



Updating the knowledge of sand flies (Diptera, Psychodidae) in Rondônia State, Brazil

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Abstract

Background

Sandflies are insects important for the transmission cycles of the leishmaniasis. Despite being studied since the 1960s in the State of Rondônia (Brazil), several gaps exist regarding our working knowledge of these insects. This study aimed to construct an up-to-date database of sandflies using complementary information from the speciesLink database and the scientific literature, as well as to elaborate integrated abundance maps. We identified 153,155 records of sandflies captured in Rondônia between 1965-2021; after exclusion, 147,258 reports (speciesLink - 3,408, Rondônia studies - 143,850) associated with 15 genera and 140 species were mapped. The most abundant species observed were *Psychodopygus davis* (Root, 1934) (43,818 records), *Nyssomyia whitmani* (Antunes & Coutinho, 1939) (12,594), *Psychodopygus carrerai* (Barretto, 1946) (11,840), *Psychodopygus hirsutus* (Mangabeira, 1942) (9,676), *Nyssomyia antunesi* (Coutinho, 1939) (8,847), *Trichophoromyia ubiquitalis* (Mangabeira, 1942) (5,505), *Psychodopygus geniculatus* (Mangabeira, 1941) (4,644), *Pintomyia nevesi* (Damasceno & Arouck, 1956) (4,140), *Trichophoromyia auraensis* (Mangabeira, 1942) (3,579), *Psychodopygus complexus* (Mangabeira, 1941) (2,659), *Nyssomyia fraihai* (Martins, Falcão & Silva, 1979)

(2,504) and *Bichromomyia flaviscutellata* (Mangabeira, 1942) (1,418). A total of 20 records of *Leishmania* detection corresponded to eight sand fly species. The present dataset provides updated information on the distribution of sandflies of Rondônia, including those considered potential vectors of *Leishmania*, which should prove useful to guide future studies.

New information

The present study provides an extensive dataset built from all studies reporting phlebotomine sandflies in the Brazilian State of Rondônia. Online distribution maps can aid scientists who wish to consult the updated list of sand fly species and view the distribution of these insects, as well as those considered potential vectors of *Leishmania*. The results of the present study can serve as the basis for future studies on sandflies conducted in the State.

Keywords

Phlebotominae, leishmaniasis, vectors, distribution, dataset

Introduction

Sand flies are small dipteran insects mainly known for their role as vectors in the cycle of leishmaniasis transmission (Bates et al. 2015). In light of this importance, efforts to learn more about these insects have led to increasing amounts of data on the diversity, ecology, biology and genetics of these insects (Bates et al. 2015, Costa et al. 2021b). Sandflies are a diverse species found worldwide, with approximately 1,050 species described; Brazil is home to the greatest number of species, with 286 classifications registered (Galati 2021). Most of the knowledge gained has resulted from specialised training, which has greatly contributed to the diversity of the accumulated data.

Many regions in Brazil possess unexplored knowledge about these insects and it is highly possible that significant diversity remains to be discovered. Expanding the existing body of knowledge on these insects is important considering the role that sandflies play in the transmission of pathogens (Bates et al. 2015). Therefore, a robust dataset on the composition of these fauna could contribute to our understanding of main species in specific locales, as well as to potential vectors in a given region, constituting the first step for specific studies to identify the biological characteristics of regional species.

The Brazilian State of Rondônia, located in the Amazon Basin, borders the States of Acre, Amazonas and Mato Grosso and shares an international frontier with Bolivia. The State has the third highest incidence of cutaneous leishmaniasis (CL) in northern Brazil, with approximately 15,000 cases registered between 2007 and 2020. According to the Brazilian Ministry of Health, this incidence rate results from intense zoonotic transmission associated with human occupation in transmission foci (Teles et al. 2013, DATASUS 2020, Almeida et

al. 2021). Previous studies have demonstrated that the following *Leishmania* species are responsible for human cases of CL in Rondônia: *Leishmania amazonensis* Lainson & Shaw, 1972, *Leishmania braziliensis* Vianna, 1911, *Leishmania guyanensis* Floch, 1954, *Leishmania lainsoni* Silveira, Ishikawa, Souza & Lainson, 1987, *Leishmania lindenbergi* Silveira, Ishikawa & Sousa, 2002, *Leishmania naiffi* Lainson & Shaw, 1989 and *Leishmania shawi* Lainson, Braga, Souza, Póvoa & Ishikawa, 1989 (Cantanhêde et al. 2015, Fagundes-Silva et al. 2015, Cantanhêde et al. 2019). However, despite the high prevalence of CL, knowledge on specific regional characteristics of the disease, including *Leishmania* species, reservoirs and vector species, remains incipient.

The first studies on sandflies were conducted in Rondônia in the 1960s (Martins et al. 1965). While some have been published in later decades, only from the 2000s has there been a substantial increase in accumulated data on sandflies (Gil et al. 2003, Gil et al. 2009, Teles et al. 2013, Galardo et al. 2015, Ogawa et al. 2016, Resadore et al. 2017, Resadore et al. 2018, Pereira Júnior et al. 2019b, Torchitte et al. 2020, Costa et al. 2021a, Silva et al. 2021). Nonetheless, studies describing vector distribution in the State are lacking. Accordingly, the present study aimed to build a database to provide an updated registry of sandflies and their potential vectors in Rondônia, in order to aid both specialists and non-specialists who work in the region.

Materials and methods

Study Area

Rondônia, located in the western part of the Amazon Basin, is third in terms of territorial extension amongst the States in the north of Brazil. The State covers an area of 237576 km² and has a population of 1,815,278 inhabitants throughout its 52 municipalities; it shares borders with Bolivia and the neighbouring States of Acre, Amazonas and Mato Grosso. The local climate is tropical, with annual average temperatures varying between 19.2 and 26.6°C. The dominant vegetation is dense ombrophilous forest (Amazon tropical forest), yet Rondônia has experienced a decrease in vegetal cover over the last 40 years (Fearnside 2014). Moreover, an increasing incidence of CL cases has been associated with anthropogenic activities conducted in or near forest environments (Almeida et al. 2021b).

Data distribution

We analysed data produced by zoological collections, such as the Phlebotomine Collection - Fiocruz/COLFLEB and Invertebrates Collection/INPA. These data are freely available on speciesLink (splink.cria.org.br/), a distributed information system that combines primary data from scientific collections. We also searched the scientific literature for all studies containing taxonomic and geographic information on sand fly species collected in Rondônia. The collected information consisted of total specimens and accompanying location coordinates in decimal format (long., lat.) to construct regional maps.

Distribution maps, constructed using QGIS3.4, revealed the most abundant species across the municipalities in Rondônia, with species abundance distributed in up to five classes: (i) 1-100 individuals, (ii) 101-500 individuals, (iii) 501-1000 individuals, (iv) 1001-2000 individuals and (v) > 2001 individuals. Data on *Leishmania* infection in each sand fly species were also compiled to build occurrence maps of potential vectors in the State. Finally, we constructed a web server with python applications containing information on the distribution of all species recorded throughout the State's municipalities: <https://sandfliesdb.herokuapp.com/>.

Updated list of sand flies from Rondônia State, Brazil

Bichromomyia flaviscutellata (Mangabeira, 1942)

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Azevedo et al. 1993, Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

Bichromomyia inornata (Martins, Falcão & Silva, 1965)

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim

Notes: Martins et al. 1965

Bichromomyia olmeca nociva (Young & Arias, 1982)

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Costa Marques, Machadinho d'Oeste, Porto Velho

Notes: Costa et al. 2021a, Galardo et al. 2015, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018

Bichromomyia reducta (Feliciangeli, Ramirez Pérez & Ramirez, 1988)

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Ogawa et al. 2016, Resadore et al. 2017, Silva et al. 2021

***Brumptomyia avellari* (Costa Lima, 1932)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Monte Negro

Notes: Gil et al. 2003

***Brumptomyia brumpti* (Larrousse, 1920)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Cacoal, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Pimenta Bueno, Vale do Anari

Notes: Costa et al. 2021a, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Teles et al. 2013, Torchitte et al. 2020

***Brumptomyia cunhai* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia

Notes: Gil et al. 2003

***Brumptomyia mesai* Sherlock, 1962**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Nova Mamoré, São Francisco do Guaporé

Notes: Costa et al. 2021a, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b

***Brumptomyia pentacantha* (Barretto, 1947)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Guajará-Mirim, Monte Negro, Porto Velho

Notes: Gil et al. 2003, Martins et al. 1965, Silva et al. 2021, Teles et al. 2013

***Brumptomyia pintoii* (Costa Lima, 1932)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Monte Negro

Notes: Costa et al. 2021a, Gil et al. 2003, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b

***Brumptomyia travassosi* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Monte Negro, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003

***Evandromyia andersoni* (Le Pont & Desjeux, 1988)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste

Notes: Leão et al. 2020

***Evandromyia apurinan* Shimabukuro, Figueira & Silva, 2013**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste, Pimenta Bueno, Porto Velho

Notes: Costa et al. 2021a, Leão et al. 2020, Silva et al. 2021

***Evandromyia bacula* (Martins, Falcão & Silva, 1965)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019b, Resadore et al. 2017, Silva et al. 2021, Teles et al. 2013

***Evandromyia begoniae* (Ortiz & Torrez, 1975)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003

***Evandromyia brachyphalla* (Mangabeira, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Pimenta Bueno, Porto Velho

Notes: Galardo et al. 2015, Ogawa et al. 2016

***Evandromyia carmelinoi* (Ryan, Fraiha, Lainson & Shaw, 1986)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Pimenta Bueno

Notes: Costa et al. 2021a

***Evandromyia evandroi* (Costa Lima & Antunes, 1936)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003

***Evandromyia georgii* (Freitas & Barrett, 2002)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021

***Evandromyia infraspinosa* (Mangabeira, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Itapuã do Oeste, Monte Negro, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Teles et al. 2013

***Evandromyia inpai* (Young & Arias, 1977)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia

Notes: Gil et al. 2003

***Evandromyia lenti* (Mangabeira, 1938)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Ji-Paraná, Monte Negro, Pimenta Bueno, Porto Velho

Notes: Costa et al. 2021a, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021, Teles et al. 2013

***Evandromyia monstrosa* (Floch & Abonnenc, 1944)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari

***Evandromyia pinottii* (Damasceno & Arouck, 1956)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015

***Evandromyia piperiformis* Godoy, Cunha & Galati, 2017**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Costa Marques, Machadinho d'Oeste, Porto Velho, São Francisco do Guaporé

Notes: Costa et al. 2021a, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021

***Evandromyia saulensis* (Floch & Abonnenc, 1944)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Torchitte et al. 2020

***Evandromyia sericea* (Floch & Abonnenc, 1944)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Itapuã do Oeste, Porto Velho

Notes: Gil et al. 2003, Leão et al. 2020, Silva et al. 2021

***Evandromyia sp. de Baduel* (Floch & Abonnenc, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim

Notes: Martins et al. 1965

***Evandromyia tarapacaensis* (Le Pont, Torrez-Espejo & Galati, 1997)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho

Notes: Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Evandromyia termitophila* (Martins, Falcão & Silva, 1964)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari

Notes: Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2016

***Evandromyia walkeri* (Newstead, 1914)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Cacoal, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Teles et al. 2013, Torchitte et al. 2020

***Evandromyia williamsi* (Damasceno, Causey & Arouck, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Costa Marques, Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Evandromyia wilsoni* (Damasceno & Causey, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho

Notes: Costa et al. 2021a, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Lutzomyia caligata* Martins, Falcão & Silva, 1965**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim

Notes: Martins et al. 1965

***Lutzomyia carvalhoi* (Damasceno, Causey & Arouck, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Monte Negro, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003

***Lutzomyia evangelistai* Martins & Fraiha, 1971**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Itapuã do Oeste, Monte Negro, Porto Velho, Vale do Anari

Notes: Azevedo et al. 1993, Gil et al. 2003, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Silva et al. 2021, Teles et al. 2013

***Lutzomyia falcata* Young, Morales & Ferro, 1994**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Resadore et al. 2017

***Lutzomyia flabellata* Martins & Silva, 1964**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste, Vale do Anari

Notes: Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018

***Lutzomyia gomezi* (Nitzulescu, 1931)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Guajará-Mirim, Monte Negro, Porto Velho

Notes: Azevedo et al. 1993, Gil et al. 2003, Martins et al. 1965, Silva et al. 2021

***Lutzomyia longipalpis* (Lutz & Neiva, 1912)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Monte Negro

Notes: Gil et al. 2003, Teles et al. 2013

***Lutzomyia marinkellei* Young, 1979**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste

Notes: Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b

***Lutzomyia sherlocki* Martins, Silva & Falcão, 1971**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Cacoal, Costa Marques, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Martinsmyia waltoni* (Arias, Freitas & Barrett, 1984)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Monte Negro

Notes: Gil et al. 2003, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b

***Micropygomyia acanthopharynx* (Martins, Falcão & Silva, 1962)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Monte Negro

Notes: Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Teles et al. 2013

***Micropygomyia cayennensis cayennensis* (Floch & Abonnenc, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia

Notes: Gil et al. 2003, Castellón Bermúdez 2009

***Micropygomyia echinatopharynx* Andrade Filho, Galati, Andrade & Facão, 2004**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Costa Marques

Notes: Costa et al. 2021a

***Micropygomyia longipennis* (Barretto, 1946)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Itapuã do Oeste, Monte Negro, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003, Resadore et al. 2018

***Micropygomyia micropyga* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003, Martins et al. 1965, Resadore et al. 2018, Teles et al. 2013

***Micropygomyia oswaldoi* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003

***Micropygomyia peresi* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Itapuã do Oeste

Notes: Gil et al. 2003, Leão et al. 2020

***Micropygomyia pilosa* (Damasceno & Causey, 1944)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Monte Negro, Porto Velho

Notes: Gil et al. 2003, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b

***Micropygomyia rorotaensis* (Floch & Abonnenc, 1944)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Costa Marques, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Porto Velho, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Torchitte et al. 2020

***Micropygomyia trinidadensis* (Newstead, 1922)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Porto Velho

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018

***Micropygomyia vellei* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Porto Velho

Notes: Costa et al. 2021b, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Migonemyia cerqueirai* (Causey & Damasceno, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim

Notes: Martins et al. 1965

***Migonemyia migonei* (França, 1920)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Silva et al. 2021, Torchitte et al. 2020

***Nyssomyia anduzei* (Rozeboom, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari

Notes: Azevedo et al. 1993, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018

***Nyssomyia antunesi* (Coutinho, 1939)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Nyssomyia delسیونatali* Galati & Galvis, 2012**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacoal, Costa Marques, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Pimenta Bueno, Porto Velho, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021

***Nyssomyia fraihai* (Martins, Falcão & Silva, 1979)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste, Machadinho d'Oeste, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari, Vilhena

Notes: Azevedo et al. 1993, Costa et al. 2021b, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021

***Nyssomyia richardwardi* (Ready & Fraiha, 1981)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaúlândia, Cacoal, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari, Vilhena

Notes: Azevedo et al. 1993, Costa et al. 2021b, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Silva et al. 2021

***Nyssomyia shawi* (Fraiha, Ward & Ready, 1981)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaúlândia, Campo Novo, Itapuã do Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho

Notes: Azevedo et al. 1993, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Nyssomyia umbratilis* (Ward & Fraiha, 1977)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari, Vilhena

Notes: Azevedo et al. 1993, Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Nyssomyia urbinattii* Galati & Galvis, 2012**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Ji-Paraná, Machadinho d'Oeste, Pimenta Bueno, São Francisco do Guaporé

Notes: Costa et al. 2021a, Torchitte et al. 2020

***Nyssomyia whitmani* (Antunes & Coutinho, 1939)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Gil et al. 2003, Leão et al. 2020, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Nyssomyia yuilli pajoti* (Abonnenc, Léger & Fauran 1979)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015

***Nyssomyia yuilli yuilli* (Young & Porter, 1972)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Guajará-Mirim, Porto Velho

Notes: Azevedo et al. 1993, Galardo et al. 2015, Gil et al. 2003

***Pintomyia damascenoi* (Mangabeira, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Monte Negro, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003

***Pintomyia duckei* Oliveira, Alencar & Freitas, 2018**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste

Notes: Leão et al. 2020

***Pintomyia fiocruzi* Pereira-Júnior, Pessoa, Marialva & Medeiros, 2019**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Costa Marques, Itapuã do Oeste, Machadinho d'Oeste, Nova Mamoré, Porto Velho

Notes: Costa et al. 2021a, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021

***Pintomyia gruta* (Ryan, 1986)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015, Ogawa et al. 2016

***Pintomyia nevesi* (Damasceno & Arouck, 1956)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Gil et al. 2003, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Pintomyia odax* (Fairchild & Hertig, 1961)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim, Porto Velho

Notes: Biancardi et al. 1982

***Pintomyia pacaoe* (Floch & Abonnenc, 1943)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia

Notes: Gil et al. 2003

***Pintomyia serrana* (Damasceno & Arouck, 1949)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari

Notes: Costa et al. 2021a, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019b, Pereira Júnior et al. 2015, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Pressatia calcarata* (Martins & Silva, 1964)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Costa Marques, Guajará-Mirim, Itapuã do Oeste, Nova Mamoré

Notes: Costa et al. 2021a, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b

***Pressatia choti* (Floch & Abonnenc, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015

***Pressatia triacantha* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021, Teles et al. 2013

***Pressatia trispinosa* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Costa Marques

Notes: Costa et al. 2021a, Gil et al. 2003

***Psathyromyia abbonenci* (Floch & Chassignet, 1947)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Itapuã do Oeste, Monte Negro, Porto Velho

Notes: Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Resadore et al. 2018

***Psathyromyia abunaensis* (Martins, Falcão & Silva, 1965)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Guajará-Mirim, Monte Negro, Pimenta Bueno, Porto Velho

Notes: Costa et al. 2021b, Gil et al. 2003, Martins et al. 1965, Ogawa et al. 2016, Silva et al. 2021, Teles et al. 2013

***Psathyromyia aragaoi* (Costa Lima, 1932)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Psathyromyia barrettoii barrettoii* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaúlândia, Campo Novo, Itapuã do Oeste, Monte Negro, Porto Velho

Notes: Gil et al. 2003, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021, Teles et al. 2013

***Psathyromyia bigeniculata* (Floch & Abonnenc, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaúlândia, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Machadinho d'Oeste, Monte Negro, Porto Velho

Notes: Azevedo et al. 1993, Costa et al. 2021b, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2015, Silva et al. 2021, Teles et al. 2013

***Psathyromyia brasiliensis* (Costa Lima, 1932)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaúlândia, Porto Velho

Notes: Azevedo et al. 1993, Galardo et al. 2015, Gil et al. 2003, Resadore et al. 2017

***Psathyromyia campbelli* (Damasceno, Causey & Arouck, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaúlândia, Campo Novo, Costa Marques, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré

Notes: Costa et al. 2021a, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Teles et al. 2013, Torchitte et al. 2020

***Psathyromyia coutinhoi* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim, Itapuã do Oeste, Monte Negro, Porto Velho

Notes: Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021, Teles et al. 2013

***Psathyromyia dasymera* (Fairchild & Hertig, 1961)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Biancardi et al. 1982

***Psathyromyia dendrophyla* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari

Notes: Azevedo et al. 1993, Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Psathyromyia dreisbachi* (Causey & Damasceno, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Cacoal, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021

***Psathyromyia elizabethdorvalae* Brilhante, Sábio & Galati, 2017**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Costa Marques, Itapuã do Oeste, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Porto Velho, São Francisco do Guaporé

Notes: Costa et al. 2021a, Pereira Júnior et al. 2019b, Pereira Júnior et al. 2015, Silva et al. 2021

***Psathyromyia hermanlenti* (Martins, Silva & Falcão, 1970)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Cacoal, Costa Marques, Guajará-Mirim, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vilhena

Notes: Costa et al. 2021a, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Torchitte et al. 2020

***Psathyromyia inflata* (Floch & Abonnenc, 1944)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015

***Psathyromyia lutziana* (Costa Lima, 1932)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaúlândia, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Psathyromyia pradobarrientosi* (Le Pont, Matias, Martinez & Dujardin, 2004)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacoal, Guajará-Mirim, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vilhena

Notes: Costa et al. 2021a, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Silva et al. 2021, Torchitte et al. 2020

***Psathyromyia punctigeniculata* (Floch & Abonnenc, 1944)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaúlândia, Itapuã do Oeste, Monte Negro, Porto Velho, Vale do Anari

Notes: Azevedo et al. 1993, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Teles et al. 2013

***Psathyromyia scaffi* (Damasceno & Arouck, 1956)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Costa Marques, Guajará-Mirim, Itapuã do Oeste, Pimenta Bueno, Porto Velho

Notes: Costa et al. 2021a, Galardo et al. 2015, Leão et al. 2020, Martins et al. 1965, Ogawa et al. 2016, Silva et al. 2021

***Psychodopygus amazonensis* (Root, 1934)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari

Notes: Azevedo et al. 1993, Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Psychodopygus ayrozai* (Barretto & Coutinho, 1940)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari

Notes: Azevedo et al. 1993, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Silva et al. 2021, Torchitte et al. 2020

***Psychodopygus bispinosus* (Fairchild & Hertig, 1951)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Itapuã do Oeste, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari

Notes: Costa et al. 2021b, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021

***Psychodopygus carrerai* (Barretto, 1946)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Candeias do Jamari, Costa Marques, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari

Notes: Azevedo et al. 1993, Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Grimaldi Júnior et al. 1991, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2015, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Psychodopygus chagasi* (Costa Lima, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Cacoal, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Galardo et al. 2015, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2015, Resadore et al. 2017, Resadore et al. 2018, Torchitte et al. 2020

***Psychodopygus clautrei* (Abonnenc, Léger & Fauran, 1979)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Azevedo et al. 1993, Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2015, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Psychodopygus complexus* (Mangabeira, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2015, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Psychodopygus corossoniensis* (Le Pont & Pajot, 1978)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Monte Negro, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003

***Psychodopygus davisi* (Root, 1934)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Candeias do Jamari, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Azevedo et al. 1993, Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Grimaldi Júnior et al. 1991, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2015, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Psychodopygus francoisleponti* Zapata, Depaquit & León 2012**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Silva et al. 2022

***Psychodopygus geniculatus* (Mangabeira, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Porto Velho, São Francisco do Guaporé, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Psychodopygus guyanensis* (Floch & Abonnenc, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Ariquemes, Ji-Paraná, Porto Velho

Notes: Biancardi et al. 1982

***Psychodopygus hirsutus* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2015, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Psychodopygus lainsoni* Fraiha & Ward, 1974**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari

Notes: Azevedo et al. 1993, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2015, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Psychodopygus leonidasdeanei* Fraiha, Ryan, Ward, Lainson & Shaw, 1986**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste, Nova Mamoré, Porto Velho, Vale do Anari

Notes: Galardo et al. 2015, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021

***Psychodopygus llanosmartinsi* Fraiha & Ward, 1980**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaúlândia, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari

Notes: Costa et al. 2021a, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Silva et al. 2021

***Psychodopygus paraensis* (Costa Lima, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaúlândia, Cacoal, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari

Notes: Galardo et al. 2015, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021

***Psychodopygus squamiventris* (Lutz & Neiva, 1912)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015

***Psychodopygus yucumensis* (Le Pont, Caillard, Tibayrenc & Desjeux, 1986)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaúlândia, Itapuã do Oeste, Monte Negro, Nova Mamoré, Porto Velho

Notes: Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Silva et al. 2021

***Sciopemyia fluviatilis* (Floch & Abonnenc, 1944)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Costa Marques, Itapuã do Oeste, Monte Negro, Porto Velho, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018

***Sciopemyia servulolimai* (Damasceno & Causey, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari

Notes: Costa et al. 2021a, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Sciopemyia sordellii* (Shannon & Del Ponte, 1927)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, São Francisco do Guaporé, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Sciopemyia vattierae* (Le Pont & Desjeux, 1992)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Costa Marques, Machadinho d'Oeste, Pimenta Bueno, Porto Velho, São Francisco do Guaporé

Notes: Costa et al. 2021a, Silva et al. 2021

***Trichophoromyia auraensis* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho

Notes: Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Trichophoromyia brachypyga* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Campo Novo, Monte Negro, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003, Resadore et al. 2017

***Trichophoromyia castanheirai* (Damasceno, Causey & Arouck, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015

***Trichophoromyia clitella* (Young & Pérez, 1994)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Porto Velho, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Silva et al. 2021, Teles et al. 2013, Torchitte et al. 2020

***Trichophoromyia eurypyga* (Martins, Falcão & Silva, 1963)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015

***Trichophoromyia flochi* (Abonnenc & Chassignet, 1948)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim, Itapuã do Oeste, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Silva et al. 2021

***Trichophoromyia ininii* (Floch & Abonnenc, 1943)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim

Notes: speciesLink 2022

***Trichophoromyia loretonensis* (Llanos, 1964)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste

Notes: Leão et al. 2020

***Trichophoromyia melloi* (Causey & Damasceno, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Monte Negro, Porto Velho

Notes: Resadore et al. 2017, Silva et al. 2021, Teles et al. 2013

***Trichophoromyia octavioi* (Vargas, 1949)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Monte Negro, Pimenta Bueno, Porto Velho

Notes: Ogawa et al. 2016, Resadore et al. 2017, Silva et al. 2021, Teles et al. 2013

***Trichophoromyia readyi* (Ryan, 1986)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste, Nova Mamoré, Porto Velho

Notes: Galardo et al. 2015, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b

***Trichophoromyia ruii* (Arias & Young, 1982)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Porto Velho

Notes: Galardo et al. 2015

***Trichophoromyia ubiquitalis* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Costa Marques, Guajará-Mirim, Itapuã do Oeste, Ji-Paraná, Machadinho d'Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Ogawa et al. 2016, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Trichopygomyia dasypodogeton* (Castro, 1939)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Itapuã do Oeste, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2018, Silva et al. 2021

***Trichopygomyia longispina* (Mangabeira, 1942)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Itapuã do Oeste

Notes: Gil et al. 2003, Leão et al. 2020

***Trichopygomyia rondoniensis* (Martins, Falcão & Silva, 1965)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Guajará-Mirim, Itapuã do Oeste, Porto Velho, Vilhena

Notes: Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021

***Trichopygomyia trichopyga* (Floch & Abonnenc, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Cacaulândia, Porto Velho

Notes: Galardo et al. 2015, Gil et al. 2003

***Trichopygomyia wagleyi* (Causey & Damasceno, 1945)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste

Notes: Leão et al. 2020, Resadore et al. 2018

***Viannamyia furcata* (Mangabeira, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Buritis, Cacaulândia, Cacoal, Campo Novo, Guajará-Mirim, Itapuã do Oeste, Monte Negro, Nova Mamoré, Pimenta Bueno, Porto Velho, Vale do Anari, Vilhena

Notes: Costa et al. 2021a, Galardo et al. 2015, Gil et al. 2003, Leão et al. 2020, Martins et al. 1965, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021, Teles et al. 2013

***Viannamyia tuberculata* (Mangabeira, 1941)**

- <https://sandfliesdb.herokuapp.com/>

Distribution: Itapuã do Oeste, Nova Mamoré, Porto Velho, Vale do Anari, Vilhena

Notes: Galardo et al. 2015, Leão et al. 2020, Pereira Júnior et al. 2019a, Pereira Júnior et al. 2019b, Resadore et al. 2017, Resadore et al. 2018, Silva et al. 2021

Analysis

A total of 153,155 records of sandflies captured in Rondônia were identified between 1965 and 2021, of which 147,258 were suitable for mapping (species link: 3,408, studies conducted in Rondônia: 143,850). In all, 5,887 reports were discarded mainly due to a lack of geographic coordinates. The remaining 147,258 records were distributed into four subtribes, 15 genera and 140 sand fly species. The subtribe with the most records was Psychodopygina Galati, 1995 with 132,138 records and 68 species, followed by Lutzomyiina Abonnenc & Leger, 1976 (12,534 records – 54 species), Sergentomyiina Galati, 2003 (2,296 records - 11 species) and *Brumptomyiina* Galati, 2003 (290 records - 7 species) (Table 1).

Table 1.

Records of sandflies in Rondônia state obtained from scientific literature and *speciesLink*.

<i>Brumptomyia</i> Galati, 2003 (7 species)	N	<i>Brumptomyia</i> Galati, 2003 (7 species)	N
<i>Brumptomyia avellari</i> (Costa Lima, 1932)	39	<i>Brumptomyia mesai</i> Sherlock, 1962	2
<i>Brumptomyia brumpti</i> (Larrousse, 1920)	97	<i>Brumptomyia pentacantha</i> (Barretto, 1947)	8
<i>Brumptomyia cunhai</i> (Mangabeira, 1942)	4	<i>Brumptomyia pinto</i> (Costa Lima, 1932)	18
		<i>Brumptomyia travassosi</i> (Mangabeira, 1942)	122
<i>Lutzomyia</i> Abonnenc & Leger, 1976 (54 species)	N	<i>Lutzomyia</i> Abonnenc & Leger, 1976 (54 species)	N
<i>Evandromyia andersoni</i> (Le Pont & Desjeux, 1988)	1	<i>Lutzomyia gomezi</i> (Nitzulescu, 1931)	459
<i>Evandromyia apurinan</i> Shimabukuro, Figueira & Silva, 2013	12	<i>Lutzomyia longipalpis</i> (Lutz & Neiva, 1912)	47
<i>Evandromyia bacula</i> (Martins, Falcão & Silva, 1965)	307	<i>Lutzomyia marinkellei</i> Young, 1979	7
<i>Evandromyia begonae</i> (Ortiz & Torrez, 1975)	12	<i>Lutzomyia sherlocki</i> Martins, Falcão & Silva, 1971	729
<i>Evandromyia brachyphalla</i> (Mangabeira, 1941)	9	<i>Migonemyia cerqueirai</i> (Causey & Damasceno, 1945)	2
<i>Evandromyia carmelinoi</i> (Ryan, Lainson, Fraiha & Shaw, 1986)	1	<i>Migonemyia migonei</i> (França, 1920)	331
<i>Evandromyia evandroi</i> (Costa Lima & Antunes, 1936)	19	<i>Pintomyia damascenoi</i> (Mangabeira, 1941)	23
<i>Evandromyia georgii</i> Freitas & Barrett, 2002	286	<i>Pintomyia duckei</i> Oliveira, Alencar & Freitas, 2018	8
<i>Evandromyia infraspina</i> (Mangabeira, 1941)	263	<i>Pintomyia fiocruzi</i> Pereira Júnior, Pessoa, Marialva & Medeiros, 2019	34
<i>Evandromyia inpai</i> (Young & Arias, 1977)	2	<i>Pintomyia gruta</i> (Ryan, 1986)	12
<i>Evandromyia lenti</i> (Mangabeira, 1938)	11	<i>Pintomyia nevesi</i> (Damasceno & Arouck, 1956)	4140
<i>Evandromyia monstrosa</i> (Floch & Abonnenc, 1944)	42	<i>Pintomyia odax</i> (Fairchild & Hertig, 1961)	1
<i>Evandromyia pinottii</i> (Damasceno & Arouck, 1956)	4	<i>Pintomyia pacae</i> (Floch & Abonnenc, 1943)	1
<i>Evandromyia piperiformis</i> Godoy, Cunha & Galati, 2017	21	<i>Pintomyia serrana</i> (Damasceno & Arouck, 1949)	308
<i>Evandromyia saulensis</i> (Floch & Abonnenc, 1944)	467	<i>Pressatia calcarata</i> (Martins & Silva, 1964)	15
<i>Evandromyia sericea</i> (Floch & Abonnenc, 1944)	8	<i>Pressatia choti</i> (Floch & Abonnenc, 1941)	89
<i>Evandromyia sp. de Baduel</i> (Floch & Abonnenc, 1945)	1	<i>Pressatia triacantha</i> (Mangabeira, 1942)	984
<i>Evandromyia tarapacaensis</i> (Le Pont, Torrez-Espejo & Galati, 1997)	373	<i>Pressatia trispinosa</i> (Mangabeira, 1942)	80

<i>Evandromyia termitophila</i> (Martins, Falcão & Silva, 1964)	102	<i>Sciopemyia fluviatilis</i> (Flocchi & Abonnenc, 1944)	69
<i>Evandromyia walkeri</i> (Newstead, 1914)	194	<i>Sciopemyia servulolimai</i> (Damasceno & Causey, 1945)	123
<i>Evandromyia williamsi</i> (Damasceno, Causey & Arouck, 1945)	22	<i>Sciopemyia sordellii</i> (Shannon & Del Ponte, 1927)	1349
<i>Evandromyia wilsoni</i> (Damasceno & Causey, 1945)	461	<i>Sciopemyia vattierae</i> (Le Pont & Desjeux, 1992)	21
<i>Lutzomyia caligata</i> (Martins, Falcão & Silva, 1965)	2	<i>Trichopygomyia dasypodogeton</i> (Castro, 1939)	569
<i>Lutzomyia carvalhoi</i> (Damasceno, Causey & Arouck, 1945)	23	<i>Trichopygomyia longispina</i> (Mangabeira, 1942)	4
<i>Lutzomyia evangelistai</i> Martins & Fraiha, 1971	235	<i>Trichopygomyia rondoniensis</i> (Martins, Falcão & Silva, 1965)	121
<i>Lutzomyia falcata</i> Young & Morales, 1994	2	<i>Trichopygomyia trichopyga</i> (Floch & Abonnenc, 1945)	73
<i>Lutzomyia flabellata</i> Martins & Silva, 1964	11	<i>Trichopygomyia wagleyi</i> (Causey & Damasceno, 1945)	45
Psychodopygina Galati, 1995 (68 species)	N	Psychodopygina Galati, 1995 (68 species)	N
<i>Bichromomyia flaviscutellata</i> (Mangabeira, 1942)	1418	<i>Psychodopygus amazonensis</i> (Root, 1934)	562
<i>Bichromomyia inornata</i> (Martins, Falcão & Silva, 1965)	2	<i>Psychodopygus ayrozai</i> (Barretto & Coutinho, 1940)	2308
<i>Bichromomyia olmeca nociva</i> (Young & Arias, 1982)	14	<i>Psychodopygus bispinosus</i> (Fairchild & Hertig, 1951)	352
<i>Bichromomyia reducta</i> (Felicangeli, Ramirez Pérez & Ramirez, 1988)	15	<i>Psychodopygus carrerai</i> (Barretto, 1946)	11840
<i>Martinsmyia waltoni</i> (Arias, Freitas & Barrett, 1984)	28	<i>Psychodopygus chagasi</i> (Costa Lima, 1941)	1436
<i>Nyssomyia anduzei</i> (Rozeboom, 1942)	219	<i>Psychodopygus clautrei</i> (Abonnenc, Léger & Fauran, 1979)	1827
<i>Nyssomyia antunesi</i> (Coutinho, 1939)	8847	<i>Psychodopygus complexus</i> (Mangabeira, 1941)	2659
<i>Nyssomyia delsonatali</i> Galati & Galvis, 2012	36	<i>Psychodopygus corossoniensis</i> (Le Pont & Desjeux, 1978)	652
<i>Nyssomyia fraihai</i> (Martins, Falcão & Silva, 1979)	2504	<i>Psychodopygus davisii</i> (Root, 1934)	43818
<i>Nyssomyia richardwardi</i> (Ready & Fraiha, 1981)	1241	<i>Psychodopygus francoisleponti</i> (Zapata, Depaquit & León, 2012)	1
<i>Nyssomyia shawi</i> (Fraiha, Ward & Ready, 1981)	3400	<i>Psychodopygus geniculatus</i> (Mangabeira, 1941)	4644
<i>Nyssomyia urbinattii</i> Galati & Galvis, 2012	64	<i>Psychodopygus guyanensis</i> (Floch & Abonnenc, 1941)	3
<i>Nyssomyia whitmani</i> Antunes & Coutinho, 1939	12594	<i>Psychodopygus hirsutus</i> (Mangabeira, 1942)	9676
<i>Nyssomyia yulli pajoti</i> (Abonnenc, Léger & Fauran, 1979)	2	<i>Psychodopygus lainsoni</i> Fraiha & Ward, 1974	1117

<i>Nyssomyia yulli yuilli</i> (Young & Porter, 1972)	876	<i>Psychodopygus leonidasdeane</i> Fraiha, Ryan, Ward, Lainson & Shaw, 1986	474
<i>Nyssomyia umbratilis</i> (Ward & Fraiha, 1977)	1782	<i>Psychodopygus llanosmartinsi</i> Fraiha & Ward, 1980	428
<i>Psathyromyia abbonenci</i> (Floch & Chassignet, 1947)	40	<i>Psychodopygus paraensis</i> (Costa Lima, 1941)	111
<i>Psathyromyia abunaensis</i> (Martins, Falcão & Silva, 1965)	12	<i>Psychodopygus squamiventris</i> (Lutz & Neiva, 1912)	30
<i>Psathyromyia aragaoi</i> (Costa Lima, 1932)	351	<i>Psychodopygus yucumensis</i> (Le Pont, Caillard, Tibayrenc & Desjeux, 1986)	58
<i>Psathyromyia barretto</i> (Mangabeira, 1942)	41	<i>Trichophoromyia auraensis</i> (Mangabeira, 1942)	3579
<i>Psathyromyia bigeniculata</i> (Floch & Abonnenc, 1941)	494	<i>Trichophoromyia brachypyga</i> (Mangabeira, 1942)	57
<i>Psathyromyia brasiliensis</i> (Costa Lima, 1932)	14	<i>Trichophoromyia castanheirai</i> (Damasceno, Causey & Arouck, 1945)	167
<i>Psathyromyia campbelli</i> (Damasceno, Causey & Arouck, 1945)	142	<i>Trichophoromyia clitella</i> (Young & Pérez, 1994)	292
<i>Psathyromyia coutinhoi</i> (Mangabeira, 1942)	13	<i>Trichophoromyia eurypyga</i> (Martins, Falcão & Silva, 1963)	138
<i>Psathyromyia dasymera</i> (Fairchild & Hertig, 1961)	1	<i>Trichophoromyia flochi</i> (Abonnenc & Chassigneti, 1948)	594
<i>Psathyromyia dendrophyla</i> (Mangabeira, 1942)	1903	<i>Trichophoromyia ininii</i> (Floch & Abonnenc, 1943)	9
<i>Psathyromyia dreisbachi</i> (Causey & Damasceno, 1945)	97	<i>Trichophoromyia loretonensis</i> (Llanos, 1964)	8
<i>Psathyromyia elizabethdoralae</i> Brilhante, Sábio & Galati, 2017	21	<i>Trichophoromyia melloi</i> (Causey & Damasceno, 1945)	762
<i>Psathyromyia hermanlenti</i> (Martins, Falcão & Silva, 1970)	233	<i>Trichophoromyia octavioi</i> (Vargas, 1949)	487
<i>Psathyromyia inflata</i> (Floch & Abonnenc, 1944)	16	<i>Trichophoromyia readyi</i> (Ryan, 1986)	29
<i>Psathyromyia lutziana</i> (Costa Lima, 1932)	268	<i>Trichophoromyia ruii</i> (Arias & Young, 1982)	1
<i>Psathyromyia pradobarrientosi</i> (Le Pont, Matias, Martinez & Dujardin, 2004)	100	<i>Trichophoromyia ubiquitalis</i> (Mangabeira, 1942)	5505
<i>Psathyromyia punctigeniculata</i> (Floch & Abonnenc, 1944)	11	<i>Viannamyia furcata</i> (Mangabeira, 1941)	1310
<i>Psathyromyia scaffi</i> (Damasceno & Arouck, 1956)	38	<i>Viannamyia tuberculata</i> (Mangabeira, 1941)	367
Sergentomyiina Galati, 2003 (11 species)	N	Sergentomyiina Galati, 2003 (11 species)	N
<i>Micropygomyia acanthopharynx</i> (Martins, Falcão & Silva, 1962)	679	<i>Micropygomyia peresi</i> (Mangabeira, 1942)	3
<i>Micropygomyia cayennensis cayennensis</i> (Floch & Abonnenc, 1941)	2	<i>Micropygomyia pilosa</i> (Damasceno & Causey, 1944)	9
<i>Micropygomyia echinathopharynx</i> Andrade Filho, Galati, Andrade & Falcão, 2004	1	<i>Micropygomyia rorotaensis</i> (Floch & Abonnenc, 1944)	160
<i>Micropygomyia longipennis</i> (Barretto, 1946)	28	<i>Micropygomyia trinidadensis</i> (Newstead, 1922)	1133

<i>Micropygomyia micropyga</i> (Mangabeira, 1942)	76	<i>Micropygomyia villelai</i> (Mangabeira, 1942)	202
<i>Micropygomyia oswaldoi</i> (Mangabeira, 1942)	3		

Sand fly studies were conducted in 17 of the State's 52 municipalities, with Porto Velho being the municipality with the most collection events. Considering all of the evaluated studies, the most abundant species observed were: *Psychodopygus davis*i (Root, 1934) (43,818 records), *Nyssomyia whitmani* (Antunes & Coutinho, 1939) (12,594), *Psychodopygus carrerai* (Barretto, 1946) (11,840), *Psychodopygus hirsutus* (Mangabeira, 1942) (9,676), *Nyssomyia antunesi* (Coutinho, 1939) (8,847), *Trichophoromyia ubiquitalis* (Mangabeira, 1942) (5,505), *Psychodopygus geniculatus* (Mangabeira, 1941) (4,644), *Pintomyia nevesi* (Damasceno & Arouck, 1956) (4,140), *Trichophoromyia auraensis* (Mangabeira, 1942) (3,579), *Nyssomyia shawi* (Ward, Fraiha & Ready, 1981) (3400), *Psychodopygus complexus* (Mangabeira, 1941) (2,659), *Nyssomyia fraihai* (Martins, Falcão & Silva, 1979) (2,504) and *Bichromomyia flaviscutellata* (Mangabeira, 1942) (1,418). These species were most commonly distributed amongst the municipalities as follows: *N. whitmani* (17/17), *P. davis*i and *N. antunesi* (16/17), *B. flaviscutellata*, *P. hirsutus* and *T. ubiquitalis* (15/17), *P. nevesi*, *P. carrerai* (13/17), *N. umbratilis* and *P. complexus* (12/17), *T. auraensis* (11/17), *P. ayrozai* (9/17) and *N. fraihai* (7/17) (Figs 1, 2, 3, 4, 5).

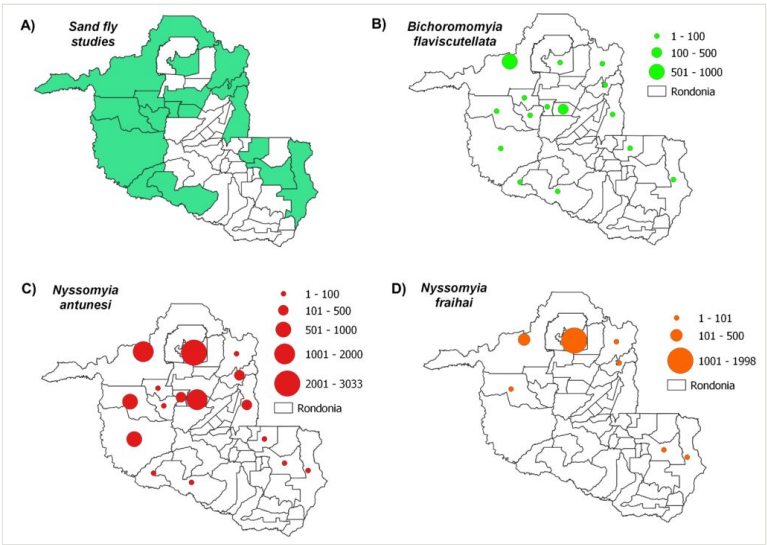


Figure 1. [doi](#)

Distribution maps of sand fly species with high abundance in the State of Rondônia (Brazil). **A)** Municipalities (green) in which sandflies were reported; **B)** *Bichromomyia flaviscutellata*; **C)** *Nyssomyia antunesi*; **D)** *Nyssomyia fraihai*.

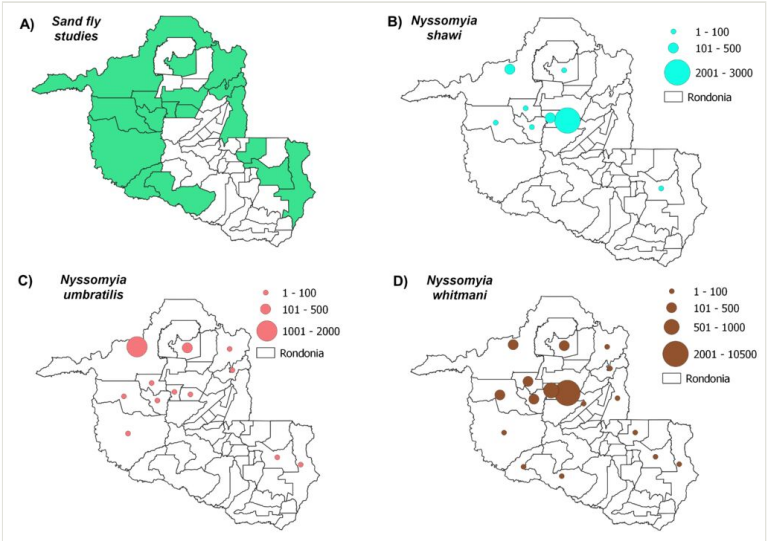


Figure 2. [doi](#)
Distribution maps of sand fly species with high abundance in the State of Rondônia (Brazil). **A)** Municipalities (green) in which sandflies were reported; **B)** *Nyssomyia shawi*; **C)** *Nyssomyia umbratilis*; **D)** *Nyssomyia whitmani*.

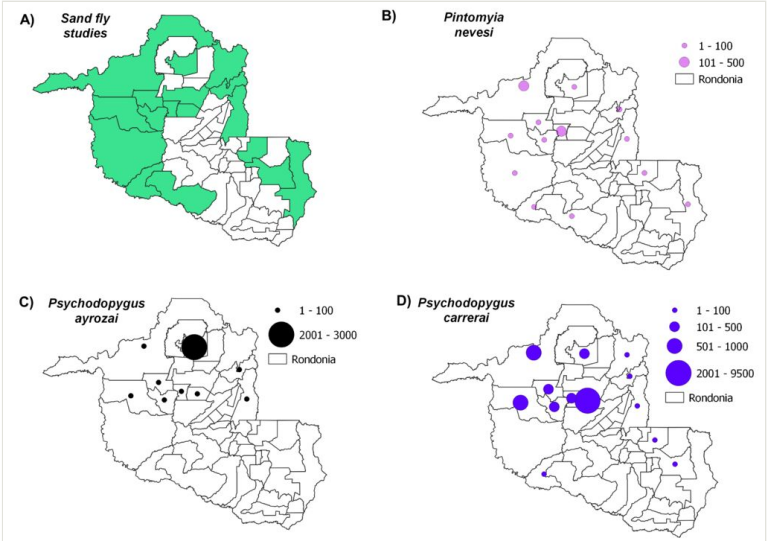


Figure 3. [doi](#)
Distribution maps of sand fly species with high abundance in the State of Rondônia (Brazil). **A)** Municipalities (green) in which sandflies were reported; **B)** *Pintomyia nevesi*; **C)** *Psychodopygus ayrozai*; **D)** *Psychodopygus carrerai*.

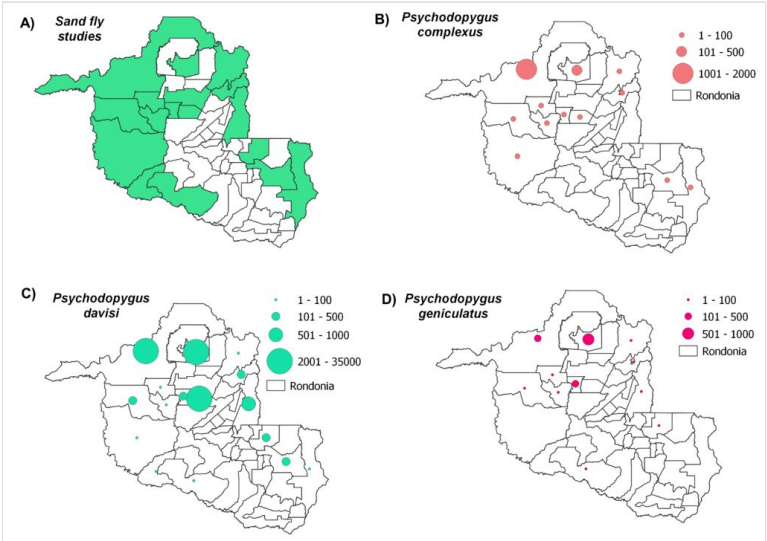


Figure 4. [doi](#)
Distribution maps of sand fly species with high abundance in the State of Rondônia (Brazil). **A)** Municipalities (green) in which sandflies were reported; **B)** *Psychodopygus complexus*; **C)** *Psychodopygus davisii*; **D)** *Psychodopygus geniculatus*.

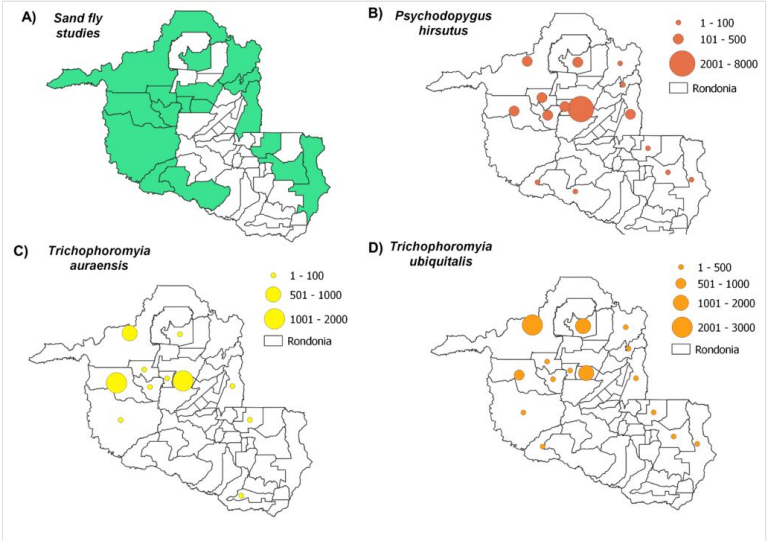


Figure 5. [doi](#)
Distribution maps of sand fly species with high abundance in the State of Rondônia (Brazil). **A)** Municipalities (green) in which sandflies were reported; **B)** *Psychodopygus hirsutus*; **C)** *Trichophoromyia auraensis*; **D)** *Trichophoromyia ubiquitalis*.

We identified 20 records of *Leishmania* infection in eight sand fly species: *N. antunesi*, *N. shawi*, *P. amazonensis*, *P. carrerai*, *P. chagasi*, *P. davisii*, *P. hirsutus* and *S. sordellii* (Fig. 6). *Leishmania amazonensis* (n = 1) was recorded in one species in Itapuã do Oeste. *Leishmania braziliensis* (n = 9) was detected in five sand fly species, reported in Costa Marques, Candeias do Jamari, Itapuã do Oeste and Monte Negro. *Leishmania naiffi* (n = 11) was observed in five sand fly species, reported in Cacaulândia, Itapuã do Oeste and Porto Velho.

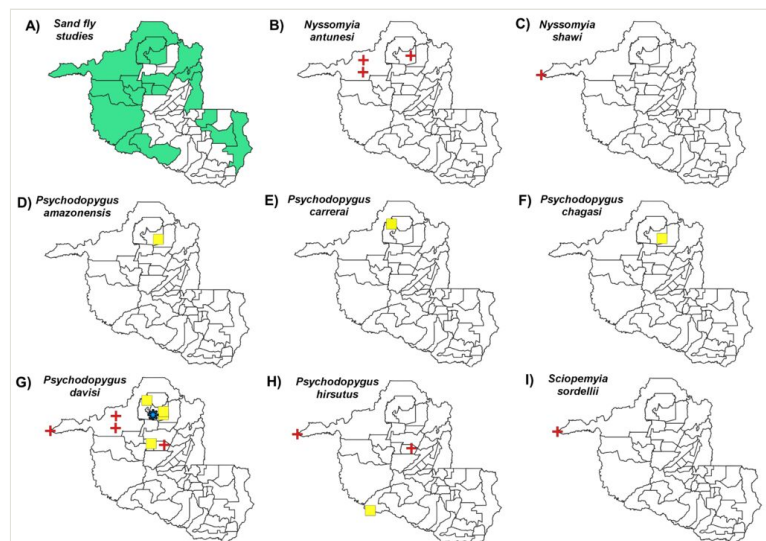


Figure 6. [doi](#)

Reports of natural infection by *Leishmania* spp. in sand fly species; the blue asterisk represents *Leishmania amazonensis*; yellow squares represent *Leishmania braziliensis* and red crosses indicate *Leishmania naiffi*. A) Municipalities with reports of sandflies infected with the following *Leishmania* spp.; B) *Nyssomyia antunesi*; C) *Nyssomyia shawi*; D) *Psychodopygus amazonensis*; E) *Psychodopygus carrerai*; F) *Psychodopygus chagasi*; G) *Psychodopygus davisii*; H) *Psychodopygus hirsutus*; I) *Sciopemyia sordellii*.

Discussion

This study demonstrates the high diversity and distribution of sandflies, which are found in abundance in the Amazon rainforest. Although Rondônia has experienced a decrease in vegetal cover over the last 40 years (Fearnside 2014), the State still contains many conservation areas that maintain the conditions necessary to maintain assemblages, including forest fragments in which a high diversity of sandflies can be found. Considering the possibility that continued deforestation may increase the risk for increases in CL cases or even contribute to the extinction of rare species, there is a great need to explore new collection areas, mainly those not sampled, as well as to preserve areas highly impacted by deforestation.

We observed a wide species distribution amongst the evaluated municipalities, including those with *Leishmania* vector potential. Interestingly, *L. braziliensis* has been reported as the most prevalent agent in human cases recently reported in Rondônia (Cantanhêde et al. 2015, Almeida et al. 2021). Our analysis of species distribution amongst potential vectors confirmed the prevalence of *L. braziliensis*, but also indicates that *L. naiffi* also seems to be abundant. However, relatively few studies have reported natural infection by these parasites in the State, revealing low vector infection rates (Resadore et al. 2018, Pereira Júnior et al. 2019b), which makes it difficult to understand the true distribution of *Leishmania* species in sandflies throughout Rondônia.

Considering species important for *Leishmania* transmission in the Amazon, we observed low abundance of *B. flaviscutellata* across the State's municipalities compared to other species; one possibility for this may be that all studies conducted in Rondônia used light traps to capture sand fly fauna; however, studies have demonstrated that *B. flaviscutellata* is more effectively attracted to and captured by animal rodent bait than light (Lainson and Shaw 1968, Dorval et al. 2010). If this holds true for a representative sample of this species, more specific studies implementing an active search in other environments are necessary. On the other hand, this species was identified in 15/52 of the State's municipalities. Ecological niche models have demonstrated that *B. flaviscutellata* is present in areas where the annual mean temperature ranges from 21 to 27.6°C and annual precipitation varies between 1,139 and 3,843 mm (Carvalho et al. 2015); therefore, Rondônia has suitable conditions for developing populations of *B. flaviscutellata*.

Nyssomyia antunesi is a suspected vector of *L. lindenbergi* with wide distribution throughout Brazil. This species was found in 16/52 municipalities in Rondônia with differing abundance (Pereira Júnior et al. 2019b, Silva et al. 2021). *Leishmania* DNA (Ogawa et al. 2016) was reported in this species and infection with *L. naiffi* was identified by two other studies (Leão et al. 2020, Silva et al. 2021). However, it is important to note that overlapping distribution with other recently-described species, *Nyssomyia delsingnati* and *Nyssomyia urbinattii* (Galati and Ovallos 2012), could be occurring. It has been suggested that these three species may constitute an "Antunesi complex," as specific identification of *N. antunesi* and *N. urbinattii* females is complicated by similar genitalia. It is, therefore, plausible that misidentification may occur in areas where both species are present, necessitating further study to clarify what characteristics can enable the correct identification of females, leading to enhanced knowledge regarding the role of these species as CL vectors. Importantly, some females, classified in this complex, were recently reported to be infected with *L. braziliensis* DNA (Costa et al. 2021a).

Nyssomyia fraihai is a species that deserves discussion. Recent revalidation (Godoy and Galati 2016) evaluated specimens from the State of Bahia, Colombian topotypes of *Nyssomyia yuilli yuilli* (Young & Porter, 1972), as well as specimens identified as *N. yuilli yuilli* from other areas of Brazil, Peru and Colombia. Morphometric analysis revealed that specimens from Brazil and Peru differed from those obtained in Colombia, mainly in terms of the parameres, which led the authors to revalidate *N. fraihai*. It was also concluded that the distribution of *N. fraihai* is cis-Andean, while *N. yuilli yuilli* has been found in both Andean and Trans-Andean areas, generating speculation regarding the true distribution of

these species (Godoy and Galati 2016). Many studies conducted in Rondônia have reported the presence of *N. yuilli yuilli* in their checklists, some with high abundance (Azevedo et al. 1993, Gil et al. 2003, Galardo et al. 2015, Ogawa et al. 2016, Resadore et al. 2017, Resadore et al. 2018, Pereira Júnior et al. 2019b, Leão et al. 2020, Costa et al. 2021a, Silva et al. 2021), leading us to revise the identification of some specimens identified in most studies; we concluded that the species were indeed *N. fraihai*. This observation updates the distribution of *N. fraihai* in Rondônia as being present in seven municipalities and raises further questions on the distribution of *N. yuilli yuilli* in the State.

Nyssomyia shawi was found to be in low abundance in most studies conducted in Rondônia; however, Gil et al. (2003) recorded a high abundance of this species, which is similar to two different reports in Acre State (Araujo-Pereira et al. 2021, Brilhante et al. 2021), which observed that this species is amongst the most frequent sand fly species predominantly occurring in primary forest environments. This species could be involved in the maintenance cycle of trypanosomatids, including *Leishmania*. Since *N. shawi* was found to be infected with *L. braziliensis* and *L. guyanensis* (Garcia et al. 2007, Bustamante et al. 2012), it is possible that populations of this species may participate in the transmission of *Leishmania* species. Although *N. shawi* was observed to be infected with *Leishmania* spp. (Ogawa et al. 2016) and *L. naiffi* (Silva et al. 2021) in Rondônia, in the State of Acre, it was observed to harbour trypanosomatids in its mid- and posterior gut (Brilhante et al. 2021); nonetheless, its vector role is still undefined.

Nyssomyia whitmani, a species found in abundance mainly in the central region of the State, was reported in entomological surveys carried out in the Municipalities of Ariquemes, Cacaulândia and Monte Negro (Biancardi et al. 1982, Gil et al. 2003, Gil et al. 2009, Teles et al. 2013). This species was recorded in both forest environments and in areas that have suffered human intervention (Teles et al. 2013, Teles et al. 2016). While this species is involved in the transmission of *L. braziliensis* in some Brazilian States, there are no reports of infection by *N. whitmani* in Rondônia (Arias et al. 1985, Teles et al. 2013, Pereira Júnior et al. 2019b, Leão et al. 2020, Costa et al. 2021a, Silva et al. 2021).

Psychodopygus ayrozai was distributed across nine municipalities, with low abundance observed in eight; higher abundance was reported in the Municipality of Itapuã do Oeste. This species is cited as a highly anthropophilic sand fly species in south-eastern Brazil, with preferential feeding activity at ground level starting at dusk, extending from approximately 1700 h - 2400 h (Aguiar and Soucasaux 1984). *Leishmania naiffi* has been isolated and characterised from specimens of *P. ayrozai*, leading to speculation regarding this species' participation in transmission (Arias et al. 1985).

Psychodopygus carrerai and *P. complexus* are mainly reported in well-preserved forest environments (Gil et al. 2003, Resadore et al. 2018). Although both species have been found in abundance, few reports have corroborated this observation in Rondônia (Biancardi et al. 1982, Gil et al. 2003, Teles et al. 2013). *Psychodopygus carrerai* has been identified with *L. braziliensis* in areas close to Cachoeira Samuel and Candeias do Jamari (Grimaldi Júnior et al. 1991) and this species was detected with *Leishmania* DNA in the Municipality of Itapuã do Oeste (Resadore et al. 2018). *Psychodopygus complexus* has

only been linked to *L. braziliensis* transmission in the north-eastern State of Pará (Souza et al. 1996).

Psychodopygus hirsutus is widely distributed across seven South American countries (Colombia, Suriname, French Guiana, Ecuador, Peru, Bolivia and Brazil) (Galati 2021). This sand fly species is present in all Brazilian States, with the exception of those in the south (Galati 2021). While broad distribution of *P. hirsutus* is notable in Rondônia, few studies have reported this species in abundance (Torchitte et al. 2020, Silva et al. 2021). Females were observed to be infected with promastigotes identified as *L. naiffi* in the State's central region (Gil et al. 2003), as well in some rural locations of Porto Velho, where the DNA of this *Leishmania* species was detected (Silva et al. 2021); however, another study reported females infected with *L. braziliensis* DNA (Costa et al. 2021a), reinforcing the possibility of the vector role of this sand fly species in the maintenance of *Leishmania*.

Psychodopygus davis is the species most widely distributed throughout Rondônia and most studies have reported this species in abundance—our database shows this species as present in 16 municipalities. We identified many studies detecting *Leishmania* infection, with this species probably being the main vector of this protozoan in the State. Natural infection was detected by PCR from females collected in the Municipality of Monte Negro, identified through sequencing as *L. braziliensis* (Pereira Júnior et al. 2019b). *Psychodopygus davis* females were visualised with promastigotes identified as *L. braziliensis* (Grimaldi Júnior et al. 1991) and *L. naiffi* (Gil et al. 2003) in the State's central region and this species was also detected together with *L. naiffi* in Porto Velho (Silva et al. 2021). Other females were recently identified with DNA from *Leishmania amazonensis* by PCR (Resadore et al. 2018). This species has already been detected with *Leishmania* DNA in other locations in the State of Amazonas: Lábrea (Silva et al. 2014) and Tefé (Pereira Júnior et al. 2015). *Psychodopygus davis* specimens were found to harbour DNA from *L. braziliensis* in Rio Branco, Acre (Ávila et al. 2018) and DNA from *L. guyanensis* in Assis Brasil, Acre, while other samples, classified as either *L. guyanensis* or *L. braziliensis* (Teles et al. 2016) have been found.

Although *Pintomyia nevesi* was found to be well-distributed in Rondônia and present in 13 municipalities, no studies reported the detection of *Leishmania* DNA (Gil et al. 2003, Pereira Júnior et al. 2019b, Leão et al. 2020, Costa et al. 2021a, Silva et al. 2021). Nonetheless, this species was detected with *L. braziliensis* DNA in Acre, suggesting the vector potential of this species (Ávila et al. 2018).

Trichophoromyia auraensis and *T. ubiquitalis* are likely *Leishmania* vectors in Rondônia (Santos and Silveira 2020). *Trichophoromyia ubiquitalis* has already been detected with *Leishmania* DNA in the Municipality of Porto Velho (Ogawa et al. 2016, Resadore et al. 2017). This species was observed to be infected with *Leishmania* DNA in the neighbouring areas of Lábrea, Amazonas (Silva et al. 2014) and with *Leishmania lainsoni* DNA in the Municipality of Tefé, Amazonas (Pereira Júnior et al. 2015). *Trichophoromyia auraensis* has been reported in abundance in the Municipality of Guajará-Mirim and in municipalities located in the central region of the State (Buritis, Cacaulândia, Campo Novo and Monte Negro), as well as in Porto Velho (Biancardi et al. 1982, Gil et al. 2003, Ogawa et al. 2016,

Pereira Júnior et al. 2019a). In addition, some specimens were detected with *Leishmania* DNA in Porto Velho (Ogawa et al. 2016) and Itapuã do Oeste (Resadore et al. 2018). Silva et al. (2021) observed *Trichophoromyia* spp. females infected with *L. naiffi*, which could not be identified on a species level due to morphological similarity; however, due to the collection of *T. auraensis* males, the authors suggested the possibility of some females also being *T. auraensis*. This species has also been considered abundant in studies carried out in the State of Acre, with presence reported in both forest and peri-domiciliary environments (Teles et al. 2016, Araujo-Pereira et al. 2017, Ávila et al. 2018) and *Leishmania* DNA documented in the Municipalities of Assis Brasil (Teles et al. 2016) and Rio Branco/AC (Araujo-Pereira et al. 2017).

Amongst all reports of species identified in Rondônia, we expostulate that some were incorrectly classified in the State: *Bichromomyia inornata*, *Evandromyia* sp. de Baduel, *Micropygomyia cayennensis cayennensis* (Floch & Abonnenc, 1941), *N. yuilli yuilli* (already cited), *Pintomyia odax* (Fairchild & Hertig, 1961), *Psathyromyia runoides* and *Psathyromyia shannoni*. However, further taxonomic study is required to definitively confirm this speculation.

The original description of *Bichromomyia inornata*, by Martins et al. (1965), is the only report of this species in the State. Distribution has been reported in Bolivia, as well as in the Brazilian States of Amazonas, Rondônia and Maranhão (Galati 2021). The species was originally described as having a dark scutellum, the same colour as the mesonotum; however, when examining the holotype, Galati characterised this structure as transparent, differently from the mesonotum, which was reportedly indistinguishable from *B. flaviscutellata* (Galati 2021). While the possibility exists that the species found in Rondônia is indeed *B. flaviscutellata*, further study is needed to confirm the taxonomic status of this species.

Evandromyia sp. de Baduel has only been recorded in two studies (Martins et al. 1965, Biancardi et al. 1982). Reports in Rondônia may have confused it with other species, such as *Evandromyia andersoni* males or *Evandromyia bacula* females (Galati 2021). Although a study reported the occurrence of *Micropygomyia cayennensis cayennensis* in the State (Castellón Bermúdez 2009), this was likely incorrectly identified, as the original description cited (Gil et al. 2003) contains no reference to this species. The original report of *Pintomyia odax* (Biancardi et al. 1982) is probably a misidentification of *Pintomyia fiocruzi* (Pereira Júnior et al. 2019a), as the latter species was not described when *P. odax* was first reported in the State. *Psathyromyia runoides* has been cited in seven studies in Rondônia (Martins et al. 1965, Biancardi et al. 1982, Gil et al. 2003, Resadore et al. 2017, Pereira Júnior et al. 2019b, Torchitte et al. 2020). A later study that evaluated morphological and molecular evidence suggested that all specimens, in fact, belonged to *Psathyromyia pradobarrientosi*, a species very similarly to *P. runoides*, leading these authors to speculate that *P. runoides* is not distributed in Rondônia (Costa et al. 2021b).

Psathyromyia shannoni is reportedly widely distributed throughout the Americas, yet this has been refuted by evidence of misidentification (Sábio et al. 2014). While some studies in Rondônia have reported the identification of this species (Martins et al. 1965, Biancardi

et al. 1982, Azevedo et al. 1993, Gil et al. 2003, Gil et al. 2009), it is likely that these reports could have corresponded to *Psathyromyia bigeniculata*, a species of the Shannoni series that has been identified by our group (Pereira Júnior et al. 2019b, Leão et al. 2020, Costa et al. 2021b). Molecular studies suggest the possibility that this species belongs to a cryptic species complex (Florin et al. 2011).

Other species require further taxonomic study due to the possibility of misidentification arising from morphological discrepancies, such as members of Guyanensis series: *Psychodopygus corossoniensis*, *Psychodopygus guyanensis* and *Psychodopygus geniculatus*. Several populations of this series collected for molecular and morphological study in Ecuador resulted in the identification of *P. geniculatus*, *Psychodopygus luisleoni* Leon, Mollinedo & Le Pont, 2009 and *P. corossoniensis*. Two populations were observed within *P. geniculatus* and one was described as a new species, *Psychodopygus francoisleponti* (Zapata et al. 2012). Although this species was recently recorded in Rondônia (Silva et al. 2022), our group identified some differences when analysing specimens classified as *P. geniculatus* (Resadore et al. 2018, Pereira Júnior et al. 2019b, Torchitte et al. 2020). We, therefore, suggest that future taxonomic studies clarify whether these specimens are, indeed, correctly classified, since a study conducted in Ecuador resulted in the reclassification of specimens in the Guyanensis series (Zapata et al. 2012).

Lutzomyia longipalpis, the main vector of *Leishmania infantum* Nicolle, 1908, has rarely been reported in Rondônia, which could be explained by some factors. Many studies have demonstrated that the sylvatic distribution of this species could be restricted in accordance with its populational structure. Moreover, many studies have shown that light traps are not considered an ideal method for capturing this species, necessitating the addition of pheromones or active search to obtain higher numbers of specimens (González et al. 2020). Nevertheless, this species remains important, as cases of VL in humans tend to follow reports of canine VL in Rondônia.

The information evaluated in our study permitted a wide-ranging review of accumulated reports on sand flies over many years, thus enabling the construction of a robust database with information on these insects in the State of Rondônia. Our study was limited by the exclusion of some records from the database due to the inaccurate reporting of coordinates, which may have affected the presently-described distributions of some species. Nevertheless, we believe that the maps produced by this study could serve as reference to guide future studies investigating sand fly species in Rondônia.

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Validation: AMPJ, MMSR, JFM.

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