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A CATALOGUE OF THE ANTS (HYMENOPTERA: FORMICIDAE) OF TRUJILLO STATE, VENEZUELA, WITH NOTES ON THEIR BIODIVERSITY, BIOGEOGRAPHY AND ECOLOGY

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Abstract: A catalogue of the ants (Formicidae: Ponerinae, Myrmicinae, Ecitoninae, Formicinae, Ectatomminae, Pseudomyrmecinae, Dolichoderinae) of Trujillo State, western Venezuela, has been compiled, based on the author's collection at, Simón Bolívar University's ant data base and records from the literature. Some notes on the biogeography (distribution in the neotropical region and in Venezuela) of the species are presented, as well as some ecological observations such as general habitat, microhabitat, life zone and altitude range. A brief description of the main ecological features of Trujillo State is given, together with a map and the list of the sampled localities. The catalogue includes 7 subfamilies, 16 tribes, 20 genera and 32 species.
Key words: Hymenoptera, Formicidae, Ponerinae, Myrmicinae, Ecitoninae, Formicinae, Ectatomminae, Pseudomyrmecinae, Dolichoderinae, biodiversity, biogeography, ecology, Trujillo State, Venezuela.

Catálogo de las hormigas (Hymenoptera: Formicidae) del Estado Trujillo, Venezuela, con notas sobre su biodiversidad, biogeografía y ecología
Resumen: Se presenta un catálogo de las hormigas (Formicidae: Ponerinae, Myrmicinae, Ecitoninae, Formicinae, Ectatomminae, Pseudomyrmecinae, Dolichoderinae) del Estado Trujillo, en el oeste de Venezuela. El catálogo está basado en la colección del autor,en la base de datos de hormigas de la Universidad Simón Bolívar y en registros bibliográficos. De cada especie se dan notas biogeográficas (distribución en la región neotropical y en Venezuela), así como algunas observaciones ecológicas tales como hábitat general, microhábitat, zona de vida y rango altitudinal. Se acompaña una breve descripción de las principales características del Estado Trujillo, con mapa y lista de los sitios de colección. El catálogo incluye 7 subfamilias, 16 tribus, 20 géneros y 32 especies.
Palabras clave: Hymenoptera, Formicidae, Ponerinae, Myrmicinae, Ecitoninae, Formicinae, Ectatomminae, Pseudomyrmecinae, Dolichoderinae, biodiversidad, biogeografía, ecología, Estado Trujillo, Venezuela.

Introduction

Trujillo State is located on the west region of Venezuela, bordering with Maracaibo Lake. It is located from latitude North 08° 59' 55.02'' to North 10° 02' 16.27'' and from longitude West 70° 01' 06.91''to West 71° 11' 36.61'' (Fig. 1). The surface is 7400 km^2. The topography is uneven by its situation in the Andes range of mountains. The highest peak reaches 3680 meters above sea level. The temperature is variable from warm areas (mean temp. 35° C in the lower parts) to very cold areas in the páramos (mean temp. 10° C). Rainfall is also variable, from very dry or semiarid areas (less than 400 mm per year) to areas of high precipitations (near 3000 mm per year), mean 1600 mm. Most of the soils are fertile and water supply is abundant. Trujillo State main economic activity is agricultural production. Trujillo State is the first producer of garlic, arracachia (an edible root), green peas, wheat and mushrooms, the second producer of coffee, potatoes, beets, carrots, lettuces, cabbage, pineaple and plantain, the third producer of black beans, the fourth producer of bananas of the country. Cattle, poultry, fishery and pisciculture rank very high in the country. The population is 609000 inhabitants. The life zones include tropical wet forest, premontane dry forest, premontane wet forest, premontane rain forest, low montane dry forest, low montane wet forest, low montane rain forest, montane wet forest, montane rain forest, and subalpine paramo (Ewel et al. 1968). Altitude: 0 to 3680 meters above sea level.

The ants are a group of animals of great importance both scientific and economical (Salinas 1968 a, b). From the scientific point of view is a group highly evolved from the social point of view and adapted to extreme variable life and behaviour forms. On the other hand, their nesting behaviour (soil, green and dry branches and twigs, leaf litter, etc.), as well as the feeding behaviour (predators, scavengers, collectors of seed, nectar, fungi, etc.), make ants very important for agriculture. Similarly, they cause inconveniences to man and his goods and properties by direct destruction, biting, smell and look.

The ants have been very poorly studied in Venezuela; therefore this paper objective is to make a catalogue of recorded species up to date for Trujillo State, in the authors' collection, the Universidad Simón Bolívar ants data base, as well as in the very few specific references on the subject.

Materials and methods

Several trips were made to different zones to Trujillo State, aiming to reach the higher range of altitude, the higher surface extension and the different climatic stations, as possible. Coordinates and altitude were taken with a Garmin GPS or using Google Earth.

Material was taken from the ground, soil, leaf litter, rotting logs, low vegetation and from trees. Methods included

searching and hand collecting, vegetation beating, pitfall traps, bait traps (sugar, syrups, sardines, meat, chicken, carrion, etc.). Malaise traps, interception traps, ultraviolet traps, sifting, Tullgren-Berlese funnels, Winkler and direct collection from the ground, nests of ants, as well as the different layers of the vegetation.

For each sample the following data were recorded (when applicable): Locality, geographic coordinates, altitude, vegetation type, habitat, behaviour, and any other observation considered relevant. Photos (not shown in this paper) of the place, habitat, microhabitat and (when available) nests were taken.

The collected material was taken from the field to the laboratory, separated by morphospecies and placed in vials with 70% ethylic or isopropyl alcohol. Each sample was correctly labeled and identified down to the specific taxonomic level possible (at least to generic level) and the specimens of each caste in each sample were counted and registered, in order to add that information in the data base (Microsoft Office Access).

All the collected specimens are deposited in the author's collection at the Faculty of Forestry Science, University of the Andes, Mérida, Venezuela.

The data (geographical coordinates, altitude above sea level and in some cases mean and/or maximum and minimum temperatures) of the registered collection sites are given in table I.

The recorded taxa are catalogued according to the system used by Salinas (1989, 2010) for Venezuela, which is a modification of the catalogue system by Kempf (1972) and updated according to Bolton (1994, 2003, 2006).

This catalogue is mainly based on the ants of the author's collection. Some information (when the genus and/or the species was in the database) was taken from the database of the collection of ants of the Universidad Simón Bolivar, Sartanejas, Venezuela, provided by Prof. Klaus Jaffé to whom we are very grateful. This information is given in the catalogue in the "**OR,** Other records as USB".

This catalogue was structured as follows: The genera and subgenera (when there is one or more) are placed in order according to the scheme given by Kempf (1972) and Bolton (1994, 2003, 2006), and in each genus or subgenus, the species are ordered alphabetically. Each species has indication of genus and author. Later the type locality and the distribution in the Neotropical Region is given according to Kempf (1972). The Neotropical distribution is given with the countries in alphabetical order. The distribution in Venezuela is given starting with Distrito Federal (now Distrito Capital) followed by states in alphabetical order and the Dependencias Federales. For the Trujillo State the collection localities are given. Some ecological information is given. All local names have their original spelling.

The following abbreviations are used:

TL: Type locality. It is the locality where the type specimen was collected.

ND: Neotropical distribution. Refers to the known distribution in the Neotropical region.

VD: Venezuela distribution. Gives the known distribution of the species in Venezuela.

GH: General habitat. It is related to ecological characteristics of the collection localities in Trujillo State, such as vegetation, climate, altitude, etc.

Table I. Collection localities of the ponerine ants of Trujillo State.

1. Agua Viva. N 09º 33' 32.05'' W 70º 36' 58.20'' 144 m N 09º 32' 40.34'' W 70º 37' 55.23'' 183 m
2. Betijoque. N 09º 22' 57.05'' W 70º 44' 10.76'' 532 m
3. Boconó. N 09º 15' 11.64'' W 70º 14' 53.27'' 1557 m
4. Burbusay. 09º 25' 08.77'' W 70º 16' 08.90'' 1693 m
5. Carache (cerca de). N 09º 37' 30.16'' W 70º 13' 01.45'' 1316 m
6. Catalina (La Catalina). N 09º 34' 00.57' W 70º 30' 28.15'' 217 m
7. Chejendé. N 09º 36' 40.76'' W 70º 21' 06.59'' 1075 m
8. Cuicas. N 09º 41' 31.20'' W 70º 17' 54.25'' 975 m
9. El Batatal. N 09º 20' 14.32'' W 70º 08' 39.70'' 1599 m
10. El Cenizo. N 09º 30' 41.53'' W 70º 44' 24.44'' 200 m
11. El Dividive. N 09º 28' 17.35'' W 70º 44' 03.95'' 151 m
12. El Prado. N 09º 13' 28.34'' W 70º 51' 29.28'' 841 m
13. El Recreo. N 09º 21' 30.28'' W 70º 25' 54.44'' 1780 m
14. Flor de Patria. 09º 27' 35.96'' W 70º 28' 23.73'' 435 m
15. Guaramacal (Parque Nacional, La Flecha, Boconó). N 09º 11' 28.67'' W 70º 09' 07.11'' 1369 m.

Hacienda Buenos Aires. No locality with this name was found in available maps or Google Earth.

16. Isnotú. 09º 21' 51.33'' W 70º 42' 15.65'' 753 m
17. Jajó. N 09º 04' 23.24'' W 70º 38' 59.96'' 1921 m
18. La Ceiba (Playa). N 09º 27' 51.65'' W 71º 04' 10.80'' 0 m
19. La Mesa de Esnujaque. N 09º 02' 41.22'' W 70º 42' 25.43'' 1780
20. La Puerta. N 09º 10' 27.50'' W 70º 21' 17.97'' 1459 m
21. Monte Carmelo. N 09º 11' 00.49'' W 70º 48' 39.03'' 1296 m
22. Niquitao. N 09º 06' 46.48'' W 70º 24' 04.24'' 1350 m
23. Pampán (Plaza Bolívar). N 09º 26' 47.22'' W 70º 28' 26.72'' 485 m
24. Pampanito (Plaza Bolívar). N 09º 24' 42.61'' W 70º 29' 39.73'' 369 m
25. Pozo de los Cedros. 1800 m. No locality with this name was found in available maps or Google Earth It was probable mistaken for Laguna de los Cedros, centro de la laguna, N 09º 14' 41.62'' W 70º 13' 13.20'' 1841 m.

Río Azul. No locality with this name was found in available maps or Google Earth.

26. Road to Boconó. 1950 m.
27. Sabana Libre. N 09º 29' 22.25'' W 70º 38' 54.50'' 800 m
28. Sabana de Mendoza (Plaza Bolívar). N 09º 26' 04.15'' W 70º 46' 12.90'' 117 m
29. San Miguel. 09º 22' 06.38'' W 70º 14' 22.17'' 1754 m
30. Santa Ana. N 09º 28' 02.72'' W70º 20' 07.30'' 1644 m
31. Tostós. N 09º 11' 29.63'' W 70º 19' 48.50'' 1547 m
32. Trujillo (Plaza Bolívar). N 09º 21' 55.64'' W 70º 26' 10.86'' 792 m, 1200 m
33. Valera (Plaza Bolívar). N 09º 18' 53.09'' W 70º 36' 28.08'' 543 m

LZ: Life zones. Indicates the life zones of the collection localities in Venezuela, after Ewel et al. (1968).

MH: Microhabitat. It is the specific environment where the species was located (when known), for example, under stone, inside rotten log, etc.

ARST: Altitude range in State Trujillo: The minimum and maximum altitudes in meters above sea level of the collection localities in State Trujillo.

OR: Other records: Indicates other references where the species is quoted for Venezuela.

At the end, any other references about the distribution of the species in Venezuela are quoted. In some cases there is no information about the locality, only the country (Venezuela) is given. In some cases either the locality was not found in the maps searched or in Google Earth or it is too vague or too wide, for example, páramos, Trujillo.

For the rest of the collection localities there is a list (table I) with their geographic coordinates and altitude and a map (figure 2) of the State Trujillo. In the list there are some localities that have no ants recorded; the author has specimens from those localities, but not yet determined.

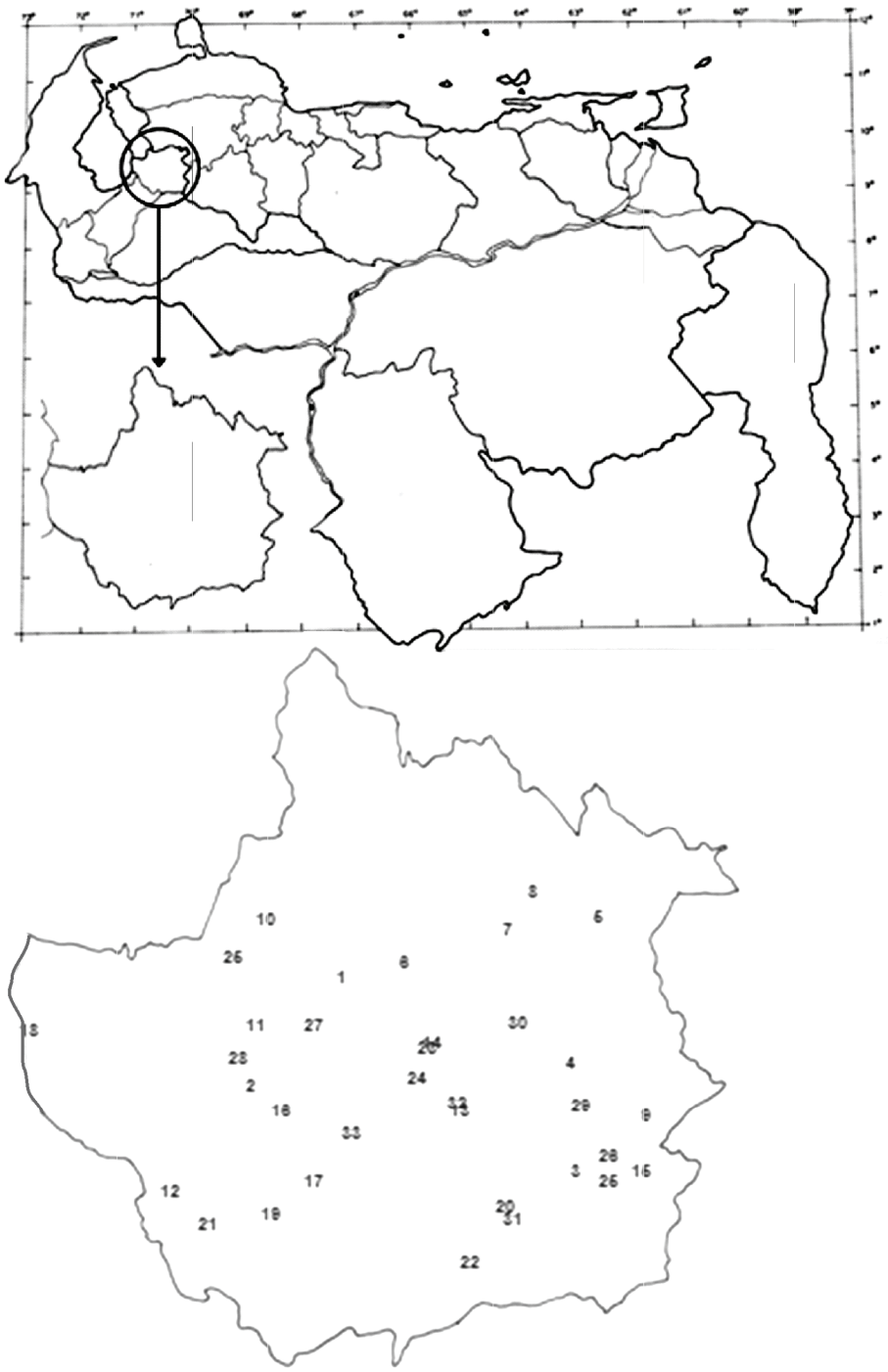

Fig. 1. Location of Trujillo State in Venezuela.
Fig. 2. Map of the Trujillo State showing the localities (by numbers) from table I.

Results

The catalogue includes six (7) subfamilies, sixteen (16) tribes, twenty (20) genera and thirty two (32) species.

Family **F O R M I C I D A E**

Subfamily **PONERINAE**

Trbe P**latythyreini**

Genus ***Platythyrea*** **Roger, 1863**

Platythyrea **sp**.
ND: Venezuela. **VD:** Large part of the country. **LZ:** Humid tropical forest. **ARST:** 1557 m. **OR:** USB.
OR: Salinas, 1989, 2010. USB.
Trujillo State: Boconó. Valera (USB).

Tribe **Ectatommini**

Genus ***Ectatomma*** **Fr. Smith, 1858**

Ectatomma lugens **Emery, 1894**
TL: Bragança, Belem do Para, Brazil.. **ND:** Brazil; Venezuela. **VD:** Trujillo. **LZ:** Tropical dry forestt. **ARST:** 1369 m.
OR: Goitía et al., 1992. USB.
State Trujillo: Valera.

Ectatomma ruidum **Roger, 1861**
TL: Brazil (without locality). **ND:** Brazil; Colombia; Costa Rica; Guayana Francesa; Guyana; Honduras; México; Nicaragua; Panamá; Surinam; Trinidad; Venezuela. **VD:** All the country and Dependencias Federales: Isla de Patos (near Trinidad); Islas Testigos (Morro de la Iguana). **GH:** Espinar. From desert vegetation to rain forest.

LZ: Tropical desert bush. Very dry tropical forest. Dry tropical forest. Humid tropical forest. **MH:** Nest in ground. Near crops. **ARST:** 350 m.
OR: Guagliumi, 1966; Kempf, 1972; Martorell, 1939; Salinas, 1989, 2010; Weber, 1946; USB.
State Trujillo: Sabana de Mendoza.

***Ectatomma tuberculatum* (Olivier, 1791)**
TL: Trinidad (without locality). **ND:** Argentina; Bolivia; Brasil; Colombia; Costa Rica; Guatemala; Guayana Francesa; Guyana; Honduras; México; Panamá; Paraguay; Surinam; Trinidad; Venezuela. **VD:** Amazonas, Aragua, Apure; Bolívar, Delta Amacuro; Lara, Portuguesa, Sucre, Mérida, Táchira, Trujillo. **GH:** Seasonal forests. Rain forests. Flooding areas. **LZ:** Dry tropical forest. Humid tropical forest. **MH:** Soil. **ARST:** 200 m.
OR: Guagliumi, 1966; Kempf, 1972; Martorell, 1939; Salinas, 1989, 2010; Weber, 1946; USB.
State Trujillo: El Cenizo; Hacienda Buenos Aires.

Tribe **Odontomachini**

Genus ***Odontomachus* Latreille, 1804**

***Odontomachus bauri* Emery**
TL: Galapagos Islands: Isabela Island, Albermarle Island. **ND:** Ecuador (Galapagos Islands), Venezuela. **VD:** All the country. **GH:** Rain forest. **LZ:** Humid tropical forest. **MH:** Rain forest leaf-litter. **ARST:** 792-1200 m.
OR: Kempf, 1972 (Included as ***O. haematodus bauri***); Salinas, 1989, 2010.
State Trujillo: Trujillo; Nest in the soil; Painful sting; Workers.

Tribe **Ponerini**

Genus ***Pachycondyla* Fr. Smith, 1858**

***Pachycondyla carbonaria* (Smith, 1858)**
TL: Quito, Ecuador. **ND:** Venezuela. **VD:** Large part of the country. **LZ:** Humid tropical forest. **ARST:** 1369 m.
OR: Riera et al., 2005. USB.
State Trujillo: Guaramacal; Pozo de los Cedros.

***Pachycondyla villosa* (Fabricius, 1804)**
TL: Central America (without locality). **ND:** Argentina; Bolivia; Brazil; Colombia; Costa Rica; Ecuador; Guatemala; Guayana Francesa; Guyana; Mexico; Panama; Paraguay; Peru; Surinam; Venezuela**. VD:** Aragua; Trujillo. **LZ:** Humid tropical forest. **ARST:** 0-20 m.
OR: Kempf 1972; Kusnezov, 1978; Martorell, 1939; Salinas, 1989, 2010; USB.
Nota: Registrada en ocasiones anteriores como ***Neoponera villosa*** (Fabricius, 1804)..
State Trujillo: La Ceiba.

Subfamily **MYRMICINAE**

Tribe **Pheidolini**

Genus ***Pheidole* Westwood, 1841**

***Pheidole megacephala* (Fabricius, 1793)**
TL: Mauritius **ND:** Antilles: Bahamas, Bermudas**,** Cuba, Culebra, Dominican Republic, Haiti, Jamaica, Mona, Puerto Rico, St. Thomas, St. Vincent, Tobago; Belize, Brazil, Costa Rica, Honduras, Mexico, Venezuela. **VD:** All the country. **LZ:** Humid tropical forest. **MH:** Rain forest leaf-litter. **ARST:** 1200 m.
OR: Salinas, 1989.
State Trujillo: Trujillo; Nest in the soil; Strong nasty smell; Workers.

***Pheidole* sp.**
TL: ND: Venezuela. **VD:** All the country. **LZ:** Humid tropical forest. **MH:** Rain forest leaf-litter. **ARST:** 180 -1950 m.
OR: Salinas, 1968c; 1989; 2010. USB.
State Trujillo: Agua Viva. On the ground. Workers, major worker; El Recreo. Eating paper wasps nest. Not agressive. Workers; Road to Boconó. Workers; Guaramacal; Trujillo. House garden. Tending Coccidae on *Dahlia*. Workers; Trujillo; Nest in the soil; Strong nasty smell; Workers. Trujillo; Major workers;

Tribe C**ardiocondylini**

Genus ***Cardiocondyla* Emery, 1869**

***Cardiocondyla emeryi* Forel, 1881.**
TL: Antilles, Saint Thomas**. ND:** Antilles: Bahamas, Barbados, Bermudas**,** Cuba, Culebra, Dominican Republic, Guadeloupe, Jamaica, Mona, Puerto Rico, St. Thomas, St. Vincent; Brazil, Mexico, Venezuela. **VD:** Anzoategui, Aragua, Distrito Federal, Falcón; Mérida, Trujillo, Zulia. **LZ:** Humid tropical forest. **MH:** Ground.. **ARST:** 1200 m.
OR: Salinas, 1989.
State Trujillo: Trujillo; Tending Coccidae on *Dahlia.;*. With *Solenopsis saevissima* (Fr. Smith); Workers.

Tribe **Crematogastrini**

Genus ***Crematogaster* Lund, 1831**

Crematogaster near ***carinata.***
ND: Venezuela. **VD:** Amazonas, Bolívar, Falcón, Mérida, Portuguesa, Sucre, Táchira, Trujillo. **LZ:** Humid tropical forest. **ARST:** 1200 m.
*** New Record for Venezuela.**
The other localities mentioned in VD refer to specimens in the author´s collection at Universidad de Los Andes, not yet published
State Trujillo: Trujillo; On leaves of *Crescentia cujete*; Tending Membracidae; Workers.

***Crematogaster* sp.**
ND: Venezuela. **VD:** Trujillo. **LZ:** Humid tropical forest. **ARST:** 1200 m.
OR: Ballou, 1945; Guagliumi, 1966; Martorell, 1939; Salinas, 1968c; 1989, 2010.
State Trujillo: Trujillo; On the ground; Alate queen.

Tribe **Solenopsidini**

Genus ***Solenopsis* Westwood, 1840**

***Solenopsis geminata* (Fabricius, 1804)**
TL: South America (sin localidad). **ND:** Antilles: Bahamas, Barbados, Bonaire, Cuba, Culebra, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Los Frailes, Martinique, Puerto Rico, St. Christopher, St. Croix, St. Eustatius, St. Lucia, St. Thomas, St. Vincent, Tobago, Trinidad; Belize, Brazil, Colombia, Cocos Islands, Costa Rica, Guajiras, Guatemala, Guyanas, Honduras, Mexico, Revillagigedo Islands, USA, Venezuela. **VD:** All the country. **LZ:** Humid tropical forest. **MH:** Ground. **ARST:** 1200 m.
OR: Kempf, 1972; Salinas, 1989; 2010.
State Trujillo: Miyayí, La Mesa de Esnujaque; On the ground; Workers, major workers

***Solenopsis oculata* Santschi, 1925**
TL: Argentina, Catamarca: Cerro Colorado. **ND:** Argentina, Venezuela. **VD:** Anzoategui, Aragua, Barinas, Carabobo, Distrito Federal, Falcón, Lara, Mérida, Portuguesa, Táchira, Trujillo**. LZ:** Humid tropical forest. MH: Ground.. **ARST:** 1200 m.
*** New Record for Venezuela.**

The other localities mentioned in VD refer to specimens in the author´s collection at Universidad de Los Andes, not yet published
State Trujillo: Trujillo; Tending Coccidae on *Dahlia*, With Cardiocondyla emeryi Forel; Workers. On wooden boards, in a house backyard; Painful sting; Workers.

***Solenopsis saevissima* (Fr. Smith, 1855)**
TL: Brazil, Pará: Rio Tapajós. **ND:** Argentina, Bolivia, Brazil, Ecuador, Guyanas, Paraguay, Venezuela, ¿Chile, ¿Galapagos Islands. **VD:** Aragua, Distrito Federal, Lara, Mérida, Trujillo, Zulia. **LZ:** Humid tropical forest. **MH**: Ground.. **ARST**: 1200 m.
*** New Record for Venezuela.**
The other localities mentioned in VD refer to specimens in the author´s collection at Universidad de Los Andes, not yet published
State Trujillo: Trujillo; Tending Coccidae on *Dahlia*, With *Cardiocondyla emeryi* Forel; Workers.

Tribe **Cephalotini**

Genus ***Zacryptocerus* Wheeler, 1911**

***Zacryptocerus* sp.**
ND: Venezuela. **VD:** All the country. **LZ:** Humid tropical forest. **MH**: Ground.
OR: Salinas, 1989.
State Trujillo: Río Azul.

Tribe **Attini**

Genus ***Acromyrmex* Mayr, 1865**

***Acromyrmex* sp.**
ND: Venezuela. **VD:** Trujillo. LZ: Humid tropical forest. **MH**: Ground.. **ARST**: 1200 m.
OR: Salinas, 1989.
State Trujillo: El Prado; Male. Without locality; At night; Males.

Genus ***Atta* Fabricius, 1804**

***Atta sexdens* (Linnaeus, 1758)**
TL: Suriname: Paramaribo. **ND:** Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Guianas, Panama, Paraguay, Peru, Venezuela. **VD:** All the country. **GH:** Rain forest, tropical dry forest, cloud forest. **LZ:** Humid tropical forest, Submontane humid forest. **MH:** Forest litter. **ARST:** 1200 m.
OR: Ballou, 1945; Martorell, 1939; Kempf, 1972; Salinas, 1989; 2010.
State Trujillo: Trujillo; Tending Coccidae on *Dahlia*, With *Cardiocondyla emeryi* Forel; Workers.

Subfamily **ECITONINAE**

Tribe **Ecitonini**

Genus ***Eciton* Latreille, 1804**

***Eciton burchelli* (Westwood, 1842)**
TL:. Brazil, Sao Paulo: Santos. **ND:** Brazil, Paraguay, Venezuela. **VD:** Apure, Barinas, Bolívar, Carabobo, Delta Amacuro, Distrito Federal**,** Mérida, Táchira, Trujillo**. LZ:** Humid tropical forest. **MH**: Ground. **ARST**: 650 m.
OR: Martorell, 1939; Salinas, 1989; 2010.
State Trujillo: La Catalina; Workers, major workers.

Genus ***Labidus* Jurine, 1807**

***Labidus coecus* (Latreille, 1802)**
TL: Surinam: Paramaribo. **ND:** All the region. **VD:** All the country. **GH:** Rain forest, tropical dry forest, cloud forest. **LZ:** Humid tropical forest, Submontane humid forest. **MH:** Forest litter. **ARST:** 1225 m.
OR: Kempf, 1972; Salinas, 1989; 2010; Watkins, 1976.
State Trujillo: Boconó.

Subfamily **PSEUDOMYRMICINAE**

Tribe **Pseudomyrmicini**

Genus ***Pseudomyrmex* Lund, 1831**

***Pseudomyrmex tenuis* group.**
ND: Bolivia; Brazil; Colombia; Costa Rica; Guayana Francesa; Guyana; Peru; Surinam; Venezuela. **VD:** Barinas; Mérida; Táchira; Trujillo. **GH:** Tropical dry forest. **ARST:** 183 m.
OR: Salinas, 2010.
State Trujillo: Agua Viva; On the ground; Workers.

***Pseudomyrmex* sp.**
ND: Venezuela. **VD:** Trujillo. **GH:** Rain forest. **ARST:** 1780 m.
State Trujillo: La Mesa de Esnujaque; On weeds; Males.

Subfamily **FORMICINAE**

Tribe **Lasiini**

Genus ***Lasiophanes* Emery, 1895**

***Lasiophanes* sp.**
ND: Venezuela. **VD:** Trrujillo. **GH:** Rain forest. **LZ:** Humid tropical forest. **MH:** Forest litter. Log leaf-litter. Soil. **ARST:** 1200 m.
State Trujillo: Trujillo; Nest under stone; Workers.

Genus ***Nylanderia* Emery, 1906**

***Nylanderia* sp.** (Formerly recorded as ***Paratrechina* near *longicornis* (Latreille, 1902).**
ND: Large part of the country. **VD:** Trujillo. **GH:** Rain forest. **ARST:** 545 m.
OR: Salinas, 1989; 2010.
State Trujillo: Boconó. On the ground; Workers.

Tribe **Camponotini**

Genus ***Camponotus* Mayr, 1861**

***Camponotus atriceps* (Fr. Smith, 1858)**
TL: Brazil, Pará: Belem. **ND:** Bolivia; Brazil; Colombia; Costa Rica; Ecuador; Guatemala; Guayana Francesa; Guyana; Panama; Surinam; Venezuela. **VD:** All the country **GH:** Rain forest. **LZ:** Humid tropical forest. **ARST:** 650 m.
OR: Kempf, 1972; Salinas, 1989; 2010.
State Trujillo: La Catalina. Major workers, minor workers.

***Camponotus germaini* Emery, 1903**.
TL: Brazil, Mato Grosso (without locality). **ND:** Brtazil; Paraguay; Venezuela. **VD:** All the country. **GH:** Rain forest. **LZ:** Humid tropical forest. **ARST:** 1780 m.
State Trujillo: Trujillo**;** Workers. La Mesa de Esnujaque; Major worker, minor workers.

***Camponotus rufipes* (Fabricius, 1775).**
TL: Brazil (without locality). **ND:** Argentina; Bolivia; Brazil; Colomvia; Guayana Francesa; Guyana; Paraguay; Surinam; Venezuela. **VD:** Amazonas, Anzoategui, Aragua, Barinas, Bolívar, Delta Amacuro, Guárico, Mérida, Miranda, Monagas, Táchira, Trujillo. **GH:** Rain forest. **LZ:** Humid tropical forest. **MH: ARST:** 1950 m.
State Trujillo: Road to Boconó; Major workers, minor workers. Valera; Major worker.
OR: Kempf, 1972; Salinas, 1989.

***Camponotus sericeiventris* (Guérin-Méneville, 1838).**
TL: Brazil, Guanabara: Rio de Janeiro. **ND:** Argentina; Brazil; Guayana Francesa; Guyana; Paraguay; Surinam; Uruguay; Venezuela. **VD:** Trujillo. **GH:** Rain forest. **LZ: MH: ARST:** 543 m.
*** New Record for Venezuela.**
State Trujillo: Valera; Major workers; Minor worker.

Subfamily **DOLICHODERINAE**

Tribe **Dolichoderini**

Genus ***Dolichoderus*** **Lund, 1831**

Dolichoderus (Monacis) debilis **(Emery, 1890).**
ND: Bolivia; Brazil; Colombia; Guatemala; Guayana Francesa; Guyana; Panama; peru; Surinam; Trinidad; Venezuela. **VD:** Aragua, Barinas, Bolívar, Carabobo; Mérida, Táchira, Trujillo. **GH:** Rain forest; Deciduous forest; "Espinar" forest; Semi-arid zones. **LZ:** Tropical humid forest, Tropical "espinar" forest; Very dry tropical forest**.. ARST:** 650 m.
OR: Salinas, 1989; 2010.
State Trujillo: La Catalina. Workers.

Dolichoderus (Monacis) bispinosa **(Olivier, 1971)**
TL: French Guiana: Cayenne. **ND:** Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Guatemala, Guianas, Honduras, Mexico, Panama, Paraguay, Peru, Saint Thomas, Trinidad, Venezuela. **VD:** Amazonas, Aragua, Barinas, Delta Amacuro, Lara, Mérida, Portuguesa, Táchira, Trujillo. **GH:** Rain forest. **LZ:** Humid tropical forest. **ARST:** 800 m.
OR: Salinas, 1989; 2010.
State Trujillo: Sabana Libre.

Genus ***Linepithema*** **Mayr, 1866**

Linepithema **sp.**
ND: Venezuela. **VD:** Trujillo. **GH:** Rain forest. **ARST:** 1950 m.
OR: Salinas, 1989; 2010.
State Trujillo: Road to Boconó. Workers.

Tribe **Tapinomini**

Genus ***Azteca*****, 1878**

Azteca **sp.**
VD: All the country**. ARST:** 1369-1950 m.
OR: Salinas, 1989; 2010.
State Trujillo: Road to Boconó. Workers. Guaramacal.

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