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ESPÉCIES DE MARUINS DO BRASIL

(DIPTERA: CERATOPOGONIDAE)

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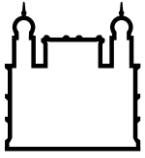
Coleção de Ceratopogonidae (CCER / FIOCRUZ)

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MARIA CLARA ALVES SANTARÉM and MARIA LUIZA FELIPPE-BAUER

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Catalogs and lists of species are important tools in the study of biodiversity of localities, states, countries and zoogeographic regions. Throughout the years, several catalogs as well as lists of Ceratopogonidae tribes and genera have been created in order to update the species lists for family study facilitation. Ceratopogonidae catalogs and lists from different parts of the World are accessible in < <http://campus.belmont.edu/cienews/cie.html>>. From the Neotropical Region, the most recent Ceratopogonidae species catalogs have been elaborated by Borkent & Spinelli (2000, 2007). Nicaraguan, Argentine and Mexican species were published sequentially by Maes & Wirth (1990), Spinelli & Wirth (1993) and Ibanez-Bernal et al. (1996). Ceratopogonidae fauna was also mentioned by Wirth (1952, 1957), Davies & Giglioli (1979) and Borkent (1991) for Juan Fernandez, Grand Cayman and Galápagos Islands, respectively. *Culicoides* species lists from Argentina, Colombia and Costa Rica are available in the publications by Spinelli et al. (2005, 2009) and Spinelli & Borkent (2004). However from Brazil, no list of species has ever been published despite the big country size and biome diversity. Surveys of species, particularly from *Culicoides*, has been conducted in different Brazilian States due to the medical and veterinary importance as well as the emerging *Culicoides*-borne diseases. Thus, the data of the Ceratopogonidae species records in Brazil are scattered in different manuscripts, which complicates investigation.

The purpose of this list is to provide the described and recorded Ceratopogonidae species to Brazil and the current distribution in the 26 Brazilian States. A table with species number distributed with respect to genera reported in the Neotropical region, Brazil and the Brazilian Amazon Region is included together with a brief history of Brazilian Ceratopogonidae fauna studies. The distribution of Neotropical species out of Brazil can be accessed in Borkent & Spinelli (2000, 2007).

In this list, we follow the species arrangement according to the catalog of “World Ceratopogonidae fauna” and “Subgeneric classification of species of *Culicoides*” by Borkent (2015a, b) and “Catalog of Neotropical Ceratopogonidae” by Borkent & Spinelli (2007). The distribution of species was adopted from specific literature including the most recent records of *Culicoides* from the Brazilian Amazon Region States from Castellón & Felipe-Bauer (2015) in addition to reliable localities with regard to the pertinent species deposited in the entomological collections of the following Institutions: Faculty of Public Health, University of São Paulo, São Paulo, Brazil; Ceratopogonidae Collection of Oswaldo Cruz Foundation, Rio de Janeiro, Brazil; National Museum of Natural History, Washington, DC, United States and British Museum, London, United Kingdom. In doubt of species presence in the cited localities, we chose to maintain them in the distribution until further studies, as revisions of genera, subgenera or species group are carried out to confirm or not their presence.

The species records are included in alphabetical order of Brazilian States after the indication of the locality type, considering the geopolitical regions (North, Northeast, Midwest, Southeast and South). In 1977, the state of Mato Grosso was split into the states of Mato Grosso and Mato Grosso do Sul and in 1989, the state of Goiás divided into the states of Goiás and Tocantins. Localities mentioned in manuscripts prior to these dates had to be updated due to the newly created States. When the collection site of the species is not provided in the original paper, we consider the cited geographic region of the species.

To set the species in the Neotropical Region we relied on the biogeographical regionalisation of the Neotropical Region by Morrone (2014). For inclusion of species in the Brazilian Amazon Region, we considered the political map of the “Amazônia Legal Brasileira”, despite the fragility of geographical borders in the delimitation of the species distribution. Brazilian municipalities and states included here can be accessed in: <http://www.cidades.ibge.gov.br/xtras/home.php>

This list recognizes 1225 extant valid Ceratopogonidae species in the Neotropical Region, 483 in Brazil and 264 in the Brazilian Amazon Region. The Ceratopogoninae subfamily is the most represented according to the studies of the sanitary important *Culicoides* genus. This subfamily is better studied in the North and Southeast Brazilian regions and few species have been reported for the Brazilian northeast region despite containing nine States in an area of 1.558.196 km<sup>2</sup>. Forcipomyinae is the second subfamily with a higher number of species, followed by Dasyheleinae. These two subfamilies are founded in the north, northeast, southeast and south of Brazil, and for Midwest Brazil, only four species have been reported for Forcipomyinae. For Leptoconopinae, only *Leptoconops brasiliensis* (Lutz) and *Leptoconops knowltoni* Clastrier & Wirth have been cited for the northern and southern Brazilian coastal areas. A close look at the number of listed species indicates the need for further studies in the five Brazilian geopolitical regions, especially in the Midwest and Northeast that encompass the natural biomes of Cerrado, Pantanal and Caatinga. In the Northeast, no Ceratopogonidae species has ever been reported for the States of Alagoas and Sergipe. Despite political inclusion in the northern region, Tocantins State presents a Cerrado biome and has no records of Ceratopogonidae as of yet.

We intend to update annually the species reported from Brazil and their records for the Brazilian States. We hope that the cited data and references available online may aid the systematic, biodiversity, biogeographical and epidemiological studies regarding the Ceratopogonidae fauna.

For corrections and additions, please contact the authors through e-mails included in the list cover.

## **Brief historical report of the Brazilian Ceratopogonidae fauna studies.**

**Jean Jacques Kieffer** was one of the most important naturalists who studied the world Ceratopogonidae fauna during the first quarter of the 20<sup>th</sup> Century. He proposed hundreds of taxa, of which several tribe, genera, subgenera and species are still valid. The species from Kieffer later reported for Brazil have been described based on material, particularly, from Paraguay. **Daniel William Coquillett** (1904) described the first Ceratopogonidae species from Brazil, *Ceratopogon guttatus* (*Culicoides guttatus*), based on three specimens collected by Adolpho Lutz in São Paulo State. **Emílio Augusto Goeldi**, from Paraense Museum, later Museu Paraense Emilio Goeldi, described a new genus and species, *Haematomyidium paraense* (*Culicoides paraensis*) in the manuscript “Os moquitos no Pará” published in 1905. Actually, *C. paraensis* is considered the most medical important species, due to Oropouche fever transmission and the possible implication in the transmission of Mansonellose in the Brazilian Amazon region. **Adolpho Lutz** (1913, 1914) described 15 new species belonging to diverse genera of Ceratopogonidae, and **Ângelo Moreira da Costa Lima** (1928, 1937) described four new *Culicoides* and *Forcipomyia* species and designed a key for the identification of the *Culicoides* of the Neotropical Region. **Frederico Simões Barbosa** (1943-1952) described new Neotropical *Culicoides* species, some still valid, his primary focus of study being *Culicoides* from the State of Pernambuco. **John William Scott Macfie** has produced several important manuscripts concerning the world Ceratopogonidae fauna, in which from Brazil, he described from 1935 to 1953 numerous species, especially from Santa Catarina State, based on specimens collected by Fritz Plaumann. In “A report on a collection of Brazilian Ceratopogonidae”, Macfie characterized 40 new species belonging to 13 genera. From 1942 to 1964, **Irving Fox** published a series of papers, primarily on the Caribbean *Culicoides*, also electing *Avaritia*, *Hoffmania* and *Macfiella* as subgenera of *Culicoides*. **John Lane** (1944-1964) and **Oswaldo P. Forattini** (1953-1960) described and redescribed several Neotropical species and published bionomic data about *Culicoides* from the mangrove swamp in São Vicente, São Paulo. In 1957, Forattini published a book intitled “*Culicoides* da Região Neotropical” including a key for identification of species. His life and bibliography, written in Portuguese, can be found in <<http://www.scielosp.org/pdf/rsp/v41n6/03.pdf>>. **Ignacio Ortíz** (1950-1961) in collaboration with Luis A. León and Marie Mirsa, dealing especially with the *Culicoides* from Venezuela and Ecuador, described dozens of species, some of them reported later in Brazil. **Jean Clastrier** carried on his Ceratopogonidae research activities from 1968 to 1995 also in the Neotropical Region, focusing primarily on the Guyana fauna. He also published Brazilian species of *Forcipomyia* with material from Pará and Santa Catarina States. His life and scientific contributions can be accessed in

<<http://campus.belmont.edu/cienews/Clastrier.html>>. From 1953 until his death in 1994, **Willis W. Wirth** motivated the studies of World Ceratopogonidae fauna with descriptions of hundreds of taxa in important and numerous manuscripts, extensive revisions, including handbooks, catalogs and species lists. **Wirth and Blanton** (1973) published “A review of the maruins or biting midges of the genus *Culicoides* (Diptera: Ceratopogonidae) in the Amazon Basin”, the first consolidation of the *Culicoides* species from the Brazilian Amazon Region, with a description of 15 new species. His life and contributions is available in <<http://campus.belmont.edu/cienews/Wirth.html>>. During three years, from 1978 to 1980, **Omar Tavares** and collaborators studying material from Rio de Janeiro, characterized 14 new species, actually belonging to the *Culicoides*, *Monohelea* and *Downshelea* genera. More recently, since 1990, **Eloy G. Castellón** has been publishing papers regarding survey and some bionomic aspects of *Culicoides* from the Amazonas and Pará States. Since 1981, **Gustavo R. Spinelli** and co-authors have been concentrating on Neotropical Ceratopogonidae, publishing studies, including revisions, which contributed with knowledge of the Brazilian biting midges, especially those of the Argentine fauna. Since 1987, **Maria Luiza Felipe-Bauer** and collaborators have been conducting taxonomy studies of Neotropical Ceratopogonidae, mainly of Brazilian *Culicoides*, describing several new species.

Catálogos e listas de espécies são ferramentas importantes no estudo da biodiversidade de localidades, estados, países e regiões zoogeográficas. Ao longo dos anos, vários catálogos e listas de tribos e gêneros de Ceratopogonidae têm sido feitos a fim de atualizar as listas de espécies para facilitar o estudo da família. Catálogos e listas de Ceratopogonidae de diferentes partes do mundo estão disponíveis em <<http://campus.belmont.edu/cienews/cie.html>>. Para a região Neotropical, os mais recentes catálogos das espécies de Ceratopogonidae foram realizados por Borkent & Spinelli (2000, 2007). Espécies de Nicarágua, Argentina e México foram publicadas sequencialmente por Maes & Wirth (1990), Spinelli & Wirth (1993) e Ibanez-Bernal et al. (1996). A fauna de Ceratopogonidae foi também mencionada por Wirth (1952, 1953), Davies & Giglioli (1979) e Borkent (1991) para as Ilhas de Juan Fernandez, Grand Cayman e Galápagos, respectivamente. Listas das espécies de *Culicoides* para a Argentina, Colômbia e Costa Rica são obtidas nas publicações de Spinelli et al. (2005, 2009) e Spinelli & Borkent (2004). No entanto para o Brasil,

nenhuma lista de espécie tem sido publicada, apesar da grande dimensão do país e da diversidade de biomas. Levantamentos de espécies, especialmente de *Culicoides*, têm sido realizados em diferentes estados brasileiros devido a importância médica e veterinária, bem como a transmissão de enfermidades emergentes por *Culicoides*. Assim, dados de registros de espécies de Ceratopogonidae no Brasil estão dispersos em diferentes manuscritos, o que torna a pesquisa trabalhosa.

O propósito dessa lista é fornecer as espécies de Ceratopogonidae descritas e reportadas para o Brasil e sua atual distribuição nos 26 estados brasileiros. Uma tabela com o número das espécies distribuídas por gênero reportadas para a Região Neotropical, Brasil e para a Região Amazônica Brasileira é incluída juntamente com um breve histórico dos estudos da fauna brasileira de Ceratopogonidae. A distribuição das espécies neotropicais fora do território brasileiro pode ser obtida em Borkent & Spinelli (2000, 2007).

Nessa lista, seguimos a ordenação das espécies conforme o catálogo “World Ceratopogonidae fauna” e “Subgeneric classification of species of *Culicoides*” de Borkent (2015a, b) e o “Catalog of Neotropical Ceratopogonidae” de Borkent & Spinelli (2007). A distribuição das espécies foi baseada na literatura específica incluindo os mais recentes registros de *Culicoides* para os estados da Região Amazônica Brasileira de Castellón & Felipe-Bauer (2015) além das localidades fiáveis relacionadas as espécies depositadas nas coleções entomológicas das seguintes instituições: Faculdade de Saúde Pública, Universidade de São Paulo, Brasil; Coleção de Ceratopogonidae da Fundação Oswaldo Cruz, Rio de Janeiro, Brasil; Museu Nacional de História Natural, Washington, DC, Estados Unidos e Museu Britânico, Londres, Inglaterra. Na dúvida da presença de espécies nas localidades citadas, optamos por mantê-las na distribuição até que futuros estudos, como revisões de gênero, subgênero ou grupo de espécies sejam realizados para confirmar ou não a presença das mesmas.

Os registros das espécies estão incluídos em ordem alfabética dos estados brasileiros após a indicação da localidade tipo, considerando as regiões geopolíticas (Norte, Nordeste, Centro-oeste, Sudeste e Sul). Em 1977, o estado de Mato Grosso foi separado nos estados de Mato Grosso e Mato Grosso do Sul e em 1989, o estado de Goiás foi dividido nos estados de Goiás e Tocantins. Localidades mencionadas em manuscritos anteriores a essas datas foram atualizadas devido a criação desses novos estados. Quando a localidade de coleta da espécie não é fornecida no trabalho original, consideramos a região geográfica citada para a espécie.

Para inserir as espécies na Região Neotropical contamos com o trabalho de regionalização biogeográfica da Região Neotropical de Morrone (2014). Para inclusão das espécies na Região Amazônica Brasileira, nós consideramos o mapa político da “Amazônia Legal Brasileira”, apesar da fragilidade das fronteiras geográficas na delimitação da distribuição das espécies. Os municípios e estados brasileiros aqui incluídos podem ser acessados em <http://www.cidades.ibge.gov.br/xtras/home.php>

Essa lista reconhece 1225 espécies de Ceratopogonidae existentes e válidas para a Região Neotropical, 483 para o Brasil e 264 para a Região Amazônica Brasileira. A subfamília Ceratopogoninae é a melhor representada devido aos estudos do gênero *Culicoides*, com importância sanitária. Essa subfamília é bem estudada nas regiões norte e sudeste do Brasil e poucas espécies têm sido reportadas para o nordeste brasileiro, apesar de abranger nove estados em uma área de 1.558.196 km<sup>2</sup>. Forcipomyinae é a segunda subfamília com maior número de espécies, seguida de Dasyheleinae. Essas duas subfamílias são encontradas nas regiões norte, nordeste, sudeste e sul do Brasil, e para o Centro-oeste, apenas quatro espécies têm sido reportadas para Forcipomyinae. Para Leptoconopinae, apenas *Leptoconops brasiliensis* (Lutz) e *Leptoconops knowltoni* Clastrier & Wirth têm sido citadas para as áreas costeiras do norte e sul do Brasil. Um olhar atento ao número das espécies listadas indica a necessidade de futuros estudos nas cinco regiões geopolíticas brasileiras, especialmente na Centro-oeste e Nordeste que abriga os biomas



naturais de Cerrado, Pantanal e Caatinga. No Nordeste, nenhuma espécie de Ceratopogonidae tem sido reportada para os estados de Alagoas e Sergipe. Apesar de politicamente incluído na região norte, o estado de Tocantins apresenta um bioma de cerrado e não tem registros de Ceratopogonidae até o presente.

Pretendemos atualizar anualmente as espécies reportadas para o Brasil e seus registros para os estados brasileiros. Esperamos que os dados incluídos e as referências disponíveis possam auxiliar os estudos da Sistemática, Biodiversidade, Biogeografia e Epidemiologia relacionados à fauna de Ceratopogonidae.

Para correções e inclusões, favor contactar os autores através dos e-mails incluídos na primeira página.

### **Breve histórico dos estudos da fauna de Ceratopogonidae do Brasil.**

**Jean Jacques Kieffer** foi um dos mais importantes naturalistas que estudou a fauna mundial de Ceratopogonidae durante o primeiro quartel do Século XX. Ele propôs centenas de taxons, dos quais várias tribos, gêneros, subgêneros e espécies são ainda válidos. As espécies de Kieffer relatadas posteriormente para o Brasil têm sido descritas baseadas em material, especialmente, do Paraguai. **Daniel William Coquillett** (1904) descreveu a primeira espécie de Ceratopogonidae para o Brasil, *Ceratopogon guttatus* (*Culicoides guttatus*), baseada em três exemplares coletados por Adolpho Lutz no estado de São Paulo. **Emílio Augusto Goeldi**, do Museu Paraense, posteriormente, Museu Paraense Emilio Goeldi, descreveu um novo gênero e espécie, *Haematomyidium paraense* (*Culicoides paraensis*) no manuscrito “Os mosquitos no Pará” publicado em 1905. Atualmente, *C. paraensis* é considerada a espécie de maior importância médica, devido a transmissão da Febre de Oropouche e a possível implicação na transmissão da Mansonelose na Região Amazônica

Brasileira. **Adolpho Lutz** (1913, 1914) descreveu 15 novas espécies pertencentes a diversos gêneros de Ceratopogonidae, e **Ângelo Moreira da Costa Lima** (1928, 1937) descreveu quatro novas espécies de *Culicoides* e *Forcipomyia* e fez uma chave para a identificação dos *Culicoides* da Região Neotropical. **Frederico Simões Barbosa** (1943–1952) descreveu novas espécies de *Culicoides* neotropicais, algumas ainda válidas, focando seus estudos principalmente nos *Culicoides* do estado de Pernambuco. **John William Scott Macfie** publicou vários manuscritos importantes no que concerne a fauna mundial de Ceratopogonidae, dos quais para o Brasil, ele descreveu de 1935 a 1953 numerosas espécies, especialmente para o estado de Santa Catarina, baseadas em espécimes coletados por Fritz Plaumann. Em “A report on a collection of Brazilian Ceratopogonidae”, Macfie caracterizou 40 novas espécies incluídas em 13 gêneros. De 1942 a 1964, **Irving Fox** publicou uma série de trabalhos, principalmente sobre os *Culicoides* do Caribe, elegendo também *Avaritia*, *Hoffmania* e *Macfiella* como subgênero de *Culicoides*. **John Lane** (1944–1964) e **Oswaldo P. Forattini** (1953–1960) descreveram e redescreveram várias espécies neotropicais e publicaram dados bionômicos sobre *Culicoides* de manguezal em São Vicente, São Paulo. Em 1957, Forattini publicou um livro intitulado “*Culicoides* da Região Neotropical” incluindo uma chave para identificação das espécies. Sua vida e bibliografia, escritas em Português, podem ser encontradas em <<http://www.scielo.org/pdf/rsp/v41n6/03.pdf>>. **Ignacio Ortiz** (1950–1961) em colaboração com Luis A. León e Marie Mirsa, trabalharam especialmente com os *Culicoides* da Venezuela e Equador, descrevendo dezenas de espécies, algumas delas reportadas posteriormente para o Brasil. **Jean Clastrier** exerceu suas atividades de pesquisa em Ceratopogonidae de 1968 a 1995 também na Região Neotropical, focado principalmente na fauna da Guiana. Ele também publicou espécies de *Forcipomyia* do Brasil com material dos estados do Pará e de Santa Catarina. Sua vida e contribuições científicas podem ser acessadas através do site <<http://campus.belmont.edu/cienews/Clastrier.html>>. De 1953 até sua morte em 1994, **Willis W. Wirth** impulsionou os estudos da fauna mundial de Ceratopogonidae com descrições de centenas

de taxons em importantes e numerosos manuscritos, amplas revisões, incluindo livros, catálogos e listas de espécies. **Wirth and Blanton** (1973) publicaram “A review of the maruins or biting midges of the genus *Culicoides* (Diptera: Ceratopogonidae) in the Amazon Basin”, a primeira reunião das espécies de *Culicoides* da Região Amazônica Brasileira, com descrição de 15 novas espécies. Sua vida e contribuições estão disponíveis em <<http://campus.belmont.edu/cienews/Wirth.html>>.

Durante três anos, de 1978 a 1980, **Omar Tavares** e colaboradores estudando material do Rio de Janeiro, caracterizaram 14 novas espécies, atualmente pertencentes aos gêneros *Culicoides*, *Monohelea* e *Downshelea*. Mais recentemente, desde 1990, **Eloy G. Castellón** tem publicado manuscritos relativos ao levantamento e alguns aspectos da bionomia de *Culicoides* dos estados do Amazonas e Pará. Desde 1981, **Gustavo R. Spinelli** e coautores têm se dedicado aos Ceratopogonidae neotropicais, publicando estudos, incluindo revisões, os quais contribuem com o conhecimento dos ceratopogonídeos brasileiros, principalmente os da fauna Argentina. Desde 1987, **Maria Luiza Felipe-Bauer** e colaboradores têm conduzido estudos taxonômicos dos Ceratopogonidae neotropicais, principalmente de *Culicoides* do Brasil, descrevendo várias espécies novas.

**Table 1.** Number of species of Ceratopogonidae genera reported in Neotropical Region, Brazil and in the Brazilian Amazon Region.

<b>Subfamily</b>	<b>Tribe</b>	<b>Genus</b>	<b>Subgenus</b>	<b>Neotropical Region</b>	<b>Brazil</b>	<b>Brazilian Amazon Region</b>
Ceratopogoninae	Ceratopogonini	<i>Allohelea</i>		1	-	-
		<i>Alluaudomyia</i>		19	7	5
		<i>Austrohelea</i>		1	-	-
		<i>Baeodasomyia</i>		5	-	-
		<i>Baeohelea</i>		1	-	-
		<i>Bahiahelea</i>		1	1	-
		<i>Borkenthelea</i>		4	-	-
		<i>Brachypogon</i>	<i>Brachypogon</i>	23	8	6
		<i>Brachypogon</i>	<i>Isohelea</i>	7	1	-
		<i>Bhachypogon</i>	Out of subgenus	2	-	-
		<i>Cacaohelea</i>		1	-	-
		<i>Ceratoculicoides</i>		1	-	-
		<i>Diaphanobezzia</i>		4	-	-
		<i>Downshelea</i>		21	9	4
		<i>Echinohelea</i>	<i>Echinohelea</i>	10	5	4
		<i>Echinohelea</i>	<i>Echinoideshelea</i>	1	1	1
		<i>Fittkauhelea</i>		1	1	1
		<i>Isthmohelea</i>		1	-	-
		<i>Leptohelea</i>		1	-	-
		<i>Macrurohelea</i>		12	-	-
		<i>Monohelea</i>		18	7	2
		<i>Nannohelea</i>		1	-	-
		<i>Notiohelea</i>		2	-	-
		<i>Parabezzia</i>		29	8	2
		<i>Rhynchohelea</i>		1	-	-

**Table 1.** Continued

Subfamily	Tribe	Genus	Subgenus	Neotropical Region	Brazil	Brazilian Amazon Region
		<i>Schizonyxhelea</i>		7	4	2
		<i>Spinellihelea</i>		1	-	-
		<i>Stilobezzia</i>	<i>Acanthohelea</i>	36	1	1
		<i>Stilobezzia</i>	<i>Eukraiohelea</i>	3	3	1
		<i>Stilobezzia</i>	<i>Stilobezzia</i>	42	23	6
	Culicoidini	<i>Culicoides</i>	<i>Amosovia</i>	1	-	-
		<i>Culicoides</i>	<i>Anilomyia</i>	19	2	1
		<i>Culicoides</i>	<i>Avaritia</i>	8	3	2
		<i>Culicoides</i>	<i>Beltranmyia</i>	3	-	-
		<i>Culicoides</i>	<i>Cotocripus</i>	6	2	-
		<i>Culicoides</i>	<i>Culicoides</i>	4	-	-
		<i>Culicoides</i>	<i>Diphaomyia</i>	14	3	2
		<i>Culicoides</i>	<i>Drymodesmyia</i>	13	3	1
		<i>Culicoides</i>	<i>Glaphiromyia</i>	2	-	-
		<i>Culicoides</i>	<i>Haematomyidium</i>	37	23	17
		<i>Culicoides</i>	<i>Hoffmania</i>	46	34	31
		<i>Culicoides</i>	<i>Macfiella</i>	2	1	1
		<i>Culicoides</i>	<i>Mataemyia</i>	19	13	10
		<i>Culicoides</i>	<i>Oecacta</i>	5	2	2
		<i>Culicoides</i>	<i>Psychophaena</i>	2	1	-
		<i>Culicoides</i>	Out of subgenus	113	58	48
		<i>Paradasyhelea</i>		3	-	-
	Heteromyiini	<i>Clinohelea</i>	<i>Ceratobezzia</i>	1	1	1
		<i>Clinohelea</i>	<i>Clinohelea</i>	11	9	6
		<i>Heretomyia</i>		11	6	3
		<i>Pellucidomyia</i>		4	1	-

**Table 1.** Continued

Subfamily	Tribe	Genus	Subgenus	Neotropical Region	Brazil	Brazilian Amazon Region
		<i>Physohelea</i>		2	-	-
	Palpomyiini	<i>Amerohelea</i>		13	4	3
		<i>Bezzia</i>		49	19	11
		<i>Clastrieromyia</i>		4	1	1
		<i>Pachyhelea</i>		2	1	1
		<i>Palpomyia</i>		51	30	4
		<i>Phaenobezzia</i>		2	2	1
	Johannsenomyiini	<i>Groganhelea</i>		1	1	1
		<i>Johannsenomyia</i>		2	1	-
		<i>Lanehelea</i>		2	-	-
		<i>Mallochohelea</i>		6	4	2
		<i>Neobezzia</i>		8	6	5
		<i>Nilobezzia</i>		3	3	2
	Sphaeromyiini	<i>Austrosphaeromias</i>		4	-	-
		<i>Sphaerohelea</i>		1	-	-
	Stenoxenini	<i>Paryphoconus</i>		41	29	17
		<i>Stenoxenus</i>		16	7	4
Dasyheleinae		<i>Dasyhelea</i>		76	17	10
Forcipomyiinae		<i>Atrichopogon</i>	<i>Atrichopogon</i>	92	22	2
		<i>Atrichopogon</i>	<i>Lophomyidium</i>	5	1	1
		<i>Atrichopogon</i>	<i>Psilokempia</i>	17	6	4
		<i>Forcipomyia</i>	<i>Blantonina</i>	1	-	-
		<i>Forcipomyia</i>	<i>Caloformipomyia</i>	11	9	4
		<i>Forcipomyia</i>	<i>Euprojoannisia</i>	16	5	3
		<i>Forcipomyia</i>	<i>Forcipomyia</i>	37	11	4
		<i>Forcipomyia</i>	<i>Lasiohelea</i>	11	5	-

**Table 1.** Continued

<b>Subfamily</b>	<b>Tribe</b>	<b>Genus</b>	<b>Subgenus</b>	<b>Neotropical Region</b>	<b>Brazil</b>	<b>Brazilian Amazon Region</b>
		<i>Forcipomyia</i>	<i>Lepidohelea</i>	22	10	1
		<i>Forcipomyia</i>	<i>Metaforcipomyia</i>	22	1	-
		<i>Forcipomyia</i>	<i>Microhelea</i>	50	22	11
		<i>Forcipomyia</i>	<i>Pedilohelea</i>	5	3	2
		<i>Forcipomyia</i>	<i>Phytohelea</i>	11	5	1
		<i>Forcipomyia</i>	<i>Pterobosca</i>	3	2	-
		<i>Forcipomyia</i>	<i>Rhynchoforcipomyia</i>	7	2	1
		<i>Forcipomyia</i>	<i>Saliohelea</i>	2	1	1
		<i>Forcipomyia</i>	<i>Schizoforcipomyia</i>	2	1	1
		<i>Forcipomyia</i>	<i>Synthyridomyia</i>	5	1	-
		<i>Forcipomyia</i>	<i>Thyridomyia</i>	8	2	-
		<i>Forcipomyia</i>	<i>Trichohelea</i>	13	2	1
		<i>Forcipomyia</i>	<i>Warkea</i>	7	4	4
	Unplaced	<i>Didymophleps</i>		1	-	-
Leptoconopiinae		<i>Leptoconops</i>	<i>Brachyconops</i>	1	-	-
		<i>Leptoconops</i>	<i>Holoconops</i>	3	1	-
		<i>Leptoconops</i>	<i>Leptoconops</i>	7	1	1
		<i>Leptoconops</i>	<i>Megaconops</i>	1	-	-
Unplaced	Unplaced	<i>Ceratopogon</i>		1	-	-
<b>TOTAL</b>				<b>1225</b>	<b>483</b>	<b>264</b>

SUBFAMILY CERATOPOGONINAE NEWMAN, 1834

TRIBE CERATOPOGONINI

**Genus ALLUAUDOMYIA Kieffer**

**ALLUAUDOMYIA** Kieffer, 1913a: 12. Type species: *Alluaudomyia imparunguis* Kieffer, by monotypy.

**NEOCERATOPOGON** Malloch, 1915a: 310. Type species: *Ceratopogon bellus* Coquillett, by original designation.

**PRIONOGNATHUS** Carter, Ingram & Macfie, 1921: 309 (preoccupied by *Prionognathus* LaFerté-Sénéctère, 1851). Type species: *Prionognathus marmoratus* Carter, Ingram & Macfie, by original designation.

**THYSANOGNATHUS** Ingram & Macfie, 1922: 244. New name for *Prionognathus* Carter, Ingram & Macfie. Type species: *Prionognathus marmoratus* Carter, Ingram & Macfie, automatic.

**ISOECACTA** Garrett, 1925: 9. Type species: *Isoecacta poeyi* Garrett (= *Ceratopogon bellus* Coquillett), by original designation.

**amazonica** Spinelli & Wirth, 1984a: 676. Brazil (Amazonas)

**catarinensis** Spinelli & Wirth, 1984a: 681. Brazil (Santa Catarina)

**distispinulosa** Spinelli & Wirth, 1984a: 682. Brazil (Amazonas)

**fittkai** Spinelli & Wirth, 1984a: 686. Brazil (Amazonas). Brazil records – Amazonas, Pará

**nubeculosa** Spinelli & Wirth, 1984a: 689. Brazil (Amazonas). Brazil records – Amazonas, Pará

**plaumanni** Spinelli & Wirth, 1984a: 691. Brazil (Santa Catarina)

**punctivenosa** Wirth & Grogan, 1988: 20. New name for *punctiradialis*.

*punctiradialis* Spinelli & Wirth, 1984a: 692 (preoccupied by *Alluaudomyia punctiradialis* Chaudhuri, Das Gupta & Chaudhuri, 1972). Brazil (Pará)

**Genus BAHIAHELEA Wirth**

**BAHIAHELEA** Wirth, 1992: 276. Type species: *Bahiahelea brasiliensis* Wirth, by original designation.

**brasiliensis** Wirth, 1992: 280. Brazil (Bahia)

**Genus BRACHYPOGON Kieffer**

**BRACHYPOGON** Kieffer, 1899: 69. Type species: *Ceratopogon vitiosus* Winnertz, by original designation.

**Subgenus BRACHYPOGON Kieffer**

**apunctipennis** Spinelli & Grogan, 1998: 64. Brazil (Rondônia)

**bimaculatus** Spinelli & Grogan, 1998: 67. Colombia. Brazil records – Mato Grosso



**fuscivenosus** (Lutz), 1914: 94 (*Palpomyia*). Brazil (Rio de Janeiro)

**impar** (Johannsen), 1938: 223 (*Ceratopogon*). Puerto Rico (USA). Brazil records – Santa Catarina

**paraensis** Wirth & Blanton, 1970a: 99 (as *parasensis*). Brazil (Pará)

**pseudoparaensis** Spinelli & Grogan, 1998: 64. Brazil (Pará)

**schmitzi** Spinelli & Grogan, 1998: 65. Brazil (Rondônia)

**spatuliformis** Spinelli & Grogan, 1998: 65. Brazil (Rondônia)

### **Subgenus ISOHELEA Kieffer**

**ISOHELEA** Kieffer, 1917a: 295. Type species: *Ceratopogon lacteipennis* Zetterstedt (misidentified, = *Psilohelea sociabilis* Goetghebuer), by original designation.

**NILOHELEA** Kieffer, 1921a: 22. Type species: *Nilohhelea albipennis* Kieffer, by monotypy.

**TRISHELEA** Kieffer, 1925a: 153. Type species: *Trishelea incompleta* Kieffer, by original designation.

**misionensis** Spinelli, 1990: 752. Argentina. Brazil records – Southeast

### **Genus DOWNESHELEA Wirth & Grogan**

**DOWNESHELEA** Wirth & Grogan, 1988: 50. Type species: *Monohelea stonei* Wirth, by original designation.

**bicornis** Felipe-Bauer & Quintelas, 1993a: 185. Brazil (Rio de Janeiro)

**carioca** (Tavares & Silva Pereira), 1978: 157 (*Monohelea*). Brazil (Rio de Janeiro)

**castroi** (Tavares & Silva Pereira), 1978: 159 (*Monohelea*). Brazil (Rio de Janeiro)

**fluminensis** Felipe-Bauer & Quintelas, 1993b: 33. Brazil (Rio de Janeiro)

**guianae** (Wirth), 1953a: 150 (*Monohelea*). Guyana. Brazil records – Pará

**lanei** Felipe-Bauer & Borkent in Felipe-Bauer et al., 2011: 21. Brazil (Pará)

**multilineata** (Lutz), 1914: 93 (*Palpomyia*). Brazil (Mato Grosso, Rio de Janeiro)

**oliveirai** Felipe-Bauer, in Felipe-Bauer and Silva, 2008: 400. Brazil (Rondônia). Brazil records – Pará, Rondônia

**quasidentica** Felipe-Bauer & Quintelas, 1993b: 37. Brazil (Rio de Janeiro)

### **Genus ECHINOHELEA Macfie**

**ECHINOHELEA** Macfie, 1940a: 187. Type species: *Echinohelea ornatipennis* Macfie, by original designation.

### **Subgenus ECHINOHELEA Macfie**

**lanei** Wirth, 1951: 319. USA (Virginia). Brazil records – Pará, Rondônia

**macfie** Lane, 1947a: 228. Brazil (São Paulo)

**neotropica** Wirth, 1994: 237. Colombia. Brazil records – Amazonas, Pará, Rio de Janeiro

**ornatipennis** Macfie, 1940a: 188. Guyana. Brazil records – Pará

**richardsi** Macfie, 1940a: 189. Guyana. Brazil records – Pará, Rondônia, Rio de Janeiro, São Paulo

### **Subgenus ECHINOIDESHELEA Wirth**

**ECHINOIDESHELEA** Wirth, 1994: 231 (as subgenus of *Echinohelea*). Type species: *Echinohelea aitkeni* Wirth, by original designation.

**aitkeni** Wirth, 1994: 231. Brazil (Pará)

### **Genus FITTKAUHELEA Wirth & Blanton**

**FITTKAUHELEA** Wirth & Blanton, 1970b: 7. Type species: *Fittkauhelea amazonica* Wirth and Blanton, by original designation.

**amazonica** Wirth and Blanton, 1970b: 9. Brazil (Amazonas)

### **Genus MONOHELEA Kieffer**

**MONOHELEA** Kieffer, 1917a: 294. Type species: *Monohelea hieroglyphica* Kieffer, by original designation.

**affinis** Felipe-Bauer & Spinelli, 1991: 201. Brazil (Amazonas)

**aguirrei** Tavares & Souza, 1980: 97. Brazil (Rio de Janeiro). Brazil records – Rio de Janeiro, Santa Catarina

**archibaldoi** Tavares & Souza, 1980: 98. Brazil (Rio de Janeiro)

**brasiliensis** Lane, 1947a: 226. Brazil (Rio de Janeiro). Brazil records – Rio de Janeiro, São Paulo

**hieroglyphica** Kieffer, 1917a: 312. Paraguay. Brazil records – Distrito Federal, Rio de Janeiro

**poncai** Lane & Wirth, 1964: 228. Panama. Brazil records – Rio de Janeiro

**roraimensis** Felipe-Bauer & Spinelli, 1991: 202. Brazil (Roraima)

### Genus PARABEZZIA Malloch

**PARABEZZIA** Malloch, 1915b: 358. Type species: *Parabezzia petiolata* Malloch, by original designation.

**balseiroi** Spinelli & Grogan, 1987: 13. Argentina. Brazil records – Rio Grande do Sul

**brasiliensis** Spinelli & Grogan, 1987: 34. Brazil (Mato Grosso)

**casimirensis** Felipe-Bauer & Spinelli, 2015: 396. Brazil (Rio de Janeiro)

**costalis** Wirth, 1965a: 221. Panama. Brazil records – Rio de Janeiro

**fluminensis** Felipe-Bauer & Spinelli, 2015: 399. Brazil (Rio de Janeiro)

**inaequalis** Spinelli & Grogan, 1987: 38. Brazil (Amazonas)

**indistincta** Felipe-Bauer & Spinelli, 2015: 393. Brazil (Rio de Janeiro)

**unica** Felipe-Bauer & Spinelli, 2015: 391. Brazil (Rio de Janeiro)

### Genus SCHIZONYXHELEA Clastrier

**SCHIZONYXHELEA** Clastrier, 1984: 1. Type species: *Schizonyxhelea guyana* Clastrier, by original designation.

**forattinii** Wirth & Grogan, 1988: 81. Brazil (Santa Catarina)

**guyana** Clastrier, 1984: 2. French Guiana. Brazil records – Mato Grosso

**panamensis** (Lane & Forattini), 1958: 218 (*Stilobezzia*). Panama. Brazil records – Rio de Janeiro, São Paulo

**thomsenae** (Wirth), 1953b: 83 (*Stilobezzia*). USA (Florida). Brazil records – Pará  
*scutata* Lane & Forattini, 1961: 92. Panama

### Genus STILOBEZZIA Kieffer

**STILOBEZZIA** Kieffer, 1911a: 118. Type species: *Stilobezzia festiva* Kieffer, by original designation.

**HARTOMYIA** Malloch, 1915b: 339. Type species: *Ceratopogon pictus* Coquillett (= *Stilobezzia coquilletti* Kieffer), by original designation.

### Subgenus ACANTHOHELEA Kieffer

**ACANTHOHELEA** Kieffer, 1917b: 198. Type species: *Acanthohelea pruinosa* Kieffer, by monotypy.

**PALEOTETRAGONEURA** Meunier, 1920: 897 (1920: 1221). Type species: *Tetragoneura veterana* Meunier, by monotypy.

**NEOSTILOBEZZIA** Goetghebuer, 1934a: 53 (as subgenus of *Stilobezzia*). Unavailable name; proposed after 1930 without type species designation.

*NEOSTILOBEZZIA* Wirth, 1953b: 63. Type species: *Ceratopogon ochraceus* Winnertz, by original designation.

**manosensis** Lane & Forattini, 1958: 205. Brazil (Amazonas)

#### **Subgenus EUKRAIOHELEA Ingram & Macfie**

**EUKRAIOHELEA** Ingram & Macfie, 1921: 347. Type species: *Eukraiohelea africana* Ingram & Macfie, designation by Macfie, 1940b: 22.

**amnigena** (Macfie), 1935a: 56 (*Eukraiohelea*). Brazil (Maranhão)

**dorsofasciata** (Lutz), 1914: 96 (*Palpomyia*). Brazil (Rio de Janeiro)

**elegantula** (Johannsen), 1907: 109 (*Bezzia*). USA (Kansas). Brazil records – Amazonas  
*maculitibia* Lane & Forattini, 1956: 207. Panama  
*subsessilis* Kieffer, 1917a: 311. Paraguay

#### **Subgenus STILOBEZZIA Kieffer**

**albocincta** Kieffer, 1917a: 309. Paraguay. Brazil records – Rio de Janeiro

**bicolor** Lane, 1947b: 208. Brazil (São Paulo)

**bimaculata** Lane & Forattini, 1956: 211. Panama. Brazil records – Rio de Janeiro

**bispinosa** Kieffer, 1917a: 310. Paraguay. Brazil records – Rio de Janeiro, São Paulo

**chaconi** Macfie, 1938: 166. Trinidad and Tobago. Brazil records – Goiás, São Paulo

**coquilletti** Kieffer, 1917a: 308. New name for *picta*. Brazil records – Amazonas, São Paulo  
*picta* (Coquillett), 1905: 60 (*Ceratopogon*) (preoccupied by *Sphaeromyias pictus* (Meigen), 1818). USA (Virginia)

**coracina** Kieffer, 1917a: 311. Paraguay. Brazil records – São Paulo

**dubitans** Lane, Forattini & Rabello, 1955: 85. Brazil (São Paulo)

**dureti** Lane & Forattini, 1958: 210. Brazil (São Paulo)

**fiebrigi** Kieffer, 1917a: 309. Paraguay. Brazil records – Rio de Janeiro, São Paulo

**glauca** Macfie, 1939a: 204. Brazil (Santa Catarina). Brazil records – Rio de Janeiro, São Paulo, Santa Catarina  
*fluminensis* Lane, 1947b: 210. Brazil (Rio de Janeiro)

**kiefferi** Lane, 1947b: 205. Brazil (Minas Gerais). Brazil records – Pará, Minas Gerais  
*punctipes* Wirth, 1953b: 79. USA (Florida)

**macfie** Lane, 1947b: 213. Brazil (São Paulo). Brazil records – Rio de Janeiro, São Paulo

**maculata** Lane, 1947b: 207. Brazil (Rio de Janeiro)

**modesta** Lane, 1947b: 206. Brazil (Rio de Janeiro). Brazil records – Rio de Janeiro, São Paulo

**pallescens** Lane & Forattini, 1958: 218. Panama. Brazil records – São Paulo

**paulistensis** Lane, 1947b: 200. Brazil (São Paulo). Brazil records – Pará, Rio de Janeiro, São Paulo

**punctulata** Lane, 1947b: 204. Brazil (Rio de Janeiro). Brazil records – Amazonas, Mato Grosso do Sul, Minas Gerais, Rio de Janeiro

**pseudopunctulata** Cazorla & Ronderos, 2012: 400. Argentina. Brazil records – Amazonas

**rabelloi** Lane, 1947b: 203. Brazil (Rio de Janeiro). Brazil records – Amazonas, Mato Grosso do Sul, Rio de Janeiro

**simplex** Lane & Forattini, 1958: 222. Panama. Brazil records – Rio de Janeiro

**travassosi** Lane, 1947b: 210. Brazil (Espírito Santo). Brazil records – Espírito Santo, São Paulo

**wygodzinskyi** Lane, 1947b: 212. Brazil (São Paulo)

#### TRIBE CULICOIDINI KIEFFER, 1911b,1911c

##### Genus **CULICOIDES** Latreille

**CULICOIDES** Latreille, 1809: 251. Type species: *Culicoides punctatus* Latreille (= *Ceratopogon punctatus* Meigen), by monotypy.

**PADROSIA** Rafinesque, 1815: 130 (unnecessary new name for *Culicoides* Latreille). Type species: *Culicoides punctatus* Latreille (= *Ceratopogon punctatus* Meigen), automatic.

**OXYHELEA** Kieffer, 1921a: 14 (as subgenus of *Culicoides*). Type species: *Culicoides dentatus* Kieffer, by monotypy.

**PROSAPELMA** Kieffer, 1925b: 417. Type species: *Prosapelma cinerea* Kieffer, by original designation.

**NEOCULICOIDES** Boorman & Lane, 1979: 327 (preoccupied by *Neoculicoides* Pierce, 1966). Type species: *Neoculicoides taylori* Boorman & Lane, by original designation.

##### Subgenus **ANILOMYIA** Vargas

**ANILOMYIA** Vargas, 1960: 37 (as subgenus of *Culicoides*). Type species: *Culicoides covagarciai* Ortíz, by original designation.

**efferus** Fox, 1952: 365. Peru. Brazil records – Acre, Amazonas, Pará

**trapidoi** Wirth & Barreto, 1978: 554. Colombia. Brazil records - ??

##### Subgenus **AVARITIA** Fox

**AVARITIA** Fox, 1955: 218 (as subgenus of *Culicoides*). Type species: *Ceratopogon obsoletus* Meigen, by original designation.

**impusilloides** Spinelli & Wirth, 1984b: 178. Brazil (Santa Catarina)

**pusilloides** Wirth & Blanton, 1955a: 104. Panama. Brazil records – Acre

**pusillus** Lutz, 1913: 52. Brazil (Rio de Janeiro). Brazil records – Acre, Amapá, Amazonas, Pará, Bahia, Minas Gerais, Rio de Janeiro, São Paulo, Santa Catarina

### **Subgenus COTOCRIPUS Brèthes**

**COTOCRIPUS** Brèthes, 1912: 451. Type species: *Cotocripus caridei* Brèthes, by monotypy.

**bambusicola** Lutz, 1913: 62. Brazil (Rio de Janeiro). Brazil records – Bahia, Espírito Santo, Rio de Janeiro, São Paulo

*bahiensis* Barbosa, 1947: 11. Brazil (Bahia)

**caridei** (Brèthes), 1912: 451 (*Cotocripus*). Argentina. Brazil records – Rio Grande do Sul

*setifer* (Lutz), 1913: 64 (*Centrorhynchus*). Brazil (Rio Grande do Sul)

### **Subgenus DIPHAOMYIA Vargas**

**DIPHAOMYIA** Vargas, 1960: 40 (as subgenus of *Culicoides*). Type species: *Culicoides baueri* Hoffman, by original designation.

**freitasi** Wirth & Blanton, 1973: 434. Brazil (Pará). Brazil records – Amazonas, Pará

**iriartei** Fox, 1952: 368. Venezuela. Brazil records – Pará

*vargasi* Wirth & Blanton, 1953a: 74. Panama

**minasensis** Felipe-Bauer, 1987: 147. Brazil (Minas Gerais)

### **Subgenus DRYMODESMYIA Vargas**

**DRYMODESMYIA** Vargas, 1960: 40 (as subgenus of *Culicoides*). Type species: *Culicoides copiosus* Root & Hoffman, by original designation.

**jamaicensis** Edwards, 1922: 165 (as *loughnani* var.). Jamaica. Brazil records – Rio de Janeiro

**pilosus** Wirth & Blanton, 1959: 332. Panama. Brazil records – Pará

**poikilonotus** Macfie, 1948: 82. Mexico. Brazil records – Bahia, Rio de Janeiro

*cacozelus* Macfie, 1948: 85. Mexico

*hertigi* Wirth and Blanton, 1953b: 229. Panama

### **Subgenus HAEMATOMYIDIUM Goeldi**

**HAEMATOMYIDIUM** Goeldi, 1905: 137. Type species: *Haematomyidium paraensis* Goeldi, by original designation.

**aragaoi** Tavares & Dias, 1980: 393. Brazil (Rio de Janeiro)

**crucifer** Clastrier, 1968: 85. French Guiana. Brazil records – Amazonas, Pará

**debilipalpis** Lutz, 1913: 60. Brazil (São Paulo). Brazil records – Acre, Amapá, Amazonas, Pará, Roraima, Pernambuco, Ceará, Goiás, Mato Grosso do Sul, Espírito Santo, São Paulo, Santa Catarina

*khalafi* Beck, 1957: 104. USA (Florida)

- ichesi* Ronderos & Spinelli, 1995: 77. Argentina
- denisae** Clastrier, 1971: 290. French Guiana. Brazil records – Amazonas, Pará
- espinolai** Felipe-Bauer & Lourenco-de-Oliveira, 1987: 149. Brazil (Minas Gerais)
- flinti** Wirth, 1982a: 251. Argentina. Brazil records – Santa Catarina
- ginesi** Ortíz, 1951a: 586. Venezuela. Brazil records – Pará
- glabrior** Macfie, 1940c: 27 (as variety of *debilipalpis*). Guyana. Brazil records – Acre, Amazonas, Pará, Roraima  
*grahambelli* Forattini, 1956a: 35. Panama
- hoffmani** Fox, 1946: 251. Trinidad and Tobago. Brazil records – Amazonas
- horticola** Lutz, 1913: 61. Brazil (São Paulo). Brazil records – Espírito Santo, Rio de Janeiro, São Paulo  
*bachmanni* Spinelli, in Spinelli et al., 2005: 146. Argentina
- insinuatus** Ortíz & León, 1955: 577. Ecuador. Brazil records – Acre, Amapá, Amazonas, Pará, Roraima, São Paulo
- jurutiensis** Trindade & Felipe-Bauer, 2011a: 61. Brazil (Pará)
- kampa** Felipe-Bauer, Veras & Castellon in Felipe-Bauer et. al, 2000: 35. Brazil (Acre)
- lahillei** (Iches), 1906: 264 (*Ceratopogon*). Argentina. Brazil records – São Paulo
- limonensis** Ortíz & León, 1955: 576. Ecuador. Brazil records – Pará, Bahia, São Paulo, Santa Catarina
- martyrius** Trindade & Felipe-Bauer, 2011a: 62. Brazil (Pará)
- neoparaensis** Tavares & Souza, 1978: 621. Brazil (Rio de Janeiro). Brazil records – Amazonas, Rio de Janeiro, Santa Catarina
- paraensis** (Goeldi), 1905: 137 (*Haematomyidium*). Brazil (Pará). Brazil records – Acre, Amazonas, Pará, Roraima, Bahia, Ceará, Maranhão, Pernambuco, Mato Grosso do Sul, Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo, Santa Catarina  
*undecimpunctatus* Kieffer, 1917a: 307. Argentina
- quasiparaensis** Clastrier, 1971: 286. French Guiana. Brazil records – Acre, Amazonas, Pará, Rondônia, Roraima, Maranhão
- rachoui** Tavares & Souza, 1978: 622. Brazil (Rio de Janeiro). Brazil records – Minas Gerais, Rio de Janeiro
- spurius** Wirth & Blanton, 1959: 433. Panama. Brazil records – Acre, Amazonas, Roraima
- totatangae** Wirth & Blanton, 1973: 447. Brazil (Pará). Brazil records – Acre, Amapá, Amazonas, Pará, Santa Catarina
- youngi** Wirth & Barreto, 1978: 562. Colombia. Brazil records – Amazonas

### Subgenus **HOFFMANIA** Fox

**HOFFMANIA** Fox, 1948: 21 (as subgenus of *Culicoides*). Type species: *Culicoides inamollae* Fox & Hoffman (= *Culicoides insignis* Lutz), by original designation.

**aitkeni** Wirth & Blanton, 1968a: 214. Trinidad and Tobago. Brazil records – Amazonas, Pará

**baniwa** Felipe-Bauer, in Felipe-Bauer, et al., 2009: 852. Brazil (Amazonas)

**batesi** Wirth & Blanton, 1973: 426. Brazil (Pará)

*sanmartini* Wirth & Barreto, 1978: 553. Colombia

**bimaculatus** Floch & Abonnenc, 1942a: 3. French Guiana. Brazil records – Amazonas, Pará

**brasilianum** Forattini, 1956b: 81. Brazil (São Paulo). Brazil records – Amazonas, Pará, Pernambuco, Rio de Janeiro, São Paulo, Santa Catarina

**coutinhoi** Barreto, 1944: 96. Brazil (São Paulo). Brazil records – Amazonas, Pará, São Paulo

**diabolicus** Hoffman, 1925: 294. Panama. Brazil records – Amazonas, Roraima, Maranhão

**diffusus** Spinelli, in Spinelli et al., 1993: 34. Brazil (Espírito Santo)

**fernandoi** Tavares & Souza, 1979: 611. Brazil (Rio de Janeiro). Brazil records – Bahia, Espírito Santo, Minas Gerais, Rio de Janeiro, Santa Catarina

**filariferus** Hoffman, 1939: 172. Mexico. Brazil records – Amazonas, Pará

**flavivenulus** Costa Lima, 1937a: 418. Brazil (Rio de Janeiro). Brazil records – Pará, Bahia, Pernambuco, Mato Grosso do Sul, Espírito Santo, Rio de Janeiro, São Paulo, Santa Catarina

**foxi** Ortíz, 1950a: 461. Puerto Rico (USA). Brazil records – Amazonas, Pará, Roraima, Bahia, Maranhão, Pernambuco, Piauí, Goiás, Mato Grosso do Sul, Minas Gerais, Rio de Janeiro, São Paulo, Paraná

**franklini** Spinelli, in Spinelli et al., 1993: 45. Panama. Brazil records – Pará

**fusipalpis** Wirth & Blanton, 1973: 435. Brazil (Pará). Brazil records – Acre, Amapá, Amazonas, Pará, Rondônia, Roraima, Bahia, Maranhão, Rio de Janeiro

**guttatus** (Coquillett), 1904a: 35 (*Ceratopogon*). Brazil (São Paulo). Brazil records – Minas Gerais, Rio de Janeiro, São Paulo, Santa Catarina

**heliconiae** Fox & Hoffman, 1944: 108. Venezuela. Brazil records – Acre, Amazonas, Pará

**hylas** Macfie, 1940c: 26. Guyana. Brazil records – Amapá, Amazonas, Pará, Roraima, Maranhão

**ignacioi** Forattini, 1957: 215. Brazil (São Paulo). Brazil records – Acre, Amazonas, Pará, Roraima, Maranhão, Minas Gerais, Rio de Janeiro, São Paulo

*saintjusti* Tavares & Ruiz, 1980: 27. Brazil (Rio de Janeiro)

**insignis** Lutz, 1913: 51. Brazil (Bahia e Rio de Janeiro). Brazil records – Amazonas, Pará, Bahia, Ceará, Paraíba, Pernambuco, Maranhão, Goiás, Mato Grosso, Mato Grosso do Sul, Espírito Santo, Minas Gerais, São Paulo, Rio de Janeiro, Rio Grande do Sul, Santa Catarina

*inamollae* Fox & Hoffman, 1944: 110. Puerto Rico (USA)

*painteri* Fox, 1946: 257. Honduras



**lutzi** Costa Lima, 1937a: 419. Brazil (Pará). Brazil records – Acre, Amazonas, Pará, Rondônia, Roraima, Maranhão, Goiás, Mato Grosso, Minas Gerais, Rio de Janeiro, São Paulo, Paraná, Santa Catarina

**maruim** Lutz, 1913: 48. Brazil (Rio de Janeiro). Brazil records – Pará, Bahia, Ceará, Pernambuco, Maranhão, Espírito Santo, Rio de Janeiro, São Paulo  
*recifei* Barbosa, 1947: 25. Brazil (Pernambuco)

**ocumarensis** Ortíz, 1950b: 455. Venezuela. Brazil records – Amazonas, Pará, Rondônia

**palpalis** Macfie, 1948: 78. Mexico. Brazil records – Amazonas

**paraignacioi** Spinelli, in Spinelli et al., 1993: 66. Colombia. Brazil records – Amazonas, Pará

**paramaruim** Wirth & Blanton, 1973: 443. Brazil (Pará). Brazil records – Pará, Maranhão

**parauapebensis** Trindade & Felipe-Bauer, 2011b: 42. Brazil (Pará)

**plaumanni** Spinelli, in Spinelli et al., 1993: 69. Argentina. Brazil records – Amazonas, Pará, Minas Gerais

**polypori** Wirth & Blanton, 1968a: 212. Panama. Brazil records – Amazonas

**pseudodiabolicus** Fox, 1946: 256. Trinidad and Tobago. Brazil records – Acre, Amapá, Amazonas, Pará, Rondônia, Roraima, Maranhão

**pseudoheliconiae** Felipe-Bauer, in Felipe-Bauer et al., 2008: 260. Peru. Brazil records – Amazonas, Roraima

**ruizi** Forattini, 1954a: 189. Brazil (Goiás). Brazil records – Amazonas, Pará, Maranhão, Goiás

**travassosi** Forattini, 1957: 198. Brazil (Pará). Brazil records – Amazonas, Pará, Mato Grosso

**trinidadensis** Hoffman, 1925: 286. Trinidad and Tobago. Brazil records – Roraima

*oliveri* Fox & Hoffman, 1944: 108. Haiti

*wokei* Barbosa, 1947: 28 (preoccupied by *Culicoides wokei* Fox, 1947). Panama.

*diminutus* Barbosa, 1951: 163. New name for *wokei*.

**verecundus** Macfie, 1948: 76. Mexico. Brazil records – Amazonas, Pará, Roraima

### **Subgenus MACFIELLA Fox**

**MACFIELLA** Fox, 1955: 217 (as subgenus of *Culicoides*). Type species: *Ceratopogon phlebotomus* Williston, by original designation.

**phlebotomus** (Williston), 1896: 281 (*Ceratopogon*). St. Vincent. Brazil records – Pará, Maranhão, Ceará, Pernambuco, Goiás

*amazonius* Macfie, 1935a: 52. Brazil (Pará)

### **Subgenus MATAEMYIA Vargas**

**MATAEMYIA** Vargas, 1960: 43 (as subgenus of *Culicoides*). Type species: *Culicoides mojingaensis* Wirth & Blanton, by original designation.

**albuquerquei** Wirth & Blanton, 1973: 424. Brazil (Pará)

**aldomari** Felipe-Bauer & Trindade, *in* Felipe-Bauer et al., 2013:56. Brazil (Pará)

**barthi** Tavares & Souza, 1978: 619. Brazil (Rio de Janeiro)

**bricenoi** Ortíz, 1951b: 445. Venezuela. Brazil records – Amazonas, Pará, Roraima

**cuiabai** Wirth, 1982a: 250. Brazil (Mato Grosso)

**dalessandroi** Wirth & Barreto, 1978: 556. Colombia. Brazil records – Roraima

**daviesi** Wirth & Blanton, 1968b: 251. Guyana. Brazil records – Pará

**discrepans** Ortíz & Mirsa, 1951: 595. Venezuela. Brazil records – Amazonas

**felippebauerae** Spinelli, *in* Spinelli et al., 2007: 660. Brazil (Amazonas)

**lenti** Tavares & Dias, 1980: 396. Brazil (Rio de Janeiro)

**macieli** Tavares & Ruiz, 1980: 29. Brazil (Rio de Janeiro). Brazil records – Bahia, Rio de Janeiro

**sherlocki** Felipe-Bauer & Trindade, *in* Felipe-Bauer et al., 2013:56. Brazil (Pará)

**wallacei** Wirth & Blanton, 1973: 449. Brazil (Pará). Brazil records – Amazonas, Pará, Maranhão

#### Subgenus OECACTA Poey

**OECACTA** Poey, 1853: 238. Type species: *Oecacta furens* Poey, by monotypy.  
**DIPLOSELLA** Kieffer, 1921b: 113 (as subgenus of *Culicoides*). Type species: *Culicoides sergenti* Kieffer, by monotypy.  
**SENSICULICOIDES** Shevchenko, 1977: 133 (as subgenus of *Culicoides*). Type species: *Ceratopogon pictipennis* Staeger, by original designation.

**alahialinus** Barbosa, 1952: 11 (1953:12). Equador. Brazil records – Amazonas

**furens** (Poey), 1853: 238 (*Oecacta*). Cuba. Brazil records – Pará, Maranhão, Rio de Janeiro, São Paulo

*maculithorax* (Williston), 1896: 277 (*Ceratopogon*). St. Vincent

*dovei* Hall, 1932: 88. USA (Georgia)

*birabeni* Cavalieri, 1966: 59. Venezuela

#### Subgenus PSYCHOPHAENA Philippi

**PSYCHOPHAENA** Philippi, 1865: 628. Type species: *Psychophaena pictipennis* Philippi (= *Culicoides venezuelensis* Ortíz & Mirsa), by monotypy.

**venezuelensis** Ortíz & Mirsa, 1950: 137. Venezuela. Brazil records – Pernambuco, Minas Gerais, São Paulo, Rio Grande do Sul, Santa Catarina

*pictipennis* (Philippi), 1865: 628 (*Psychophaena*, preoccupied by *Culicoides pictipennis* (Staeger), 1839). Chile

*ortizi* Fox, 1952: 366. Venezuela

#### Subgenus unplaced, *acotylus* species group

**acotylus** Lutz, 1913: 69. Brazil (Mato Grosso). Brazil records – Amazonas, Pará, Roraima, Mato Grosso

*panamericanus* Fox, 1947: 90. Mexico

**atripalpis** Wirth & Blanton, 1973: 325. Brazil (Pará)

**carsiomelas** Wirth & Blanton, 1955a: 100. Panama. Brazil records – Pará

**Subgenus unplaced, *carpenteri* species group**

**belemensis** Wirth & Blanton, 1973: 427. Brazil (Pará). Brazil records – Amazonas, Pará

**camposi** Ortíz & León, 1955: 569. Ecuador. Brazil records – Amazonas

*fairchildi* Wirth & Blanton, 1955a: 102. Panama

**carpenteri** Wirth & Blanton, 1953a: 72. Panama. Brazil records – Amazonas

**Subgenus unplaced, *daedalus* species group**

**pseudocrescentis** Tavares & Dias, 1980: 397. Brazil (Rio de Janeiro). Brazil records – Espírito Santo, Rio de Janeiro

**Subgenus unplaced, *dasyophrus* species group**

**dasyophrus** Macfie, 1940c: 27. Guyana. Brazil records – Amazonas, Pará, Roraima, Mato Grosso

**guerrai** Wirth & Blanton, 1971: 41. Trinidad and Tobago. Brazil records – Pará, Roraima, Bahia

**Subgenus unplaced, *eublepharus* species group**

**eublepharus** Macfie, 1948: 86. Guyana. Brazil records – Amazonas, Pará, Roraima

*transferrans* Ortíz, 1953: 801. Venezuela

**propruipennis** Macfie, 1948: 84. Mexico. Brazil records – Amazonas, Pará, Bahia

**rangeli** Ortíz & Mirsa, 1952: 126. Venezuela. Brazil records – Amazonas

*donajii* Vargas, 1954: 28. Mexico

*patulipalpis* Wirth & Blanton, 1959: 421. Panama

**Subgenus unplaced, *fluvialis* species group**

**balsapambensis** Ortíz & León, 1955: 569 (as variety of *pifanoi*). Ecuador. Brazil records – Rio de Janeiro

**fluvialis** Macfie, 1940c: 25. Guyana. Brazil records – Amazonas, Pará, Roraima

**leopoldoi** Ortíz, 1951a: 579. Venezuela. Brazil records – Amapá, Amazonas, Pará, Rondônia, Roraima, Bahia, Ceará, Maranhão, Pernambuco, Espírito Santo, Minas Gerais, Rio de Janeiro

**pulchripennis** Macfie, 1939a: 200. Brazil (Santa Catarina)

**tetrathyris** Wirth & Blanton, 1959: 409. Panama. Brazil records – Acre, Amazonas, Pará, Roraima, Bahia

### **Subgenus unplaced, *leoni* species group**

- benarrochi** Ortíz & Mirsa, 1952: 126 (as *benarrochei*). Venezuela. Brazil records – Amazonas, Roraima, Rio de Janeiro
- fieldi** Wirth & Blanton, 1956: 50. Honduras. Brazil records – Amazonas, Pará, Rio de Janeiro
- gabaldoni** Ortíz, 1954: 221. Venezuela. Brazil records – Pará, Roraima, Bahia
- glabellus** Wirth & Blanton, 1956: 47. Panama. Brazil records – Amazonas, Pará, Roraima, Bahia
- leoni** Barbosa, 1952: 17 (1953: 19). Ecuador. Brazil records – Amazonas

### **Subgenus unplaced, *limai* species group**

- antunesi** Forattini, 1954b: 315. Brazil (Goiás). Brazil records – Amazonas, Goiás, Mato Grosso do Sul, Minas Gerais, São Paulo
- boliviensis** Spinelli & Wirth, 1984b: 172. Bolivia. Brazil records – Goiás, Minas Gerais
- carvalhoi** Wirth & Blanton, 1973: 429. Brazil (Pará)
- duartei** Tavares & Dias, 1980: 395. Brazil (Rio de Janeiro)
- galindoi** Wirth & Blanton, 1953a: 73. Panama. Brazil records – Acre, Amazonas, Roraima, Maranhão
- limai** Barretto, 1944: 99. Brazil (São Paulo). Brazil records – Amapá, Amazonas, Pará, Roraima, Maranhão, Mato Grosso do Sul, Minas Gerais, Rio de Janeiro, São Paulo, Santa Catarina
- lobatoi** Felipe-Bauer, *in* Felipe-Bauer & Quintelas, 1994: 25. Brazil (Rio de Janeiro)
- lopesi** Barretto, 1944: 102. Brazil (São Paulo). Brazil records – Acre, Amazonas, Rio de Janeiro, São Paulo
- santanderi** Browne, 1980: 536. Colombia. Brazil records – Amazonas
- vernoni** Wirth & Blanton, 1973: 448. Brazil (Pará). Brazil records – Amazonas, Pará

### **Subgenus unplaced, *pachymerus* species group**

- caprilesi** Fox, 1952: 364. Venezuela. Brazil records – Amazonas, Pará, Mato Grosso  
*kintzi* Wirth and Blanton, 1953a: 72. Panama
- cylindricornis** Wirth & Blanton, 1973: 430. Brazil (Pará)
- pachymerus** Lutz, 1914: 83. Brazil (Amazonas)

### **Subgenus unplaced, *reticulatus* species group**

- amazonicus** Santarém, Felipe-Bauer & Trindade *in* Santarém et. al, 2014: 259. Brazil (Pará)
- aureus** Ortíz, 1951a: 585. Venezuela. Brazil records – Amazonas, Goiás  
*miyamotoi* Wirth & Blanton, 1953b: 231. Panama
- castelloni** Santarém & Felipe-Bauer 2015: 959. Brazil (Amazonas)
- fittkai** Wirth & Blanton, 1973: 432. Brazil (Pará). Brazil records – Amazonas, Pará

**fluminensis** Santarém & Felipe-Bauer *in* Santarém et. al, 2014: 263. Brazil (Rio de Janeiro)

**forattinii** Ortíz, 1961: 211. Venezuela. Brazil records – Roraima

**goeldii** Wirth & Blanton, 1973: 437. Brazil (Pará)

**guamai** Wirth & Blanton, 1973: 438. Brazil (Pará)

**guyanensis** Floch & Abonnenc, 1942b: 4. French Guiana. Brazil records – Amapá, Pará, Ceará, Maranhão, Pernambuco, Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo

*recifensis* Barbosa, 1943: 263. Brazil (Pernambuco)

*stubaensis* Fox, 1946: 254. Trinidad and Tobago

**irregularis** Santarém, Felipe-Bauer & Castellón *in* Santarém et. al, 2014: 265. Brazil (Roraima)  
Brazil records – Amazonas, Roraima

**kuripako** Felipe-Bauer, *in* Felipe-Bauer et al., 2010: 863. Brazil (Amazonas)

**lanei** Ortíz, 1950c: 431. Panama. Brazil records – Amazonas, Pará, Roraima

**lyrinotatus** Wirth & Blanton, 1955b: 126. Panama. Brazil records – Pará

**paucienfuscatus** Barbosa, 1947: 23. Brazil (Amazonas). Brazil records – Acre, Amazonas, Pará, Roraima, Maranhão, Goiás

**pifanoi** Ortíz, 1951a: 588. Venezuela. Brazil records – Pará, Bahia, Rio de Janeiro

*tricoloratus* Wirth & Blanton, 1953b: 233. Panama

**profundus** Santarém, Felipe-Bauer & Trindade *in* Santarém et. al, 2014: 266. Brazil (Pará). Brazil records – Amazonas, Pará

**pseudoreticulatus** Santarém, Felipe-Bauer & Castellón *in* Santarém et. al, 2014: 268. Brazil (Roraima). Brazil records – Amazonas, Roraima

**reticulatus** Lutz, 1913: 49. Brazil (Bahia). Brazil records – Bahia, Pernambuco

**rhombus** Santarém, Felipe-Bauer & Castellón *in* Santarém et. al, 2014: 270. Brazil (Roraima).  
Brazil records – Amazonas, Roraima

**tavaresi** Felipe-Bauer & Wirth, 1988: 261. Brazil (Rio de Janeiro). Brazil records – Rio de Janeiro, Santa Catarina

#### **Subgenus unplaced, *stigmalis* species group**

**deanei** Felipe-Bauer & Wirth, 1987: 416. Brazil (Rio de Janeiro)

**fluviatilis** (Lutz), 1914: 82 (*Johannseniella*). Brazil (Amazonas)

*scorzai* Ortíz, 1956: 93. Venezuela

#### **Miscellaneous unplaced species**

**wokei** Fox, 1947: 90. Panama. Brazil records - Amazonas

*aethionotus* Wirth & Blanton, 1955b: 121. Panama

TRIBE HETEROMYIINI WIRTH, 1962

**Genus CLINOHELEA Kieffer**

**CLINOHELEA** Kieffer, 1917a: 295. Type species: *Ceratopogon variegatus* Winnertz (= *Ceratopogon unimaculata* Macquart), by original designation.

**Subgenus CERATOBIZZIA Kieffer**

**CERATOBIZZIA** Kieffer, 1917a: 326. Type species: *Ceratobizzia fallax* Kieffer, by original designation.

**fallax** Kieffer, 1917a: 326. Paraguay. Brazil records – Rondônia, Amazonas, Pará, Mato Grosso, Rio de Janeiro, São Paulo

*barrettoi* Lane & Duret, 1954: 249. Brazil (São Paulo)

**Subgenus CLINOHELEA**

**albopennis** Lane, 1944: 259. Brazil (São Paulo). Brazil records – Pará, São Paulo

**damascenoi** Lane & Duret, 1954: 250. Brazil (Pará)

**horacioi** Lane, 1944: 257. Brazil (São Paulo). Brazil records – Amapá, Pará, Rondônia, Bahia, Mato Grosso, Mato Grosso do Sul, Rio de Janeiro, São Paulo, Paraná

**neivai** Lane, 1944: 252. Brazil (São Paulo). Brazil records – Mato Grosso do Sul, Minas Gerais, Rio de Janeiro, São Paulo, Paraná

**nigripes** Macfie, 1939a: 205. Brazil (Santa Catarina). Brazil records – Rondônia, São Paulo, Santa Catarina

**rubriceps** Kieffer, 1917a: 318. Paraguay. Brazil records – Rio de Janeiro

**saltanensis** Lane & Duret, 1954: 252. Argentina. Brazil records – Rondônia, Paraná, Santa Catarina,

**townsendi** Lane, 1944: 256. Brazil (São Paulo). Brazil records – Amazonas, Pará, Rondônia, Mato Grosso do Sul, Minas Gerais, Rio de Janeiro, São Paulo

*townesi* Lane, 1944: 254. Brazil (Mato Grosso do Sul)

**wygodzinskyi** Lane, 1947a: 231. Brazil (Rio de Janeiro)

**Genus HETEROMYIA Say**

**HETEROMYIA** Say, 1825: plate 35. Type species: *Heteromyia fasciata* Say, by monotypy.

**PACHYLEPTUS** Walker, 1856: 426. Type species: *Pachyleptus fasciatus* Walker (= *Heteromyia nigra* Kieffer), by monotypy.

**castanea** Lane, 1946a: 214. Brazil (São Paulo)

**clavata** Williston, 1900: 225. Mexico. Brazil records – Amazonas

*rufa* Kieffer, 1917a: 325. Colombia

*caloptera* Kieffer, 1919a: 192. Unnecessary new name for *H. rufa* Kieffer, not Loew, 1861.

**chaquensis** Duret & Lane, 1955: 37. Argentina. Brazil records – Minas Gerais

**correntina** Duret & Lane, 1955: 39. Argentina. Brazil records – Rondônia

**kiefferi** Lane, 1946a: 213. Brazil (Rio de Janeiro)

**nigra** Kieffer, 1917a: 326. Paraguay. Brazil records – Amapá, Rio Grande do Norte, Rio de Janeiro, São Paulo, Paraná

*fasciatus* (Walker), 1856: 426 (*Pachyleptus*, preoccupied by *Heteromyia fasciata* Say, 1825). South America

### Genus PELLUCIDOMYIA Macfie

**PELLUCIDOMYIA** Macfie, 1939b: 99. Type species: *Pellucidomyia ugandae* Macfie, by original designation.

**MACFIEHELEA** Lane, 1946a: 208. Type species: *Macfiehelea oliveirai* Lane, by original designation.

**oliveirai** (Lane), 1946a: 209 (*Macfiehelea*). Brazil (Minas Gerais). Brazil records – Mato Grosso do Sul, Minas Gerais

### TRIBE JOHANNSENYIINI CRAMPTON, 1925

#### Genus GROGANHELEA Spinelli & Dippolito

**GROGANHELEA** Spinelli & Dippolito, *in* Spinelli et al., 1995: 166. Type species: *Groganhelea rondoniensis* Spinelli & Dippolito, by original designation.

**rondoniensis** Spinelli & Dippolito, *in* Spinelli et al., 1995: 167. Brazil (Rondônia)

#### Genus JOHANNSENYIA Malloch

**JOHANNSENYIA** Malloch, 1915b: 332. Type species: *Johannsenomyia halteralis* Malloch (= *Ceratopogon argentata* Loew), designation by Wirth, 1952: 211.

**DICROHELEA** Kieffer, 1917a: 363. Type species: *Palpomyia filicornis* Kieffer, designation by Macfie, 1940b: 26.

**lanei** Wirth, 1965b: 4. Brazil (Santa Catarina)

#### Genus MALLOCHOHELEA Wirth

**MALLOCHOHELEA** Wirth, 1962: 278. Type species: *Johannsenomyia albibasis* Malloch, by original designation.

**aenipes** (Macfie), 1940a: 193 (*Bezzia*). Guyana. Brazil records – Rio de Janeiro

**nigripes** (Macfie), 1939a: 216 (*Johannsenomyia*). Brazil (Santa Catarina)

**pullata** (Wirth), 1952: 213 (*Johannsenomyia*). USA (California). Brazil records – Amapá

*bicellii* (Lane), 1961a: 449 (*Nilobezzia*). Brazil (Amapá)

**termophila** (Spinelli), 1984: 197 (*Neobezzia*). Argentina. Brazil records – Rondônia

### Genus NEOBEZZIA Wirth & Ratanaworabhan

**NEOBEZZIA** Wirth and Ratanaworabhan, 1972: 477. Type species: *Neobezzia clavipes* Wirth & Ratanaworabhan, by original designation.

**albitarsis** Wirth & Ratanaworabhan, 1972: 478. Brazil (Pará)

**annicola** (Macfie), 1940c: 30 (*Bezzia*). Guyana. Brazil records – Amazonas, Pará, Rondônia, Mato Grosso do Sul, Rio de Janeiro, São Paulo

**blantoni** Wirth & Ratanaworabhan, 1972: 482. Panama. Brazil records – Amazonas, Pará, Rondônia

**brasiliae** (Lane), 1961b: 37 (*Macropeza*). Brazil (Distrito Federal)

**clavipes** Wirth & Ratanaworabhan, 1972: 485. Brazil (Amazonas)

**fittkau** Wirth & Ratanaworabhan, 1972: 489. Brazil (Amazonas)

### Genus NILOBEZZIA Kieffer

**NILOBEZZIA** Kieffer, 1921a: 24. Type species: *Nilobezzia armata* Kieffer, by monotypy.

**CRESPINIA** Kieffer, 1923: 141. Type species: *Crespinia brevipalpis* Kieffer, by monotypy.

**PARROTIA** Kieffer, 1923: 140. Type species: *Parrotia flaviventris* Kieffer (= *Nilobezzia kiefferi* Wirth), by original designation.

**SPHAEROBEZZIA** Zilahi-Sebess, 1940: 108 (as subgenus of *Bezzia*). Type species: *Bezzia paradoxa* Zilahi-Sebess (= *Ceratopogon formosa* Loew), by monotypy.

**neotropica** (Macfie), 1940d: 78 (*Bezzia*). Brazil (Northeast). Brazil records – Rondônia, Bahia, Ceará

**paraensis** (Lane), 1958: 33 (*Bezzia*). Brazil (Pará). Brazil records – Amapá, Pará

**schwarzii** (Coquillett), 1901: 605 (*Ceratopogon*). USA (Texas). Brazil records – Rio de Janeiro

*setipes* (Coquillett), 1905: 59 (*Ceratopogon*). USA (Texas)

*banksi* (Gerry), 1933: 94 (*Bezzia*). Cuba

*brasiliensis* (Lane), 1958: 28 (*Bezzia*). Brazil (Rio de Janeiro)

### TRIBE PALPOMYIINI ENDERLEIN, 1936

#### Genus AMEROHELEA Grogan & Wirth

**AMEROHELEA** Grogan & Wirth, 1981: 1280. Type species: *Amerohelea galindoi* Grogan & Wirth, by original designation.

**dalcyi** Grogan & Wirth, 1981: 1289. Brazil (Amazonas)

**nelsoni** Grogan & Wirth, 1981: 1290. Brazil (Amazonas)



**pseudofasciata** Grogan & Wirth, 1981: 1286. Brazil (Santa Catarina). Brazil records – Goiás, Santa Catarina

**sordidipes** (Macfie), 1939a: 209 (*Palpomyia*). Brazil (Santa Catarina). Brazil records – Pará, Minas Gerais, São Paulo, Santa Catarina

### Genus **BEZZIA** Kieffer

**BEZZIA** Kieffer, 1899: 69. Type species: *Ceratopogon ornatus* Meigen, by original designation.

**PSEUDOBEZZIA** Malloch, 1915b: 351. Type species: *Ceratopogon expolitus* Coquillett, by original designation.

**ALLOBEZZIA** Kieffer, 1917a: 296. Type species: *Ceratopogon expolitus* Coquillett, by original designation.

**LASIOBEZZIA** Kieffer, 1925c: 54. Type species: *Bezzia pilipennis* Lundström, by original designation.

**HOMOBEZZIA** Macfie, 1932a: 496. Type species: *Homobezzia nyasae* Macfie, by monotypy.

**SIVABEZZIA** Remm, 1974: 440 (as subgenus of *Bezzia*). Type species: *Bezzia campanai* Clastrier, by original designation.

**PYGOBEZZIA** Remm, 1974: 441 (as subgenus of *Bezzia*). Type species: *Bezzia strobli* Kieffer (= *Ceratopogon albicornis* Meigen), by original designation.

**ASPINABEZZIA** Dow & Turner, 1976: 122 (as subgenus of *Bezzia*). Type species: *Ceratopogon glaber* Coquillett, by original designation.

**aitkeni** Spinelli & Wirth, 1991: 5. Brazil (Pará)

**albuquerquei** Lane, 1961b: 43. Brazil (Distrito Federal)

**carioca** Lane, 1958: 30. Brazil (Rio de Janeiro)

**catarinensis** Spinelli & Wirth, 1990: 17. Brazil (Santa Catarina)

**clavipennis** Spinelli & Wirth, 1989: 775. Brazil (Amazonas). Brazil records – Amazonas, Rondônia

**dentifemur** Spinelli & Wirth, 1991: 3. Colombia. Brazil records – Pará

**fluminensis** Lane, 1947a: 236. Brazil (Rio de Janeiro). Brazil records – Distrito Federal, Rio de Janeiro

**goianensis** Lane, 1961b: 44. Brazil (Distrito Federal)

**lenkoi** Lane, 1958: 31. Brazil (São Paulo). Brazil records – Amazonas, Pará, Distrito Federal, Rio de Janeiro, São Paulo

**mazaruni** Macfie, 1940a: 193. Guyana. Brazil records – Amazonas, Rondônia  
*coloradensis* Wirth, 1952: 238. USA (California)

**megatheca** Spinelli & Wirth, 1990: 22. Colombia. Brazil records – Rondônia

**nobilis** (Winnertz), 1852: 79 (*Ceratopogon*). Germany. Brazil records – Rio Grande do Sul

*setulosa* (Loew), 1861: 312 (*Ceratopogon*). USA (District of Columbia)

*barberi* (Coquillett), 1901: 601 (*Ceratopogon*). USA (Maryland)

*punctata* Lundström, 1910: 42 (as variety of *leucogaster*). Finland

*leucosticta* Kieffer, 1919b: 124. Russia

*cinerella* Kieffer, 1919b: 124. Hungary  
*armaticrus* Kieffer, 1919b: 125. Hungary  
*csikiana* Kieffer, 1919b: 126. Russia  
*chrysocoma* Kieffer, 1922: 355. Poland  
*acanthodes* Macfie, 1940a: 192. Guyana  
*atlantica* Wirth & Williams, 1957: 13. Bermuda (Great Britain)  
*nobiliformis* Clastrier, 1962: 74. France

**pseudovenustula** Spinelli & Wirth, 1991: 8. Brazil (Pará)

**pulchripes** Kieffer, 1917a: 330. Paraguay. Brazil records – Amazonas, Pará, Rondônia, Mato Grosso

**punctipennis** (Williston), 1896: 278 (*Ceratopogon*). St. Vincent. Brazil records – Amazonas

**schmitzorum** Dippolito & Spinelli, in Dippolito et al., 1995: 54. Brazil (Rondônia)

**snowi** Lane, 1958: 34. Guatemala. Brazil records – Pará

**subfusca** Macfie, 1939a: 218. Brazil (Santa Catarina). Brazil records – Distrito Federal, Goiás, Santa Catarina

**venustula** (Williston), 1896: 278. (*Ceratopogon*). St. Vicent. Brazil records – Bahia  
*concoloripes* Macfie, 1940c:31. Guyana

### Genus CLASTRIEROMYIA Spinelli & Grogan

**CLASTRIEROMYIA** Spinelli & Grogan, 1985: 330. Type species: *Clastrieromyia schnacki* Spinelli & Grogan, by original designation.

**kremeri** Spinelli & Grogan, 1985: 332. Brazil (Amazonas)

### Genus PACHYHELEA Wirth

**PACHYHELEA** Wirth, 1959a: 50. Type species *Ceratopogon magnus* Coquillett (= *Ceratopogon pachymerus* Williston), by original designation.

**pachymera** (Williston), 1900: 224 (*Ceratopogon*). Mexico. Brazil records – Rondônia, Mato Grosso do Sul, Rio de Janeiro

*latifemoris* (Ingram & Macfie), 1931: 231 (*Johannsenomyia*). Argentina

### Genus PALPOMYIA Meigen

**PALPOMYIA** Meigen, 1818: 82. Type species: *Ceratopogon flavipes* Meigen, by monotypy. Generic name first published in synonymy with *Ceratopogon* but available under ICZN Code Article 11(e).

**APOGON** Rondani, 1856: 175 (preoccupied by *Apogon* Lacepede, 1802). Type species: *Ceratopogon hortulanus* Meigen (= *Ceratopogon flavipes* Meigen), by original designation.

**ALASION** Rondani, 1857: 14. New name for *Apogon* Rondani. Type species: *Ceratopogon hortulanus* Meigen (= *Ceratopogon flavipes* Meigen), automatic.

**MIOPALPOMYIA** Pierce, 1966: 95. Type species: *Miopalpomyia shilo* Pierce, by original designation.

*NEOPALPOMYIA* Pierce, 1966: 95. Type species: *Neopalpomyia freyi* Pierce, by original designation.

*PARAPALPOMYIA* Pierce, 1966: 97. Type species: *Parapalpomyia ryshkoffi* Pierce, by original designation.

*GLUHHOVIA* Remm, 1976: 174 (as subgenus of *Palpomyia*). Type species: *Palpomyia miki* Goetghebuer, by original designation.

**almeidai** (Lane), 1946b: 219 (*Sphaeromias*). Brazil (São Paulo)

**barrettoi** Lane, 1947c: 442. Brazil (Rio de Janeiro)

**brasiliensis** Macfie, 1939a: 213. Brazil (Santa Catarina). Brazil records – Minas Gerais, São Paulo, Santa Catarina

**carioca** Lane, 1960: 384. Brazil (Rio de Janeiro)

**carrerai** (Lane), 1947a: 235 (*Dicrobezzia*, as *carreirai*). Brazil (São Paulo)

**castanea** Macfie, 1939a: 211. Brazil (Santa Catarina). Brazil records – São Paulo, Santa Catarina

**catarinensis** Lane, 1960: 385. Brazil (Santa Catarina)

**conifera** Macfie, 1939a: 214. Brazil (Santa Catarina). Brazil records – Distrito Federal, Goiás, São Paulo, Santa Catarina

**crassicrus** Kieffer, 1917a: 321. Paraguay. Brazil records – São Paulo

**guarani** Lane, 1946b: 221. Brazil (São Paulo). Brazil records – Espírito Santo, Rio de Janeiro, São Paulo

**johannseni** (Lane), 1947a: 233 (*Dicrobezzia*). Brazil (São Paulo). Brazil records – Rio de Janeiro, São Paulo

**lacustris** Lane, Forattini & Rabello, 1955: 83. Brazil (São Paulo)

**limnochaeres** (Macfie), 1940d: 76 (*Sphaeromias*). Brazil (Pernambuco)

**lutzi** Lane, 1947c: 440. Brazil (Rio de Janeiro)

**mellichroa** Macfie, 1939a: 212. Brazil (Santa Catarina)

**nigroflava** Lane, 1947c: 446. Brazil (São Paulo)

**nigroscutellata** Lane, 1947c: 444. Brazil (São Paulo). Brazil records – Rio de Janeiro, São Paulo

**oliveirai** Lane, 1947c: 443. Brazil (Minas Gerais). Brazil records – Rondônia, Minas Gerais

**pampana** Lane, 1960: 386. Brazil (Rio Grande do Sul)

**paraensis** Lane, 1960: 387. Brazil (Pará)

**paulistensis** Lane, 1947c: 445. Brazil (São Paulo). Brazil records – Rio de Janeiro, São Paulo

**pseudolacustris** Dippolito & Spinelli, in Dippolito et al., 1995: 55. Brazil (Rondônia)

**spinifemur** (Lane), 1947a: 234 (*Dicrobezzia*). Brazil (São Paulo). Brazil records – Rio de Janeiro, São Paulo

**spinosa** Lutz, 1914: 93. Brazil (Rio de Janeiro).

**subfuscula** Ingram & Macfie, 1931: 216. Chile. Brazil records – Minas Gerais

**tamoioi** Lane, 1960: 388. Brazil (Rio de Janeiro)

**tanycornis** Borkent, *in* Borkent & Wirth, 1997: 134. New name for *longicornis*.

*longicornis* (Williston), 1896: 280 (*Ceratopogon*, preoccupied by *Ceratopogon longicornis* Waltl, 1837). St. Vincent. Brazil records – Distrito Federal

**umbella** Macfie, 1939a: 208. Brazil (Santa Catarina). Brazil records – Distrito Federal, Mato Grosso do Sul, Rio de Janeiro, Rio Grande do Sul, Santa Catarina

**versicolor** Macfie, 1939a: 215. Brazil (Santa Catarina). Brazil records – Rondônia, Santa Catarina

**wirthi** Lane, Forattini & Rabello, 1955: 82. Brazil (São Paulo)

### Genus PHAENOBEZZIA Haeselbarth

**PHAENOBEZZIA** Haeselbarth, 1965: 297. Type species: *Probezzia pistiae* Ingram & Macfie, by original designation.

**ateles** (Macfie), 1940d: 78 (*Bezzia*). Brazil (Bahia). Brazil records – Bahia, Distrito Federal  
*astyla* Spinelli & Wirth, 1986: 232. Colombia

**maya** Spinelli & Wirth, 1986: 234. Belize. Brazil records – Rondônia

### TRIBE STENOXENINI COQUILLET, 1899

#### Genus PARYPHOCONUS Enderlein

**PARYPHOCONUS** Enderlein, 1912: 57. Type species: *Paryphoconus angustipennis* Enderlein, by original designation.

**aemulus** Macfie, 1940e: 180. Guyana. Brazil records – Amazonas, Mato Grosso do Sul

**amapaensis** Lane, 1961a: 450. Brazil (Amapá)

**angustipennis** Enderlein, 1912: 57. Brazil (Santa Catarina). Brazil records – Goiás, São Paulo, Santa Catarina

**anomalicornis** Kieffer, 1917a: 333. Colombia and Paraguay. Brazil records – Amazonas

**barrettoi** Lane, 1946a: 203. Brazil (Goiás) Brazil records – Goiás, São Paulo

**batesi** Lane, 1961c: 455. Brazil (Distrito Federal)

**brunneipennis** Spinelli & Wirth, 1984c: 890. Brazil (Amazonas)

**enderleini** Lane, 1956: 301. Brazil (Mato Grosso do Sul)

**fittkai** Spinelli & Wirth, 1984c: 892. Brazil (Amazonas)

**flavidus** (Johannsen), 1943: 761 (*Ceratobezzia*). Guyana. Brazil records – Amazonas, Mato Grosso  
*lanei* Wirth, 1959b: 236. Brazil (Amazonas)

**fusciradialis** Spinelli & Wirth, 1984c: 895. Brazil (Pará)

**fuscus** Lane, 1946a: 206. Brazil (Goiás)

**goianensis** Lane, 1961c: 456. Brazil (Distrito Federal)

**grandis** Macfie, 1939c: 6. Brazil (Santa Catarina). Brazil records - Pará, Ceará, Mato Grosso do Sul, Santa Catarina

**guianae** Macfie, 1940e: 180. Guyana. Brazil records – Pará, Mato Grosso do Sul, São Paulo

**kiefferi** Lane, 1956: 302. Brazil (Goiás)

**macfie** Lane, 1946a: 203. Brazil (São Paulo). Brazil records – Pará, Mato Grosso, São Paulo

**mayeri** Wirth, 1959b: 236. Brazil (Amazonas). Brazil records – Amazonas, Rondônia

**neotropicalis** (Lane), 1947a: 229 (*Macropeza*). Brazil (São Paulo)

**nigripes** Macfie, 1939c: 8. Argentina. Brazil records – Pará, Rondônia

**nubifer** Macfie, 1939c: 5. Brazil (Santa Catarina). Brazil records - Amazonas, Goiás, Minas Gerais, Rio de Janeiro, Santa Catarina

**oliveirai** Lane, 1956: 303. Brazil (Pará). Brazil records – Amazonas, Pará

**paulistensis** Lane, 1961c: 457. Brazil (São Paulo)

**subflavus** Macfie, 1940c: 23. Guyana. Brazil records – Amazonas, Pará, Rondônia, Distrito Federal  
*travassosi* Lane, 1956: 304. Brazil (Pará)

**telmatophilus** (Macfie), 1940d: 77 (*Bezzia*). Brazil (Paraíba). Brazil records – Paraíba, Rio de Janeiro

**terminalis** (Coquillett), 1904b: 90 (*Ceratopogon*). Nicaragua. Brazil records – Amazonas, Santa Catarina

**unimaculatus** Macfie, 1940e: 179. Guyana. Brazil records – Pará

**wirthi** Lane, 1961c: 458. Brazil (Distrito Federal)

**wygodzinskyi** Lane, 1946a: 208. Brazil (Rio de Janeiro)

### **Genus STENOXENUS Coquillett**

**STENOXENUS** Coquillett, 1899: 61. Type species: *Stenoxenus johnsoni* Coquillett, by monotypy.

**aductus** Dippolito & Spinelli, *in* Dippolito et al., 1995: 56. Brazil (Rondônia)

**brasiliensis** Macfie, 1939a: 140. Brazil (Santa Catarina). Brazil records – Amazonas, Santa Catarina

**carrerai** Lane, 1956: 305 (as *carreirai*). Brazil (Goiás)

**excentricus** Lane, 1961c: 453. Brazil (Pará)

**niger** Lane, 1947a: 230 (as *nigrus*). Brazil (Goiás). Brazil records – Goiás, Rio de Janeiro

**paraensis** Lane, 1956: 306. Brazil (Pará)

**setiger** Macfie, 1939a: 138. Brazil (Santa Catarina). Brazil records – São Paulo, Santa Catarina

SUBFAMILY DASYHELEINAE LENZ, 1934

**Genus DASYHELEA Kieffer**

**DASYHELEA** Kieffer, 1911b: 5. Type species: *Dasyhelea halophila* Kieffer, by monotypy.

**PROKEMPIA** Kieffer, 1913b: 163, 179 (as subgenus of *Dasyhelea*). Type species: *Dasyhelea ornaticornis* Kieffer, designation by Wirth, 1973: 358.

**PSEUDOCULICOIDES** Malloch, 1915b: 309. Type species: *Ceratopogon mutabilis* Coquillett, by original designation.

**TETRAHELEA** Kieffer, 1925b: 423. Type species: *Culicoides insignicornis* Kieffer, by original designation.

**DICRYPTOSCENA** Enderlein, 1936: 51. Type species: *Dasyhelea inclusa* Kieffer, by original designation.

**SEBESSIA** Remm, 1979: 55 (as subgenus of *Dasyhelea*). Type species: *Dasyhelea flavopyga* Zilahi-Sebess, by original designation.

**BORKENTIMYIA** Yu, Liu, Liu, Liu, Hao, Yan & Zhao, 2006: 321 (as subgenus of *Dasyhelea*). Type species: *Dasyhelea forsteri* Grogan & Wirth, by original designation.

**borgmeieri** Wirth & Waugh, 1976: 225. Trinidad and Tobago. Brazil records – Pará, Bahia, Santa Catarina

**cacaoi** Wirth & Waugh, 1976: 231. Trinidad and Tobago. Brazil records – Pará

**cincta** (Coquillett), 1901: 605 (*Ceratopogon*). USA (Florida). Brazil records – Maranhão, Santa Catarina

*albopicta* Ingram & Macfie, 1931: 187. Argentina

*pentesileae* Macfie, 1935a: 55. Brazil (Maranhão)

**eloyi** Díaz & Ronderos *in* Díaz et al., 2013: 86. Brazil (Amazonas)

**filibranchia** (Lutz), 1914: 85 (*Ceratopogon*). Brazil (Rio de Janeiro)

**flavicauda** Macfie, 1939a: 201. Brazil (Santa Catarina)

**hippolytae** Macfie, 1935a: 54. Brazil (Maranhão)

**parahybae** Macfie, 1940d: 74. Brazil (Paráíba)

**paulistana** Forattini & Rabello, 1957: 245. Brazil (São Paulo). Brazil records – Amazonas, Minas Gerais, São Paulo

**pseudopollinosa** Díaz & Ronderos *in* Díaz et al., 2014: 716. Brazil (Amazonas)

**pumila** Macfie, 1939a: 202. Brazil (Santa Catarina)

**pusilla** (Lutz), 1913: 65 (*Centrorhynchus*). Brazil (Rio de Janeiro). Brazil records – Rio de Janeiro, São Paulo

**soriai** Wirth & Waugh, 1976: 229. Brazil (Bahia)

**thalestris** Macfie, 1935a: 55. Brazil (Maranhão)

**viridans** Forattini & Rabello, 1957: 247. Brazil (Rio de Janeiro)

**williamsi** Wirth & Waugh, 1976: 228. Trinidad and Tobago. Brazil records – Pará, Bahia

**winderi** Wirth & Waugh, 1976: 233. Brazil (Bahia). Brazil records – Pará, Bahia, Santa Catarina

#### SUBFAMILY FORCIPOMYIINAE LENZ, 1934

##### Genus **ATRICHOPOGON** Kieffer

**ATRICHOPOGON** Kieffer, 1906: 53 (as subgenus of *Ceratopogon*). Type species: *Ceratopogon exilis* Coquillett (= *Ceratopogon levis* Coquillett), designation by Coquillett, 1910: 512.

**KEMPPIA** Kieffer, 1913b: 162, 179 (as subgenus of *Dasyhelea*). Type species: *Dasyhelea calcuttensis* Kieffer, designation by Wirth, 1952: 117.

**GYMNOHELEA** Kieffer, 1921b: 115. Type species: *Kempia longiserrus* Kieffer, designation by Wirth, 1973: 348.

**DOLICHOHELEA** Edwards, 1929: 8. Type species: *Dolichohelea polita* Edwards, by monotypy.

**MELOEHELEA** Wirth, 1956: 16 (as subgenus of *Atrichopogon*). Type species: *Atrichopogon meloesugans* Kieffer.

**PSAMMOPOGON** Remm, 1979: 57 (as subgenus of *Atrichopogon*). Type species: *Atrichopogon trifasciata* Kieffer (= *Atrichopogon flavolineatus* Strobl), by original designation.

**ROSTROPOGON** Remm, 1979: 57 (as subgenus of *Atrichopogon*). Type species: *Ceratopogon rostratus* Winnertz, by original designation.

**IMPENSUKEMPPIA** Yu, in Liu et al., 2001: 47 (as subgenus of *Atrichopogon*). Type species: *Atrichopogon impensus*, by original designation.

**BESSAMYIA** Yu, Liu, Liu, Liu, Hao, Yan and Zhao, 2006: 355 (as subgenus of *Atrichopogon*). Type species: *Atrichopogon bessa* Yu and Yan, by original designation.

##### Subgenus **ATRICHOPOGON** Kieffer

**bifidus** Ewen, in Ewen & Saunders, 1958: 694. Brazil (Rio de Janeiro)

**brasiliensis** Macfie, 1939a: 184. Brazil (Santa Catarina)

**cavus** Felipe-Bauer, in Felipe-Bauer et al., 2012:45. Brazil (Rio de Janeiro)

**columbianus** Kieffer, 1917a: 303. Colombia. Brazil records – Santa Catarina

**costalis** Macfie, 1939a: 179. Brazil (Santa Catarina)

**cryptogamus** Macfie, 1939a: 182. Brazil (Santa Catarina)

**dactilus** Felipe-Bauer, in Felipe-Bauer et al., 2012:40. Brazil (Rio de Janeiro)

**depilis** Macfie, 1939a: 178. Brazil (Santa Catarina)

**eucnemus** Macfie, 1939a: 185. Brazil (Santa Catarina)

**flavicaudae** Macfie, 1939a: 181. Brazil (Santa Catarina)

*pilosior* Macfie, 1939a: 182 (as variety of *flavicaudae*). Brazil (Santa Catarina)

**flavipes** Lutz, 1914: 90. Brazil (Rio de Janeiro)

**flumineus** Macfie, 1935a: 52. Brazil (Maranhão). Brazil records – Maranhão, Santa Catarina

**globulifer** Macfie, 1939a: 191. Brazil (Santa Catarina)

**insignipalpis** Macfie, 1940d: 73. Brazil (Northeast). Brazil records – Paraíba, Rio Grande do Norte

**nebulosus** Macfie, 1939a: 192. Brazil (Santa Catarina)

**novaeteutoniae** Macfie, 1939a: 189. Brazil (Santa Catarina)

**palpalis** Macfie, 1939a: 196. Brazil (Santa Catarina)

**pictipennis** Clastrier, 1979: 30. French Guiana. Brazil records – Rio Grande do Sul

**remigatus** Ewen, *in* Ewen & Saunders, 1958: 687. Brazil (Rio de Janeiro)

**rusticus** Macfie, 1939a: 190. Brazil (Santa Catarina)

**taeniatus** Macfie, 1939a: 186. Brazil (Santa Catarina)

**umbratilis** Macfie, 1935a: 51. Brazil (Maranhão)

#### **Subgenus LOPHOMYIDIUM Cordero**

**LOPHOMYIDIUM** Cordero, 1929: 94. Type species: *Lophomyidium uruguayense* Cordero, by original designation.

**fuscus** (Coquillett), 1901: 605 (*Ceratopogon*). USA (New Jersey). Brazil records – Pará, Rio Grande do Sul

*polydactylus* Nielsen, 1951: 27. Denmark

#### **Subgenus PSILOKEMPIA Enderlein**

**PSILOKEMPIA** Enderlein, 1936: 49. Type species: *Kempia appendiculata* Goetghebuer, by monotypy.

**echinodes** Macfie, 1939a: 194. Brazil (Santa Catarina)

**glaber** Macfie, 1935a: 50. Brazil (Maranhão). Brazil records – Pará, Rondônia, Maranhão.

**gordoni** Macfie, 1938: 164. Trinidad and Tobago. Brazil records – Rondônia, Bahia, Santa Catarina  
*fimbriatus* Macfie, 1939a: 194 (as variety of *gordoni*).

**insigniventris** Macfie, 1935a: 51. Brazil (Maranhão)

**javieri** Spinelli, Marino & Huerta, 2015: 35. St. Vicent. Brazil records – Pará

**pectinatus** Macfie, 1939a: 195. Brazil (Santa Catarina)



## Genus FORCIPOMYIA Meigen

**FORCIPOMYIA** Meigen, 1818: 73,75. Type species: *Tipula bipunctata* Linnaeus, designation by Westwood, 1840: 126. Generic name first published in synonymy with *Ceratopogon* but available under ICZN Code Article 11(e).

**LABIDOMYIA** Stephens, 1829: 52 (1829: 239) (unnecessary new name for *Forcipomyia* Meigen, as *Forcipomyia* Megerle). Type species: *Tipula bipunctata* Linnaeus, designation by Westwood, 1840: 126.

**TETRAPHORA** Philippi, 1865: 630. Type species: *Tetraphora fusca* Philippi, by monotypy.

**PROHELEA** Kieffer, 1911c: 319 (as subgenus of *Forcipomyia*). Type species: *Ceratopogon decipiens* Kieffer, designation by Brunetti, 1920: 48.

## Subgenus CALOFORCIPOMYIA Saunders

**CALOFORCIPOMYIA** Saunders, 1957: 680 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia caerulea* Saunders, by original designation.

**caerulea** Saunders, 1957: 681. Brazil (Rio de Janeiro). Brazil records – Pará, Rio de Janeiro

**eukosma** Macfie, 1939a: 148. Brazil (Santa Catarina). Brazil records – Pará, Rio de Janeiro, São Paulo, Santa Catarina

**furcifera** Macfie, 1940f: 920. Brazil (Santa Catarina)

**glauc**a Macfie, 1934: 144. Great Britain. Brazil records – Southern

*monilis* Goetghebuer, 1934b: 287. Russia

*diversipes* Goetghebuer, 1936: 319. Belgium

*splendida* Wirth, 1951: 315. USA (Virginia)

**hermosa** Utmar & Wirth, 1976: 117. Brazil (Pará). Brazil records – Amazonas, Pará

**nigrescens** Macfie, 1939a: 156. Brazil (Santa Catarina). Brazil records – Rio de Janeiro, São Paulo, Santa Catarina

**remigera** Utmar & Wirth, 1976: 121. Colombia. Brazil records – Pará

**sabalitensis** Utmar & Wirth, 1976: 127. Costa Rica. Brazil records – Rio de Janeiro, São Paulo, Paraná, Santa Catarina

**varicolor** Saunders, 1957: 683. Brazil (Rio de Janeiro)

## Subgenus EUPROJOANNISIA Brèthes

**EUPROJOANNISIA** Brèthes, 1914: 155. Type species: *Euprojoannisia platensis* Brèthes, by original designation.

**EUFORCIPOMYIA** Malloch, 1915a: 312. Type species: *Euforcipomyia hirtipennis* Malloch (= *Ceratopogon palustris* Meigen), by original designation.

**CRYPTOSCENA** Enderlein, 1936: 51. Type species: *Ceratopogon palustris* Meigen, by monotypy.

**PROFORCIPOMYIA** Saunders, 1957: 662 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia wirthi* Saunders, by original designation.

**blantoni** Soria & Bystrak, 1975: 3. Brazil (Bahia). Brazil records – Pará, Bahia

**bromeliae** Saunders, 1957: 665. Brazil (Rio de Janeiro). Brazil records – Pará, Rio de Janeiro

**longispina** Saunders, 1957: 669. Brazil (Rio de Janeiro)

**quasiingrami** Macfie, 1939a: 164. Brazil (Santa Catarina). Brazil records – Bahia, Santa Catarina

**spatulifera** Saunders, 1957: 667. Brazil (São Paulo). Brazil records – Pará, Bahia, São Paulo

### **Subgenus FORCIPOMYIA Meigen**

**argenteola** Macfie, 1939a: 146. Brazil (Santa Catarina). Brazil records – Mato Grosso do Sul, Rio de Janeiro, Santa Catarina

**calatheae** Wirth, 1982b: 573. Dominica. Brazil records – Bahia, Santa Catarina

**catarinensis** Marino & Spinelli, 2002: 309. Brazil (Santa Catarina)

**genualis** (Loew), 1866: 128 (*Ceratopogon*). Cuba. Brazil records – Amazonas, Bahia, Rio de Janeiro, Santa Catarina

*propinqua* (Williston), 1896: 279 (*Ceratopogon*). St. Vincent

*raleighi* Macfie, 1938: 160. Trinidad and Tobago

**harpegonata** Wirth & Soria, 1975: 19. Puerto Rico (USA). Brazil records – Amazonas, Pará, Bahia

**ornatipennis** Macfie, 1939a: 151. Brazil (Santa Catarina). Brazil records – Mato Grosso do Sul, Santa Catarina

**pictoni** Macfie, 1938: 161. Trinidad and Tobago. Brazil records – Amazonas, Pará, Bahia, São Paulo

**pinamarensis** Spinelli, 1983: 121. Argentina. Brazil records – Pará, Bahia, Rio de Janeiro

**poulaineae** Ingram & Macfie, 1931: 227. Argentina. Brazil records – Bahia, Santa Catarina

**quatei** Wirth, 1952: 142. USA (California). Brazil records – Bahia, Santa Catarina

**squamitibia** Lutz, 1914: 88. Brazil (Santa Catarina). Brazil records – Bahia, Mato Grosso do Sul, Rio de Janeiro, São Paulo, Santa Catarina

*soriai* Wirth, 1991: 168. Brazil (Bahia).

### **Subgenus LASIOHELEA Kieffer**

*CENTRORHYNCHUS* Lutz, 1913: 62 (preoccupied by *Centrorhynchus* Steven or Fisher Waldheim, 1829). Type species: *Centrorhynchus stylifer* Lutz, by original designation.

**LASIOHELEA** Kieffer, 1921b: 115. Type species: *Atrichopogon pilosipennis* Kieffer (= *Ceratopogon velox* Winnertz), by original designation.

**PARAPTEROBOSCA** Harant, Huttel and Huttel, 1951: 468. Type species: *Parapterobosca anthropophila* Harant, Huttel and Huttel, by original designation.

**DACNOFORCIPOMYIA** Chan and Saunders, 1965: 527 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia anabaenae* Chan and Saunders, by original designation.

**anitae** Huerta & Ibañez-Bernal, 1996: 350. Mexico. Brazil records – Bahia

**cornuta** Saunders, 1964: 464. Costa Rica. Brazil records – São Paulo

**insigniforceps** Macfie, 1939a: 165. Brazil (Santa Catarina)

**multidentata** Ronderos & Spinelli, 1999: 153. Brazil (Bahia)

**stylifer** (Lutz), 1913: 63 (*Centrorhynchus*). Brazil (Minas Gerais). Brazil records – Bahia, Goiás, Minas Gerais, Rio de Janeiro, São Paulo, Santa Catarina

### **Subgenus LEPIDOHELEA Kieffer**

**LEPIDOHELEA** Kieffer, 1917a: 364. Type species: *Ceratopogon chrysolophus* Kieffer, by original designation.

**annulatipes** Macfie, 1939a: 154. Brazil (Santa Catarina). Brazil records – Pará, Bahia, Santa Catarina

**bahiensis** Wirth & Spinelli, 1993: 113. Brazil (Bahia)

**bicolor** Lutz, 1914: 89. Brazil (Rio de Janeiro). Brazil records – Rio de Janeiro, Santa Catarina  
*discoloripes* Macfie, 1939a: 159. Brazil (Santa Catarina)

**brasiliensis** Macfie, 1939a: 153. Brazil (Santa Catarina)

**dubia** Macfie, 1939a: 162. Brazil (Santa Catarina)

**kuanoskeles** Macfie, 1939a: 150. Brazil (Santa Catarina)

**lacrimatorii** Macfie, 1939a: 161. Brazil (Santa Catarina)

**luteigenua** Wirth & Spinelli, 1992: 353. Costa Rica. Brazil records – Bahia

**seminole** Wirth, 1976: 81. USA (Florida). Brazil records – Rio de Janeiro

**winderi** Wirth, 1991: 171. Brazil (Bahia)

### **Subgenus METAFORCIPOMYIA Saunders**

**METAFORCIPOMYIA** Saunders, 1957: 685 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia cerifera* Saunders, by original designation.

**cerifera** Saunders, 1957: 685. Brazil (Rio de Janeiro)

### **Subgenus MICROHELEA Kieffer**

**MICROHELEA** Kieffer, 1917a: 364. Type species: *Atrichopogon microtomus* Kieffer, designation by Kieffer, 1921a: 7, with explanatory notation on erroneous previous type designation).

**PHASMIDOHELEA** Mayer, 1937: 233. Type species: *Phasmidohelea crudelis* Mayer (= *Forcipomyia mayeri* Forattini & Lane), by original designation.

**amazonica** Wirth, 1971: 241. Brazil (Amazonas)

**belemensis** Clastrier & Wirth, 1995: 140. Brazil (Pará)

**castneri** Clastrier & Wirth, 1995: 111. Peru. Brazil records (Pará)

**catarina** Clastrier & Wirth, 1995: 131. Brazil (Santa Catarina)

**cristata** Clastrier & Wirth, 1995: 135. Brazil (Santa Catarina)

**desutterae** Clastrier & Wirth, 1995: 100. French Guiana. Brazil records – Pará

**eriophora** (Williston), 1896: 279 (*Ceratopogon*). St. Vincent. Brazil records – Bahia

**fuliginosa** (Meigen), 1818: 86 (*Ceratopogon*). Germany. Brazil records – Pará, Bahia, Rio de Janeiro, São Paulo, Santa Catarina

*villosa* (Zetterstedt), 1850: 3645 (*Ceratopogon*). Sweden

*crudelis* (Karsch), 1886: 18 (*Ceratopogon*). Germany

*hirtipes* (de Meijere), 1907: 209 (*Ceratopogon*). Indonesia

*brevimana* Lundström, 1910: 32. Finland

*inornatipennis* (Austen), 1912: 107 (*Ceratopogon*). Nigeria

*erucicida* Knab, 1914: 65. USA (Florida)

*crudelis* Knab, 1914: 66 (preoccupied by *Forcipomyia crudelis* (Karsch), 1886). Mexico

*coquilletti* (Kieffer), 1917a: 297 (*Ceratopogon*). USA (New York)

*tropica* (Kieffer), 1917a: 297 (*Ceratopogon*). Costa Rica

*obscura* Santos Abreu, 1918: 276 (as variety of *bipunctata*, preoccupied by *Forcipomyia*

*obscura* (Walker), 1848). Canary Islands (Spain)

*alboclavata* (Kieffer), 1919b: 12 (*Ceratopogon*, also as *asticta*). Slovak Republic

*canaliculata* (Goetghebuer), 1920: 110 (*Ceratopogon*). Belgium

*nilotheres* Macfie, 1924: 62. Egypt

*ornaticrus* Ingram & Macfie, 1924: 577 (as variety of *inornatipennis*; preoccupied by

*Forcipomyia ornaticrus* Kieffer, 1912). Ghana

*atripennis* Goetghebuer, 1935: 149. Democratic Republic of the Congo

*auripila* Goetghebuer, 1935: 150. Democratic Republic of the Congo

*curtimana* Goetghebuer, 1935: 151. Democratic Republic of the Congo

*grisescens* Goetghebuer, 1935: 154. Democratic Republic of the Congo

*vicina* Goetghebuer, 1935: 161. Democratic Republic of the Congo

*longiradialis* Tokunaga, 1940: 66. Japan

*takagii* Tokunaga, 1941: 90. China

*wansoni* (Harant & Baur), 1946: 141 (*Lasiohelea*, preoccupied by *Forcipomyia wansoni* de

Meillon, 1939). Democratic Republic of the Congo

*brookmani* Wirth, 1952: 140. USA (California)

*santosi* Remm, 1981: 32. New name for *obscura*

**insignipalpis** Macfie, 1949: 109. Mexico. Brazil records – Pará

**luteisquamosa** Wirth, 1972: 575. Brazil (Santa Catarina)

**microtoma** (Kieffer), 1917a: 299. Paraguay. Brazil records – Amazonas, Bahia, Rio de Janeiro, Santa Catarina.

**minisquamosa** Wirth, 1972: 570. Belize. Brazil records – Amazonas, Pará

**moorei** Clastrier & Wirth, 1995: 133. Brazil (Santa Catarina)

**novaeteutoniae** Clastrier & Wirth, 1995: 107. Brazil (Santa Catarina)

**obesa** Costa Lima, 1928: 85. Brazil (Amazonas). Brazil records – Amazonas, Pará

**paulista** Falaschi, Albertoni & Fusari, 2014: 381. Brazil (São Paulo)

**penultimata** Wirth, 1972: 573. Brazil (Santa Catarina)

**plaumanni** Clastrier & Wirth, 1995: 127. Brazil (Santa Catarina)

**squamosa** Lutz, 1914: 87. Brazil (Rio de Janeiro). Brazil records – Amazonas, Bahia, Rio de Janeiro, São Paulo, Santa Catarina

**thomasi** Clastrier & Wirth, 1995: 115. Brazil (Pará)

**wagneri** (Séguy), 1941: 85 (*Phasmidohelea*). Brazil (Rio de Janeiro)

**willistoni** Wirth, 1971: 242. Puerto Rico (USA). Brazil records – Santa Catarina

#### **Subgenus PEDILOHELEA de Meillon & Wirth**

**PEDILOHELEA** de Meillon & Wirth, 1980: 9 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia clastrieri* Dessart, by original designation.

**aitkeni** de Meillon & Wirth, 1980: 12. Brazil (Pará)

**archboldi** de Meillon & Wirth, 1980: 13. Dominica. Brazil records – Pará

**spilmani** de Meillon & Wirth, 1980: 22. Dominica. Brazil records – Santa Catarina

#### **Subgenus PHYTOHELEA Remm**

**PHYTOHELEA** Remm, 1971: 189 (as subgenus of *Forcipomyia*). Type species: *Ceratopogon bromelicola* Lutz, by original designation.

**bromelicola** (Lutz), 1914: 84 (*Ceratopogon*). Brazil (Rio de Janeiro)

**edwardsi** (Saunders), 1925: 260 (*Apelma*). Brazil (Rio de Janeiro). Brazil records – Pernambuco, Rio de Janeiro

**keilini** (Saunders), 1925: 265 (*Apelma*). Brazil (Pernambuco)

**magna** (Saunders), 1925: 266 (*Apelma*). Brazil (Pernambuco)

**musae** Clastrier & Delécolle, 1994: 51. French Guiana. Brazil records – Amazonas

#### **Subgenus PTEROBOSCA Macfie**

**PTEROBOSCA** Macfie, 1932b: 266. Unavailable name; proposed after 1930 without type species designation.

**PTEROBOSCA** Macfie, 1940b: 16. Type species: *Ceratopogon aeshnosuga* de Meijere, by original designation.

**fusicornis** (Coquillett), 1905: 63 (*Ceratopogon*). USA (Florida). Brazil records – Rio de Janeiro

*fur* (Johnson), 1913: 444 (*Ceratopogon*). Bermuda (Great Britain)

*macfie* (Costa Lima), 1937b: 616 (*Pterobosca*). Brazil (Rio de Janeiro)

*floridana* (Johannsen), 1950: 143 (*Pterobosca*). USA (Florida)

**incubans** (Macfie), 1937: 111. Belize. Brazil records – Minas Gerais

#### **Subgenus RHYNCHOFORCIPOMYIA Wirth and Dow**

**RHYNCHOFORCIPOMYIA** Wirth & Dow, 1972: 863 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia messersmithi* Wirth & Dow, by original designation.

**brachyrhyncha** Wirth & Dow, 1972: 867. Colombia. Brazil records – Bahia

**guamai** Wirth & Dow, 1972: 869. Brazil (Pará)

### **Subgenus SALIOHELEA Wirth & Ratanaworabhan**

**SALIOHELEA** Wirth & Ratanaworabhan, 1978: 494 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia leei* Wirth & Ratanaworabhan, by original designation.

**leei** Wirth & Ratanaworabhan, 1978: 498. Colombia. Brazil records – Amazonas, Pará, Bahia, Rio de Janeiro, Santa Catarina

### **Subgenus SCHIZOFORCIPOMYIA Chan & LeRoux**

**SCHIZOFORCIPOMYIA** Chan & LeRoux, 1971: 271 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia petersoni* Chan & LeRoux (= *Forcipomyia borbonica* Clastrier), by original designation.

**cinctipes** (Coquillett), 1905: 64 (*Ceratopogon*). USA (Florida). Brazil records – Pará, Bahia

### **Subgenus SYNTHYRIDOMYIA Saunders**

**SYNTHYRIDOMYIA** Saunders, 1957: 688 (as subgenus of *Forcipomyia*). Type species: *Lasiohelea acidicola* Tokunaga, by original designation.

**tenuiforceps** Macfie, 1939a: 167. Brazil (Santa Catarina)

### **Subgenus THYRIDOMYIA Saunders**

**THYRIDOMYIA** Saunders, 1925: 268. Type species: *Thyridomyia palustris* Saunders (= *Ceratopogon monilicornis* (Coquillett), by original designation.

**nana** (Macfie), 1939a: 171 (*Lasiohelea*). Brazil (Santa Catarina)

**univesicula** Macfie, 1939a: 170. Brazil (Santa Catarina)

### **Subgenus TRICHOHELEA Goetghebuer**

**APELMA** Kieffer, 1919b: 64 (preoccupied by Billberg, 1820). Type species: *Apelma auronitens* Kieffer (= *Trichohelea tonnoiri* Goetghebuer), designation by Macfie, 1940b: 16.

**TRICHOHELEA** Goetghebuer, 1920: 39. Type species: *Trichohelea tonnoiri* Goetghebuer, by original designation.

**NEOFORCIPOMYIA** Tokunaga, in Tokunaga and Murachi, 1959: 200 (as subgenus of *Forcipomyia*). Type species: *Ceratopogon pectinunguis* de Meijere, by original designation.

**aeronautica** Macfie, 1935b: 265. Guyana. Brazil records – Pará

**opilionivora** (Lane), 1947d: 159 (*Lasiohelea*). Brazil (São Paulo)

### **Subgenus WARMKEA Saunders**

**WARMKEA** Saunders, 1957: 671 (as subgenus of *Forcipomyia*). Type species: *Forcipomyia bicolor* Saunders (= *Forcipomyia lesliei* Wirth), by original designation.

**galindoi** Wirth & Soria, 1980: 146. Panama. Brazil records – Pará

**louriei** (Macfie), 1935a: 49 (*Lasiohelea*). Brazil (Maranhão). Brazil records – Pará, Maranhão, Santa Catarina

*narthekophora* Macfie, 1939a: 166. Brazil (Santa Catarina)

**spinosa** Saunders, 1957: 676. Puerto Rico (USA). Brazil records – Pará, Bahia, Rio de Janeiro

**tuberculata** Saunders, 1957: 677. Trinidad and Tobago. Brazil records – Amazonas, Pará

#### SUBFAMILY LEPTOCONOPINAE NOÈ, 1907

##### Genus **LEPTOCONOPS** Skuse

**LEPTOCONOPS** Skuse, 1889: 288. Type species: *Leptoconops stygius* Skuse, by monotypy.

**TERSESTHES** Townsend, 1893: 370. Type species: *Tersesthes torrens* Townsend, by original designation.

**MYCTEROTYPUS** Noè, 1905: 114. Type species: *Mycterotypus bezzii* Noè, designation by Carter, 1921: 3.

**PROTERSESTHES** Kieffer, 1921b: 107. Type species: *Tersesthes brasiliensis* Lutz, by original designation.

**SCHIZOCONOPS** Kieffer, 1918: 135. Type species: *Schizoconops indicus* Kieffer, by monotypy.

##### Subgenus **HOLOCONOPS** Kieffer

**HOLOCONOPS** Kieffer, 1918: 135. Type species: *Leptoconops kerteszi* Kieffer, by original designation.

**MICROCONOPS** Kieffer, 1921b: 108. Type species: *Microconops vexans* Kieffer, by original designation.

**knowltoni** Clastrier & Wirth, 1978: 26. USA (California). Brazil records – Santa Catarina

##### Subgenus **LEPTOCONOPS** Skuse

**brasiliensis** (Lutz), 1913: 66 (*Tersesthes*). Brazil (Amazonas). Brazil records – Acre, Amazonas, Pará

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