Cecidomyiidae (Diptera, Insecta): richness of species and distribution in Brazil

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Abstract: Most Neotropical species of Cecidomyiidae (Diptera) have been described from Brazil, but a list of species with occurrence in the country has never been published. Little is known about their distribution and richness in the Brazilian phytogeographic domains. Additionally, a list of host plant species has never been gathered. The present study aims to fill these knowledge gaps and provides an overview of this family in Brazil. For this, data were obtained mainly from the literature, but also from the Cecidomyiidae collection of Museu Nacional and two herbaria (RB and R). Based on the site “Flora do Brasil 2020”, botanical names were updated and plant species origin and distribution were verified. A total of 265 gall midge species have been recorded in Brazil, most from the Atlantic Forest (183), followed by Cerrado (60), and Amazon Forest (29). The other phytogeographic domains shelter from five to ten species. Phytophagous gall midges occur on 128 plant species of 52 families, almost all native, being 43 endemic to Brazil (21 endemic to Atlantic Forest, five to Cerrado, and one to Amazon). Although, the taxonomical knowledge is focused on the Atlantic Forest, each domain has its own fauna composition and these informations can be useful for environmental conservational purposes. About 58% of the Brazilian fauna are known only from the type-locality. In order to fill these gaps, it is necessary and important to collect in uninvestigated areas.

Keywords: Phytogeographic domains; host plants; endemism; taxonomical knowledge.

Cecidomyiidae (Diptera, Insecta): riqueza de espécies e distribuição no Brasil

Resumo: A maioria das espécies neotropicais de Cecidomyiidae (Diptera) foi descrita do Brasil, mas uma lista das espécies com ocorrência no país nunca foi publicada. Pouco se sabe sobre sua distribuição e riqueza nos domínios fitogeográficos brasileiros. Adicionalmente, uma lista das espécies de plantas hospedeiras nunca foi elaborada. O presente estudo visa preencher estas lacunas de informação e fornecer um panorama geral desta família no Brasil. Para tal, dados foram obtidos principalmente da literatura, mas também da coleção de Cecidomyiidae do Museu Nacional e de dois herbários (RB e R). Com base no site “Flora do Brasil 2020”, os nomes botânicos foram atualizados e a origem e distribuição das espécies vegetais foram verificadas. Um total de 265 espécies de cecidomidéos é assinalado para o Brasil, a maioria da Mata Atlântica (183), seguida pelo Cerrado (60) e Floresta Amazônica (29). Os outros domínios fitogeográficos abrigam de cinco a dez espécies. Os cecidomidídeos fitófagos estão associados a 128 espécies de plantas de 52 famílias, quase todas nativas, sendo 43 endêmicas do Brasil (21 endêmicas da Mata Atlântica, cinco do Cerrado e uma da Floresta Amazônica). Embora o conhecimento taxonômico se concentre na Mata Atlântica, cada domínio tem sua própria composição faunística e estas informações podem ser úteis para a conservação ambiental. Cerca de 58% da fauna brasileira é conhecida apenas da localidade-tipo. Para preencher estas lacunas, é necessário e importante coletar em áreas não investigadas.

Palavras-chave: Domínios fitogeográficos; plantas hospedeiras; endemismo; conhecimento taxonômico.
Introduction

Cecidomyiidae are one of the most speciose families of Diptera, with more than 6,500 species. They are cosmopolitan and known mainly as gall-inducers (Gagné & Jaschhof 2017). Most species have been described from the Holarctic Region, while the Neotropical fauna comprises less than 10% of the known species. This low richness reflects the scarcity of taxonomic studies in this region. Most species have been described from Brazil. Nevertheless, a list of Brazilian species has never been published.

Brazil comprises six phytogeographic domains: Amazon Forest, Atlantic Forest, Caatinga, Cerrado, Pampa, and Pantanal, which greatly differ from each other in flora composition, and consequently they shelter different assemblages of gall-inducing species. The richness of cecidomyiid species by domain is still unknown, as well as the number of gall-inducing, predaceous, inquilinous, fungivorous, and free-living phytophagous species. Most of them appear to have a restricted distribution, but there are several locality records scattered in the literature.

Additionally, a list of host plant species has never been elaborated and many botanical names need to be updated. The main goals of the this study are: 1) to present a general overview of the richness of this family in Brazil, 2) to provide for the first time a list of gall midges species with occurrence in Brazil as well as in each phytogeographic domain, 3) to fill a knowledge gap about the distribution of this group, and 4) to provide for the first time a list of host plant species in Brazil.

Materials and Methods

The last version of the world catalog of Cecidomyiidae written by Gagné & Jaschhof 2017 was used as starting point. Using the find tool, all species with records in Brazil were retrieved. Papers with the original description of each species were consulted to obtain more detailed data on its occurrence localities. Furthermore, a literature survey was performed on the database “Web of Science” using “Cecidomyiidae” and “Brazil/Brasil” as key words in order to verify the gall midge species described after 2017. Based on the site “Flora do Brasil 2020”, botanical names were updated and plant species origin and distribution were verified. Synonyms were provided in brackets after the correct names to allow linking of retrieved data to the original publications. Additionally, all insect gall inventories of Brazil were also consulted to recover information about locality records of the gall midge species, based on host plant species and gall morphology, whenever possible, or on gall-inducer identification. Data on phytogeographic domains were obtained using maps of IBGE 2004 or directly from the literature. In some cases, domains were not determined because data on localities were insufficient. When gall midge species were recorded in localities occupied by two different domains, both were considered as part of their distributional area.

Besides, the Collection of Cecidomyiidae (Diptera) of Museu Nacional, Universidade Federal do Rio de Janeiro (MNRJ) was examined to aggregate unpublished data of species occurrence. Simultaneously, the Jardim Botânico do Rio de Janeiro herbarium (RB) and the Museu Nacional herbarium (R) were consulted in a search of galled exsiccates. This procedure was adopted since galls are extended phenotypes of the gall-inducing insects (Stone & Schönrogge 2003), so their presence on the host plants indicates the gall-inducing species’ presence. Data on localities were retrieved from labels and new records were established by comparison with the literature. The geographic distribution of all gall-inducing species was updated. Data on Brazilian localities were detailed, including states and municipalities. To discriminating Rio de Janeiro and São Paulo states from Rio do Janeiro and São Paulo municipalities, the word “state” was used whenever necessary.

Results

In Brazil, 265 species of Cecidomyiidae of 93 genera have been recorded. It corresponds to about 43% of the Neotropical fauna richness; 226 are gall-inducing (about 85%), 15 are predaceous, 11 are fungivorous, nine are inquilinous, three are free-living species, and one is kleptoparasite in spider webs. Phytophagous gall midges are collectively associated with 52 plant families, 105 genera, and 128 determined species. Among these hosts, only five are exotic, one is naturalized and all others are native to Brazil (Table 1). Futhermore, ten gall midge species are associated with hosts identified only in family, totaling six families, and 37 with hosts identified only in genus, totaling 35 genera. Additionally, host plants of six cecidomyiid species are unknown. Besides, the identification of some hosts are doubtful, e.g.: “Mikania cf. biforsmis”, “? Smilax sp.”, “Guarea sp. poss. guidonia (L.)”, “Guapira pernambucensis” (Casar.) Lundell (possibly Guapira opposita (Vell.) Reitz”, “poss Smilax sp.”, and the record of Youngomyia pouteriae on Pouteria torta (Mart.) Radlk. (Sapotaceae) corresponds to a misidentification of the gall-inducing species.

Three incongruities were also observed between the host plant and gall-inducing species geographic distributions, namely: 1) Kielmeyera rosea Mart. & Zucc. (Calophyllaceae) x Arzinaea kielmeyerae Gagné, 1984, 2) Guapira pernambucensis (Casar.) Lundell (Nygtaginaceae) x Braggmannia chapadensis Proença & Maia, 2018 and 3) Urvillea uniloba Radlk. (Sapindaceae) x Neolasiopetra urvilleae (Tavares, 1909).

Finally, 27 botanical names were uptaded.

Most gall-inducing species are monophagous (about 90%), but oligophagous and polyphagous species have been reported. Oligophagous species are represented by at least 15 gall midge species, 11 of them occur on two or three plant species of the same genus and four on two or three genera of the same family. The number of hosts of some gall midge species could not be determined, since the level of plant identification does not allow it. This is the case of five gall midge species, four of them have been associated with an identified plant species plus a non identified congeneric host, and the other with an identified species plus a morphospecies of the same plant family. A single cecidomyiid species is polyphagous, occurring in plants of different families.

Fabaceae, Asteraceae, and Myrtaceae are the plant families with the greatest richness of gall midge species (28, 26 and 25), followed by Nyctaginaceae (16). They together host about 36% of the Brazilian fauna richness. Among these families, Myrtaceae exhibit the highest average of gall midge species by host plant species, 1.8, while Fabaceae have a similar value to Asteraceae (1.2 and 1.3, respectively). The average number in Nyctaginaceae was not stablished, because most plants were not identified in species (Table 2). All other families shelter from nine to one gall midge species, but most of them (23) (about 44%) shelter a single gall-inducer. The average of gall midge species by host plant species was 1.0 in 33 families. This is the most frequent value (Table 2). Eugenia L. (Myrtaceae) and Mikania Wild. (Asteraceae) host 13 and 12 gall midge species, respectively, followed by Guapira...
Table 1. List of host plant species (organized by family), their origin and richness of gall midges (Diptera, Cecidomyiidae) by species in Brazil.

| Family              | Species                                      | Origin                  | Number of gall midge species |
|---------------------|----------------------------------------------|-------------------------|-----------------------------|
| Amaranthaceae       | *Alternanthera philoxeroides* (Mart.) Griseb. + *A. aquatica* (D. Parodi) Chodat | native to Brazil         | 1                           |
|                     | *Mangifera indica* L.                       | exotic (cultivated plant) | 1                           |
| Annonaceae          | *Duguetia furfuracea* (A.St.-Hil.) Saff.     | native to Brazil         | 1                           |
| Araliaceae          | *Didymopanax morototoni* (Aubl.) Decne. & Planch | native to Brazil         | 1                           |
| Asclepiadaceae      | *Peplonia asteria* (Vell.) Fontella & E. A. Schwarz | endemic to Atlantic Forest | 1                           |
| Asteraceae          | *Ageratum conyzoides* L.                    | native to Brazil         | 1                           |
|                     | *Baccharis lateralis* Baker (= *B. schultzi* Baker) + *B. dracunculifolia* DC. + *B. trinervis* Pers. | endemic to Brazil native to Brazil | 1                           |
|                     | *Baccharis pseudomyriocephala* Malag.        | endemic to Atlantic Forest | 1                           |
|                     | *Baccharis crispa* Spreng. (= *B. trimera* (Less.) DC.) | native to Brazil         | 1                           |
|                     | *Chromolaena odorata* (L.) R. M. King & H. Rob. + *Eupatorium spp.* | native to Brazil         | 2                           |
|                     | *Conyza canadensis* (L.) Cronquist + *Erigeron strigosus* Muhl. ex Willd. | native to Brazil         | exotic 1                     |
|                     | *Eremanthus erythropappus* (DC.) MacLeish (=*Vanillosmopsis erythropappa* (DC.) Sch. Bip.) | endemic to Brazil         | 1                           |
|                     | *Eupatorium* sp.                            | -                       | 1                           |
|                     | *Hypocharis chillensis* (Kunth) Britton      | native to Brazil         | 1                           |
|                     | *Lessingianthus warminianus* (Baker) H. Rob. | endemic to Cerrado       | 1                           |
|                     | *Mikania guaco* Kunth + *M. glomerata* Spreng. + *Mikania cf biformis* | native to Brazil         | 1                           |
|                     | *Mikania glomerata* Spreng.                 | native to Brazil         | 1                           |
|                     | *Mikania glomerata* Spreng. + *Mikania cf biformis* DC | native to Brazil         | 6                           |
|                     | *Mikania glomerata* Spreng. + *Mikania trinervis* Hook. & Arn. + *Mikania cf biformis* | native to Brazil         | 1                           |
|                     | *Mikania micrantha* Kunth + *M. cordifolia* (L.f.) Willd. | native to Brazil native to Brazil | 2                           |
|                     | *Mikania sp.*                               | -                       | 2                           |
|                     | *Moquinastrum polymorphum* (Less.) G. Sancho (=*Gochnatia polymorpha* (Less.) Cabrera) | native to Brazil         | 1                           |
|                     | *Porophyllum* sp.                           | -                       | 1                           |
|                     | undetermined                                | -                       | 2                           |
| Bignoniaceae        | *Fridericia conjugata* (Vell.) L. G. Lohmann (=*Arrabidaea conjugata*) | native to Brazil         | 1                           |
| Boraginaceae        | *Varronia curassavica* Jacq. (= *Cordia verbenacea* DC. = *Cordia curassavica* (Jacq.) Roem. & Schult.) | native to Brazil         | 1                           |
|                     | *Heliotropium angustiflorum* (Ruiz & Pav.) Govaerts (=*Tournefortia angustiflora* Ruiz & Pav.) + *Myriopus volubilis* Small (=*Tournefortia volubilis* L. (Boraginaceae)) | native to Brazil native to Brazil | 1                           |
| Burseraceae         | *Protium brasiliense* (Spreng.) Engl.       | endemic to Brazil        | 1                           |
|                     | *Protium heptaphyllum* (Aubl.) Marchand      | native to Brazil         | 4                           |
|                     | *Protium icicariba* (DC.) Marchand           | endemic to Atlantic Forest | 2                           |
| Cactaceae           | *Hylocereus setaceus* (Salm-Dyck) R. Bauer (=*Selenicereus setaceus* (Salm-Dyck) Berg) | native to Brazil         | 1                           |
| Calophyllaceae      | *Calophyllum brasiliense* Cambess.           | native to Brazil         | 5                           |
|                     | *Kielmeyera rosea* Mart. & Zucc.             | endemic to Cerrado       | 1                           |

Continue...
| Family                  | Species                                                                 | Location                        | Notes                  |
|-------------------------|-------------------------------------------------------------------------|----------------------------------|------------------------|
| Caryocaraceae           | Caryocar brasiliense Cambess.                                            | native to Brazil                 | 1                      |
| Celastraceae            | Monteverdia obtusifolia (Mart.)                                        | endemic to Brazil                | 2                      |
|                        | Biral (=Maytenus obtusifolia Mart.)                                     | Endemic to Atlantic Forest       | 2                      |
| Chrysobalanaceae        | Couepia ovalifolia (Schott) Benth. ex Hook.f.                           | endemic to Atlantic Forest       | 2                      |
| Clusiaceae              | Clusia fluminensis Planch. & Triana                                     | endemic to Atlantic Forest       | 1                      |
|                        | Clusia hilariana Schltdl.                                              | endemic to Atlantic Forest       | 1                      |
|                        | Clusia lanceolata Cambess.                                              | endemic to Atlantic Forest       | 1                      |
|                        | Clusia sp.                                                              |                                    | 1                      |
| Combretaceae            | Combretum leprosum Mart.                                                | native to Brazil                 | 1                      |
| Convolvulaceae          | Jacquemontia holofernecea (Weinm.) O’ Donell                           | native to Brazil                 | 1                      |
| Dilleniaceae            | Davilla rugosa Poir                                                     | native to Brazil                 | 1                      |
|                        | Doliocarpus dentatus (Aubl.) Standl.                                    | native to Brazil                 | 1                      |
| Erythroxylaceae         | Erythroxylum ovalifolium Peyr.                                           | native to Atlantic Forest        | 3                      |
|                        | Erythroxylum suberosum A. St.-Hil.                                      | native to Brazil                 | 1                      |
| Euphorbiaceae           | Croton floribundus Spreng                                               | native to Brazil                 | 2                      |
|                        | Croton hemiargyreus Müll. Arg.                                          | endemic to Atlantic Forest       | 1                      |
|                        | Dalechampia ficifolia Lam.                                              | endemic to Brazil                | 1                      |
| Manihot esculenta Crantz (= Manihot utilissima Pohl.) + Manihot caerulescens + Manihot sp. | native to Brazil | 1 |
| Manihot esculenta Crantz (= Manihot utilissima Pohl.) | native to Brazil | 1 |
| Microstachys corniculata (Vahl) Griseb. (=Sebastiana glandulosa (Mart.) Pax.) | native to Brazil | 2 |
| Fabaceae                | Aeschynomene denticulata Rudd.                                          | native to Brazil                 | 1                      |
|                        | Aldina heterophylla Spruce ex Benth.                                    | endemic to Amazon Forest         | 1                      |
|                        | Andira fraxinifolia Benth.                                              | endemic to Brazil                | 1                      |
|                        | Andira humilis Mart. ex Benth.                                          | endemic to Brazil                | 1                      |
|                        | Andira vermiculata (Mart.) Benth.                                       | native to Brazil                 | 1                      |
|                        | Andira sp.                                                              |                                    | 1                      |
|                        | Bauhinia brevipes Vogel                                                 | native to Brazil                 | 2                      |
|                        | Bauhinia cupulata Benth.                                                | native to Brazil                 | 1                      |
|                        | Bauhinia rufa (Bong.) Steud.                                            | native to Brazil                 | 1                      |
| Dalbergia ecastophyllum (L.) Taub. + Dalbergia frutescens (Vell.) Britton | native to Brazil | 1 |
| Dalbergia sp.           |                                                                        | native to Brazil                 | 1                      |
| Inga edulis Mart.       |                                                                        | native to Brazil                 | 2                      |
| Inga vera Will. (= Inga spuria Humb. & Bonpl. ex Willd.) + Inga punctata Will. (= Inga leptoloba Schltdl.) | native to Brazil | 1 |
| Machaerium hirtum (Vell.) Stellfeld + Machaerium sp. + Machaerium macaense C. V. Mendonça, A. M. G. Azevedo & H. C. Lima | native to Atlantic Forest | 1 |
|                        |                                                                        |                                    | 1                      |
|                        |                                                                        |                                    | 2                      |
|                        |                                                                        |                                    | 1                      |
|                        |                                                                        |                                    | 2                      |
|                        |                                                                        |                                    | 1                      |
|                        |                                                                        |                                    | 1                      |
|                        |                                                                        |                                    | 1                      |
|                        |                                                                        |                                    | 1                      |
| Lamiaceae               | Hyptis sp.                                                              | exotic                           | 1                      |
|                        | Melissa officinalis L.                                                  | exotic                           | 1                      |
| Lauraceae               | Ocotea pulchella (Nees & Mart) Mez                                      | native to Brazil                 | 1                      |
|                        | Undetermined                                                            |                                    | 1                      |
| Loranthaceae            | Psittacanthus dichroos (Mart.) Mart.                                     | endemic to Brazil                | 1                      |

Continue...
Struthanthus taubatensis Eichler (= S. maricensis Rizzini ex Profice) endemic to Brazil 1

Lythraceae

Cuphea carthagenensis (Jacq.) J. F. Macbr native to Brazil 1

Malpighiaceae

Banisteriopsis membranifolia (A. Juss.) B. Gates endemic to Brazil 1

Byrsonima sericea DC. native to Brazil 2

Diplopteryx pubipetala (A. Juss.) W. R. Anderson & C. C. Davis native to Brazil 1

Heteropterys nitida (Lam.) DC. native to Brazil 1

Heteropterys sp. - 1

Pterandra pyroidea A. Juss. endemic to Cerrado 1

Tetrapteryx phlomoides (Spreng.) Nied. native to Brazil 1

Undetermined - 1

Malvaceae

Undetermined - 1

Melastomataceae

Clidemia sp. - 1

Leandra ionopogon (Mart.) Cogn. native to Brazil 1

Marcetia sp. - 1

Miconia cinnamomifolia (DC.) Naudin endemic to Atlantic Forest 1

Miconia cf. cinnamomifolia - 1

Miconia theaezans (Bonpl.) Cogn. native to Brazil 1

Ossaea sp. - 1

Pleroma candlelanaum (Mart. ex DC.) Triana (= Tibouchina candlelanaum (Mart. ex DC.) Cogn.) endemic to Cerrado 1

Tibouchina sp. - 1

Meliaceae

Guarea macrophylla Vahl native to Brazil 2

Guarea sp. poss. guidonia (L.) Sleumer (= Guarea trichilioides L.) - 1

Moraceae

Coussapoa sp. - 1

Ficus sp. - 2

Maclura tinctoria (L.) D. Don ex Steud. (= Chlorophora tinctoria (L.) Gaudich. ex B.D. Jackson) (Moraceae) native to Brazil 1

Sorocea bonplandii (Bail.) W. C. Burger et al. (= Sorocea ilicifolia Miq.) native to Brazil 1

Myrsinaceae

Myrsine sp. - 1

Myrtaceae

Eugenia astringens Cambess (=E. rotundifolia Casar = Eugenia umbelliflora O. Berg.) (Myrtaceae) endemic to Atlantic Forest 4

Eugenia copacabanaensis Kiaersk. endemic to Atlantic Forest 3

Eugenia hiemalis Cambess. (=Eugenia multiflora Cambess.) + undetermined Myrtaceae endemic to Brazil 1

Eugenia punicifolia (Kunth.) DC. (= (E. ovalifolia Cambess.) + Eugenia sp. endemic to Brazil 1

Eugenia uniflora L. native to Brazil 4

Myrcia ovata Cambess. endemic to Atlantic Forest) 1

Myrcia retorta Cambess. endemic to Brazil 1

Myrciaria delicatula (DC.) O. Berg native to Brazil 1

Myrciaria floribunda (H. West ex Willd.) native to Brazil 2

Myrciaria tenella (DC.) O.Berg native to Brazil 1

Neomitrantes obscura (DC.) N. Silveira endemic to Atlantic Forest 3

Psidium cattleyanum Sabine endemic to Brazil 2

Undetermined - 1

Nyctaginaceae

Guapira opposita (Vell.) Reitz native to Brazil 7

Guapira pernambucensis (Casar.) Lundell (possibly Guapira opposita (Vell.) Reitz) endemic to Brazil 1

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| Family       | Species                                                | Location          | Count |
|--------------|--------------------------------------------------------|-------------------|-------|
| Ochnaceae    | *Ouratea spectabilis* (Mart. Engl.)                    | endemic to Cerrado | 1     |
| Ochnaceae    | *Heisteria acuminata* (Humb. & Bonpl.) Engl. (=*Heisteria cyanocarpa* Poepp.) | native to Brazil  | 1     |
| Ochnaceae    | *Ximenia americana* L.                                  | native to Brazil  | 1     |
| Onagraceae   | *Ludwigia* sp.                                          | -                 | 1     |
| Orchidaceae  | *Cattleya* spp. *Epidendrum* spp. *Laelia* spp.         | -                 | 1     |
| Piperaceae   | *Piper* sp.                                             | -                 | 3     |
| Poaceae      | *Paspalum conjugatum* P. J. Bergius                     | native to Brazil  | 1     |
| Polypodiaceae| *Microgramma vacciniifolia* (Langsd. & Fisch.) Copel.   | native to Brazil  | 1     |
| Pontederiaceae| *Eichhornia azurea* (Sw.) Kunth                      | native to Brazil  | 1     |
| Ranunculaceae| *Clematis* sp.                                          | =                 | 1     |
| Rosaceae     | *Spiraea salicifolia* L.                                | exotic            | 1     |
| Rubiaceae    | *Borreria palustris* (Cham. & Schltdl.) Bacigalupo & E.L.Cabral (=*Diodia gymnocephala* (DC.) K.Schum.) | native to Brazil  | 1     |
| Rubiaceae    | *B. verticillata* (L.) G.Mey + *Borreria* sp.           | native to Brazil  | 1     |
|            | *Psychotria* sp.                                        | -                 | 1     |
|            | *Rubia* sp.                                             | -                 | 1     |
|            | Undetermined                                            | -                 | 3     |
| Rutaceae     | *Citrus* sp.                                            | -                 | 1     |
| Sapindaceae  | *Matayba guianensis* Aubl.                              | native to Brazil  | 1     |
| Sapindaceae  | *Paullinia weinmannifolia* Mart.                        | endemic to Atlantic Forest | 1     |
| Sapindaceae  | *Paullinia weinmannifolia* Mart. + *Matayba guianensis* Aubl. | native to Brazil  | 1     |
| Sapindaceae  | *Serjania* sp.                                          | -                 | 1     |
| Sapindaceae  | *Urvillea uniloba* Radlk.                               | native to Brazil  | 1     |
| Sapindaceae  | *Waltheria indica* L.                                   | native to Brazil  | 1     |
| Sterculiaceae| *Pouteria caimito* (Ruiz & Pav.) Radlk (=*Pouteria caimito* var. *laurifolia* (Gomes) Baehni) | native to Brazil  | 2     |
| Sterculiaceae| *Pouteria torta* (Mart.) Radlk.                         | native to Brazil  | 1     |
| Sterculiaceae| *Pouteria venosa* (Mart.) Baehni                        | native to Brazil  | 1     |
| Styracaceae  | *Sideroxylon obtusifolium* (Roem. and Schult.) T. D. Penn | native to Brazil  | 1     |
| Smilacaceae  | *Smilax oblongifolia* Pohl ex Griseb                    | endemic to Brazil | 1     |
| Smilacaceae  | *Poss on Smilax* sp.                                    | -                 | 1     |
| Smilacaceae  | *Smilax rufescens* Griseb                               | endemic to Brazil | 1     |
| Smilacaceae  | *?Smilax* sp.                                           | -                 | 1     |
| Solanaceae   | *Physalis angulata* L.                                   | native to Brazil  | 1     |
| Solanaceae   | *Solanum* sp.                                           | -                 | 1     |
| Sterculiaceae| *Waltheria indica* L.                                   | native to Brazil  | 1     |
| Styracaceae  | *Styrax* sp.                                            | -                 | 5     |
| Urticaceae   | *Cecropia* sp.                                          | -                 | 1     |
| Verbenaceae  | *Aegiphila integrifolia* (Jacq.) Moldenke (=*Aegiphila arborescens* (Aubl.) J. F. Gmel.) | native to Brazil  | 1     |
| Verbenaceae  | *Lantana camara* L.                                     | naturalized       | 1     |
| Verbenaceae  | *Lantana* sp.                                           | -                 | 3     |
| Verbenaceae  | *Stachytarpheta cayennensis* (Rich.) Vahl. + *Stachytarpheta* sp. | native to Brazil  | 1     |
| Unknown      | -                                                       | -                 | 6     |
Cecidomyiidae (Diptera, Insecta) in Brazil

Table 2. Richness of host plant species and gall midge species (Diptera, Cecidomyiidae) by vegetable family, and average of gall midge species by host plant in each family in Brazil.

| Family              | Number of host species | Number of gall midge species | Average number |
|---------------------|------------------------|------------------------------|----------------|
| Amaranthaceae       | 2                      | 1                            | 0.5            |
| Anacardiaceae       | 2                      | 2                            | 1.0            |
| Annonaceae          | 1                      | 1                            | 1.0            |
| Araliaceae          | 1                      | 1                            | 1.0            |
| Asclepiadaceae      | 1                      | 1                            | 1.0            |
| Asteraceae          | 21                     | 26                           | 1.3            |
| Bignoniaceae        | 1                      | 1                            | 1.0            |
| Boraginaceae        | 3                      | 2                            | 0.7            |
| Burseraceae         | 3                      | 7                            | 2.3            |
| Cactaceae           | 1                      | 1                            | 1.0            |
| Calophyllaceae      | 2                      | 6                            | 3.0            |
| Caryocaraceae       | 1                      | 1                            | 1.0            |
| Celastraceae        | 1                      | 2                            | 2.0            |
| Clusiaceae          | 4                      | 4                            | 1.0            |
| Chrysobalanaceae    | 2                      | 2                            | 2.0            |
| Combretaceae        | 1                      | 1                            | 1.0            |
| Convolvulaceae      | 1                      | 1                            | 1.0            |
| Dilleniaceae        | 2                      | 2                            | 1.0            |
| Erythroxylaceae     | 2                      | 4                            | 2.0            |
| Euphorbiaceae       | 7                      | 8                            | 1.1            |
| Fabaceae            | 24                     | 28                           | 1.2            |
| Lamiaceae           | 2                      | 2                            | 1.0            |
| Lauraceae           | 2                      | 2                            | 1.0            |
| Lythraceae          | 1                      | 1                            | 1.0            |
| Loranthaceae        | 3                      | 3                            | 1.0            |
| Malpighiaceae       | ?                      | 8                            | ?              |
| Malvaceae           | 1                      | 1                            | 1.0            |
| Melastomataceae     | 9                      | 9                            | 1.0            |
| Meliaceae           | 2                      | 3                            | 1.5            |
| Moraceae            | 4                      | 5                            | 1.2            |
| Myrsinaceae         | 1                      | 1                            | 1.0            |
| Myrtaceae           | 14                     | 25                           | 1.8            |
| Nyctaginaceae       | ?                      | 16                           | ?              |
| Ochnaceae           | 1                      | 1                            | 1.0            |
| Olacaceae           | 2                      | 2                            | 1.0            |
| Onagraceae          | 1                      | 1                            | 1.0            |
| Orchidaceae         | ?                      | 1                            | ?              |
| Piperaceae          | 1                      | 1                            | 1.0            |
| Poaceae             | 1                      | 1                            | 1.0            |
| Polypodiaceae       | 1                      | 1                            | 1.0            |
| Ponteridaceae       | 1                      | 1                            | 1.0            |
| Ranunculaceae       | 1                      | 1                            | 1.0            |
| Rosaceae            | 1                      | 1                            | 1.0            |
| Rubiaceae           | 6                      | 7                            | 1.2            |
| Rutaceae            | 1                      | 1                            | 1.0            |
| Sapindaceae         | 4                      | 5                            | 1.2            |
| Sapotaceae          | 5                      | 6                            | 1.2            |
| Smilacaceae         | 4                      | 4                            | 1.0            |
| Solanaceae          | 2                      | 2                            | 1.0            |
| Sterculiaceae       | 2                      | 2                            | 1.0            |
| Styracaceae         | ?                      | 5                            | ?              |
| Urticaceae          | 1                      | 1                            | 1.0            |
| Verbenaceae         | 5                      | 6                            | 1.2            |

A list of gall midge species with occurrence in Brazil is presented below in alphabetical order. Data on their food habit, geographic distribution and host plant are added. Botanical names were updated (synonyms found in publications are given in brackets). The origin of each host plant and its occurrence in Brazilian phytogeographic domains are also provided. These last two informations are restricted to hosts identified at specific level. References are added in chronological order.

Amaranthaceae: Lepidogyne dezae Kieffer, 1901.

Anacardiaceae: 23 species, exclusively in Brazil, while only 26 (about 10%) occur in other countries.

Annonaceae: 23%, 11%, 4%, 3%, and 2% of the Brazilian fauna.

Araliaceae: 7 species, respectively (Table 3). Predators are represented by four genera, Aphidoletes Kieffer, 1904, Diadiplosis Felt 1911, Feltiella Rübsaamen, 1910, and Lestodiplosis Kieffer, 1894, being Diadiplosis the most speciose, with ten species, while the others comprise three (Lestodiplosis) or one species (Aphidoletes and Feltiella). The first genus feeds on aphids, the second on scale insects (Coccoidae), the third on mites and the fourth mostly on other cecidomyiids, but also on mites. They have been used as biological control agents of some plant pests. Fungivorous species are represented by five genera, Dichodiplosis Rübsaamen, 1910, Haplusia Karsch, 1877, Mycodiplosis Rübsaamen, 1895, Stomatosema Kieffer, 1904, and Terminotestes Silvestri, 1901. Three of them comprise a single species, while Haplusia comprises two and Stomatosema six. Inquilines are represented by six genera, Clodiplosis Kieffer, 1894, Contarinia Tavares 1918, Meunieriella Kieffer, 1909, Neolastoptera Felt, 1908 and Trotteria Kieffer, 1902. Among them, Dicaleria and Trotteria include exclusively inquilinous species. Five of them comprise a single inquilinous species in Brazil, while Meunieriella comprises four. All were recorded in galls of other Cecidomyiidae. Although these cecidomyiids have been reported as inquilines, they are probably kleptoparasites, according to Luz and Mendonça-Júnior (2019). Free-living species are less common, being represented by three genera, Lepisocius pheus, Lepisocius pheus, and Prodiplosis Felt, 1908, each with a single species. Their larvae feed on plant reproductive organs. And only one species, Didactylomyia longimana (Felt, 1908), is reported as the kleptoparasite in literature.

Most species of gall midges (about 90%) have been recorded exclusively in Brazil, while only 26 (about 10%) occur in other countries. The Atlantic Forest is the phytogeographic domain with the greatest richness of species, 183, followed by Cerrado (60 species), Amazon (29 species), Pampa (10 species), Caatinga (8 species), and Pantanal (5 species) (Table 3). These values correspond to about 69%, 23%, 11%, 4%, 3%, and 2% of the Brazilian fauna of Cecidomyiidae. Forty-one cecidomyiid species are associated with 43 endemic Brazilian plant species. Among them, 21 hosts are endemic to Atlantic Forest, 5 to Pantanal, and one to Amazon. No hosts were endemic to any Brazilian plant species. Among them, 21 hosts are endemic to Atlantic Forest, 5 to Cerrado, and one to Amazon. No hosts were endemic to Caatinga, Pampa, and Pantanal (Table 4). Two-hundred thirty-five gall midge species (235) are known from a single domain: 157 from Atlantic Forest, 5 from Cerrado, 17 from Amazon Forest, 8 from Pampa, 4 from Caatinga, and 3 from Pantanal. The others have been reported in two (23 species) or three domains (seven species). One-hundred and thirty-seven species (about 52% of the Brazilian fauna) are known only from the type-locality.

A list of gall midge species with occurrence in Brazil is presented below in alphabetical order. Data on their food habit, geographic distribution and host plant are added. Botanical names were updated (synonyms found in publications are given in brackets). The origin of each host plant and its occurrence in Brazilian phytogeographic domains are also provided. These last two informations are restricted to hosts identified at specific level. References are added in chronological order.
### Genera (n=93)

| Genera (n=93) | Number of gall midge species |
|---------------|-----------------------------|
|                | Brazil | Amazon | Atlantic Forest | Caatinga | Cerrado | Pampa | Pantanal |
| Alexomyia      | 1      | 1      | 0               | 0        | 0       | 0     | 0        |
| Alycaulus      | 4      | 1      | 2               | 0        | 1       | 0     | 0        |
| Anadiplosis    | 4      | 0      | 4               | 1        | 0       | 0     | 0        |
| Anasphondylia  | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Androdiplosis  | 1      | 0      | 1               | 0        | 1       | 0     | 0        |
| Anisodiplosis  | 1      | 0      | 1               | 0        | 1       | 0     | 0        |
| Aphidoletes    | 1      | 0      | 0               | 0        | 0       | 0     | 0        |
| Apodiplosis    | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Arcivena       | 1      | 0      | 0               | 0        | 1       | 0     | 0        |
| Arrabidaeamyia | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Asphondyla     | 23     | 2      | 15              | 0        | 7       | 2     | 0        |
| Asteromyia     | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Autodiplosis   | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Baccharomyia   | 2      | 0      | 2               | 0        | 0       | 0     | 0        |
| Brethesiamyia  | 1      | 0      | 0               | 0        | 1       | 0     | 0        |
| Brugmannia     | 14     | 2      | 11              | 0        | 1       | 1     | 0        |
| Bruggmanniella | 11     | 0      | 8               | 0        | 4       | 1     | 0        |
| Burseramyia    | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Cerciplanus    | 2      | 0      | 0               | 0        | 2       | 0     | 0        |
| Cleitodiplosis | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Clinodiplosis  | 20     | 2      | 14              | 0        | 3       | 0     | 0        |
| Clusiamyia     | 2      | 0      | 2               | 0        | 0       | 0     | 0        |
| Compsodiplosis | 2      | 0      | 1               | 0        | 0       | 1     | 0        |
| Contarinia     | 2      | 1      | 2               | 0        | 1       | 0     | 0        |
| Contodiplosis  | 3      | 0      | 3               | 0        | 0       | 0     | 0        |
| Cordiamyia     | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Costadiplosis  | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Courodiplasis  | 1      | 0      | 1               | 0        | 1       | 0     | 0        |
| Dactylodiplasis| 4      | 1      | 3               | 0        | 0       | 0     | 0        |
| Dasineura      | 11     | 0      | 9               | 0        | 2       | 0     | 0        |
| Diadiplosis    | 10     | 0      | 7               | 0        | 1       | 0     | 0        |
| Dialeria       | 1      | 0      | 1               | 1        | 0       | 0     | 0        |
| Dichodiplosis  | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Didactylomyia  | 1      | 0      | 0               | 0        | 1       | 0     | 0        |
| Elachypalpus   | 1      | 0      | 0               | 0        | 0       | 1     | 0        |
| Epilhornomyia  | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Eugeniamyia    | 2      | 0      | 2               | 0        | 0       | 1     | 0        |
| Felitella      | 1      | 0      | 0               | 1        | 0       | 0     | 0        |
| Fernandesia    | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Frauenfeldiella| 1      | 1      | 1               | 0        | 0       | 0     | 0        |
| Geraldesia     | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Gnesidiplosis  | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Guareamyia     | 1      | 0      | 1               | 0        | 0       | 0     | 0        |
| Guarephila     | 1      | 0      | 0               | 0        | 0       | 1     | 0        |
| Haplopalpus    | 1      | 1      | 0               | 0        | 0       | 0     | 0        |
| Haplusia*      | 2      | 1      | 0               | 0        | 0       | 0     | 0        |

Continue...
Continuation...

| Species                | Houardodiplosis | Iatrophobia | Jorgenseniella | Lestodiplosis | Liodiplosis | Lopesia | Machaeriobia | Macroporpa | Manilkaramyia | Mayteniella | Megaulus | Metasphondylia | Meunieriella | Mikaniadiplosis | Mycodiplosis | Myrciamyia | Myrciariamyia | Neolasioptera | Neomitranthella | Novocalmonia | Ouradiplosis | Parametasphondylia | Parazalepidota | Parkiamyia | Paulliniamyia | Perasphondylia | Pisphondylia | Primadiplosis | Proasphondylia | Procontarinia | Prodiplosis | Rhoasphondylia | Rochadiplosis | Schismatodiplosis | Schizomyia | Smilasioptera | Sphaeramyia | Sphaerodiplosis | Stephomyia | Stomatosema | Styxadiplosis | Termiotomastus | Trotteria | Uleella | Uleia | Youngomyia | Zalepidota |
|------------------------|----------------|-------------|----------------|---------------|-------------|---------|-------------|------------|--------------|-------------|----------|----------------|-------------|-----------------|-------------|-----------|---------------|--------------|----------------|-------------|-------------|-----------------|--------------|-------------|--------------|---------------|---------|-----------|----------|-------------|----------|-----------|
|                        | 1              | 0           | 1              | 1             | 0           | 0       | 0           | 0          | 0            | 0           | 0        | 1              | 0            | 0                | 0            | 0         | 0             | 7            | 0              | 0          | 0           | 0              | 1            | 0            | 0            | 0             | 0        | 0          | 0         | 0            | 0        |

Total 261 29 178 8 57 10 5
Table 4. Richness of gall midge species (Diptera: Cecidomyiidae) by endemic plant species in Brazilian phytogeographic domains. There is no endemic host plants in the Caatinga, Pampa and Pantanal until the current moment.

| Host Plant Species | Endemic to Brazil | Endemic to Amazon Forest | Endemic to Atlantic Forest | Endemic to Cerrado | Number of gall midge species |
|--------------------|-------------------|--------------------------|---------------------------|-------------------|-----------------------------|
| Aldina heterophylla | X                 | X                        | -                         | -                 | 1                           |
| Andira humilis      | X                 | -                        | -                         | -                 | 1                           |
| Andira fraxinifolia | X                 | -                        | -                         | -                 | 1                           |
| Baccharis lateralis | X                 | -                        | -                         | -                 | 1                           |
| Baccharis pseudomyriocephala | X | -                      | X                         | -                 | 1                           |
| Banisteriopsis membranifolia | X | -                      | -                        | -                 | 1                           |
| Clusia fluminensis  | X                 | -                        | X                         | -                 | 1                           |
| Clusia hilariana    | X                 | -                        | X                         | -                 | 1                           |
| Clusia lanceolata   | X                 | -                        | -                         | -                 | 1                           |
| Couepia ovalifolia  | X                 | -                        | X                         | -                 | 2                           |
| Croton hemiaragreus  | X                 | -                        | X                         | -                 | 1                           |
| Dalechampia ficifolia | X        | -                        | -                         | -                 | 1                           |
| Eremanthus erythropappus      | X | -                      | -                        | -                 | 1                           |
| Erythroxylum ovalifolium | X | -                      | X                         | -                 | 3                           |
| Eugenia astringens   | X                 | -                        | X                         | -                 | 4                           |
| Eugenia copacabanensis | X    | -                       | X                         | -                 | 3                           |
| Eugenia punicifolia  | X                 | -                        | X                         | -                 | 1                           |
| Guapira pernambucensis | X            | -                        | X                         | -                 | 1                           |
| Kielmeyera rosea     | X                 | -                        | X                         | -                 | 1                           |
| Lessingianthus warmingianus | X | -                      | -                        | X                 | 1                           |
| Machaeriobia machaeri | X | -                       | X                         | -                 | 1                           |
| Manilkara subsericea | X                 | -                        | X                         | -                 | 1                           |
| Miconia cinnamomifolia | X        | -                       | X                         | -                 | 1                           |
| Mikania trinervis    | X                 | -                        | X                         | -                 | 1                           |
| Mimosa caesalpinifolia | X | -                      | -                        | -                 | 1                           |
| Monteverdia obtusifolia | X        | -                        | -                         | -                 | 2                           |
| Myrcia ovata         | X                 | -                        | X                         | -                 | 1                           |
| Myrcia retorta       | X                 | -                        | -                         | -                 | 1                           |
| Neomitrantes obscura  | X                 | -                        | X                         | -                 | 3                           |
| Ocotea notata        | X                 | -                        | -                         | -                 | 1                           |
| Ouratea spectabilis  | X                 | -                        | -                         | X                 | 1                           |
| Peplonia asteria     | X                 | -                        | X                         | -                 | 1                           |
| Paullinia weinmannifolia | X          | -                       | X                         | -                 | 2                           |
| Pleroma candolleanum | X                 | -                        | -                         | X                 | 1                           |
| Protium brasiliense  | X                 | -                        | -                         | -                 | 1                           |
| Protium icicariba    | X                 | -                        | X                         | -                 | 2                           |
| Psidium cattleyanum  | X                 | -                        | -                         | -                 | 2                           |
| Psittacanthus dichroos | X | -                      | -                        | -                 | 1                           |
| Pterandra pyroidea   | X                 | -                        | -                         | X                 | 1                           |
| Smilax oblongifolia  | X                 | -                        | -                         | -                 | 1                           |
| Smilax rufescens     | X                 | -                        | -                         | -                 | 1                           |
| Struthanthus taubatensis | X    | -                       | -                         | -                 | 1                           |
| Swartzia langsdorffii | X                 | -                        | X                         | -                 | 1                           |
### Table 5. Richness of gall midge species (Diptera, Cecidomyiidae) by vegetable family in Brazilian phytogeographic domains.

| Family             | Amazon Forest | Atlantic Forest | Caatinga | Cerrado | Pampa | Pantanal |
|--------------------|---------------|-----------------|----------|---------|-------|----------|
| Amaranthaceae      | 0             | 0               | 0        | 0       | 0     | 0        |
| Anacardiaceae      | 0             | 2               | 0        | 0       | 0     | 0        |
| Annonaceae         | 0             | 0               | 0        | 1       | 0     | 0        |
| Araliaceae         | 0             | 0               | 0        | 1       | 0     | 0        |
| Asclepiadaceae     | 0             | 1               | 0        | 0       | 0     | 0        |
| Asteraceae         | 3             | 19              | 0        | 6       | 1     | 0        |
| Bignoniaceae       | 0             | 1               | 0        | 0       | 0     | 0        |
| Boraginaceae       | 1             | 2               | 0        | 1       | 0     | 0        |
| Burseraceae        | 2             | 4               | 0        | 4       | 0     | 0        |
| Cactaceae          | 0             | 1               | 0        | 0       | 0     | 0        |
| Calophyllaceae     | 5             | 5               | 0        | 6       | 0     | 0        |
| Caryocaraceae      | 0             | 0               | 0        | 0       | 0     | 0        |
| Celastraceae       | 0             | 2               | 0        | 0       | 0     | 0        |
| Chrysobalanaceae   | 0             | 2               | 0        | 0       | 0     | 0        |
| Clusiaceae         | 1             | 3               | 0        | 0       | 0     | 0        |
| Combretaceae       | 0             | 1               | 1        | 0       | 0     | 0        |
| Convolvulaceae     | 0             | 1               | 0        | 0       | 0     | 0        |
| Dilleniaceae       | 0             | 1               | 0        | 1       | 0     | 0        |
| Erythroxylaceae    | 0             | 4               | 0        | 1       | 0     | 0        |
| Euphorbiaceae      | 1             | 4               | 0        | 2       | 0     | 0        |
| Fabaceae           | 2             | 15              | 4        | 10      | 0     | 1        |
| Lamiaceae          | 0             | 2               | 0        | 1       | 0     | 0        |
| Lauraceae          | 1             | 2               | 0        | 0       | 0     | 0        |
| Loranthaceae       | 0             | 3               | 0        | 0       | 0     | 0        |
| Lythraceae         | 0             | 1               | 0        | 0       | 0     | 0        |
| Malpighiaceae      | 1             | 4               | 0        | 5       | 0     | 0        |
| Malvaceae          | 0             | 2               | 0        | 0       | 0     | 0        |
| Melastomataceae    | 0             | 7               | 0        | 3       | 0     | 0        |
| Meliaceae          | 0             | 2               | 0        | 0       | 1     | 0        |
| Moraceae           | 1             | 3               | 0        | 0       | 0     | 1        |
| Myrsinaceae        | 0             | 0               | 0        | 0       | 1     | 0        |
| Myrtaceae          | 0             | 21              | 0        | 3       | 1     | 0        |
| Nyctaginaceae      | 1             | 14              | 0        | 2       | 0     | 0        |
| Ochnaceae          | 0             | 0               | 0        | 1       | 0     | 0        |
| Olacaceae          | 1             | 1               | 0        | 0       | 0     | 0        |
| Onagraceae         | 0             | 1               | 0        | 0       | 0     | 0        |
| Orchidaceae        | 0             | 0               | 0        | 0       | 0     | 0        |
| Piperaceae         | 0             | 1               | 0        | 1       | 1     | 0        |
| Poaceae            | 0             | 1               | 0        | 0       | 0     | 0        |
| Polygodiaceae      | 0             | 1               | 0        | 0       | 0     | 0        |
| Pontederiaceae     | 0             | 1               | 0        | 0       | 0     | 0        |
| Ranunculaceae      | 0             | 0               | 0        | 0       | 0     | 0        |
| Rosaceae           | 0             | 0               | 0        | 0       | 0     | 0        |
| Rubiaceae          | 0             | 8               | 0        | 0       | 0     | 0        |
| Rutaceae           | 0             | 0               | 0        | 0       | 0     | 0        |
| Sapindaceae        | 1             | 2               | 0        | 1       | 1     | 0        |
| Sapotaceae         | 0             | 5               | 0        | 1       | 0     | 0        |
| Smilacaceae        | 0             | 1               | 0        | 1       | 1     | 0        |
| Solanaceae         | 1             | 0               | 0        | 0       | 0     | 0        |
| Sterculiaceae      | 1             | 0               | 0        | 1       | 0     | 0        |
| Styracaceae        | 0             | 2               | 1        | 0       | 0     | 0        |
| Urticaceae         | 1             | 0               | 0        | 0       | 0     | 0        |
| Verbenaceae        | 1             | 5               | 0        | 0       | 9     | 0        |
New records are indicated by an asterisk. The number in brackets after the locality represents the voucher number of the plant species.

1. *Alexomyia ciliata* Felt, 1921a (gall-inducer). Distribution: Brazil: Pará (Amazon Forest). Host plant: unknown. Refs.: Felt 1921a, Gagné 1994, Gagné & Jaschhof 2017.

2. *Alycaulus globulus* Gagné, 2001 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Poço das Antas, Rio de Janeiro (Grumari), Parque Nacional do Itatiaia, Reserva Biológica União; São Paulo state: Bertioga (Atlantic Forest). Host plant: *Mikania glutinosa* Spreng. (native to Brazil) (Cerrado and Atlantic Forest) and *Mikania cf. biformis* DC. (Asteraceae). Refs.: Gagné et al. 2001, Oliveira & Maia 2005, Maia et al. 2008, Gagné & Jaschhof 2017, Maia & Mascarenhas 2017, Maia & Siqueira 2020.

3. *Alycaulus hexadentatus* Usro-Guimarães, 2018a (gall-inducer). Distribution: Brazil: São Paulo state: Altinópolis (Cerrado). Host plant: *Smilax oblongifolia* Pohl ex Griseb (Smilacaceae) (endemic to Brazil) (Caatinga and Cerrado). Refs.: Usro-Guimarães 2018a, Ribeiro et al. 2019.

4. *Alycaulus mikaniae* Rübsaamen, 1915 (gall-inducer). Distribution: Brazil: Amazon (Amazon Forest). Host plant: *Mikania sp.* (Asteraceae). Refs.: Rübsaamen 1915, Gagné 1994, Gagné & Jaschhof 2017.

5. *Alycaulus trilobatus* Möhn, 1964a (gall-inducer). Distribution: El Salvador; Colombia; Brazil: São Paulo state: Bertioga (Atlantic Forest). Host plants: *Mikania micrantha* Kunth (native to Brazil) (Amazon Forest, Cerrado, Atlantic Forest, and Pampa) and *M. cordifolia* (L.f.) Willld. (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, and Pampa) (Asteraceae). Refs.: Möhn 1964a, Gagné 1994, Maia et al. 2008, Gagné & Jaschhof 2017.

6. *Anadiplosis caetetensis* Tavares, 1920a (gall-inducer). Distribution: Brazil: Bahia: Caetité (Atlantic Forest, Caatinga). Host plant: undetermined Fabaceae. Refs.: Tavares 1920a, Gagné 1994, Gagné & Jaschhof 2017.

7. *Anadiplosis proceras* Tavares, 1920a (gall-inducer). Distribution: Brazil: Bahia: Salvador (Itaparica) (Atlantic Forest). Host plant: undetermined Fabaceae. Refs.: Tavares 1920a, Gagné 1994, Gagné & Jaschhof 2017.

8. *Anadiplosis pulchra* Tavares, 1916 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Machaerium* sp. (Fabaceae). Refs.: Tavares 1916, Gagné 1994, Gagné & Jaschhof 2017.

9. *Anadiplosis venusta* Tavares, 1916 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Machaerium* sp. (Fabaceae). Refs.: Tavares 1916, Gagné 1994, Gagné & Jaschhof 2017.

10. *Anasphondylia myrtacea* Tavares, 1920b (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: undetermined Myrtaceae. Refs.: Tavares 1920b, Gagné 1994, Gagné & Jaschhof 2017.

11. *Andirodiplosis bahiensis* Tavares, 1920c (gall-inducer). Distribution: Brazil: Bahia: Salvador (Atlantic Forest); São Paulo state: Luiz Antônio (Cerrado). Host plant: *Andira* sp. (Fabaceae). Refs.: Tavares 1920c, Gagné 1994, Saito & Usro-Guimarães 2012, Gagné & Jaschhof 2017.

12. *Anisodiplosis walteriae* Maia, 2005 (gall-inducer). Distribution: Brazil: Minas Gerais: Aimorés (Atlantic Forest); Mato Grosso: Chapada dos Guimarães (Cerrado). Host plant: *Waltheria indica* L. (Sterculiaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, and Pantanal). Refs.: Maia & Fernandes, 2005a, Almeida et al. 2006, Gagné & Jaschhof 2017. Proença & Maia 2020.

13. *Aphidoletes aphidimyza* (Rondani, 1847) (predator of aphids: Hemiptera). Distribution: Widespread Palearctic, Hawaii, widespread Nearctic, Chile, New Zealand, and Brazil (unstated locality). Refs.: Gagné & Jaschhof 2017.

14. *Apodiplosis praecox* Tavares, 1922 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Psychotria* sp. (Rubiaceae). Refs.: Tavares 1922, Gagné 1994, Gagné & Jaschhof 2017.

15. *Arcivena kiemeyerae* Gagné, 1984 (gall-inducer). Distribution: Brazil: São Paulo state: Mogi Guaçu (Cerrado). Host plant: *Kiemenyera rosea* Mart. & Zucc. (Calophyllaceae) (endemic to Cerrado). Refs.: Gagné 1984, 1994, Gagné & Jaschhof 2017.

16. *Arrabiadaeamyia serrata* Maia, 2001a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Matararitiba, Rio de Janeiro (Grumari), Reserva Biológica União, Maricá, Arraial do Cabo, São João da Barra (Atlantic Forest). Host plant: *Fridericia conjugata* (Vell.) L. G. Lohmann (Bignoniaceae) (=*Arrabiadaeamyia conjugata* Mart.) (native to Brazil) (Amazon Forest, Cerrado, Atlantic Forest, and Pantanal). Refs.: Monteiro et al. 1994, Maia 2001a, b, Oliveira & Maia 2005, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017, Maia & Siqueira 2020.

17. *Asphondylia bahiensis* Tavares, 1917a (gall-inducer). Distribution: Brazil: Bahia: Salvador (Atlantic Forest). Host plant: undetermined Rubiaceae. Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

18. *Asphondylia borroriae* Rübsaamen, 1905a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Matararitiba, Rio de Janeiro, Maricá, Saquarema, Cabo Frio, Carapebus, Arraial do Cabo (Atlantic Forest). Host plants: *Borreria sp.* and *B. verticillata* (L.) G. Mey. (Rubiaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs. Rübsaamen 1905a, Gagné 1994, Monteiro et al. 1994, Maia 2001b, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

19. *Asphondylia canaestrae* Usro-Guimarães & Amorim, 2002 (gall-inducer). Distribution: Brazil: Minas Gerais: Delfinópolis (Cerrado). Host plant: *Hypitis sp.* (Lamiaceae). Refs. Usro-Guimarães & Amorim 2002, Usro-Guimarães et al. 2003, Gagné & Jaschhof 2017.

20. *Asphondylia cipo* Usro-Guimarães, 2018b (gall-inducer). Distribution: Brazil: Minas Gerais: Santana do Riacho (Cerrado). Host plant: *Lessingianthus warmingianus* (Baker) H. Rob. (Asteraceae) (endemic to Cerrado). Refs.: Usro-Guimarães, 2018b.

21. *Asphondylia communis* Maia & Couri, 1992 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Mangaratiba, Rio de Janeiro, Maricá, Arraial do Cabo, Ilha do Cabo Frio, São João da Barra (Atlantic Forest). Host plant: *Ximenia americana* L. (Olacaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs. Maia & Couri 1992, Monteiro et al. 1994, Maia 1999a, Maia 2001b, Maia & Souza 2013, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

22. *Asphondylia cordiae* Möhn, 1964a (gall-inducer). Distribution: El Salvador and Brazil: Minas Gerais: Lagoa Santa (Cerrado); Espírito Santo: Anchieta-Piúma (Atlantic Forest) Rio de Janeiro state: Rio de Janeiro state: Paulo de Frontal.
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Cecidomyiidae (Diptera, Insecta) in Brazil

Janerio, Maricá, Reserva Biológica União, Saquarema, Araruama, Arraial do Cabo, Quissamã, Carapebus, Campos de Goitacazes, São João da Barra (Atlantic Forest); São Paulo state: Bertioaga, Ubatutuba (Atlantic Forest); Santa Catarina: Babitonga (Atlantic Forest); Rio Grande do Sul: Porto Alegre (Atlantic Forest). Host plant: Cordia dentata Poir. (exotic) (no records in Brazil), C. alba (Jacq.) Roem. & Schult. (exotic) (no records in Brazil), and Varrionia curassavica Jacq. (= Cordia verbenacea DC. = Cordia curassavica Jacq.) Roem. & Schult. (Boraginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, and Pampa). Refs.: Mohn 1959, Gagné 1994, Maia 2001b, Maia et al. 2008, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018, Maia & Siqueira 2020, Maia & Flor 2020.

23. Asphondylia fructicola Maia, 2009 (gall-inducer). Distribution: Brazil: Pará: Oriximiná (Porto Trombetas) (Amazon Forest). Host plant: Solanum sp. (Solanaceae). Refs.: Maia et al. 2009, Gagné & Jaschhof 2017.

24. Asphondylia glomeratae Gagné, 2001 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro, Parque Nacional do Itatiaia, Valença (Atlantic Forest); Minas Gerais: Viçosa (Atlantic Forest); São Paulo state: Bertioaga (Atlantic Forest). Host plants: Mikania glomerata Spreng. (native to Brazil) (Cerrado and Atlantic Forest) and Mikania cf biforis (Asteraceae). Refs.: Gagné et al. 2001, Maia et al. 2008, Proença & Maia 2012, Maia & Proença 2016, Maia & Mascarenhas 2017, Gagné & Jaschhof 2017.

25. Asphondylia gochnaatiae Maia, 2008 (gall-inducer). Distribution: Brazil: Minas Gerais: Luz (Cerrado). Host plant: Moquiniastrum polymorphum (Less.) G. Sancho (= Gochnatia polymorpha (Less.) Cabrera) (Asteraceae) (native to Brazil) (Cerrado and Atlantic Forest). Refs.: Maia et al. 2008, Gagné & Jaschhof 2017.

26. Asphondylia maricensis Maia & Couri, 1992 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá (Atlantic Forest). Host plant: Struthanthus taubatensis Eichler (= S. maricensis Rizzini ex Proffie (Loranthaceae)) (endemic to Brazil) (Cerrado and Atlantic Forest). Refs.: Maia & Couri 1992, Maia 2001b, Gagné & Jaschhof 2017.

27. Asphondylia microcapillata Maia, 2005 (gall-inducer). Distribution: Brazil: Minas Gerais: Três Marias (Cerrado). Host plant: Bauhinia brevipes Vogel (Fabaceae) (native to Brazil) (Amazon Forest, Cerrado, and Atlantic Forest). Refs.: Maia & Fernandes, 2005b, Gagné & Jaschhof 2017.

28. Asphondylia moehni Skuhravá, 1989 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Leopoldo (Pampa), Canela, Santa Tereza (Atlantic Forest); São Paulo state: Ubatutuba, Bertioaga (Atlantic Forest); Rio de Janeiro state: Rio de Janeiro (Grumari), Parque Nacional do Itatiaia (Atlantic Forest). Host plants: Mikania guaco Kunth (native to Brazil) (Amazon), M. glomerata Spreng. (native to Brazil) (Cerrado and Atlantic Forest), and Mikania cf biforis (Asteraceae). Refs.: Möhn 1973, Gagné 1994, Oliveira & Maia 2005, Maia et al. 2008, Maia & Mascarenhas 2017, Gagné & Jaschhof 2017, Goetz et al. 2018.

29. Asphondylia parva Tavares, 1917a (gall-inducer). Distribution: Brazil: Bahia: Madre de Deus (Atlantic Forest). Host plant: undetermined Rubiaceae. Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

30. Asphondylia peplonice Maia, 2001a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Carapebus (Atlantic Forest). Host plant: Peplonia asteria (Vell.) Fontella & E. A. Schwarz (Asclepiadaceae) (endemic to Atlantic Forest). Refs.: Maia 2001a, Gagné & Jaschhof 2017.

31. Asphondylia rochae Tavares, 1918a (gall-inducer). Distribution: Brazil: Ceará: Fortaleza (Atlantic Forest). Host plant: Ludwigia sp. (Onagraceae). Refs.: Tavares 1918a, Gagné 1994, Gagné & Jaschhof 2017.

32. Asphondylia sanctipetri Urso-Guimarães & Amorim, 2002 (gall-inducer). Distribution: Brazil: São Paulo state: Ribeirão Preto (Cerrado); Minas Gerais: Delfinópolis (Cerrado). Host plant: Didymopanax morototoni (Aubl.) Decne. & Planch (Araliaceae) (native to Brazil) (all Brazilian biomes). Refs.: Urso-Guimarães & Amorim 2002, Gagné & Jaschhof 2017, Proença & Maia in print.

33. Asphondylia sennes Maia & Couri, 1992 (gall-inducer). Distribution: Brazil: Rio de Janeiro state, Maricá (Atlantic Forest). Host plant: Senna bicapsularis (L.) Roxb. (Fabaceae) (exotic). Refs.: Maia & Couri 1992, Maia 2001b, Gagné & Jaschhof 2017.

34. Asphondylia serrata Maia, 2004a (gall-inducer). Distribution: Brazil: Minas Gerais: Tiradentes (Cerrado), Serra do Ibitipoca (Atlantic Forest), Serra Azul de Minas (Cerrado), Serra do Cabral (Cerrado), São Tomé das Letras (Atlantic Forest and Cerrado), Serra do Caparaó (Atlantic Forest); Espírito Santo: Santa Teresa (Atlantic Forest); Rio de Janeiro state: Petrópolis, Nova Friburgo (Atlantic Forest). Host plant: Eremanthus erythrophappus (DC.) MacLeish (= Vanillosmopsis erythrophappa (DC.) Sch. Bip.) (Asteraceae) (endemic to Brazil) (Cerrado and Atlantic Forest). Refs.: Maia 2004a, Maia 2011, 2013, Coelho et al. 2013, Gagné & Jaschhof 2017, Maia & Flor 2020.

35. Asphondylia stachytarpheta Barnes, 1932 (gall-inducer). Distribution: Trinidad and Brazil: Rio de Janeiro state: Mangaratiba (Atlantic Forest). Host plants: Stachytarpheta cayennensis (Rich.) Vahl. (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, Pampa, and Pantanal) and Stachytarpheta sp. (Verbenaceae). Refs.: Barnes 1932, Gagné 1994, Rodrigues et al. 2014, Gagné & Jaschhof 2017.

36. Asphondylia struthanthi Rübsaamen, 1915 (gall-inducer). Distribution: Brazil: Ceará: Serra do Baturité (Atlantic Forest). Host plant: Struthanthus sp. (Loranthaceae). Refs.: Rübsaamen 1915, Möhn 1973, Gagné 1994, Gagné & Jaschhof 2017.

37. Asphondylia sulphurea Tavares, 1909 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Leopoldo (Pampa). Host plant: Poss on Smilax sp. (Smilacaceae). Refs.: Tavares 1909, Gagné 1994, Gagné & Jaschhof 2017.

38. Asphondylia tournefortiae Rübsaamen, 1915 (gall-inducer). Distribution: El Salvador; Brazil: Amazonas: Auristela and São Francisco on Acre River (Amazon Forest). Host plants: Heliotropium angustiforum (Ruiz & Pav.) Govaerts (= Tournefortia angustiflora Ruiz & Pav.) (native to Brazil) (Amazon Forest) and Myriopus volubilis Small (= Tournefortia volubilis L.) (Boraginaceae) (native) (Atlantic Forest). Refs.: Rübsaamen 1915, Gagné 1994, Gagné & Jaschhof 2017.

39. Asphondylia ulei Rübsaamen, 1908a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Palmeiras (Atlantic Forest). Host plant: Mikania sp. (Asteraceae). Refs.: Rübsaamen 1908a, Möhn 1973, Gagné 1994, Gagné & Jaschhof 2017.

40. Astromyria modesta (Felt, 1907a) (gall-inducer). Distribution: Widespread eastern Nearctic, Argentina, and Brazil: Minas Gerais (unstated municipality), Rio de Janeiro state (Atlantic Forest). Host plants: Conyza canadensis (L.) Cronquist (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, Pampa, and Pantanal) and Erinigeron strictuos Muhl. ex Willd. (Asteraceae) (exotic). Refs.: Felt 1907a, Gagné 1968, 1994, Gagné & Jaschhof 2017.
41. *Autodiplosis parva* (Tavares, 1916) (gall-inducer). Distribution: Brazil: Bahia: Salvador (Atlantic Forest). Host plant: undetermined Fabaceae. Refs.: Tavares 1916, Gagné 1994, Gagné & Jaschhof 2017.

42. *Baccharomyia magna* Maia, 2012 (gall-inducer). Distribution: Brazil: Minas Gerais: Parque Estadual do Itacolomi (Atlantic Forest). Host plant: *Baccharis pseudomyriocephala* Malag. (Asteraceae) (endemic to Atlantic Forest); HT; ?: MNJR. Distr.: Brazil (Minas Gerais). Refs.: Maia 2012, Gagné & Jaschhof 2017.

43. *Baccharomyia ramosina* Tavares, 1917a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Baccharis crispa Spreng.* (= *B. trimera* (Less.) DC. (Asteraceae) (native to Brazil) (Caatinga, Cerrado, and Atlantic Forest). Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

44. *Brethesiamyia retorta* Maia, 2009 (gall-inducer). Distribution: Brazil: Minas Gerais: Três Marias (Cerrado). Host plant: *Myrcia retorta* (Nyctaginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia et al. 2009, 2010a, Gagné & Jaschhof 2017.

45. *Bruggmannia acuaduata* Maia, 2004b (gall-inducer). Distribution: Brazil: Espírito Santo: Santa Teresa (Atlantic Forest); Rio de Janeiro state: Angra dos Reis (Ilha Grande), Mangaratiba, Maricá, Cabo Frio; São Francisco de Itabapoana (Atlantic Forest); Bahia: Porto Seguro-Trancoso (Atlantic Forest). Host plant: *Guapira opposita* (Vell.) Reitz (Nyctaginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Monteiro et al. 1994, 2001b, 2004b, 2014, Maia & Oliveira 2010, Maia et al. 2014, Rodrigues & Maia 2014, Maia & Carvalho-Fernandes 2016, Gagné & Jaschhof 2017.

46. *Bruggmannia braziliensis* Tavares, 1906 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Leopoldo (Pampa). Host plant: *Myrsine sp.* (Myrsinaceae). Refs.: Tavares 1906, Möhn 1962, Gagné & Jaschhof 2017.

47. *Bruggmannia chapadensis* Proença & Maia, 2018 (gall-inducer). Distribution: Brazil: Mato Grosso: Parque Nacional da Chapada dos Guimarães (Cerrado). Host plant: *Guapira pernambucensis* (Casar.) Lundell (Nyctaginaceae) (endemic to Atlantic Forest). Refs.: Proença & Maia 2018

48. *Bruggmannia depressa* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: Pará: Belém; Acre: Juruá Mirim (Amazon Forest); Rio de Janeiro state: Teresópolis, Rio de Janeiro (Floresta do Tijuca) (Atlantic Forest); Santa Catarina (unstated municipality); Minas Gerais (unstated municipality). Host plant: *Neea* sp. (Nyctaginaceae). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

49. *Bruggmannia elongata* Maia & Couri, 1993 (gall-inducer). Distribution: Brazil: Bahia: Porto Seguro-Trancoso (Atlantic Forest); Espírito Santo: Conceição da Barra, Guarapari (Atlantic Forest); Rio de Janeiro state: Angra dos Reis (Ilha Grande), Mangaratiba, Maricá, Cabo Frio, Carapebus, Arraial do Cabo; São Francisco de Itabapoana (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Bahia: Porto Seguro-Trancoso (Atlantic Forest); Rio Grande do Sul: Canela (Atlantic Forest). Host plant: *Guapira opposita* (Vell.) Reitz (Nyctaginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia & Couri 1993, Monteiro et al. 1994, 2001b, 2014, Maia et al. 2008, Maia & Oliveira 2010, Maia et al. 2014, Rodrigues & Maia 2014, Maia & Carvalho-Fernandes 2016, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017, Goetz et al. 2018, Maia & Siqueira 2020, Maia 2020a.

50. *Bruggmannia globulifex* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Serra dos Órgãos (Atlantic Forest). Host plant: *Neea* sp. (Nyctaginaceae). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

51. *Bruggmannia lignicola* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Serra do Macaé (Atlantic Forest). Host plant: *Neea* sp. (Nyctaginaceae). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

52. *Bruggmannia longicuada* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Atlantic Forest). Host plant: *Neea* sp. (Nyctaginaceae). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

53. *Bruggmannia longiseta* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: Amazonas: Barcelos (Marari), Juruá (Amazon Forest). Host plant: *Neea* sp. (Nyctaginaceae). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

54. *Bruggmannia micrura* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: Santa Catarina (unstated municipality) (Atlantic Forest). Host plant: *Neea* sp. (Nyctaginaceae). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

55. *Bruggmannia monteiroi* Maia & Couri, 1993 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá (Atlantic Forest). Host plant: *Guapira opposita* (Vell.) Reitz (Nyctaginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia & Couri 1993, 1994, Gagné & Jaschhof 2017.

56. *Bruggmannia robusta* Maia & Couri, 1993 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Bertioga (Atlantic Forest); Rio de Janeiro state: Angra dos Reis (Ilha Grande), Mangaratiba, Reserva Biológica União, Maricá, Saquarema, Araruama, Arraial do Cabo, Cabo Frio, Carapebus, São João da Barra, São Francisco de Itabapoana (Atlantic Forest); Espírito Santo: Santa Tereza, Conceição da Barra (Atlantic Forest); Bahia: Porto Seguro-Trancoso (Atlantic Forest); Rio Grande do Sul: Canela (Atlantic Forest). Host plant: *Guapira opposita* (Vell.) Reitz (Nyctaginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia & Couri 1993, 1994, Maia et al. 2008, Maia & Oliveira 2010, Maia et al. 2014, Rodrigues & Maia 2014, Maia & Carvalho-Fernandes 2016, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017, Goetz et al. 2018, Maia & Siqueira 2020, Maia 2020a.

57. *Bruggmannia ruetschiana* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: Santa Catarina: Pedras Grandes (Atlantic Forest). Host plant: *Neea* sp. (Nyctaginaceae). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

58. *Bruggmanniella braziliensis* Tavares, 1909 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Leopoldo (Pampa). Host plant: *Sorocea bonplandi* (Baill.) W. C. Burger et al. (= *Sorocea ilicifolia* Miq.) (Moraceae) (native to Brazil) (Cerrado, Atlantic Forest, and Pantanal). Refs.: Tavares 1909, Möhn 1963, Gagné 1994, Gagné & Jaschhof 2017.

59. *Bruggmanniella byroniana* (Maia & Couri, 1992) (gall-inducer). Distribution: Brazil: Bahia: Viçosa (Atlantic Forest); Espírito Santo: Linhares (Atlantic Forest); Rio de Janeiro state: Mangaratiba, Rio de Janeiro (Marambaia), Maricá, Araruama, Arraial do Cabo, Carapebus, São João da Barra (Atlantic Forest). Host plant: *Byronima sericea* DC. (Malpighiaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia & Couri 1992, Maia 1999a, Maia
61. *Brugmanniella doliciarpri* Maia, 2010 (gall-inducer). Distribution: Venezuela: Santa Lucia; Brazil: Pernambuco: Recife (Atlantic Forest); D.F.: Planaltina (Cerrado); Minas Gerais: Dores do Indaiá (Cerrado). Host plant: *Doliocarpus dentatus* (Aubl.) Standl. (Dilleniaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, and Pantanal). Refs.: Maia et al. 2010a, Gagné & Jaschhof 2017, Maia & Flor 2020.

62. *Brugmanniella duguetiae* Urso-Guimarães & Amorim, 2005 (gall-inducer). Distribution: Brazil: São Paulo state: Sáo Carlos, Luiz António (Cerrado). Host plant: *Duguetia furfuracea* (A.St.-Hil.) Saff. (Acanthaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: *Urso-Guimarães & Amorim 2005, Saito & Urso-Guimarães 2012*, Gagné & Jaschhof 2017.

63. *Brugmanniella ingae* Urso-Guimarães & Amorim, 2005 (gall-inducer). Distribution: Brazil: São Paulo state: between São José do Rio Preto (Atlantic Forest and Cerrado) and Tapiatibita (Atlantic Forest). Host plant: *Inga edulis* Mart. (Fabaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: *Urso-Guimarães & Amorim 2005, Gagné & Jaschhof 2017*.

64. *Brugmanniella maytenuse* (Maia & Couri, 1992) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá, São João da Barra, São Francisco de Itabapoana (Atlantic Forest). Host plant: *Monteverdia obutsisfolia* (Mart.) Biral (=Maytenus obutsisfolia Mart.) (Celastraceae) (endemic to Brazil) (Amazon Forest and Atlantic Forest). Refs.: *Maia & Couri 1992, Maia 1999a, Maia 2001b, Carvalho-Fernandes et al. 2016, Maia & Carvalho-Fernandes 2016, Gagné & Jaschhof 2017*.

65. *Brugmanniella miconiae* Carvalho-Fernandes, Maia & Rodrigues, 2020 (gall-inducer). Distribution: Brazil: Minas Gerais: Dores do Indaiá (Cerrado). Host plant: *Miconia theaezans* (Bonpl.) Cogn. (Melastomataceae) (native to Brazil) (Cerrado and Atlantic Forest). Refs.: Rodrigues et al. 2020.

66. *Brugmanniella miconia* Garcia, Lamas and Urso-Guimarães, 2020 (gall-inducer). Distribution: Brazil: São Paulo state: Sorocaba (Atlantic Forest). Host plant: *Miconia cf. cinnamonomifolia* (Melastomataceae). Refs.: Garcia et al. 2020.

67. *Brugmanniella notatae* Rodrigues & Maia, 2020 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Mangaratiba (Ilha da Marambaia) (Atlantic Forest). Host plant: *Ocotea notata* (Nees and Mart.) Mez (Laureaceae) (endemic to Brazil) (Cerrado and Atlantic Forest). Refs.: Rodrigues et al. 2020.

68. *Brugmanniella obliqua* Tavares, 1920d (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Schinus* sp. (Anacardiaceae). Refs.: *Tavares 1920d, Gagné 1994, Gagné & Jaschhof 2017*.

69. *Brugmanniella sideroxydi* Rodrigues & Maia, 2020 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Mangaratiba (Ilha da Marambaia) (Atlantic Forest). Host plant: *Sideroxylon obutsisfolium* (Roem. and Schult.) T. D. Penn. (Sapotaceae) (native to Brazil) (Caatinga, Cerrado, Atlantic Forest, and Pantanal). Refs.: Rodrigues & Maia 2020.

70. *Burseramyia braziliensis* Maia & Fonseca, 2012 (gall-inducer). Distribution: Brazil: São Paulo state: Bertioga (Atlantic Forest); Espírito Santo: Santa Teresa (Atlantic Forest). Host plant: *Swartzia langsdorffii* Raddi (Fabaceae) (endemic to Atlantic Forest). Refs.: Maia et al. 2008, Maia & Fonseca 2012, Maia 2014, Gagné & Jaschhof 2017.

71. *Ceciplanthes cipo* Garcia & Urso-Guimarães, 2020 (gall-inducer). Distribution: Brazil: Minas Gerais: Serra do Cipó (Cerrado). Host plant: *Heteropterys* sp. (Malpighiaceae). Ref: Garcia et al. 2020.

72. *Ceciplanthes tocantinensis* Garcia & Urso-Guimarães, 2020 (gall-inducer). Distribution: Brazil: Tocantins: Araguané (Cerrado). Host plant: *Ouratea spectabilis* (Mart.) Engl. (Ochnaceae) (endemic to Cerrado). Ref: Garcia et al. 2020.

73. *Cleidodiplosis graminis* (Tavares, 1916) (gall-inducer). Distribution: Brazil: Bahia (unstated municipality) (Atlantic Forest). Host plant: *Paspalum conjugatum* P. J. Bergius (Poaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, Pampa, and Pantanal). Refs.: *Tavares 1916, 1921, Gagné 1994, Gagné & Jaschhof 2017*.

74. *Cleidodiplosis agerati* Maia, 2016 (gall-inducer). Distribution: Brazil: Minas Gerais: Dores de Indaiá (Cerrado). Host plant: *Ageratum conyzoides* L. (Asteraceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, Pampa, and Pantanal). Refs.: *Maia & Oliveira 2016, Gagné & Jaschhof 2017*.

75. *Cleidodiplosis alternantherae* Gagné, 2004 (gall-inducer). Distribution: Uruguay, Argentina and Brazil (unstated locality), Host plant: *Alternanthera philoxeroides* (Mart.) Griseb. (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, Pampa, and Pantanal) and *A. aquatica* (D. Parodi) Chodat (Amaranthaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, and Pantanal). Refs.: *Gagné et al. 2004, Gagné & Jaschhof 2017*.

76. *Cleidodiplosis bahiensis* (Tavares, 1917a) (gall-inducer). Distribution: Brazil: Bahia: Salvador, Madre de Deus (Atlantic Forest). Host plant: undetermined Asteraceae. Refs.: *Tavares 1917a, Gagné 2004, Gagné & Jaschhof 2017*.

77. *Cleidodiplosis bellum* Urso-Guimarães & Carvalho-Fernandes, Maia & Rodrigues, 2020 (gall-inducer). Distribution: Brazil: Minas Gerais: Dores do Indaiá (Cerrado). Host plant: *Miconia theaezans* (Bonpl.) Cogn. (Melastomataceae) (native to Brazil) (Cerrado and Atlantic Forest). Refs.: Rodrigues et al. 2020.

78. *Cleidodiplosis bellum* Urso-Guimarães & Carvalho-Fernandes, Maia & Rodrigues, 2020 (gall-inducer). Distribution: Brazil: Minas Gerais: Dores do Indaiá (Cerrado). Host plant: *Miconia theaezans* (Bonpl.) Cogn. (Melastomataceae) (native to Brazil) (Cerrado and Atlantic Forest). Refs.: Rodrigues et al. 2020.

79. *Cleidodiplosis cecropiae* Proença & Maia, 2020 (gall-inducer). Distribution: Brazil: Rondônia: Monte Negro (Amazon Forest). Host plant: *Cecropiae* sp. (Urlichiaceae). Refs.: Proença & Maia 2020.

80. *Cleidodiplosis cecropiae* Proença & Maia, 2020 (gall-inducer). Distribution: Brazil: Rondônia: Monte Negro (Amazon Forest). Host plant: *Cecropiae* sp. (Urlichiaceae). Refs.: Proença & Maia 2020.

81. *Cleidodiplosis chlorophorae* Rübsaamen, 1905a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Fábrica (Atlantic Forest). Host plant: *Macularia tinctoria* (L.) D. Don ex Steud. (= *Chlorophora tinctoria* (L.) Gaudich. ex B.D. Jackson) (Moraceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, Pampa, and Pantanal). Refs.: *Rübsaamen 1905a, Gagné 1994, Gagné & Jaschhof 2017*.

82. *Cleidodiplosis conica* Oliveira & Maia, 2008 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá, Carapebus, Araraial do Cabo (Atlantic Forest). Host plant: *Microstachys coriiculata* (Vahl)
Griseb. (=Sebastiana glandulosa (Mart. Pax.) (Euphorbiaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 2001b, Oliveira & Maia 2008, Gagné & Jaschhof 2017.

83. *Clinodiplosis costai* Maia, 2005 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá, Carapebus, Arraial do Cabo (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest). Host plant: *Paullinia weinmanniifolia* Mart. (Sapindaceae) (endemic to Atlantic Forest). Refs.: Maia 2001b, 2005, Maia et al. 2008, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

84. *Clinodiplosis diodiae* Maia, 2001a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Carapebus, Arraial do Cabo (Atlantic Forest). Host plant: *Borreria palustris* (Cham. & Schltdl.) Bacigalupo & E. L. Cabral (= *Diodia gymnocephala* (DC.) K.Schum.) (Rubiacae) (native to Brazil) (Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 2001a,b, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

85. *Clinodiplosis eupatorioid* (Felt, 1911a) (gall-inducer). Distribution: St. Vincent, Trinidad, Costa Rica, Brazil: Pará (unstated locality) (Amazon Forest). Host plant: *Chromolaena odorata* (L.) R. M. King & H. Rob. (native to Brazil) (all phytogeographic domains) and *Eupatorium* spp. (Asteraceae). Refs.: Felt 1911a, Gagné 1994, Gagné & Jaschhof 2017.

86. *Clinodiplosis florica* Novo-Guedes & Maia, 2008 (free living phytophagous). Distribution: Brazil: Rio de Janeiro state: Maricá, Rio de Janeiro (Marambaia) (Atlantic Forest). Host plant: *Heteropterys nitida* (Lam.) DC. (Malpighiaceae) (native to Brazil) (Cerrado and Atlantic Forest). Refs.: Maia 2001b, Novo-Guedes & Maia 2008, Maia & Silva 2016, Gagné & Jaschhof 2017.

87. *Clinodiplosis iheringi* (Tavares, 1925) (gall-inducer). Distribution: Brazil: Santa Catarina: Joinville (Atlantic Forest). Host plant: *Aegiphila integrifolia* (Jacq.) Moldenke (= *Aegiphila arborescens* (Aubl.) J. F. Gmel.) (Verbenaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Tavares 1925, Gagné 1994, Gagné & Jaschhof 2017.

88. *Clinodiplosis marciata* (Tavares, 1917b) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Marcetia* sp. (Melastomataceae). Refs.: Tavares 1917b, Gagné 1994, Gagné & Jaschhof 2017.

89. *Clinodiplosis marciens* Fernandes & Maia, 2011 (inquiline). Distribution: Brazil: Rio de Janeiro state: Maricá, Carapebus (Atlantic Forest). Host plant: *Erythroxylum ovalifolium* Peyr. (Erythroxylaceae) (endemic to Atlantic Forest). Refs.: Maia 2001b, Maia & Fernandes 2011, Gagné & Jaschhof 2017.

90. *Clinodiplosis melissae* Maia, 1993a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá (Atlantic Forest). Host plant: *Melissa officinalis* L. (Lamiaceae) (exotic) (cultivated plant). Refs.: Maia 1993a, Gagné & Jaschhof 2017.

91. *Clinodiplosis propusa* Maia, 2001a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Mangaratiba, Rio de Janeiro (Marambaia, Grumari), Maricá, Saquarema, Araruama, Cabo Frio, Arraial do Cabo (Ilha do Cabo Frio), São João da Barra (Atlantic Forest); Rio Grande do Sul: Santa Tereza (Atlantic Forest). Host plant: *Eugenia uniflora* L. (Myrtaceae) (native to Brazil) (Cerrado, Atlantic Forest, and Pampa). Refs.: Monteiro et al. 1994, Maia 2001a,b, Oliveira & Maia 2005, 2008, Silva & Rodrigues 2011, Rodrigues & Maia 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017, Goetz et al. 2018.

92. *Clinodiplosis pulchra* (Tavares, 1917a) (gall-inducer). Distribution: Brazil: Bahia: Salvador, Madre de Deus (Atlantic Forest).

Host plant: *Lantana* sp. (Verbenaceae). Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

93. *Clinodiplosis quartelensis* Maia & Oliveira 2019 (gall-inducer). Distribution: Brazil: Minas Gerais: Quartel São João (Cerrado). Host plant: *Banisteriopsis membranifolia* (A. Juss.) B. Gates (Malpighiaceae) (endemic to Brazil) (Amazon and Atlantic Forests). Refs.: Maia & Oliveira 2019.

94. *Clinodiplosis rubiae* (Tavares, 1918a) (gall-inducer). Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Rubia* sp. (Rubiacae). Refs.: Tavares 1918a, Gagné 1994, Gagné & Jaschhof 2017.

95. *Clinodiplosis uno* (Tavares, 1997) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Paraty, Rio de Janeiro, Maricá, Silva Jardim, Quissamã, Macaé, Arraial do Cabo (Atlantic Forest). Host plant: *Clinodiplosis komai* (Endem. Atlantic Forest). Refs.: Gagné & Jaschhof 2017.

96. *Clinodiplosis uns* (Maia, 1993a) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Paraty, Rio de Janeiro, Maricá, Silva Jardim, Quissamã, Macaé, Arraial do Cabo (Atlantic Forest). Host plant: *Clinodiplosis komai* (Endem. Atlantic Forest). Refs.: Gagné & Jaschhof 2017.

97. *Clinodiplosis uns* (Maia, 1993a) (gall-inducer). Distribution: Brazil: Bahia: Salvador (Iuparica) (Atlantic Forest). Host plant: unknown. Refs.: Tavares 1922, Gagné 1994, Gagné & Jaschhof 2017.

98. *Clinodiplosis uns* (Maia, 1993a) (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Leopoldo (Pampa). Host plant: *Smilax* sp. (Smilacaceae). Refs.: Tavares 1909, Gagné 1994, Gagné & Jaschhof 2017.

99. *Clinodiplosis uns* (Maia, 1993a) (gall-inducer). Distribution: Brazil: Amazonas: Amanã (Amazon Forest); Bahia: Sebastião Laranjeiras (Cerrado); Goiás: Firenopolis, Teresina de Goiás, Cavalcante (Cerrado); Minas Gerais: Januária (Cerrado), São Tomé das Letras (Atlantic Forest, Cerrado); Rio de Janeiro state: Carapebus (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest). Host plant: *Caloplyllum brasiliense* Cambess. (Calophyllaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Madeira et al. 2003, Maia et al. 2008, Arriola et al. 2015, Proença & Maia 2015, Gagné & Jaschhof 2017, Maia 2019a.

100. *Clinodiplosis uns* (Maia, 1993a) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Reserva Biológica de Poço das Antas (Atlantic Forest). Host plant: *Mikania glomerata* Spreng. (Asteraceae) (native to Brazil) (Cerrado and Atlantic Forest). Refs.: Gagné et al. 2001, Gagné & Jaschhof 2017.

101. *Clinodiplosis uns* (Maia, 1993a) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Styrax* sp. (Styracaceae). Refs.: Tavares 1915, Gagné 1994, Gagné & Jaschhof 2017.

102. *Clinodiplosis uns* (Maia, 1993a) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Smilax* sp. (Smilacaceae). Refs.: Tavares 1915, Gagné 1994, Gagné & Jaschhof 2017.

103. *Clinodiplosis uns* (Maia, 1993a) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: *Styrax* sp. (Styracaceae). Refs.: Tavares 1915, Gagné 1994, Gagné & Jaschhof 2017.
Saquarema, Cabo Frio, Arraial do Cabo, São João da Barra, São Francisco de Itabapoana (Atlantic Forest); Espírito Santo: Guarapari, Conceição da Barra, Itaúnas (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Santa Catarina: Babitonga (Atlantic Forest). Host plant: *Varroonia curassavica* Jacq. (= *Cordia verbenacea* DC.) (= *Cordia curassavica* (Jacq.) Roem. & Schult.) (Boraginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, and Pampa). Refs.: Monteiro et al. 1994, Maia 1996a, 2001b, Maia et al. 2008, Bregonci et al. 2010, Arriola et al. 2015, Carvalho-Fernandes et al. 2016, Maia & Carvalho-Fernandes 2016, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018, Maia & Siqueira 2020, Maia 2020a.

105. *Costadiplosis maricaensis* Viceconte & Maia, 2009 (gall-inducer). Distribution: Brazil: Bahia*: Porto Seguro (RB557173) (Atlantic Forest); Rio de Janeiro state: Maricá (Atlantic Forest). Host plant: *Psittacanthus dichrous* (Mart.) Mart. (Loranthaceae) (endemic to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 2001b, Viceconte & Maia 2009, Gagné & Jaschhof 2017.

106. *Couridiplosis vena* Maia, 2004a (gall-inducer). Distribution: Bahia*: Ilhéus (RB732206) (Atlantic Forest); Espírito Santo*: Santa Leopoldina (RB440351) (Atlantic Forest); Minas Gerais: Tiradentes (Cerrado); São Paulo state*: Bananal (RB511509) (Atlantic Forest); Parana*: Diamante do Norte (RB460265) (Atlantic Forest). Host plant: *Croton floribundus* Spreng (Euphorbiaceae) (native) (Atlantic Forest). Refs.: Maia 2004a, Maia & Fernandes 2004, Gagné & Jaschhof 2017.

107. *Dactylodiplosis heisteria* Rübsaamen, 1915a (gall-inducer). Distribution: Brazil: Acre: Aurora (Amazon Forest). Host plant: *Heisteria acuminata* Humb. & Bonpl. Engl. (= *Heisteria cyanoarpa* Poepp.) (Olacaceae) (native) (Amazon Forest). Refs.: Rübsaamen 1915a, Gagné 1994, Gagné & Jaschhof 2017.

108. *Dactylodiplosis heptaphylli* Maia, 2004 (gall-inducer). Distribution: Brazil: Bahia*: Conde (RB379786), Caravelas (RB507605) (Atlantic Forest); Espírito Santo*: Linhares (RB252596, RB34113), São João da Barra (Atlantic Forest). Host plant: *Heisteria umbellulata* (Humb. & Bonpl.) Engl. (= *Heisteria acuminata* Humb. & Bonpl.) (Olacaceae) (native) (Amazon Forest). Refs.: Monteiro et al. 1994, Maia 2001a, b, Bregonci et al. 2010, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

109. *Dactylodiplosis icicaribae* Maia, 2002 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Mangaratiba, Carapebus (Atlantic Forest); Espírito Santo: Araruama, Arraial do Cabo, Cabo Frio, São João da Barra (Atlantic Forest). Host plant: *Protium icicariba* Cambess. (Lauraceae) (endemic to Atlantic Forest). Refs.: Bregonci et al. 2010, Maia 2001a, b, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017.

110. *Dactylodiplosis petibaurum* Maia, 2021 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Parque Nacional da Restinga de Jurubatiba (Atlantic Forest). Host plant: *Ocotea pulchella* (Nees & Mart) Mez (Lauraceae) (native) (Atlantic Forest, Cerrado, and Pampa).

111. *Dasineura flavissima* Tavares, 1922 (gall-inducer). Distribution: Brazil: Mato Grosso*: Tavares (RB 314383) (Cerrado). Host plant: *Protium icicariba* Cambess. (Lauraceae) (endemic to Atlantic Forest). Refs.: Tavares 1922, Gagné 1994, Gagné & Jaschhof 2017.

112. *Dasineura byrsonimae* Maia, 2010b (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Mangaratiba, Rio de Janeiro (Marambaia), Reserva Biológica União, Maricá, Saquarema, Carapebus, Arraial do Cabo, Cabo Frio, São João da Barra, São Francisco de Itabapoana (Atlantic Forest); Espírito Santo: Conceição da Barra Atlantic Forest). Host plant: *Byrsonima sericea* DC. (Malpighiaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 2001b, Maia 2008, 2010b, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Carvalho-Fernandes 2016, Maia & Silva 2016, Gagné & Jaschhof 2017, Maia & Siqueira 2020, Maia 2020a.

113. *Dasineura copacabanasensis* Maia, 1993b (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Saquarema, Arruama, Arraial do Cabo, Cabo Frio, São João da Barra (Atlantic Forest). Host plant: *Eugenia copacabanasensis* Kiiersk. (Myrtaceae) (endemic to Atlantic Forest). Refs.: Maia 1993b, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

114. *Dasineura couepiae* Maia, 2001a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro, Maricá, Araruama, Arraial do Cabo, Cabo Frio (Atlantic Forest); Espírito Santo: Guarapari, São Mateus (Atlantic Forest); Bahia: Caravelas, Conde, Porto Seguro (Atlantic Forest). Host plant: *Couepia ovalifolia* Schott Benth. ex Hook.f. (Chrysobalanaceae) (endemic to Atlantic Forest). Refs.: Monteiro et al. 1994, Maia 2001a, b, Bregonci et al. 2010, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017, Maia & Cruz, 2020.

115. *Dasineura gigantea* Angelo & Maia, 1999 (gall-inducer). Distribution: Brazil: Paraná: Piraquara, Pontal do Paraná (Atlantic Forest); Santa Catarina: Babitonga, Itápolis (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Host plant: *Psidium cattleianum* Sabine (Myrtaceae) (endemic to Brazil) (Caatinga, Cerrado, and Atlantic Forest). Refs.: Angelo & Maia 1999, Maia et al. 2008, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018.

116. *Dasineura globosa* Maia, 1996b (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Mangaratiba, Rio de Janeiro (Marambaia), Maricá, Saquarema, Arruama, Arraial do Cabo, Cabo Frio, São João da Barra (Atlantic Forest). Host plant: *Eugenia astringens* Cambess. (= *Eugenia rotundifolia* Casar.) (Myrtaceae) (endemic to Atlantic Forest). Refs.: Maia 1996b, 2001b, Oliveira & Maia 2005, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017.

117. *Dasineura marginalis* Maia, 2005 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Mangaratiba, Saquarema, Maceió, Arruama, Arraial do Cabo, Cabo Frio (Atlantic Forest). Host plant: *Eugenia astringens* Cambess. (= *Eugenia umbelliflora* O. Berg., *E. rotundifolia* Casar.) (Myrtaceae) (endemic to Atlantic Forest). Refs.: Maia 2001b, Maia et al. 2005, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017.

118. *Dasineura myciariae* Maia, 1996b (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Marambaia), Maricá, Carapebus, São Francisco de Itabapoana (Atlantic Forest); Espírito Santo: Guarapari, Santa Teresa (Atlantic Forest). Host plant: *Myrciaria floribunda* (H. West ex Willd.) O.Berg (Myrtaceae (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 1996b, Bregonci et al. 2010, Maia 2001b, Maia et al. 2014, Maia & Carvalho-Fernandes 2016, Maia & Silva 2016, Gagné & Jaschhof 2017.

119. *Dasineura occulta* Pereira-Colavite & Urso-Guimaraes, 2013 (gall-inducer). Distribution: Brazil: São Paulo state: São Carlos
(Atlantic Forest). Host plant: *Hypochaeris chloris* (Kunth) Britton (Asteraceae) (native to Brazil) (Atlantic Forest and Pampa). Refs.: Pereira-Colavite & Maia 2013, Gagné & Jaschhof 2017.

120. *Dasineura ovalifolii* Fernandes & Maia, 2011 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Grumari, Marambaia), Maricá, Saquarema, Araruama, Arraial do Cabo, Cabo frio, Carapebus (Atlantic Forest); Espírito Santo: Santa Teresa (Atlantic Forest). Host plant: *Erythroxylum ovalifolium* Puyr. (Erythroxylaceae) (endemic to Atlantic Forest). Refs.: Maia 2001b, Maia & Fernandes 2011, Maia et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017.

121. *Dasineura tavaresi* Maia, 1996b (gall-inducer). Distribution: Brazil: State of de Janeiro: Maricá, Araruama, Carapebus, Arraial do Cabo, Cabo frio, São João da Barra (Atlantic Forest). Host plant: *Neomitranthes obscura* (DC.) N. Silveira (Myrtaeae) (endemic to Atlantic Forest). Refs.: Maia 1996b, 2001b, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

122. *Diadiplosis abacaxii* Culik & Ventura, 2013a (predator of *Dysmicoccus brevipes* Cockrell, 1893) (Hemiptera; Pseudococcidae). Distribution: Brazil: Espírito Santo: Cachoeiro de Itapemirim (Atlantic Forest). Refs.: Culik & Ventura 2013a, Gagné & Jaschhof 2017.

123. *Diadiplosis belligerii* Culik & Ventura, 2012 (predator of Pseudococcidae and Coccidae: Hemiptera). Distribution: Brazil: Espírito Santo: Domingos Martins (Atlantic Forest). Refs.: Culik & Ventura 2012, Gagné & Jaschhof 2017.

124. *Diadiplosis coccidivora* (Felt, 1911b) (predator of *Pulvinaria urbicola* (Cockrell, 1893) (Hemiptera; Coccidae), *Alichtensia sp.* (Hemiptera; Coccidae), and *Eriococcus sp.* (Hemiptera; Eriococcidae). Distribution: USA (Florida); Bermuda; Jamaica; Guadeloupe, Panama, Guayana, Argentina, Brazil: São Paulo state (unstated municipality). Refs.: Felt 1911b, Borgmeier 1931, Gagné & Jaschhof 2017.

125. *Diadiplosis floriana* (Felt, 1915a) (predator of Pseudococcidae). Distribution: USA (Florida), Cuba, Paraguay, Brazil: Espírito Santo*: Domingos Martins, Sooretama, Cachoeiro de Itapemirim (material of MNRJ) (Atlantic Forest). Refs.: Felt 1915a, Gagné & Jaschhof 2017.

126. *Diadiplosis jamboi* Culik & Ventura, 2013b (predator of *Planococcus halli* Ezzat & McConnell, 1956 (Hemiptera: Pseudococcidae). Distribution: Brazil: Espírito Santo: Vitória (Atlantic Forest). Refs.: Culik & Ventura 2013b, Gagné & Jaschhof 2017.

127. *Diadiplosis martinsensis* Culik & Ventura, 2013b (predator of Pseudococcus cf. jackbeardsleyi (Hemiptera: Pseudococcidae). Distribution: Brazil: Espírito Santo: Domingos Martins (Atlantic Forest). Refs.: Culik & Ventura 2013b, Gagné & Jaschhof 2017.

128. *Diadiplosis multifila* (Felt, 1907b) (predator of scale insects; *Ferrisia sp.*, *Planococcus citri* Risso, 1813, *Phenacoccus solani* Ferris, 1918 (Hemiptera: Pseudococcidae) and *Icerya montserratensis* Riley & Howard, 1890 (Hemiptera: Margarodidiae). Distribution: West Indies (Dominican Republic to Trinidad), Brazil: Espírito Santo*: Vitória (material of MNRJ) (Atlantic Forest), Fiji, Israel. Refs.: Felt 1907b, Gagné & Jaschhof 2017.

129. *Diadiplosis pseudococi* Felt, 1921b (predator of Pseudococcus bromeliae* Hempel 1912; *Dysmicoccus brevipes* Cockrell 1893 and *D. neobrevipes* Beardsley 1959 (Hemiptera: Pseudococcidae). Distribution: Hawaii, Mexico, Guatemala, Honduras, Jamaica, Guyana, and Brazil (unstated locality). Refs.: Felt 1921b, Gagné & Jaschhof 2017.

130. *Diadiplosis saccharum* Urso-Guimarães, 2020 (predator of *Saccharicoccus sacchari* (Cockrell, 1895) (Hemiptera, Pseudococcidae). Distribution: Brazil: Jaboricabal, São Carlos (Cerrado). Refs.: Urso-Guimarães et al. 2020.

131. *Diadiplosis vaupedis* (Harris, 1968) (predator of undetermined coccoid; *Planococcus sp.* (Hemiptera: Pseudococcidae). Distribution: Colombia, Guadeloupe, Brazil: Espírito Santo*: Domingos Martins (material of MNRJ) (Atlantic Forest). Refs.: Harris 1968, Gagné & Jaschhof 2017.

132. *Dialeria styrycivas* Tavares, 1918a (inquinule). Distribution: Bahia: Caetité (Atlantic Forest, Caatinga). Host plant: *Styrax sp.* (Styraceae). Refs.: Tavares 1918a, Gagné 1994, Gagné & Jaschhof 2017.

133. *Dichodiplosis triangularis* (Felt, 1908) (fungivorous). Distribution: USA (widespread), Costa Rica, and Brazil: Bahia: Salvador (Atlantic Forest). Refs.: Felt 1908, Gagné & Jaschhof 2017.

134. *Didactylomyia longimana* (Felt, 1908) (kleptoparasite in spider web). Distribution: Sri Lanka, USA, Colombia, Dominican Republic, Mexico, and Brazil: Mato Grosso do Sul: Aquidauana (Cerrado). Refs.: Felt 1908, Gagné & Jaschhof 2017, Carmo-Neto et al. 2019.

135. *Elachyulus psidii* Maia & Nava, 2011 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: Pelotas (Pampa) (cultivated area). Host plant: *Psidium cattleyanum* Sabine (Myrtaceae) ( endemic to Brazil) (Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia & Nava 2011, Gagné & Jaschhof 2017.

136. *Ephormonia miconiae* Maia, 2001a (gall-inducer). Distribution: Brazil: Espírito Santo*: Santa Teresa (RB493591) (Atlantic Forest); Rio de Janeiro state: Carapebus (Atlantic Forest). Host plant: *Miconia cinnamomifolia* (DC.) Naudin (Melastomataeae) ( endemic to Atlantic Forest). Refs.: Maia 2001a, b, Gagné & Jaschhof 2017.

137. *Euugeniamyia dispar* Maia, Mendonça & Romanowski, 1997 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: Pelotas (Pampa), Porto Alegre (Atlantic Forest); São Paulo state: Bertioaga (Atlantic Forest). Host plant: *Eugenia uniflora* L. (Myrtaceae) (native to Brazil) (Cerrado, Atlantic Forest, and Pampa). Refs.: Maia, Mendonça & Romanowski 1997, Maia et al. 1997, 2008, Bierhals et al. 2012, Mendonça & Romanowski 2012, Gagné & Jaschhof 2017.

138. *Euugeniamyia triangularis* Maia & Nava, 2011 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá (Atlantic Forest). Host plant: *Eugenia uniflora* L. (Myrtaceae) (native to Brazil) (Cerrado, Atlantic Forest, and Pampa). Refs.: Maia & Nava 2011, Gagné & Jaschhof 2017.

139. *Feltiella curtistylistus* Gagné, 1984 (predator of *Tetranychus evansi* Baker & Pritchard, 1960 (Acarina: Tetranychidae). Distribution: Brazil: Pernambuco: Petrolina (Caatinga); USA: Florida. Refs.: Gagné 1984, 1994, Gagné & Jaschhof 2017.

140. *Fernandesia meridionalis* Rodrigues & Maia, 2013 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Francisco de Paula (Atlantic Forest). Host plant: *Myrciaria delicatula* (DC.) O.Berg (Myrtaceae) ( native to Brazil) (Cerrado, Atlantic Forest, and Pampa). Refs.: Rodrigues et al. 2013, Gagné & Jaschhof 2017.

141. *Frauwenfeldia coussapoae* Rübsaamen, 1905b (gall-inducer). Distribution: Brazil: Acre: Jurua Mirim (Amazon Forest), Rio de Janeiro state: Rio de Janeiro (Gávea) (Atlantic Forest). Host plant: *Coussapoa sp.* (Moraceae). Refs.: Rübsaamen 1905b, Gagné 1994, Gagné & Jaschhof 2017.

142. *Geraldusia eupatoriella* Tavares, 1917a (gall-inducer). Distribution: Brazil: Rio de Janeiro state (Atlantic Forest). Host
143. *Gnesiodiplosis itaparicae* Tavares, 1917a (gall-inducer). Distribution: Brazil: Bahia: Salvador (Atlantic Forest). Host plant: *Eupatorium* sp. (Asteraceae). Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017. 

144. *Guarea myristica purpura* Maia, 2007a (gall-inducer). Distribution: Brazil: São Paulo state: Bertioga (Atlantic Forest). Host plant: *Guarea macrophylla* Vahl (Meliaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 2007a, Maia et al. 2008, Gagné & Jaschhof 2017. 

145. *Guarephila albida* Tavares, 1909 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Leopoldo (Pampa). Host plant: *Eugenia astringens* Cambess. (Myrtaceae) (endemic to Atlantic Forest). Refs.: Gagné & Jaschhof 2017. 

146. *Haplopalpus serjaneae* Rübsaamen, 1915a (gall-inducer). Distribution: Brazil: Acre, Auriestela (Amazon Forest). Host plant: *Serjania* sp. (Sapindaceae). Refs.: Rübsaamen 1915a, Gagné 1994, Gagné & Jaschhof 2017. 

147. *Haplusia braziliensis* (Felt, 1915b) (Fungivorous species). Distribution: Brazil: Pará, Igarapé Açu (Amazon Forest). Refs.: Felt 1915b, Gagné 1994, Gagné & Jaschhof 2017. 

148. *Haplusia plumipes* Karsch, 1877 (Fungivorous species). Distribution: Brazil: Bahia (unstated locality). Refs.: Karsch 1877, Gagné 1994, Gagné & Jaschhof 2017. 

149. *Houardodiplosis rochae* Tavares, 1925 (gall-inducer). Distribution: Brazil: Ceará: Fortaleza (Atlantic Forest, Caatinga), Aracati (Caatinga). Host plant: *Combretum leprosum* Mart. (Combretaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Tavares 1925, Gagné 1994, Maia 2002, Gagné & Jaschhof 2017. 

150. *Iatrophobia brasiliensis* (Rübsaamen, 1908a) (gall-inducer). Distribution: Costa Rica, Guadeloupe, St. Vincent, Trinidad and Tobago, Guyana, Surinam, and Brazil: Amazonas: Fortaleza, Juruá Mirim (Amazon Forest); Rio de Janeiro state: Mauá, Palmeiras, São Francisco do Iguape (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Santa Catarina: Tubarão (Atlantic Forest). Host plants: *Manihot esculenta* Crantz (= *Manihot utilisissima* Pohl.) (native to Brazil) (Amazon Forest and Cerrado), *Manihot caerulescens* (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest) and *Manihot sp.* (Euphorbiaceae). Refs.: Rübsaamen 1908a, Gagné 1994, Maia et al. 2008, Maia & Carvalho-Fernandes 2016, Gagné & Jaschhof 2017. 

151. *Jorgenseniella eugeniae* Maia, 2005 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Ararajú do Cabo (Atlantic Forest). Host plant: *Eugenia astringens* Cambess. (= *E. umbelliflora* O. Berg. = *E. rotundifolia* Casar.) (Myrtaeae) ( endemic to Atlantic Forest). Refs.: Maia et al. 2005, Gagné & Jaschhof 2017. 

152. *Lestodiplosis brasiliensis* (Tavares, 1920b) (predator). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Refs.: Tavares 1920b, Gagné 1994, Gagné & Jaschhof 2017. 

153. *Lestodiplosis floribunda* (Rodrigues & Maia, 2010a) (predator). Distribution: Brazil: Rio de Janeiro state: Maricá (Atlantic Forest). On *Jasminum holocephale* (Weinn) O’Donell (Convolvulaceae). Refs.: Rodrigues & Maia 2010a, Gagné & Jaschhof 2017. 

154. *Lestodiplosis maricaensis* Santos & Maia, 2009 (predator). Distribution: Rio de Janeiro state: Vassouras (Atlantic Forest). On *Stylosanthes guianensis* (Aubl.) Sw. (Fabaceae) (native to Brazil) (all phytogeographic domains). Refs.: Santos & Maia 2009, Rodrigues et al. 2014, Gagné & Jaschhof 2017. 

155. *Liodiplosis conica* Gagné, 2001 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Angra dos Reis (Ilha Grande), Silva Jardim, Reserva Biológica União, Rio de Janeiro (Parque Nacional da Tijuca, Grumari), Varenca, Angra dos Reis (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Rio Grande do Sul: Canela (Atlantic Forest). Host plants: *Mikania glomerata* Spreng. (native to Brazil) (Cerrado and Atlantic Forest) and *Mikania of biformis* (Asteraceae). Refs.: Gagné et al. 2001, Oliveira & Maia 2005, Maia et al. 2008, Maia & Oliveira 2010, Proença & Maia 2012, Gagné & Jaschhof 2017, Maia & Mascarenhas 2017, Goetz et al. 2018, Maia & Siqueira 2020. 

156. *Liodiplosis cylindrica* Gagné, 2001 (gall-inducer). Distribution: Distr.: Brazil: Rio de Janeiro state: Angra dos Reis (Ilha Grande), Paraty, Manguatiba, Silva Jardim, Varenca, Parque Nacional do Itaúna (Atlantic Forest); Minas Gerais: Viçosa (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Santa Catarina: Babitonga (Atlantic Forest); Rio Grande do Sul: Canela (Atlantic Forest). Host plants: *Mikania glomerata* Spreng. (native to Brazil) (Cerrado and Atlantic Forest) and *Mikania of biformis* (Asteraceae). Refs.: Gagné et al. 2001, Maia et al. 2008, Maia & Oliveira 2010, Carvalho-Fernandes & Maia 2011, Proença & Maia 2012, Rodrigues et al. 2014, Maia & Proença 2016, Gagné & Jaschhof 2017, Maia & Mascarenhas 2017, Melo-Júnior et al. 2018, Goetz et al. 2018. 

157. *Liodiplosis sphaeric* Gagné, 2001 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Angra dos Reis (Ilha Grande), Paraty, Manguatiba, Varenca, Parque Nacional do Itaúna (Atlantic Forest); Minas Gerais: Viçosa (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Rio Grande do Sul: Canela (Atlantic Forest). On *Andira humilis* Mart. ex Benth. (Fabaceae) (endemic to Atlantic Forest) (Asteraceae). Refs.: Gagné et al. 2001, Maia et al. 2008, Maia & Oliveira 2010, Carvalho-Fernandes & Maia 2011, Proença & Maia 2012, Rodrigues et al. 2014, Maia & Proença 2016, Gagné & Jaschhof 2017, Maia & Mascarenhas 2017, Goetz et al. 2018. 

158. *Lopezia aldinae* Fernandes & Maia, 2010 (gall-inducer). Distribution: Brazil: Amazonas: Manaus (Amazon Forest). Host plant: *Mikania cf biformis* (Asteraceae). Refs.: Fernandes et al. 2010, Gagné & Jaschhof 2017. 

159. *Lopezia andirae* Garcia, Lima, Calado & Urso-Guimaraes, 2017 (gall-inducer). Distribution: Mato Grosso: Chapada dos Guimarães (Cerrado); Bahia: Barreiras (Cerrado); São Paulo state: Luiz Antônio (Cerrado). Host plant: *Andira humilis* Mart. ex Benth. (Fabaceae) ( endemic to Brazil) (Asteraceae). Refs.: Garcia et al. 2017, Lima & Calado 2018. 

160. *Lopezia biloba* Maia, 2004a (gall-inducer). Distribution: Brazil: Minas Gerais: Tiradentes (Cerrado). Host plant: *Gnaphalium sp.* (Nyctaginaceae). Refs.: Maia 2004a, Maia & Fernandes 2004, Gagné & Jaschhof 2017. 

161. *Lopezia brasiliensis* Rübsaamen, 1908b (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Fábrica (Atlantic Forest); Santa Catarina: Tubarão (Atlantic Forest). Host plant: *Oxoaea sp.* (Melastomataceae). Refs.: Rübsaamen 1908b, Gagné 1994, Maia 2007b, Gagné & Jaschhof 2017. 

162. *Lopezia caulinhorts* Maia, 2003 (gall-inducer). Distribution: Brazil: Amazonas: Amanã-; Amapá: Oiapoque (Amazon Forest);
Bahia: São Sebastião (Atlantic Forest); Rio de Janeiro state: Angra dos Reis, Carapebus (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Minas Gerais: São Tomé das Letras (Atlantic Forest) Januária (Atlantic Forest, Cerrado); Goiás: Pirenópolis, Cavalcante (Cerrado); Santa Catarina: Babitonga (Atlantic Forest). Host plant: Calophyllum brasiliense Cambess. (Calophyllaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Madeira et al. 2003, 2008, 2013, 2005, Arriola et al. 2015, 2014, Maia et al. 2018, Maia 2019a, Maia 2003, Maia, 2019b.

163. Lepisia chapadensis Garcia & Urso-Guimarães, 2018 (gall-inducer). Distribution: Brazil: Mato Grosso: Chapada dos Guimarães (Cerrado). Host plant: Andira vermiculata (Mart.) Benth. (Fabaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest). Ref: Garcia & Urso-Guimarães 2018.

164. Lepisia conspicua Maia, 2003 (gall-inducer). Distribution: Brazil: Amazonas: Amanã (Amazon Forest); Amapá: Oiapoque (Amazon Forest); Goiás: Pirenópolis (Cerrado); Rio Grande do Norte: Cangurejatama (Atlantic Forest); Bahia: Sebastião Laranjeiras (Caatinga, Cerrado); Minas Gerais: São Tomé das Letras (Atlantic Forest) Januária (Atlantic Forest, Cerrado); Rio de Janeiro state: Carapebus (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Santa Catarina: São Francisco do Sul (Atlantic Forest); Paraná: Paranaguá (Atlantic Forest). Host plant: Calophyllum brasiliense Cambess. (Calophyllaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Madeira et al. 2003, 2008, 2013, Arriola et al. 2015, 2014, Maia 2015, Maia & Oliveira 2010, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018, Maia 2002a, 2003, Maia, 2019b.

165. Lepisia davillae Maia & Monteiro, 2017 (free living phytophagous). Distribution: Brazil: Rio de Janeiro state: Teresópolis (Atlantic Forest). Host plant: Davilla rugosa Poir (Dilleniaceae) (native to Brazil) (Amazon Forest and Atlantic Forest). Ref: Maia & Monteiro 2017.

166. Lepisia eichhorniae Urso-Guimarães, 2015 (gall-inducer). Distribution: Brazil: São Paulo state: Luiz Antônio (Cerrado). Host plant: Eichhornia azurea (Sw.) Kunth (Pontederiaceae) (native to Brazil) (all Brazilian phytogeographic domains). Refs.: Urso-Guimarães et al. 2015, Gagné & Jaschhof 2017.

167. Lepisia elliptica Maia, 2003 (gall-inducer). Distribution: Mexico, Guatemala, Costa Rica, Dominican Republic, Cuba, Bolivia, Guyana, Peru, and Brazil: Amazonas: Amanã (Amazon Forest); Amapá: Oiapoque (Amazon Forest); Pará: Moju (Amazon Forest); Tocantins: Formoso do Araguaia (Cerrado); Rondônia: Chiquiguaia (Amazon Forest); Goiás: Pirenópolis (Cerrado); Mato Grosso: Santa Terezinha (Cerrado); Rio Grande do Norte: Cangurejatama (Atlantic Forest); Maranhão: São Luís (Amazon Forest); Pernambuco: Rio Preto (Cerrado); Bahia: Sebastião Laranjeiras (Caatinga, Cerrado); Rio de Janeiro state: Carapebus (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Minas Gerais: São Tomé das Letras (Atlantic Forest, Cerrado); Santa Catarina: Babitonga (Atlantic Forest); Paraná: Paranaguá (Atlantic Forest). Host plant: Calophyllum brasiliense Cambess. (Calophyllaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Madeira et al. 2003, Maia et al. 2008, 2013, Arriola et al. 2015, Maia & Oliveira 2010, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018, Maia 2002a, 2003, Maia, 2019b.

168. Lepisia erythroyli Rodrigues & Maia, 2010b (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Angra dos Reis (Ilha Grande), Mangaratiba, Rio de Janeiro (Grunari, Marambaia), Maricá, Carapebus, Saquarema, Araruama, Arraial do Cobo, Cabo Frio, São João da Barra (Atlantic Forest); Espírito Santo: Santa Teresa (Atlantic Forest); São Paulo state: Itanhaém (Atlantic Forest). Host plant: Erythroxylum ovalifolium Peyr. (Erythroxylaceae) (endemic to Atlantic Forest). Refs.: Monteiro et al. 1994, Maia 2001b, Rodrigues & Maia 2010b, Fernandes & Maia 2011, Maia et al. 2014, Maia & Silva 2016, Gagné & Jaschhof 2017, Maia 2021.

169. Lepisia grandis Maia, 2001a (gall-inducer). Distribution: Brazil: Paraíba: Mataracá (Atlantic Forest); Bahia: Camamu, Porto Seguro-Trancoso, Santa Cruz de Cabrália, Itacaré, Nova Viçosa, Umu, Ilhéus, Valença, Belmonte (Atlantic Forest); Espírito Santo: Anaçuz, Conceição da Barra, Guarapari; Presidente Kennedy, São Mateus (Atlantic Forest); Rio de Janeiro state: Angra dos Reis (Ilha Grande), Paraty, Mangaratiba, Rio de Janeiro (Marambaia), Carapebus, Maricá, Araruama, Arraial do Cobo, São Francisco de Itabapoana (Atlantic Forest); São Paulo state: Bertioga, Ubatuba, Cananeia (Atlantic Forest); Santa Catarina: Babitonga (Atlantic Forest). Host plants: Dalbergia ecastophyllum (L.) Taub. (native to Brazil) (Amazon Forest and Atlantic Forest) and Dalbergia frutescens (Vell.) Britton (native to Brazil) (Amazon Forest, Atlantic Forest, Caatinga, and Cerrado) (Fabaceae). Refs.: Maia 2001a, b, 2015, Maia et al. 2008, Maia & Oliveira 2010, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018, Maia 2020a, Maia 2021.

170. Lepisia indaiensis Maia & Oliveira, 2018 (gall-inducer). Distribution: Brazil: Pernambuco: Tamarandaré; Rio de Janeiro state: Mamaratiba (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Minas Gerais: Dores do Indaiá (Cerrado). Host plant: Andira fraxinifolia Bent (Fabaceae) (endemic to Brazil) (Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia et al. 2008, Santos et al. 2012, Rodrigues et al. 2014, Maia & Oliveira 2018.

171. Lepisia leandrae Maia, 2019b (gall-inducer). Distribution: Brazil: São Paulo state: Bertioga (Atlantic Forest). Host plant: Leandra ionopogon (Mart.) Cogn. (Melastomataceae) (native to Brazil) (Cerrado and Atlantic Forest). Refs.: Maia et al. 2008, Maia 2019b.

172. Lepisia linearis Maia 2003 (gall-inducer). Distribution: Mexico, Costa Rica, Trinidad and Tobago, Cuba, Colombia, Guyana, Peru, Bolivia, Paraguay, Brazil: Amazonas: Amanã (Amazon Forest); Pará: Moju (Amazon Forest); Rondônia: Chiquiguaia (Amazon Forest); Roraima: Caracarai (Amazon Forest); Rio Grande do Norte: Cangurejatama (Atlantic Forest); Mato Grosso: Santa Terezinha (Amazon Forest and Cerrado), Corumbá (Cerrado); Minas Gerais: São Tomé das Letras (Atlantic Forest); Espírito Santo: Linhares (Atlantic Forest); Rio de Janeiro state: Carapebus (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Santa Catarina: Babitonga (Atlantic Forest); Paraná: Paranaguá (Atlantic Forest). Host plant: Calophyllum brasiliense Cambess. (Calophyllaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Madeira et al. 2003, Maia et al. 2008, Maia 2013, Arriola et al. 2015, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018.

173. Lepisia marginals Maia, 2001a (gall-inducer). Distribution: Brazil: Bahia: Caravelas, Conde (Atlantic Forest); Espírito Santo: Alto Limoero, São Mateus, Linhares, Itaguaçu, Itarana (Atlantic Forest); Rio de Janeiro state: Rio de Janeiro, Niterói, Camisimoro de Abreu, Araruama, Carapebus, Cabo Frio, Arraial do Cabo (Atlantic Forest). Host plant: Couepia ovalifolia (Schott) Benth. ex Hook.f. (Chrysobalanaceae) (endemic to Atlantic Forest). Refs.: Monteiro et al. 1994, Maia 2001a, b, Gagné & Jaschhof 2017, Maia & Cruz 2020, Maia 2021.

174. Lepisia maricaensis Rodrigues & Maia, 2010b (gall-inducer). Distribution: Peru: Iquitos (Amazon Forest); Brazil:
Amazonas (Amazon Forest), Paraíba: Caaporá (Atlantic Forest); Minas Gerais: Diamantina, Lagoa Santa, Serra do Cipó, Santa Rita do Riacho, Jaboticatubas (Cerrado); Rio de Janeiro state: Rio de Janeiro, Manguaretuba, Niterói, Maricá, Casimiro de Abreu, Cabo Frio; Carapebus (Atlantic Forest). Host plant: *Protium brasiliense* (Spreng.) Engl. (Burseraceae) (endemic to Brazil) (Cerrado and Atlantic Forest). Refs.: Maia 2001b, Rodrigues & Maia 2010b, Rodrigues et al. 2014, Gagné & Jaschhof 2017, Maia 2021.

175. *Leposia mataybæ* Garcia & Urso-Guimarães, 2018 (gall-inducer). Distribution: Brazil: Mato Grosso: Chapada dos Guimarães (Cerrado). Host plant: *Matayba guianensis* Aubl. (Sapindaceae) (native to Brazil) (Amazon Forest, Cerrado, Atlantic Forest, and Pantanal). Ref.: Garcia & Urso-Guimarães 2018.

176. *Leposia mimosae* Maia, 2010 (gall-inducer). Distribution: Brazil: Pernambuco, Parnamirim (Caatinga). Host plant: *Mimos a tenuiflora* (Willd.) Poir. (= *Mimosa hostilis* Benth. (Mimosaceae) (native to Brazil) (Caatinga and Cerrado). Refs.: Maia et al. 2010b, Gagné & Jaschhof 2017.

177. *Leposia pernambucensis* Maia, 2010 (gall-inducer). Distribution: Brazil: Pernambuco, Parnamirim (Caatinga), Garanhuns* (RB376469) (Caatinga); Bahia: Ibiaissucê (Caatinga). Host plant: *Mimos a tenuiflora* (Willd.) Poir. (= *Mimosa hostilis* (Fabaceae) (native to Brazil) (Caatinga and Cerrado). Refs.: Maia et al. 2010b, Gagné & Jaschhof 2017, Brito et al. 2018.

178. *Leposia similis* Maia, 2004 (gall-inducer). Distribution: Brazil: Pará: Serra do Cachimbo, Ponta da Pedra (Amazon Forest); Parába: João Pessoa (Atlantic Forest); Distrito Federal: Brasília (Cerrado); Alagoas: Maceió (Atlantic Forest); Sergipe: Itaporanga d’Ajudia (Atlantic Forest); Bahia: Conde, Porto Seguro (Atlantic Forest); Espírito Santo: Conceição da Barra (Atlantic Forest); Rio de Janeiro state: Quissamã, Macaé, Araraial do Cabo (Ilha do Cabo Frio), Macaé, São João da Barra (Atlantic Forest); Minas Gerais: Perdizes (Cerrado), Itamonte (Atlantic Forest), São Tomé do Cabo (Ilha do Cabo Frio), São João da Barra, São Francisco de Itabapoana (Atlantic Forest); Rio de Janeiro state: Quissamã, Macaé, Arraial do Cabo, São Paulo state: São Paulo state: Ubatatuba (Atlantic Forest). Host plant: *Cladium* sp. (Melastomataceae). Refs.: Garcia & Urso-Guimarães, 2018.

184. *Machaeriobia gemmea* Maia, 2016 (gall-inducer). Distribution: Rio de Janeiro state: Parque Nacional da Serra de Órgãos (Atlantic Forest). Host plant: *Machaerium macense* C. V. Mendonça, A. M. G. Azevedo & H. C. Lima (Fabaceae) (endemic to Atlantic Forest). Refs.: Maia et al. 2016, Gagné & Jaschhof 2017.

185. *Machaeriobia machaeiri* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: São Paulo state: Ribeirão Preto (Cerrado); Santa Catarina: Tubarão (Atlantic Forest). Host plants: *Machaerium sp. and Machaerium hirtum* (Vell.) Stellfeld (Fabaceae) (native to Brazil) (Amazon, Caatinga, Cerrado, Atlantic Forest, and Pantanal). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

186. *Macroporra peruviana* Rübsaamen, 1915a (gall-inducer). Distribution: Brazil: Acre: Auristela (Amazon Forest). Host plant: *Mimosa peruviana* (Fabaceae) (endemic to Brazil) (Cerrado and Atlantic Forest). Refs.: Rübsaamen 1915, Möhn 1962, Gagné 1994, Gagné & Jaschhof 2017.

187. *Macroporra ubei* Rübsaamen, 1915a (gall-inducer). Distribution: Brazil: Acre: Rübsaamen 1915a, Möhn 1962, Gagné 1994, Gagné & Jaschhof 2017.

188. *Manilkaramyia notabilis* Maia, 2001a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Carapebus, Maricá (Atlantic Forest); Espírito Santo: Guarapari (Atlantic Forest). Host plant: *Manilkara subsericea* (Mart.) Durbad (Sapotaceae) (endemic to Atlantic Forest). Refs.: Maia 2001a, b, Bregoncı et al. 2010, Maia & Silva 2016, Gagné & Jaschhof 2017.

189. *Mayteniella distincta* Maia, 2001a (gall-inducer). Distribution: Brazil: Espírito Santo: Guarapari, Presidente Kennedy* (RB311268, RB311270) (Atlantic Forest); Rio de Janeiro state: Manguaretuba, Rio de Janeiro (Marambaia, Grumari, Ilha das Folhas* R145329, Copacabana* R74076, Jacarepaguá* RB159930, Cagarras), Maricá, Carapebus, Macaé* (R209511, RB565802), Saquarema, Araruama, Arraial do Cabo, Cabo Frio, São João da Barra, São Francisco de Itabapoana (Atlantic Forest) (endemic to Brazil) (Amazon, Caatinga, Cerrado, Atlantic Forest, and Pantanal). Refs.: Monteverde obtusifolia (Mart.) Biral (= *Maytenus obtusifolia* Mart.) (Celastraceae) (endemic to Brazil) (Amazon and Atlantic Forests). Refs.: Monteiro et al. 1994, Maia 2001a, b, Oliveira & Maia 2005, Rodrigues et al. 2014, Maia & Carvalho-Fernandes 2016, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017, Melo-Junior et al. 2018, Maia 2020a.

190. *Megaulus sterculiae* Rübsaamen, 1915a (gall-inducer). Distribution: Bolivia and Brazil: Acre: São Francisco (Amazon Forest). Host plant: *Sterculia* sp. (Sterculiaceae). Refs.: Rübsaamen 1915a, Gagné 1994, Gagné & Jaschhof 2017.
191. Metasphondylium squamosa Tavares, 1918b (gall-inducer). Distribution: Brazil: Bahia: Salvador (Atlantic Forest). Host plant: undetermined Malvaceae. Refs.: Tavares 1918b, Gagné 1994, Gagné & Jaschhof 2017.

192. Meunieriana dalechampi Rübsaamen, 1905b (inquiline). Distribution: Brazil: Rio de Janeiro state: Palmeiras (Atlantic Forest). Host plant: Dalechampia ficifolia Lam. (Euphorbiaceae) (endemic to Brazil) (Cerrado and Atlantic Forest). Refs.: Rübsaamen 1905b, Gagné 1994, Gagné & Jaschhof 2017.

193. Meunieriana insignis (Tavares, 1922) (inquiline). Distribution: Brazil: Bahia: Salvador (Atlantic Forest). Host plant: Protium heptaphyllum (Aubl.) Marchand (Burseraceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Tavares 1922, Gagné 1994, Gagné & Jaschhof 2017.

194. Meunieriana lantanae (Tavares, 1918a) (inquiline). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: Lantana sp. (Verbenaceae). Refs.: Tavares 1918a, Gagné 1994, Gagné & Jaschhof 2017.

195. Meunieriana spinosa Urso-Guimarães, 2018b (inquiline). Distribution: Brazil: Minas Gerais: Delfinópolis (Cerrado). Host plant: Inga edulis Mart. (Fabaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Urso-Guimarães 2018b.

196. Mikaniadiplosis annulipes Gagné, 2001 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Angra dos Reis (Ilha Grande), Rio de Janeiro (Marambaia, Grumari), Maricá, Cabo Frio, Arraial do Cabo (Ilha do Cabo Frio), São João da Barra (Atlantic Forest); Minas Gerais: Itamonte (Atlantic Forest). Host plant: Mikania glomerata Spreng. (Asteraceae) (native to Brazil) (Cerrado and Atlantic Forest) and Mikania cf biformis Refs.: Gagné et al. 2001, Maia et al. 2008, Maia & Oliveira 2010, Gagné & Jaschhof 2017, Goetz et al. 2018.

197. Mycidiadiplosis rubida (Felt, 1911c) (fungivorous). Distribution: Jamaika, St. Vincent, Hawaii, and Brazil (unstated locality). Host plants: Uromyces pisi (DC.) G.H. Otth (native to Brazil) (Rio Grade do Sul) and Puccinia sp. (Pucciniaceae). Refs.: Felt 1911c, Gagné 1994, Gagné & Jaschhof 2017.

198. Myrciamyia maricaensis Maia, 1996c (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá, Carapebus, Cabo Frio, Arredial do Cabo (Atlantic Forest). Host plant: Myrcia ovata Cambess. (Myrtaceae) (endemic to Atlantic Forest). Refs.: Monteiro et al. 1994, Maia 1999b, Maia 2001b, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

199. Myrciamyia pterandrae Maia & Flor, 2018 (gall-inducer). Distribution: Brazil: Minas Gerais: Quartel São João (Cerrado). Host plant: Pterandra pyroidea A. Juss. (Malpighiaceae) (endemic to Cerrado). Refs.: Maia et al. 2018.

200. Myricariamyia admirabilis Maia, 2007 (gall-inducer). Distribution: Brazil: Minas Gerais: Tiradentes, São Tomé das Letras (Cerrado); São Paulo state: Ingaí (Cerrado); Goiás: Floresta Nacional de Silvânia (Cerrado), Hidrolândia (Cerrado). Host plant: Erythroxylum suberosum A. St.-Hil. (Erythroxylaceae) (native to Brazil) (Amazon Forest and Cerrado). Refs.: Maia & Fernandes 2007, Malves & Frieiro-Costa 2012, Maia 2013, Bergamini et al. 2017, Gagné & Jaschhof 2017, Silva et al. 2018.

201 Myricariamyia pyrtoida Maia, 1995 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá, Carapebus (Atlantic Forest). Host plant: Myrciaria floribunda (H.West ex Willd.) (Myrtaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 1995, 2001b, Gagné & Jaschhof 2017.

202. Myricariamyia fernandesi Maia, 2004a (gall-inducer). Distribution: Minas Gerais: Tiradentes (Cerrado). Host plant: Myrciaria tenella (DC.) O.Berg (Myrtaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 2004a, Maia & Fernandes 2004, Gagné & Jaschhof 2017.

203. Neolasioptera cerei (Rübsaamen, 1905a) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Angra dos Reis (Ilha Grande), Manguaratiba, Maricá, Cabo Frio, Arredial do Cabo (Ilha do Cabo Frio), São João da Barra (Atlantic Forest); Espírito Santo: Conceição da Barra (Atlantic Forest). Host plant: Hylocereus setaceus (Salm-Dyck) R. Bauer (= Selinecereus setaceus (Salm-Dyck) Berg (Cactaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Rübsaamen 1905a, Gagné 1994, Maia 1999b, Maia 2001b, Maia & Oliveira 2010, Maia & Souza 2013, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017, Maia 2020a.

204. Neolasioptera cuphea Gagné, 1998 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Silva Jardim (Atlantic Forest). Host plant: Cuphea carthagagensis (Jacq.) J.F.Maeebr. (Lythraceae) (native to Brazil) (all Brazilian phytogeographic domains). Refs.: Gagné et al. 1998, Gagné & Jaschhof 2017.

205. Neolasioptera eugeniae Maia, 1993b (gall-inducer). Distribution: Brazil: Espírito Santo: Conceição da Barra, Guaraí (Atlantic Forest); Rio de Janeiro state: Angra dos Reis (Ilha Grande), Paraty, Manguaratiba, Parque Nacional do Itatiaia, Rio de Janeiro (Marambaia, Guaruja, Maricá, Saquarema, Araruama, Cabo Frio, Arredial do Cabo (Ilha do Cabo Frio), São João da Barra (Atlantic Forest); Minas Gerais: Itamonte (Atlantic Forest). Host plant: Eugenia uniflora L. (Myrtaceae) (native to Brazil) (Cerrado, Atlantic Forest, and Pampa). Refs.: Maia 1993b, Monteiro et al. 1994, Oliveira & Maia 2005, Maia & Oliveira 2010, Silva & Rodrigues 2011, Carvalho-Fernandes & Maia 2011, Maia & Souza 2013, Maia 2014, Rodrigues & Maia 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Maia & Mascarenhas 2017, Gagné & Jaschhof 2017, Maia 2020a.

206. Neolasioptera fariae (Tavares, 1922) (inquiline). Distribution: Brazil: Bahia: Salvador (Atlantic Forest). Host plant: unknown. Refs.: Tavares 1922, Gagné 1994, Gagné & Jaschhof 2017.

207. Neolasioptera ingae Möhn, 1964b (gall-inducer). Distribution: El Salvador and Brazil: Rio de Janeiro state: Rio de Janeiro (Marambaia) (Atlantic Forest). Host plants: Inga vera Will. (= Inga spuria Humb. & Bonpl. ex Willd.) (native to Brazil) (Amazon Forest, Cerrado, Atlantic Forest, and Pantanal) and Inga punctata Will. (= Inga leptoloba Schltdl. (Fabaceae) (native to Brazil) (Amazon Forest). Refs.: Möhn 1964b, Gagné 1994, Gagné & Jaschhof 2017, Maia & Silva 2016.

208. Neolasioptera lantanae (Tavares, 1922) (gall-inducer). Distribution: Brazil: Bahia: Salvador (Atlantic Forest). Host plant: Lantana sp. (Verbenaceae). Refs.: Tavares 1922, Gagné 1994, Gagné & Jaschhof 2017.

209. Neolasioptera pantaneira Maia, 2017 (gall-inducer). Distribution: Brazil: Mato Grosso do Sul: Corumbá (Pantanal). Host plant: Aschynomene denticulata Rudd. (Fabaceae) (native to Brazil) (all Brazilian phytogeographic domains). Refs.: Maia et al. 2017.

210. Neolasioptera ramicola Maia, 2009 (gall-inducer). Distribution: Brazil: Rio Grande do Sul: Bento Gonçalves (Atlantic Forest). Host plant: Physalis angulata L. (Solanaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, and Pantanal). Refs.: Maia et al. 2009, Gagné & Jaschhof 2017.

211. Neolasioptera urvilleana (Tavares, 1909) (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Leopoldo (Pampa). Host
plant: Urvilea uniloba Radlk. (Sapindaceae) (native to Brazil) (Atlantic Forest). Refs.: Tavares 1909, Gagné 1994, Gagné & Jaschhof 2017.

212. Neomitranthela robusta Maia, 1996c (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá, Saquarema, Araruama, Arraial do Cabo, Cabo Frio, Carapebus (Atlantic Forest). Host plant: Neomitranthes obscura (DC.) N. Silveira (Myrtaceae) (endemic to Atlantic Forest). Refs.: Maia 1996c, 2001b, Gagné & Jaschhof 2017.

213. Novocalmonia fici Ozdikmen, 2009 (gall-inducer). Distribution: Brazil: Bahia: Itaparica and Santo Antonio da Barra (Atlantic Forest). Host plant: Ficus sp. (Moraceae). Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

214. Novocalmonia urostigma Tavares, 1917a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plant: Ficus sp. (Moraceae). Refs.: Tavares 1917a, Gagné & Jaschhof 2017.

215. Ouradiplosis aurata Felt, 1915b (gall-inducer). Distribution: Brazil: Pará: Igaraçú-Açu (Amazon Forest). Host plant: unknown. Refs.: Felt 1915b, Gagné & Jaschhof 2017.

216. Parametaspodondylia pipers Maia & Santos 2007 (gall-inducer). Distribution: Brazil: Minas Gerais: Trindade and Cerrado. Host plant: Piper sp. (Piperaceae). Refs.: Maia & Fernandes 2004, Maia & Santos 2007, Gagné & Jaschhof 2017.

217. Parazalepidota clusiae Maia, 2001a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Grumari), São Gonçalo, Maricá, Saquarema, Araruama, Arraial do Cabo, Cabo Frio, Quissamã, Macaé, Petrópolis, Mauá (Atlantic Forest). Host plant: Clusia fluminensis Planch. & Triana (Clusiaceae) (endemic to Atlantic Forest). Refs.: Monteiro et al. 1994, Maia 2001a, b, Oliveira & Maia 2005, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017, Maia 2020b.

218. Parkianymia paraensis Maia, 2006 (gall-inducer). Distribution: Brazil: Pará: Oriximiná (Amazon Forest). Host plant: Parkia pendula (Willd.) Benth. ex Walp. (Fabaceae) (native to Brazil) (Atlantic Forest). Refs.: Maia & Fernandes 2006, Gagné & Jaschhof 2017.

219. Paullinia amala Maia, 2001a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá, Saquarema, Araruama, Arraiol do Cabo, Cabo Frio, Carapebus, São João da Barra, São Francisco de Itabapoana (Atlantic Forest); São Paulo state: Bertigoa (Atlantic Forest). Host plants: Paullinia weinmannifolia Mart. (endemic to Atlantic Forest) and Matayba guianensis Aubl. (Sapindaceae) (native to Brazil) (Amazon Forest, Cerrado, Atlantic Forest, and Pantanal). Refs.: Maia 2001a, b, Maia et al. 2008, Maia & Carvalho-Fernandes 2016, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

220. Peraspodondylia mikaniae Gagné, 2001 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Paraty, Parque Nacional do Itatiaia, Silva Jardim (Atlantic Forest); São Paulo state: Bertigoa (Atlantic Forest). Host plants: Mikania glomerata Spreng. (native to Brazil) (Cerrado and Atlantic Forest) and Mikania of fiformis (Asteraceae). Refs.: Gagné et al. 2001, Maia et al. 2008, Carvalho-Fernandes & Maia 2011, Gagné & Jaschhof 2017, Maia & Mascarenhas 2017.

221. Peraspodondylia reticulata Möhn, 1960 (gall-inducer). Distribution: Mexico, El Salvador, Trinidad, Bolivia, and Brazil: Pará (Amazon Forest). Host plants: Chromolaena odorata (L.) R. M. King & H. Rob. (native to Brazil) (all phytophagous domains) and Eupatorium sp. (Asteraceae). Refs.: Möhn 1960, Gagné 1994, Gagné & Jaschhof 2017.

222. Pisaspodondylia brasiliensis Couri & Maia, 1992 (gall-inducer). Distribution: Brazil: São Paulo state: Bertigoa; Rio de Janeiro state: Maricá, Arraial do Cabo (Ilha do Cabo Frio), São João da Barra (Atlantic Forest); Espírito Santo: Santa Teresa (Atlantic Forest); Minas Gerais: Brumadinho (Atlantic Forest); Bahia: Porto Seguro-Trancoso (Atlantic Forest); Santa Catarina: Babitonga, São Francisco do Sul (Atlantic Forest); Rio Grande do Sul: Porto Alegre (Atlantic Forest). Host plant: Guapira opposita (Vell.) Reitz. (Nyctaginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Couri & Maia 1992, Maia 2001b, 2014, Maia et al. 2008, Maia 2010, Maia et al. 2010, Maia & Souza 2013, Arriola et al. 2015, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018.

223. Primadiplosis microgramma Maia, 2011 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá (Atlantic Forest). Host plant: Microgramma vaccinifolia (Langsd. & Fisch.) Copel. (Polyopodiaceae) (native to Brazil) (Cerrado and Atlantic Forest). Refs.: Maia & Santos 2011, Gagné & Jaschhof 2017.

224. Proaspodylia brasiliensis Felt, 1915c (gall-inducer). Distribution: Brazil: Bonito (Atlantic Forest). Host plant: unknown. Refs.: Felt 1915c, Gagné & Jaschhof 2017.

225. Proaspodylia formosa Maia, 1994 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá (Atlantic Forest); Santa Catarina: Babitonga (Atlantic Forest). Host plant: Guapira opposita (Vell.) Reitz. (Nyctaginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 1994, Gagné & Jaschhof 2017, Melo-Júnior et al. 2018.

226. Proaspodondylia guapirae Maia, 1994 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Angra dos Reis (Ilha Grande), Manganatiba, Rio de Janeiro (Marapimba), Maricá, Carapebus, Arraial do Cabo (Ilha do Cabo Frio) (Atlantic Forest); Espírito Santo: Santa Teresa (Atlantic Forest); São Paulo state: Bertioga (Atlantic Forest); Santa Catarina: Babitonga (Atlantic Forest). Host plant: Guapira opposita (Vell.) Reitz. (Nyctaginaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 1994, 1999, 2001b, Maia et al. 2008, Maia & Oliveira 2010, Maia & Souza 2013, Maia 2014, Rodrigues & Maia 2014, Arriola et al. 2015, Maia & Silva 2016, Melo-Júnior et al. 2018.

227. Procontarinia mangiferae (Felt, 1911d) (gall-inducer). Distribution: India, China, Reunion, Iran, Guadeloupe, St. Vincent, Trinidad, and Brazil: Bahia (Atlantic Forest). Host plant: Mangifera indica L. (Anacardiaceae) (exotic) (cultivated plant in all Brazilian domains). Refs.: Felt 1911d, Gagné & Jaschhof 2017.

228. Prodoplosis floricola Felt, 1907b (free living phytophagous). Distribution: USA, Colombia, and Brazil: São Paulo state (unstated locality). Host plants: Spiraea salicifolia L. (Rosaceae) (native to the temperate Northern Hemisphere), Clematis sp. (Ranunculaceae), Caryocar brasiliense Cambess. (Caryocaraceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest), and Citrus sp. (Rutaceae). Refs.: Felt 1907b, Gagné 1994, Gagné & Jaschhof 2017.

229. Rhoaspodylia friburgensis (Tavares, 1917a) (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Nova Friburgo (Atlantic Forest). Host plants: Baccharis lateralis Baker (= B. schultzi Baker) (endemic to Brazil) (Atlantic Forest and Cerrado), B. dracunculifolia DC. (native to Brazil) (Cerrado, Atlantic Forest, and Pampa), and B. trineris Pers. (Asteraceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, Atlantic Forest, and Pampa). Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

230. Rochadiplosis tibouchiniae Tavares, 1917b (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Petrópolis, Tijuca, and Nova.
Friburgo (Atlantic Forest); São Paulo state: Altinópolis (Cerrado). Host plant: *Tibouchina* sp. (Melastomataceae). Refs.: Tavares 1917b, Gagné 1994, Gagné & Jaschhof 2017, Ribeiro et al. 2019.

231. *Schizmatodiopsis lantanae* (Rübsaamen, 1908a) (gall-inducer). Distribution: Mexico, Veracruz, Tabasco, Quintana Roo, Trinidad, and Brazil: Pará: Oriximiná (Amazon Forest); Rondônia: Campo Novo de Rondônia (Amazon Forest); Minas Gerais: Aimorés (Atlantic Forest), Vale do Rio Doce (Atlantic Forest, Cerrado); Rio de Janeiro state: Parque Nacional do Itatiaia, Valença, Matarangaba, Caetité (Verbenaceae) (no records in Brazil).

232. *Schizomyia barreirensis* Santos, Maia & Calado, 2019 (gall-inducer). Distribution: Brazil: Bahia: Barreiras (Cerrado). Host plant: *Bauhinia cupulata* Benth. (Fabaceae) (native to Brazil) (Amazon Forest, Cerrado, and Atlantic Forest). Refs.: Maia 2001b, Maia & Araújo 2009, Maia & Oliveira 2007, Gagné & Jaschhof 2017.

233. *Schizomyia macrocapillata* Maia, 2005 (gall-inducer). Distribution: Colombia and Brazil: Ceará (unstated locality). Host plant: *Manihot esculenta* Crantz (= *Manihot utilissima* Pohl.) (Euphorbiaceae) (native to Brazil) (Amazon Forest and Cerrado). Refs.: Tavares 1925, Gagné 1994, Gagné & Jaschhof 2017.

234. *Schizomyia manihoti* Tavares, 1925 (gall-inducer). Distribution: *Schizomyia manihoti* Tavares, 1925 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Marambaia) and Carapebus. Host plant: *Eugenia epeugeniae* Gagné, 1994 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Botanical Garden) (Atlantic Forest); Minas Gerais: Belo Horizonte (Cerrado); Host plants: *Eugenia sp.* and *Eugenia punicifolia* (Kunth.) DC. (= *Eugenia ovalifolia* Cambess.) (Myrtaceae) (endemic to Brazil) (Amazon Forest, Atlantic Forest, Cerrado, and Pantanal). Refs.: Tavares 1925, Gagné 1994, Gagné & Jaschhof 2017, Urso-Guimarães et al. 2019b. Host plant species: *Stephomyia clavata* (Tavares, 1920b) (gall-inducer). Distribution: Brazil: Bahia: Madre de Deus (Atlantic Forest). Host plant: unidentified Myrtaceae. Refs.: Tavares 1920b, Gagné 1994, Gagné & Jaschhof 2017. Comments: *Maia* 2001b and Silva & Maia 2014 recorded *Stephomyia cf. clavata* on *Eugenia hiemalis* Cambess. (= *Eugenia multiflora* Cambess.) (native to Brazil) (Cerrado, Atlantic Forest) in the Rio de Janeiro state: Rio de Janeiro (Marambaia) and Carapebus.

235. *Schizomyia maricaensis* Sousa & Maia, 2007 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá (Atlantic Forest); São Paulo state: Ribeirão Preto (Cerrado). Host plant: *Tetrapterys phlomoides* (Spreng.) Nied. (Malpighiaceae) (native to Brazil) (Cerrado, Atlantic Forest, and Pantanal). Refs.: Sousa & Maia 2007, Gagné & Jaschhof 2017, Urso-Guimarães & Amorim, 2002 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Marambaia) and Carapebus. Host plant: *Eugenia punicifolia* (Kunth.) DC. (= *Eugenia ovalifolia* Cambess.) (Myrtaceae) (endemic to Brazil) (Amazon Forest, Atlantic Forest, Cerrado, and Pantanal). Refs.: Tavares 1926, Gagné 1994, Fornandes et al. 1988, Gagné & Jaschhof 2017. Host plant species: *Stephomyia epeugeniae* Gagné, 1994 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Botanical Garden) (Atlantic Forest); Minas Gerais: Belo Horizonte (Cerrado); Host plants: *Eugenia sp.* and *Eugenia punicifolia* (Kunth.) DC. (= *Eugenia ovalifolia* Cambess.) (Myrtaceae) (endemic to Brazil) (Amazon Forest, Atlantic Forest, Cerrado, and Pantanal). Refs.: Tavares 1925, Gagné 1994, Gagné & Jaschhof 2017.

237. *Schizomyia santosi* Maia & Araújo, 2009 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Marambaia) and Maricá (Atlantic Forest). Host plant: *Jacquemontia holosericea* (Weinm.) O’Donell (Convolvulaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Monteiro et al. 1994, Maia 2001b, Maia & Oliveira 2007, Gagné & Jaschhof 2017.

239. *Schizomyia tuiuiu* Urso-Guimarães & Amorim, 2002 (gall-inducer). Distribution: *Mato Grosso*: Cuiabá (Cerrado); São Paulo state: Ribeirão Preto (Cerrado). Host plant: *Bauhinia holophylla* (Fabaceae) (as *B. rufa* (Bong.) Steud. in Urso-Guimarães & Amorim, 2002) (native to Brazil) (endemic to Cerrado). Refs.: Urso-Guimarães & Amorim 2002, Gagné & Jaschhof 2017, Urso-Guimarães 2019b.

240. *Smilasisiopthera candelariace* Möhn, 1975 (gall-inducer). Distribution: El Salvador, Brazil: Rio de Janeiro state: Matarangaba, Rio de Janeiro (Grunmari, Marambaia), Maricá, Saquarema, Araruama, Arraiol do Cabo, Cabo Frio, Carapebus, São João da Barra (Atlantic Forest). Host plants: *Smilax spinosa* Mill. (= *Smilax mexicana* Griseb. ex Kunth.) (no records in Brazil) and *Smilax rufoescens* Griseb. (Smilacaceae) (endemic to Brazil) (Amazon Forest, Cerrado, and Atlantic Forest). Refs.: Möhn 1975, Gagné 1994, Maia 2001b, Oliveira & Maia 2005, Rodrigues & Maia 2014, Carvalho-Fernandes et al. 2016, Maia & Silva 2016, Gagné & Jaschhof 2017.

241. *Sphaeromyia flavula* Maia, 2007a (gall-inducer). Distribution: Brazil: São Paulo state: Bertioga (Atlantic Forest); Santa Catarina: São Francisco do Sul (Atlantic Forest). Host plant: *Guarea macrophylla* Vahl (Meliaceae) (native to Brazil) (Amazon Forest, Caatinga, Cerrado, and Atlantic Forest). Refs.: Maia 2007a, Maia et al. 2008, Melo-Júnior et al. 2018.

242. *Sphaeromyia duchia* Rübsaamen, 1915 (gall-inducer). Distribution: Brazil (locality unstated). Host plant: unknown. Refs.: Rübsaamen 1915, Gagné 1994, Gagné & Jaschhof 2017.

243. *Stephomyia clavata* (Tavares, 1920b) (gall-inducer). Distribution: Brazil: Bahia: Madre de Deus (Atlantic Forest). Host plant: undetermined Myrtaceae. Refs.: Tavares 1920b, Gagné 1994, Gagné & Jaschhof 2017.

244. *Stephomyia epeugeniae* Gagné, 1994 (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Botanical Garden) (Atlantic Forest); Minas Gerais: Belo Horizonte (Cerrado); Host plants: *Eugenia sp.* and *Eugenia punicifolia* (Kunth.) DC. (= *Eugenia ovalifolia* Cambess.) (Myrtaceae) (endemic to Brazil) (Amazon Forest, Atlantic Forest, Cerrado, and Pantanal). Refs.: Tavares 1925, Gagné 1994, Fornandes et al. 1988, Gagné & Jaschhof 2017.
248. *Stephanomyia tetraloba* Maia, 1993c (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Maricá, Arraial do Cabo (Atlantic Forest). Host plant: *Eugenia capacabahensis* Kaeck. (Myrtaceae) (endemic to Atlantic Forest). Refs.: Maia 1993c, 2001b, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

249. *Stomatosema camilae* Carmo-Neto, Lamas & Urso-Guimarães, 2019 (fungivorous). Distribution: Brazil: Mato Grosso do Sul: Corumbá (Pantanal). Refs.: Carmo-Neto et al. 2019.

250. *Stomatosema paratudo* Carmo-Neto, Lamas & Urso-Guimarães, 2019 (fungivorous). Distribution: Brazil: Mato Grosso do Sul: Corumbá (Pantanal), Bodoquena (Cerrado). Refs.: Carmo-Neto et al. 2019.

251. *Stomatosema pantaneirum* Carmo-Neto, Lamas & Urso-Guimarães, 2019 (fungivorous). Distribution: Brazil: Mato Grosso do Sul: Corumbá (Pantanal), Bodoquena (Cerrado). Refs.: Carmo-Neto et al. 2019.

252. *Stomatosema sibiota* Carmo-Neto, Lamas & Urso-Guimarães, 2019 (fungivorous). Distribution: Brazil: Mato Grosso do Sul: Corumbá (Pantanal), Bodoquena (Cerrado), Aquidauana (Cerrado). Refs.: Carmo-Neto et al. 2019.

253. *Stomatosema terena* Carmo-Neto, Lamas & Urso-Guimarães, 2019 (fungivorous). Distribution: Brazil: Mato Grosso do Sul: Aquidauana (Cerrado). Refs.: Carmo-Neto et al. 2019.

254. *Stomatosema terre* Carmo-Neto, Lamas & Urso-Guimarães, 2019 (fungivorous). Distribution: Brazil: Mato Grosso do Sul: Aquidauana (Cerrado). Refs.: Carmo-Neto et al. 2019.

255. *Styraxdiplosis caetensis* Tavares, 1915 (gall-inducer). Distribution: Brazil: Bahia: Caetité (Atlantic Forest, Caatinga). Host plant: *Styrax* sp. (Styracaceae). Refs.: Tavares 1915, Gagné 1994, Gagné & Jaschhof 2017.

256. *Styraxdiplosis cearensis* Tavares, 1925 (gall-inducer). Distribution: Brazil: Ceará (unstated locality) (Atlantic Forest). Host plant: *Styrax* sp. (Styracaceae). Refs.: Tavares 1925, Gagné 1994, Gagné & Jaschhof 2017.

257. *Termitomastus leptoproctus* Silvestri, 1901 (fungivorous). Distribution: Argentina and Brazil: Mato Grosso: Cuiabá (Cerrado). Refs.: Silvestri 1901, Gagné 1994, Gagné & Jaschhof 2017.

258. *Trotteria quadridentata* Maia, 2001c (inquiline). Distribution: Brazil: Rio de Janeiro state: Maricá, Arraial do Cabo (Atlantic Forest). Host plant: *Pouteria caimito* Ruiz & Pav. Radlk (= *Pouteria caimito* var. *laurifolia*) (Sapotaceae) (native to Brazil) (Amazon Forest, Cerrado, and Atlantic Forest). Refs.: Monteiro et al. 1994, Maia 2001b, c, Rodrigues & Maia 2014, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

259. *Uleia clusiae* Rübsaamen, 1915 (gall-inducer). Distribution: Brazil: São Paulo state: Salto de Itú (Atlantic Forest). Host plant: *Porophyllum* sp. (Asteraeaceae). Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

260. *Uleia clusiae* Maia, 1993c (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Tijuca) (Atlantic Forest). Host plant: *Piper* sp. (Piperaceae). Refs.: Rübsaumen 1908a, Gagné 1994, Gagné & Jaschhof 2017.

261. *Uleia clusiae* Maia, 1993c (gall-inducer). Distribution: Brazil: São Paulo state: Salto de Itú (Atlantic Forest). Host plant: *Porophyllum* sp. (Asteraeaceae). Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

262. *Uleia clusiae* Maia, 1993c (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Manganábiba, Rio de Janeiro (Grumari), Maricá, Saquarema, Araruama, Arraial do Cabo, Cabo Frio, São João da Barra (Atlantic Forest). Host plant: *Pouteria caimito* Ruiz & Pav. Radlk (= *Pouteria caimito* var. *laurifolia*) (Sapotaceae) (native to Brazil) (Amazon Forest, Cerrado, and Atlantic Forest). Refs.: Monteiro et al. 1994, Maia 2001b, c, Rodrigues & Maia 2014, Carvalho-Fernandes et al. 2016, Gagné & Jaschhof 2017.

263. *Zalepidota itiensis* (Tavares, 1917a) (gall-inducer). Distribution: Brazil: São Paulo state: Salto de Itú (Atlantic Forest). Host plant: *Porophyllum* sp. (Asteraeaceae). Refs.: Tavares 1917a, Gagné 1994, Gagné & Jaschhof 2017.

264. *Zalepidota piperis* Rübsaumen, 1908a (gall-inducer). Distribution: Brazil: Rio de Janeiro state: Rio de Janeiro (Tijuca) (Atlantic Forest). Host plant: *Piper* sp. (Piperaceae). Refs.: Rübsaumen 1908a, Gagné 1994, Gagné & Jaschhof 2017.

265. *Zalepidota tavaresii* (Kieffer, 1913) (gall-inducer). Distribution: Brazil: Rio Grande do Sul: São Leopoldo (Pampa). Host plant: *Piper* sp. (Piperaceae). Refs.: Kieffer 1913, Gagné 1994, Gagné & Jaschhof 2017.

In order to provide the state of the art of the Cecidomyiidae fauna in each Brazilian phytoecological domain, data are presented separately.

**AMAZON FOREST**

Twenty-nine species of Cecidomyiidae of 19 genera have been reported in the Amazon Forest, being 28 gall-inducers and one fungivorous species. Among the former, 23 are monophagous, while five are oligophagous species: *Asphondylia tournefortiae* Rübsaumen, 1915, *Clinodiplosis eupatorioid* (Felt, 1911a), *Iatrophobia brasiliensis* (Rübsaumen, 1908a), *Perasphondylia reticulata* Möhn, 1960, and *Schismatodiplosis lanatae* (Rübsaumen, 1908a).

Gall-inducers are associated with 17 plant families, 20 genera and 12 determined species. Callophyllaceae is the plant families with the greatest richness of gall midge species (five), followed by Asteraceae with three, and Asteraeaceae and Bursaraceae, both with two. All other families (13) shelter a single gall midge species (Table 5). Nine gall midge species are associated with host plants identified only in genus: *Cecropia* sp., *Clusia* sp., *Coussapoa* sp., *Mikania* sp., *Neea* sp., *Serjania* sp., *Solanum* sp., and *Sterculia* sp., and two gall midge species were obtained from host plants identified only in family, one from Malpighiaceae and the other from Lauraceae. Two cecidomyiids, *Lepesia maricaensis* and *Lepesia aldinae* induce galls on Brazilian endemic plants, *Protium brasiliense* (Bursaraceae) and *Aldina heterophylla* (Fabaceae), being the last endemic to Amazon Forest (Table 4). The remainder plants are native to Brazil, except *Lantana camara*, a naturalized species.

The Amazonan fauna comprises 19 genera of Cecidomyiidae, 14 represented by one species, three (*Asphondylia*, *Bruggmannia* and *Clinodiplosis*) by two species, and one, *Lepesia*, by five species, being the most speciose genera (Table 3).

Gall-inducers are known by five species: the Amazon Forest, while eight species occur in other domains. Twenty-two species have been recorded only in Brazil, while seven occur in other countries too: *Clinodiplosis eupatorioid*, *Iatrophobia brasilienensis*, *Perasphondylia reticulata*, *Schismatodiplosis lanatae*, *Lepesia conspicua*, *Lepesia elliptica*, and *Lepesia linearis*.

**List of Cecidomyiidae (Diptera) with occurrence in the Amazon Forest (Brazil)**

1. *Alexomyia ciliata* Felt, 1921
2. *Alycaulus mikaniae* Rübsaumen, 1915
3. *Asphondylia fructicola* Maia, 2009
4. *Asphondylia tournefortiae* Rübsaumen, 1915
5. *Bruggmannia depressa* (Kieffer, 1913)
6. *Bruggmannia longiseta* (Kieffer, 1913)
7. *Clinodiplosis cecropiae* Proença & Maia, 2020
8. *Clinodiplosis eupatori* (Felt, 1911)
9. *Contarinia gemmae* Maia, 2003
10. *Dactylodiplosis heisteriae* Rübsaamen, 1915
11. *Frauenfeldiella coussapoa* Rübsaamen, 1905
12. *Haplogalpus serjaneae* Rübsaamen, 1915
13. *Haplusia braziliensis* Rübsaamen, 1905
14. *Iatrophobia longiseta* (Kieffer, 1915)
15. *Iatrophobia simulis* Maia, 2005
16. *Lepisia caulinaris* Maia, 2003
17. *Lepisia conspiciua* Maia, 2003
18. *Lepisia elliptica* Maia, 2003
19. *Lepisia linears* Maia, 2003
20. *Lepisia maricaensis* Rodrigues & Maia, 2010
21. *Lepisia similis* Maia, 1992
22. *Macroporpa ulei* Rübsaamen, 1915
23. *Megaaulus sterculiae* Rübsaamen, 1905
24. *Ouradiplosis aurata* Rübsaamen, 1908
25. *Parkiamyia paraensis* Maia, 2006
26. *Perasphondylia reticulata* Möhn, 1960
27. *Schismatodiplosis lantanae* (Rübsaamen, 1915)
28. *Uleia clusiae* Maia, 1992

**ATLANTIC FOREST**

A total of 183 species of Cecidomyiidae of 71 genera have been recorded in the Atlantic Forest, 162 of them are gall-inducers, ten are predators (*Diadiplosis abacari*, *D. bellingeri*, *D. floridana*, *D. jamboi*, *D. martinsensis*, *D. multifila*, *D. vaupedais*, *Lestodiplosis brasiliensis*, *L. floricola*, and *L. maricaensis*), eight are probably kleptoparasites (*Clinodiplosis maricaensis*, *Contarinia ubiquita*, *Dialeria styracis*, *Munieriella dalechampiae*, *M. insignis*, *M. lantanae*, *N. fariae*, and *Trotteria quadridentata*), two are free-living species (*Clinodiplosis floricola* and *Lepisia davillae*), and a single one has fungivorous larvae (*Dichodiplosis triangularis*).

Sixteen gall-inducing species are oligophagous, while the others are monophagous. Phytophagous species have been recorded on 38 plant families, 73 genera and 82 determined species. Myrtaceae, Asteraceae, Nyctaginaceae, and Fabaceae are the superhost families, which together shelter six of the gall midge species (22, 19, 14, and 14, respectively). This value corresponds to about 39% of the gall-inducing species richness (Table 5). Thirty-eight gall midge species, when described, were recorded on 21 host plants identified only in genus. Later, two of them, *Asphondylia stachytarpheta* Barnes, 1932 and *Machaeriobia machaerii* (Kieffer, 1913) were obtained from identified plant species.

Eleven gall midge species have been recorded on five host plants identified only in family (Asteraceae: 2, Fabaceae: 3, Malvaceae: 1, Myrtaceae: 2, and Rubiaceae: 3). Forty-eight gall midge species induce galls on endemic plants to Brazil, 36 of them on endemic plants to the Atlantic Forest (Table 4). The remainders are associated with native plants, except *Schismatodiplosis lantanae*, *Asphondylia sennae*, and *Clinodiplosis mellissae*, inducers of galls on *Lantana camara* (a naturalized plant), *Senna bicapsularis* and *Melissa officinalis*, both exotic.

The most speciose genera in the Atlantic Forest are *Lopesia* (with 18 species), *Asphondylia* (with 15), *Clinodiplosis* (with 14), and *Bruggmannia* (with 11). They together shelter about 32% of the species richness. The other genera comprise from nine to one species, being the majority (44 genera) represented by a single species (Table 3).

**List of Cecidomyiidae (Diptera) with occurrence in the Atlantic Forest (Brazil)**

1. *Alycaulus globulus* Gagné, 2001
2. *Alycaulus trilobatus* Möhn, 1964
3. *Anadiplosis caetetensis* Tavares, 1920
4. *Anadiplosis procera* Tavares, 1920
5. *Anadiplosis pulchra* Tavares, 1916
6. *Anadiplosis venusta* Tavares, 1916
7. *Anasphondylia myrtacea* Tavares, 1920
8. *Andirodiplosis bahiensis* Tavares, 1920
9. *Anisodiplosis walteriae* Maia, 2005
10. *Apodiplosis praeox* Tavares, 1922
11. *Arrabiadeamia serrata* Maia, 2001
12. *Asphondylia bahiensis* Tavares, 1917
13. *Asphondylia borreiae* Rübsaamen, 1905
14. *Asphondylia communis* Maia & Couri, 1992
15. *Asphondylia cordiae* Möhn, 1959
16. *Asphondylia glomerata* Gagné, 2001
17. *Asphondylia maricensis* Maia & Couri, 1992
18. *Asphondylia moehni* Skuhrová, 1989
19. *Asphondylia parva* Tavares, 1917
20. *Asphondylia peploniae* Maia, 2001
21. *Asphondylia rochae* Tavares, 1918
22. *Asphondylia sennae* Maia & Couri, 1992
23. *Asphondylia serrata* Maia, 2004
24. *Asphondylia stachytarpheta* Barnes, 1932
25. *Asphondylia struthanthi* Rübsaamen, 1915
26. *Asphondylia ulei* Rübsaamen, 1908
27. *Asteromyia modesta* (Felt, 1907)
28. *Autoziplosis parva* (Tavares, 1916)
29. *Baccharomyia magna* Maia, 2012
30. *Baccharomyia ramosina* Tavares, 1917
31. *Bruggmannia acuaduta* Maia, 2004
32. *Bruggmannia depressa* (Kieffer, 1913)
33. *Bruggmannia elongata* Maia & Couri, 1993
34. *Bruggmannia globufex* (Kieffer, 1913)
35. *Bruggmannia lignicola* (Kieffer, 1913)
36. *Bruggmannia longicauda* (Kieffer, 1913)
37. *Bruggmannia micrura* (Kieffer, 1913)
38. *Bruggmannia monteiroi* Maia & Couri, 1993
39. *Bruggmannia neecaua* (Kieffer, 1913)
40. *Bruggmannia robusta* Maia & Couri, 1993
41. *Bruggmannia ruhsaemien* (Kieffer, 1913)
42. *Bruggmanniella byronomia* (Maia & Couri, 1992)
43. *Bruggmanniella dolociarpia* Maia, 2010
44. *Bruggmanniella ingae* Urso-Guimarães & Amorim, 2005
45. *Bruggmanniella maytenuse* (Maia & Couri, 1992)
46. *Bruggmanniella miconia* Garcia, Lamas and Urso-Guimarães, 2020
47. *Bruggmanniella notatae* Rodrigues & Maia, 2020

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48. Bruggmanniella oblita Tavares, 1920
49. Bruggmanniella sideroxyli Rodrigues & Maia, 2020
50. Burseramyia braziliensis Maia & Fonseca, 2012
51. Clitodiplosis graminis (Tavares, 1916)
52. Clitodiplosis bahiensis (Tavares, 1917)
53. Clitodiplosis cearensis (Tavares, 1917)
54. Clitodiplosis chlorophorae Rübsaamen, 1905
55. Clitodiplosis conica Oliveira & Maia, 2008
56. Clitodiplosis costai Maia, 2005
57. Clitodiplosis dodiacea Maia, 2001
58. Clitodiplosis floricola Novo-Guedes & Maia, 2008
59. Clitodiplosis iheringi (Tavares, 1925)
60. Clitodiplosis marceiae (Tavares, 1917)
61. Clitodiplosis maricaensis Fernandes & Maia, 2011
62. Clitodiplosis melissae Maia, 1993
63. Clitodiplosis profusa Maia, 2001
64. Clitodiplosis pulchra (Tavares, 1917)
65. Clitodiplosis rubiae (Tavares, 1918)
66. Clusiamyia granulosa Maia, 2001
67. Clusiamyia nitida Maia, 1997
68. Compodiplosis itaparicana Tavares, 1922
69. Contarinia gemmae Maia, 2003
70. Contarinia ubiquita Gagné, 2001
71. Contodiplosis friburgensis (Tavares, 1915)
72. Contodiplosis humilis (Tavares, 1915)
73. Contodiplosis tristis (Tavares, 1915)
74. Cordiamyia globosa Maia, 1996
75. Costadiplosis maricaensis Vieconte & Maia, 2009
76. Couridiplosis vena Maia, 2004
77. Dactylodiplosis heptaphylli Maia, 2004
78. Dactylodiplosis icicaricae Maia, 2002
79. Dactylodiplosis petitaurum Maia, 2021
80. Dasineura byronimae Maia, 2010
81. Dasineura copacabanensis Maia, 1993
82. Dasineura copeiae Maia, 2001
83. Dasineura gigantea Angelo & Maia, 1999
84. Dasineura globoasa Maia, 1996
85. Dasineura marginalis Maia, 2005
86. Dasineura myrciariae Maia, 1996
87. Dasineura ovalifoliae Fernandes & Maia, 2011
88. Dasineura tavaresi Maia, 1996
89. Diadiplosis abacaxii Cubik & Ventura, 2013
90. Diadiplosis bellingeri Cubik & Ventura, 2012
91. Diadiplosis floridana (Felt, 1915)
92. Diadiplosis jamboi Cubik & Ventura, 2013
93. Diadiplosis martinsensis Cubik & Ventura, 2013
94. Diadiplosis multifila (Felt, 1907)
95. Diadiplosis vaupedis (Harris, 1968)
96. Dialela styrracs Tavares, 1918
97. Dichodiplosis triangularis (Felt, 1908)
98. Epihormomyia miconia Maia, 2001
99. Eugeniamyia dispar Maia, Mendonça & Romanowski, 1997
100. Eugeniamyia triangularis Maia & Nava, 2011
101. Fernandesia meridionalis Rodrigues & Maia, 2013
102. Frauenfeldiella coussapoei Rübsaamen, 1905
103. Geraldesia eupatorii Tavares, 1917
104. Gnesiodiplosis itaparicae Tavares, 1917
105. Guareaomyia purpura Maia, 2007
106. Houardodiplosis rochae Tavares, 1925
107. Iatrophobia brasiliensis (Rübsaamen, 1908)
108. Jorgenseniella eugeniae Maia, 2005
109. Lestodiplosis brasiliensis (Tavares, 1920)
110. Lestodiplosis floricola (Rodrigues & Maia, 2010)
111. Lestodiplosis maricaensis Santos & Maia, 2009
112. Liodiplosis conica Gagné, 2001
113. Liodiplosis cylindrica Gagné, 2001
114. Liodiplosis sphericola Gagné, 2001
115. Lopesia brasiliensis Rübsaamen, 1908
116. Lopesia caulinaris Maia, 2003
117. Lopesia conspicua Maia, 2003
118. Lopesia davillae Maia & Monteiro, 2017
119. Lopesia elliptica Maia, 2003
120. Lopesia erythroxylif Rodrigues & Maia, 2010
121. Lopesia grandis Maia, 2001
122. Lopesia indaensis Maia & Araújo, 2018
123. Lopesia leandrae Maia, 2019
124. Lopesia linearis Maia, 2003
125. Lopesia marginalis Maia, 2001
126. Lopesia maricaensis Rodrigues & Maia, 2010
127. Lopesia similis Maia, 2004
128. Lopesia simplex Maia, 2002
129. Lopesia singularis Maia, 2001
130. Lopesia spinosa Maia, 2004
131. Lopesia tibouchiniae Maia, 2004
132. Lopesia ubatabensis Garcia & Urso-Guimarães, 2018
133. Machaeoriobia gemmae Maia, 2016
134. Machaeoriobia machaeori (Kieffer, 1913)
135. Manilkaramyia notabilis Maia, 2001
136. Maytiella distincta Maia, 2001
137. Metaspardomyia squamosa Tavares, 1918
138. Meunieriella dalechampiae Rübsaamen, 1905
139. Meunieriella insignis (Tavares, 1922)
140. Meunieriella lantanae Tavares, 1918
141. Mikamiadiplosis annulipes Gagné, 2001
142. Myrciamyia maricaensis Maia, 1996
143. Myrciamyia bivalva Maia, 1995
144. Neolasioptera cerei (Rübsaamen, 1905)
145. Neolasioptera cuphea Gagné, 1998
146. Neolasioptera eugeniae Maia, 1993
147. Neolasioptera fariae (Tavares, 1922)
148. Neolasioptera ingae Möhn, 1964
149. Neolasioptera lantanae (Tavares, 1922)
150. Neolasioptera ramicola Maia, 2009
151. Neomitranthella robusta Maia, 1996
152. Novocalmonia fci Ozdikmen, 2009
153. Novocalmonia roustignati (Tavares, 1917)
154. Parazalepidota clusiae Maia, 2001
155. Paulliniamyia ampla Maia, 2007
156. Parazalepidota clusiae Tavares, 1918
157. Pisphodylia brasiliensis Couri & Maia, 1992
158. Primadiplosis microgramma Maia, 2011
159. Prospophydia brasiliensis Felt, 1915
Four genera, Bauhinia with three plant families, Combretaceae, Fabaceae, and Styracaceae, inducers are monophagous. The phytophagous species are associated in the Cerrado, 52 of them are gall-inducers, six are fungivorous, species, four (Table 4). Three gall midge species occur on a host plant and, Curtistylus in the Caatinga, six of them are gall-inducers, one is predator, Meunieriella spinosa, and one is predator, Diadiplosis saccharum.

All phytophagous species are monophagous. Phytophagous gall midges have been recorded on 21 plant families, 37 genera and 37 determined species. Fabaceae, Asteraceae and Calophyllaceae comprise the greatest richness of cecidomyiid species, ten, six and six, respectively (Table 5). Seven gall midge species occur on host plants identified only in genus, totaling seven plant genera. All host species are native. Among them, eleven are endemic to Brazil, two being endemic to Cerrado (Table 4). Lopesia, Asphondylia, and Bruggmanniella are the best represented genera of Cecidomyiidae, with 14, 7, and 4 species, respectively (Table 3).

**List of Cecidomyiidae (Diptera) with occurrence in the Cerrado (Brazil)**

1. Alycaulus hexadenatus Urso-Guimarães, 2018
2. Andridoplosis bahiensis Tavares, 1920
3. Arcivena kielmeyerae Gagné, 1984
4. Asphondylia canastreae Urso-Guimarães & Amorim, 2002
5. Asphondylia cipo Urso-Guimarães, 2018
6. Asphondylia cordiae Möhn, 1959
7. Asphondylia gochnatiae Maia, 2008
8. Asphondylia microcapillosa Maia, 2005
9. Asphondylia santipetri Urso-Guimarães & Amorim, 2002
10. Asphondylia serrata Maia, 2004
11. Asphondylia stachytarpheta Barnes, 1932
12. Brethesiamyia retorta Maia, 2009
13. Bruggmanniella chapadensis Proença & Maia, 2018
14. Bruggmanniella dolocarpil Maia, 2010
15. Bruggmanniellauguetae Urso-Guimarães & Amorim, 2005
16. Bruggmanniella inge Urso-Guimarães & Amorim, 2005
17. Bruggmanniella miconiae Carvalho-Fernandes, Maia & Rodrigues, 2020
18. Cerciplanus cipo Garcia & Urso-Guimarães, 2020
19. Cerciplanus tocantinensis Garcia & Urso-Guimarães 2020
20. Clinodiplosis aegeratum Maia, 2016
21. Clinodiplosis bellum Urso-Guimarães & Carmo-Neto, 2015
22. Clinodiplosis quartelensis Maia & Oliveira 2019
23. Contarinia gemma Maia 2003
24. Couridiplosis vena Maia, 2004
25. Dasineura braziliensis (Tavares, 1922)
26. Dasineura occulta Pereira-Colavite & Urso-Guimarães, 2013
27. Didadioplosis saccharum Urso-Guimarães, 2020
28. Didactylomyia longicana (Felt, 1908)
29. Lopesia andraea Garcia, Lima, Calado & Urso-Guimarães, 2017
30. Lopesia bilobata Maia, 2004
31. Lopesia caulinaris Maia, 2003
32. Lopesia chapadensis Garcia & Urso-Guimarães, 2018
33. Lopesia conspica Maia, 2003
34. Lopesia eichhorniae Urso-Guimarães, 2015
35. Lopesia elliptica Maia, 2003
36. Lopesia linearis Maia, 2003
37. Lopesia maricaensis Rodrigues & Maia, 2010
38. Lopesia mataybae Garcia & Urso-Guimarães, 2018

**CAATINGA**

Only eight gall midge species of seven genera have been reported in the Caatinga, six of them are gall-inducers, one is predator, Feltiella curtistylus, and one is probably kleptoparasite, Dialeria styracis. All inducers are monophagous. These phytophagous species are associated with three plant families, Combretaceae, Fabaceae, and Styracaceae, four genera, Bauhinia L., Combretum Loefl., Mimosa L., and Styrrax L., and three determined species, Combretum leprosum, Mimosa tenuliflora, and Bauhinia brevipes. Fabaceae shelter the great richness of gall midge species, four (Table 4). Three gall midge species occur on a host plant identified only in genus, Styrrax sp., and a single species occur in a plant identified only in family (Fabaceae). All host plant species are native to Brasil. None of them is endemic. All gall midge genera are represented by single species, except Lopesia, with two species (Table 3).

**List of Cecidomyiidae (Diptera) with occurrence in the Caatinga (Brazil)**

1. Anadioplosis caetetensis Tavares, 1920
2. Dialeria styracis Tavares, 1918
3. Feltiella curtistylus Gagné, 1984
4. Houardodiplosis rochae Gagné, 1984
5. Lopesia mimosa Maia, 2010
6. Lopesia pernambucensis Maia, 2010
7. Schizomyia macrocapillata Maia, 2005
8. Styrraxdiplosis caetetensis Tavares, 1915 (possibly)

**CERRADO**

A total of 60 gall midge species of 25 genera have been recorded in the Cerrado, 52 of them are gall-inducers, six are fungivorous, Didactylomyia longicana, Stomatosema pantaneira, S. sibiota, S. terena, S. terere, and Termitomastus leptoproctus, one is inquiline, Meunieriella spinosa, and one is predator, Diadiplosis saccharum.

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39. Lopesia similis Maia, 2004
40. Lopesia simplex Maia, 2002
41. Lopesia spinosa Maia, 2004
42. Lopesia tibouchiniae Maia, 2004
43. Machaeriodia machaerii (Kieffer, 1913)
44. Meunieriella spinosa Urso-Guimarães, 2018
45. Myriciamyia pterandrae Maia & Flor, 2018
46. Myriciamyia admirabilis Maia, 2007
47. Myriciamyia fernandesii Maia, 2004
48. Parametaspodorylina pipersis Maia & Santos 2007
49. Rochadiplosis tibouchiniae Tavares, 1917
50. Schizomyia barreirensis Santos, Maia & Calado, 2019
51. Schizomyia macrocapillata Maia, 2005
52. Schizomyia maricaensis Sousa & Maia, 2007
53. Schizomyia tuiuui Urso-Guimarães & Amorim, 2002
54. Stephomyia epeugeniae Gagné, 1994
55. Stomatosema pantaneirum Carmo-Neto, Lamas & Urso-Guimarães, 2019
56. Stomatosema sibishiota Carmo-Neto, Lamas & Urso-Guimarães, 2019
57. Stomatosema serena Carmo-Neto, Lamas & Urso-Guimarães, 2019
58. Termitomastus leptoproctus Silvestri, 1901
59. Youngomyia matogrossensis Proença & Maia, 2019

PAMPA

Only ten species of gall midges of nine genera have been recorded in the Pampa (List 5), nine of them are gall-inducers and one was caught in flight. One species is oligophagous, Asphondylia moehni, the other inducers are monophagous. They are associated with eight plant families distributed in eight genera and six determined species. All families shelter a single gall midge species, and there are two doubtful records of extension (IBGE, 2012), has a peculiar flora, with 46, 4922 species (Flora do Brasil, 2020), and its Cecidomyiidae fauna is the most taxonomically studied. These facts together explained this high percentage.

Most species induce galls, since this is the predominant habit in this family (Gagné 1994). The majority of the host plants are identified in species, but 52 hosts are identified at supraespecific categories, what difficults the establishment of the right number of host species.

Most hosts are native, but few are exotic, being represented by introduced useful plants, as Melissa officinalis L. (Lamiaceae), a medicinal herb, Mangifera indica L. (Anacardiaceae) with edible fruits, Senna bicapsularis (L.) Roxb. (Fabaceae), Spiraea salicifolia L. (Rosaceae), and Erigeron strigosus Muhl. ex Willd. (Asteraceae), ornamental plants. The gall midges associated with M. indica, S. salicifolia, and E. strigosus are also exotic, but those associated with M. officinalis and S. bicapsularis were described from Brazil and they have never been reported in other countries, suggesting that these hosts were colonized by Brazilian gall midges.

Lantana camara is naturalized and its gall-inducing species was described from Brazil, but it occurs in several Latin American countries. Probably the midge was introduced together with its host.

Incongruities between the host plant and gall-inducing species distributions were observed, suggesting a plant misidentification. In this case, plant vouchers should be examined, but unfortunately the number of vouchers are rare in the literature.

Twenty-seven botanical names were uptaded, but synonyms were cited in brackets to allow their association with the original references. This procedure is important to gather data on the same species, even if under different names.

Most gall-inducing species are monophagous (about 90%), what was expected, as most gall-inducing insects exhibit a high degree of fungivorous. The single gall-inducing species is monophagous and occurs on a native, non endemic plant.

List of Cecidomyiidae (Diptera) with occurrence in the Pantanal (Brazil)

1. Neolasioptera pantaneira Maia, 2017
2. Stomatosema camilae Carmo-Neto, Lamas & Urso-Guimarães, 2019
3. Stomatosema paratudo Carmo-Neto, Lamas & Urso-Guimarães, 2019
4. Stomatosema pantaneirum Carmo-Neto, Lamas & Urso-Guimarães, 2019
5. Stomatosema sibishiota Carmo-Neto, Lamas & Urso-Guimarães, 2019

The phytogeographic domain of occurrence of ten species (Aphidoletes aphidimyza, Cladius alternantherae, C. cattleyae, Diadiplosis coccidivora, Diadiplosis pseudococcii, Mycodiplosis rubida, Prodiplosis floricola, Schizomyia manihoti, Schizomyia mimosa, and Sphaerodiplosis dubia) was not determined, since data on its locality was not enough detailed.

Discussion

Brazil shelters 265 gall midge species, about 43% of the diversity of the Neotropical fauna. Brazil is the largest country in the Neotropics, with 8, 515, 767. 049 km² of extension (IBGE, 2012), has a peculiar and diverse flora, with 46, 4922 species (Flora do Brasil, 2020), and also its Cecidomyiidae fauna is the most taxonomically studied. These facts together explained this high percentage.

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host-plant specificity (Abrahamson et al. 1998, Carneiro et al. 2009). Fabaceae, Asteraceae, and Myrtaceae are the plant families with the greatest richness of gall midge species, as in several inventories of insect galls in Brazil (e.g. Almada & Fernandes 2011, Maia 2013, Araújo et al. 2015, Maia & Mascarenhas 2017, Ascendino & Maia 2018, Maia & Siqueira 2020). Among them, Myrtaceae exhibit the highest average of gall midge species by host plant species, probably because this family is one of the most diverse in the Atlantic Forest, the most investigated biome, and their gall-inducing species are the most studied (e.g. Oliveira & Maia 2005, Rodrigues et al. 2014, Carvalho-Fernandes et al. 2016). *Eugenia* (Myrtaceae) and *Mikania* (Asteraceae) highlight among all other plant genera by sheltering the highest richness of gall midges. Similarly, *Guapira opposita*, *Mikania glomerata*, and *Calophyllum brasiliense* highlight among all other plant species. Their richness has also been pointed out by other authors (Maia 2001b, Maia & Mascarenhas 2017, Melo-Júnior et al. 2018).

The best represented gall midge genera are *Lopesia*, *Asphondylia*, and *Clinodiplosis*. The first is predominantly Neotropical while the others are cosmopolitan, but well represented in the Neotropics (Gagné & Jaschhof 2017). Species of *Clinodiplosis*, *Contarinia*, *Diaeria*, *Meunierella*, *Neolasioptera* and *Torterria* have been reported as inquilinous species in galls. But in fact, according to the ecological concept, they should be considered kleptoparasites, since they do not promote the production of new tissues, as inquilines do (Luz & Mendonça-Júnior 2019).

Several gall midge species are associated with endemic hosts. This information is very important, because it shows the peculiarities of the Brazilian fauna, revealing species with exclusive occurrence in the country. The high number of species known only from the type-locality indicates how the geographic distribution of Brazilian fauna is still poor. This scarcity of data is reinforced by the high number of species which have never been collected again since their description.

Concerning phytoecographic domains, Atlantic Forest shelters the highest richness of gall midge species, followed by Cerrado, Amazon Forest, Pampa, Caatinga, and Pampa. Amazon Forest and Cerrado are the largest, with an area of 2,196,943 and 2,036,448 Km\(^2\), respectively, followed by Atlantic Forest with 1,110,182 Km\(^2\) and Caatinga with 844,453 Km\(^2\). The two others are the smallest, Pampa with 176,469 and Pantanal with 150,355 Km\(^2\). They also differ in richness of flora. Amazon Forest shelters about 50,000 plant species of Angiospermae, Atlantic Forest 20,000, Cerrado 11,600, Caatinga 3,500, Pampa 3,000 and Pantanal only 900 (MMA, 2020). Considering these data, we should expect the highest richness of gall midge species in the Amazon Forest, according to the plant richness hypothesis (Southwood 1960, 1961), since this domain offers quantitatively and qualitatively the greatest amount of resources for the gall-inducers. Nevertheless, the highest richness is reported in the Atlantic Forest, the most investigated domain. This result is an effect of the strong sampling efforts in Atlantic Forest areas, the poor knowledge of the Cecidomyiidae fauna of other Brazilian biomes and the lack of taxonomists in our country.

Most gall midge species occur in a single domain, differing from their host plants which can be found in more than one domain. This suggests that the distribution of gall-inducing species can be wider than that which we know today. Arriola et al. 2016 argued that the distribution of the galling-insects is similar to that of the host plant. So, collections in uninvestigated ou poorly investigated localities are necessary to fill these geographic distribution gaps.

Nevertheless, several gall midge species are associated with plants endemic of a specific phytogeographic domain, as Amazon Forest, Atlantic Forest, and Cerrado. These data reveal the peculiarities of each one and can be useful for the establishment of environmental preservation areas.

**Conclusion**

This study is the first dataset of gall midge species with occurrence in Brazil. It totalize 265 species (43% of the Neotropical fauna); 85.6% are gall-inducers. Phytophagous gall midges are associated with at least 128 host plant species. Fabaceae, Asteraceae and Myrtaceae shelter the greatest richness of gall-inducing species. *Lopesia*, *Asphondylia* and *Clinodiplosis* are the best represented cecidomyiid genera. Most species (about 90%) are known only from Brazil. The Atlantic Forest as the most investigated domain comprises the highest species richness. Several gall midge species induce galls on plants endemic to Brazil. Each Brazilian phytoecographic domain has its own species composition. There is a high number of cecidomyiid species which are known only from the type-locality. Data indicate that the Brazilian fauna is the most studied in the Neotropical Region, confirm the greatest richness of gall midges on plant families which are well represented in Brazil, reveal the most diverse genera in the country, show the peculiarities of each domain and highlight how the geographic distribution of most species is still poor.

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**Conflicts of Interest**

The author declares that she has no conflict of interest related to the publication of this manuscript.

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