Insects found on *Araujia* species (Apocynaceae, Asclepiadoideae) in Argentina

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Abstract: The results of a survey of the natural enemies of moth plant or “tasi”, species of *Araujia* (Apocynaceae, Asclepiadoideae), present in Argentina are shown in this paper. 57 species of insects were recorded of which 17 are cited as natural enemies of these species for the first time. Their specificity was determined and their potential use as biological control agents for *Araujia hortorum* Fourn. was hypothesized. *Pseudosphex noverca* Schaus (Lepidoptera, Arctiidae), is recorded for the first time in the Buenos Aires province, Argentina.

Key Words: *Araujia hortorum*, Asclepiadoideae, natural enemies, biological control, Argentina.

INTRODUCTION

Few systematic studies have previously been carried out on natural insect enemies of native plants in Argentina. The well known listings of Bosq (1937, 1940, 1943) and more recently of Cordo et al. (2004) put emphasis on species that are important in agricultural crops, as until now, that is the sector where most surveys have been conducted.

The present study is part of a project on the biological control of *Araujia hortorum* E.Fourn., an invasive species in New Zealand. A survey was undertaken during 2004-2008, in Argentina and neighbouring countries, of the insect species found on *A. hortorum*, as well as on related genera and species, that could be of potential use as biological control agents of this plant in New Zealand.

In preliminary reports Winks & Fowler (2000) and Winks et al. (2004), a total of 19 insect species found on “moth plant” (*A. hortorum*) are cited in Argentina, data that was later included in the “Catálogo de Insectos Fitófagos de la Argentina” published by Cordo et al. (2004). Villamil et al. (2005) later added 35 species to the list of phytophagous insects and predators found on *A. hortorum* and other species of the same genus (*A. angustifolia* (Hook. & Arn.) Decne., *A. sericifera* Brot., *A. odorata* (Hook. & Arn.) Fontella & Goyder and *A. brachystephana* (Griseb.) Fontella & Goyder). That list was the result of surveys undertaken in the south of Buenos Aires province and in the Argentine mesopotamia (provinces of Entre Ríos, Corrientes and Misiones). Only 10 of these species (found on five species of the moth plants studied) were identified (21 % of the total number of species).

In the present research, the study area was extended to the north and centre of Argentina, but the focus was on the north of Buenos Aires province which is considered as the most important area in Argentina as most species of moth plant studied are found there, both in anthropogenic
and pristine areas. Two other species of Araujia are included in this study: A. megapotamica (Spreng.) G.Don. and A. plumosa Schltdl. Some insect species are proposed as biological control agents of moth plants and their use is justified.

The authors have developed this research using the traditional approach, which considered Araujia and Morrenia as distinct genera (Meyer, 1944, here referred as sensu antico). Nevertheless, recently both genera have been brought together as Araujia (Rapini et al., 2011, here referred as sensu novo).

From the species found during the development of this project have been chosen by Landcare Research (the project sponsor) and preliminarily evaluated in laboratory, Colaspis argentinensis (Bechyné) (Coleoptera, Chrysomelidae) and Toxotrypana australis Blanchard (Diptera, Tephritidae).

MATERIALS AND METHODS

The specimens studied were collected in jars with 70 % alcohol and were deposited in the Entomology collection in the Museo Argentino de Ciencias Naturales “Bernardino Rivadavia” to be studied and stored.

The insects and plants, has been determined by comparison with reference collections, both in the collection of the Division of Entomology Museum of Natural History and the herbarium of the Universidad Nacional del Sur.

Sampling sites (Fig. 1)

2005-2006

01. Finamar, route 74 km 5, Buenos Aires province, Argentina. On Araujia hortorum.
02. Finamar, route 74 km 14, Buenos Aires province, Argentina. On Araujia hortorum.
03. Ea La Luisa, route 56, km 24, Buenos Aires province, Argentina. On Araujia hortorum.
04. Magdalena, 3 km south, Buenos Aires province, Argentina. On Araujia hortorum.
05. Magdalena, route 11, 13 km north, Buenos Aires province, Argentina. On Araujia hortorum.
06. La Plata, Gonnet, Buenos Aires province Argentina. On Araujia hortorum.
07. Villa Elisa, Ecological Reserve, Buenos Aires province, Argentina. On Araujia hortorum.
Araujia brachystepha
Araujia odorata.
Philibertia latiflora
Araujia hortorum.
Araujia plumosa.

RESULTS

These are the final results of the survey of natural enemies of Araujia, after five years of field work (2004-2008). The authors have added 17 new natural enemies to the preliminary lists.

Record of herbivorous insects reported on different species of Araujia in Argentina

Featured here is the list of species found and published in the reports of the various campaigns conducted between 2000 and 2008

(1) Species cited in Winks & Fowler (2000).
(2) Species cited in Villamil et al. (2005).
(3) Species cited in Villamil et al. (2006).
(4) Species cited here for the first time are shown in bold type.

NOTE: Unidentified species cited in Villamil et al. (2005) were shown with small letters (a, b, c).

COLEOPTERA
Anobiidae
A. sp. (2)

Comments. Probably the same species as (1). On Araujia hortorum.
1. Tryecorynus subrutiliceps Pic (3)

Anthribidae
1. Araecerus fasciculatus (DeGeer) (4) (Fig. 9).

Cerambycidae
2. Acanthoderes jaspidea (Germain) (1)
3. Eupogonius petalans Melzer (1)
4. Eupromerella propinquia (Melzer) (3)
5. Hyperplatyx argentinus Berg (1)
6. Neocorus ibidionoides (Serville) (3)
7. Urgleptes mancus (Melzer) (1)
Chrysomelidae

8. Chlamisus hispidulus hispidulus (Klug) (3)
9. Colaspis argentinas (Bechyné) (1) (3) (4)

2. Colaspis porosa Jacoby (4)

10. Cacoscelis melanoptera (Germain) (1)

Curculionidae

11. Araptus araujiae (Brèthes) (1) (3) (4)
12. Araptus pubescens (Schedl) (3) (Scolytinae) (4)

3. Asynonychus cervinus (Boheman) b. curculioniform larvae? (2)

Comments. Probably the same species of Scolytinae previously cited (11, 12). On Araujia hortorum and A. dorata.

4. Naupactus sp.1 (4)
5. Naupactus sp.2 (4)
6. Naupactus sp.3 (4)
7. Naupactus sp.4 (4)

13. Rhysomatus diversicolli Heller (1) (3)
14. Rhysomatus pilosipes Heller (3) c. sp. (2)

Comments. Without any taxonomic specifica-tions. On Araujia hortorum, A. angustifolia and A. brachystephana.

DIPTERA

d. Pupae (did not emerge) (2)

Comments. Without any taxonomic specifications. On Araujia hortorum.

e. leaf miner? (2)

Comments. Without any taxonomic specifications. On Araujia hortorum. verniform larvae ? (2)

Comments. Without any taxonomic specifications. On Araujia hortorum and A. angustifolia. Muscidae

sp. ? (2)

Comments. Without any taxonomic specifications. On Araujia hortorum.

Scyphidae

Pupae (2)

Comments. Without any taxonomic specifications. On Araujia odorata. Tephrithidae (Fig. 12)

9. Tomoplaga fiebrigi Hendel (4)
17. Toxotrypana australis Blanchard (3)

HEMIPTERA-HETEROPTERA

Coreidae:

18. Acanonica hahni (Stal) (3) (4)
19. Anasa guttifera Berg (3)
20. Eubule glyphica Berg (2) (3)
21. Eubule sculpta (Perty) (1) (2) (3) (4) (Figs. 2, 3)

10. Phthiacnemia picta (Drury) (Nymph) (4)

Lygaeidae

11. Lygaeus alboornatus Blanchard (4) (Fig. 6).

22. Oncopeltus unifasciellus Hahn (2) (3) (4) (Fig. 5).
23. Oncopeltus bergianus (Kirkaldy) (1) (3) (4) (formerly stali) (Fig. 4).

Pentatomidae

12. Edessa sp. (Nymph) (4)
13. Nezara viridula L. (4)

Scutelleridae

14. Tetyra poecila Berg (4)

HEMIPTERA-STERNORHYNCHA

Aphididae

24. Aphis nerii Boyer de Fonscolombe (1) (2) (3) (4) (Fig. 10).
25. Aphis gossypii Glover (dark green aphids) (2) (3) (4) i.very small yellow aphids (2)

Comments. Probably a different species to Aphis nerii but further study is needed. On Araujia hortorum.

26. Myzus persicae (Sulzer) (3)

Lecaniiidae

27. Saissetia oleae (Olivier) (3) (4)

Pseudococcidae

28. Pseudococcus sp. (mealy bugs) (2) (3)

HEMIPTERA-COLEORHYNCHA

Membracidae

15. Ceresa uruguayensis Berg (4) (Fig. 11).

HYMENOPTERA

Formicidae

29. Acromyrmex lundi Guérin (2)
30. Camponotus sp. (2) (3)

LEPIDOPTERA

Arctiidae (Fig. 16).

16. Pseudosphex noverca Schaus (4)

Comments. This is the first record of this spe-cies in Buenos Aires province.

Danaidae

31. Danaus erippus (Cramer) (3) (Figs. 7,8).

j.monarch larvae (2)

Comments. Probably like the previous species. On Araujia hortorum and A. angustifolia. Hesperiidae

32. Pyrger sp. (2)
283
Carpintero & Testoni: Insects on Araujia species in Argentina

Noctuidae
33. Helicoverpa zea (Boddie) (2)
34. Rachiplusia nu (Genée) (2)

Sphingidae
35. Erinnus ello (L.) (3)
36. Erinnus lassauxi (Boisduval) (3)
37. Erinnus obscura (F.) (3) k. Unidentified butterfly (2)

Comments. Without any taxonomic specifications. On Araujia hortorum.
eruciform larvae (2)

ORTHOPTERA
Proscopiidae
38. sp. (2)
PSOCOPTERA
Psocidae
39. sp. (2)
Ectopsocidae
17. Ectopsocus (brisiqi group) prob. californicus (Banks) (4)

THYSANOPTERA
40. sp. (2) (3)

Additional information
List of parasites and predators recorded on Araujia species in Argentina.

COLEOPTERA
Carabidae
Lebia securigera Chaudoir (3)
Coccinellidae
Adalia bipunctata L. (4)
Azya lut(e)ipes Mulsant (4)
Coccinella ancoralis (Germain) (2) (3) (4)
Cycloneda sanguinea L. (4)
Harmonia axyridis (Pallas) (3)
Staphilinidae
Sp. (3)

HEMIPTERA
HETEROPTERA
Pentatomidae
Podisus aenescens (Stål) (4)
Reduviidae
Zelus leucogrammus (Perty) (4)

HYMENOPTERA
Mutillidae
Sp. (2)
Serie Parasíctica (hosts: aphids, mealybugs, coleoptera larvae)
Sp. (2)
Pompilidae
Sp. (2)

CONCLUSIONS

Results of the 2004-2008 survey
Fifty seven species of phytophagous insects were recorded on the nine species studied of Araujia, and some other Asclepiadoideae, of which 46 were identified to species level and eight to the genus. Another 12 unidentified morphotypes cited in Villamil et al. (2005) were also included with brief comments.

Parasitic and predator species found on these plants during 2005-2008 were also surveyed and commented on briefly.

Of the total of 57 phytophagous species studied it is concluded that:

The following 24 species are not very important as they are polyphytophagous: Trycorynus subrutiliceps, Acanthoderes jaspidea, Eupagonius petulans, Hyperplatys argentinus, Urgleptes nancus, Chlamisus hispidulus hispidulus, Cacoscelis melanoptera, Astylus atromaculatus, Tetraonyx propinquus, Anacronicus hahnii, Anasa guttifera, Acromyrmex sp., Pyrgus sp., Helicoverpa zeae, Rachiplusia nu, Erinnus ello, Psocidae sp., Proscopidae sp., Araecerus fasciculatus, Epitragus mucidus, Phthia picta, Lygaeus alboornatus, Nezara viridula, Ectopsocus prob. californicus.

The following 17 species should be studied further to evaluate their potential as biological control agents: Tetrya poecila, Eupromerella propincua and Rhyssomatus pilosipes (for to be monospecific with Araujia odorata); Neocorus ibidionoides, Asynonychus cerinus and Erinnus obscura (for their specificity with Asclepiadoideae); Araptus pubescens, Toxotrypana australis and Erinnus lassauxi (for their specificity with Araujia odorata and A. brachystephana), Camponotus sp. (important as a symbiont with Pseudococcus sp.); Naupactus spp. 1, 2, 3, 4, Edessa sp., Tomoplagia fiebrigii and several species of THYSANOPTERA.

The final 16 species appear to be very important for future study on biological control: Oncopeltus bergianus, Rhyssomatus diversicolis, Colaspis argentinensis, Colaspis porosa, Araptus araujiae and Pseudosphex noverca (for their specificity with Araujia, sensu antico); Oncopeltus unifasciellus, Eubule sculpta, Eubule glyphica and Danaus erippus (for being restricted to Araujia, sensu novo); Ceresa uruguayensis (for being restricted to Morrenia, sensu antico); Aphis neri, Aphis gossypii, Myzus periscae, Saissetia oleae, Pseudococcus sp. (These are polyphytophagous but their populations and damage caused to the plants studied are very important, as well as their capacity as virus vectors).

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Table 1. Presence of insects recorded on different species of *Araujia*. X. Pest/host associations mentioned in Winks & Fowler (2000). Y. Pest/host associations mentioned in Villamil *et al.* (2005). Z. Pest/host associations mentioned in Villamil *et al.* (2006). Z. Pest/host associations mentioned here for the first time. 1. Pests on more than one species of *Araujia* or *Morrenia* (both in *sensu antico*). 2. Pests found only on different species but only on Asclepiadaceae. 3. Specific pests on *one* of the moth plants studied (monospecific pests). ?. No data. Species without numbers are polyphytophagous (also present in other plants not Asclepiadaceae).

| #  | *A. hortorum* | *A. angustifolia* | *A. plumosa* | *A. megapotamica* | *A. sericifera* | sp. | *A. odorata* | *A. variegata* | *A. brachystaphylos* | Other Asclepiadaceae |
|----|---------------|-------------------|-------------|-------------------|---------------|-----|-------------|--------------|---------------------|----------------------|
| 1  | X             | Z                 |             |                   |               |     |             |              |                     |                      |
| 2  | Z             | Z                 |             |                   |               |     |             |              |                     |                      |
| 3  | X             | Z                 |             |                   |               |     |             |              |                     |                      |
| 4  | Z             | Z                 |             |                   |               |     |             |              |                     |                      |
| 5  | Z             | Z                 |             |                   |               |     |             |              |                     |                      |
| 6  | Z             | Z                 |             |                   |               |     |             |              |                     |                      |
| 7  | X             |                   |             |                   |               |     |             |              |                     |                      |
| 8  | Z1            | Z1                |             |                   |               |     |             |              |                     |                      |
| 9  | Z1            | Z1                |             |                   |               |     |             |              |                     |                      |
| 10 | Z1            | Z1, Z1            | Z1          |                   |               |     |             |              |                     |                      |
| 11 | Z1, Z1        |                   |             |                   |               |     |             |              |                     |                      |
| 12 | Z1, Z1        |                   |             |                   |               |     |             |              |                     |                      |
| 13 | Y             |                   |             |                   |               |     |             |              |                     |                      |
| 14 | Y             |                   |             |                   |               |     |             |              |                     |                      |
| 15 | Z             |                   |             |                   |               |     |             |              |                     |                      |
| 16 | X2            |                   |             |                   |               |     |             |              |                     |                      |
| 17 | X3            |                   |             |                   |               |     |             |              |                     |                      |
| 18 | X             |                   |             |                   |               |     |             |              |                     |                      |
| 19 | Z             |                   |             |                   |               |     |             |              |                     |                      |
| 20 | Z2            | Z2                |             |                   |               |     |             |              |                     |                      |
| 21 | Z2            | Z2                | Z2, Z2      | X2, Z2            | X2            |     |             |              |                     |                      |
| 22 | Z2            | Z2                | Z2          |                   |               |     |             |              |                     |                      |
| 23 | Z1, Z1        |                   |             |                   |               |     |             |              |                     |                      |
| 24 | X, Y, Z       |                   |             |                   |               |     |             |              |                     |                      |
| 25 | Y, Z          |                   |             |                   |               |     |             |              |                     |                      |
| 26 | X             |                   |             |                   |               |     |             |              |                     |                      |
| 27 | Z             |                   |             |                   |               |     |             |              |                     |                      |
| 28 | Y             |                   |             |                   |               |     |             |              |                     |                      |
| 29 | Y, Z          |                   |             |                   |               |     |             |              |                     |                      |
| 30 | X             |                   |             |                   |               |     |             |              |                     |                      |
| 31 | X1            |                   |             |                   |               |     |             |              |                     |                      |
| 32 | Z2            |                   |             |                   |               |     |             |              |                     |                      |
| 33 | Y             |                   |             |                   |               |     |             |              |                     |                      |
| 34 | Y             |                   |             |                   |               |     |             |              |                     |                      |
| 35 | X             |                   |             |                   |               |     |             |              |                     |                      |
| 36 | X3            |                   |             |                   |               |     |             |              |                     |                      |
| 37 | X2            |                   |             |                   |               |     |             |              |                     |                      |
| 38 | Y             |                   |             |                   |               |     |             |              |                     |                      |
| 39 | Y             |                   |             |                   |               |     |             |              |                     |                      |
| 40 | Z             |                   |             |                   |               |     |             |              |                     |                      |

On *Philibertia latiflora*

On *Funastrum gracile*
Table 2. Characteristics and potentialities of herbivorous insect populations found on different species of *Araujia*. Definitions of frequency categories according to Winks et al. (2004): **rare**: fewer than five individuals collected, **common**: 25 or more specimens collected and present at five or more sites. **occasional**: a total of 5-24 individuals collected, or present at fewer than five sites. **abundant**: more than 200 individuals collected and present at 10 or more sites. These data may be relative because damage caused by, for example, 10 larvae of *Rhyssomatus*, is greater than damage caused by 500 *Aphis nerii*. Different feeding habits according to Winks et al. (2004): **Sap feeders. Fruit feeders. Stem borers.**

| Species number | Collecting site | Frequency | Feeding habits | Comments |
|----------------|-----------------|-----------|----------------|----------|
| 1              | -               | common?   | Stem borers (Bosq, 1943) | Polyphytophagous. |
| 2              | -               | occasional | Bark’s fruits feeders | Polyphytophagous. |
| 3              | -               | rare?     | Stem borers? | Polyphytophagous. |
| 4              | -               | rare?     | Stem borers (Bosq, 1943) | Polyphytophagous. |
| 5              | -               | rare?     | Stem borers? | Need to be studied. May be important due to its specificity on *A. odorata*. Polyphytophagous. |
| 6              | -               | rare?     | Stem borers? | Need to be studied. May be important. Restricted to some Asclepiadoideae. |
| 7              | -               | rare?     | Stem borers (Bosq, 1943) | Polyphytophagous. |
| 8              | -               | ??        | Foliage feeders? | Polyphytophagous. |
| 9              | 04, 06, 07, 32  | occasional | Foliage feeders | Important. Restricted to *Araujia* (sensu antico). |
| 2              | 17              | occasional | Foliage feeders | Need to be studied. May be important. |
| 10             | -               | ??        | Foliage feeders? | Polyphytophagous. |
| 11             | 03, 05, 34      | common    | Fruit feeders | Very important. Restricted to *Araujia* (sensu antico). |
| 12             | 34              | common    | Fruit feeders (Bosq, 1943) | Could be important. Restricted to *Morrenia* (sensu antico). Polyphytophagous. |
| 3              | 06              | common    | Foliage feeders | Polyphytophagous. |
| 4              | 06              | rare      | Foliage feeders | Only one specimen. May be occasional. |
| 5              | 22              | rare      | Foliage feeders | Only one specimen. May be occasional. |
| 6              | 23              | rare      | Foliage feeders | Only one specimen. May be occasional. |
| 7              | 35              | rare      | Foliage feeders | Only one specimen. May be occasional. |
| 13             | 04, 06, 07      | occasional | Fruit feeders | Very important. Restricted to *Araujia* (sensu antico). |
| 14             | -               | occasional? | Fruit feeders (Bosq, 1943) | Could be important. Restricted to *Araujia* odorata. Polyphytophagous. |
| 15             | 19, 28          | common    | Flower / fruit feeders (Bosq, 1943) | Polyphytophagous. |
| 16             | -               | ??        | Flower feeders? | Polyphytophagous. |
| 8              | 23              | rare      | Flower feeders? | Only one specimen. May be occasional. Could be important. |
| 9              | 41              | rare      | Fruit feeder | Need to be studied. May be important due to its specificity. Polyphytophagous. |
| 17             | -               | ??        | Fruit feeders? | Polyphytophagous. |
| 18             | 22              | rare      | Sap feeders | Very important. Restricted to *Araujia* species. Polyphytophagous. |
| 19             | -               | common?   | Sap feeders | Very important. Restricted to *Araujia* species. |
| 20             | 14 26           | common    | Sap feeders | Very important. Restricted to *Araujia* species. Polyphytophagous. |
| 21             | 07, 21, 23, 28, 29, 17, 30, 36, 27 | common | Sap feeders | Very important. Restricted to *Araujia* species. Polyphytophagous. |
| 10             | 02              | rare      | Sap feeders | Polyphytophagous. |
| 22             | 15, 16, 20, 24, 17, 18, 30, 37, 38 | common | Sap feeders | Very important. Restricted to *Araujia* (sensu antico). |
| 23             | 01, 02, 07, 16, 39, 40, 41, 42 | common | Sap feeders | Polyphytophagous. A single specimen. Polyphytophagous. |
| 12             | 22              | rare      | Sap feeders | Polyphytophagous. A single specimen. Polyphytophagous. |
| 13             | 31              | rare      | Sap feeders | Polyphytophagous but very important as a virus vector. IDEM *A. nerii* but with less important populations. |
| 14             | 27              | rare      | Sap feeders | IDEM *A. nerii* but with less important populations. |
| 24             | 06, 07, 11, 12, 43 | abundant | Sap feeders | IDEM *A. nerii* but with less important populations. |
| 25             | 11, 43          | common    | Sap feeders | IDEM *A. nerii*. With important populations. |
| 26             | -               | common?   | Sap feeders | IDEM *A. nerii*. With important populations. |
| 27             | 11, 43          | common    | Sap feeders | IDEM *A. nerii*. With important populations. |
| 28             | 08, 10, 11      | abundant  | Sap feeders | IDEM *A. nerii*. With important populations. |
Table 2. Cont.

| Species number | Collecting site | Frequency | Feeding habits | Comments |
|----------------|-----------------|-----------|----------------|----------|
| 15             | 27              | occasional | Sap feeders   | Need to be studied. May be important. |
| 29             | -               | abundant?  | Foliage feeders | Polyphagous. |
| 30             | 06              | abundant   | See comments   | Many species of this genus, and also other ants, are symbionts of mealy bugs. |
| 16             | 06              | common     | Foliage feeders | Need to be studied. May be important due to its specificity. |
| 31             | 09              | occasional | Foliage feeders | Very important. Restricted to Araujia species. |
| 32             | -               | ??         | ??             | Polyphagous. |
| 33             | -               | ??         | ??             | Polyphagous. |
| 34             | -               | ??         | ??             | Polyphagous. |
| 35             | -               | Foliage feeders? |        | Polyphagous. |
| 36             | -               | Foliage feeders? |        | Need to be studied. May be important due to its specificity. |
| 37             | -               | ??         | Foliage feeders? | Need to be studied. May be important as restricted to some Asclepiadoideae. |
| 38             | -               | ??         | Foliage feeders? | Need to be studied. There are no records of species of this family in the genera studied. |
| 39             | -               | occasional? | Sap feeders   | Need to be studied. There are no records of species of this family in the genera studied. |
| 17             | 43              | common     | Foliage feeders | Polyphagous. |
| 40             | 15              | rare       | Flower feeders? | Need to be studied. There are no records of species of this family in the genera studied. |

Table 3. Comments on parasite and predator populations found on different species of Araujia.
Note: Frequency: see previous table. (23): Collecting site.

| Taxon                       | Common name            | Frequency | Comments |
|-----------------------------|------------------------|-----------|----------|
| Lebia securigera            | Ground beetles         | Rare (23) | On Araujia hortorum |
| Adalia bipunctata           | Ladybirds              | Rare (DLC)| On Araujia odorata |
| Azya luteipes               | Ladybirds              | Occasional (GON) | On Araujia hortorum |
| Coccinella anchoralis       | Ladybirds              | Common (6, 8, 22, 23, 193, 196, FRIG. SUR) | A. angustifolia and Funastrum gracile |
| Harmonia axyridis           | Ladybirds              | Occasional (21) | On Araujia angustifolia |
| Cycloneda sanguinea         | Ladybirds              | Common (20) | On Araujia hortorum |
| Staphilinidae               | Rove beetles           | Rare (IV) | On Araujia hortorum |
| Podisus aenescens           | Spined soldier bug    | Rare (208, 8M) | On Philibertia latiflora and Araujia sericifera |
| Zelus leucogrammus          | Assassin bug           | Rare (197) | On Philibertia latiflora |
| Mutilillidae                | Ant Wasps              | rare?     | On Araujia hortorum |
| Serie Parasitica           | Parasitic wasps       | rare?     | On Araujia hortorum |
| Pommpilidae                 | Wasps                  | rare?     | On Araujia hortorum |

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