

The Jumping Spiders (Araneae: Salticidae) of Trinidad and Tobago.

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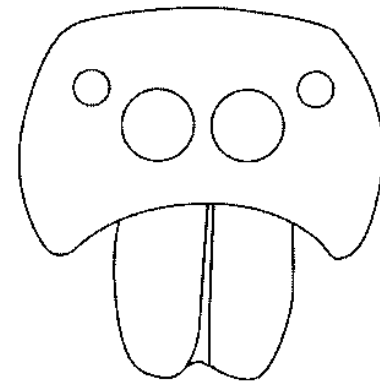
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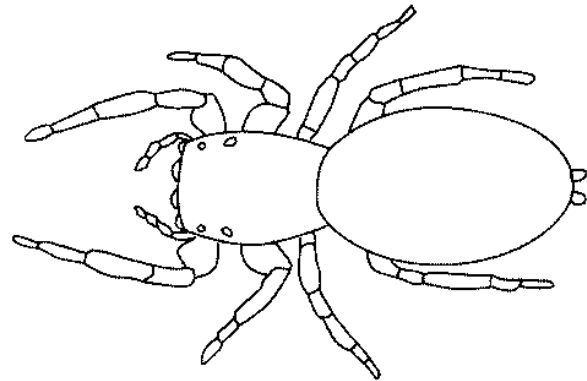
INTRODUCTION TO THE JUMPING SPIDERS

The jumping spiders (Salticidae) are the most speciose family of spiders, with approximately 4500 species currently known. They occur in most terrestrial habitats including arctic and alpine tundra, deserts, forests, grasslands, crops, and on man-made structures. The family's greatest diversity is in tropical forests. This is exemplified by Panama, which has 237 recorded salticid species, compared with Canada and the United States combined with 288 recorded salticid species in an area 200 times the size of Panama (Nentwig 1993). Jumping spiders are sometimes called money spiders in Trinidad.

Members of the Salticidae are very easy to recognize, when compared with many spider families. If one looks at the front of the spider, the first pair of eyes in the middle is the largest (Fig. 1, 2). There are other families which have large median eyes (c.g. Deinopidae - ogre-face spiders, Lycosidae - wolf spiders), but these are clearly not the first pair. While it is easy to determine the family placement, it can be difficult to initially determine genus and especially species of a specimen. Species identification depends on morphology of the male and female genitalia. There is only one attempted, outdated manual with keys to the jumping spiders of any Neotropical country, Panama (Chickering 1946). There is tremendous general morphological diversity within the family. A typical salticid is shown in figure 2. Some have very thin bodies and legs (*Chinoscopus*), some are round (*Cylistella*), some are stocky in build (*Corythalia*), some are flattened (*Menemerus*), and some are flamboyantly colored (*Cobanus*, *Psecas*). Some groups of salticids are distinguished by their resemblance to worker ants (*Peckhamia*, *Sarinda*, *Synemosyna*). These spiders resemble ants in body form by having constrictions or arrays of light colored scales that serve to create the appearance of con-



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strictions. These spiders also move like ants, and may elevate and wag one of the front pair of legs in a manner reminiscent of antennae. The body length for "typical" adult jumping spiders is between 5 – 10mm, with a size range in Trinidad & Tobago from ~2mm (*Cylistella*) to ~15mm (*Phiale*). Often the females are somewhat larger than the males, with gravid females being the largest members of their species.

The most familiar characteristic of spiders is the spinning of a prey capture web, a snare. As one looks at the diversity of spiders, probably no more than half of

all spiders spin this type of web, although all spiders use silk for a variety of purposes. The only Neotropical genus of jumping spider for which even rudimentary snare-building behaviour is known is *Lyssomanes*, although it probably also occurs in the closely related *Chinoscopus*. However, all jumping spiders use silk to build retreats (most commonly as a thick tube in which to rest or molt), to make egg cocoons (eggsacs), and as draglines. A dragline is a silk line fastened to the substrate at intervals, so that it trails behind and acts as a safety line if the spider misses a leap.

Jumping spiders may make leaps either to capture prey or to cross gaps. Some (*Corythalia*, *Eustiromastix*) spend much of their locomotory activity in this manner, while others (*Lyssomanes*, *Synemosyna*) seldom leap. Leaps are produced by a sudden extension of the rear legs. While the first legs are commonly the longest and heaviest, they are used to hold prey and are not involved in jumping. The anterior median eyes (AME) play a major role in jumping spider behaviour. They are among the few known image-forming simple eyes in invertebrates. While the other eyes are sensitive to movement, the AME focus on the object of interest and provide the spider a discriminatory view of it, including color and size. Salticids are general predators of other small arthropods. As might be expected from their visual capabilities, jumping spiders are primarily diurnal animals. Their prey capture behaviour is very reminiscent of cats. They locate prey visually, stalk it, and capture it with a final pounce. For the most part, captured prey is about 25% - 75% the spider's body length. Heavily defended insects, such as beetles and wasps, are usually avoided, as are worker ants. Workers often have hard bodies, stings or strong chemical defenses, and powerful mandibles, and use recruitment chemicals to bring other nest mates to their aid if they are attacked. A few jumping spiders utilize worker ants as prey. The genus *Corythalia*, which is common in low vegetation and litter, may prefer worker ants, although it does not feed on them exclusively. It is not unusual to see members of this genus in the field with captured workers.

The visual sense is also exploited in courtship. Mature jumping spiders are often sexually dimorphic, with the males having brighter or more contrasting colors. Many male jumping spiders display and perform ritualized movements ("dances") showing off their ornamentation during courtship.

The simplest method of collecting jumping spiders is to watch the ground and vegetation for the movements

of a spider. Then, a small clear glass or plastic vial can be carefully slipped over the spider to trap it inside. This is also the way to find salticids to photograph in their natural habitat. They can also be found on and in buildings. Since the spiders are very agile, they will often escape until one learns their behaviour and can anticipate their responses. For more efficient collecting, one tool of choice is the sweep net. The net is brushed through soft vegetation (like weeds and grasses), then at intervals opened and examined for captured arthropods. If all one is interested in is non-flying prey, such as spiders, it is convenient to have a small, lightweight, low sided tray in which to dump the net contents. The flying insects rapidly disperse leaving the non-flying arthropods in the tray. The spiders can then be captured in vials. Beating thick branched shrubs and trees with a beating tray held below can also be effective in collecting salticids and other spiders. These methods and others, such as passive trapping methods, are treated in greater detail in manuals of collecting techniques for land arthropods such as Peterson (1959).

As in all spider families, identification of species tends to be reliable only with adults, as the genitalia provide the main diagnostic characters. In adult males, the genital structures are the palpi, the small, leg-like appendages situated ahead of the forelegs. The palpi are enlarged at the tips unlike in females and immatures. The female genital structures are located in the midline of the anterior ventral part of the abdomen, and consist of an area of hardened cuticle, the epigynum. This often has diagnostic circles, loops or lines.

Some jumping spiders can conveniently be reared to maturity and/or kept quite easily in the laboratory for behavioural observations. Some Trinidad genera reared from a juvenile instar include *Corythalia*, *Nycerella*, *Parnaenus* and *Plexippus*. Some genera, on the other hand, are very difficult to keep alive beyond a couple of weeks, e.g. *Synemosyna*. Rearing salticids from egg to adult is also very difficult unless one has access to very small prey food items. Rearing through several instars can be accomplished by caging spiders individually in plastic disposable Petri dishes. Place only one spider per dish since salticids are cannibalistic. A small artificial leaf can be added to provide cover and a substrate for retreat building. A small piece of wet plastic sponge is added as a water source. Under laboratory conditions the most widely used food are vinegar flies (*Drosophila*). However these do not provide a complete diet, and must be supplemented with other prey. Small lar-

vae of stored products insects, such as grain moths and beetles are a good option, as are small leafhoppers. For *Corythalia*, small worker ants (eg. *Atta cephalotes* or *bachac*) are acceptable. As dishes become dirty with fecal material, mold, prey carcasses and webbing, transfer the spiders to another dish. Dirty dishes are easily cleaned in a solution of one part household bleach (sodium hypochlorite solution) to ten parts hot water. This will dissolve dirt and disinfect the dishes, which can be rinsed thoroughly in clean water, dried and reused.

Spiders to be preserved for routine scientific purposes are killed in 70-80% ethanol (either denatured or pure), or 70% isopropyl alcohol. Allow at least five times the volume of alcohol to the volume of spiders. After 1 - 2 days, it is best to transfer the spiders to fresh alcohol for permanent storage. Labelling is very important, as without this information a specimen has minimal scientific value. Labels should be inserted into the vial with the specimens. Paper for labels should be clean, high quality white paper. The ink should be water and alcohol proof, India ink is an old standard. Information should include a precise locality, date of collection, the collector's name, and any habitat notes. I write permanent labels, and let them sit for a few hours to allow the ink to dry, before putting them in alcohol. For field use, a soft lead pencil makes a satisfactory temporary label. Additional information such as rearing information, minimal behavioural notes may be included on a supplementary label. Store specimens in small glass vials with secure stoppers.

George and Elizabeth Peckham (1894, 1895, 1896, 1901) were the first to research the Salticidae of Trinidad, based on specimens sent by Mr. W. E. Broadway. Edwards and Wolff (1995), list additional Trinidad records. There has been no other work on the family in Trinidad since the Peckhams, other than casual collecting of specimens. No previous published Tobago records are known to us. In late June - early July 1999, the annual meeting of the American Arachnological Society was held at the University of the West Indies in St. Augustine. Many of the participants collected arachnids, with most specimens coming from Mt. St. Benedict above Tunapuna. The authors concentrated on collecting salticids. Our specimens were supplemented by some collected by other meeting participants and given to us. Together, these form the primary basis for this list. Other significant Trinidad collections included here were made by G. B. Edwards in August 1986, at various localities in northern Trinidad, and by Byrd Dozier

(FSCA Research Associate) during June 1991, near Talparo. These specimens are deposited in the Florida State Collection of Arthropods. A number of specimens, collected by Caroline Chaboo (Cornell University) in 1988-89 and Rick West (Royal British Columbia Museum) in 1981, are now in the personal collection of B. Cutler.

CHECKLIST

In the following list, TR = Trinidad and TO = Tobago; (L) after a locality indicates a literature record. Those not marked with (L) are new records. The sex captured is indicated in parentheses (mf). Some species of uncertain generic placement are assigned to the apparent nearest genus, enclosed in quote marks (""). Uncertain but possibly correct identifications are indicated as ?. Undetermined species similar to known species are indicated by cf. The main road through the Arima Valley to Blanchisseuse is here called the Arima Rd.

A total of 117 species have so far been distinguished.

1. *Ashtabula dentata* F.O.P.C. (m) - TR: Mt. St. Benedict.
2. *Banksetosa?* sp. (m) - TR: Mt. St. Benedict.
3. *Beata inconcinna* (Peck. & Peck.) - TR: Port of Spain (L).
4. *Beata maccuni* (Peck. & Peck.) (f) - TR: Talparo.
5. *Bellota peckhami* Galiano (f) - TR: Valencia Rd. at Turure River.
6. *Breda milvina* (C.L.Koch) (juv) - TR: East Coast (L), Port of Spain (L) [the Peckhams reported this species, but since the specimens are juvenile, they may be misidentified].
7. *Breda* sp. (m) - TR: Talparo.
8. *Bryantella speciosa* Chickering (mf) - TR: Simla Estate - Arima Valley.
9. *Chinoscopus maculipes* Crane (mf) - TR: Arena Forest, 2 km N. Arima, Mt. St. Benedict, Platanel Rd. at Oropouche River, Port of Spain (L), Simla Estate - Arima Valley.
10. *Chira guianensis* (Tacz.) (m) - TR: Simla Estate - Arima Valley; TO: Roxborough, Speyside.
11. *Chira cf. lanei* Soares & Camargo (m) - TR: 4 mi. N. of Arima.
12. *Chira lucina?* Simon (f) - TR: Edith Falls - Tucker Valley.
13. *Chira simoni* Galiano (m) - TR: La Brea.
14. *Chira cf. spinipes* (Tacz.) (mf) - TR: 8 km NNW Arima, Valencia Rd. at Turure River, TO: Delaford.

15. *Chira trivittata* (Tacz.) (mf) – TR: Acono – Maracas Valley, Arena Forest, 4 mi. N. of Arima, Mamoral Rd. at Talparo River, Talparo, Valencia Rd. at Turre River.
16. *Chira* sp. (f) – TR: Mt. St. Benedict.
17. *Cobanus cf. mandibularis* (Peck. & Peck.) (mf) – TR: Arena Forest, Mt. Zion – Loango Village; TO: Roxborough.
18. *Corythalia blandus* (Peck. & Peck.) (mf) – TR: Arena Forest, Mt. St. Benedict, Platanal Rd. at Oropouche River. Port of Spain (L), St. Andrew Co.
19. *Corythalia placata* (Peck. & Peck.) (mf) – TR: Mt. St. Benedict, ? locality (L); TO: Studley Park [a penultimate male with color pattern matching this species].
20. *Corythalia cf. spiralis* (F.O.P.C.) (mf) – TR: Arena Forest, Mamoral Rd. at Talparo River, Talparo.
21. *Corythalia* sp. 1 (mf) – TR: Arena Forest, Arima Rd. (300m), Edith Falls – Tucker Valley, Gaspar Grande Island, Mamoral Rd. at Talparo River, Mt. St. Benedict, Talparo; TO: Delaford.
22. *Cotinusa* sp. (m) – TR: Mt. Zion – Loango Village.
23. *Cylistella* sp. (m) – TR: Mt. St. Benedict.
24. *Cylloдания cf. bicruciatata* Simon (m) – TR: Arena Forest.
25. “*Cylloдания*” sp. (f) – TR: Valencia Rd. at Oropouche River.
26. *Eustiromastix falcatus* Galiano (mf) – TR: Arena Forest, Edith Falls – Tucker Valley, Mt. St. Benedict, Mamoral Rd. at Talparo River, Port of Spain (L), Talparo.
27. *Eustiromastix obscurus* (Peck. & Peck.) (mf) – TR: 7.5 mi N. Arima, Arima Rd. (300, 590m), Edith Falls - Tucker Valley, Mt. St. Benedict, Mt. Zion – Loango Village, Simla Estate – Arima Valley; TO: Delaford, Little Tobago, Speyside.
28. “*Eustiromastix*” sp. 1 (mf) – TR: 4 mi. N. Arima, Arima Rd. (300m), Simla Estate – Arima Valley.
29. *Fluda angulosa* Simon (m) – TR: Arena Forest.
30. *Fluda perdita* (Peck. & Peck.) (f) – TR: Mamoral Rd. at Talparo River.
31. *Fluda usta* Galiano (m) – TR: Mamoral Rd. at Talparo River, Valencia Rd. at Oropouche River.
32. *Freya decorata* (C.L.Koch) (mf) – TR: 4 mi. N. of Arima, La Brea, Mt. St. Benedict, Paria Springs Estate - Braso Seco, Simla Estate – Arima Valley, Talparo, Valencia, Valencia Rd. at Turre River.
33. *Freya perelegans* Simon (mf) – TR: Arena Forest, Arima Rd. (300m), Aripo Savannah, Erin Savannah (1-2 km E of Buenos Ayres), Madame Espagnole River, La Brea, Mt. St. Benedict; TO: Delaford, Speyside.
34. “*Freya*” sp. 1 (mf) – TR: Mt. St. Benedict.
35. “*Freya*” sp. 2 (mf) – TR: Arena Forest, Erin Savannah (1-2 km E of Buenos Ayres) La Brea, Mamoral Rd. at Talparo River, Talparo.
36. *Frigga kessleri* (Tacz.) (mf) – TR: Edith Falls – Tucker Valley, Mt. St. Benedict, Talparo.
37. *Gastromicans* sp. 1 (mf) – TR: Mt. St. Benedict.
38. *Gastromicans* sp. 2 (f) – TR: Mt. Zion – Loango Village.
39. *Habronattus mexicanus* (Peck. & Peck.) (mf) – TR: Champs Fleurs, La Brea.
40. *Hentzia parallela* (Peck. & Peck.) (mf) – TR: East Coast (L), Mt. St. Benedict, Piarco (L).
41. *Hentzia vernalis* (Peck. & Peck.) (mf) – TR: Mt. St. Benedict.
42. *Hypaeus cf. flavipes* Simon (m) – TR: Arima Rd. (500m); TO: Roxborough.
43. *Hypaeus cf. mystacalis* (Tacz.) (mf) – TR: Arena Forest, Arima Rd. (590m), Edith Falls – Tucker Valley, Simla Estate – Arima Valley.
44. *Hypaeus cf. nigrocomosus* Simon (mf) – TR: Arena Forest, Arima Rd. (500, 590m), Mt. St. Benedict, Mt. Zion – Loango Village, Platanal Rd. at Oropouche River.
45. *Hypaeus* sp. (f) – TO: Delaford [does not appear to match *H. cf. flavipes* male].
46. *Jollas geniculatus* Simon (mf) – TR: Mamoral Rd. at Talparo River, University Campus (presumably St. Augustine) (L), Valencia.
47. *Lurio solennis* (C.L.Koch) (mf) – TR: 4 mi. N. of Arima, Blanchisseuse, Mt. St. Benedict, Talparo.
48. *Lyssomanes ceplasi* Galiano (m) – TR: Arena Forest.
49. *Lyssomanes elegans* F.O.P.C. (m) – TR: Arena Forest.
50. *Lyssomanes remotus* Peck. & Peck. (mf) – TR: Arena Forest, Mt. St. Benedict, Mt. Zion – Loango Village.
51. *Lyssomanes taczanowskii* Galiano (f) – TR: Platanal Rd. at Oropouche River, ? locality (L).
52. *Lyssomanes unicolor* (Tacz.) (mf) – TR: Madame Espagnole River, Mt. St. Benedict; TO: Delaford, Speyside.
53. *Mago silvae* Crane (mf) – TR: Arena Forest, Arima

- Rd. (590m), La Brea, Mt. St. Benedict, Mt. Zion – Loango Village, Platanal Rd. at Oropouche River, Talparo.
54. *Mago* sp. 1 (mf) – TR: Arima Rd. (500, 590m).
55. *Marpissa broadwayi* (Peck. & Peck.) – TR: West Coast (L).
56. *Marpissa* sp. (f) – TR: Madame Espagnole River [doesn't match color pattern of *broadwayi*, epigynum of *broadwayi* not illustrated; however, locality is correct for *broadwayi* considering this river is on west coast].
57. *Menemerus bivittatus* (Dufour) (mf), a pantropical house spider – TR: La Brea, Maracas Bay, St. Augustine, Talparo.
58. *Messua* sp. (mf) – TR: 4 mi. N. of Arima, Arena Forest, Mt. St. Benedict, Mt. Zion – Loango Village, Talparo.
59. “*Messua*” sp. (m) – TR: Champs Fleurs.
60. *Metaphidippus* sp. 1 (mf) – TR: Arena Forest.
61. *Metaphidippus* sp. 2 (mf) – TR: Madame Espagnole River.
62. *Noegus fuscimanus* (Tacz.) (mf) – TR: Mt. St. Benedict, Mt. Zion, Simla Estate – Arima Valley.
63. *Noegus rufus* Simon (mf) – TR: Arena Forest, Erin Savannah (1-2 km E of Buenos Ayres), Mamoral Rd. at Talparo River, Platanal Rd. at Oropouche River, Valencia Rd. at Ture River.
64. *Noegus transversalis?* Simon (mf) – TR: Arena Forest.
65. *Nycerella aprica* (Peck. & Peck.) (mf) – TR: Arena Forest, Mt. St. Benedict.
66. “*Nycerella*” sp. 1 (mf) – TR: Mt. St. Benedict, Mt. Zion – Loango Village.
67. *Pachomius dybowskii* (Tacz.) (mf) – TR: Arena Forest, Erin Savannah (1-2 km E of Buenos Ayres), Mt. St. Benedict, Talparo.
68. *Pachomius cf. sextus* Galiano (m) – TR: Aripo Savannah.
69. *Pachomius similis* Peck. & Peck. (mf) – TR: Mt. St. Benedict, Talparo, ? locality (L).
70. *Pachomius villeta* Galiano (mf) – TR: Arena Forest, La Brea.
71. *Parnaenus cf. cuspidatus* F.O.P.C. (mf) – TR: Erin Savannah (1-2 km E of Buenos Ayres).
72. *Parnaenus metallicus* (C.L.Koch) (mf) – TR: Arena Forest, Edith Falls – Tucker Valley, Talparo.
73. *Peckhamia* sp. (mf) – TR: Arena Forest, 4 mi. N. of Arima.
74. *Phiale crocea* C.L.Koch (mf) – TR: Mamoral Rd. at Talparo River, Mt. St. Benedict, Talparo.
75. *Phiale guttata* C.L.Koch (mf) – TR: 2km N. Arima, Caura Valley, Mt. St. Benedict, Simla Estate – Arima Valley, Talparo.
76. *Plexippus paykulli* (Audouin) (mf), a pantropical house spider – TR: St. Augustine.
77. *Poultonia* sp. (mf) – TR: Arena Forest, Edith Falls, Mamoral Rd. at Talparo River, Valencia Rd. at Ture River.
78. *Psecas barbaricus* (Peck. & Peck.) – TR: Port of Spain (L), St. Andrew Co. [juv. probably *barbaricus*].
79. *Psecas sumptuosus* (Perty) – TR: Port of Spain (L).
80. *Psecas* sp. 1 (mf) – TR: Arena Forest, Arima Rd. (300m).
81. *Sarinda cf. armata* (Peck. & Peck.) (mf) – TR: Mt. St. Benedict; TO: Delaford, Speyside.
82. *Sarinda longula* (Tacz.) (mf) – TR: Arena Forest, 4 mi. N. of Arima, Mt. St. Benedict, Valencia Rd. at Ture River.
83. *Sassacus cf. arcuatus* Simon (mf) – TR: Arena Forest, Mt. St. Benedict.
84. *Sassacus cf. resplendens* Simon (mf) – TR: Mt. St. Benedict, Mt. Zion – Loango Village.
85. *Sassacus cf. trochilus* Simon (mf) – TR: Mt. St. Benedict; TO: Roxborough.
86. *Sassacus* sp. (f) – TR: Mt. St. Benedict.
87. *Scopocira carinata* Crane (m) – TO: Delaford.
88. *Scopocira dentichelis* Simon (mf) – TR: Arena Forest, 4 mi. N. of Arima, Arima Rd. (590m), Edith Falls – Tucker Valley, Erin Savannah (1-2km E of Buenos Ayres), Mamoral Rd. at Talparo River, Mt. St. Benedict, Valencia Rd. at Ture River; TO: Delaford, Speyside.
89. *Scopocira tenella* Simon (mf) – TR: Arena Forest, 4 mi. N. of Arima, Platanal Rd. at Oropouche River, Valencia Rd. at Ture River.
90. *Scopocira* sp. 1 (m) – TR: Arena Forest, Mt. Zion – Loango Village, Platanal Rd. at Oropouche River, Simla Estate – Arima Valley.
91. *Semorina* sp. (f) – TR: 2 km. N. of Arima.
92. *Sidusa* sp. (mf) – TR: 4 mi. N. of Arima, Oropouche Cave [probably Cumaca Cave on the Cumaca Rv. in Cumaca Valley].
93. *Synemosyna cf. americana* (Peck. & Peck.) (m) – TR: Simla Estate – Arima Valley.
94. *Synemosyna ankeli* Cutler & Muller (m) – TR: Mt. St. Benedict.
95. *Synemosyna aurantiaca* (Mello-Leitao) (mf) –

- TR: Arena Forest, 4 mi. N. of Arima, Aripo Savannah, Erin Savannah (1-2 km E of Buenos Ayres), Platanal Rd. at Oropouche River.
96. *Synemosyna cf. lauretta* Peck. & Peck. (mf) – TR: Arima Rd. (300m); TO: Goldsborough.
97. *Synemosyna cf. lucasi* (Tacz.) (f) – TR: Arima Rd. (300m).
98. *Synemosyna myrmeciaeformis* (Tacz.) (mf) – TR: Arena Forest, Aripo Savannah.
99. *Synemosyna* sp. (f) – TR: Mt. St. Benedict.
100. *Thiodina pallida* (C.L.Koch) (mf) – TR: Arima Rd. (300m), Mt. St. Benedict.
101. *Thiodina* sp. 1 (mf) – TR: Arena Forest, 4 mi. N. of Arima, Erin Savannah (1-2 km E of Buenos Ayres), Mt. St. Benedict, Talparo.
102. *Thiodina* sp. 2 (mf) – TR: Arena Forest, Mt. St. Benedict; TO: Delaford.
103. *Uspachus* sp. 1 (mf) – TR: 4 mi. N. of Arima, Arima Rd. (500m), Aripo Savannah, Mt. St. Benedict, Mt. Zion, Platanal Rd. at Oropouche River; TO: Delaford, Roxborough.
104. "*Uspachus*" sp. 2 (mf) – TR: 4 mi. N. of Arima, Arima Rd. (500 m), Aripo Savannah, Mt. Zion, Talparo, Valencia Rd. at Turure River; TO: Delaford, Speyside.
Undetermined Euophryinae:
105. Genus 1, sp. 1 (mf) – TR: 4 mi. N. of Arima, Arima Rd. (500m).
106. Genus 1, sp. 2 (mf) – TR: Mt. St. Benedict; TO: Roxborough.
107. Genus 2, sp. 1 (mf) – TR: Mt. St. Benedict, Simla Estate – Arima Valley.
108. Genus 3, sp. 1 (mf) – TR: Arena Forest, Arima Rd. (300, 590m), Mt. St. Benedict, Platanal Rd. at Oropouche River, Valencia Rd. at Turure River.
109. Genus 4, sp. 1 (f) – TR: Mamoral Rd. at Talparo River.
110. Genus 5, sp. 1 (f) – TR: Talparo.
111. Genus 6, sp. 1 (mf) – TR: Erin Savannah (1-2 km E of Buenos Ayres).
112. Genus 7, sp. 1 (f) – TR: Arena Forest, 4 mi. N. of Arima.

Undetermined Other:

113. Genus A, sp. 1 (f) – TR: Arena Forest.
114. Genus B, sp. 1 (m) – TR: Arena Forest.
115. Genus C, sp. 1 (f) – TR: Simla Estate – Arima Valley.
116. Genus D, sp. 1 (m) – TR: Arena Forest.
117. Genus E, sp. 1 (m) – TR: Mt. St. Benedict.

CORRIGENDA

Bellienna scotti Hogg, reported by Edwards and Wolff (1995) from the country of Trinidad, is actually from an island with the same name located off the east coast of Brazil.

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