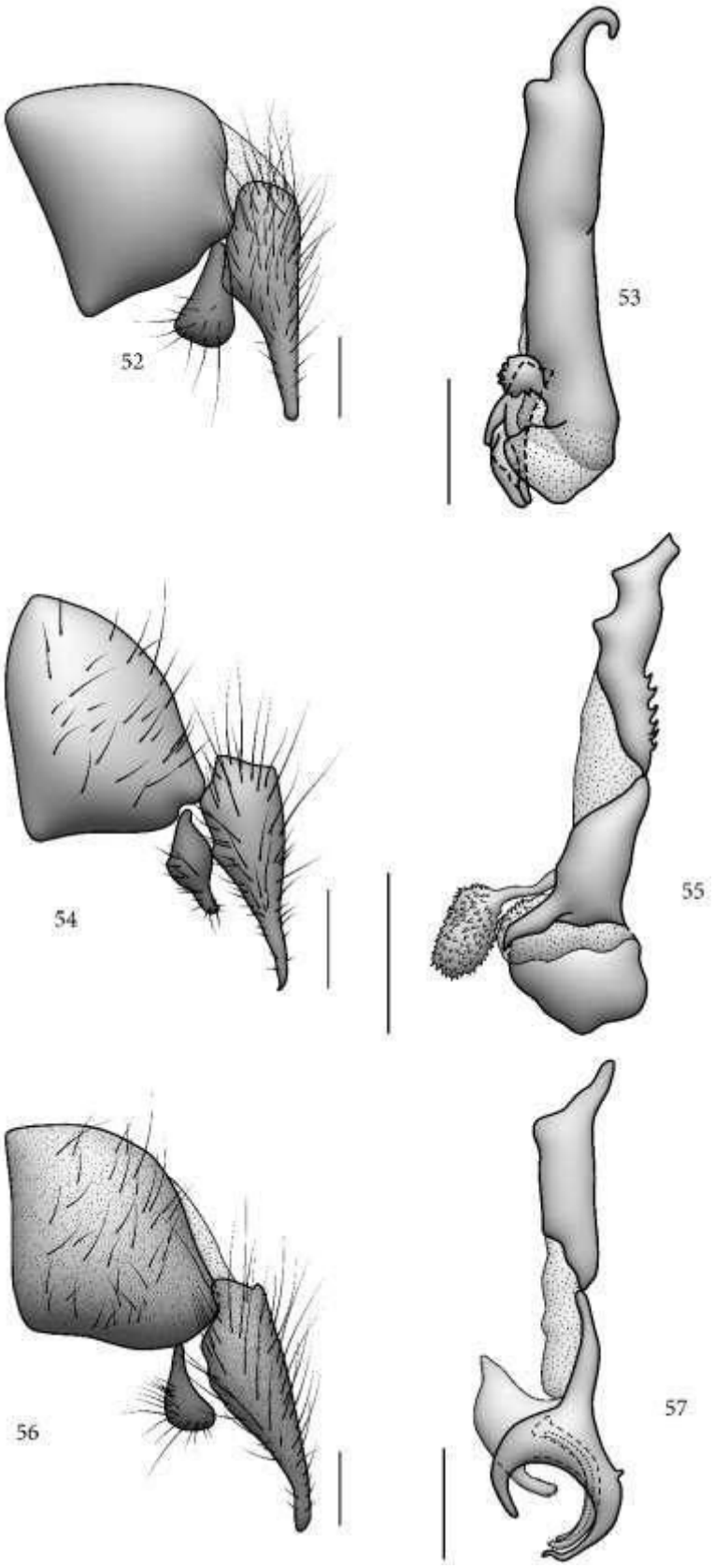


Figure 52-57

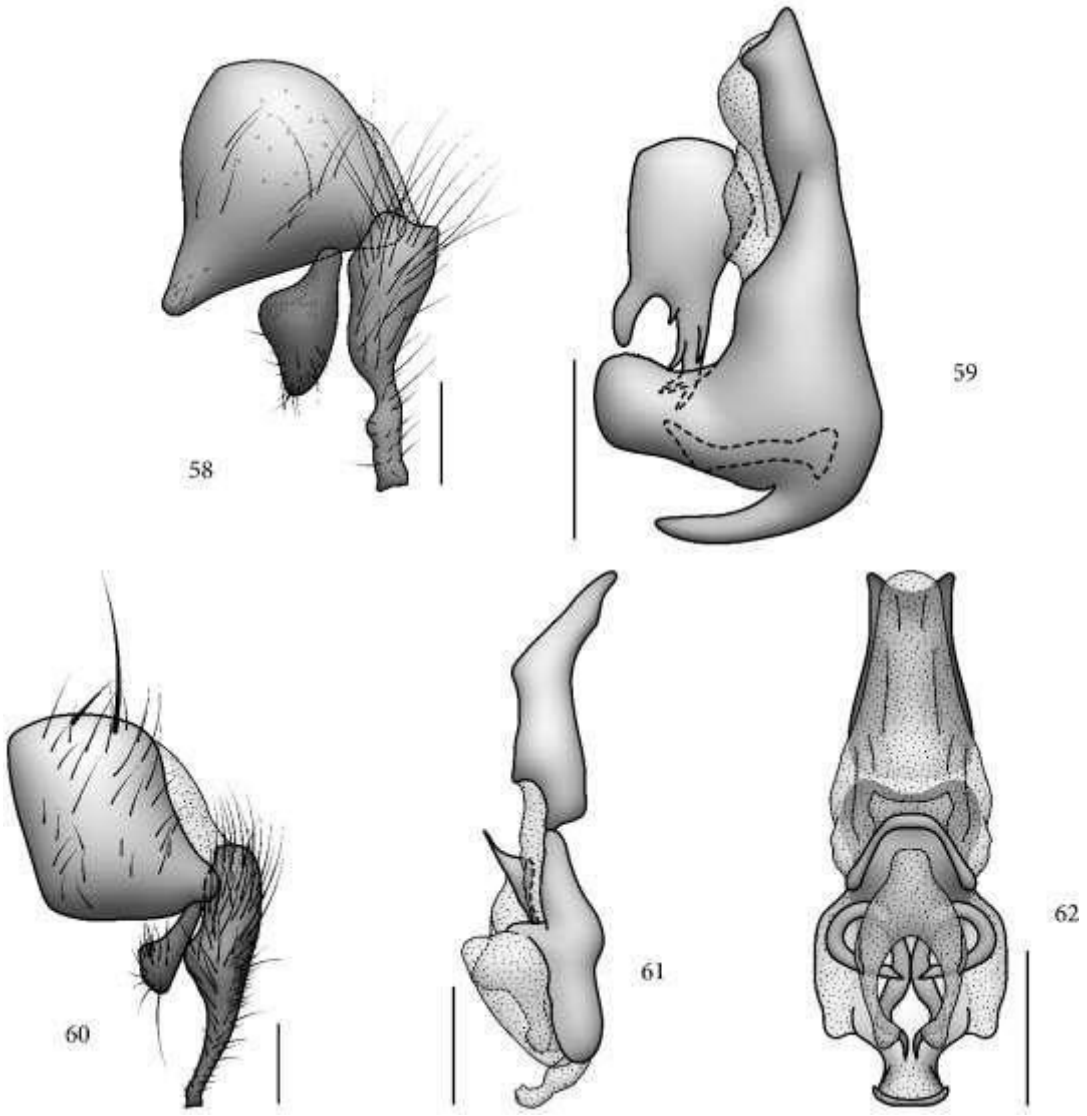


Figure 58-62

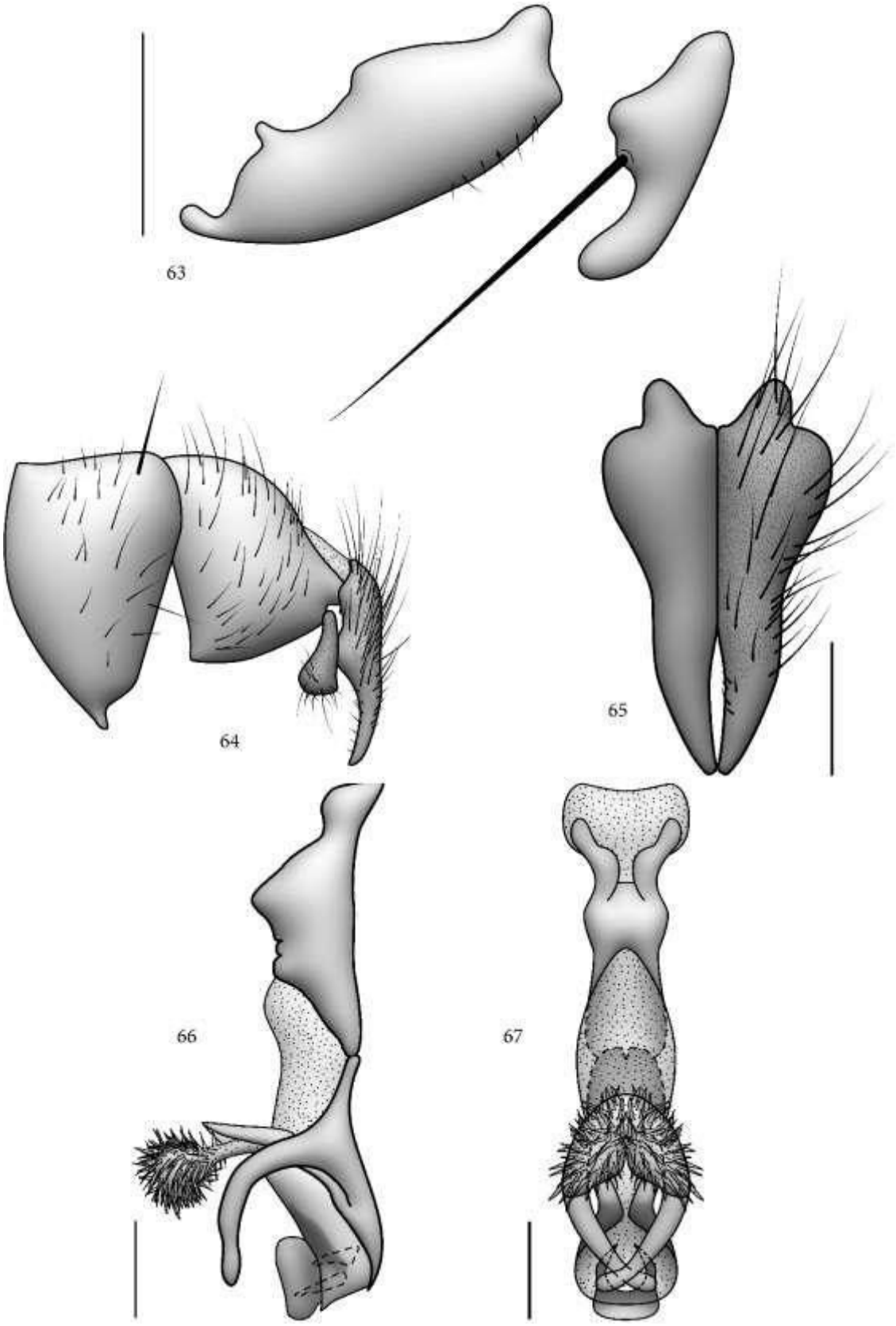


Figure 63-67

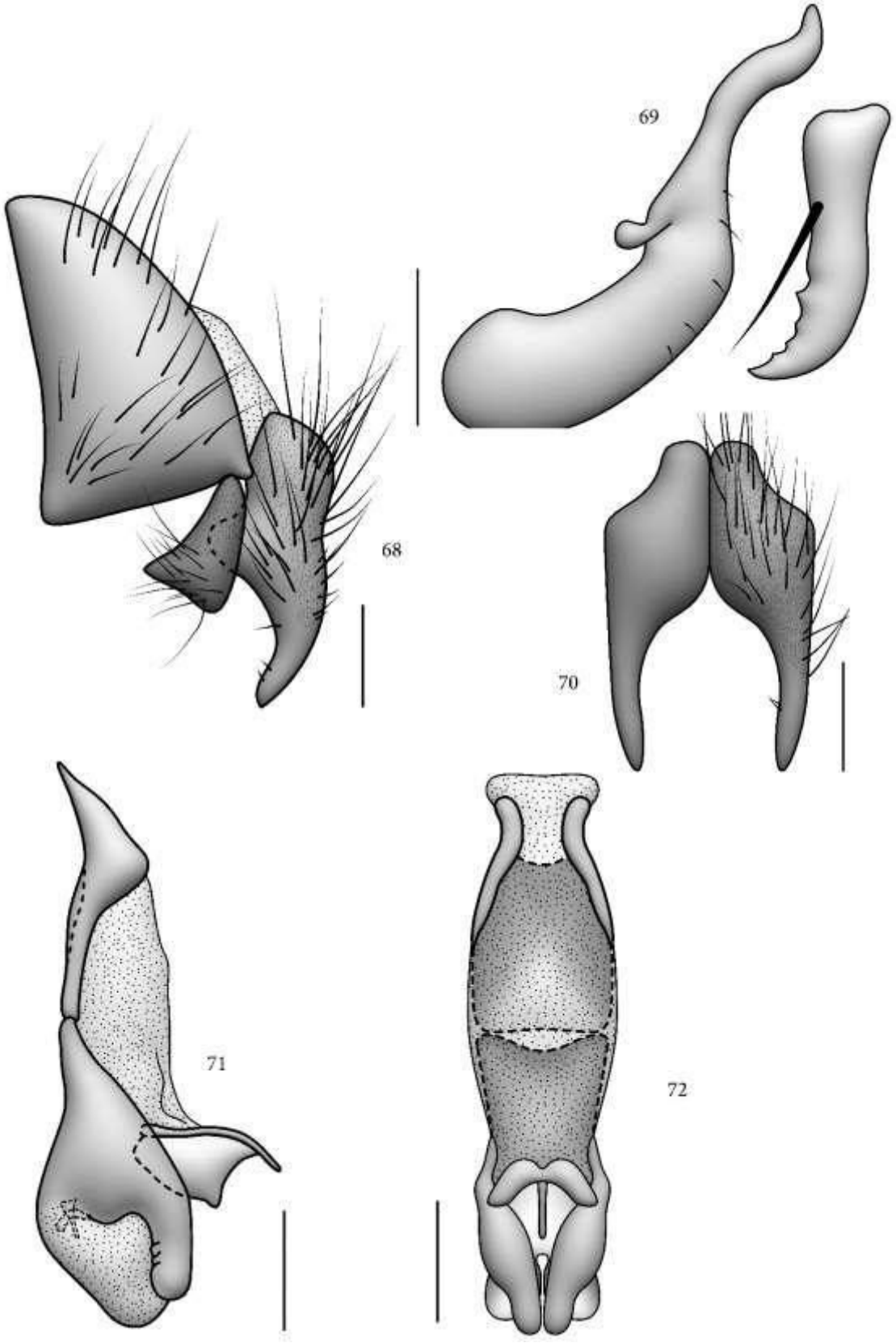


Figure 68-72

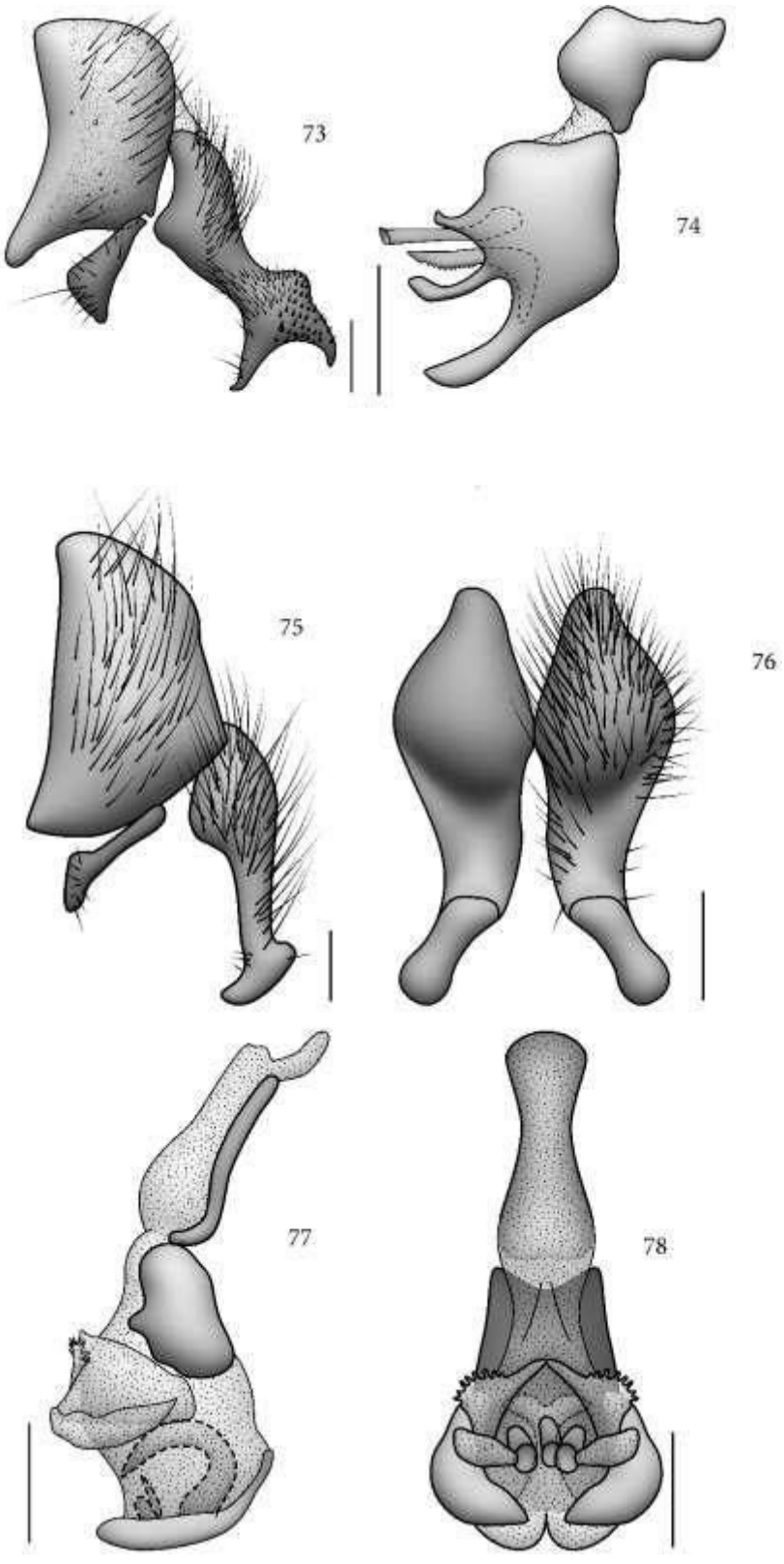


Figure 73-78

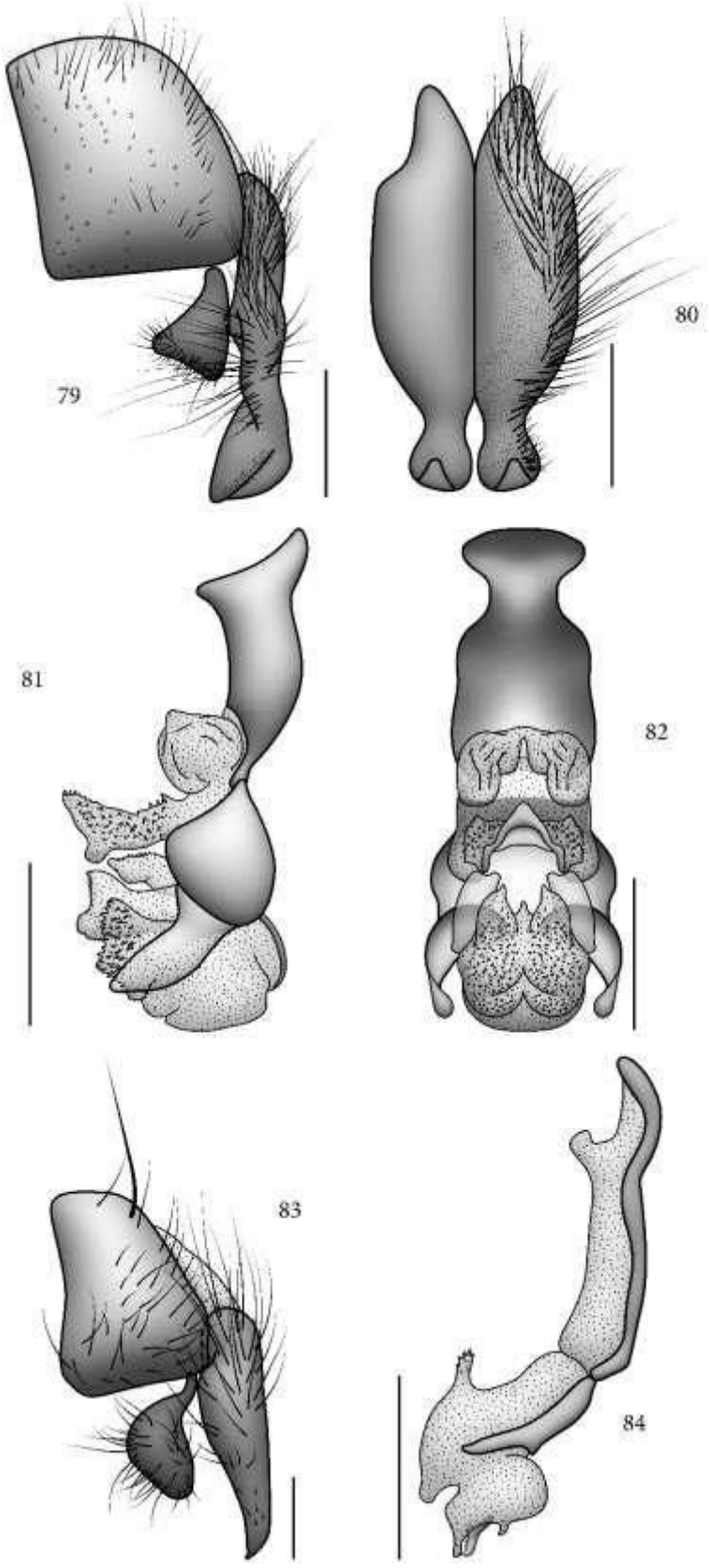


Figure 79-84

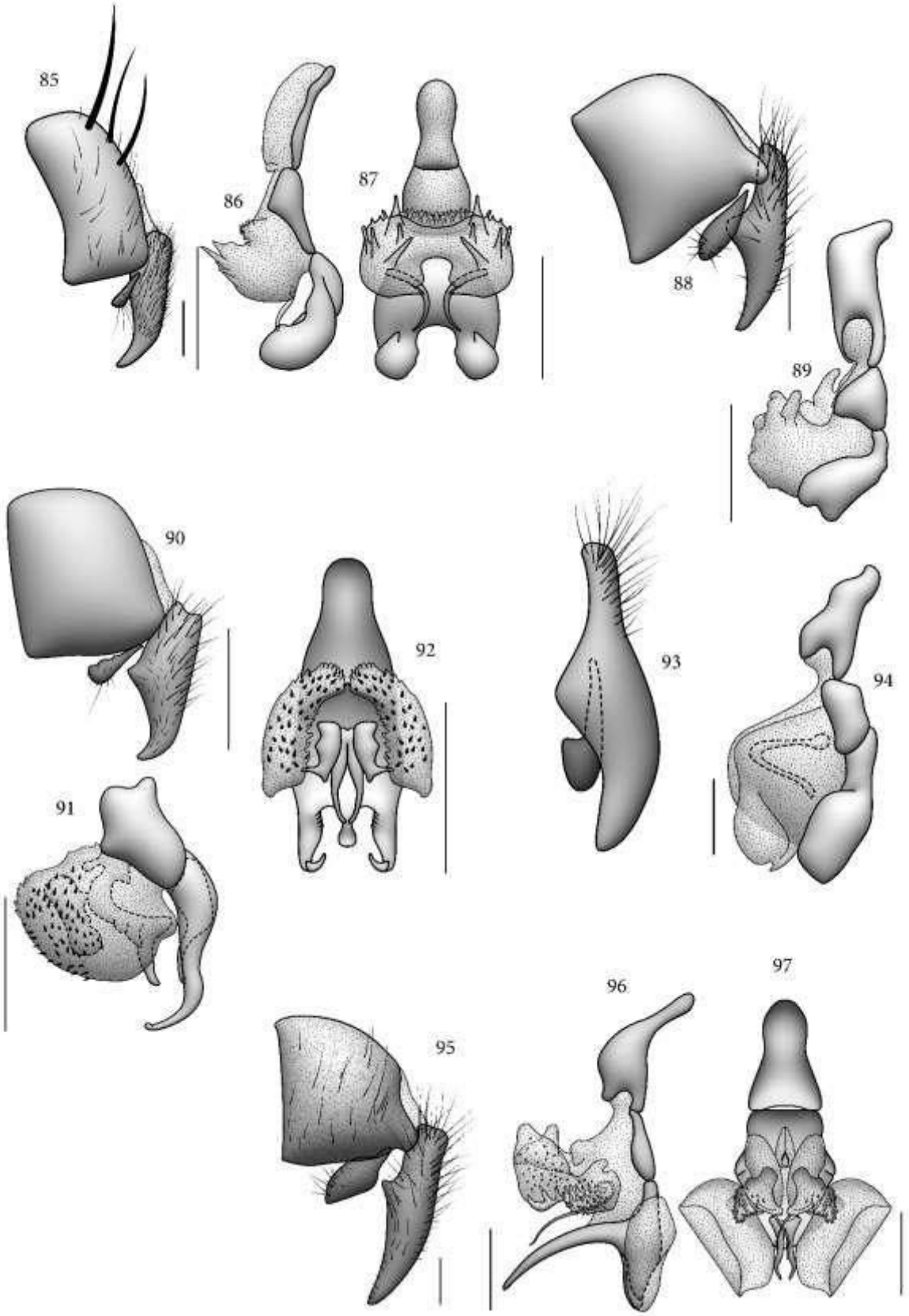


Figure 85-97

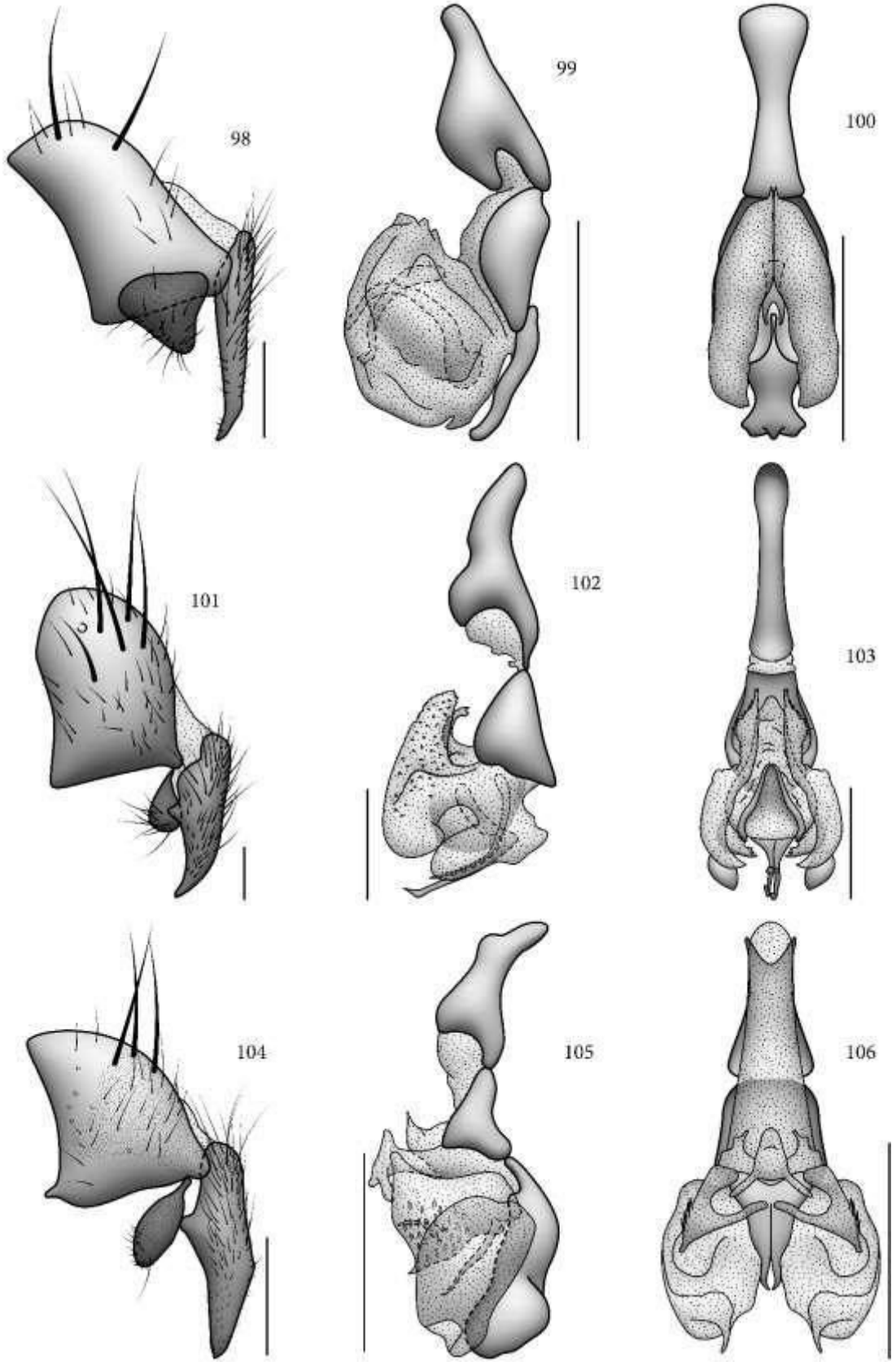


Figure 98-106

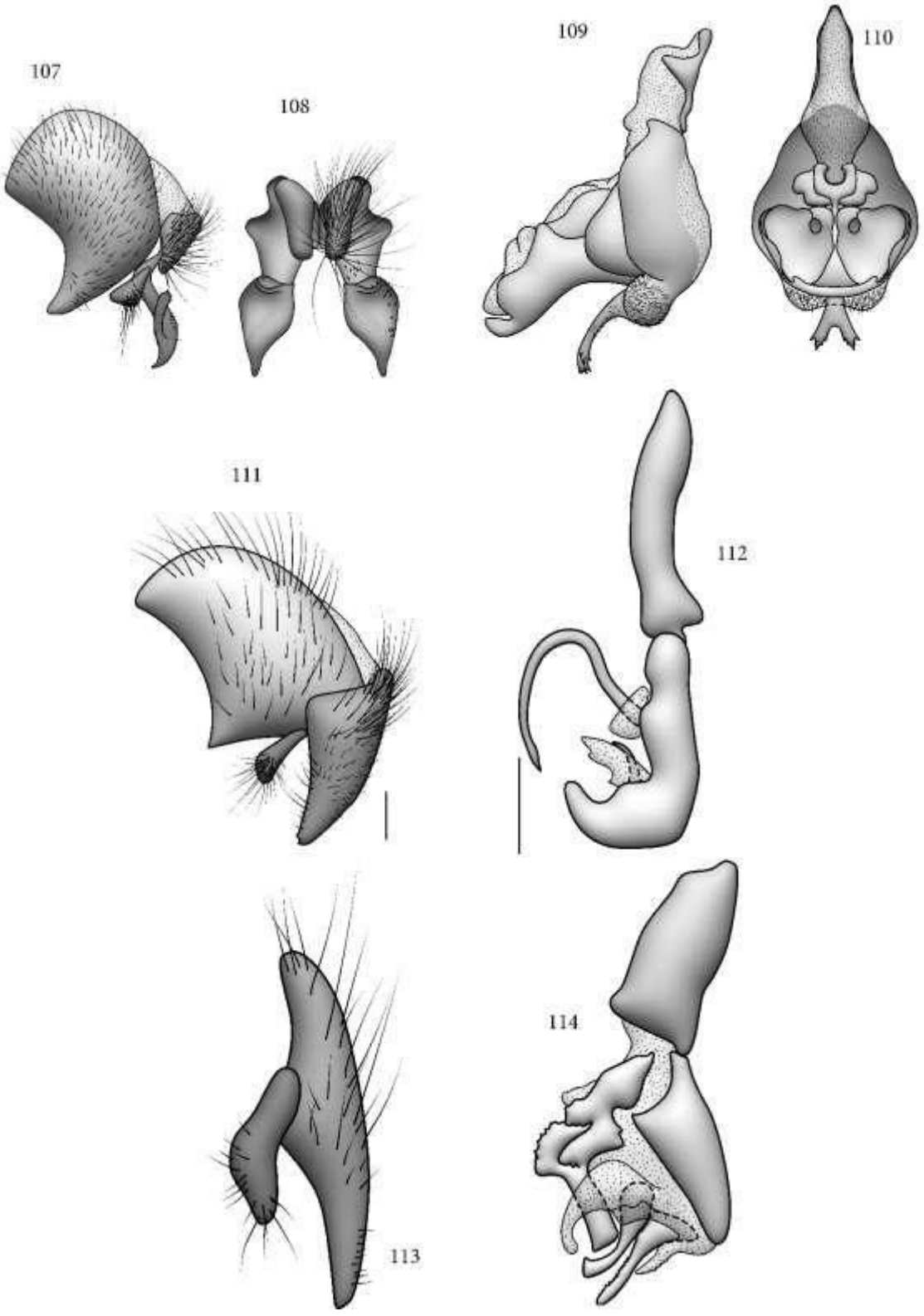


Figure 107-114

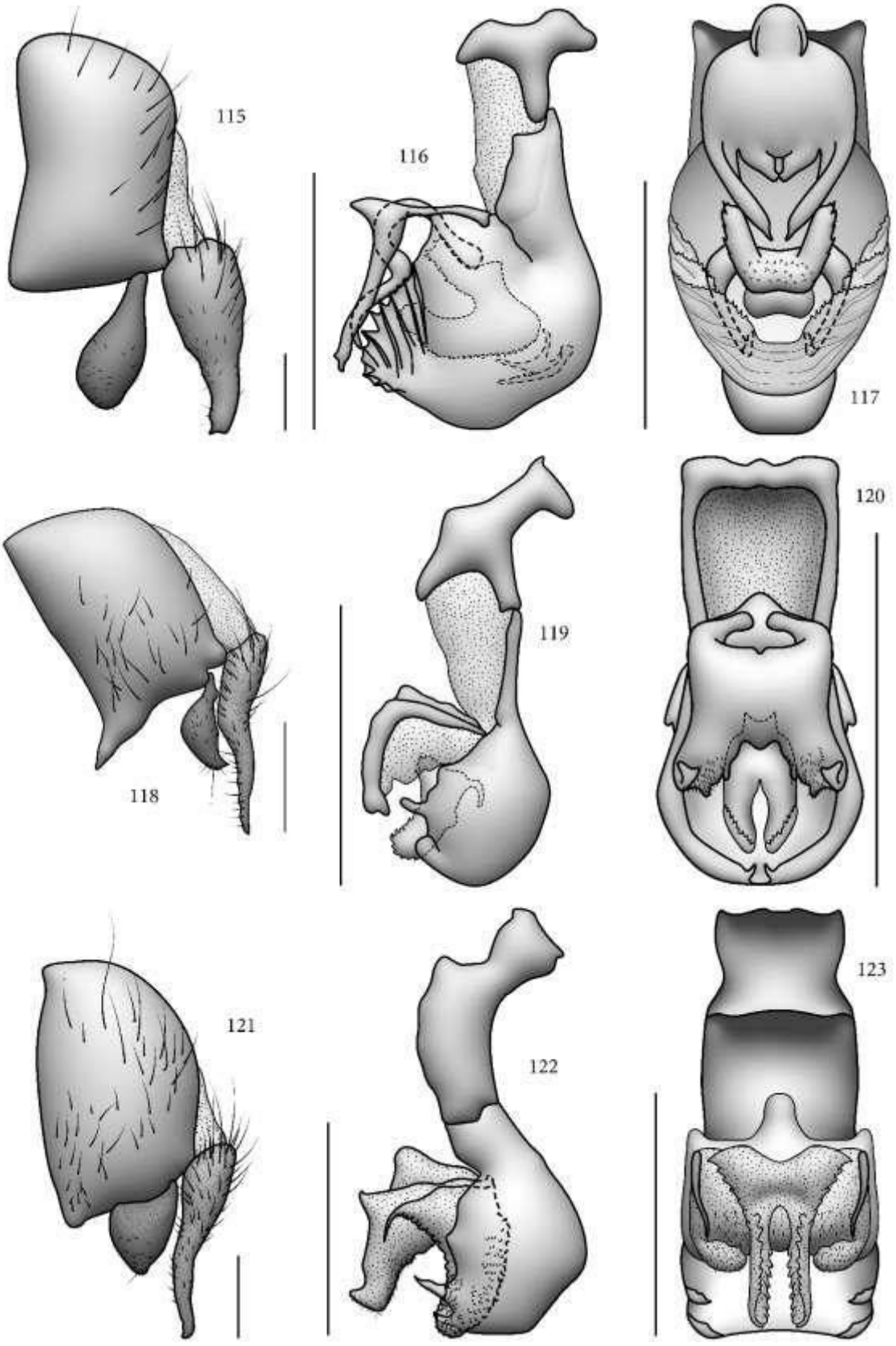


Figure 115-123

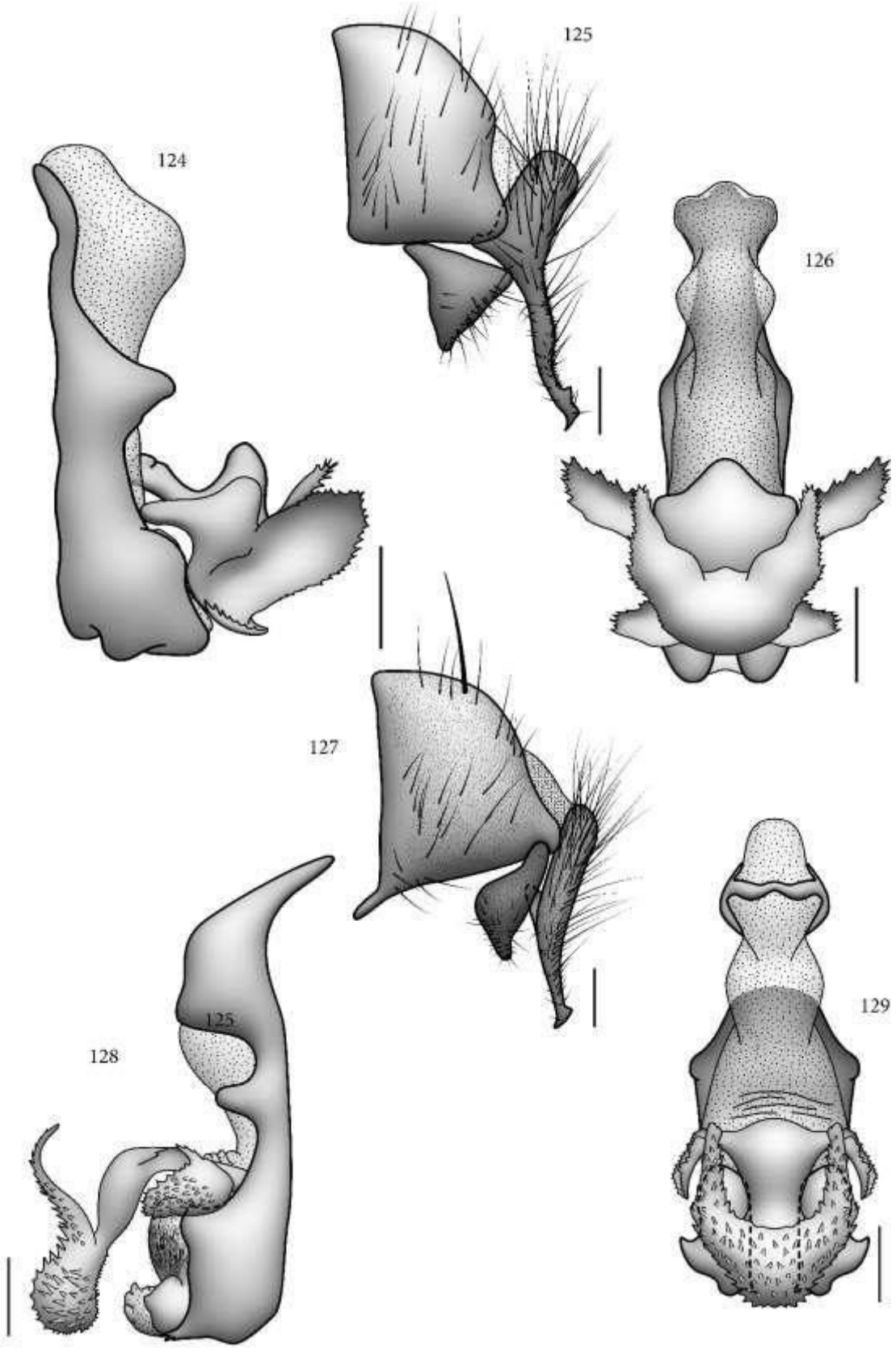


Figure 124-129

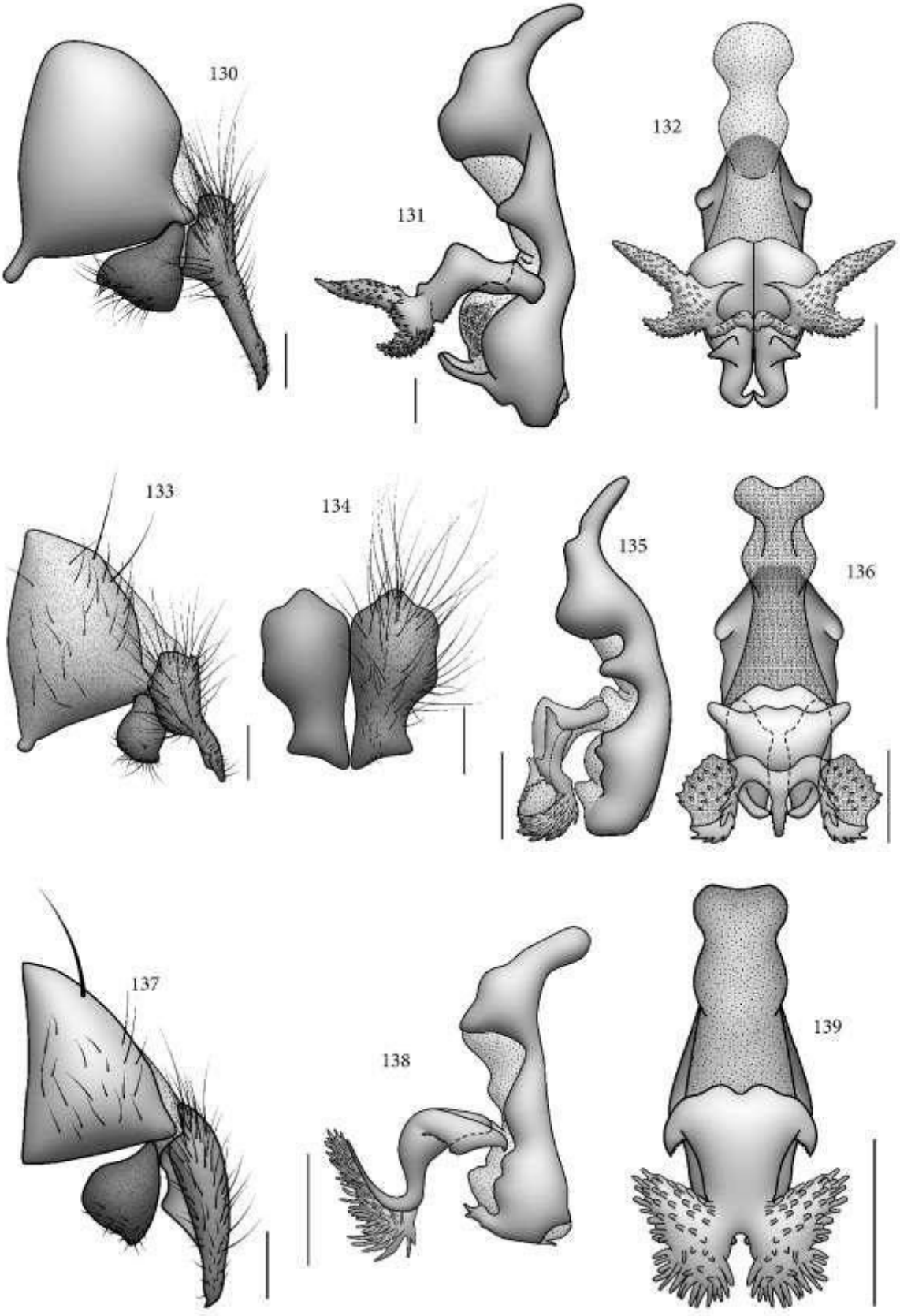


Figure 128-139

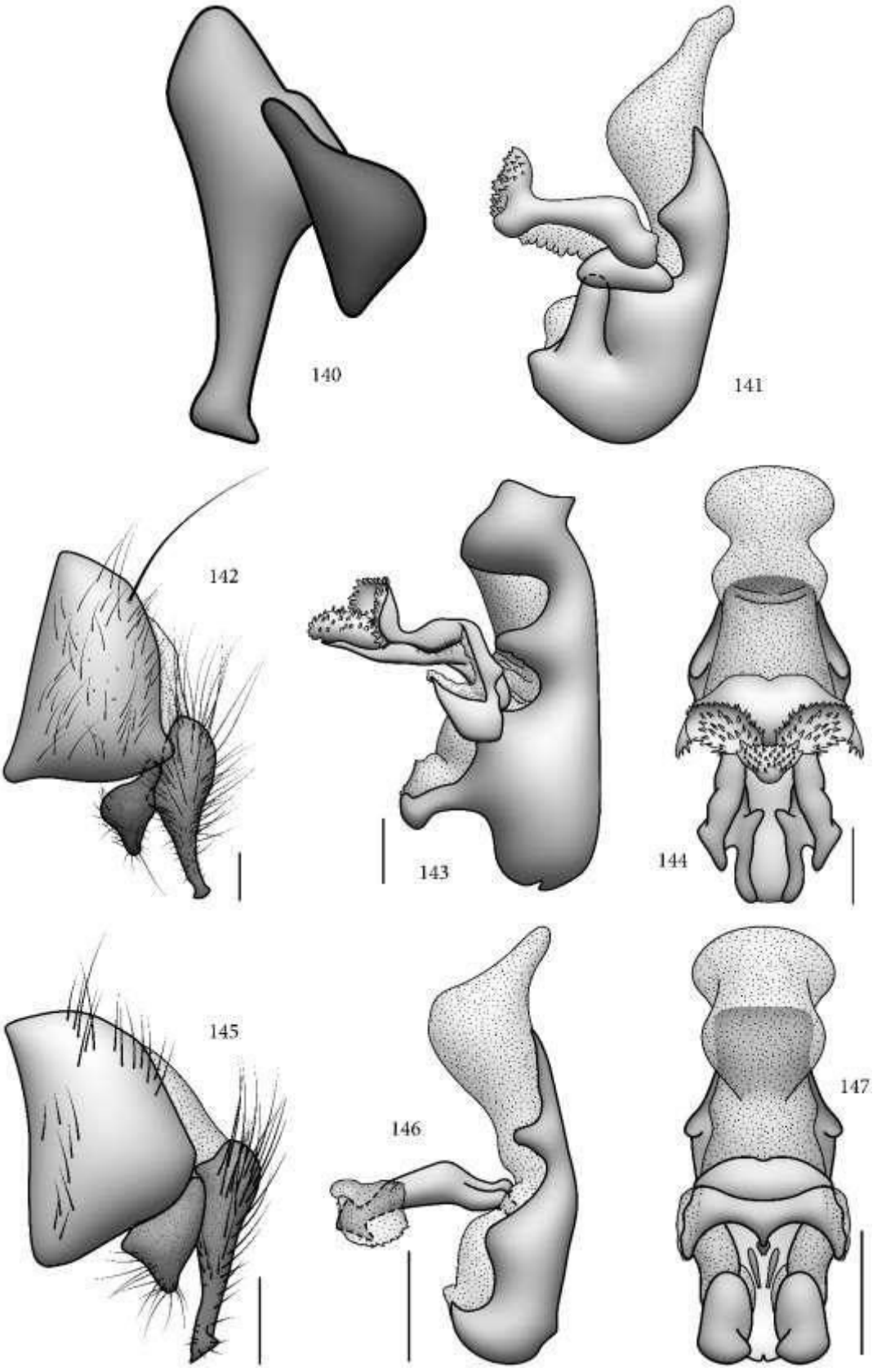


Figure 140-147

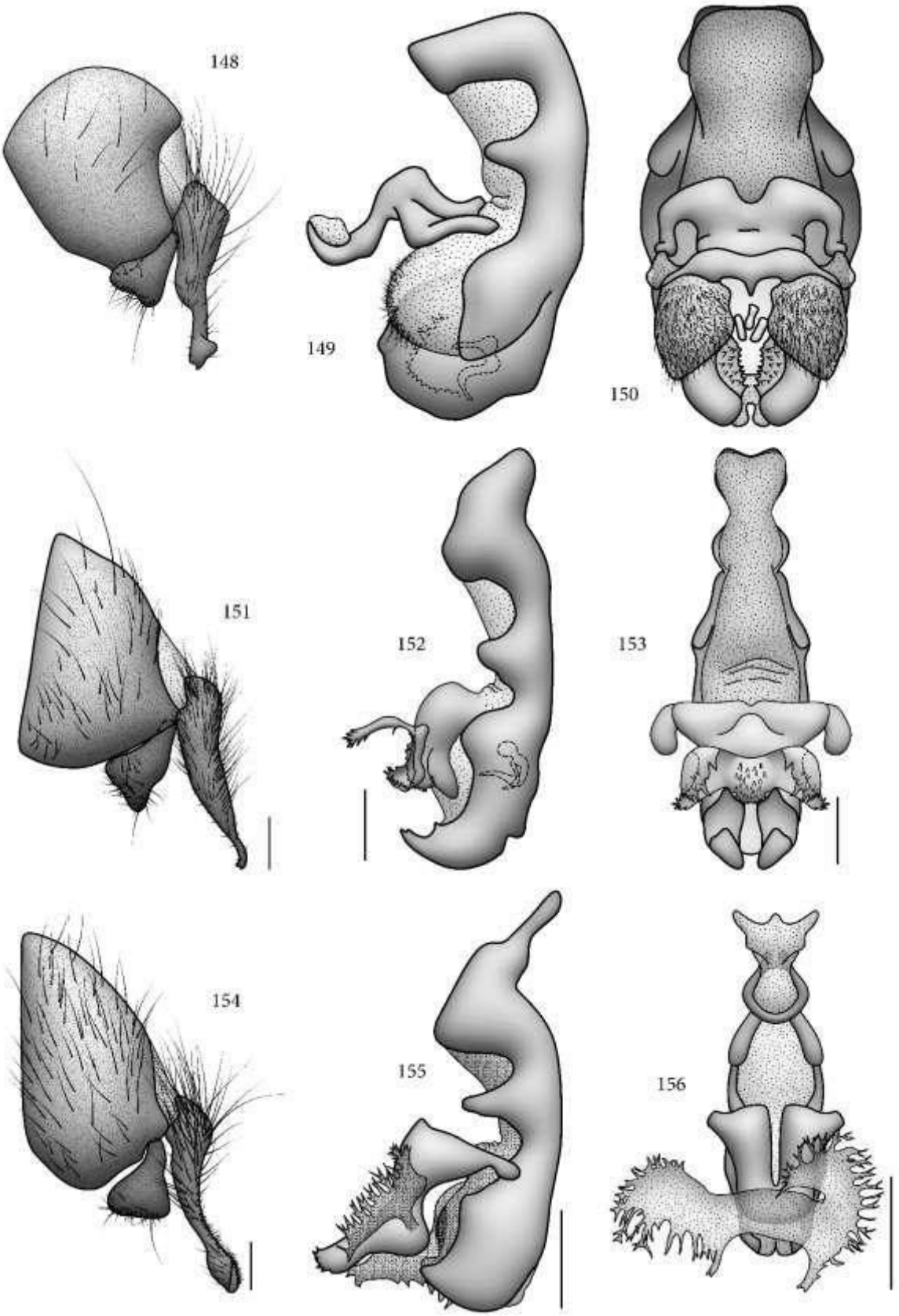


Figure 148-156

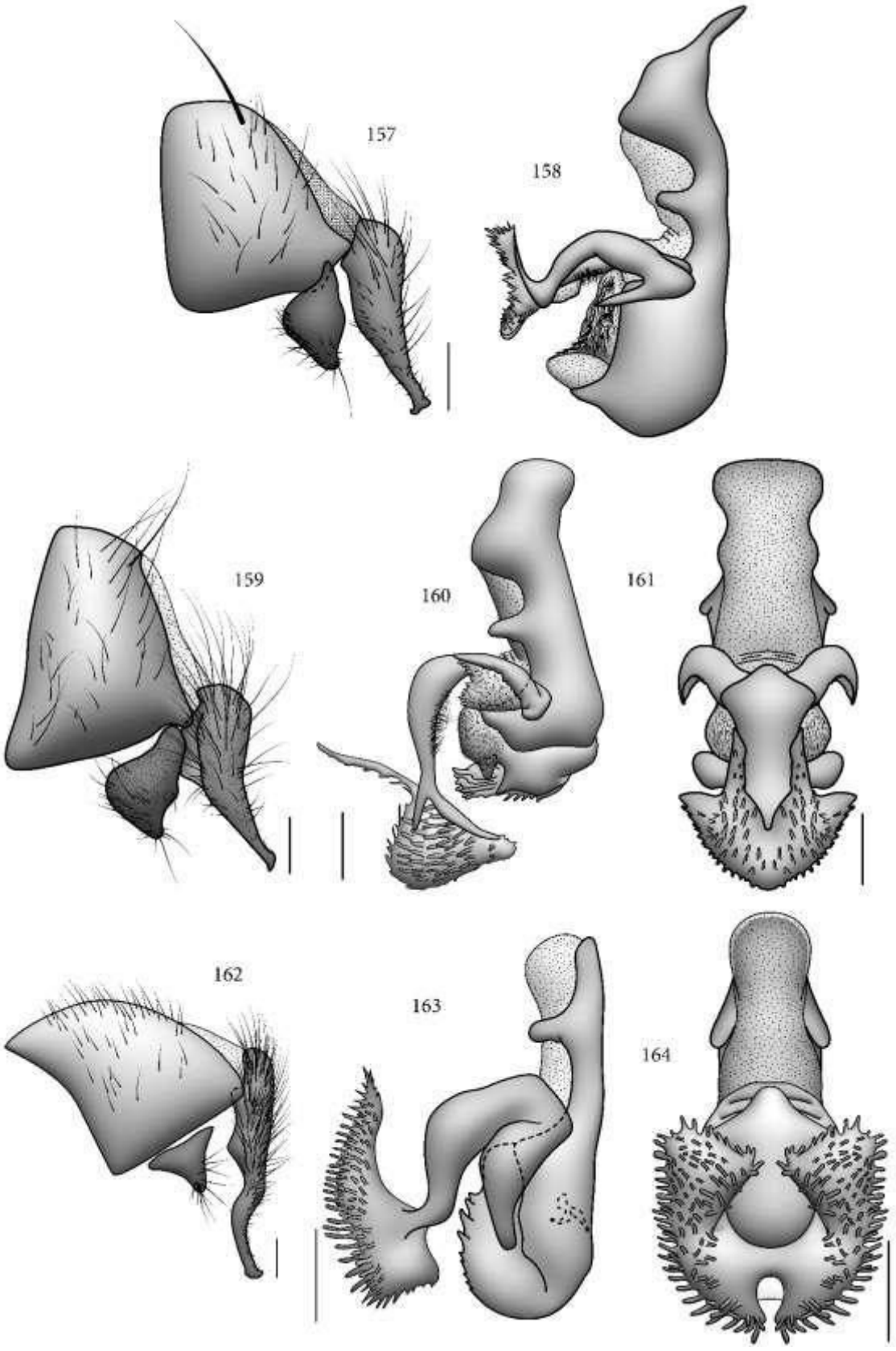


Figure 157-164

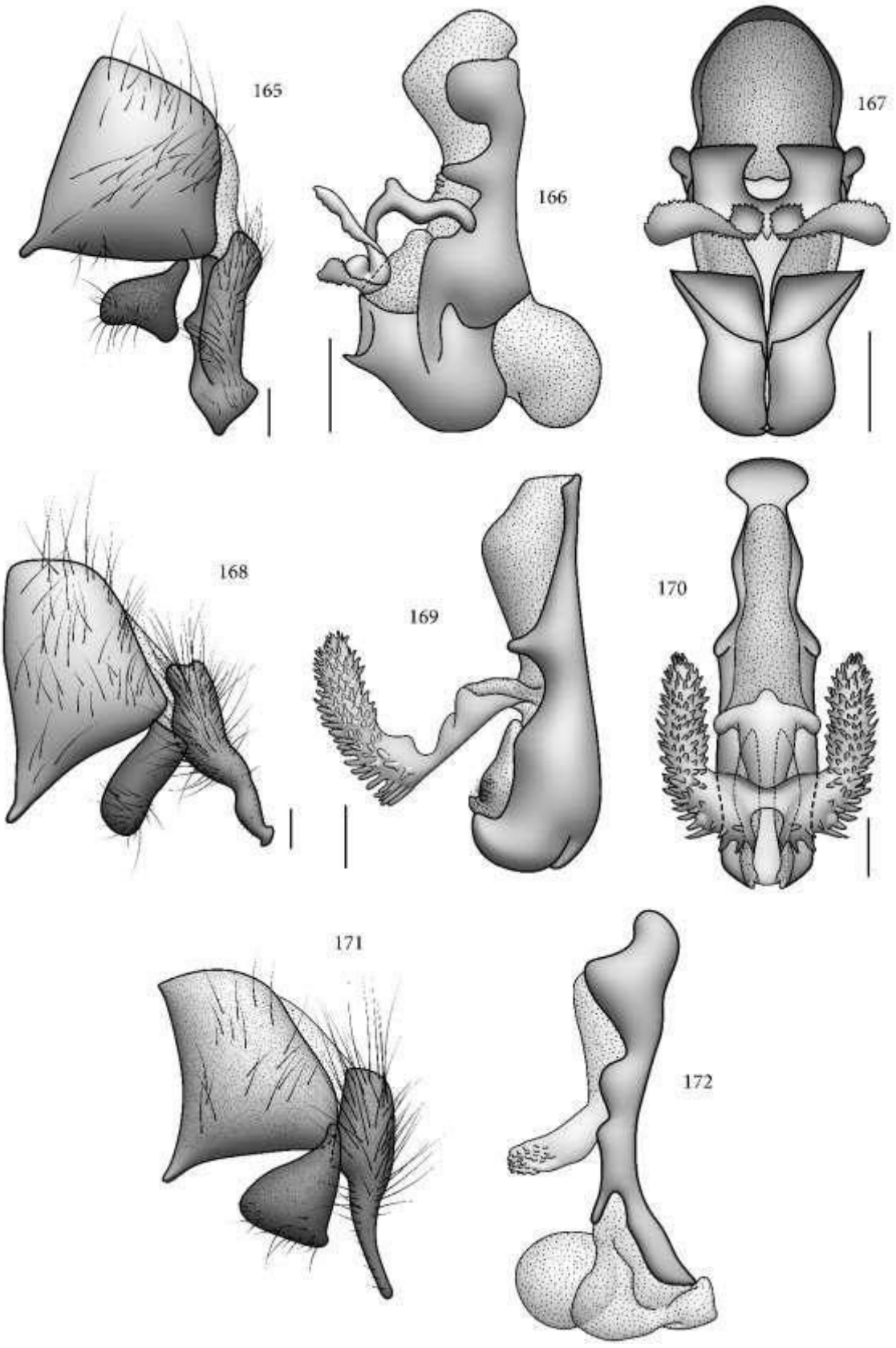


Figure 165-172

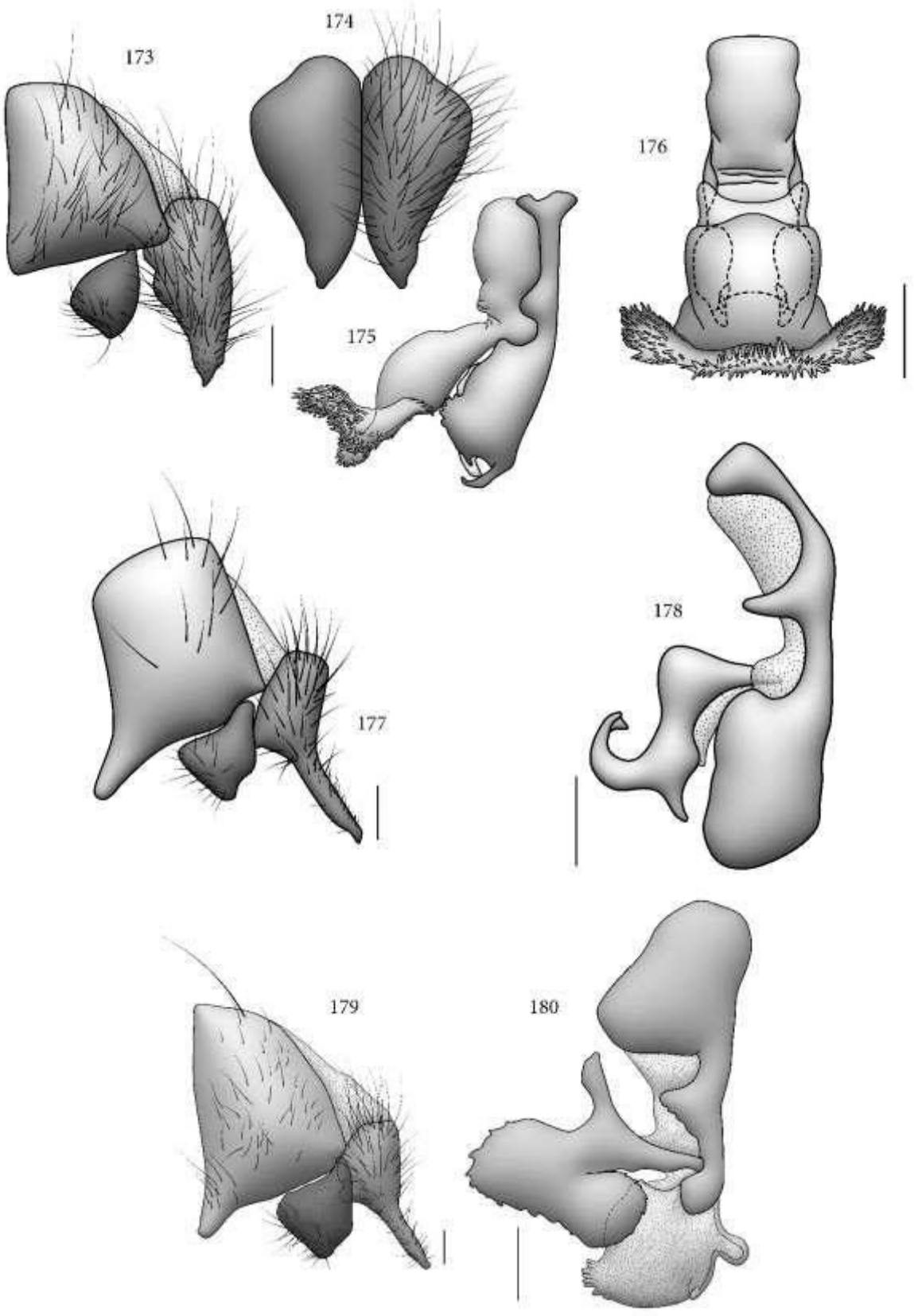


Figure 173-180

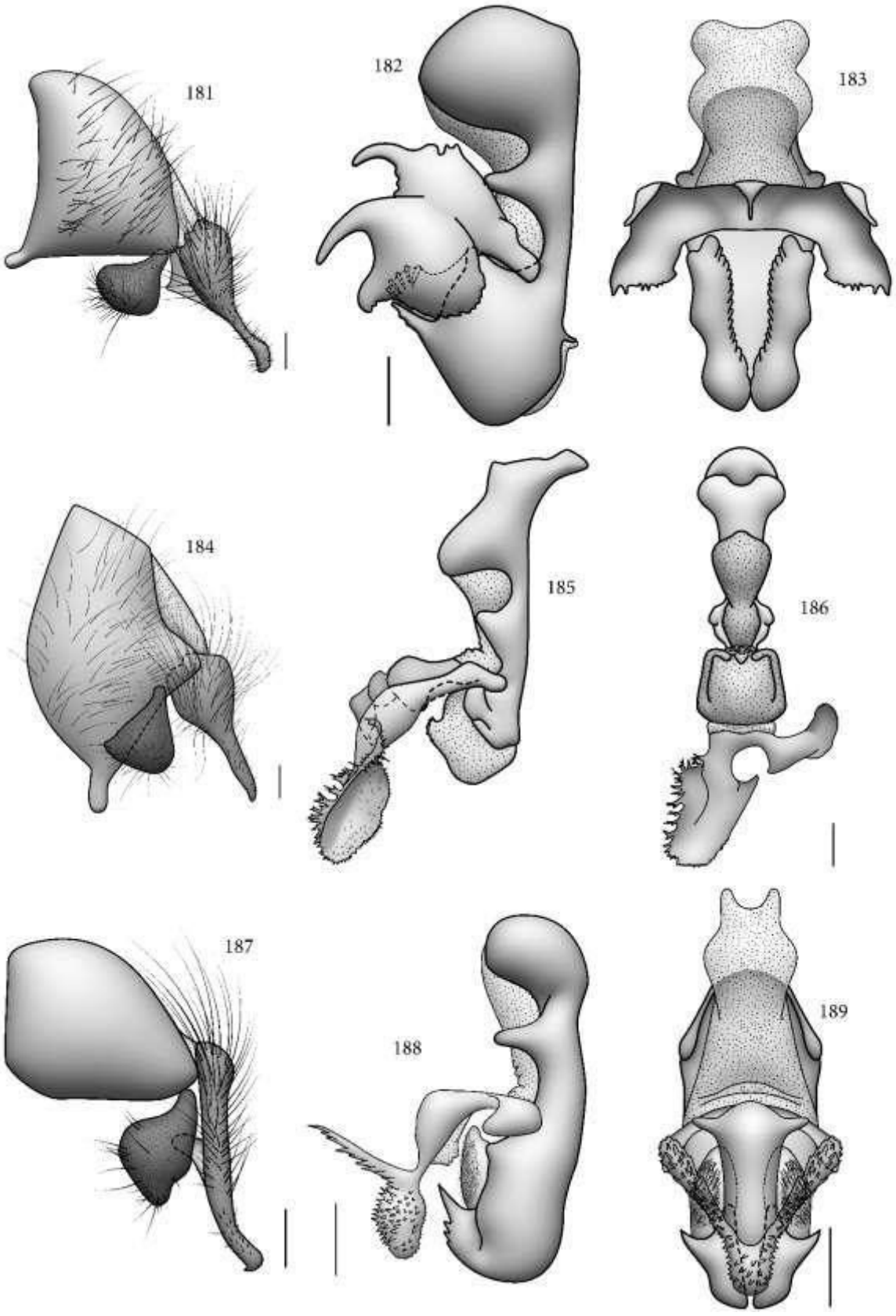


Figure 181-189

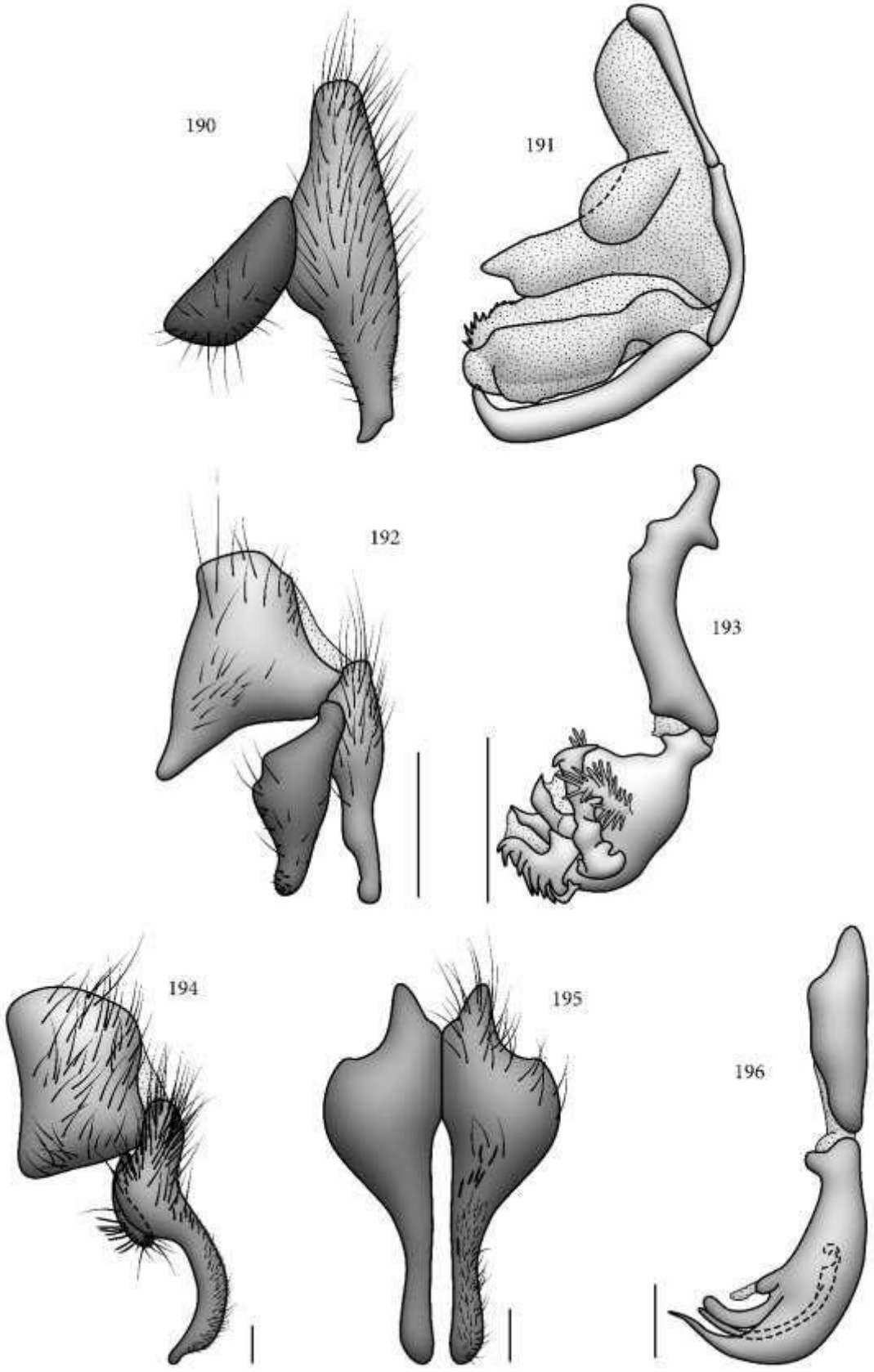


Figure 190-196

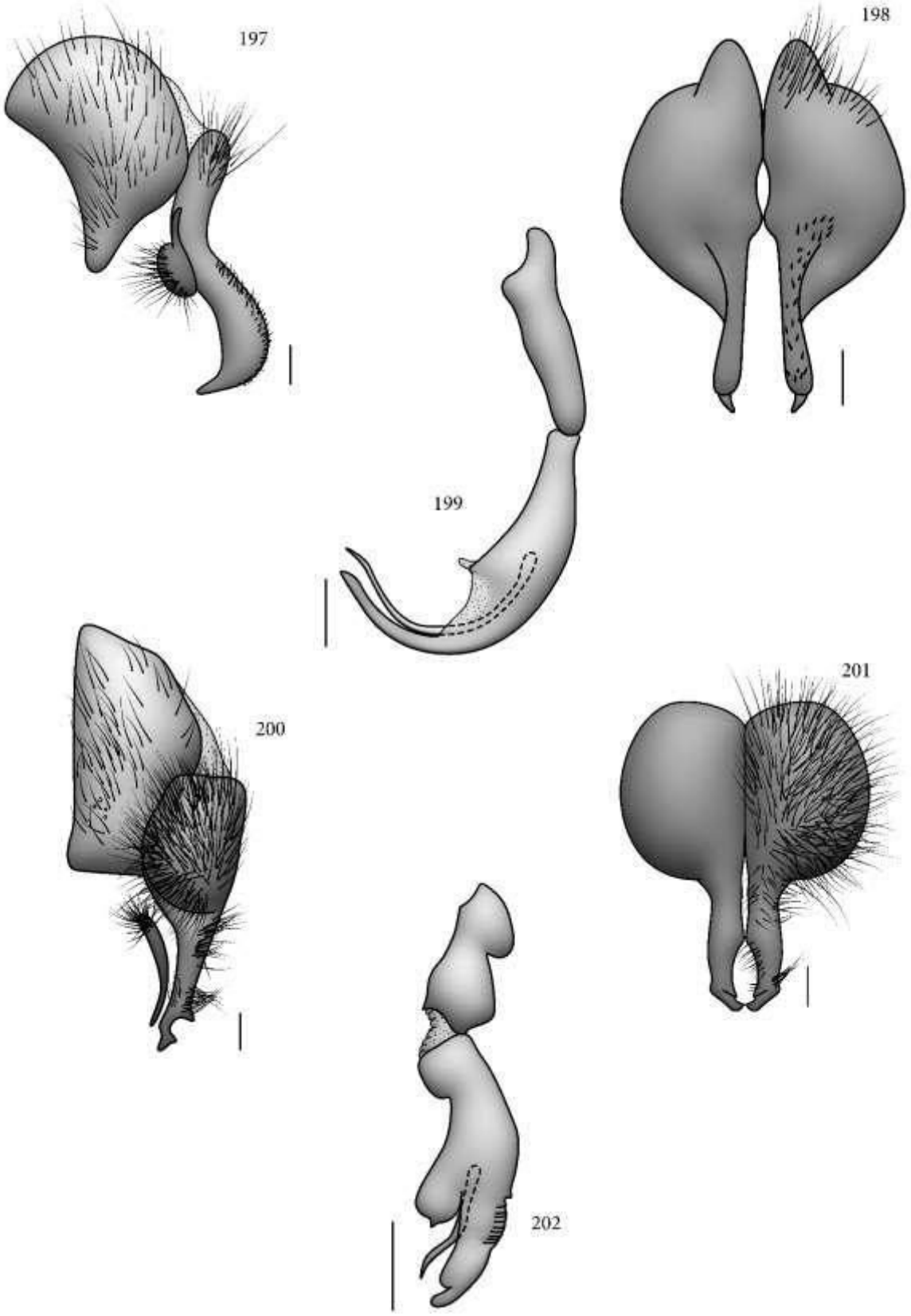


Figure 197-202

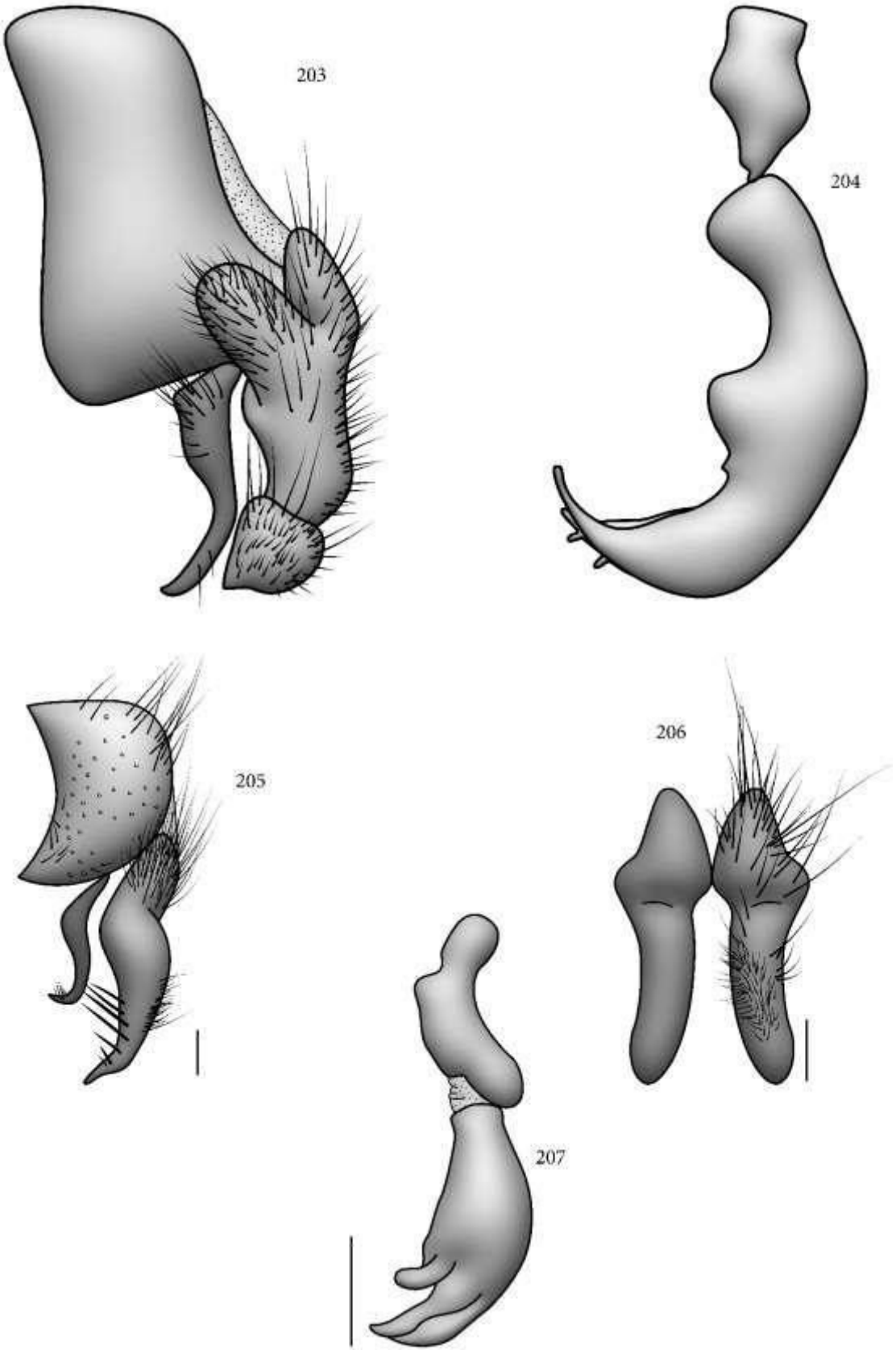


Figure 203-207

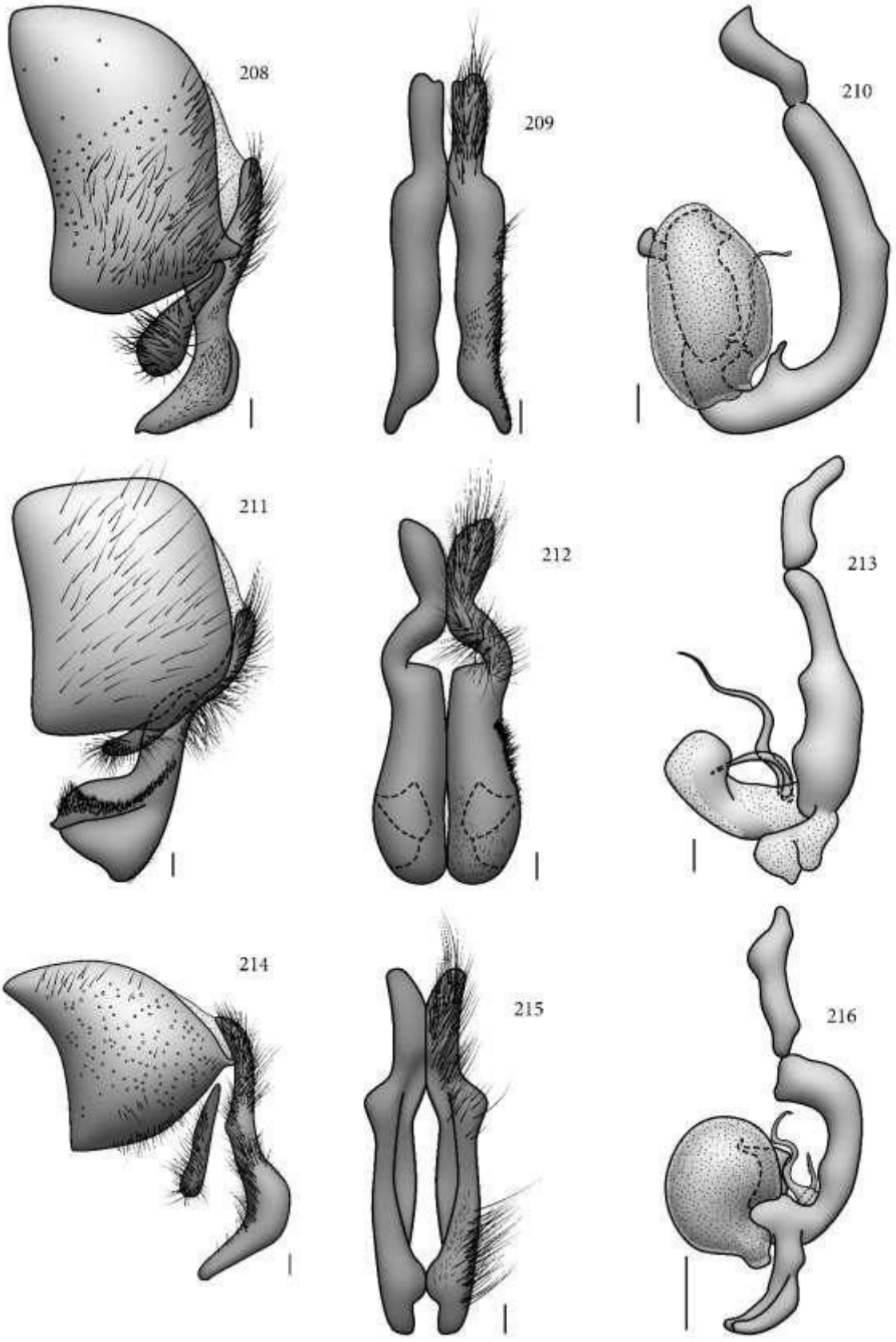


Figure 208-216

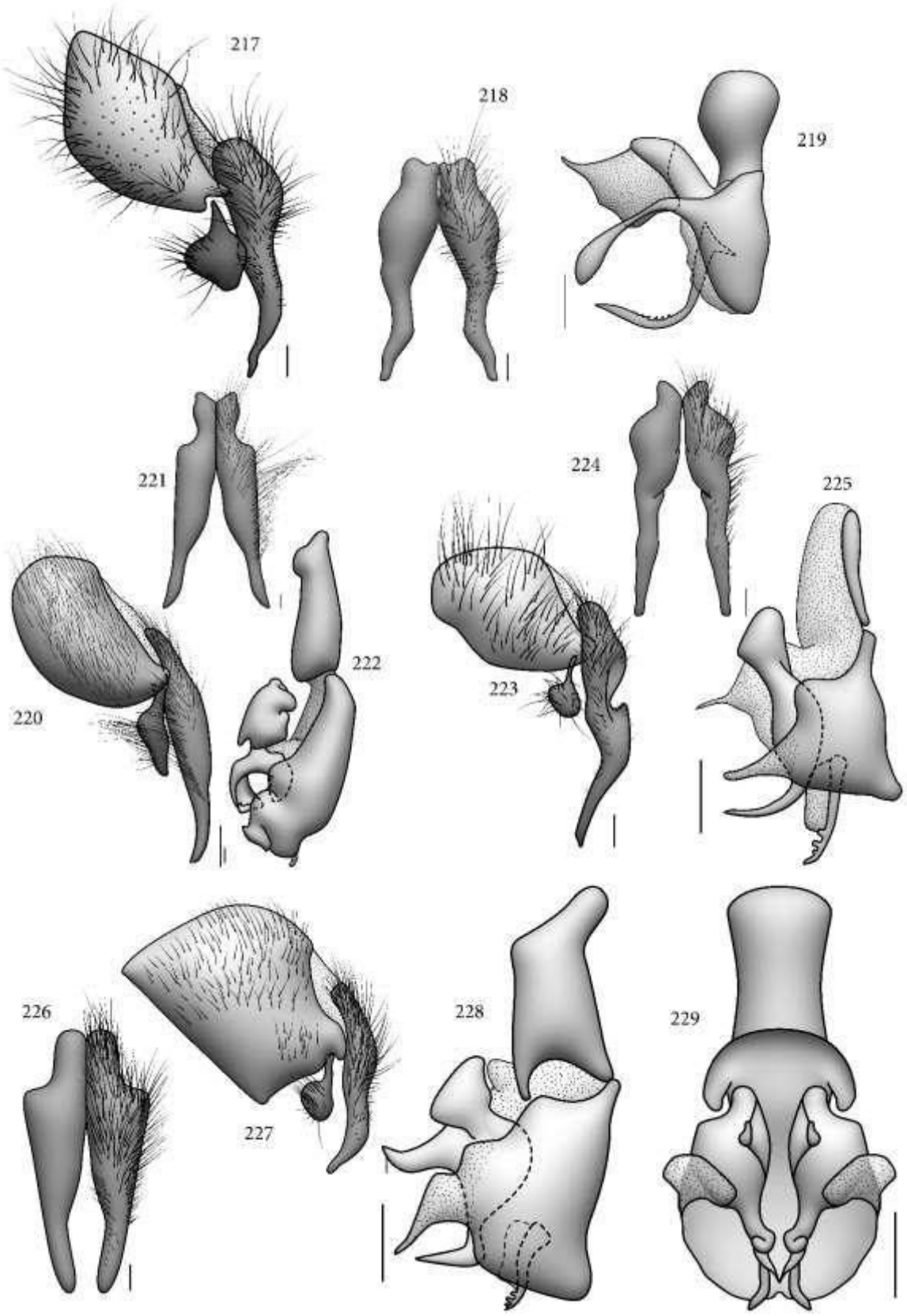


Figure 217-229

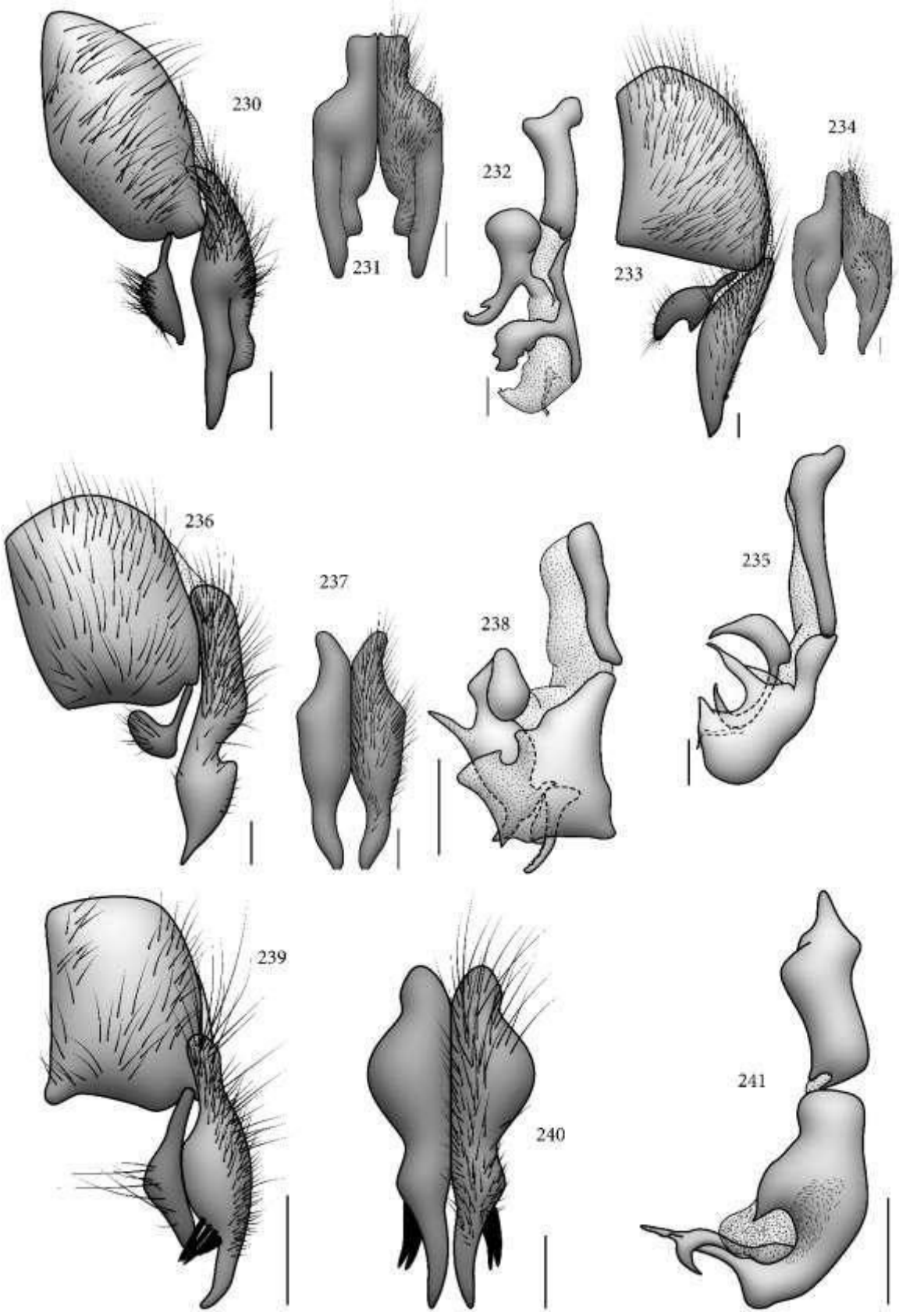


Figure 230-241

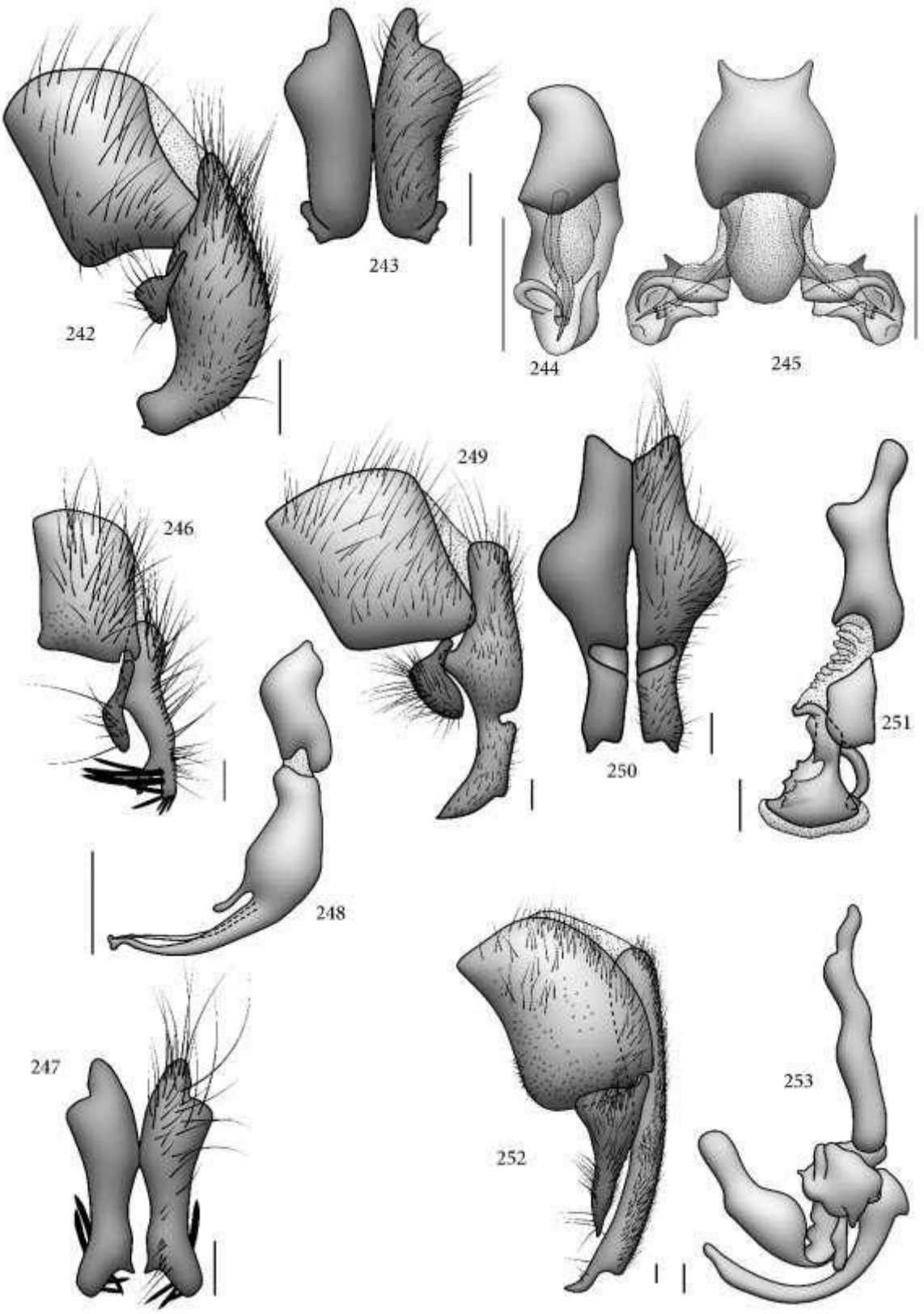


Figure 242-253

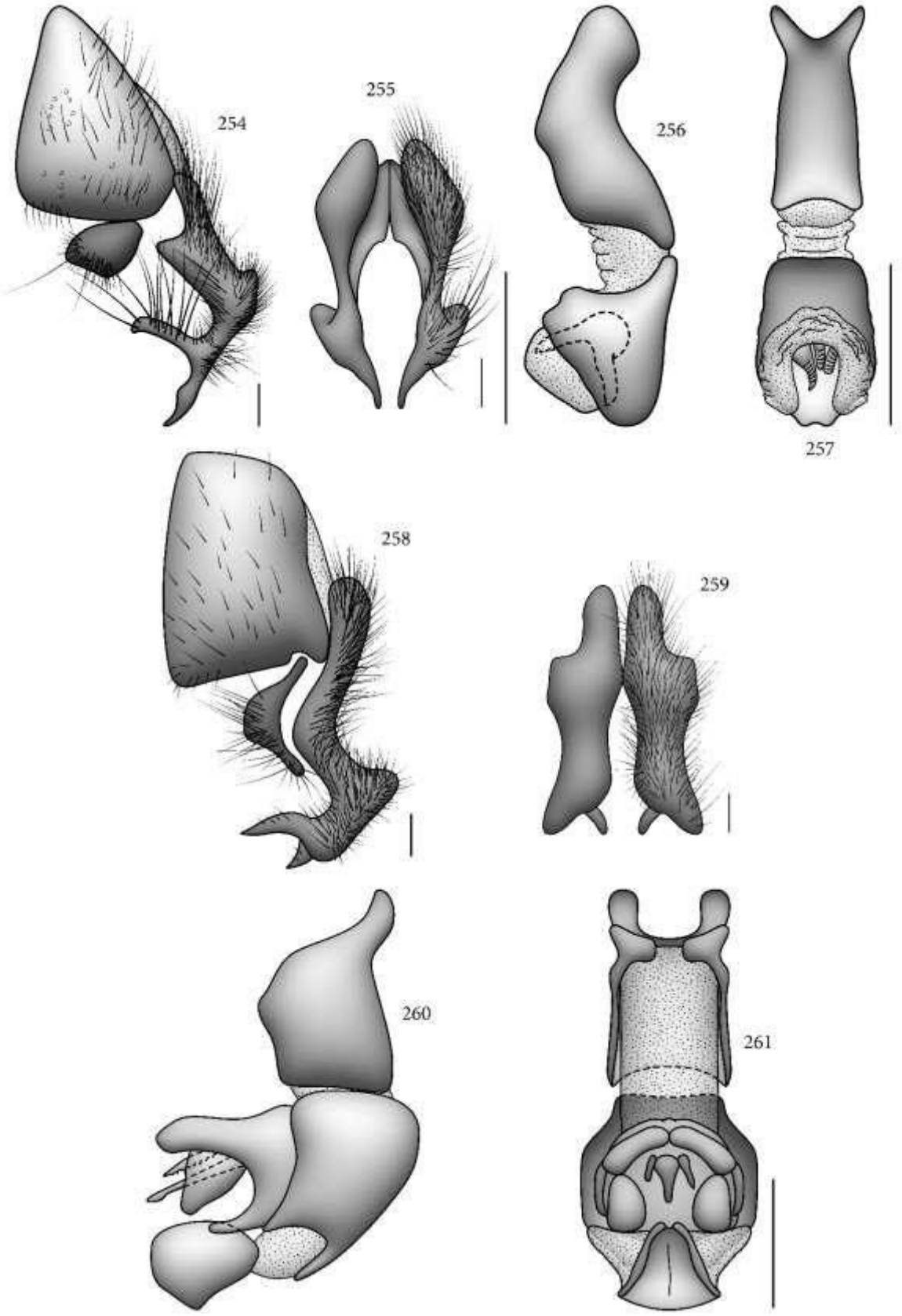


Figure 254-261

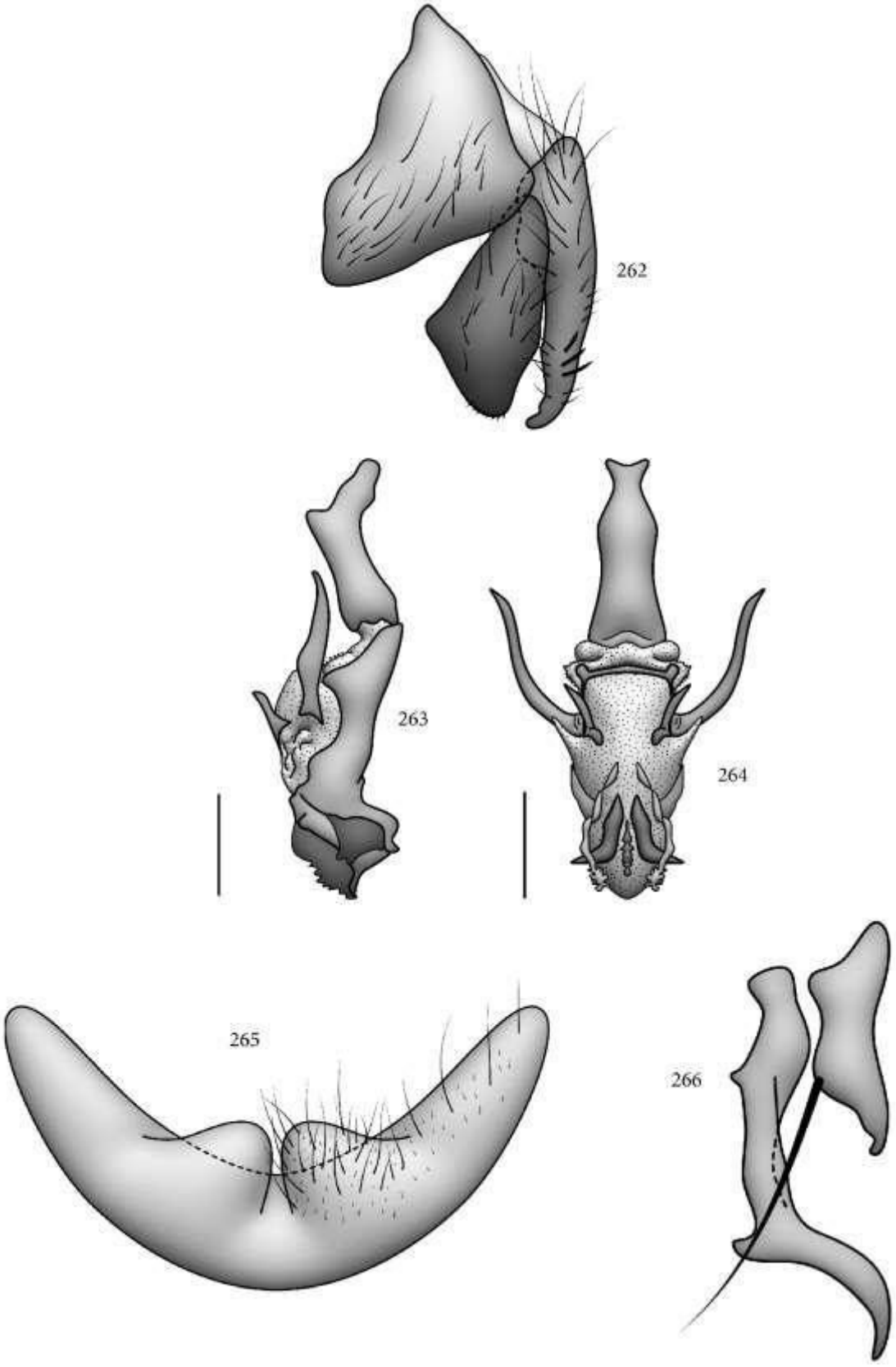


Figure 262-266

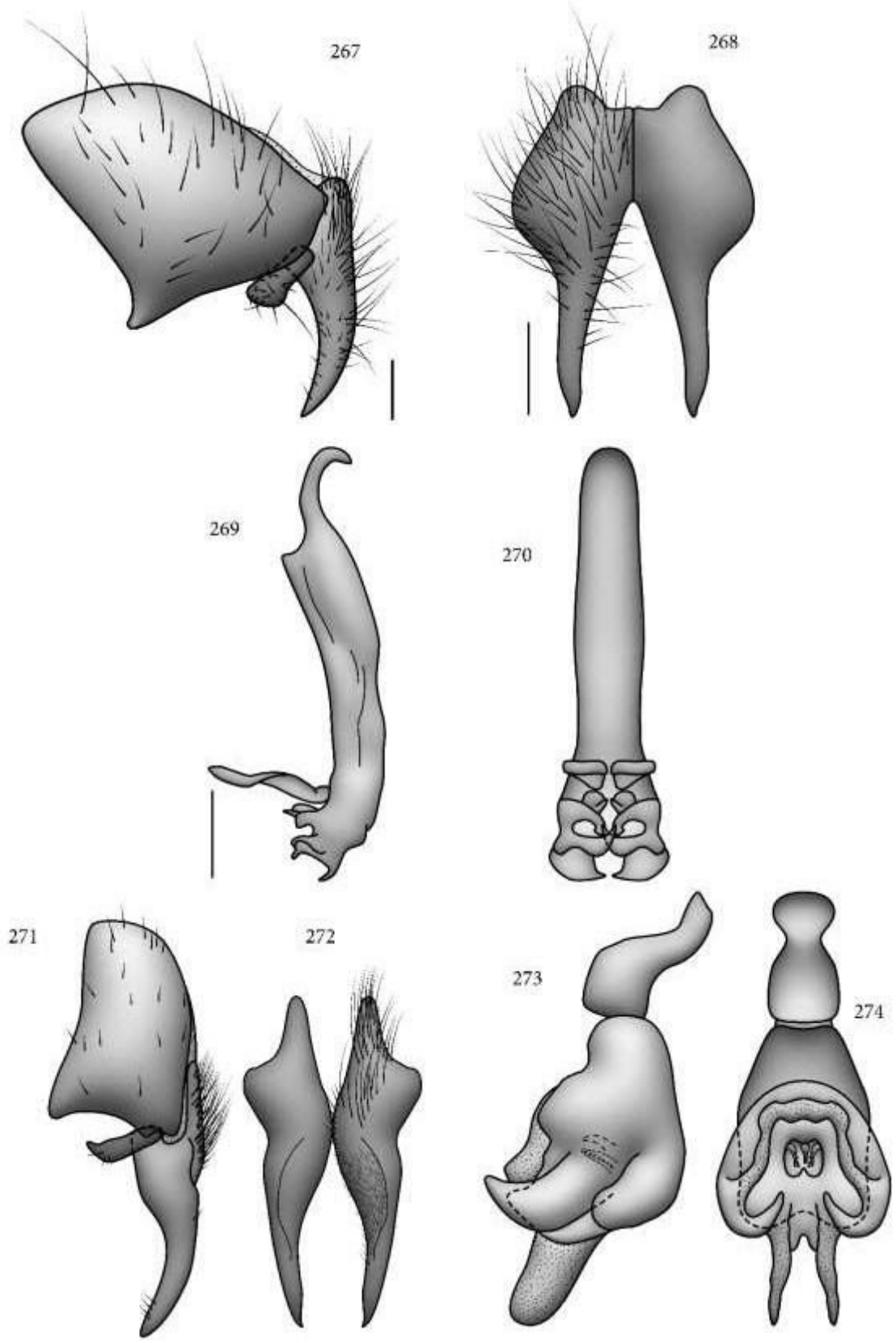


Figure 267-274

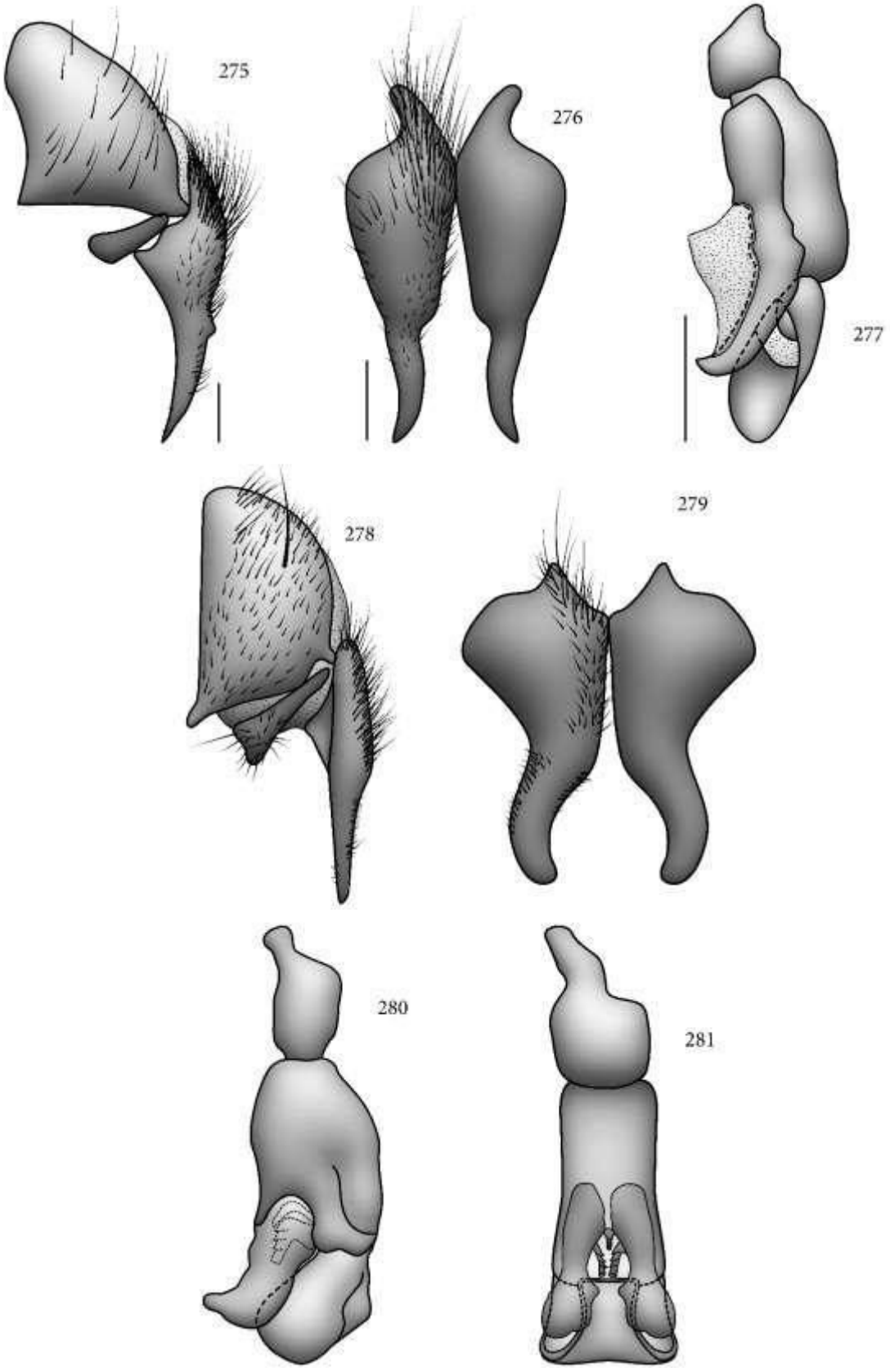


Figure 275-281

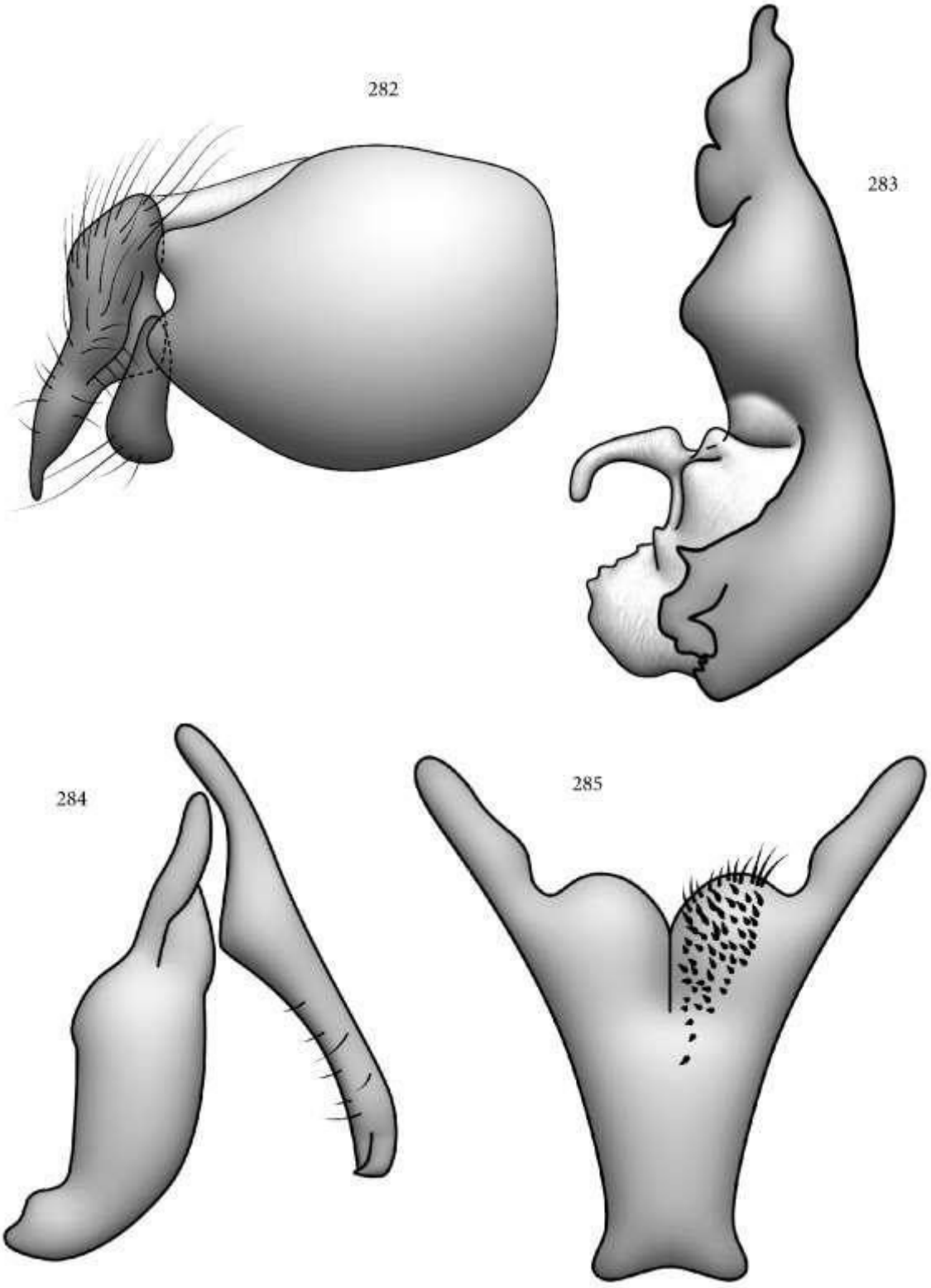


Figure 282-285

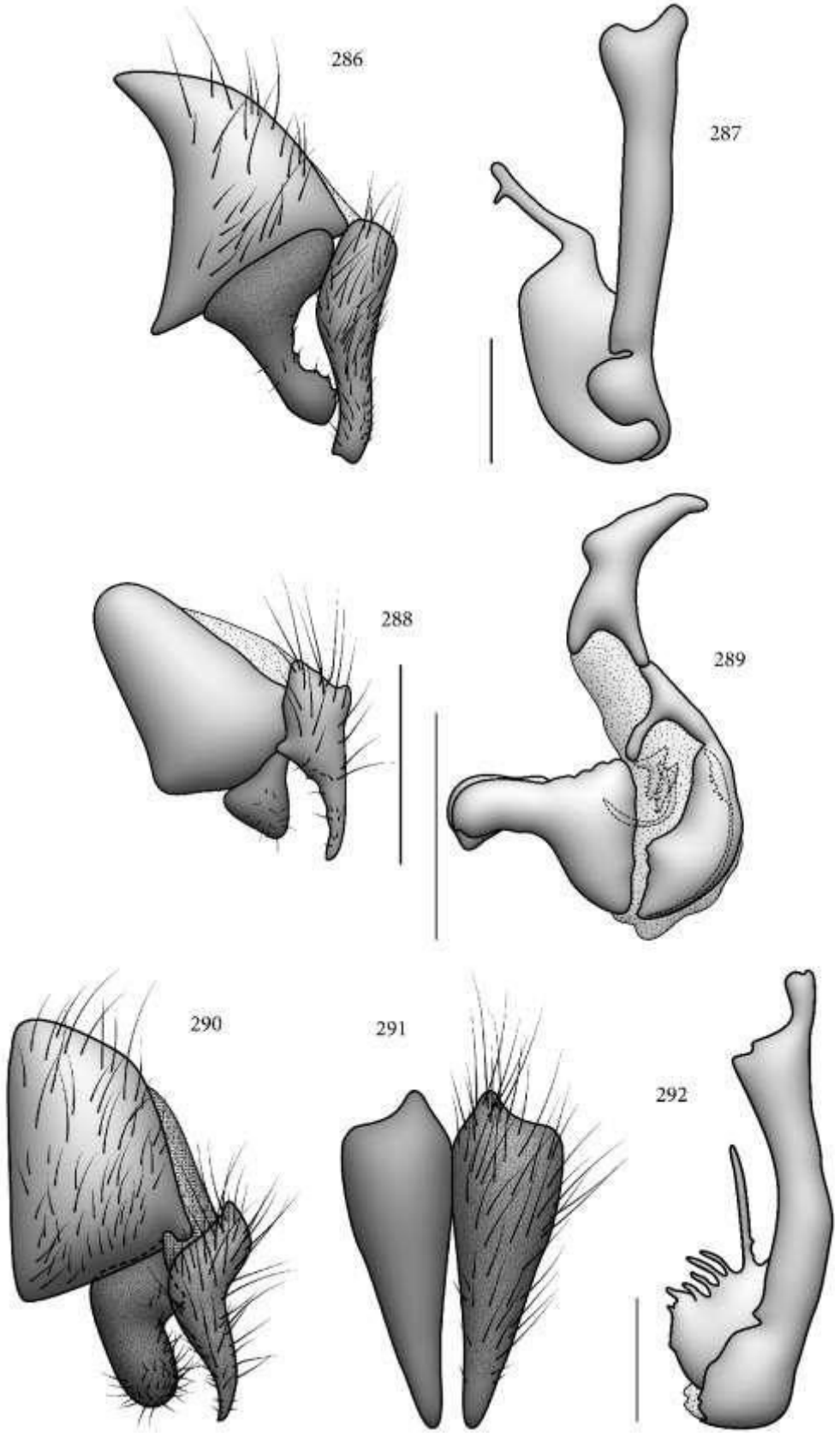


Figure 286-292

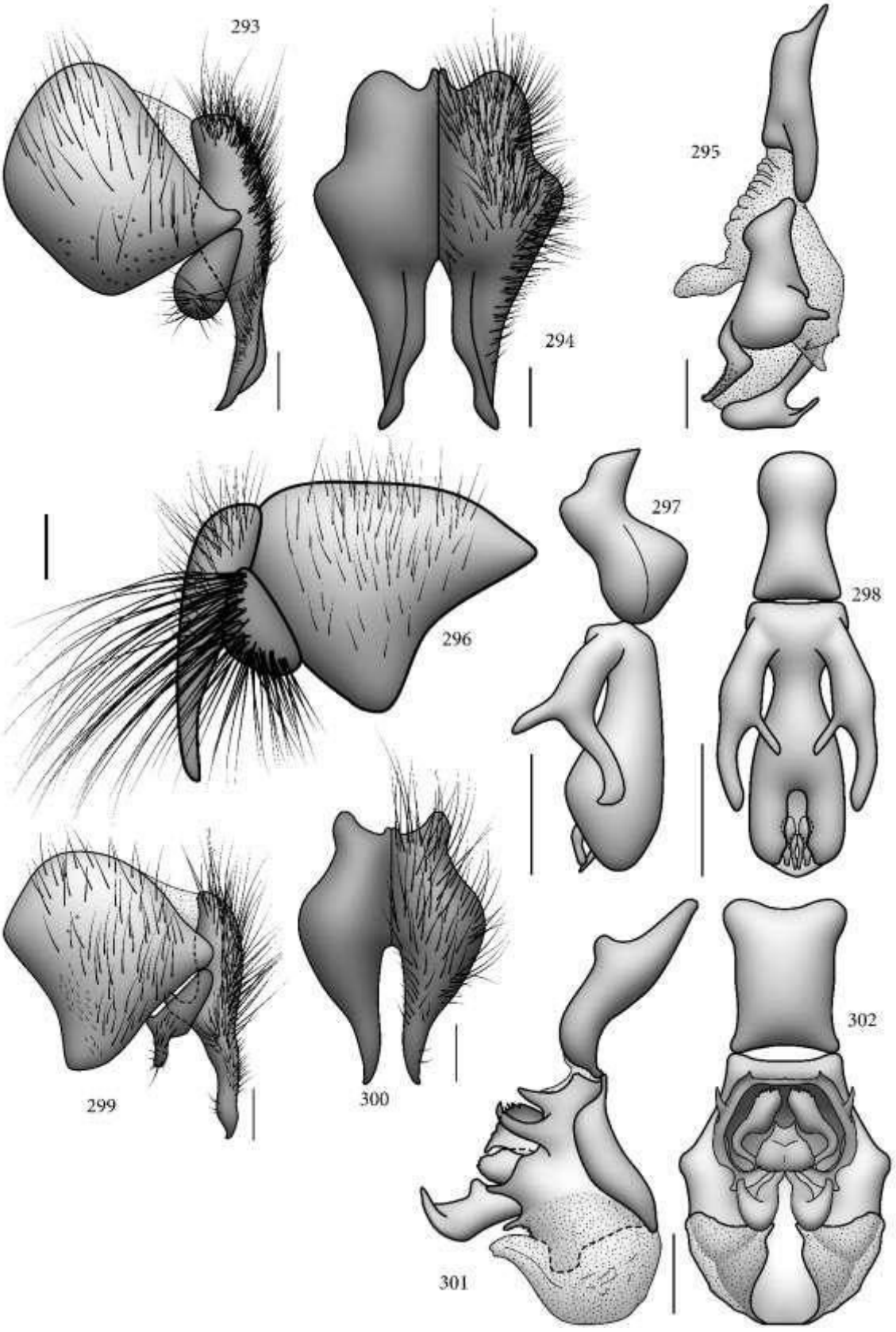


Figure 293-302

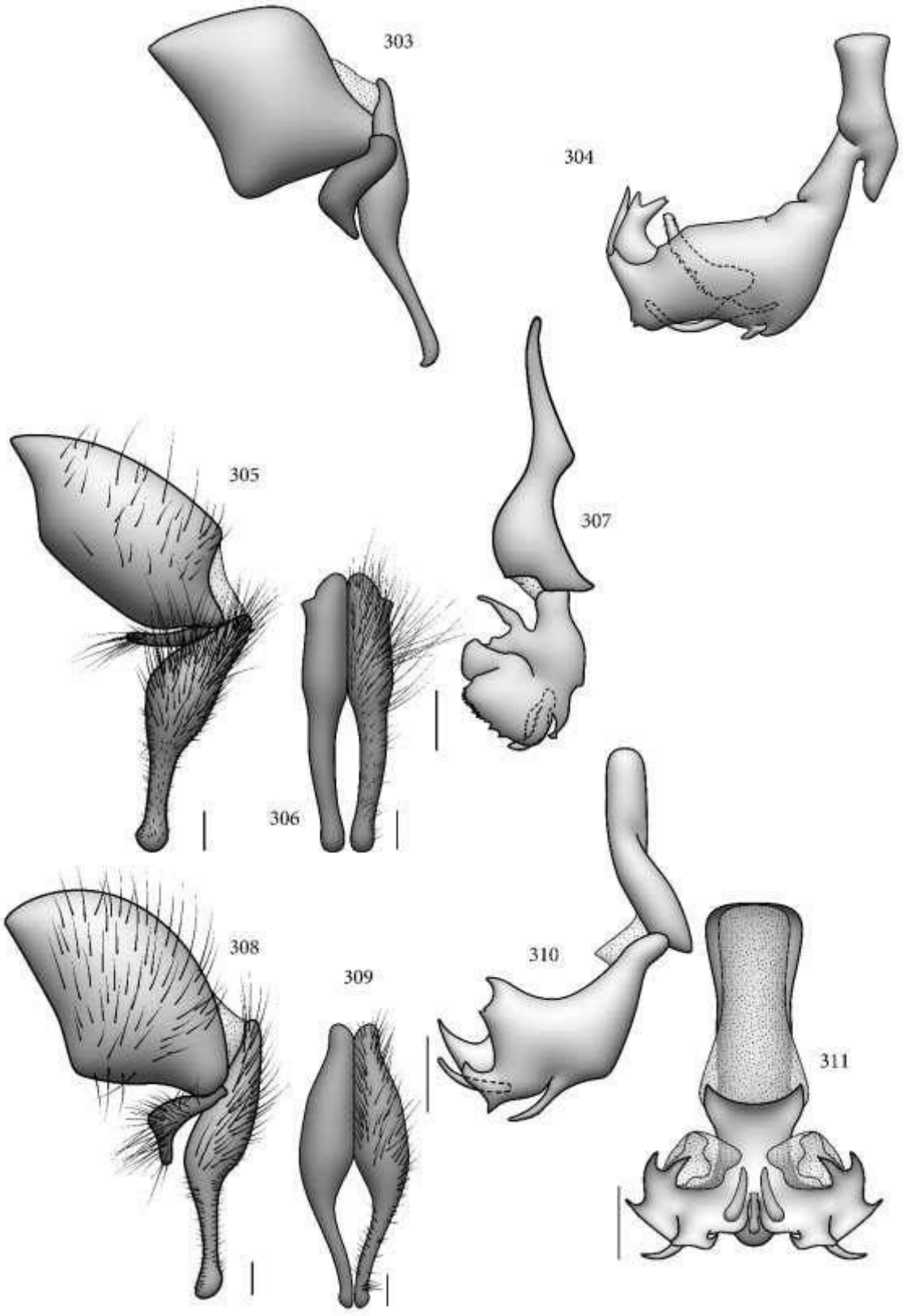


Figure 303-311

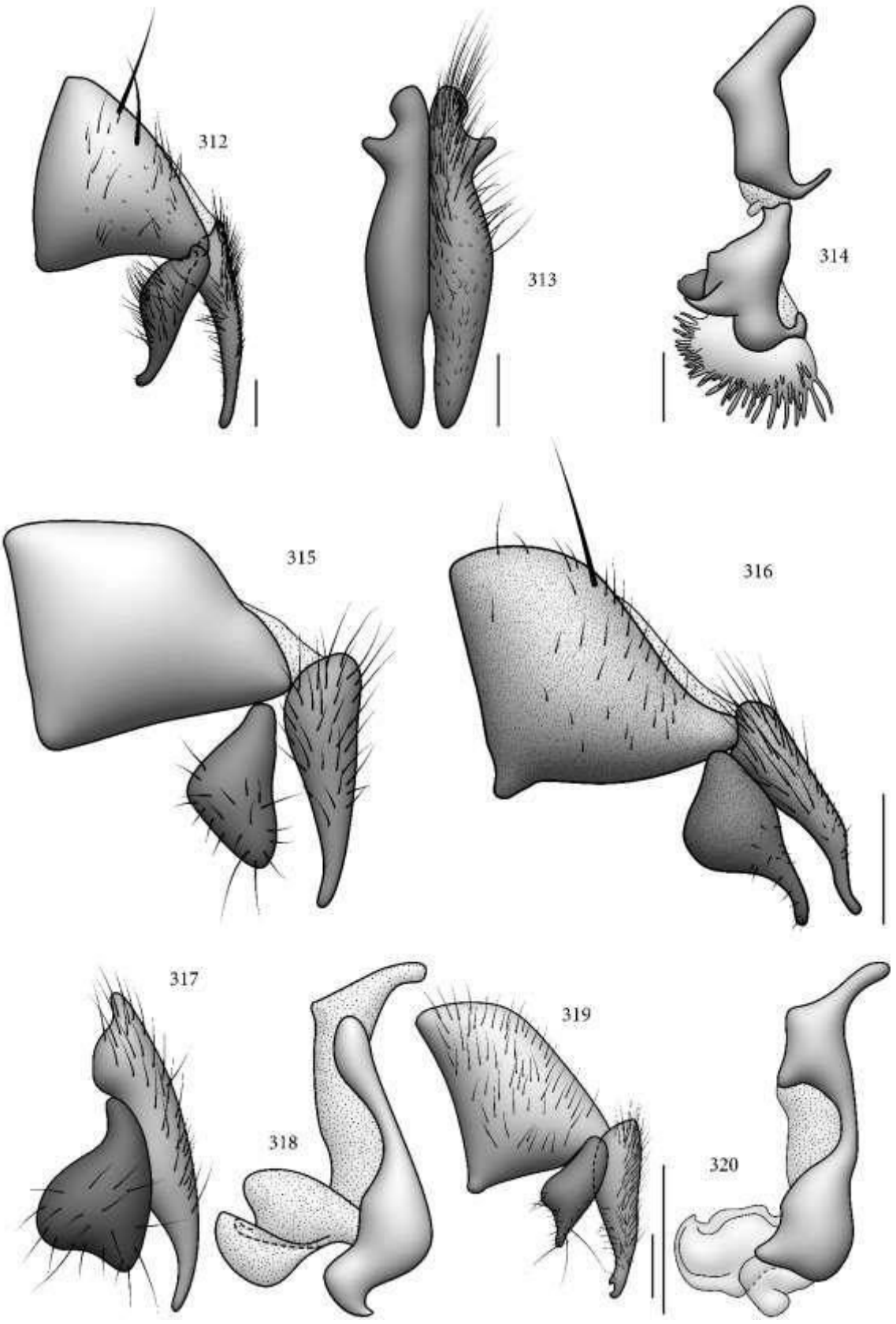


Figure 312-320

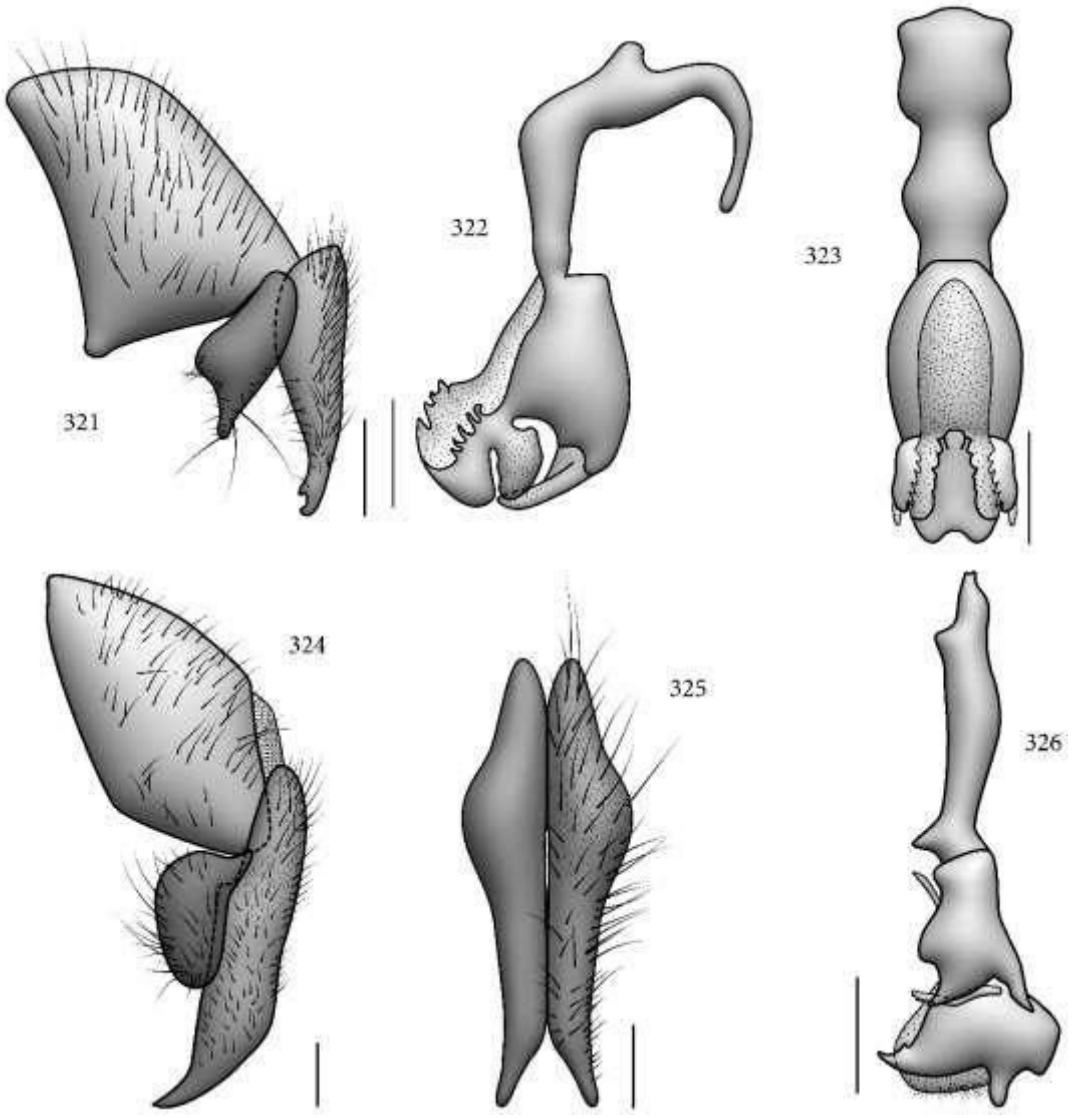
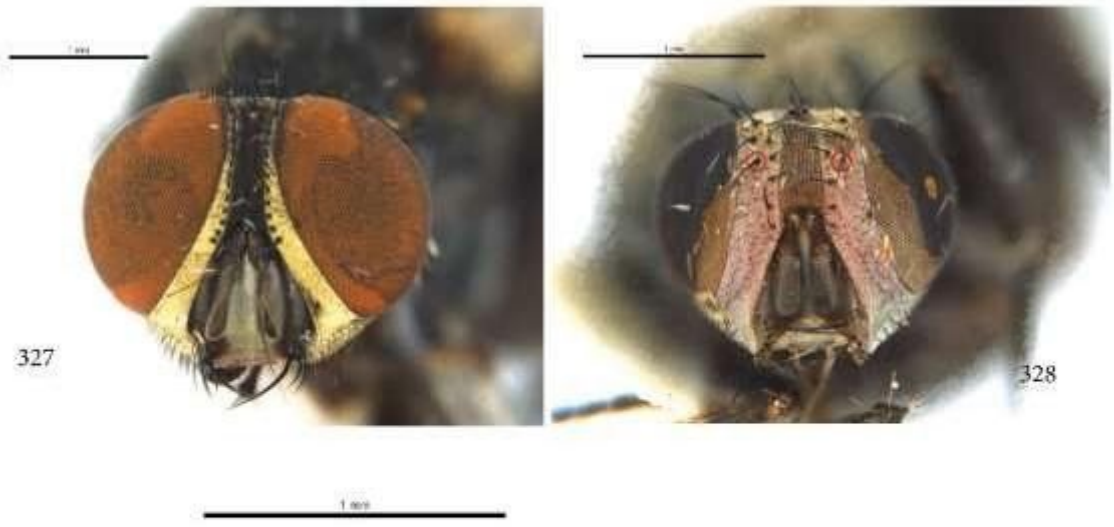


Figure321-326



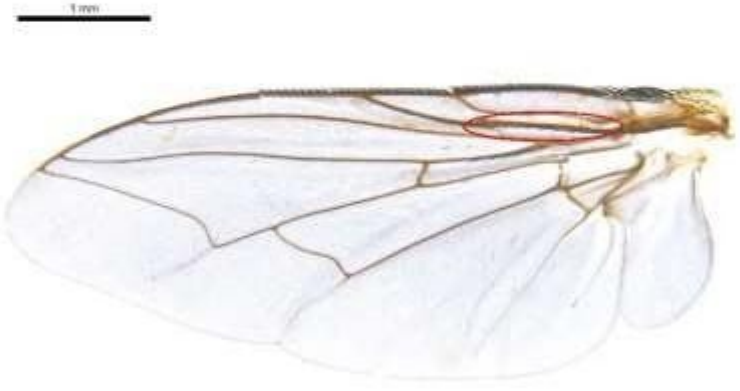


Figure 327-330