

Checklist of Orb-Weaving Spiders of Trinidad and Tobago Belonging to the Families Araneidae, Tetragnathidae and Nephilidae

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INTRODUCTION

Ecologically spiders can be categorised into guilds, but there exists no universally recognised guild. However, the spider families can basically be divided into long-sighted hunters, short-sighted hunters and web-building spiders. Families can be placed into the last category if they use their webs primarily to capture prey.

There are a recorded 15 web-building families found in Trinidad of which nine construct orb webs (Sewlal and Cutler 2003). Members of these families are called orb-weavers, because of the characteristic webs they construct, which are roughly circular and filled by a series of concentric circles that get progressively smaller as its gets closer to the middle, all of which are divided into sectors by separate silk threads. These orb webs are used to capture prey which consists mostly of flying insects.

The families Anapidae, Deinopidae, Mysmenidae and Theridiosomatidae were excluded based on the fact that they construct modified orb webs. However, among those that construct unmodified webs are Araneidae, Nephilidae, Tetragnathidae, Symphytognathidae and Uloboridae. The majority of the data gathered for this checklist was from my Ph.D. project where a majority of the specimens found belonged to the first three families that construct unmodified webs, which is the focus of this checklist.

METHODOLOGY

Sampling for Trinidad lasted from March 2006 to November 2009 and was carried out in 70 localities, spanning 17 natural habitat types based on the major vegetation types (Beard 1946) which included: evergreen seasonal forest, Mora forest, semi-evergreen seasonal forest, deciduous seasonal forest, montane rainforest, lower montane rainforest, elfin woodland, seasonal montane forest, swamp forest, palm swamp, herbaceous swamp, marsh forest, palm marsh, savanna, mangrove woodland, littoral woodland. Other natural habitats sampled not covered by Beard's monograph included riparian vegetation. Three habitats that endured disturbance through human activity were also sampled for this study and included secondary vegetation, cocoa fields and farmland.

Specimens were collected mainly using two methods: visual search and sweep-netting. Visual search involved the collector walking between the vegetation and collecting those in webs or retreats below waist level (referred to as

the look-down method), and above the waist (referred to as the look-up method) (Scharff *et al.* 2003). Sweep-netting involved brushing the short vegetation including grasses, shrubs and the low-hanging branches of trees with a thick canvas sweep-net. This action served to dislodge individuals of both diurnal and nocturnal species resting in retreats in the vegetation. After short intervals the net was opened and its contents examined for arachnids. All localities were sampled during the day, as nocturnal sampling proved to be too dangerous. At each locality, visual search was carried out for 10 hours and sweep-netting for 5 hours.

Additional records for Trinidad were obtained from literature as well as from examining specimens from a collection of spiders made in Trinidad from the Denver Museum, and by a collection trip to Tobago in October 2008.

For this study the estimated species richness of natural and disturbed habitats was calculated separately using EstimateS 8.0 software (Colwell 2006). This program generates the estimated species richness for ten of the most commonly used estimators. Since all estimators measure the same parameter, the mean of these estimators was taken. Natural habitats produced an observed species richness of 55 and an estimated species richness of 59.55, while disturbed habitats produced an observed species richness of 41 and an estimated species richness of 45.54.

After sorting and identification all spiders were stored in labelled vials containing 70% ethanol. Identifications were based on adult specimens. The genitalia was the main diagnostic feature used which for males included their pedipalps which are the small leg-like appendages next to their tips which differ from juveniles and females by being enlarged with a complex structure. The females were identified by the structure of their epigynum which is located on the ventral midline of the abdomen, which varied in length, shape and presence or absence of a scape and the direction it points towards. Secondary diagnostic characteristics included patterns on the abdomens of such genera as *Acacesia* and *Metzygia*.

BACKGROUND

Structure and function of orb webs

Out of the recorded descriptions of web designs, the orb web is the best known web design (Foelix 1996) with approximately 4,740 species known to construct orb webs

or webs derived from an orb web design (Platnick 2009). Orb web building behaviour is believed to have evolved several times in different spider groups, where others believe it has only evolved once (Coddington 1986). Most orb-weavers build their webs vertically, most of which are two-dimensional (Foelix 1996).

An orb web consists of four basic parts: (1) frame threads, (2) radial threads, (3) the catching spiral and (4) the hub. The frame threads mark the boundaries of the web, and serve as insertion sites for the radial threads (Foelix 1996). The radial threads converge to a central spot called the hub.

Common structural variations of orb webs

However, not all orb webs are uniform in design where the variation by some species include the placement of a free sector where the radii between two sector threads is not built, but is replaced by a sturdy signal thread connected to a retreat near the web (Foelix 1996). Some species include a tangle or barrier web in their web design which is attached to one or both faces of the orb web, like *Nephila clavipes* and *Leucauge argyra*. Orb-weaving genera like *Spilasma* and *Micrepeira* include conical retreats made of detritus in their webs which has become an identifying feature of these genera.

However, probably the most documented structural variation of orb webs is the stabilimenta. These are thick zigzag bands of silk which can be placed in a variety of patterns in the web. For instance, they can pass through the hub to form a line or an X-pattern, or around the hub in a circle as with the genus *Argiope*, while *Gasteracantha cancriformis* incorporate short thick tufts of silk along the frame threads (Jaffé 2006). Species such as those belonging to the genera *Cyclosa* and *Allocyclosa*, cover the stabilimenta with debris like remnants of prey exoskeletons and old cast skins.

A total of 89 species have so far been distinguished.

CHECKLIST

In records from the literature included in this checklist, the name of the collectors, the date the specimens were collected and the collections they are currently housed in are given in brackets next to the locality. However, I must note that not all of the previous species records have all of this information, with the least amount of information present being the collection it is currently found in. Where records in the literature exist, they are placed after the species name followed by records of the species collected by the author.

Abbreviations in checklist:

AMNH – American Museum of Natural History, New

York, United States.

BMNH – Natural History Museum, London, United Kingdom.

CUC – Cornell University Collection kept in AMNH.

DMNS – Denver Museum of Nature and Science, Denver, Colorado, United States.

FSCA – Florida State Collection of Arthropods, Gainesville, Florida, United States.

MCZ – Museum of Comparative Zoology, Cambridge, Massachusetts, United States.

USNM – National Museum of Natural History, Smithsonian Institution, Washington D.C., United States.

Collections made by B. Cutler and J.N. Sewlal are currently housed in their private collections.

KEY TO COLLECTORS

| | |
|-------------------------------|-----------------------|
| AMC - A.M. Chickering | JNS - J.N. Sewlal |
| AMN - A.M. Nadler | JL - J. Lazell |
| BC - B. Cutler | JR - J. Rosen |
| BCa - B. Camill | Levi - Levi |
| CKS - C.K. Starr | LNS - L.N. Snorkin |
| CTC - C.T. Collins | NAW - N.A. Weber |
| DAB - D.A. Brady | NLHR - N.H.L. Krauss |
| DdeR - D. De Roche | OPC - O.P. Cambridge |
| DH - D. Hardy | PEC - P.E. Cushing |
| ENK - E.N. Kjellesvig-Waering | PJD - P.J. Darlington |
| GBE - G.B. Edwards | PW - P. Wygodzinsky |
| GD - G. Donald | RHM - R.H. Montgomery |
| HVW - H.V. Weers | RI - R. Ingle |
| IB - I. Bragg | RJ - R. Jamison |
| JALC - J.A.L. Cooke | RT - R. Thaxter |
| JC - J. Coddington | RW - R. West |
| JHH - J.H. Hart | WSB - W.S. Brooks |

ARANEIDAE

- 1. *Acacesia hamata*** (Hentz 1847) - St. Augustine (AMNH); Mt. St. Benedict (B. Cutler, 27 June - 2 July 1999) (Glueck 1994); Aripo Savannas - Cumuto (savanna) (JNS, 17 Oct 2006, 7 and 20 July 2007); Aripo Savannas - Valencia (savanna) (JNS, 11 Sept 2007, 4 Nov 2007); Aripo Savannas - Wallerfield (savanna) (JNS, 7 - 9 Jan 2008); Lopinot Ridge (Mora forest) (JNS, 1 - 2 July 2008); Caura Valley (secondary forest) (JNS, 14, 16 - 17 May 2007); Secondary forest bordering Erin Savannas (JNS, 22 - 24 and 28 - 29 May 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006).
- 2. *Acacesia tenella*** (Koch 1871) - Simla Biological Station, Arima Valley (AMNH) (Glueck 1994); Caura Valley (secondary forest) (JNS, 14, 16 - 17 May 2007); Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2008); Quinam Bay (semi-evergreen seasonal forest)

- (JNS, 17 Dec 2007); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 March 2007, 2 - 4 Apr 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006, 9 Dec 2007); **TOBAGO**: roadside vegetation on route to Murchison Estate (night collecting) (IB, DdeR, DH, 26 Sept 2008).
3. *Alpaida* sp. **A** (new spp) - Matura (Mora forest) (JNS, 7 and 10 Nov 2006, 11 Dec 2007).
 4. *Alpaida* sp. **B** (new spp) - Los Blanquizontales (palm swamp) (JNS, 13 - 14 Apr 2009).
 5. *Alpaida bicornuta* (Taczanowski 1878) - Maracas Valley (AMNH) (Levi 1988).
 6. *Alpaida chickeringi* (Levi 1988) - Simla (AMN, 12 Dec 1954, AMNH) (Levi 1988).
 7. *Alpaida septemmammata* (O.P. Cambridge 1889) - Gaspree (GD, Nov 1944, AMNH) (Levi 1988).
 8. *Alpaida simla* (Levi 1988) - Simla (RT 1913, AMNH); Spring Hill, Arima, (LNS, 18 - 19 July 1979, AMNH) (Levi 1988).
 9. *Alpaida thaxteri* (Levi 1988) - Port of Spain (RT, 1913, MCZ) (Levi 1988).
 10. *Alpaida trispinosa* (Keyserling 1892) - St. Augustine, University of the West Indies Campus (MCZ) (Levi 1988); Aripo Savannas - Cumuto (savanna) (JNS, 17 Oct 2006, 7 and 20 July 2007); Caura Valley (farmland) (JNS, 6 June 2007, 13 - 14 June 2007); Los Iros (farmland) (JNS, 6 - 7 Apr 2008); Jerningham (farmland) (JNS, 27 May 2008), Mosquito Creek (mangrove woodland) (JNS, 13 Oct 2006).
 11. *Alpaida truncata* (Keyserling 1865) - Caparo (AMNH) (Levi 1988).
 12. *Alpaida veniliae* (Keyserling 1865) - Point Fortin (AMNH); St. Augustine (AMNH) (Levi 1988).
 13. *Araneus* sp. (new spp) - Pt. Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006 and 9 Dec 2007).
 14. *Araneus venatrix* (C.L. Koch 1838) - Arima Valley (AMNH); Ft. George Hill (AMNH); Maracas Valley (AMNH); Navy Base (AMNH); Port of Spain (MCZ); Sangre Grande (AMNH) (Levi 1991a); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Rousillac (cocoa field) (JNS, 29 Nov 2007); Caura Valley (riparian vegetation) (JNS, 25 Oct 2006 and 27 July, 8, 15 Aug, 12 Sept 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006 and 9 Dec 2007); Chacachacare (deciduous seasonal forest) (JNS, 19 - 20 Sept and 16 Nov 2007).
 15. *Argiope argentata* (Fabricius 1775) - Pt. Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006 and 9 Dec 2007); Aripo Savannas - Cumuto (savanna) (JNS, 17 Oct 2006, 7 and 20 July 2007); Aripo Savannas - Valencia (savanna) (JNS, 11 Sept 2007 and 4 Nov 2007); Aripo Savannas - Wallerfield (savanna) (JNS, 7 - 9 Jan 2008); Mt. El Tucuche (elfin woodland) (JNS, 29 - 30 June 2008); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Paria (secondary forest) (JNS, 17 - 18 Apr 2008); Caura Valley (farmland) (JNS, 6 and 13 - 14 June 2007); Pasea (farmland) (JNS, 22 and 25 - 26 June 2008); Phillipine (farmland) (JNS, 3 - 4 Feb 2008); Valencia (farmland) (JNS, 1 - 2 Apr 2008); Los Iros (farmland) (JNS, 6 - 7 Apr 2008); Jerningham (farmland) (JNS, 27 May 2008); Rousillac (cocoa field) (JNS, 29 Nov 2007); Caroni Swamp (mangrove) (JNS, 1 Nov 2006, 3 Aug 2007); Bush Bush (herbaceous swamp) (JNS, 15 Jan 2008); Rousillac Swamp (herbaceous swamp) (JNS, 12 Oct 2006, 12 Dec 2007); Toco (littoral) (JNS, 5 Dec 2007); Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2008); Vessigny River (riparian vegetation) (JNS, 29 - 30 Feb 2008); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 March 2007, 2 - 4 Apr 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006, 9 Dec 2007); Chacachacare (deciduous seasonal forest) (JNS, 19 - 20 Sept 2007, 16 Nov 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Valencia (palm marsh) (JNS, 23 - 24 Jan 2008); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); Estuary of Oropouche River (swamp forest) (JNS 10 - 11 Apr 2008); Gran Couva (cocoa field) (JNS, 3 and 6 Nov 2009); **TOBAGO**: roadside vegetation along North Coast Road between Bloody Bay to Charlotteville (DdeR, DH, IB, 28 Sept 2008).
 16. *Cyclosa bifurcata* (Walckenaer 1842) - Mt. El Tucuche (NAW, 16 Dec 1934, MCZ); Simla (AMC, 25 Apr 1964, MCZ); Lalaja Road, Arima (JC, 7 Feb 1984, USNM) (Levi 1999).
 17. *Cyclosa caroli* (Hentz 1850) - St. Augustine (AMNH); St. Augustine River (MCZ); St. Augustine Univ. Campus (MCZ); St. George: Simla, Arima Valley (AMNH) (Levi 1999); Morne Bleu (montane forest) (JNS, 8 Nov 2006, 10 Dec 2007); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 March 2007); Mt. Harris (evergreen seasonal forest) (JNS, 3 - 4 Apr 2008); Secondary forest bordering Erin Savannas (JNS, 22 - 24 May and 28 - 29 May 2007); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Santa Cruz (cocoa field) (JNS, 7 - 8 Nov 2009); Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2008); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22 - 23 Aug 2007); Aripo Savannas - Valencia (marsh forest) (JNS, 8 - 9 Jan 2008); Heights of Aripo (seasonal montane forest) (JNS, 3 - 4 May 2008); Bush Bush (swamp for-

- est) (JNS, 10 Mar 2008); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008); Bush Bush (palm swamp) (JNS, 11 Mar 2008); Gran Couva (cocoa field) (JNS, 3 and 6 Nov 2009); Caurita Valley (cocoa field) (JNS, 1 - 2 Nov 2009); Centeno (cocoa field) (JNS, 3 Dec 2007).
- 18. *Cyclosa diversa*** (O.P. Cambridge 1894) - Simla, 6.4 km north of Arima (RW, 10 May 1981, MCZ) (Levi 1999).
- 19. *Cyclosa fililineata*** (Hingston 1932) - Arima Ward, Blanchisseuse Road (USNM) (Levi 1999); Matura (Mora forest) (JNS, 7 and 10 Nov 2006, 11 Dec 2007); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22 - 23 Aug 2007); Heights of Guanapo (lower montane forest) (JNS, 12 - 13 Apr 2008).
- 20. *Cyclosa rubronigra*** (Caporiacco 1947) - Arima Valley, Simla Research Station (JC, 31 Jan 1984, USNM); Blanchisseuse Road, St. George (JC, Feb 1984, USNM) (Levi 1999); Chatham (secondary forest) (JNS, 11 - 12 Apr 2009).
- 21. *Cyclosa tamanaco*** (Levi 1999) - No specific locality given, only known from Trinidad (JHH, 17 July 1899, USNM) (Levi 1999).
- 22. *Cyclosa triquetra*** (Simon 1895) - Bayshore (RJ, 2 Sept 1968, USNM) (Levi 1999).
- 23. *Cyclosa walckenaeri*** (O.P. Cambridge 1889) - Bayshore (AMNH) (Levi 1999); Chacachacare (deciduous seasonal forest) (JNS, 19 - 20 Sept and 16 Nov 2007).
- 24. *Eriphora edax*** (Blackwall 1863) - Matura (Mora forest) (JNS, 7 and 10 Nov 2006, 11 Dec 2007); Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); Secondary forest bordering Erin Savannas (JNS, 22 - 24 and 28 - 29 May 2007); Mamoral (secondary forest) (JNS, 28 May 2008); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Santa Cruz (cocoa field) (JNS, 7 - 8 Nov 2009); Bush Bush (herbaceous swamp) (JNS, 15 Jan 2008); Cap-de-Ville (littoral woodland) (JNS, 27 - 28 Feb 2008); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 March 2007, 2 - 4 Apr 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Valencia (palm marsh) (JNS, 23 - 24 Jan 2008); Aripo Savannas - Wallerfield (palm marsh) (JNS, 28 - 29 Jan 2008); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22 - 23 Aug 2007); Aripo Savannas - Valencia (marsh forest) (JNS, 8 - 9 Jan 2008); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); El Cerro del Aripo (lower montane forest) (JNS, 30 - 31 Jan 2008); Heights of Aripo (seasonal montane forest) (JNS, 3 - 4 May 2008); Ture Forest (seasonal montane forest) (JNS, 17 - 18 June 2008); El Luengo Village (cocoa field) (JNS, 29 - 30 Nov 2009); Caurita Valley (cocoa field) (JNS, 1 - 2 Nov 2009); Rousillac (cocoa field) (JNS, 29 Nov 2007).
- 25. *Eustala cf anastera*** (Walckenaer 1842) - Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Las Cuevas (montane forest) (JNS, 28 - 29 Aug 2007); Trinity Hills (semi-evergreen seasonal forest) (JNS, 23 - 24 June 2008); Aripo Savannas - Valencia (palm marsh) (JNS, 23 - 24 Jan 2008); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22, 23 Aug 2007); Heights of Aripo (seasonal montane forest) (JNS, 3 - 4 May 2008); El Cerro del Aripo (lower montane forest) (JNS, 30 - 31 Jan 2008); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008); Los Blanquizales Lagoon (palm swamp) (JNS, 13 - 14 Apr 2009); Bush Bush (palm swamp) (JNS, 11 Mar 2008); **TOBAGO:** Gilpin Trace/Niplig Trace (JNS, CKS, DH, DdeR, 21 Sept 2008).
- 26. *Eustala trinitatis*** (Hogg 1918) - (Levi 1991a).
- 27. *Eustala sp. A*** - Mt. St. Benedict; Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008).
- 28. *Eustala sp. B*** - Aripo Savannas - Cumuto (palm marsh) (JNS, 8 - 9 Jan 2008).
- 29. *Gasteracantha cancriformis*** (Linnaeus 1758) - Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Las Cuevas (montane forest) (28 - 29 Aug 2007); Mosquito Creek (mangrove woodland) (JNS, 13 Oct 2006); Toco (littoral woodland) (JNS, 5 Dec 2007); Estuary of Oropouche River (swamp forest) (10 - 11 Apr 2008).
- 30. *Gea heptagon*** (Hentz 1850) - Aripo Savannas - Cumuto (savanna) (JNS, 7 and 20 July 2007).
- 31. *Hypognatha divuca*** (Levi 1996) - Mamoral (secondary forest) (JNS, 28 May 2008).
- 32. *Hypognatha scutata*** (Perty 1833) - Arima (NLHK, May 1953, AMNH), (DAB, 24 - 26 July 1978, AMNH); 6.4 km north of Arima (GBE, 23 Aug 1986, FSCA); near Simla (GBE, 20 - 23 Aug 1986, FSCA); Arima Valley (JR, PW, 10 - 22 Feb 1964, AMNH); Simla, Arima Valley (AMN, Dec 1954, AMNH), (AMC, 23 Apr 1964), (RW, 10 May 1981, MCZ); Diego Martin (RHM, 9 Oct 1944, AMNH), (ENK, 23 Aug 1963, AMNH); Maracas Valley (JL, 16 July 1964, MCZ); Mt. El Tucuche (PJD, April 1929, MCZ); Port of Spain (RT, no date, MCZ); Navy Base, SW Trinidad (RI, Sept 1944, AMNH) (Levi 1996); Aripo Savannas - Cumuto (savanna) (JNS, 17 Oct 2006, 7 and 20 July 2007); Matura (Mora forest) (JNS, 7 and

- 10 Nov 2006, 11 Dec 2007); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Paria (secondary forest) (JNS, 17 - 18 Apr 2008); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Centeno (cocoa field) (JNS, 3 Dec 2007).
- 33. *Kaira cobimcha*** (Levi 1993) - Aripo Savannas - Cumuto (savanna) (JNS, 17 Oct 2006).
- 34. *Kapogea sellata*** (Simon 1895) - St. Augustine (RHM, Nov 1944, AMNH) (Levi 1997).
- 35. *Larinia cf directa*** (Hentz 1847) - Aripo Savannas - Cumuto (savanna) (JNS, 17 Oct 2006, 7 and 20 July 2007); Aripo Savannas - Valencia (savanna) (JNS, 11 Sept 2007, 4 Nov 2007); Aripo Savannas - Wallerfield (savanna) (JNS, 7 - 9 Jan 2008); Pasea (farmland) (JNS, 22, 25 - 26 June 2007); Valencia (farmland) (JNS, 1 - 2 Apr 2008); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008); Los Blanquizales Lagoon (palm swamp) (JNS, 13 - 14 Apr 2009); **TOBAGO:** roadside vegetation on route to Murchison Estate (night collecting) (IB, DdeR, DH, 26 Sept 2008).
- 36. *Mangora sp. B*** (new spp) - Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007).
- 37. *Mangora amchickeringi*** (Levi 2005) - St. Augustine Univ. (AMC, Apr 1964, MCZ); Port of Spain (RT, 1913, MCZ); Gasparee (RHM, 3 Nov 1944, AMNH); St. George Co., Diego Martin Ward, Edith Falls Trail (GBE, 18 Aug 1986, FSCA); San Rafael Ward, east side of Talparo River (GBE, 20 Aug 1986, FSCA); St. Andrew Co., Valencia Ward at Oropouche River (GBE, 17 Aug 1986, FSCA) (Levi 2005 and 2007); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Mt. Harris (evergreen seasonal forest) (JNS, 3 - 4 Apr 2008); Caura Valley (farmland) (JNS, 6 June 2007, 13 - 14 June 2007); Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006, 9 Dec 2007); Chacachacare (deciduous seasonal forest) (JNS, 19 - 20 Sept 2007 and 16 Nov 2007); Heights of Guanapo (lower montane forest) (JNS, 12 - 13 Apr 2008); El Cerro del Aripo (lower montane forest) (JNS, 30 - 31 Jan 2008); **TOBAGO:** between roots of mangrove at Tobago Plantations (JNS, DdeR, CKS, DH, 22 - 23 Sept 2008).
- 38. *Mangora dianasilvae*** (Levi 2007) - Cumuto (10°35'N, 61°12'W) (WSB, Oct 1926, MCZ) (Levi 2007).
- 39. *Mangora falconae*** (Schenkel 1953) - Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006 and 9 Dec 2007).
- 40. *Mangora fascialata*** (Franganillo 1936) - Port of Spain (RT, 1913, MCZ); St. Augustine (AMC, 1 Apr 1964, MCZ) (Levi 2005).
- 41. *Mangora melanocephala*** (Taczanowski 1874) - Near Port of Spain (RT, 1913, MCZ); (WSB, 9 Feb 1926, MCZ); Sangre Grande (RT, 1913, MCZ); Cumuto (WSB, 9 Feb 1926, MCZ); St. Andrew Co., Valencia Ward at Oropouche River (GBE, 17 Aug 1986, FSCA) (Levi 2005 and 2007); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Coromandel (evergreen seasonal forest) (JNS, 1 and 5 Apr 2009); Paria (secondary forest) (JNS, 17 - 18 Apr 2008); Mamoral (secondary forest) (JNS, 28 May 2008); Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Morne Bleu (montane forest) (JNS, 8 Nov 2006, 10 Dec 2007); Las Cuevas (montane forest) (JNS, 28 - 29 Aug 2007); Centeno (cocoa field) (JNS, 3 Dec 2007); Ecclesville (semi-evergreen seasonal forest) (JNS, 18 - 19 Apr 2009); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Chacachacare (deciduous seasonal forest) (JNS, 19 - 20 Sept 2007, 16 Nov 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Wallerfield (palm marsh) (JNS, 28 - 29 Jan 2008); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22, 23 Aug 2007); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); Heights of Aripo (seasonal montane forest) (JNS, 3 - 4 May 2008); Platanal (seasonal montane forest) (JNS, 13 - 15 May 2008); Bush Bush (swamp forest) (JNS, 10 Mar 2008); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008); Bush Bush (palm swamp) (JNS, 11 Mar 2008); Los Blanquizales Lagoon (palm swamp) (JNS, 13 - 14 Apr 2009); El Luengo Village (cocoa field) (JNS, 29 - 30 Nov 2009); **TOBAGO:** Gilpin Trace/Niplig Trace (JNS, CKS, DH, DdeR, 21 Sept 2008).
- 42. *Metzgia sp. A*** (new spp) - Quinam Bay (semi-evergreen seasonal forest) (JNS, 17 Dec 2007).
- 43. *Metzgia gregalis*** (O.P. Cambridge 1889) - **TOBAGO:** Buccoo Bay (AMNH) (Levi 1995a).
- 44. *Mecynogea lemniscata*** (Walckenaer 1842) - Gasparee (RHM, 5 Nov 1946, AMNH) (Levi 1997); Caura Valley (secondary forest) (JNS, 14, 16, 17 May 2007); Secondary forest bordering Erin Savannas (JNS, 22 - 24 and 28 - 29 May 2007).
- 45. *Metzgia keyserlingi*** (Banks 1929) - St. George Co., Simla, 6.4 km north of Arima (CTC, 2 May 1967, AMNH); Arima Valley (PW, 10 - 22 Feb 1964, AMNH) (Levi 1995); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2009).

- 46. *Metzgia laticeps*** (O.P. Cambridge 1889) - Simla Biological Station, Arima Valley (Levi 1995); Matura (Mora forest) (JNS, 7 Nov 2006, 10 Nov 2006, 11 Dec 2007); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Caura Valley (secondary forest) (JNS, 14, 16, 17 May 2007); Centeno (cocoa field) (JNS, 3 Dec 2007); Caroni Swamp (mangrove woodland) (JNS, 1 Nov 2006, 3 Aug 2007); Bush Bush (herbaceous swamp) (JNS, 15 Jan 2008); Caura River (riparian vegetation) (JNS, 25 Oct 2006, 27 July 2007, 8 and 15 Aug 2007, 12 Sept 2007); Quinam Bay (semi-evergreen seasonal forest) (JNS, 17 Dec 2007); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22, 23 Aug 2007); Aripo Savannas - Valencia (marsh forest) (JNS, 8 - 9 Jan 2008); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Rousillac (cocoa field) (JNS, 29 Nov 2007); **TOBAGO:** Gilpin Trace/Niplig Trace (JNS, CKS, DH, DdeR, 21 Sept 2008).
- 47. *Metopeira compsa*** (Chamberlin 1916) - Guayaguayare Point 10°8'N, 61°2'W (ENK, 14 Sept 1963, AMNH); Gasparee, 10°46'N, 61°19'W (RM, 3 Nov 1944, AMNH); Salybia Bay by shore 10°42'N, 61°2'W (JALC, 15 Feb 1972, MCZ); Toco 10°50'N, 60°57'W (ENK, 15 Aug 1965, AMNH) **TOBAGO:** Buccoo Bay 11°10'N, 60°49'W (ENK, 19 Apr 1964, AMNH); Pigeon Point 11°10'N, 60°50'W (E.D., 18 Aug 1937, MCZ) (Piel 2001); Pasea (farmland) (JNS, 22, 25 - 26 June 2007); Los Iros (farmland) (JNS, 6 - 7 Apr 2008); Manzanilla (mangrove woodland) (JNS, 14 Jan 2008); Toco (littoral woodland) (JNS, 5 Dec 2007); Chacachacare (semi-evergreen seasonal forest) (JNS, 19 - 20 Sept 2007 and 16 Nov 2007); **TOBAGO:** Hope's Bay (coastal vegetation) (JNS, DdeR, 25 Sept 2008).
- 48. *Micrathena acuta*** (Walckenaer 1842) - No specific localities in Trinidad given (MCZ) (Levi 1985); Paria (Mora forest) (JNS, 19 - 20 Apr 2008); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Paria (secondary forest) (JNS, 17 - 18 Apr 2008); Mamoral (secondary forest) (JNS, 28 May 2008); Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Las Cuevas (montane forest) (JNS, 28 - 29 Aug 2007); Caura River (riparian vegetation) (JNS, 25 Oct 2006, 27 July 2007, 8 and 15 Aug 2007, 12 Sept 2007); Bush Bush (palm swamp) (JNS, 11 Mar 2008); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006, 9 Dec 2007); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22, 23 Aug 2007); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008); Bush Bush (swamp forest) (JNS, 10 Mar 2008); Santa Cruz (cocoa field) (JNS, 7 - 8 Nov 2009).
- 49. *Micrathena evansi*** (Chickering 1960) - Mt. St. Benedict (AMNH) (Levi 1985); (BC, 27 June - 2 July 1999); Maracas Valley (AMNH, BMNH); Port of Spain (MCZ) (Levi 1985); Paria (Mora forest) (JNS, 19 - 20 Apr 2008); Mt. El Tucuche (elfin woodland) (JNS, 29 - 30 June 2008); Coromandel (evergreen seasonal forest) (JNS, 1 and 5 Apr 2009); Las Cuevas (montane forest) (JNS, 28 - 29 Aug 2007); Centeno (cocoa field) (JNS, 3 Dec 2007); Vessigny River (riparian vegetation) (JNS, 29 - 30 Feb 2008); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Aripo Savannas - Valencia (marsh forest) (JNS, 8 - 9 Jan 2008); Platanal (seasonal montane forest) (13 - 15 May 2008); Turure Forest (seasonal montane forest) (JNS, 17 - 18 June 2008).
- 50. *Micrathena horrida*** (Taczanowski 1873) - Simla (AMNH); Arima Valley (AMNH) (Levi 1985); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Chatham (evergreen seasonal forest) (JNS, 11 - 12 Apr 2009); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008).
- 51. *Micrathena plana*** (C.L. Koch 1836) - Common, no specific localities in Trinidad given (AMNH, MCZ) (Levi 1985); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Heights of Aripo (seasonal montane forest) (JNS, 3 - 4 May 2008); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008); Bush Bush (palm swamp) (JNS, 11 Mar 2008).
- 52. *Micrathena saccata*** (C.L. Koch 1836) - Navy base, SW Trinidad (Levi 1985).
- 53. *Micrathena schenkeli*** (Mello-Leitão 1939) - Balandra Bay (Reynolds, Apr 1922, MCZ); St. Augustine (RHM, 18 Sept 1946, AMNH) (Levi 1985).
- 54. *Micrathena schreibersi*** (Perty 1833) - Mt. St. Benedict (CUC); Los Blanquiales, Cedros (AMNH) (Levi 1985); Matura (Mora forest) (JNS, 7 and 10 Nov 2006, 11 Dec 2007); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); Bush Bush (palm swamp) (JNS, 11 March 2008); Coromandel (evergreen seasonal forest) (JNS, 1 and 5 Apr 2009); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Paria (secondary forest) (JNS, 17 - 18 Apr 2008); Mamoral (secondary forest) (JNS, 28 May 2008); Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Caura River (riparian vegetation) (JNS, 25 Oct 2006, 27 July 2007, 8 and

- 15 Aug 2007, 12 Sept 2007); Ecclesville (semi-evergreen seasonal forest) (JNS, 18 - 19 Apr 2009); Mt. St. Benedict (semi-evergreen seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Bush Bush (swamp forest) (JNS, 10 Mar 2008); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008); Poole (palm swamp) (JNS, 20 - 21 Apr 2009); Santa Cruz (cocoa field) (JNS, 7 - 8 Nov 2009); Gran Couva (cocoa field) (JNS, 3 and 6 Nov 2009); El Luengo Village (cocoa field) (JNS, 29 - 30 Nov 2009).
- 55. *Micrathena sexspinosa*** (Hahn 1822) - Maracas Valley, SW Navy Base, Port of Spain, Blanchisseuse, Sangre Grande (Levi 1985); Mt. Harris (evergreen seasonal forest) (JNS, 3 - 4 Apr 2008); Secondary forest bordering Erin Savannas (JNS, 22 - 24 May and 28 - 29 May 2007); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Ecclesville (semi-evergreen seasonal forest) (JNS, 18 - 19 Apr 2009); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008).
- 56. *Micrathena triangularis*** (C.L. Koch 1836) - Common, no specific localities in Trinidad given (AMNH, MCZ) (Levi 1985); Matura (Mora forest) (JNS, 7 and 10 Nov 2006, 11 Dec 2007); Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Paria (Mora forest) (JNS, 19 - 20 Apr 2008); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Lopinot Ridge (Mora forest) (JNS, 1 - 2 July 2008); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Mt. Harris (evergreen seasonal forest) (JNS, 3 - 4 Apr 2008); Coromandel (evergreen seasonal forest) (JNS, 1 and 5 Apr 2009); Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2008); Quinam Bay (semi-evergreen seasonal forest) (JNS, 17 Dec 2007); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22 - 23 Aug 2007); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Bush Bush (swamp forest) (JNS, 10 Mar 2008); Heights of Guanapo (lower montane forest) (JNS, 12 - 13 Apr 2008); Los Blanquizaes Lagoon (palm swamp) (JNS, 13 - 14 Apr 2009); Caurita Valley (cocoa field) (JNS, 1 - 2 Nov 2009). **TOBAGO:** Gilpin Trace/Niplig Trace (JNS, CKS, DH, DdeR, 21 Sept 2008).
- 57. *Micrathena triangularispinosa*** (De Geer 1778) - No specific localities in Trinidad given (MCZ) (Levi 1985); Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Paria (Mora forest) (JNS, 9 - 10 Apr 2008); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Mt. Harris (evergreen seasonal forest) (JNS, 3 - 4 Apr 2008); Mamoral (secondary forest) (JNS, 28 May 2008); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Valencia (palm marsh) (JNS, 23 - 24 Jan 2008).
- 58. *Micrepeira albomaculatus*** (Schenkel 1953) - Coromandel (evergreen seasonal forest) (JNS, 1 and 5 Apr 2009); Quinam Bay (semi-evergreen seasonal forest) (JNS, 17 Dec 2007); Ecclesville (semi-evergreen seasonal forest) (JNS, 18 - 19 Apr 2009); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Caurita Valley (cocoa field) (JNS, 1 - 2 Nov 2009).
- 59. *Neoscona arabesca*** (Walckenaer 1842) - Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008).
- 60. *Neoscona nautica*** (C.L. Koch 1875) - (Levi 1992b); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007).
- 61. *Ocrepeira covillei*** (Levi 1993) - St. George Co., Simla, Arima Valley, 244 m (BCa, HVW, 27 June - 3 July 1978, FSCA) (Levi 1993); Granville (Mora forest) (JNS, 6 - 7 Apr 2009).
- 62. *Ocrepeira maraca*** (Levi 1993) - Aripo Savannas - Valencia (savanna) (JNS, 11 Sept 2007, 4 Nov 2007); Caura Valley (secondary forest) (JNS, 14, 16, 17 May 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006, 9 Dec 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Valencia (palm marsh) (JNS, 23 - 24 Jan 2008); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008).
- 63. *Parawixia kochi*** (Taczanowski 1873) - Los Blanquizaes, Cedros (AMNH); Maracas Valley (AMNH); Navy Base (AMNH); Port of Spain (MCZ); St. George Co., Arima (AMNH) (Levi 1992a); Gran Couva (cocoa field) (JNS, 3 and 6 Nov 2009); El Luengo Village (cocoa field) (JNS, 29 - 30 Nov 2008); Caurita Valley (cocoa field) (JNS, 1 - 2 Nov 2008).
- 64. *Parawixia matiapa*** (Levi 1992a) - Piarco (AMN, 3 - 6 Jan 1955, AMNH) (Levi 1992a).
- 65. *Parawixia* sp. A** - Valencia (farmland) (JNS, 1 - 2 Apr 2008).
- 66. *Pozonia bacillifera*** (Simon 1897) - Maracas Valley (JALC, Feb 1972, AMNH) (Levi 1993).
- 67. *Pronous intus*** (Levi 1995) - Near Port of Spain (RT 1913, MCZ) (Levi 1995b); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Bush Bush

- (swamp forest) (JNS, 15 Jan 2008); Estuary of Oropouche River (swamp forest) (JNS, 10 - 11 Apr 2008); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008).
- 68. *Spilasma duodecimguttata*** (Keyserling 1879) - Old gold mine, Arima Ward (USNM) (Levi 1995b); El Cerro del Aripo (elfin woodland); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Mt. Harris (evergreen seasonal forest) (JNS, 3 - 4 Apr 2008); Chatham (secondary forest) (JNS, 11 - 12 Apr 2008); Trinity Hills (semi-evergreen seasonal forest) (JNS, 23 - 24 June 2008); Platanal (seasonal montane forest) (JNS, 13 - 15 May 2008); Heights of Guanapo (lower montane forest) (JNS, 12 - 13 Apr 2008); Caurita Valley (cocoa field) (JNS, 1 - 2 Nov 2009).
- 69. *Testudinaria debsmithae*** (Levi 2005) - Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Heights of Guanapo (lower montane forest) (JNS, 12 - 13 Apr 2008); El Cerro del Aripo (montane forest) (JNS, 30 - 31 Jan 2008).
- 70. *Verrucosa* sp. A** - Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Valencia (farmland) (JNS, 1 - 2 Apr 2008); Caura River (riparian vegetation) (JNS, 25 Oct 2006, 27 July 2007, 8 and 15 Aug 2007, 12 Sept 2007); Quinam Bay (semi-evergreen seasonal forest) (JNS, 17 Dec 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Cumuto (marsh forest) (27 Oct 2006, 14, 17, 22, 23 Aug 2007).
- 71. *Verrucosa* sp. B** - Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2008); Chacachacare (deciduous seasonal forest) (JNS, 19 - 20 Sept 2007 and 16 Nov 2007); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008).
- 72. *Verrucosa arenata*** (Walckenaer 1842) - Centeno (cocoa field) (JNS, 3 Dec 2007).
- 73. *Wagneriana jelskii*** (Taczanowski 1873) - Piarco (AMN, 27 Nov 1954, AMNH) (Levi 1991b); Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Paria (secondary forest) (JNS, 17 - 18 Apr 2008); Centeno (cocoa field) (JNS, 3 Dec 2008); Morne Bleu (montane forest) (JNS, 8 Nov 2006, 10 Dec 2007); Caura River (riparian vegetation) (JNS, 25 Oct 2006, 27 July 2007, 8 and 15 Aug 2007, 12 Sept 2007); Aripo Savannas - Valencia, (palm marsh) (JNS, 23 - 24 Jan 2008); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22, 23 Aug 2007); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); Poole (palm swamp) (JNS, 20 - 21 Apr 2009); El Luengo Village (cocoa field) (JNS, 29 - 30 Nov 2009); **TOBAGO:** roadside vegetation along North Coast Road from Bloody Bay to Charlotteville (DdeR, DH, IB, 28 Sept 2008).
- 74. *Wagneriana neglecta*** (Mello-Leitão 1939) - Simla, 6.4 km north of Arima (RW, 10 May 1981, MCZ) (Levi 1991b).
- 75. *Wagneriana pakitza*** (Levi 1991) - Chacachacare (deciduous seasonal forest) (JNS, 19 - 20 Sept and 16 Nov 2007); Los Blanquizales Lagoon (palm swamp) (JNS, 13 - 14 Apr 2009).
- 76. *Wagneriana undecimtuberculata*** (Keyserling 1865) - Arima (AMNH), Port of Spain (AMNH, MCZ) (Levi 1991b); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Mamoral (secondary forest) (JNS, 28 May 2008); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2008).
- 77. *Witica cayanus*** (Taczanowski 1873) - Arima Road, 16 km from Arima (AMN, 27 Feb 1954, AMNH); Mt. El Tucuche (RHM, 12 Nov 1944, AMNH) (Levi 1986b).
- 78. *Witica crassicaudus*** (Keyserling 1865) - No specific localities in Trinidad given (MCZ) (Levi 1986b).
- 79. *Xylethrus* sp. A** - Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006, 9 Dec 2007); Aripo Savannas - Cumuto (marsh forest) (JNS, 17 Oct 2006, 7 and 20 July 2007).
- 80. *Zygiella x-notata*** (Clerck 1757) - Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008).

NEPHILIDAE

- 81. *Nephila clavipes*** (Linnaeus 1767) - Mt. St. Benedict (BC, 27 June - 2 July 1999); Toco (littoral woodland) (JNS, 5 Dec 2007); Caura River (riparian vegetation) (JNS, 25 Oct 2006, 27 July 2007, 8 and 15 Aug 2007, 12 Sept 2007); Ecclesville (semi-evergreen seasonal forest) (JNS, 18 - 19 Apr 2009); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006, 9 Dec 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Valencia (palm marsh) (JNS, 23 - 24 Jan 2008); Aripo Savannas - Wallerfield (palm marsh) (JNS, 28 - 29 Jan 2008); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22 - 23 Aug 2007); Aripo Savannas - Valencia (marsh forest) (JNS, 8 - 9 Jan 2008); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); Heights of Aripo (seasonal montane forest) (JNS, 3 - 4 May 2008); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008); Estuary of Oropouche River (swamp forest) (JNS, 10

- 11 Apr 2008); Heights of Guanapo (lower montane forest) (JNS, 12 - 13 Apr 2008); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008); Poole (palm swamp) (JNS, 20 - 21 Apr 2009); Bush Bush (palm swamp) (JNS, 11 Mar 2008); Aripo Savannas - Cumuto (savanna) (JNS, 17 Oct 2006, 7 and 20 July 2007); Paria (Mora Forest) (JNS, 19 - 20 Apr 2008); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Lopinot Ridge (Mora forest) (JNS, 1 - 2 July 2008); Mt. El Tucuche (elfin woodland) (JNS, 29 - 30 June 2008); El Cerro del Aripo (elfin woodland) (JNS, 24 and 28 Apr 2009); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 March 2007); Coromandel (evergreen seasonal forest) (JNS, 1 and 5 Apr 2009); Caura Valley (secondary forest) (JNS, 14, 16 - 17 May 2007); Secondary forest bordering Erin Savannas (JNS, 22 - 24 and 28 - 29 May 2007); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Morne Bleu (montane forest) (JNS, 8 Nov 2006, 10 Dec 2007); Las Cuevas (montane forest) (JNS, 28 - 29 Aug 2007); Mosquito Creek (mangrove woodland) (JNS, 13 Oct 2006); Rousillac Swamp (herbaceous swamp) (JNS, 12 Oct 2006, 12 Dec 2007); St. George Parish, Mt. St. Benedict above monastery 10°39'N 61°14'W (night collecting) (PEC, 11 July 1999, DMNS); Santa Cruz (cocoa field) (JNS, 7 - 8 Nov 2009); Gran Couva (cocoa field) (JNS, 3 and 6 Nov 2009); Caurita Valley (cocoa field) (JNS, 1 - 2 Nov 2009); **TOBAGO**: between roots of mangrove at Tobago Plantations (JNS, DdeR, CKS, DH, 22 - 23 Sept 2008).

TETRAGNATHIDAE

- 82. *Azilia vachoni*** (Caporiacco 1954) - Matura (Mora forest) (JNS, 7 and 10 Nov 2006, 11 Dec 2007); Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Paria (Mora forest) (JNS, 19 - 20 Apr 2008); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Lopinot Ridge (Mora forest) (JNS, 1 - 2 July 2008); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); El Cerro del Aripo (elfin woodland) (JNS, 24 and 28 Apr 2009); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Mt. Harris (evergreen seasonal forest) (JNS, 3 - 4 Apr 2008); Coromandel (evergreen seasonal forest) (JNS, 1 and 5 Apr 2009); Secondary forest bordering Erin Savannas (JNS, 22 - 24 and 28 - 29 May 2007); Paria (secondary forest) (JNS, 17 - 18 Apr 2008); Mamoral (secondary forest) (JNS, 28 May 2008); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Morne Bleu (montane forest) (JNS, 8 Nov 2006, 10 Dec 2007); Las Cuevas (montane forest) (JNS, 28 - 29 Aug 2007); Ecclesville (semi-evergreen seasonal forest) (JNS, 18 - 19 Apr 2009); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22 - 23 Aug 2007); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); Heights of Aripo (seasonal montane forest) (JNS, 3 - 4 May 2008); Platanal (seasonal montane forest) (JNS, 13 - 15 May 2008); Ture Forest (seasonal montane forest) (JNS, 17 - 18 June 2008); Bush Bush (swamp forest) (JNS, 10 Mar 2008); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008); Heights of Guanapo (lower montane forest) (JNS, 12 - 13 Apr 2008); El Cerro del Aripo (lower montane forest) (JNS, 30 - 31 Jan 2008); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008); Bush Bush (palm swamp) (JNS, 11 Mar 2008); Poole (palm swamp) (JNS, 20 - 21 Apr 2009); At or above Paria Springs 10°46'N 61°14'W (PEC, 7 July 1999, DMNS); Santa Cruz (cocoa field) (JNS, 7 - 8 Nov 2009); Gran Couva (cocoa field) (JNS, 3 and 6 Nov 2009); El Luengo Village (cocoa field) (JNS, 29 - 30 Nov 2009); **TOBAGO**: near Roxborough (IB, DdeR, DH, JNS, CKS, 21 Sept 2008).
- 83. *Chrysometa aureola*** (Keyserling 1884) - Piarco (AMN, 27 Nov 1954, 3 - 6 Jan 1955, AMNH) (Levi 1986a); Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Lopinot Ridge (Mora forest) (JNS, 1 - 2 July 2008); Mt. El Tucuche (elfin woodland) (JNS, 29 - 30 June 2008); El Cerro del Aripo (elfin woodland) (JNS, 30 - 31 Jan 2008); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 March 2007 and 2 - 4 Apr 2007).
- 84. *Chrysometa n. sp.*** Mt. St. Benedict (BC, 27 June - 2 July 1999).
- 85. *Leucauge argyra*** (Walckenaer 1842) - Aripo Savannas - Cumuto (savanna) (JNS, 17 Oct 2006, 7 and 20 July 2007); Matura (Mora forest) (JNS, 7 and 10 Nov 2006, 11 Dec 2007); Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Paria (Mora forest) (JNS, 19 - 20 Apr 2008); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Lopinot Ridge (Mora forest) (JNS, 1 - 2 July 2008); Granville (Mora forest) (JNS, 6 - 7 Apr 2009); Mt. El Tucuche (elfin woodland) (JNS, 29 - 30 June 2008); El Cerro del Aripo (elfin woodland) (JNS, 24 and 28 Apr 2009); Mt. Harris (evergreen seasonal forest) (JNS, 3 - 4 Apr 2008); Coromandel (evergreen seasonal forest) (JNS, 1 and 5 Apr 2009); Union Village, Vessigny (secondary forest) (JNS, 1 - 2 Feb 2008); Paria (secondary forest) (JNS, 17 - 18

- Apr 2008); Chatham (secondary forest) (JNS, 11 - 12 Apr 2009); Pasea (farmland) (JNS, 22, 25 - 26 June 2007); Phillipine (farmland) (JNS, 3 - 4 Feb 2008); Lalaja Road (montane forest) (JNS, 29 Nov 2006, 28 Aug 2007); Morne Bleu (montane forest) (JNS, 8 Nov 2006, 10 Dec 2007); Las Cuevas (montane forest) (JNS, 28 - 29 Aug 2007); Centeno (cocoa field) (JNS, 3 Dec 2007); Rousillac (cocoa field) (JNS, 29 Nov 2007); Mosquito Creek (mangrove woodland) (JNS, 13 Oct 2006); Caura River (riparian vegetation) (25 Oct 2006, 27 July 2007, 8 and 15 Aug 2007, 12 Sept 2007); Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2008); Ecclesville (semi-evergreen seasonal forest) (18 - 19 Apr 2009); Mt. St. Benedict (deciduous seasonal forest) (JNS, 23 - 26 Mar 2007, 2 - 4 Apr 2007); Point Gourde (deciduous seasonal forest) (JNS, 26 Oct 2006, 9 Dec 2007); Chacachacare (deciduous seasonal forest) (JNS, 19 - 20 Sept 2007, 16 Nov 2007); Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Valencia (palm marsh) (JNS, 23 - 24 Jan 2008); Aripo Savannas - Wallerfield (palm marsh) (JNS, 28 - 29 Jan 2008); Aripo Savannas - Valencia (marsh forest) (JNS, 8 - 9 Jan 2008); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); Heights of Aripo (seasonal montane forest) (JNS, 3 - 4 May 2008); Platanal (seasonal montane forest) (JNS, 13 - 15 May 2008); Turure Forest (seasonal montane forest) (JNS, 17 - 18 June 2008); Bush Bush (swamp forest) (JNS, 10 Mar 2008); Brigand Hill (swamp forest) (JNS, 24 - 25 Apr 2008); Bush Bush (palm swamp) (JNS, 11 Mar 2008); Los Blanquizales Lagoon (palm swamp) (JNS, 13 - 14 Apr 2009); Poole (palm swamp) (JNS, 20 - 21 Apr 2009); Heights of Guanapo (lower montane forest) (JNS, 12 - 13 Apr 2008); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008); Gran Couva (cocoa field) (JNS, 3 and 6 Nov 2009); El Luengo Village (cocoa field) (JNS, 29 - 30 Nov 2009); Caurita Valley (cocoa field) (JNS, 1 - 2 Nov 2009); Rousillac (cocoa field) (JNS, 29 Nov 2007); **TOBAGO**: between roots of mangrove at Tobago Plantations (JNS, DdeR, CKS, DH, 22 - 23 Sept 2008); Near Roxborough (IB, DdeR, DH, JNS, CKS, 21 Sept 2008).
- 86. *Leucauge regnyi*** (Simon 1897) - Aripo Savannas - Valencia (savanna) (JNS, 11 Sept 2007 and 4 Nov 2007); Melajo (Mora forest) (JNS, 27 and 30 Apr 2008); Goudron Field (Mora forest) (JNS, 5, 10, 12 July 2007); Arena Forest Reserve (evergreen seasonal forest) (JNS, 12 - 16 and 21 - 23 Mar 2007); Caroni Swamp (mangrove woodland) (JNS, 1 Nov 2006 and 3 Aug 2007); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006 and 14, 17, 22, 23 Aug 2007); Grande Riviere (lower montane forest) (JNS, 11 - 12 May 2008).
- 87. *Opas lugens*** (OPC 1896) - Caura River (riparian vegetation) (JNS, 25 Oct 2006); Outside Brasso Seco on small road towards Paria Springs (PEC, 9 July 1999, DMNS).
- 88. *Tetragnatha nitens*** (Audouin 1826) - Paria (secondary forest) (JNS, 17 - 18 Apr 2008); Pasea (farmland) (JNS, 22, 25 - 26 June 2007); Caroni Swamp (mangrove woodland) (JNS, 1 Nov 2006 and 3 Aug 2007); Caura River (riparian vegetation) (JNS, 25 Oct 2006, 27 July 2007, 8 and 15 Aug 2007, 12 Sept 2007); Poona River (riparian vegetation) (JNS, 8 - 9 Feb 2008); Vessigny River (riparian vegetation) (JNS, 29 - 30 Feb 2008); Aripo Savannas - Wallerfield (palm marsh) (JNS, 28 - 29 Jan 2008).
- 89. *Tetragnatha pallescens*** (F.O.P. Cambridge 1903) - Aripo Savannas - Cumuto (palm marsh) (JNS, 3 Oct 2006); Aripo Savannas - Valencia (palm marsh) (JNS, 23 - 24 Jan 2008); Aripo Savannas - Wallerfield (palm marsh) (JNS, 28 - 29 Jan 2008); Caura Valley (farmland) (JNS, 6 June 2007, 13 - 14 June 2007); Caura Valley (riparian vegetation) (JNS, 25 Oct 2006, 27 July 2007, 8 and 15 Aug 2007, 12 Sept 2007); Aripo Savannas - Cumuto (marsh forest) (JNS, 27 Oct 2006, 14, 17, 22 - 23 Aug 2007); Aripo Savannas - Valencia (marsh forest) (JNS, 8 - 9 Jan 2008); Aripo Savannas - Wallerfield (marsh forest) (JNS, 21 - 22 Jan 2008); Bush Bush (palm swamp) (JNS, 11 Mar 2008); Los Blanquizales Lagoon (palm swamp) (JNS, 13 - 14 Apr 2009); El Luengo Village (cocoa field) (JNS, 29 - 30 Apr 2009).

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