

TROPASTERON GEN. NOV. OF THE ASTERON-COMPLEX (ARANEAE:
ZODARIIDAE) FROM TROPICAL QUEENSLAND

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Tropasteron contains 22 new species of the *Asteron*-complex, a large group of endemic Australian Zodariidae. *Tropasteron* consists of two species-groups which are distinguished by their size, slightly different palps and epigynes, and their different abdominal colour pattern. The *T. cleveland*-group with 18 species includes the type species *Tropasteron cleveland* sp. nov. (♂, ♀) and *T. cardwell* sp. nov. (♂, ♀), *T. cooki* sp. nov. (♂, ♀), *T. daviesae* sp. nov. (♂, ♀), *T. eacham* sp. nov. (♂, ♀), *T. fox* sp. nov. (♂, ♀), *T. halifax* sp. nov. (♂, ♀), *T. heatherae* sp. nov. (♂, ♀), *T. julatten* sp. nov. (♂, ♀), *T. luteipes* sp. nov. (♂, ♀), *T. malbon* sp. nov. (♂, ♀), *T. monteithi* sp. nov. (♂, ♀), *T. palmerston* sp. nov. (♂), *T. raveni* sp. nov. (♂, ♀), *T. splendens* sp. nov. (♂), *T. thompsoni* sp. nov. (♂, ♀), *T. tribulation* sp. nov. (♂, ♀), *T. yeatesi* sp. nov. (♂, ♀). The larger and much more rare species of the *Tropasteron andreae*-group are represented by *Tropasteron andreae* sp. nov. (♂, ♀), *T. magnum* sp. nov. (♂), *T. pseudomagnum* sp. nov. (♂) and *T. robertsi* sp. nov. (♂). All species are found only in the tropical rainforests of Queensland. □ *Spiders, rainforest, Zodariidae, Tropasteron.*

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This is the fifth systematic paper on the *Asteron*-complex (Baehr & Jocqué, 1996) of zodariid spiders, that now contains 12 genera with 79 species.

Like the rest of the *Asteron*-complex (Baehr, in press; Baehr & Jocqué, 2000, 2001; Jocqué & Baehr 2001) *Tropasteron* is endemic to Australia and occurs almost exclusively in the rainforest mountain systems of north Queensland. Most of the 766 specimens were collected in wet tropic surveys undertaken by G. Monteith, V. Davies, R. Raven and other Queensland Museum staff, to examine the broad patterns of species geography across the area (Monteith, 1995). Target taxa were insects with low vagility, e.g. Scarabaeidae (Reid & Storey, 2000; Storey & Monteith, 2000), Tenebrionidae (Bouchard, 2002), wingless Carabidae (Baehr, 1995) and Aradidae (Monteith, 1997). In addition to the mygalomorph spiders (e.g. Raven 1979, 2000) and some araneomorph spider groups of Amphinectidae and Kababinae (e.g. Davies, 1995, 1999, 2000a, 2000b), *Tropasteron* becomes the sixth Wet Tropics spider group to be used for low vagility studies.

Tropasteron gen. nov., mentioned in Baehr & Jocqué (1996) as *Asteron queenslandicum*-group, can be easily separated from all other genera by a number of synapomorphies mentioned in the genus description.

MATERIAL AND METHODS

Descriptions are generated with the aid of DELTA and Intkey (Dallwitz et al., 1998) and shortened where possible.

Drawings were done from body, right palp, epigyne and vulva. All measurements are in mm.

Spination and colour patterns are dealt with as in the revision of *Euasteron* (Baehr, this volume).

Divisions of the Wet Tropics used in the discussion of distribution are the Rainforest Mountain Blocks proposed by Monteith (1995) and modified in Bouchard (2002).

Abbreviations of characters: ALE, anterior lateral eyes; AME, anterior median eyes; AS, anterior spinnerets; CD, copulatory duct; CE, rounded extension on cymbium; Ceph, cephalothorax; CO, copulatory opening; CR, chitinous rim; DTA, dorsal tegular apophysis; DtiA, dorsolateral tibial apophysis; E, embolus; EP, external prong on dorso-retrolateral tibial apophysis; F, flange on cymbium; Fe, femur; IP, internal prong on dorso-retrolateral tibial apophysis; MS, median spinnerets; MEG, median eye group; MT, metatarsus; P, patella; PE, prolateral extension of DTA; PLE, posterior lateral eyes; PME, posterior median eyes; PS, posterior spinnerets; S, spermatheca; sl/sw, sternum length/width; SP, sperm duct; T, tibia; Ta, tarsus; TF, transparent field on embolus base; VtiA, ventral tibial apophysis.

Abbreviations of institutions where material is deposited: AM, Australian Museum, Sydney (M. Gray); QM, Queensland Museum, Brisbane (R. Raven).

Abbreviations of common collector names: DC, D.J. Cook; DY, D. Yeates; GM, G.B. Monteith; GT, G.I. Thompson; HJ, H. Janetzki; JG, J. Gallon; MS, M. Shaw; RR, R.J. Raven; PL, P. Lawless; SH, S. Hamlet; VD, V. Davies.

SYSTEMATICS

KEY TO SPECIES GROUPS OF *TROPASTERON*

1. Clypeus at least 5.5 times diameter of ALE high. Palp, (EP) distally flattened, cymbial flange short straight, with distal hook, only about 10% of cymbium long, epigyne CO lyriform (Fig. 6G-J) . . . *T. andreae*-group
- Clypeus less than 5 × diameter of ALE high. Palp, (EP) with sharp tip, cymbial flange straight, without distal hook, about 15% of cymbium long, epigyne CO semicircular or oval (Figs 5A-L, 6A-F) . . . *T. cleveland*-group

KEY TO SPECIES OF *T.* *CLEVELAND*-GROUP

Males

1. Palp without LTA spine (Figs 9B) 2
- Palp with LTA spine (Fig. 1C) 3
2. Palp, DtiA, EP short, about as long as wide at base; abdomen with 3 pairs of big white patches dorsally (Fig. 5D, 9A-F) *T. daviesae*
- Palp, DtiA, EP long, EP at least twice as long as wide at base; abdominal pattern not as above (Fig. 6A; 18A-D) *T. palmerston*
3. Abdomen frontally without any white or pale spots (Fig. 1A) 4
- Abdomen frontally with pairs of white spots (Fig. 22C) 10
4. Palp DtiA, EP short, about as long as wide at base (Fig. 5A,D,F, 6B) 5
- Palp DtiA, EP long, EP at least twice as long as wide at base (Fig. 5B,C,E,G-L) 7
5. Palp, with short LTA spine, about as long as wide; sperm duct semicircular; abdomen with 2 pairs of white dots dorsally (Fig. 19A-D) *T. raveni*
- Palp, with long LTA spine, at least 3 times as long as wide; sperm duct inverted U-shaped (Fig. 1C, 11B) 6
6. Abdomen with 2 pairs of white dots dorsally, second pair forming a transverse stripe (Fig. 11A-D) *T. fox*
- Abdomen with 2 pairs of white dots dorsally, without transverse stripe (Fig. 1A-C) *T. cleveland*
7. Abdomen ventrally without any colour pattern, dorsally with 2 pairs of white dots (Fig. 12A-D) *T. halifax*
- Abdomen ventrally otherwise (Figs 8D, 17D, 23D, F) 8
8. Abdomen ventrally with 1 pair of white stripes (Fig. 17A-D) *T. monteithi*
- Abdomen ventrally with white chevrons (Fig. 1A-C) 9
9. Abdomen with light patches arranged as in Fig. 8C, D *T. cooki*
- Abdomen with light patches arranged as in Fig. 23C-F *T. yeatesi*

10. Abdomen frontally with 1 additional pair of fronto-lateral white spots (Fig. 23C-F) 11
- Abdomen frontally without additional pair of fronto-lateral white spots (Fig. 21C-D) 14
11. Palp, with short LTA spine (Fig. 14B) *T. julatten*
- Palp, with long LTA spine, at least 3 × as long as wide (Fig. 10B, 15B, 21B) 12
12. Abdomen frontally with 1 pair of white spots additional to 1 fronto-lateral pair (Fig. 21A-D) *T. thompsoni*
- Abdomen frontally with more than 1 pair of white spots additional to 1 fronto-lateral pair (Figs 10C, 15C) 13
13. Abdomen frontally with 2 pairs of white spots additional to 1 fronto-lateral pair (Fig. 10C) *T. eacham*
- Abdomen frontally with 3 pair of white spots additional to 1 fronto-lateral pair (Fig. 15C) *T. luteipes*
14. Palp with short LTA spine (Fig. 16B) *T. malbon*
- Palp with long LTA spine, at least 3 times longer than wide (Figs 7B, 13B, 20B, 22B) 15
15. Abdomen frontally with 1 pair of white spots (Fig. 7A-D) *T. cardwell*
- Abdomen frontally with more than 1 pair of white spots (Figs 13C, 12C, 22C) 16
16. Abdomen frontally with 3 pairs of white spots (Fig. 22A) *T. tribulation*
- Abdomen frontally with 2 pairs of white spots (Figs 20C, 13C) 17
17. Abdomen dorsally with 2 pairs of white spots and 2 in front of spinnerets, additional to frontal spots (Fig. 20A-D) *T. splendens*
- Abdomen frontally with 4 pairs of white spots, dorsally with 2 pairs and 2 in front of spinnerets, additional to frontal spots (Fig. 13A-D) *T. heatherae*

Females

1. Abdomen frontally without any white spots (Fig. 1A) 2
- Abdomen frontally with pairs of white spots (Fig. 22C) 9
2. Abdomen dorsally with 2 pairs of white dots (Fig. 1A) 3
- Abdomen dorsally otherwise 5
3. Femur I dark brown, II-IV proximal part white, distal part brown epigyne (Fig. 3B,C) *T. cleveland*
- Femur I-IV same colour pattern 4
4. Femur I-IV proximal margin brown, medium part white, distal part brown, epigyne longer than wide, CO semicircular (Fig. 19C-G) *T. raveni*
- Femur I-IV proximal part white, distal part brown, epigyne wider than long, CO oval (Fig. 12C-G) *T. halifax*
5. Abdomen ventrally without any colour pattern, epigyne, CO flattened oval (Fig. 11C-F) *T. fox*
- Abdomen ventrally with colour pattern 6
6. Abdomen ventrally with 1 pair of white stripes; epigyne (Fig. 17C-F) *T. monteithi*
- Abdomen ventrally with chevrons (Figs 8D, 9D, 23D,F) 7
7. Legs pale without colour pattern, small about 3.5mm; epigyne (Fig. 9C-F) *T. daviesae*
- Legs with indistinct colour pattern or clearly annulated 8
8. Abdomen laterally with 1 long white stripe, epigyne CO flat oval (Fig. 23C-H) *T. yeatesi*
- Abdomen laterally with white chevrons, epigyne CO semicircular (Fig. 8C-F) *T. cooki*
9. Abdomen frontal with 1 additional pair of fronto-lateral white spots (Figs 10C, 14C, 15C, 21C) 10

- Abdomen frontal without fronto-lateral white spots (Figs 7C, 13C, 16C, 22C) 13
10. Abdomen ventrally without any colour pattern (Figs 14D, 15D) 11
Abdomen ventrally with white stripes or patches (Fig. 21D) 12
11. Abdomen frontally with 2 pairs of small white spots, epigyne as in Fig. 14C-F *T. julatten*
Abdomen frontally with 3 pairs of small white spots, epigyne as in Fig. 15C-F *T. luteipes*
12. Abdomen ventrally with 3 white stripes, epigyne as in Fig. 21C-F *T. thompsoni*
Abdomen ventrally with 1 pair of white patches near tracheal spiracle, epigyne as in Fig. 10C-E *T. eacham*
13. Abdomen frontally with 1 pair of small white spots (Figs 7C-F, 16C-F) 14
Abdomen frontally with 2-3 pairs of small white spots, epigyne as in Figs 13C-F, 22C-F 15
14. Epigyne, CO semicircular (Fig. 16C-F) *T. malbon*
Epigyne, CO flattened oval (Fig. 7C-F) *T. cardwell*
15. Abdomen frontally with 2 pairs of small white spots, epigyne (Fig. 13C-F) *T. heatherae*
Abdomen frontally with 3 pairs of small white spots, epigyne (Fig. 22C-F) *T. tribulation*

Tropasteron gen. nov.

TYPE SPECIES. *Tropasteron cleveland* sp. nov.

ETYMOLOGY. Occurs only in tropical eastern Queensland, from Iron Range (12°40'S) to Carmila (21°52'S).

DIAGNOSIS. *Tropasteron* gen. nov., mentioned in Baehr & Jocqué (1996) as *Asteron queenslandicum*-group, can be easily separated from all other genera by the synapomorphies:

- 1) the very short, straight cymbial flange, with only 10-15% length of cymbium and the small rounded extension CE (Fig. 1B);
- 2) the long spine-like LTA (Fig. 3C), the more or less cylindrical base of the embolus (Fig. 3B);
- 3) the prolateral extension (PE) of semicircular, distally-folded, dorsal tegular apophysis (DTA), short not longer than base of DTA (Fig. 3B);
- 4) the ventro-lateral tibial apophysis with chitinous rim (CR) (Fig. 1B);
- 5) the bifurcate dorsolateral palpal tibial apophysis, internal prong (IP) about 1/3 of external prong (EP) (Figs 5A-L, 6A-J);
- 6) the more or less square epigyne with semicircular to flat oval copulatory opening (CO), not attached to the epigastric fold, copulatory duct (CD) elongate with big semicircular distal loop, curled and ending in not touching spermathecae (S) (Fig. 2B,C);
- 7) the strong female palpal claw with more than 6 teeth (Fig. 4B).

Although *Tropasteron* is well separated by these synapomorphies, all species are similar in their palpal and epigynal structure. Therefore, unfortunately, the abdominal and leg colour pattern are often the only characters to easily separate species.

DESCRIPTION. Medium-sized spiders (3.00-7.50) with finely reticulate tegument. Carapace widest at coxae II. Profile flat with highest point between fovea and PME (Fig. 1A,D).

Colour: carapace, sternum yellow to sepia brown; chelicerae yellow to medium brown; maxillae and labium yellow to medium brown, distally white; abdomen dorsally sepia brown with or without weak scutum with 2-4 pairs of white patches on anterior part and 1-3 in front of spinnerets; frontally with or without 1-3 pairs of small white spots, frontolaterally with or without 1 pair of small white spots; laterally with 2-4 white stripes or mottled with white; ventrally paler brown to dark brown, mottled with white; with or without with 1 pair of elongate white stripes and or 1 white stripe from epigastric fold to near tracheal spiracle, legs yellow, pale to medium brown, indistinct or clearly annulated.

Carapace: broadly oval, finely reticulated.

Sternum: shining; heart-shaped anteriorly straight; with short and longer setae.

Eyes (Fig. 1A,D,E): in 3 rows (2-4-2). AME smallest; eye group width 0.46-0.69 of headwidth. MEG slightly longer than wide. Clypeus straight, about 5.5-6 times (*T. andreae*-group) and 3-4.4 times (*T. cleveland*-group) diameter of ALE high. Chilum single or divided. Chelicerae as usual for family with few hairs in front and dense row on distal promargin; no teeth. Maxillae and labium triangular; sparsely haired; maxillae with anteromesal scopula. Sternum flat; heart-shaped with straight anterior margin, shining; with long setae around margin.

Mouthparts: chelicerae, basal segment laterally with condyle; maxillae triangular, with promarginal scopula; labium triangular.

Abdomen: PLS small; widely spaced with PMS in one row; PMS tiny; colulus only some hairs; tracheal spiracle small slit-like, with a tiny pit (Fig. 3A).

Legs: Formula 4123. Spination: few spines on pairs I, II, more numerous on III, IV. Paired tarsal claws with numerous (± 14) teeth on inner side of claw. Unpaired claw toothless, on very small onychium. Metatarsal preening brush on Mt II and III poorly developed.

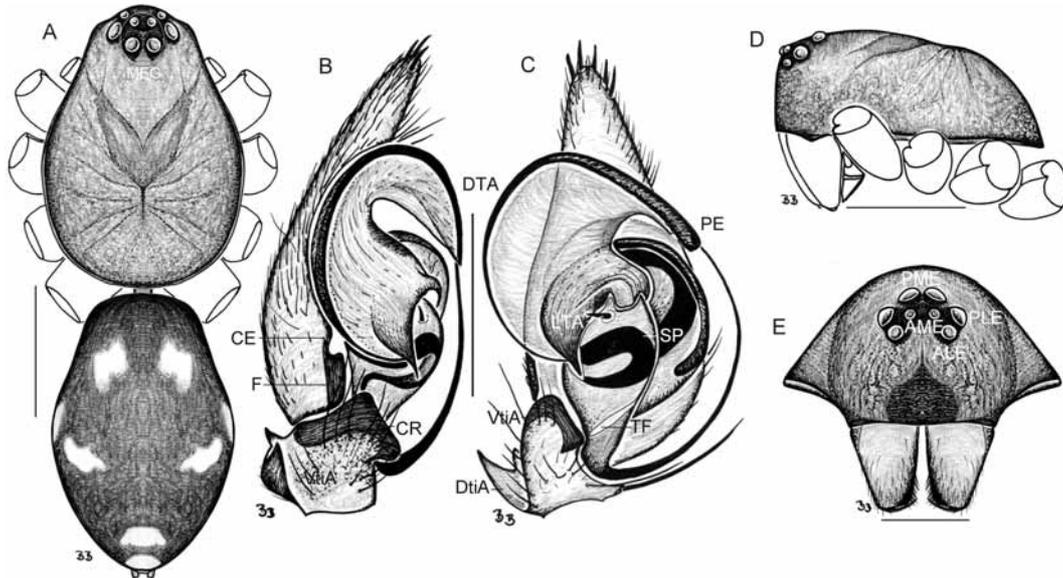


FIG. 1. *Tropasteron clelandi* male. A, body dorsal; B,C, palp; B, lateral, C, ventral, scale 0.5mm; D,E, cephalothorax; D, lateral; E, frontal, scale 1mm. ALE = anterior lateral eyes, AME = anterior median eyes, CE = rounded extension on cymbium, CH = hook on cymbial flange, CR = chitinous rim, DTA = dorsal tegular apophysis, DtiA = dorsolateral tibial apophysis, E = embolus, F = flange on cymbium, LTA = lateral tegular apophysis (spine), MEG = median eye group, PE = prolateral extension of DTA, PLE = posterior lateral eyes, PME = posterior median eyes, SP = sperm duct, TF = transparent field on embolus base, VtiA = ventral tibial apophysis.

Male palp (Fig. 1B,C): tibia short with dorso-lateral and ventrolateral apophysis. Dorsolateral tibial apophysis bifid with sharp internal (IP) and external prong (EP). In *T. andreae*-group EP distally flattened. Cymbial flange short straight, only 10-15% of cymbium long, distally followed by small rounded extension, incision in between.

DTA, semicircular, distally folded with short PE, not longer than base of DTA; retrolaterally with retrolaterally with sharp tip and without any additional extension; sperm duct inverted U-shaped; embolus thin, semicircular, embolus base cylindrical; tibia short; ventrolateral tibial apophysis with chitinous rim dorsally, connected with dorsolateral apophysis. Femur with 2 strong spines dorsally. Embolus semicircular conducted by DTA.

Females are often bigger than males but body shape and colour pattern are the same. In contrast the female ceph is higher and clypeus is bowed, visible from dorsal view (Fig. 2A,D,E). Epigynes (Fig. 2B, C) of all *Tropasteron* species are very similar: all are as long as wide, with semicircular oval or lyriform CO, not attached to the epigastric

fold, CD elongate with big semicircular distal loop, curled and ending in not touching S.

***Tropasteron clelandi* sp. nov.**
(Figs 1, 2, 3, 4, 5A, 29)

ETYMOLOGY. The species name is taken from the type locality. A noun in apposition.

MATERIAL. HOLOTYPE: ♂, Mt Cleveland, NE Qld, 500m, blady grass, open forest, 19°15'23"S, 147°01'40"E, 22 Jan-21 Mar 1991, A. Graham, pitfall (QM S17982). PARATYPES: NE Qld: 11f, 19m, same data as holotype (QM S57097); 2m, same locality, 20 Jan-12 Mar 1991 (QM S17972); 1f, as previous, 19°16'S, 147°03'E, Jan-12 Mar 1991 (QM S46780); 1m, as previous, summit, 560m, open forest, 19°15'23"S, 147°01'40"E, 22-24 Mar 1991, GM, DC (QM S17928); 2f, 6m, as previous, 500m, rainforest, 19°15'23"S, 147°01'40"E, 20 Jan-12 Mar 1991, A. Graham (QM S17902).

DIAGNOSIS. Differs from most other species by short EP (Fig. 5D). Similar to *T. raveni* in the abdomen lacking white spots frontally, but differs by femur I dark brown, II-IV proximal part white, distal part dark brown.

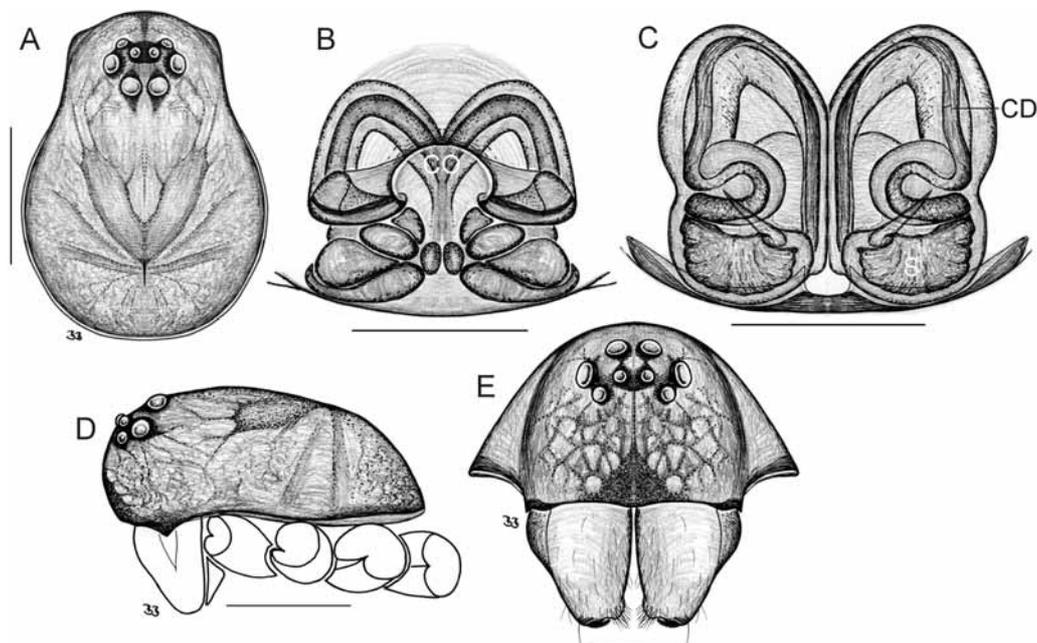


FIG. 2. *Tropasteron cleveland* female. A, carapace; B,C, epigyne; B, ventral, C, dorsal, scale 0.25mm; D,E, cephalothorax; D, lateral; E, frontal, scale 1mm. CD = copulatory duct, CO = copulatory opening, S = spermatheca.

DESCRIPTION. Male (holotype). Total length 4.12. Ceph 2.08 long, 1.56 wide, 0.84 high; cl/cw 1.33; sternum 1.04 long, 0.96 wide; sl/sw 1.08; abdomen 2.04 long, 1.44 wide.

Colour: Carapace orange brown. With dark fovea and dark bifurcate patches in front; sternum orange brown; chelicerae orange; maxillae and labium medium brown, distally white. Abdomen (Fig. 1A) sepia brown; dorsally with 2 pairs of white patches on top and 2-3 in front of the spinnerets; lateral with 1 white patch; ventrally dark brown. Legs medium brown, with darker brown lateral stripes; coxae I-IV white; trochanter I-IV brown; femur I dark brown, II-IV proximal part white, distal part dark brown; tibia I distally white.

Eyes: in 2 rows with 4 eyes, both rows procurved; AME smallest, PLE largest; eye group width 0.69 of headwidth; AME 0.10; ALE 0.12; PME 0.13; PLE 0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.34; AME-AME 0.24; PME-PME 0.30. Clypeus 0.48 high; chilum undivided.

Male palp (Figs 1B,C, 3C): tegulum (LTA) a long spine, at least twice as long as wide; EP about as long as wide at base (Fig. 5A).

Female (paratype). Total length 4.92. Ceph 2.44 long, 1.68 wide, 0.96 high; cl/cw 1.45; sternum 1.08 long, 1.00 wide; sl/sw 1.08; abdomen 2.48 long, 1.92 wide.

Colour: As in male.

Eyes: AME smallest; PLE largest; eye group width 0.53 of headwidth; AME 0.10; ALE 0.12; PME 0.14; PLE 0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.06; PME-PLE 0.12; ALE-PLE 0.04; eyes group AME-PME 0.36; AME-AME 0.24; PME-PME 0.34. Clypeus 0.60 high.

Epigyne: (Fig. 2B,C) with oval CO.

DISTRIBUTION. Queensland (Fig. 29). Known only from the summit of Mt Cleveland, a small, isolated mountain on the coast 25km E of Townsville. Open forest.

***Tropasteron cardwell* sp. nov.**
(Figs 5B, 7, 29)

ETYMOLOGY. The type locality, a noun in apposition.

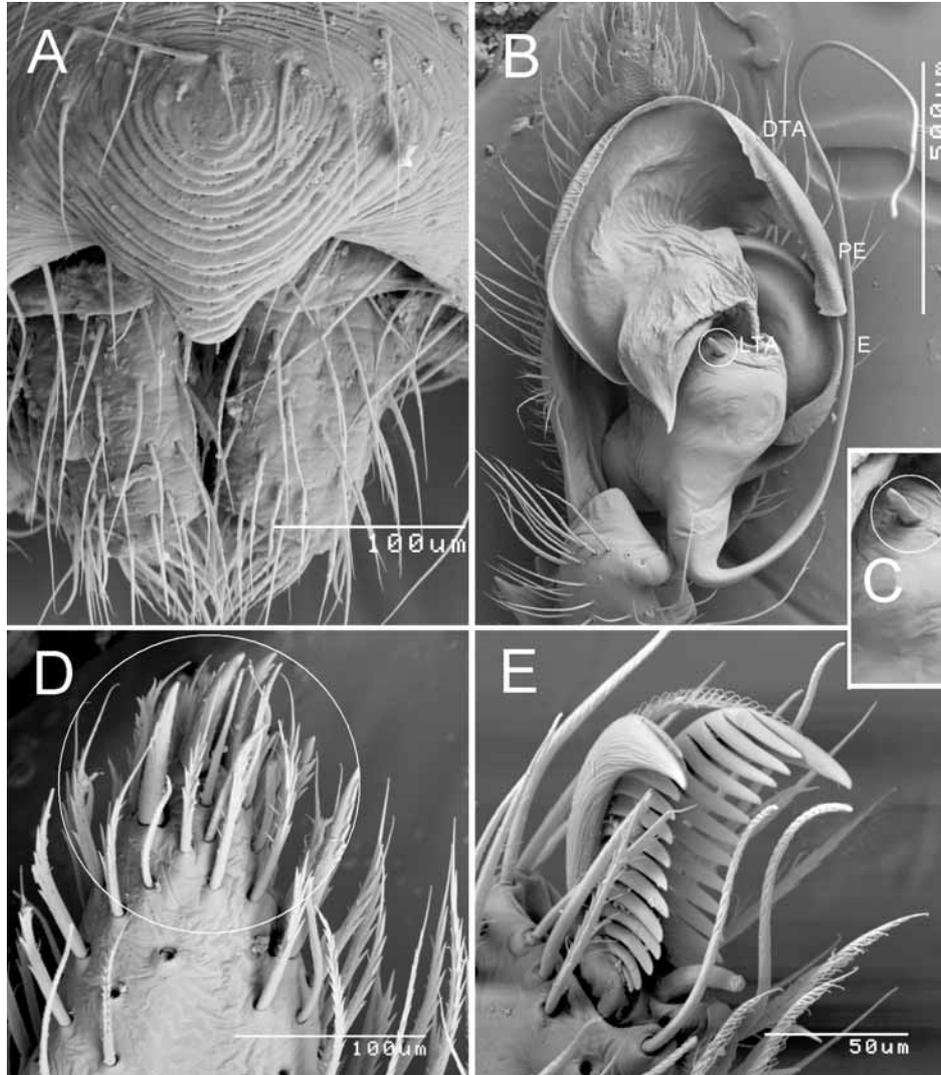


FIG. 3. *Tropasteron cleveland* male. A, pitted shield covers tracheal spiracle; B, palp ventral; C, LTA spine; D, tip of cymbium; E, tarsal claw 1st right leg.

MATERIAL. HOLOTYPE: ♂, Cardwell Ra, NE Qld, Upper Broadwater Ck Valley, 700m, rainforest, 18°18'S, 145°56'E, 18 Dec 1986-14 Jan 1987, GM, GT, SH, pitfall (QM S12235). **PARATYPES:** NE Qld: 2 ♀, 1 ♂, same data as holotype (QM S57093); 1 ♀, 1 ♂, same data as holotype (AM KS83917); 2 ♂, Cardwell Ra, Mt Macalister, 700m, rainforest, 18°19'S, 145°5'E, 20 Dec 1986, GM, GT, moss on trees and rocks (QM S25692); 9 ♂, same locality, 18°18'S, 145°56'E, 18 Dec 1986-14 Jan 1987, GM, GT, SH, flight intercept trap (QM S41929); 2 ♂, Upper Boulder Ck, 8km N of Tully, 250m, rainforest, 17°05'S, 145°54'S, 4-7 Dec 1989, GM, GT, HJ, pitfall (QM S46826); 1 ♂,

Boulder Ck, Walter Hill Ra, rainforest, 250-600m, 17.05'S, 145.54'E, 24-27 Oct 1983, GM, DY, GT (QM S3808); 1 ♂, Broadwater Pk, 35km NW Ingham, rainforest, 18°22'S, 145°57'E, 21-22 Dec 1986, SH (QM S12239); 1 ♂, as previous, 18°22'S, 145°57'E, 22 Dec 1986-3 Jan 1987, SH, pitfall (QM S12238); 7 ♂, Douglas Ck Rd, Kirrama SF, 800m, rainforest, 18°12'S, 145°45'E, 10 Dec 1986-11 Jan 1987, GM, GT, SH, flight intercept trap (QM S12240); 7 ♂, as previous, 26-30 Aug 1987, RR, pitfall (QM S12242); 9 ♂, Mt Smoko Rd, Kirrama Ra, 700m, rainforest, 18°09'S, 145°37'E, 10 Dec 1986-11 Jan 1987, GM, GT, SH, pitfall (QM S18179); 2 ♂, Kirrama Ra (Mt

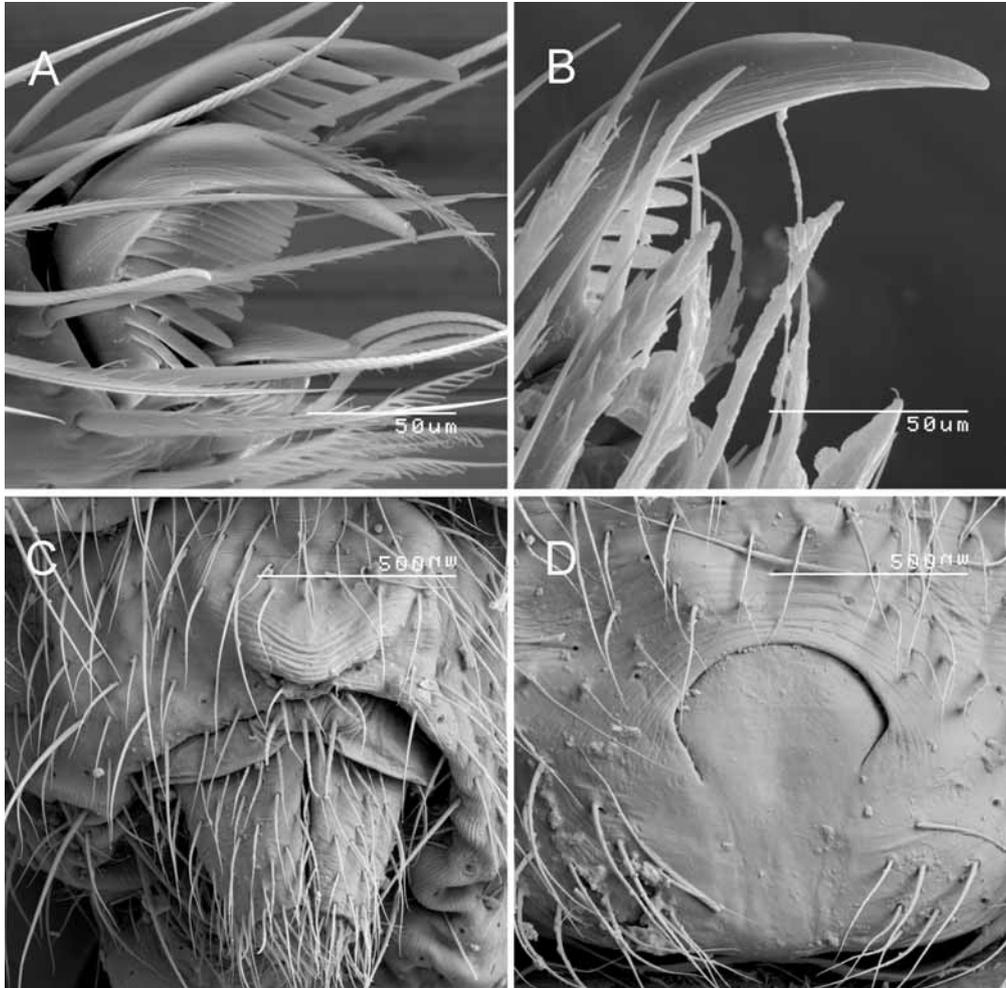


FIG. 4. *Tropasteron cleveland* female. A, tarsal claw 1st right leg B, palpal claw with teeth; C, pitted shield covers tracheal spiracle; D, CO of epigyne.

Hosie), 930m, rainforest, 18°11'S, 145°45'E, 11-Dec-86, GM, GT, Berlesate (QM S34852); 4♂, Kirrama Ra, Main Rd, west side, 700m, rainforest, 18°12'S, 145°45'E, 10 Dec 1986-11 Jan 1987, GM, GT, SH, pitfall (QMS12263); 2♀, 2♂, Kirrama Ra, 700m, 18°06'S, 145°42'E, 9 Dec 1986, GM, GT, sieved litter (QM S25683); 2♂, Kirrama Ra, Yuccabine Ck, 700m, 18°12'S, 145°45'E, 10 Dec 1986, GM, GT, sieved litter (QM S25694); 2♂, Kirrama Ra, Douglas Ck Rd, 800m, 18°12'S, 145°45'E, 10 Dec 1986-11 Jan 1987, GM, GT, SH, pitfall (QM S18177); 2♂, Gayundah Ck, Hinchinbrook Is, 10m, rainforest, 18°22'S, 146°15'E, 8-17 Nov 1984, VD, JG, pitfall (QM S25791); 1♀, 9♂, as previous (QM S25721); 1♂, as previous, 18°22'S, 146°13'E, 8-18 Nov 1984, GM, GT, DC, pitfall (QM S3800).

DIAGNOSIS. Very similar in colour pattern and body shape to *T. splendens* and *T. malbon*, differs in colour pattern by: abdomen without weak scutum and ventrally with 1 pair of small white spots. *T. cardwell* has shorter legs and different shape of palp with long spine, at least twice as long as wide (LTA).

DESCRIPTION. *Male* (holotype). Total length 4.24. Ceph 2.20 long, 1.60 wide, 1.00 high; cl/cw 1.37; sternum 1.08 long, 0.96 wide; sl/sw 1.12; abdomen 2.04 long, 1.32 wide.

Colour: carapace orange brown. With dark fovea and dark bifurcate patches in front; sternum orange brown; chelicerae orange; maxillae and

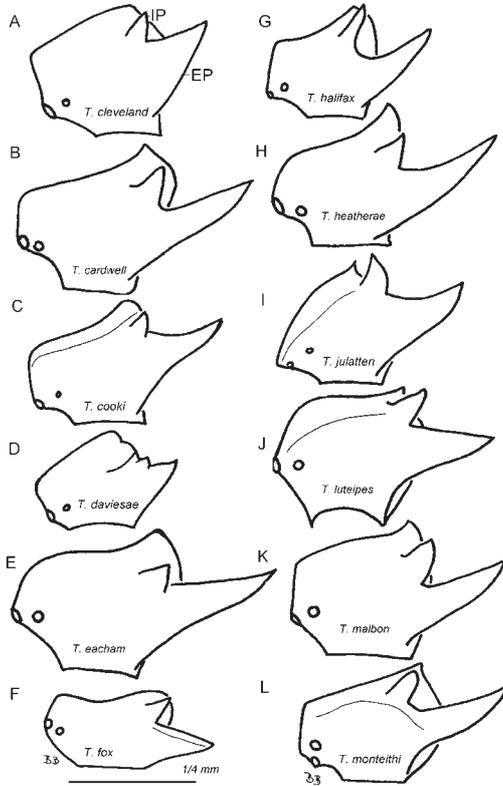


FIG. 5. A-L, tibia (dorsal view) of *Tropasteron* spp; A, *T. cleveland*; B, *T. cardwell*; C, *T. cooki*; D, *T. daviesae*; E, *T. eacham*; F, *T. fox*; G, *T. halifax*; H, *T. heatherae*; I, *T. julatten*; J, *T. luteipes*; K, *T. malbon*; L, *T. monteithi*. Scale 0.25mm. EP = external prong on dorso-retrolateral apophysis; IP = internal prong on dorso-retrolateral apophysis.

labium medium brown, distally white. Abdomen (Fig. 7C, D) sepia brown; frontally with 1 pair of small white dots; dorsally with 2 pairs of white patches on top and 2-3 in front of the spinnerets; lateral with 1 white patch; ventrally dark brown; with 1 pair of white patches near tracheal spiracle. Legs pale brown, with darker brown lateral stripes; coxae I-IV white or pale; trochanter I-IV brown; femur I-IV proximal part white becoming continuously dark brown distally; tibia I distally white.

Eyes: AME smallest, PLE largest; eye group width 0.60 of headwidth; AME 0.08; ALE 0.12; PME 0.13; PLE 0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME

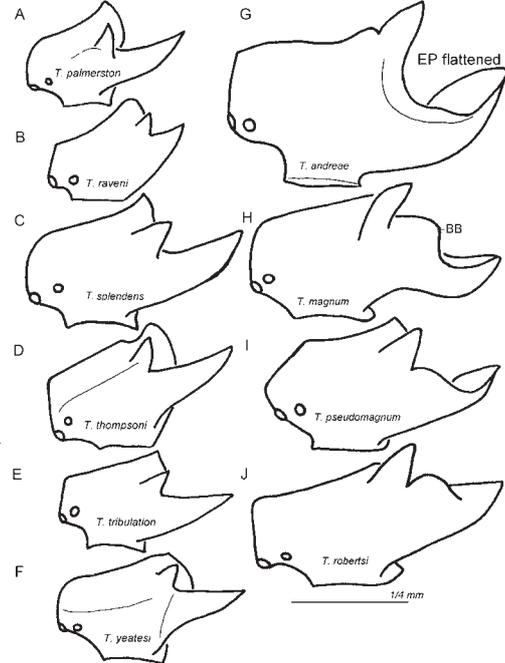


FIG. 6. A-J, tibia (dorsal view) of *Tropasteron* spp; A, *T. palmerston*; B, *T. raveni*; C, *T. splendens*; D, *T. thompsoni*; E, *T. tribulation*; F, *T. yeatesi*; G, *T. andreae*; H, *T. magnum*; I, *T. pseudomagnum*; J, *T. robertsi*. Scale 0.25mm.

0.36; AME-AME 0.20; PME-PME 0.30. Clypeus 0.52 high.

Male palp (Fig. 7A, B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct semicircular; EP at least twice as long as wide at base (Fig. 5B).

Female (paratype). Total length 4.20. Ceph 2.20 long, 1.44 wide, 0.96 high; cl/cw 1.52; sternum 0.92 long, 0.88 wide; sl/sw 1.04; abdomen 2.00 long, 1.44 wide.

Eyes: AME smallest; eye group width 0.57 of headwidth; AME 0.08; ALE 0.12; PME 0.13; PLE 0.13; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.12; ALE-PLE 0.04; eyes group AME-PME 0.38; AME-AME 0.20; PME-PME 0.30. Clypeus 0.52 high.

Epigyne (Fig. 7E, F): Wider than long, with very flat, broadly oval CO (Fig. 7E, F).

DISTRIBUTION. Queensland, Wet Tropics blocks 12, 13 and 15 (Fig. 29). Occurs widely on the Kirrama Range, on the eastern rims of the Cardwell and Walter Hill Ranges, and on nearby Hinchinbrook Island. Rainforest.

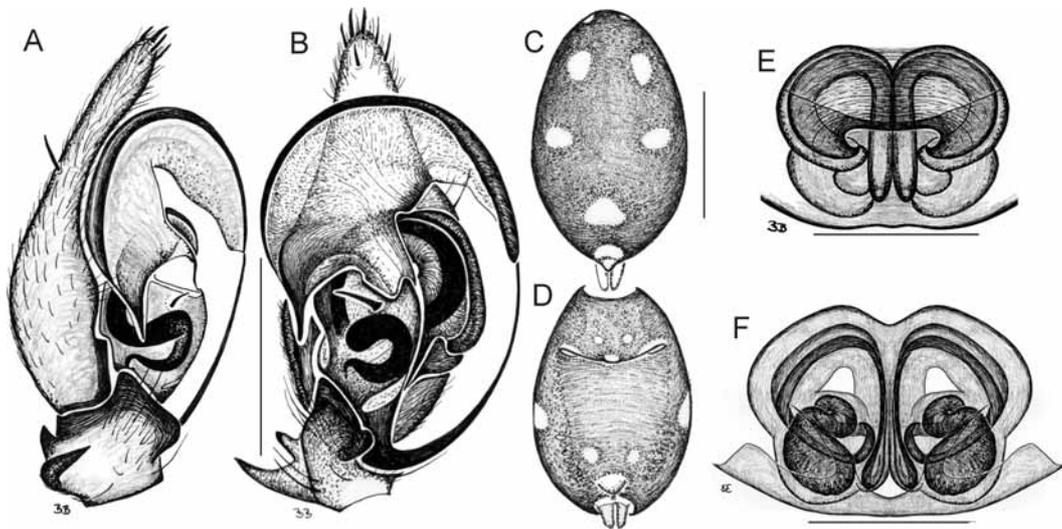


FIG. 7. *Tropasteron cardwell*. A,B, palp; A, lateral; B, ventral; scale 0.25mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

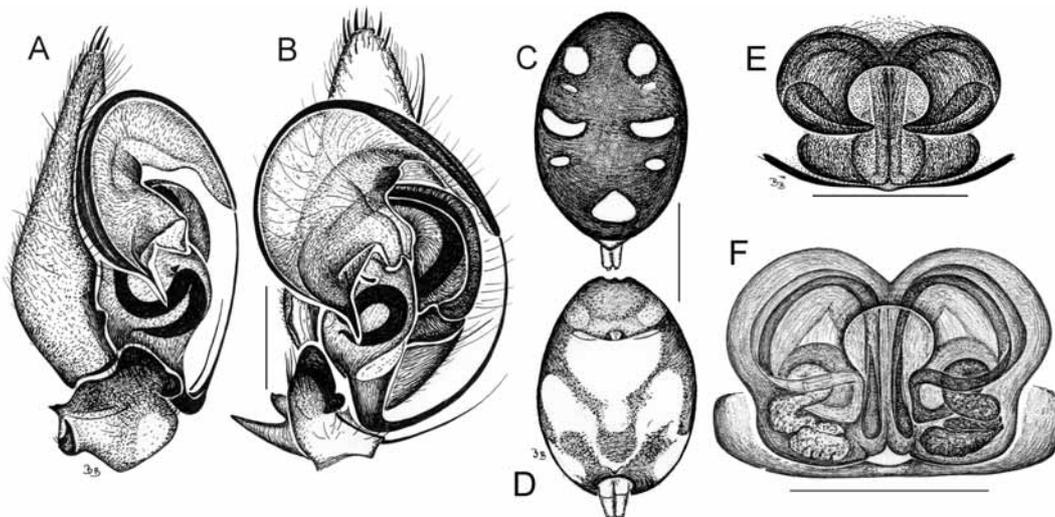


FIG. 8. *Tropasteron cooki*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

***Tropasteron cooki* sp. nov.**
(Figs 5C, 8, 31B)

ETYMOLOGY. For Douglas Cook of the Queensland Museum, one of the collectors.

MATERIAL. HOLOTYPE: ♂, North Bell Peak, Malbon Thompson Ra, NE Qld, 17°07'S, 145°53'E, 20-22 Nov 1990, GM, GT, pitfall (QM S57007). PARATYPES: NE Qld: 1 ♀, 7 ♂, as for holotype (QM S25696); 1 ♀, 1 ♂, Bell

Peak North, 10km E Gordonvale, 850-1000m, rainforest, 17°06'S, 145°53'E, 13 Oct 1982, GM, DY, GT, sieved litter (QM S4235); 2 ♀, 1 ♂, Mt Edith Rd, Lamb Ra., 900m, rainforest, 17°06'S, 145°37'E, 12 Oct 1982, GM, DY, GT, sieved litter (QM S3798); 3 ♀, 1 ♂, North Bell Peak, via Gordonvale, 900m, rainforest, 17°05'S, 145°53'E, 16 Sep 81, GM, DC (QM S3766); 5 ♂, North-South Bell Pk saddle, Malbon Thompson Ra, 17°07'S, 145°54'E, 20-21 Nov 1990, GM, GT, pitfall (QM S25788).

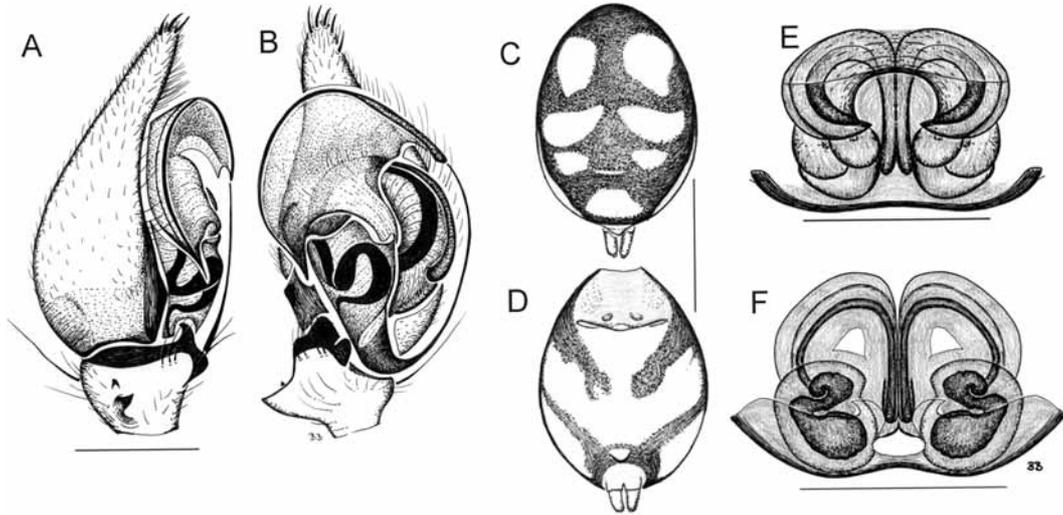


FIG. 9. *Tropasteron daviesae*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

DIAGNOSIS. *T. cooki* is similar to *T. yeatesi* but differs from all other species by abdomen without frontal spots and with 4 pairs of white patches on top. Differs from *T. yeatesi* in only 2 spots in front of the spinnerets. Male palp with short spine (LTA), about as wide as long.

DESCRIPTION. *Male* (holotype). Total length 4.08. Ceph 2.00 long, 1.60 wide, 1.04 high; cl/cw 1.25; sternum 1.04 long, 0.88 wide; sl/sw 1.18; abdomen 2.08 long, 1.36 wide.

Colour: carapace orange brown; sternum orange brown; chelicerae medium brown; maxillae and labium medium brown, distally white. Abdomen (Fig. 8C,D) sepia brown; dorsally with 4 pairs of white patches on top and 2 in front of the spinnerets; lateral with chevrons; ventrally pale brown; mottled with brown. Legs pale brown to medium brown; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white, distal part dark brown.

Eyes: AME smallest, PLE largest; eye group width 0.58 of headwidth; AME 0.09; ALE 0.14; PME 0.13; PLE 0.16; AME-AME 0.04; AME-ALE 0.03; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.02; eyes group AME-PME 0.34; AME-AME 0.20; PME-PME 0.30. Clypeus 0.44 high; chilum divided.

Male palp (Fig. 8A,B): tegulum (LTA) a short spine, about as wide as long; sperm duct inverted U-shaped; EP at least twice as long as wide at base (Fig. 5C).

Female (paratype). Total length 6.12. Ceph 2.76 long, 1.96 wide, 1.36 high; cl/cw 1.40; sternum 1.00 long, 1.00 wide; sl/sw 1.00; abdomen 3.36 long, 2.56 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.54 of headwidth; AME 0.09; ALE 0.14; PME 0.14; PLE 0.14; AME-AME 0.02; AME-ALE 0.06; PME-PME 0.06; PME-PLE 0.16; ALE-PLE 0.06; eyes group AME-PME 0.40; AME-AME 0.20; PME-PME 0.34. Clypeus 0.68 high.

Epigyne: wider than long, anteriorly wider, with semicircular CO (Fig. 8E,F).

Variation: Females are bigger than males and have more chevrons.

DISTRIBUTION. Queensland, Wet Tropics blocks 7 and 11 (Fig. 31B). Known only from high elevations on the Lamb Range and the Bell Peak region of the Malbon Thompson Range. Rainforest.

***Tropasteron daviesae* sp. nov.**
(Figs 5D, 9, 30B)

ETYMOLOGY. For Dr Valerie Davies, the main founder of the spider collection of the Queensland Museum.

MATERIAL. HOLOTYPE: ♂, Upper Boulder Ck, Walter Hill Ra, NE Qld, 850-1000m, rainforest, 17°05'S, 145°54'E, 17-18 Nov 1984, VD, GM, JG, DC, GT, pitfall (QM S57092). **PARATYPES:** NE Qld: 1 ♂, same data as holotype but, 900m, 27 Oct 1983, GM, DY, GT, sieved litter (QM S3806); 1 ♂, as previous, 200-650m, 24-27 Oct

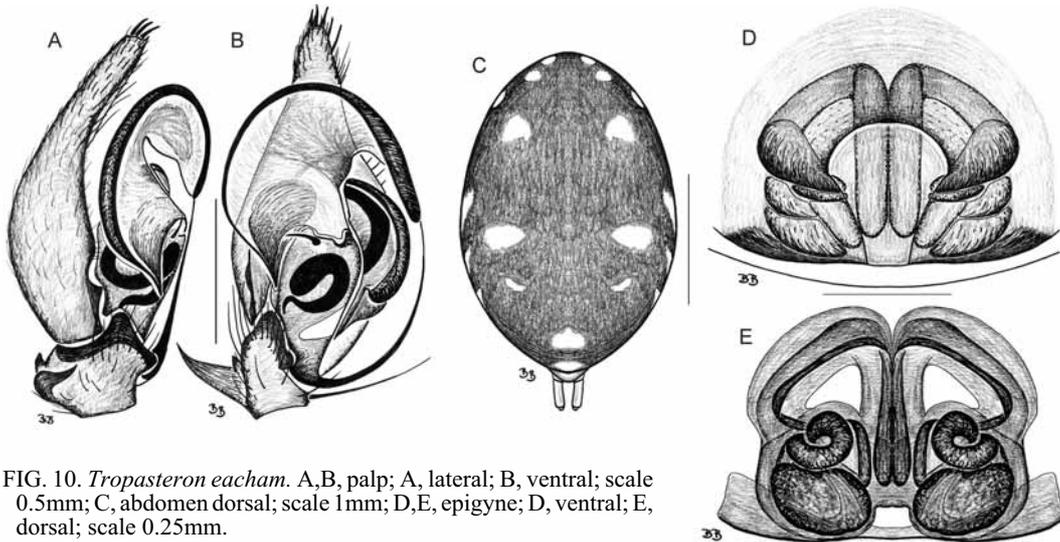


FIG. 10. *Tropasteron eacham*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C, abdomen dorsal; scale 1mm; D,E, epigyne; D, ventral; E, dorsal; scale 0.25mm.

1983 (QM S3787); 2♂, as previous, 850-1000m, 17-18 Nov 1984, VD, GM, DC, GT, pitfall (QM S3785); 1♂, as previous (QM S4266); 1♂, Maalan SF (NQ 12), 17°35'S, 145°36'E, 26 Nov 1992-15 Apr 1993, R., J. & S. Raven, P. & E. Lawless, pitfall (QM S24368); 1♂, U Boulder Ck, 10km N Tully, 800m, 17°05'E, 145°54'S, 4-7 Dec 1989, GM, GT, HJ, pitfall (QM S41523); 1♀, 12♂, Maalan SF (NQ 12), 17°35'30"S, 145°36'45"E, 25 Jul 1992-26 Nov 1992, RR, P. & E. Lawless, MS, pitfall (QM S24486); 1♂, as previous (AM KS 83918)..

DIAGNOSIS. One of the smallest species, it differs from all others by Ep very short (Fig. 5D), no palpal spine (LTA) and abdomen with 3 pairs of big pale dorsal spots but without frontal spots.

DESCRIPTION. *Male* (holotype). Total length 3.64. Ceph 1.88 long, 1.32 wide, 0.88 high; cl/cw 1.42; sternum 0.88 long, 0.80 wide; sl/sw 1.10; abdomen 1.76 long, 1.28 wide.

Colour: carapace yellow orange; sternum, chelicerae, maxillae and labium yellow, distally white. Abdomen sepia brown (Fig. 9C,D); frontally without or with 1 pair of weak small white dots; dorsally with 3 pairs of big white patches on anterior part and 2 to 3 in front of spinnerets; lateral with chevrons; ventrally white; mottled with brown. Legs pale to white.

Eyes: AME smallest; eye group width 0.59 of headwidth; AME 0.09; ALE 0.11; PME 0.11; PLE 0.11; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.30; AME-AME 0.22; PME-PME 0.26. Clypeus 0.32 high.

Male palp (Fig. 9A,B): tegulum (LTA) absent; sperm duct inverted U-shaped; EP about as long as wide at base (Fig. 5D).

Female (paratype). Total length 3.52. Ceph 1.92 long, 1.20 wide, 0.92 high; cl/cw 1.60; sternum 0.84 long, 0.84 wide; sl/sw 1.00; abdomen 1.60 long, 1.08 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.5 of headwidth; AME 0.06; ALE 0.10; PME 0.08; PLE 0.10; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.06; PME-PLE 0.10; ALE-PLE 0.03; eyes group AME-PME 0.28; AME-AME 0.16; PME-PME 0.22. Clypeus 0.40 high.

Epigyne: wider than long, anteriorly wider, with semicircular CO (Fig. 9E, F).

Variation: in some specimens, the abdominal dots can be expanded.

DISTRIBUTION. Queensland, Wet Tropics block 12 (Fig. 30B). Occurs only at high elevations along the Walter Hill Range. Rainforest.

***Tropasteron eacham* sp. nov.**
(Figs 5E, 10A-E, 30A)

ETYMOLOGY. The type locality is near Lake Eacham; a noun in apposition.

MATERIAL. HOLOTYPE: ♂, Mt Hypipamee NP, The Crater, NE Qld, 17°25'29"S, 145°29'00"E, 2-May-98, G. Milledge, pitfalls open, 25 Apr - 2 May 1998 (AM KS 77352). **PARATYPES:** NE Qld: 1♀, 12♂, same data as holotype (AM KS 55635); 3♂, Lake Eacham, 750m, 17°17'S, 145°38'E, 9 Dec 1989-14 Jan 1990, GM, GT, HJ,

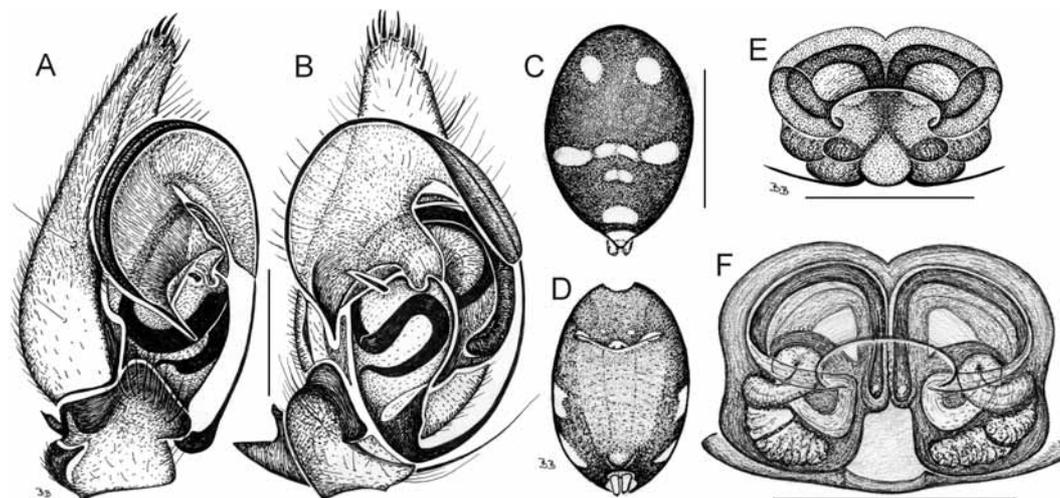


FIG. 11. *Tropasteron fox*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

pitfall (QM S25961); 2♂, Mt Father Clancy, 9km S Millaa Millaa, 800m, 17°35'S, 145°38'E, 6-14 Dec 1988, GM, GT, flight intercept trap (QM S23056); 1♂, Wongabel State Forest (NQ 26), 17°19'S, 145°29'E, 5 Nov 1991-23 Jul 1992, RR, PL, MS, pitfall (QM S24208); 1f, 2♂, as previous, 26 Nov 1992-15 Apr 1993, R., J. & S. Raven, P. & E. Lawless, pitfall (QM S19748); 4♂, Maalan SF, 1000m, rainforest, 17°35'S, 145°35'E, 20-24 Apr 1978, VD, RR (QM S3851).

DIAGNOSIS. Similar to *T. julatten* and *T. luteipes* with 2 frontal and 1 small frontal lateral pair of small white dots but *T. eacham* as the largest species, differs from *T. julatten* by long palpal spine (LTA) and from *T. luteipes* by legs with indistinct colour pattern.

DESCRIPTION. *Male* (holotype). Total length 4.76. Ceph 2.44 long, 1.72 wide, 1.08 high; cl/cw 1.42; sternum 1.08 long, 0.96 wide; sl/sw 1.12; abdomen 2.32 long, 1.60 wide.

Colour: carapace orange brown. Sternum orange brown; chelicerae medium brown; maxillae and labium medium brown, distally white. Abdomen (Fig. 10C) sepia brown; frontally with 2 pairs of small white dots, and 1 small lateral pair; dorsally with 3 pairs of white patches on top and 1-2 in front of the spinnerets; lateral with 3-4 white patches, first circular, others elongate; ventrally dark brown; with 1 pair of white patches near tracheal spiracle. Legs medium brown; coxae I-IV white or pale; trochanter I-IV brown; femur I-IV proximal part white, distal part pale brown, or I-IV dark brown; tibia I distally white.

Eyes: AME smallest; eye group width 0.60 of headwidth; AME 0.12; ALE 0.12; PME 0.16; PLE 0.16; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.42; AME-AME 0.28; PME-PME 0.36. Clypeus 0.56 high.

Male palp (Fig. 10A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct inverted U-shaped.

Female (paratype). Total length 5.76. Ceph 2.72 long, 1.84 wide, 1.28 high; cl/cw 1.48; sternum 1.12 long, 1.04 wide; sl/sw 1.08; abdomen 3.04 long, 2.40 wide.

Colour: as in males.

Eyes: AME smallest; eye group width 0.57 of headwidth; AME 0.12; ALE 0.14; PME 0.16; PLE 0.16; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.16; ALE-PLE 0.06; eyes group AME-PME 0.42; AME-AME 0.28; PME-PME 0.36. Clypeus 0.68 high.

Epigyne: wider than long, CO inverted flask-shaped (Fig. 10D,E).

DISTRIBUTION. Queensland, Wet Tropics blocks 8, 9 and 12. (Fig. 30A). Occurs on the Atherton Tableland and on mountains immediately to the west (Hugh Nelson Range) and south (Mt Father Clancy). Rainforest.

***Tropasteron fox* sp. nov.**
(Figs 5F, 11, 29B)

ETYMOLOGY. For the type locality, a noun in apposition.

MATERIAL. HOLOTYPE: ♂, Seaview Ra, NE Qld, Mt Fox Rd, 600m, rainforest, 18°50'S, 145°50'E, 15 Dec 1986-2 Jan 1987, GM, GT, SH, pitfall (QM S56866). **PARATYPES:** NE Qld: 5♀, 17♂, as for holotype (QM S18178); 1♀, 2♂, as previous, 15-Dec-86, GM, GT, (QM S25690); 1♂, Cardwell Gap (NQ 5), 18°31'53"S, 146°11'E, 26 Nov 1992-16 Apr 1993, RR, PL, pitfall (QM S24565); 1♀, 2♂, Wallaman Falls Rd, sieved litter, 500m, rainforest, 18°35'S, 145°51'E, 1 Jan 87, SH, pitfall (QM S25704); 2♀♂, 9♂, Wallaman Falls, via Ingham, sieved litter, 500m, rainforest, 18°36'S, 145°48'E, 14 Dec 1986-2 Jan 1987, GM, GT, SH, pitfall (QM S18176); 1♀, 1♂, as previous (AM KS83919); 1♂, as previous, 1 Oct 1980, GM, pitfall (QM S3761); 12♂, Wallaman Falls Rd, junction, 650m, rainforest, 18°39'S, 145°52'E, 5-12 Feb 1996, GM, pitfall (QM S41434); 3♂, as previous (QM S38223); 1♂, Cardwell Gap, open forest, 18°32'S, 146°11'E, 4-12 Feb 1998, GM, DC, pitfall (QM S41923).

DIAGNOSIS. One of the smallest species, it differs from all others by abdomen with 2 pairs of white dots on the anterior part, second pair forming a horizontal stripe, 3 spots in front of the spinnerets and short EP.

DESCRIPTION. Male (holotype). Total length 3.44. Ceph 1.76 long, 1.24 wide, 0.84 high; cl/cw 1.42; sternum 0.84 long, 0.80 wide; sl/sw 1.05; abdomen 1.68 long, 1.24 wide.

Colour: carapace orange brown. Sternum orange brown; chelicerae medium brown; maxillae and labium pale brown, distally white. Abdomen (Fig. 11C, D) sepia brown; dorsally with 2 pairs of white patches on the anterior part, second pair forming a horizontal stripe, and 3 spots in front of the spinnerets; lateral with 2 elongate white patches, first one broad; ventrally pale brown. Legs pale to white; coxae I-IV white or pale; trochanter I-IV brown; femur I-IV proximal part white, distal part dark brown; tibia I distally white.

Eyes: AME smallest, PLE largest; eye group width 0.57 of headwidth; AME 0.08; ALE 0.10; PME 0.10; PLE 0.12; AME-AME 0.10; AME-ALE 0.03; PME-PME 0.04; PME-PLE 0.06; ALE-PLE 0.02; eyes group AME-PME 0.26; AME-AME 0.18; PME-PME 0.24. Clypeus 0.38 high.

Male palp (Fig. 11A,B): tegulum (LTA) a short spine, about as wide as long; sperm duct inverted U-shaped; EP about as long as wide at base (Fig. 5F).

Female (paratype). Total length 3.76. Ceph 1.88 long, 1.12 wide, 0.64 high; cl/cw 1.68; sternum 0.80 long, 0.76 wide; sl/sw 1.05; abdomen 1.88 long, 1.36 wide.

Colour: as in male.

Eyes: AME smallest, or PLE largest; eye group width 0.56 of headwidth; AME 0.07; ALE 0.10; PME 0.10; PLE 0.12; AME-AME 0.02; AME-ALE 0.03; PME-PME 0.04; PME-PLE 0.08; ALE-PLE 0.04; eyes group AME-PME 0.30; AME-AME 0.16; PME-PME 0.24.

Clypeus 0.40 high.

Epigyne: wider than long, with very flat, broadly oval CO (Fig. 11E,F).

Variation: the lateral white stripes can be connected with the pale ventral side of the abdomen.

DISTRIBUTION. Queensland, Wet Tropics blocks 13 and 14 (Fig. 29B). Occurs on the Seaview Range and the southern end of the Cardwell Range, both adjacent to the valley of the Herbert River. Rainforest and open forest.

***Tropasteron halifax* sp. nov.**
(Figs 5G, 12, 29A)

ETYMOLOGY. For the type locality, a noun in apposition.

MATERIAL. HOLOTYPE: ♂, Mt Halifax, NE Qld, summit, 1050m, 19°07'S, 146°23'E, 1 Jan-20 Mar 1991, A. Graham, pit (QM S56919). **PARATYPES:** NE Qld: 1♀, 4♂, as for holotype (QM S25689); 1♂, 7km WNW of Paluma (Site 32), 19°05'S, 146°06'E, 16 Dec 1988-13 Jan 1989, R. Storey, G. Dickinson, flight intercept trap (QM S25749); 1♀, 1♂, Paluma, Mt Spec, rainforest, 18°57'S, 146°11'E, 20 Jan-10 Feb 1983, NPWS per K. Smith, pitfall (QM S4448); 5♂, as previous, 20 Dec 1982-20 Jan 1983, K. McDonald (QM S4385); 2♂, Paluma Dam Rd, Site 2, 720m, rainforest, 19°14'S, 146°13'E, 17 Nov 1990-8, Dec 1990, GM, J. Seymour, flight intercept trap (QM S25958); 1♀, 3♂, Paluma Ra 75km NW Townsville, 18°47'S, 146°19'E, 18.1.1982, B. & M. Baehr (QM S56920); 6♂, 12km WSW Paluma (Site 33), Mareeba DPI, 19°05'S, 146°06'E, 16 Dec 1988-13 Jan 1989, R. Storey, G. Dickinson, flight intercept trap (QM S25747); 12♂, Wallaman Falls, via Ingham, 500m, rainforest, 18°36'S, 145°48'E, 14 Dec 1986-2 Jan 1987, GM, GT, SH, pitfall (QM S12262); 1♂, Paluma Dam Rd, Site 5, 850m, 18°57'S, 146°09'E, 17 Nov-8 Dec 1990, GM, J. Seymour, pitfall (QM S46855); 11♂, Paluma Dam Rd, Site 5, 850m, 19°01'S, 146°13'E, 8 Dec 1990-5 Feb 1991, GM, J. Seymour, pitfall (QM S46850); 1♀, 12♂, Paluma Dam Rd, Site 3, 800m, 19°01'S, 146°13'E, 08 Dec 1990-05 Feb 1991, GM, Seymour, pitfall (QM S31890); 1♂, Paluma Dam Rd, Site 5, 850m, 19°01'S, 146°13'E, 08 Dec 1990-5 Feb 1991, GM, J. Seymour, flight intercept trap (QM S41921); 3♂, Paluma Dam Rd, Site 2, 720m, rainforest, 19°14'S, 146°13'E, 17 Nov-8 Dec 1990, GM, J. Seymour, pitfall (QM S46891); 15♂, Mt Halifax, 19°07'S, 146°23'E, 1st wk Dec 90-8/1/91, A. Graham, pitfall (QM S33735).

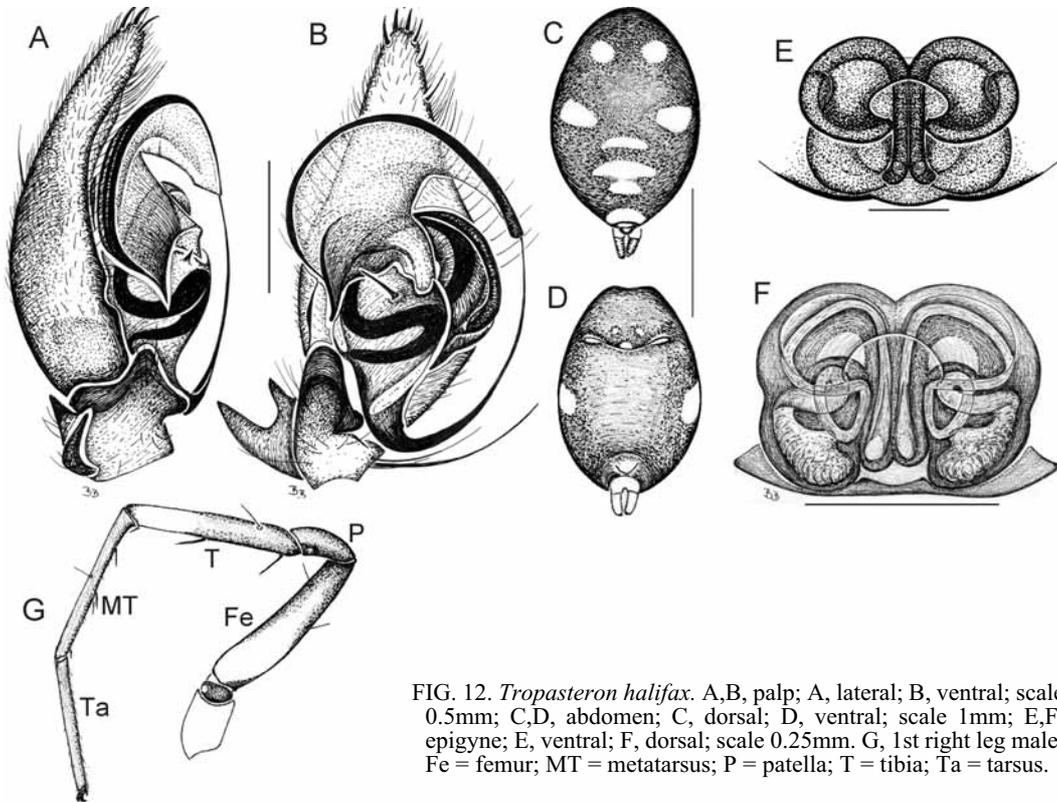


FIG. 12. *Tropasteron halifax*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm. G, 1st right leg male. Fe = femur; MT = metatarsus; P = patella; T = tibia; Ta = tarsus.

DIAGNOSIS. *T. halifax*, a small species with very long palpal spine (LTA), differs from all other species by abdomen without frontal spots and with 2 pairs of big white dots on the anterior part and 3-4 in front of the spinnerets.

DESCRIPTION. *Male* (holotype). Total length 3.72. Ceph 1.92 long, 1.28 wide, 0.80 high; cl/cw 1.50; sternum 0.84 long, 0.80 wide; sl/sw 1.05; abdomen 1.80 long, 1.20 wide.

Colour: carapace orange brown; sternum orange brown; chelicerae medium brown; maxillae and labium pale brown, distally white. Abdomen (Fig. 12C,D) sepia brown; dorsally with 2 pairs of big white patches on the anterior part and 3-4 in front of the spinnerets; lateral with 1-2 white stripes, first one broad; ventrally pale brown. Legs yellow, with darker brown lateral stripes; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white, distal part dark brown; tibia I distally white.

Eyes: AME smallest, PLE largest; eye group width 0.62 of headwidth; AME 0.08; ALE 0.10; PME 0.12; PLE 0.16; AME-AME 0.04; AME-ALE 0.03; PME-PME 0.04; PME-PLE 0.06;

ALE-PLE 0.02; eyes group AME-PME 0.32; AME-AME 0.20; PME-PME 0.28. Clypeus 0.40 high.

Male palp (Fig. 12A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct inverted U-shaped; EP at least twice as long as wide at base (Fig. 5G).

Female (paratype). Total length 4.00. Ceph 2.16 long, 1.28 wide, 0.92 high; cl/cw 1.68; sternum 0.84 long, 0.84 wide; sl/sw 1.00; abdomen 1.84 long, 1.32 wide.

Colour: as in male.

Eyes: AME smallest, or PLE largest; eye group width 0.66 of headwidth; AME 0.08; ALE 0.10; PME 0.12; PLE 0.14; AME-AME 0.02; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.08; ALE-PLE 0.03; eyes group AME-PME 0.03; AME-AME 0.18; PME-PME 0.28. Clypeus 0.48 high.

Epigyne: wider than long, with broadly oval CO (Fig. 12E,F).

DISTRIBUTION. Queensland, Wet Tropics blocks 14 and 16 (Fig. 29A). Occurs along the

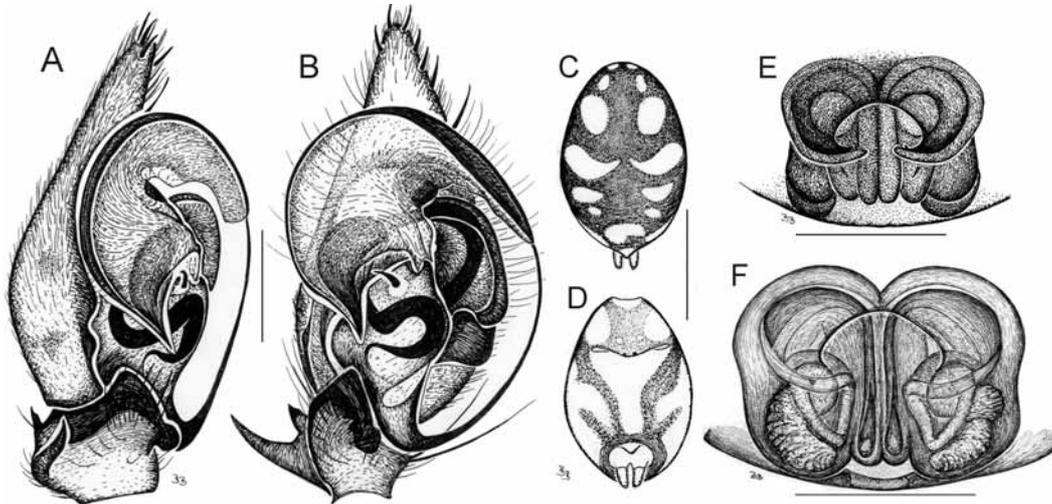


FIG. 13. *Tropasteron heatherae*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

summit of the subcoastal ranges from Wallaman Falls south to Paluma. Rainforest.

***Tropasteron heatherae* sp. nov.**
(Figs 5H, 13, 31B)

ETYMOLOGY. For Heather Janetzki of the Queensland Museum, a collector of the types.

MATERIAL. HOLOTYPE: ♂, Stewart Ck, NE Qld, 4km NNE Mt Spurgeon, Camp 1, 1250-1300m, 16°24'S, 145°13'E, 15-20 Oct 1991, GM, DC, HJ, L. Roberts, pitfall (QM S57008). PARATYPES: NE Qld: 7♂, as for holotype (QM S25799); 2♂, Mt Spurgeon, 7km N of (camp 2), 1250m, 15°28'18"S, 145°13'18"E, 17-19 Oct 1991, GM, DC, L. Roberts, pitfall (QM S57009); 1♂, Mossman Bluff Track, 5-10km W Mossman, Site 9, 1260m, rainforest, 16°39'S, 145°34'E, 17-31 Dec 1988, GM, GT, ANZSES Expedition, flight intercept trap (QM S18170); 1♀, 1♂, as previous, 1-19 Jan 1989 (QM S18164); 1♂, as previous, Site 7, 1000m, 16°28'S, 145°22'E, 20 Dec 1989-15 Jan 1990, pitfall (QM S25763); 1♂, as previous, 1300m, 21 Dec 1989, GM, GT (QM S25800); 1♂, Carbine Tableland, plane crash site, 1330m, 16°24'27"S, 145°16'20"E, 27-28 Nov 1990, GM, GT, DC, R. Sheridan, HJ (QM S21478); 1♂, as previous, pitfall (QM S21479); 1♂, as previous (QM S26109); 1♂, Carbine Tableland, Mossman Bluff camp, 1000m, 16°27'52"S, 145°17'12"E, 30 Nov 1990, GM, HJ (QM S25687); 1♂, Carbine Tblnd, above fern patch, Devils Thumb, 16°23'S, 145°17'E, 26-27. Nov 1990, GM, HJ, pitfall (QM S25808); 3♂, Cape Tribulation, 4.5km W (Site 9), 760m, rainforest, 16°05'S, 145°26'E, 23 Sep-7 Oct 1982, GM, DY, GT, pitfall (QM S4290); 1♂, Mt Demi, 7km SW Mossman, 1100m, rainforest, 16°03'S, 145°19'E, 29 Oct 1983, DY, GT (QM S3804); 1♂, Devils Thumb, 10km NW Mossman, 1150m,

rainforest, 16°23'S, 145°17'E, 9 Oct 1982, GM, DY, GT (QM S4255); 4♂, Karnak-Devils Thumb, 8-12km NW Mossman, Site 10, 1080m, 16°23'S, 145°17'E, 26 Dec 1989-15 Jan 1990, ANZSES expedition, pitfall (QM S18175); 1♂, Mt Pieter Botte, 950m, 16°04'S, 145°24'E, 21 Nov- 8 Dec 1993, GM, HJ, Roberts, pitfall (QM S47060); 3♂, Devils Thumb, 12km NW Mossman, 1000m, rainforest, 16°23'S, 145°17'E, 26-27 Dec 1989, ANZSES expedition, pitfall (QM S18388); 3♂, Karnak-Devils Thumb, 8-12km NW Mossman, Site 5, 440m, 16°23'S, 145°17'E, 26 Dec 1989-15 Jan 1990, ANZSES expedition (QM S25130); 1♂, as previous (QM S25124); 2♂, as previous, Site 6, 900m, 16°23'S, 145°17'E, 26 Dec 1989-15 Jan 1990, ANZSES expedition (QM S29967); 1♂, Mossman Bluff Track, 5-10km W Mossman, Site 7, 1000m, rainforest, 16°28'S, 145°22'E, 20 Dec 1989-15 Jan 1990, GM, GT, ANZSES Expedition (QM S41543); 4♂, as previous, 16-30 Dec 1988 (QM S21701); 3♂, as previous, Site 9, 1260m, rainforest, 20 Dec 1989-15 Jan 1990 (QM S33951); 1♂, as previous, Site 9, 1260m, 16°25'S, 145°2'E, 17-31 Dec 1988 (QM S40865); 2♂, as previous, Site 10, 10km W Mossman, 1300m, rainforest, 16°25'S, 145°2'E, 20 Dec 1989-15 Jan 1990 (QM S34065); 2♂, Windsor Tableland, site 4, 1270m, 16.14'33"S, 145.01'03"E, 27 Dec 1988-9 Jan 1989, E. Schmidt, ANZSES Expedition, FIT (QM S4939).

DIAGNOSIS. Differs from all other species by abdomen with 1 or 2 pairs of white spots frontally and with 4 pairs on top and 2 in front of the spinnerets, second transverse can form 1 line.

DESCRIPTION. *Male* (holotype). Total length 3.84. Ceph 2.04 long, 1.48 wide, 0.88 high; cl/cw

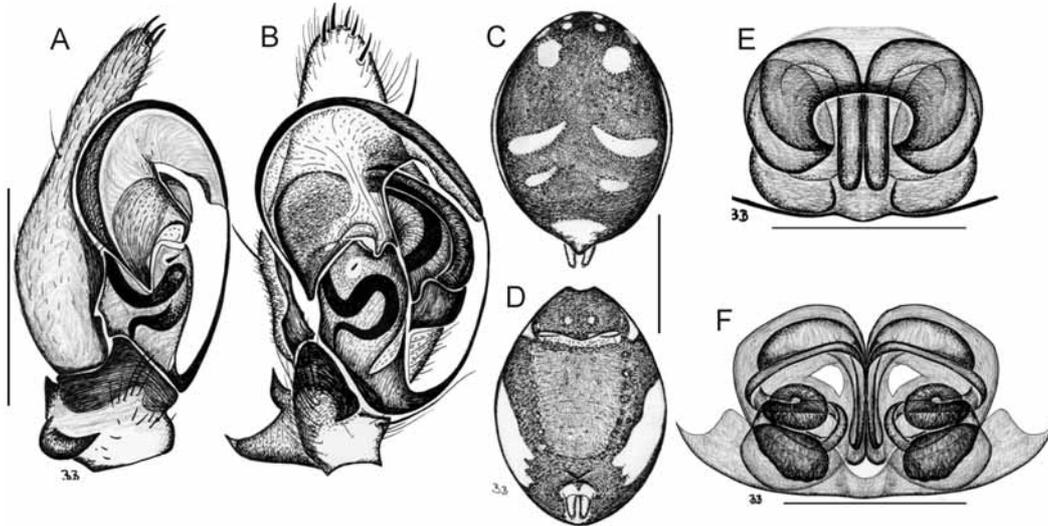


FIG. 14. *Tropasteron julatten*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

1.38; sternum 0.92 long, 0.88 wide; sl/sw 1.04; abdomen 1.80 long, 1.20 wide.

Colour: carapace orange brown; sternum orange brown; chelicerae medium brown; maxillae and labium medium brown, distally white. Abdomen (Fig. 13C,D) sepia brown; frontally with 1-2 pairs of small white dots; dorsally with 4 pairs of white patches on top and 2 in front of the spinnerets, second transverse can form 1 line; lateral with chevrons; ventrally pale brown; mottled with brown. Legs pale brown, medium brown; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white, distal part dark brown; tibia I distally white.

Eyes: AME smallest; eye group width 0.57 of headwidth; AME 0.10; ALE 0.14; PME 0.14; PLE 0.14; AME-AME 0.02; AME-ALE 0.03; PME-PME 0.02; PME-PLE 0.08; ALE-PLE 0.03; eyes group AME-PME 0.34; AME-AME 0.22; PME-PME 0.30. Clypeus 0.40 high; chilum divided.

Male palp (Fig. 13A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct semicircular; EP at least twice as long as wide at base (Fig. 5H).

Female (paratype). Total length 5.56. Ceph 2.76 long, 1.80 wide, 1.36 high; cl/cw 1.53; sternum 1.20 long, 1.08 wide; sl/sw 1.11; abdomen 2.80 long, 1.96 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.52 of headwidth; AME 0.10; ALE 0.14; PME 0.14; PLE 0.14; AME-AME 0.04; AME-ALE 0.06; PME-PME 0.06; PME-PLE 0.16; ALE-PLE 0.06; eyes group AME-PME 0.46; AME-AME 0.24; PME-PME 0.36. Clypeus 0.72 high.

Epigyne: wider than long, with broadly oval CO (Fig. 13E,F).

Variation: females bigger than males; colour pattern of the females are sometimes with more chevrons.

DISTRIBUTION. Queensland, Wet Tropics blocks 2 and 4 (Fig. 31B). Known from many locations on the western and eastern edges of the Carbine Tableland and from the mountains west of Cape Tribulation. Rainforest.

***Tropasteron julatten* sp. nov.**
(Figs 5I, 14, 30B)

ETYMOLOGY. For the type locality, a noun in apposition.

MATERIAL. HOLOTYPE: ♂, Black Mt, NE Qld, 17km ESE Julatten, 800-1000m, rainforest, 16°39'S, 145°29'E, 29-30 Apr 1982, GM, M. Yeates, DC, (QM S4287). **PARATYPES:** NE Qld: 1♂, Baldy Mt Rd, SW Atherton, 1150m, rainforest, 17°16'S, 145°25'E, 9 Dec 1988, GM, GT, sieved litter (QM S25813); 1♂, Lake Eacham, 750m, 17°17'S, 145°38'E, 9 Dec 1989-14 Jan 1990, GM, GT, HJ, pitfall (QM S25960); 2♀, 1♂, Bones Knob, 3km W, 1100m, 17°13'S, 145°25'E, 10 Dec 1995, GM, GT, DC (QM S38213); 17m, Yungaburra, 17°16'S, 145°35'E, 19 Sep 76, R.Mascord (AM KS55636).

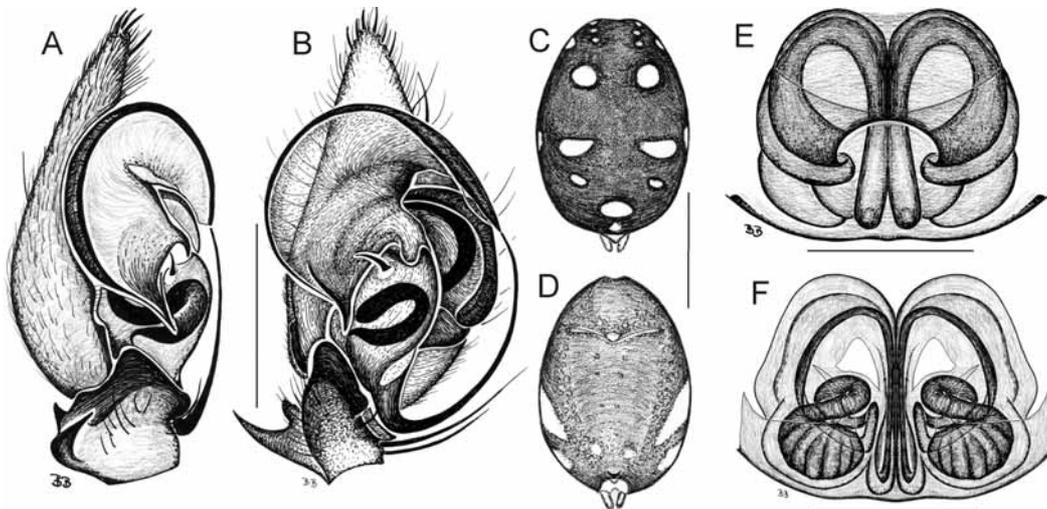


FIG. 15. *Tropasteron luteipes*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

DIAGNOSIS. Similar to *T. eacham* and *T. luteipes* with 2 frontal and 1 small frontal lateral pair of small white dots, but differs from *T. eacham* and *T. luteipes* by short palpal spine (LTA) and pale legs.

DESCRIPTION. Male (holotype). Total length 3.76. Ceph 1.76 long, 1.44 wide, 0.72 high; cl/cw 1.22; sternum 0.88 long, 0.84 wide; sl/sw 1.04; abdomen 2.00 long, 1.40 wide.

Colour: carapace yellow; sternum pale to orange brown; chelicerae pale brown, distally dark brown; maxillae and labium pale brown, distally white. Abdomen (Fig. 14C,D) sepia brown; frontally with 2-3 pairs of white dots, and 1 small lateral pair; dorsally with 3 pairs of white patches on top and 1-2 in front of the spinnerets; lateral with 1 elongate horizontal white stripe reaching front; ventrally dark brown. Legs pale to white, with darker brown lateral stripes; coxae I-IV white; trochanter I-IV pale; femur I-IV pale with slightly darker distally.

Eyes: AME smallest; eye group width 0.56 of headwidth; AME 0.07; ALE 0.10; PME 0.10; PLE 0.10; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.06; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.30; AME-AME 0.18; PME-PME 0.26. Clypeus 0.40 high.

Male palp (Fig. 14A,B): tegulum (LTA) a short spine, about as wide as long; EP at least twice as long as wide at base (Fig. 5I).

Female (paratype). Total length 3.76. Ceph 1.76 long, 1.44 wide, 0.72 high; cl/cw 1.22; sternum 0.88 long, 0.84 wide; sl/sw 1.04; abdomen 2.00 long, 1.40 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.56 of headwidth; AME 0.07; ALE 0.10; PME 0.10; PLE 0.10; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.06; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.30; AME-AME 0.18; PME-PME 0.26. Clypeus 0.40 high.

Epigyne: wider than long, anteriorly wider, with broadly oval CO (Fig. 14E,F).

Variation: white spots in front may come together to a stripe.

DISTRIBUTION. Queensland, Wet Tropics blocks 6, 8 and 9 (Fig. 30B). Known from several areas at the northern end of the Atherton Tableland and from a little further north at Black Mountain. Rainforest.

***Tropasteron luteipes* sp. nov.**
(Figs 5J, 15, 31A)

ETYMOLOGY. Latin *luteipes*, bright yellow legs.

MATERIAL. HOLOTYPE: ♂, Mt Spurgeon, NE Qld, 2.5km S, 1100m, open forest, 16°28'S, 145°12'E, 13-21 Oct 1991, GM, HJ, pitfall (QM S57094). **PARATYPES:** NE Qld: 1♀, 3♂, same data as holotype (QM S25793); 1♀, 3♂, as previous (trap 2), 1080m, 16°27'S, 145°11'E, 19 Nov 1997-8 Feb 1998, GM, DC, pitfall (QM S41933); 1♂, as previous (trap 3), 1100m (QM S41931); 2♀, 1♂,

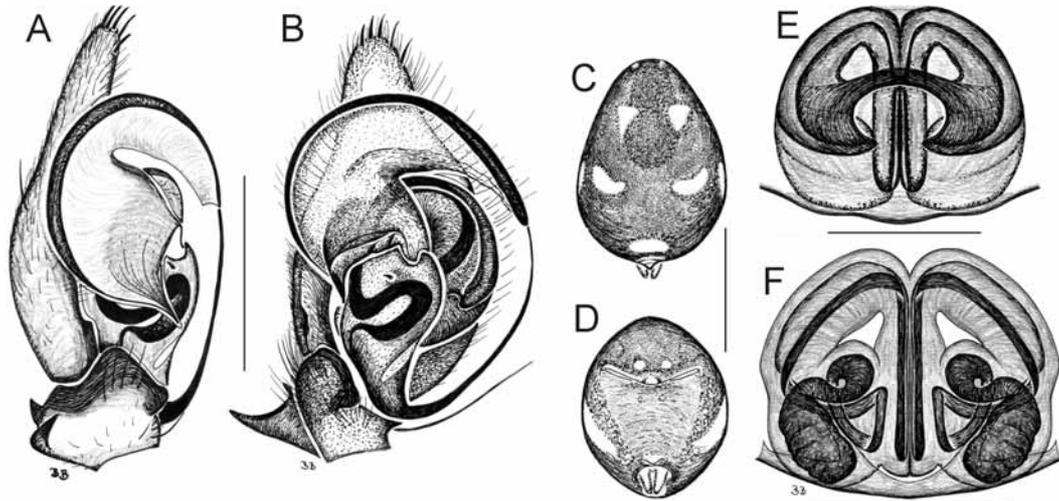


FIG. 16. *Tropasteron malbon*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

Windsor Tbl, NW, 1180m, open forest, 16°13'S, 144°59'E, 24 Nov 1997-9 Feb 1998, GM, DC, pitfall (QM S41914).

DIAGNOSIS. Similar to *T. eacham* and *T. julatten* with 2 frontal and 1 small frontal lateral pair of small white dots but differs from both by clearly annulated legs and from *T. julatten* by long palpal spine (LTA).

DESCRIPTION. Male (holotype). Total length 4.48. Ceph 2.20 long, 1.64 wide, 1.16 high; cl/cw 1.34; sternum 1.0 long, 0.92 wide; sl/sw 1.08; abdomen 2.28 long, 1.60 wide.

Colour: carapace sepia brown; sternum sepia brown; chelicerae medium brown; maxillae and labium medium brown, distally white. Abdomen (Fig. 15C,D) sepia brown; frontally with 3 pairs of small white dots, and 1 small lateral pair; dorsally with 3 pairs of white patches on top and 1-2 in front of the spinnerets; lateral with 3 white patches, first small circular, others long; ventrally dark brown. Legs yellow; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white, distal part dark brown.

Eyes: AME smallest; eye group width 0.55 of headwidth; AME 0.09; ALE 0.14; PME 0.14; PLE 0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.34; AME-AME 0.22; PME-PME 0.32. Clypeus 0.52 high.

Male palp (Fig. 15A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct

inverted U-shaped; EP at least twice as long as wide at base (Fig. 5J).

Female (paratype). Total length 4.36. Ceph 2.28 long, 1.44 wide, 0.96 high; cl/cw 1.58; sternum 0.96 long, 0.92 wide; sl/sw 1.04; abdomen 2.08 long, 1.28 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.56 of headwidth; AME 0.07; ALE 0.13; PME 0.12; PLE 0.14; AME-AME 0.04; AME-ALE 0.05; PME-PME 0.06; PME-PLE 0.12; ALE-PLE 0.05; eyes group AME-PME 0.36; AME-AME 0.18; PME-PME 0.30. Clypeus 0.52 high.

Epigyne: about as wide as long, with broadly oval CO (Fig. 15E,F).

DISTRIBUTION. Queensland, Wet Tropics blocks 3 and 4 (Fig. 31A). Known only from high altitude eucalypt forests on Windsor Tableland and the adjacent western edge of the Carbine Tableland. Open forest.

***Tropasteron malbon* sp. nov.**
(Figs 5K, 16, 30A)

ETYMOLOGY. For the type locality, a noun in apposition.

MATERIAL. HOLOTYPE: ♂, North Bell Peak, via Gordonvale, NE Qld, 900m, rainforest, 17°05'S, 145°53'E, 16 Sept 1981, GM, DC (QM S57084). PARATYPES: NE Qld: 1 ♂, as for holotype (QM S3777); 1 ♀, 3 ♂, North-South Bell Pk. saddle, Malbon Thompson Ra, 17°07'S, 145°54'E, 20-21 Nov 1990, GM, GT, pitfall (QM S57086); 2 ♂, North Bell Peak, Malbon Thompson

Ra, 17°07'S, 145°53'E, 20-22 Nov 1990, GM, GT, pitfall (QM S57085); 4♂, as previous, 20 Nov 1990 (QM S25810); 1♂, Bellenden Ker Ra, 0.5km S Cable Tower 7, 500m, rainforest, 17°16'S, 145°51'E, 17-24 Oct 1981, Earthwatch Expedition & Qld Museum (QM S27616); 3♂, as previous, pitfall (QM S27611); 1♂, as previous, 1-7 Nov 1981 (QM S27612); 2♂, as previous (QM S27609).

DIAGNOSIS. With weak scutum but similar in colour pattern and body shape to *T. splendens*, differs in colour pattern by: abdomen frontally with 1 pair of small white spots and different shape of palp, with a very short membranous spine (LTA).

DESCRIPTION. *Male* (holotype). Total length 4. Ceph 2.20 long, 1.60 wide, 1 high; cl/cw 1.37; sternum 1.08 long, 0.88 wide; sl/sw 1.22; abdomen 1.80 long, 1.28 wide.

Colour: cephalic, sternum orange brown; chelicerae orange; maxillae and labium pale brown, distally white. Abdomen (Fig. 16C,D) sepia brown; frontally with 1 pair of small white dots; dorsally with scutum and 2 pairs of white patches on anterior part and with 2 in front of the spinnerets; lateral with 1 white stripe; ventrally pale brown. Legs pale brown; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white becoming continuously dark brown distally.

Eyes: AME smallest; eye group width 0.61 of headwidth; AME 0.10; ALE 0.12; PME 0.14; PLE 0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.02; PME-PLE 0.08; ALE-PLE 0.04; eyes group AME-PME 0.36; AME-AME 0.24; PME-PME 0.30. Clypeus 0.48 high.

Male palp (Fig. 16A,B): tegulum (LTA) a short spine, about as wide as long; sperm duct inverted U-shaped; EP at least twice as long as wide at base (Fig. 5K).

Female (paratype). Total length 5.08. Ceph 2.52 long, 1.68 wide, 1.16 high; cl/cw 1.50; sternum 1 long, 0.96 wide; sl/sw 1.04; abdomen 2.56 long, 1.84 wide.

Colour: as in male.

Eyes: AME smallest; AME 0.10; ALE 0.12; PME 0.14; PLE 0.14; AME-AME 0.02; AME-ALE 0.02; PME-PME 0.06; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.38; AME-AME 0.24; PME-PME 0.34. Clypeus 0.56 high.

Epigyne: about as wide as long, with semicircular CO (Fig. 16E,F).

Variation: additional to the lateral white stripe there may be a small white dot. Some males also have a dorsal weak abdominal scutum.

DISTRIBUTION. Queensland, Wet Tropics blocks 10 and 11 (Fig. 30A). Known from mid-altitude on the eastern side of the Bellenden Ker Range and from the highest part of the nearby Malbon Thompson Range. Rainforest.

***Tropasteron monteithi* sp. nov.**
(Figs 5L, 17, 31A)

ETYMOLOGY. For Dr Geoff Monteith of the Queensland Museum, collector of the holotype.

MATERIAL. HOLOTYPE: ♂, Mossman Bluff Track, NE Qld, 5-10km W Mossman. Site 4, 800-1100m, rainforest, 16°25'S, 145°2'E, 20 Dec 1989-15 Jan 1990, GM, GT, ANZSES Expedition, pitfall (QM S56838). PARATYPES: NE Qld: 5♂, as for holotype (QM S18161); 2♂, as previous (QM S18188); 4♂, as previous (Site 5), 760m, 16°28'S, 145°22'E, 16-30 Dec 1988, pitfall (QM S16646); 1♂, as previous, Site 6A, 810m (QM S18154); 2♂, as previous, 600m, 16°39'S, 145°34'E, 16-30 Dec 1988 (QM S18173); 2♂, as previous, 600m, 1-16 Jan 1989, flight intercept trap (QM S18182); 2♂, as previous, Site 5A, 650m, 20 Dec 1989-15 Jan 1990, pitfall (QM S18155); 1♂, as previous, Site 5, 660m, 1-16 Jan 1989, flight intercept trap (QM S18171); 2♂, as previous, 20 Dec 1989-15 Jan 1990, pitfall (QM S18156); 1♀, 4♂, as previous, Site 6, 660m, flight intercept trap (QM S18180); 1♂, Mt Lewis Rd, 22km from H'way (Site 3), 1000m, rainforest, 16°35'S, 145°17'E, 18 Dec 1989-13 Jan 1990, GM, GT ANZSES Expedition, pitfall (QM S18181); 1♂, as previous (QM S18160); 1♂, Mt Lewis Rd, 16km from H'way (Site 20), 960m, rainforest, 16°35'S, 145°17'E, 18 Dec 1989-13 Jan 1990, GM, GT ANZSES Expedition, pitfall (QM S18183); 1♂, Mt Demi, 7km SW Mossman, 1100m, 16°30'S, 145°19'E, 29 Oct 1983, DY, GT, Berlesate (QM S56839); 2♀, 29♂, as previous, 17 Dec 1995-25 Jan 1996, GM, GT, Ford, pitfall (QM S41359); 1♂, as previous (AM KS83921).

DIAGNOSIS. Differs from all other species by abdomen without white spots frontally and with 3 to 4 pairs of white patches on top and 2 to 3 in front of the spinnerets, ventrally with 1 pair of white stripes.

DESCRIPTION. *Male* (holotype). Total length 3.92. Ceph 2.00 long, 1.52 wide, 0.88 high; cl/cw 1.31; sternum 0.96 long, 0.92 wide; sl/sw 1.04; abdomen 1.92 long, 1.24 wide.

Colour: carapace, sternum orange brown; chelicerae medium brown; maxillae and labium medium brown, distally white. Abdomen (Fig. 17C,D) sepia brown; dorsally with 3 or 4 pairs of white patches on top and 2 or 3 in front of the spinnerets; lateral with 2-3 white stripes; ventrally pale brown; with 1 pair of white stripes and with 1 pair of white patches near; coxae I-IV

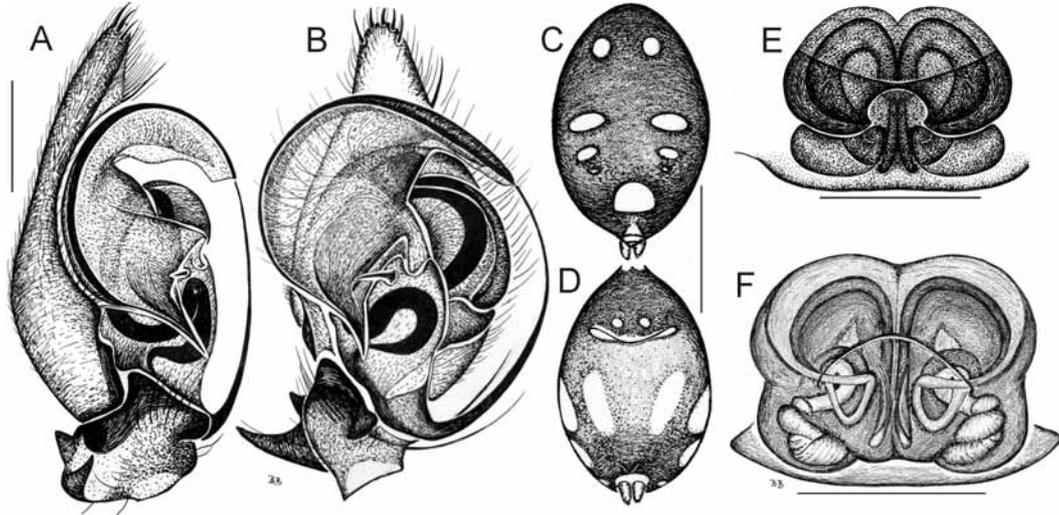


FIG. 17. *Tropasteron monteithi*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

white; trochanter I-IV brown; femur I-IV proximal part white, distal part dark brown.

Eyes: AME smallest; eye group width 0.50 of headwidth; AME 0.09; ALE 0.14; PME 0.14; PLE 0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PL 0.10; ALE-PL 0.04; eyes group AME-PME 0.36; AME-AME 0.22; PME-PME 0.32. Clypeus 0.52 high; chilum undivided.

Male palp (Fig. 17A,B): tegulum (LTA) a short spine, about as wide as long; EP at least twice as long as wide at base (Fig. 5L).

Female (paratype). Total length 5.04. Ceph 2.24 long, 1.52 wide, 0.84 high; cl/cw 1.47; sternum 0.92 long, 0.92 wide; sl/sw 1; abdomen 2.80 long, 2.08 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.53 of headwidth; AME 0.08; ALE 0.14; PME 0.14; PLE 0.14; AME-AME 0.04; AME-ALE 0.06; PME-PME 0.04; PME-PL 0.10; ALE-PL 0.04; eyes group AME-PME 0.36; AME-AME 0.20; PME-PME 0.32. Clypeus 0.60 high.

Epigyne: wider than long, with oval CO (Fig. 17E,F).

Variation: lateral white patches on abdomen sometimes fused with ventral white spots.

DISTRIBUTION. Queensland, Wet Tropics block 4 (Fig. 31A). Restricted to high elevations on the

central and eastern Carbine Tableland. Rainforest.

***Tropasteron palmerston* sp. nov.**
(Figs 6A, 18, 30B)

ETYMOLOGY. For the type locality, a noun in apposition.

MATERIAL. HOLOTYPE: ♂, Palmerston NP, NE Qld (NQ 11), 670m, rainforest, 17°35'S, 145°42'E, 30 Nov 1992-15 Apr 1993, RR, PL, pitfall (QM S57091). PARATYPES: NE Qld: 1 ♂, as for holotype (QM S57090); 1 ♂, as previous, 30 Oct 1991-24 Jul 1992, RR, PL, MS (QM S24717); 1 ♂, as previous, 30 Oct 1991-24 Jul 1992, RR, PL, MS (QM S24726); 1 ♂, as previous, 30 Nov 1992-15 Apr 1993, RR, PL (QM S22947); 10 ♂, as previous, 25 Jul-30 Nov 1992, RR, PL, MS, pitfall (QM S21932).

DIAGNOSIS. Similar to *T. monteithi* in abdominal colour pattern, but differs in abdomen with 3-4 pairs of white patches on anterior part and 3-4 in front of the spinnerets and male palp without spine (LTA).

DESCRIPTION. *Male* (holotype). Total length 3.16. Ceph 1.64 long, 1.20 wide, 0.72 high; cl/cw 1.36; sternum 0.76 long, 0.76 wide; sl/sw 1; abdomen 1.52 long, 1 wide.

Colour: carapace, sternum orange brown; chelicerae orange; maxillae and labium pale brown, distally white. Abdomen (Fig. 18C,D) sepia brown; dorsally with 3-4 pairs of white patches on anterior part and 3-4 in front of the spinnerets; lateral with 1 white stripe; ventrally dark brown; with 1 pair of long white patches.

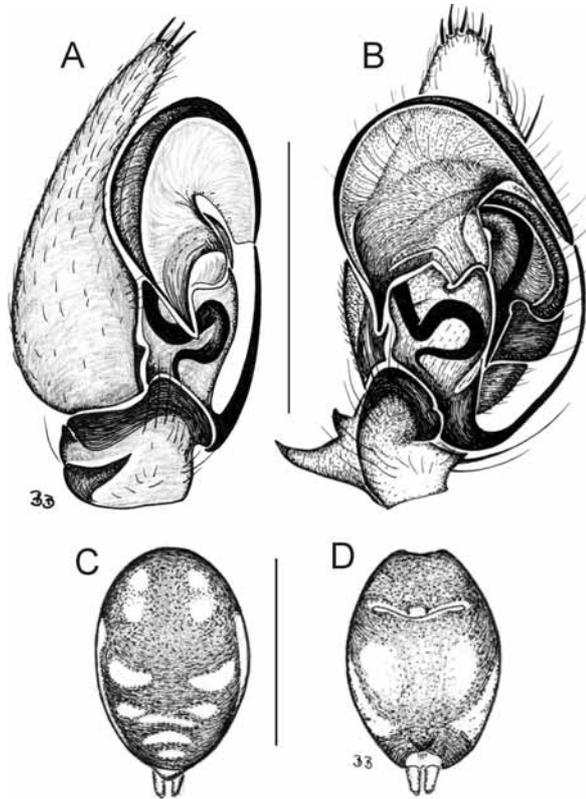


FIG. 18. *Tropasteron palmerston*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm.

Legs pale brown; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white becoming continuously dark brown distally; tibia I distally white.

Eyes: AME smallest, PLE largest; eye group width 0.62 of headwidth; AME 0.08; ALE 0.10; PME 0.10; PLE 0.12; AME-AME 0.02; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.08; ALE-PLE 0.04; eyes group AME-PME 0.28; AME-AME 0.18; PME-PME 0.24. Clypeus 0.30 high.

Male palp (Fig. 18A,B): tegulum (LTA) absent; sperm duct semicircular; EP at least 2 times as long as wide at base (Fig. 6A).

Female unknown.

DISTRIBUTION. Queensland Wet Tropics block 12 (Fig. 30B). Known only from the Palmerston River valley at the southern edge of the Atherton Tableland. Rainforest.

***Tropasteron raveni* sp. nov.**
(Figs 6B, 19, 29B)

ETYMOLOGY. For Dr Robert Raven of the Queensland Museum, in esteem for his important work on Australian spiders.

MATERIAL. HOLOTYPE: ♂, Eungella NP, ME Qld, Finch Hatton Gorge (NQ 37), rainforest, 21°04'E, 148°38'S, 3 Dec 1992-23 Apr 1993, RR, PL, pitfall (QM S56855). PARATYPES: ME Qld: 1♀, 17♂, as for holotype (QM S24632); 1♂, as for holotype (AM KS83922); 1♂, as previous, RR, PL, MS (QM S24769); 1♀, 9♂, as previous (QM S24780); 1♂, as previous, 9 Nov 1991-28 Jul 1992 (QM S19896); 2♀, Finch Hatton NP, 21°09'S, 148°38'E, 14-Feb-86, RR, JG (QM S9936); 1♀, 1♂, Eungella area, eucalypt forest, 21°01'41"S, 148°31'41"E, 20 Apr 1998, RR, JG, pitfall (QM S55633); 1♀, 4♂, Upper Hall Ck via Carmila, 21°52'S, 149°18'E, 4 Dec 1996-6 Apr 1997, GM, E. Mulder, pitfall (QM S40602); 1♀, 2♂, Mt Hayward, 20°20'S, 148°45'E, 20 Nov 1992-mid Apr 1993, GM, DC, pitfall (QM S41052).

DIAGNOSIS. Differs from most other species by short EP. Abdomen similar to *T. cleveland* with no white spots frontally, but differs by femur I-IV proximal margin brown, medium part white, distal part dark brown.

DESCRIPTION. *Male* (holotype). Total length 3.8. Ceph 2.00 long, 1.40 wide, 0.88 high; cl/cw 1.43; sternum 0.92 long, 0.88 wide; sl/sw 1.05; abdomen 1.80 long, 1.36 wide.

Colour: carapace, sternum orange brown; chelicerae orange; maxillae and labium medium brown, distally white. Abdomen (Fig. 19C,D) sepia brown; dorsally with 2 pairs of white patches on top and 2-3 in front of the spinnerets; lateral with 1 white stripe; ventrally pale brown. Legs yellow, with darker brown lateral stripes; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal margin brown, medium part white, distal part dark brown; tibia I distally white.

Eyes: AME smallest, PLE largest; eye group width 0.60 of headwidth; AME 0.10; ALE 0.13; PME 0.13; PLE 0.14; AME-AME 0.02; AME-ALE 0.02; PME-PME 0.04; PME-PLE 0.08; ALE-PLE 0.01; eyes group AME-PME 0.30; AME-AME 0.22; PME-PME 0.30. Clypeus 0.44 high.

Male palp (Fig. 19A,B): tegulum (LTA) a short spine, about as wide as long; sperm duct

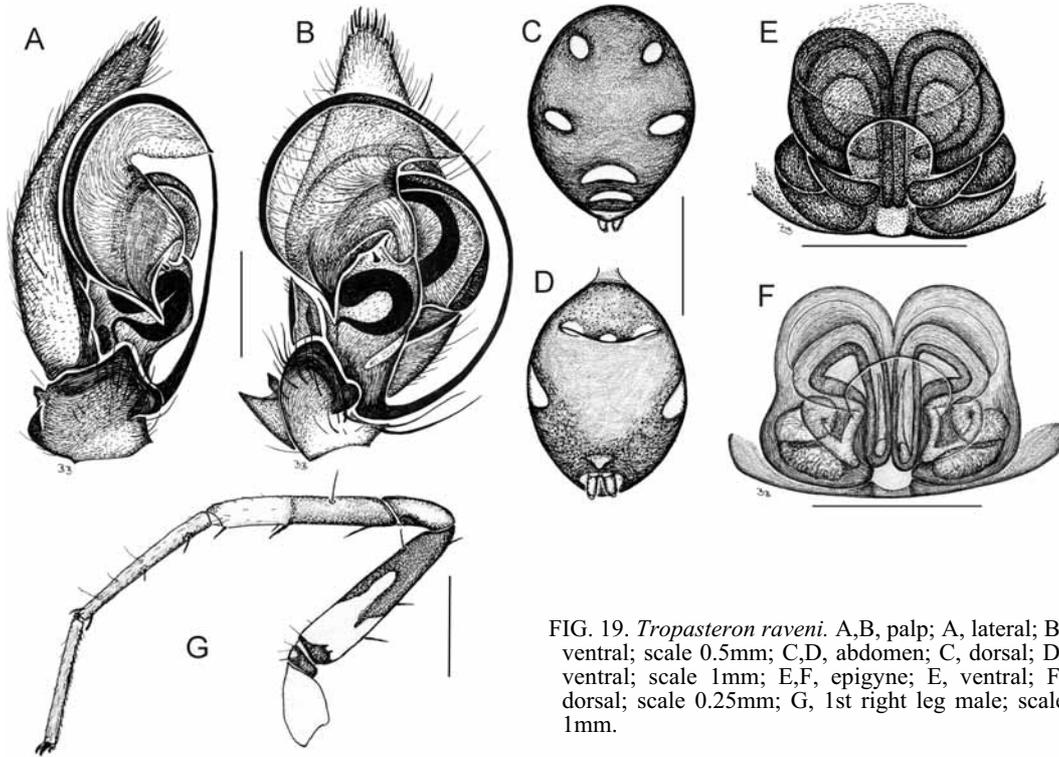


FIG. 19. *Tropasteron raveni*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm; G, 1st right leg male; scale 1mm.

semicircular; EP about as long as wide at base (Fig. 6B).

Female (paratype). Total length 3.76. Ceph 1.96 long, 1.32 wide, 0.84 high; cl/cw 1.48; sternum 0.84 long, 0.84 wide; sl/sw 1; abdomen 1.80 long, 1.28 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.56 of headwidth; AME 0.08; ALE 0.12; PME 0.12; PLE 0.12; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.06; PME-PLP 0.10; ALE-PLP 0.04; eyes group AME-PME 0.32; AME-AME 0.20; PME-PME 0.30. Clypeus 0.44 high.

Epigyne: about as long as wide, with semicircular CO (Fig. 19E,F).

DISTRIBUTION. Widespread in the central Queensland rainforest system from near Proserpine south through the Eungella Range to the mountains west of Carmila. (Fig. 29B). Rainforest and eucalypt forest.

***Tropasteron splendens* sp. nov.**
(Figs 6C, 20, 31B)

ETYMOLOGY. Latin *splendens*, shining; surface of abdomen and carapace is iridescent.

MATERIAL. HOLOTYPE: ♂, Big Tableland, NE Qld, 700m, 15°43'S, 145°17'E, 20-21 Dec 1990, ANZSES expedition, pitfall (QM S57095). PARATYPES: NE Qld: 10♂, as for holotype (QM S25681); 4♂, Big Tableland, 740m, 15°43'S, 145°17'E, 20 Dec 1990-8 Jan 1991, ANZSES expedition, flight intercept trap (QM S25688); 2♂, Lambs Head, 10km W Edmonton, 1200m, rainforest, 17°02'S, 145°38'E, 13 Dec 1988, GM, GT, Moss (QM S25684); 3♂, Mt Finnigan summit, via Helenvale, 850-950m, 15°49'S, 145°17'E, 3-5 Dec 1990, DC, GT, L. Roberts, pitfall (QM S25686); 1♀, 3♂, Mt Finnigan summit, via Helenvale, 15°49'S, 145°17'E, 3-5 Dec 1990, pitfall (QM S25693); Davies Creek Road, via Mareeba 750m, 17°02'33"S, 145°36'51"E, 4-13 Dec 1988, GM,GT, pitfall (QM S49365).

DIAGNOSIS. Similar in colour pattern and body shape to *T. malbon*, differs in colour pattern by: abdomen frontally with 2 pair of small white spots; and different shape of palp, with a very long spine (LTA).

DESCRIPTION. *Male* (holotype). Total length 4.32. Ceph 2.24 long, 1.68 wide, 0.88 high; cl/cw 1.33; sternum 1.08 long, 1 wide; sl/sw 1.08; abdomen 2.08 long, 1.32 wide.

Colour: carapace, sternum orange brown; chelicerae medium brown; maxillae and labium

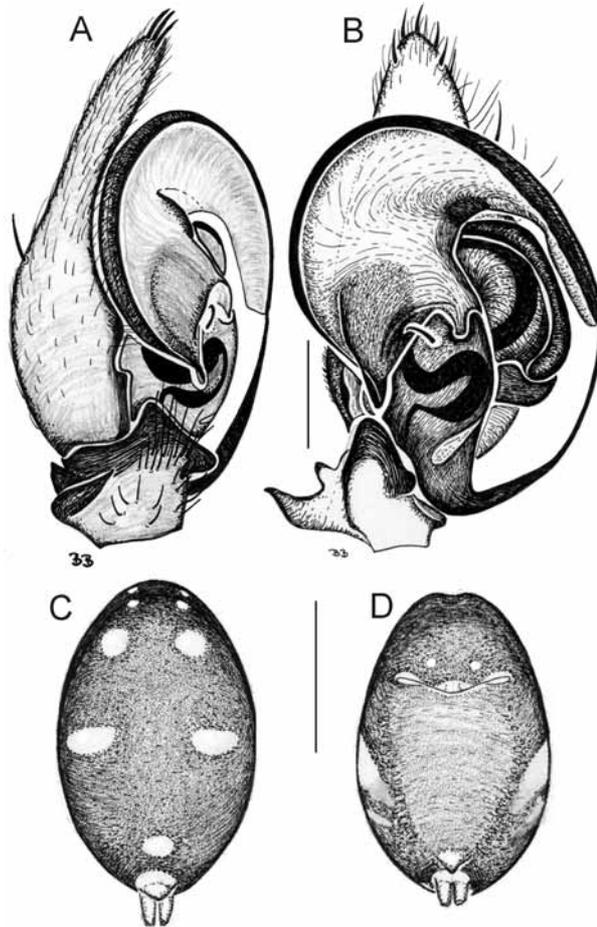


FIG. 20. *Tropasteron splendens*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm.

medium brown, distally white. Abdomen (Fig. 20C,D) sepia brown; frontally with 2 pairs of small white dots; dorsally with or without weak scutum and 2 pairs of white patches on anterior part and with 2 in front of the spinnerets; laterally with 1-2 white stripe a first small, second longer; ventrally dark brown. Legs medium brown; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white becoming continuously dark brown distally; tibia I distally white.

Eyes: AME smallest, PLE largest; eye group width 0.49 of headwidth; AME 0.08; ALE 0.13; PME 0.13; PLE 0.14; AME-AME 0.02; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.32; AME-AME 0.18; PME-PME 0.30. Clypeus 0.56 high.

Male palp (Fig. 20A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct inverted U-shaped; EP at least twice as long as wide at base (Fig. 6C).

Female unknown.

DISTRIBUTION. Queensland, Wet Tropics blocks 1 and 7 (Fig. 31B). Distribution shows a disjunction of 150km between the mountains at the northern end of the Wet Tropics (Mt Finnigan and Big Tableland) and the Lamb Range, west of Cairns. Rainforest.

***Tropasteron thompsoni* sp. nov.**
(Figs 6D, 21A-F, 30B)

ETYMOLOGY. For Geoff Thompson of the Queensland Museum, a collector of the types.

MATERIAL. HOLOTYPE: ♂, Lambs Head, NE Qld, 10km W Edmonton, 1200m, rainforest, 17°2'S, 145°39'E, 10 Dec 1989-8 Jan 1990, GM, GT, HJ, pitfall (QM S56850). PARATYPES: NE Qld: 1♀, 2♂, as for holotype (QM S25962); 1♂, Mt Edith, Lamb Ra, 1140m, rainforest, 17°10'S, 145°37'E, 11 Oct 1982, GM, DY, GT (QM S3780); 1♀, 12♂, Mt Formatine South, 700m, 16, 433'S, 145°37'E, 23-24 Nov 1990, GM, GT (QM S25691); 1Y, as previous (AM KS83923); 5♂, Davies Ck Rd, 20km ESE Mareeba, 750m, 17°02'33"S, 145°36'51"E, 4-13 Dec 1988, GM, GT, pitfall (QM S31586); 1♂, Isley Hills, 1050m, 17°03'S, 145°42'E, 30 Nov 93, GM, HJ (QM S25959); 1♂, Mareeba, 22km SE, 900m, rainforest, 17°05'S, 145°36'E, 4 Nov 1983, DY, GT, sieved litter (QM S3802); 1♂, Atherton Tableland, Tinaroo Falls Dam, 17°11'S, 145°34'E, 30 Dec 81, B. & M. Baehr, pitfall (QM S57088); 1♂, Mt Hypipamee NP, The Crater, 15km S Atherton, 17°25'29"S, 145°29'00"E, 29 Dec 81, B. & M. Baehr (QM S57087).

DIAGNOSIS. Differs from all other species by abdomen ventrally with 1 pair of white stripes and 1 white stripe from epigastric fold to near tracheal spiracle. Male palp with long strong spine (LTA).

DESCRIPTION. *Male* (holotype). Total length 4.08. Ceph 2.08 long, 1.56 wide, 1 high; cl/cw 1.33; sternum 1 long, 0.92 wide; sl/sw 1.08; abdomen 2.00 long, 1.48 wide.

Colour: carapace, sternum sepia brown; chelicerae medium brown; maxillae and labium medium brown, distally white. Abdomen (Fig. 21C,D)

sepia brown, iridescent; frontally with 1 pair of small white dots, and 1 small lateral pair; dorsally with 2 pairs of white patches on top and 2-3 in front of the spinnerets; laterally with 3-4 white stripes; ventrally dark brown; with 1 pair of white stripes and 1 white stripe from epigastric fold to near tracheal spiracle. Legs pale brown; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white, distal part dark brown; tibia I distally white.

Eyes: AME smallest, PLE largest; eye group width 0.57 of headwidth; AME 0.08; ALE 0.14; PME 0.14; PLE 0.16; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.34; AME-AME 0.20; PME-PME 0.32. Clypeus 0.44 high.

Male palp (Fig. 21A,B): tegulum (LTA) a short spine, as wide as long; sperm duct inverted U-shaped; EP at least twice as long as wide at base (Fig. 6D).

Female (paratype). Total length 4.48. Ceph 2.08 long, 1.48 wide, 0.96 high; cl/cw 1.40; sternum 0.92 long, 0.92 wide; sl/sw 1; abdomen 2.40 long, 1.76 wide.

Colour: as in male.

Eyes: AME smallest, or PLE largest; eye group width 0.55 of headwidth; AME 0.08; ALE 0.12; PME 0.12; PLE 0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.10; ALE-PLE 0.04; eyes group AME-PME 0.34; AME-AME 0.20; PME-PME 0.28. Clypeus 0.48 high.

Epigyne: wider than long, with semicircular CO (Fig 21E,F).

Variation: ventral white patches on abdomen may be connected.

DISTRIBUTION. Queensland, Wet Tropics blocks 6, 7, 8 and 9 (Fig. 30B). Ranges from Mt Formartine south through the Lamb Range to the northern parts of the Atherton Tableland and Hugh Nelson Range. Rainforest.

***Tropasteron tribulation* sp. nov.**
(Figs 6E, 22, 31A)

ETYMOLOGY. For the type locality, a noun in apposition.

MATERIAL. HOLOTYPE: ♂, Cape Tribulation, NE Qld, 3.5km W (Site 7), 680m, rainforest, 16°05'S, 145°27'E, 2-7 Oct 1982, GM, DY, GT, pyrethrum knockdown (QM

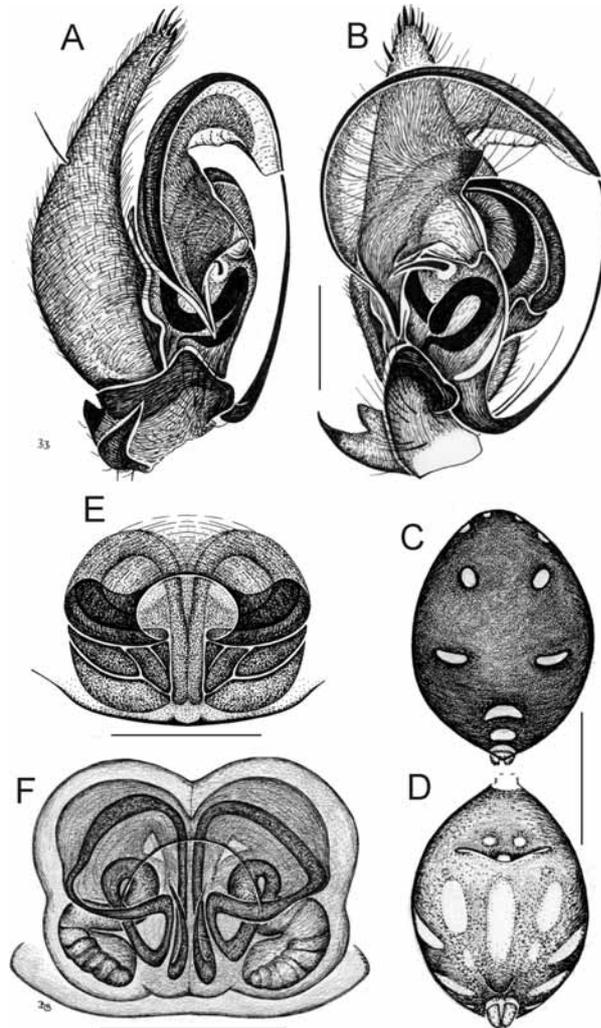


FIG. 21. *Tropasteron thompsoni*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm; E,F, epigyne; E, ventral; F, dorsal; scale 0.25mm.

S57096). PARATYPES: NE Qld: 1 ♂, as holotype, 2-7 Oct 1982, GM, DY, GT, pyrethrum knockdown (QM S4288); 1 ♂, as previous, 23 Sep-7 Oct 1982, pitfall (QM S4283); 1 ♂, as previous, 2.5km W (Site 5), 180m, 23 Sep-7 Oct 1982, pitfall (QM S4256); 1 ♀, as previous, 2.7km W (Site 5A), 400m, Jan 83, GM, sieved litter (QM S4269); 1 ♀, as previous, 1.5km W (Site 3), 150m, 5-9 Jan 1983, baited pitfall (QM S4270); 1 ♀, as previous, 2.7km W (Site 5A), 400m, 5-9 Jan 1983, baited pitfall (QM S3765); 1 ♂, as previous, 2km W (Site 4), 200m, 23 Sep-7 Oct 1982, GM, DY, GT, pitfall (QM S4289); 1 ♂, as previous, transect, site 6, 500m, rainforest, 17 Nov 98, GM, pyrethrum knockdown, trees (QM S47503); 1 ♂, Fritz Ck, Bloomfield,

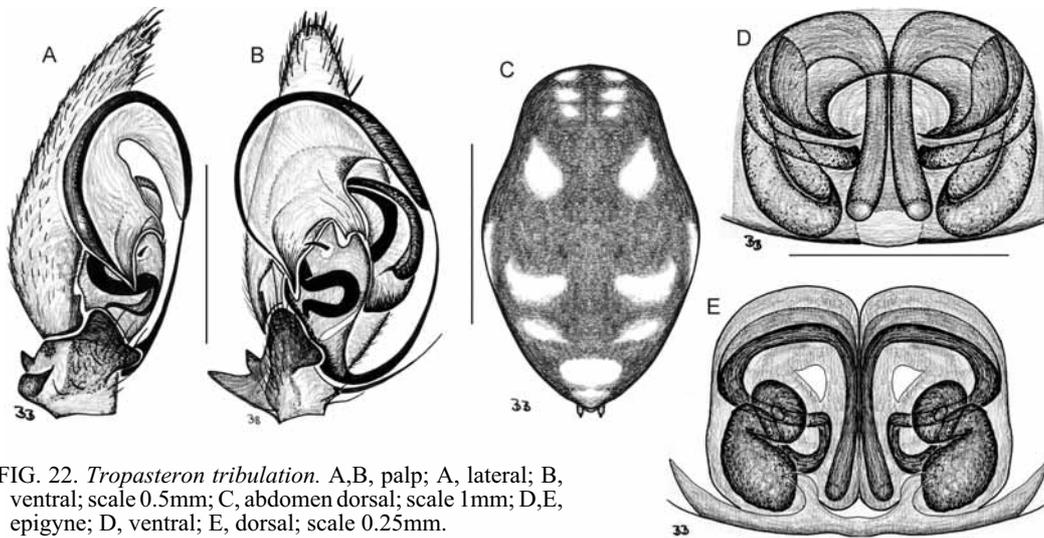


FIG. 22. *Tropasteron tribulation*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C, abdomen dorsal; scale 1mm; D,E, epigyne; D, ventral; E, dorsal; scale 0.25mm.

rainforest, 15°52'S, 145°21'E, 31 Dec 75, M. Gray (AM KS0490); 3 ♀, 1 ♂, Shiptons Flat, 15°47'33"S, 145°13'51"E, 16-21 Nov 1975, RR, VD, pitfall (QM S4467); 1 ♀, 1 ♂, as previous (AM KS83924); 1 ♂, Mt Misery road, Site 1, 730m, 15°53'S, 145°13'E, 6 Dec 1990-17 Jan 1991, ANZSES expedition, pitfall (QM S57089); 1 ♂, West Claudie R, Iron Ra, 50m, rainforest, 12°45'S, 143°14'E, 3-10 Dec 1985, GM, DC (QM S40844).

DIAGNOSIS. Differs from all other species by abdomen with 3 pairs of frontal and without fronto-lateral white spots. Male palp with long spine (LTA).

DESCRIPTION. *Male* (holotype 2nd measurement). Total length 3.4-3.76. Ceph 1.8-1.92 long, 1.32-1.36 wide, 0.72-0.76 high; cl/cw 1.36-1.41; sternum 0.84-0.92 long, 0.84 wide; sl/sw 1-1.09; abdomen 1.6-1.84 long, 1-1.20 wide.

Colour: carapace orange brown. Sternum pale brown, orange brown; chelicerae pale brown, distally dark brown; maxillae and labium pale brown, distally white. Abdomen (Fig. 22C) sepia brown; frontally with 3 pairs of white dots; dorsally with 3 pairs of white patches on top and 1-2 in front of the spinnerets; laterally with 1-2 white patches first small, second elongate; ventrally pale to dark brown; mottled with white, with 1 pair of white patches near tracheal spiracle. Legs pale brown; coxae I-IV white; trochanter I-IV pale to brown; femur I-IV proximal part white becoming continuously dark brown distally.

Eyes: AME smallest; eye group width 0.53-0.64 of headwidth; AME 0.08-0.09; ALE 0.10; PME

0.1-0.13; PLE 0.11-0.13; AME-AME 0.02-0.04; AME-ALE 0.04; PME-PME 0.04-0.06; PME-PLA 0.08; ALE-PLA 0.04; eyes group AME-PME 0.03-0.32; AME-AME 0.18-0.22; PME-PME 0.26-0.30. Clypeus 0.4-0.44 high.

Male palp (Fig. 22A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct semicircular.

Female (paratype). Total length 3.88-4.08. Ceph 1.88-2.08 long, 1.28-1.36 wide, 0.88-0.96 high; cl/cw 1.46-1.53; sternum 0.84-0.92 long, 0.8-0.92 wide; sl/sw 1-1.05; abdomen 2.00 long, 1.32-1.40 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.53-0.54 of headwidth; AME 0.06-7; ALE 0.1-0.12; PME 0.1-0.11; PLE 0.11-0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.06; PME-PLA 0.10; ALE-PLA 0.04; eyes group AME-PME 0.32; AME-AME 0.16-0.18; PME-PME 0.26-0.28. Clypeus 0.52 high.

Epigyne: wider than long, with broadly oval CO (Fig 22E, F).

DISTRIBUTION. This is the most northerly species of *Tropasteron* (Fig. 31A). It occurs from Iron Range in Cape York Peninsula south to the Bloomfield River (Block 1) and Cape Tribulation (Block 2) at the northern end of the Wet Tropics. It is mostly in lowlands but is found up to 680m, west of Cape Tribulation. Rainforest.

***Tropasteron yeatesi* sp. nov.**
(Figs 6F, 23, 30A)

ETYMOLOGY. For Dr David Yeates of CSIRO Entomology, a collector of the types.

MATERIAL. HOLOTYPE: ♂, Bellenden Ker Ra, NE Qld, Summit, 1560m, rainforest, 17°16'S, 145°52'E, 28 Aug-8 Oct 1991, GM, HJ, pitfall (QM S56995). PARATYPES: NE Qld: 1♀, 1♂, same data as holotype (QM S25718); 1♀, 1♂, Bellenden Ker Ra, Summit TV Stn, 1560m, 17°16'S, 145°51'E, 29 Sep 81, GM, DC (QM S3732); 2♀, 1♂, as previous, 29 Apr-2 May 1983, GM, DY (QM S3757); 1♀, 1♂, as previous, 28 Oct 1983, GM, DY, GT (QM S4267); 1♂, Massey Ra 4km W, center of Bellenden Ker, 1250m, 17°16'S, 145°49'E, 9-11 Oct 1991, GM, HJ, DC (QM S25783); 4♀, 3♂, Mt Bartle-Frere, summit creek, 1500m, rainforest, 17°23'S, 145°48'S, 24 Sep 81, GM, DC, pitfall (QM S3722); 2♀, as previous, 0.5km N of Sth Peak, 17°24'S, 145°49'E, 6-8 Nov 1981, Earthwatch Expedition (QM S47543); 2♀, 2♂, as previous, Sth Peak (QM S47543); 1♀, as previous, Sth Peak, 1400-1500m, rainforest, 17°23'S, 145°49'E, 7-8 Oct 1981, Earthwatch Expedition, berlesate (QM S47543); 1♀, 1♂, Massey Ra, 12km S Gordonvale, 1300m, rainforest, 17°16'S, 145°49'E, 2 May 1983, GM, DC, sieved litter (QM S47543); 17♂, Bellenden Ker Ra, Cable Tower 3, 1054m, 17°16'S, 145°51'E, 25-31 Oct 1981, Earthwatch & Qld Museum, pitfall (QM S27890); 1♂, as previous, sieved litter (QM S27888); 1♂, as previous, 1-7 Nov 1981, pitfall (QM S27881); 2♂, as previous, 17-24 Oct 1981 (QM S27886); 8♀, 4♂, as previous, Summit TV Stn, 1560m, PILI (QM S27596); 3♀, 4♂, as previous, 1-7 Nov 1981 (QM S27589); 1♀, 1♂, as previous (AM KS83925); 3♀, 7♂, as previous, 17-24 Oct 1981, PILI (QM S27591); 1♂, as previous, 0.5km S of Cable Tower 7, 500m, rainforest (QM S27613); 12♂, as previous, pitfall (QM S27610); 1♀, 1♂, as previous, Centre Peak Summit, 1500m, rainforest, 11 Apr 79, GM, sieved litter (QM S27595); 1♀, Bellenden Ker Ra, Summit TV Stn, 1560m, rainforest, 29 Apr-2 May 1983, GM, DY (QM S27593); 1♂, as previous (QM S38519); 2♂, as previous (QM S38538); 1♀, 1♂, as previous (QM S38547); 2♂, as previous, 17-Apr-97, GM, E. Russell, sieved litter (QM S31918); 2♀, 1♂, as previous, Centre Peak summit, rainforest, 28 Aug 91, GM, HJ, sieved litter (QM S31565); 1♂, as previous, Top Stn, rainforest, 17°16'S, 145°52'E, 17-18 Apr 1997, GM, J. Ovenden, pitfall (QM S40691).

DIAGNOSIS. Similar to *T. cooki* but differs from all other species by abdomen without white spots frontally and with 3 to 4 pairs of white patches on

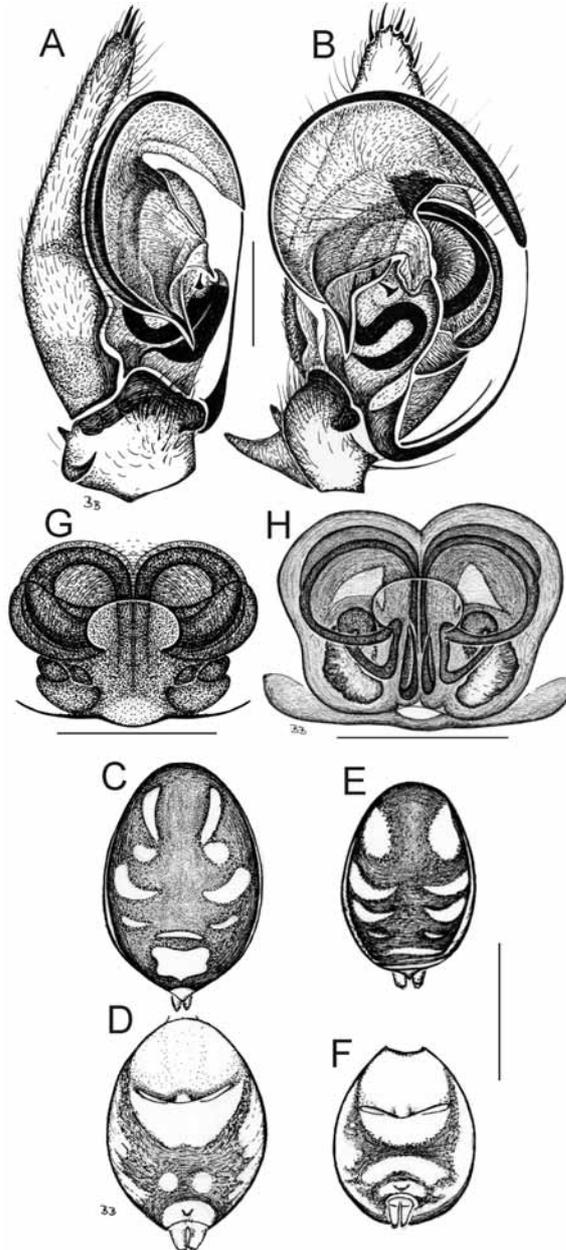


FIG. 23. *Tropasteron yeatesi*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C-F, abdomen variation of colour pattern; C,E, dorsal; D,F, ventral; scale 1mm; G,H, epigyne; G, ventral; H,

top and 3 in front of the spinnerets can be enlarged to white chevrons, ventrally with white chevrons. Male palp with long spine (LTA), at least twice as long as wide.

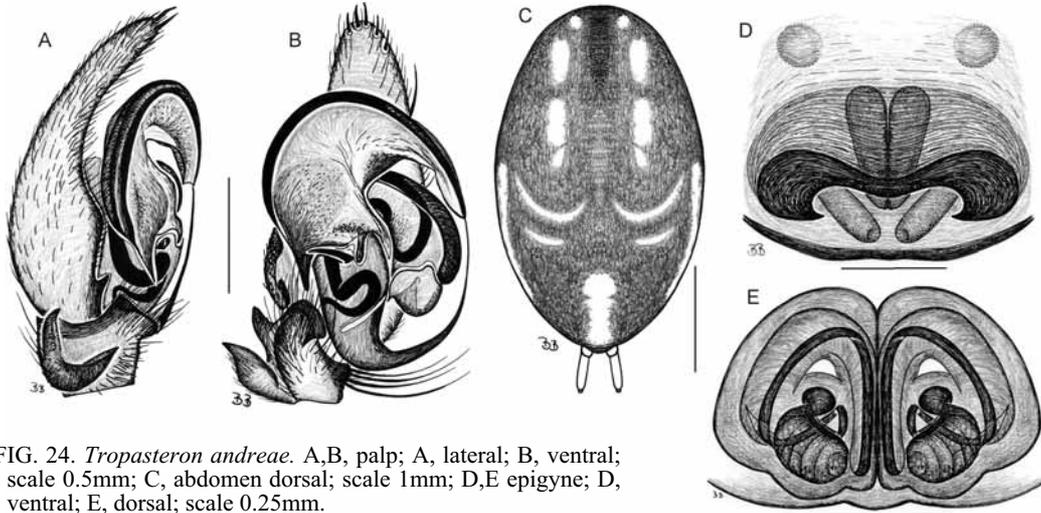


FIG. 24. *Tropasteron andreae*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C, abdomen dorsal; scale 1mm; D,E epigyne; D, ventral; E, dorsal; scale 0.25mm.

DESCRIPTION. *Male* (holotype). Total length 3.6-4.16. Ceph 2.04-2.24 long, 1.4-1.56 wide, 0.88-0.96 high; cl/cw 1.43-1.45; sternum 0.8-0.96 long, 0.8-0.92 wide; sl/sw 1-1.04; abdomen 1.56-1.92 long, 1.16-1.32 wide.

Colour: carapace, sternum orange brown; chelicerae yellow to medium brown; maxillae and labium pale brown, distally white. Abdomen (Fig. 23C-F) sepia brown; dorsally with 4 pairs of white patches on top and 3 in front of the spinnerets, can be enlarged to white chevrons; laterally with 1 big white patch and pale booklungs; ventrally dark brown; mottled with white. Legs pale brown; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white, distal part dark brown; tibia I-IV proximally and distally with brown spot.

Eyes: AME smallest, PLE largest; eye group width 0.54 of headwidth; AME 0.08; ALE 0.12; PME 0.11-0.13; PLE 0.12-0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.08-0.10; ALE-PLE 0.04; eyes group AME-PME 0.3-0.34; AME-AME 0.20; PME-PME 0.26-0.30. Clypeus 0.44 high; chilum divided.

Male palp (Fig. 23A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct inverted U-shaped; EP at least twice as long as wide at base (Fig. 6F).

Female (paratype). Total length 3.96-4.16. Ceph 1.96-2.20 long, 1.36-1.52 wide, 1-1.08 high; cl/cw 1.44-1.44; sternum 0.84-0.92 long, 0.84-0.92 wide; sl/sw 1-1; abdomen 1.96-2 long, 1.44-1.48 wide.

Colour: as in male.

Eyes: AME smallest, or PLE largest; eye group width 0.5-0.54 of headwidth; AME 0.07-0.08; ALE 0.1-0.12; PME 0.11-0.12; PLE 0.11-0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.04; PME-PLE 0.1-0.14; ALE-PLE 0.04; eyes group AME-PME 0.32-0.34; AME-AME 0.18-0.20; PME-PME 0.26-0.28. Clypeus 0.44-0.48 high.

Epigyne: wider than long, anteriorly wider, with flattened broadly oval CO (Fig. 23G,H).

Variation: The abdominal white patches can fuse to white chevrons.

DISTRIBUTION. Queensland, Wet Tropics block 10 (Fig. 30A). Known only from the contiguous massifs of Bellenden Ker, Bartle Frere and the Massey Range. Almost all specimens are from above 1000m and it is common at the maximum altitudes of 1500-1600m. Rainforest.

KEY TO SPECIES OF *T. ANDREAE*-GROUP

1. Palp dorsal tibial apophysis EP without basal bump. Abdomen with 1 elongate lateral white stripe not reaching front, abdomen, epigyne (Figs 6G, 24A-E) *T. andreae*
- Palp dorsal tibial apophysis EP with basal bump. Abdomen with 1 elongate lateral white stripe reaching front (Fig. 6H-J) 2
2. Abdomen dorsally with 1 pair of long stripes (Figs 25C, 26C) 3
- Abdomen dorsally with 2 pairs of long stripes, abdomen, palp (Figs 6J, 27A-C) *T. robertsi*
3. Abdomen additional with 2 pairs of dorsal horizontal stripes, abdomen, palp (Figs 6H, 25A-D) *T. magnum*
- Abdomen additional with 3 pairs of dorsal horizontal stripes, abdomen, palp (Figs 6I, 26A-D) *T. pseudomagnum*

***Tropasteron andreae* sp. nov.**
(Figs 6G, 24, 32)

ETYMOLOGY. For my friend and personal PR consultant Andrea Hammond.

MATERIAL. HOLOTYPE: ♂, Finch Hatton NP, ME Qld, 350m, rainforest, on foliage, 21°09'S, 148°38'E, 7-14 Apr 1975, VD, R. Kohout (QM S57985). PARATYPES: ME Qld: 1 ♀, same data as holotype (QM S16742); 1 ♀, as previous, 14-Feb-86, RR, JG (QM S9936).

DIAGNOSIS. The largest species of the genus, differs from all other species in *T. andreae*-group in abdominal pattern and male palp with long strong spine (LTA).

DESCRIPTION. *Male* (holotype). Total length 5.6. Ceph 2.80 long, 2.08 wide, 1.04 high; cl/cw 1.34; sternum 1.20 long, 1.16 wide; sl/sw 1.03; abdomen 2.80 long, 1.80 wide.

Colour: carapace orange brown, iridescent. Sternum orange brown; chelicerae medium brown; maxillae and labium pale brown, distally white. Abdomen (Fig. 24A, B) sepia brown, iridescent; frontally with 1 pair of small white dots; dorsally with 3-4 pairs of white patches, 1, 2 elongated stripes, 3 sometimes 4 horizontal half-moon-shaped and 1 elongate in front of the spinnerets; lateral with 1 white stripe; ventrally dark brown, iridescent. Legs medium brown, with darker brown lateral stripes; coxae I-IV white; trochanter I-IV brown; femur I-IV proximal part white becoming continuously dark brown distally; tibia I-IV proximally pale, distally brown.

Eyes: in 2 rows with 4 eyes, both rows procurved; AME smallest; eye group width 0.59 of headwidth; AME 0.10; ALE 0.12; PME 0.14; PLE 0.14; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.08; PME-PLE 0.08; ALE-PLE 0.04; eyes group AME-PME 0.38; AME-AME 0.24; PME-PME 0.36. Clypeus 0.68 high.

Male palp (Fig. 24A, B): cymbium flange short straight, with distal hook, only about 10% of cymbium long, and with small rounded extension, incision in between; tegulum (LTA) a long spine, at least twice as long as wide; DTA membranous, semicircular, distal part folded containing embolus; prolateral extension (PE) short not longer than base of DTA; retrolaterally with sharp tip and without any additional

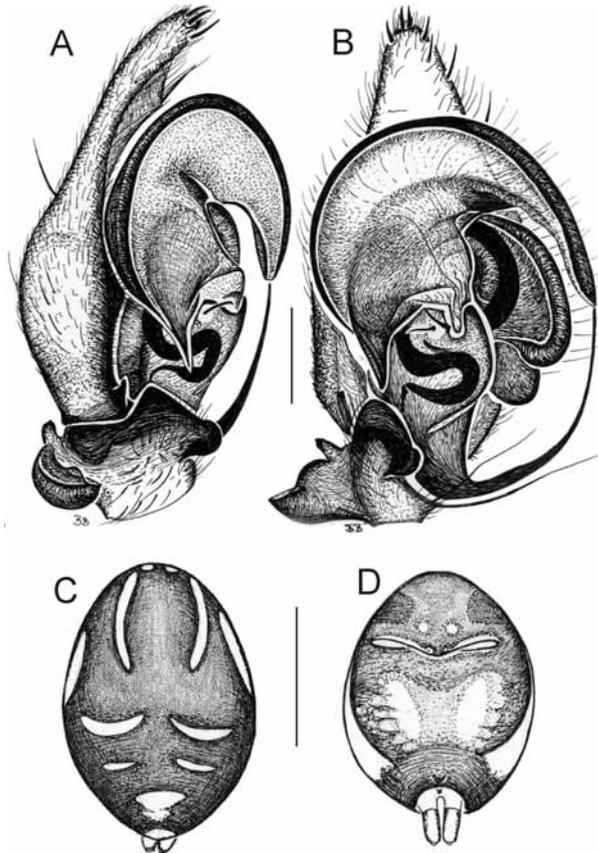


FIG. 25. *Tropasteron magnum*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm.

extension; sperm duct inverted U-shaped; embolus thin, semicircular, embolus base cylindrical; tibia short; ventro-lateral tibial apophysis with chitinous rim dorsally; EP distally flattened (Fig. 6G). Femur with 2 strong spines dorsally.

Female (paratype). Total length 7.04. Ceph 3.44 long, 2.32 wide, 1.28 high; cl/cw 1.48; sternum 1.44 long, 1.40 wide; sl/sw 1.03; abdomen 3.60 long, 2.80 wide.

Colour: as in male.

Eyes: AME smallest; eye group width 0.56 of headwidth; AME 0.14; ALE 0.16; PME 0.18; PLE 0.20; AME-AME 0.02; AME-ALE 0.06; PME-PME 0.08; PME-PLE 0.18; ALE-PLE 0.06; eyes group AME-PME 0.48; AME-AME 0.30; PME-PME 0.44. Clypeus 0.88 high.

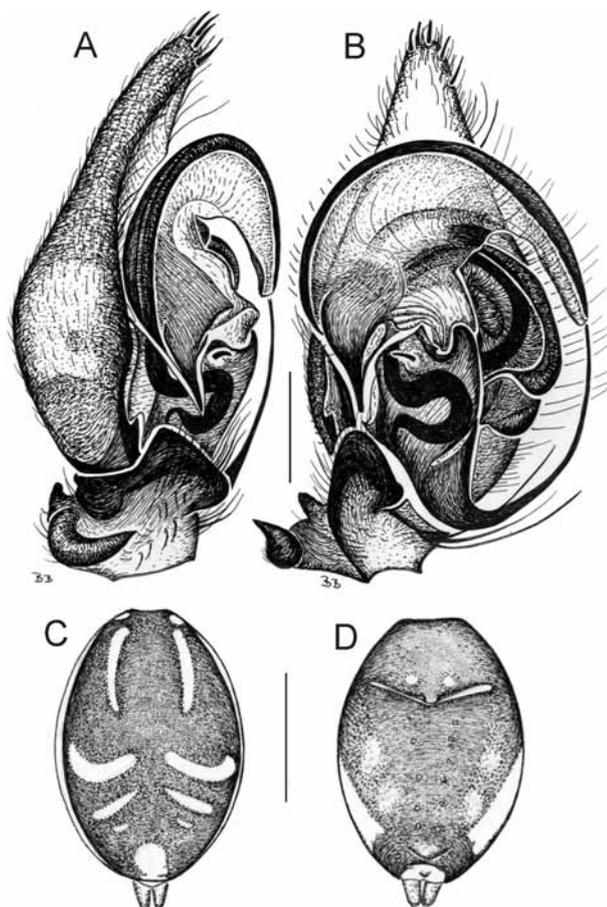


FIG. 26. *Tropasteron pseudomagnum*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm.

Epigyne: much wider than long, with broadly lyriform CO (Fig. 24D,E). Female palpal claw strong with more than 6 teeth.

Variation: in one specimen the 4th horizontal patch on abdomen is reduced.

DISTRIBUTION. Known only from Finch Gaton Gorge within Eungella National Park (Fig. 32). Rainforest.

***Tropasteron magnum* sp. nov.**
(Figs 6H, 25A-D, 32)

ETYMOLOGY. Latin *magnum*, large. *T. magnum* is one of the largest spiders in this genus.

MATERIAL. HOLOTYPE: ♂, Cape Tribulation, NE Qld, 3km W (Site 6), 500m, rainforest, 16°05'S, 145°27'E, 5-9 Jan 1983, GM, baited pitfall (QM S4264).

DIAGNOSIS. Differs from *T. pseudomagnum* and *T. robertsi* in abdomen with 3 pairs of white patches, first elongated, 2, 3 horizontal and 2 in front of the spinnerets.

DESCRIPTION. *Male* (holotype). Total length 4.6. Ceph 2.40 long, 1.96 wide, 0.88 high; cl/cw 1.22; sternum 1.20 long, 1 wide; sl/sw 1.20; abdomen 2.20 long, 1.56 wide.

Colour: carapace pale brown. Sternum orange brown; chelicerae pale brown, distally dark brown; maxillae and labium pale brown, distally white. Abdomen (Fig. 25C,D) sepia brown; frontally with 1 pair of small white dots; dorsally with 3 pairs of white stripes, first long, 2, 3 horizontal and 2 in front of the spinnerets; lateral with 1 white stripe reaching front; ventrally dark brown; with 1 pair of elongate white patches. Legs pale brown, with darker brown lateral stripes; coxae I-IV white; trochanter I-IV white; femur I-IV pale with brown ring distally.

Eyes: AME smallest; eye group width 0.46 of headwidth; AME 0.07; ALE 0.12; PME 0.12; PLE 0.12; AME-AME 0.05; AME-ALE 0.06; PME-PME 0.08; PME-PLA 0.14; ALE-PLA 0.06; eyes group AME-PME 0.36; AME-AME 0.19; PME-PME 0.32. Clypeus 0.64 high.

Male palp (Fig. 25A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct inverted, U-shaped; EP distally flattened (Fig. 6H).

DISTRIBUTION. Queensland, Wet Tropics block 2 (Fig.32). Known only from a single collection at mid-altitude on the mountain slopes west of Cape Tribulation. Rainforest.

***Tropasteron pseudomagnum* sp. nov.**
(Figs 6H, 26, 32)

ETYMOLOGY. For its similarity to *T. magnum*.

MATERIAL. HOLOTYPE: ♂, Mt Spurgeon, NE Qld, 7km N of (camp 2), 1250m, 15°28'18"S, 145°13'18"E, 17-19 Oct 1991, GM, DC, L. Roberts, pitfall (QM S57098). PARATYPES: NE Qld: 2♂, same data as

holotype (QM S25798); 1 ♂, same locality, GM, HJ (QM S25805).

DIAGNOSIS. Differs from *T. magnum* and *T. robertsi* in abdomen with 4 pairs of white patches, first long, 2-4 horizontal and 1 in front of the spinnerets.

DESCRIPTION. *Male* (holotype). Total length 4.6. Ceph 2.40 long, 1.84 wide, 1 high; cl/cw 1.30; sternum 1.04 long, 1 wide; sl/sw 1.04; abdomen 2.20 long, 1.52 wide.

Colour: carapace pale brown. Sternum sepia brown; chelicerae pale brown, distally dark brown; maxillae and labium pale brown, distally white. Abdomen (Fig. 26C,D) sepia brown; frontally with 1 pair of small white dots; dorsally with 4 pairs of white patches, first long, 2-4 horizontal and 1 in front of the spinnerets; lateral with 1 white stripe reaching front; ventrally dark brown; with 1-2 pairs of elongate white patches. Legs medium brown, with darker brown lateral stripes; coxae I-IV white; trochanter I-IV white; femur I-IV pale with brown ring distally.

Eyes: AME smallest; eye group width 0.55 of headwidth; AME 0.09; ALE 0.11; PME 0.12; PLE 0.12; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.06; PME-PL 0.12; ALE-PL 0.04; eyes group AME-PME 0.34; AME-AME 0.22; PME-PME 0.30. Clypeus 0.64 high.

Male palp (Fig. 26A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct semicircular; EP distally flattened (Fig. 6H).

DISTRIBUTION. Queensland, Wet Tropics block 4 (Fig. 32). Known only from high altitude on the remote northwest sector of the Carbine Tableland. Rainforest.

***Tropasteron robertsi* sp. nov.**
(Figs 6J, 27, 32)

ETYMOLOGY. For Lewis Roberts, one of the collectors of the types.

MATERIAL. HOLOTYPE: ♂, Mt Finnigan, NE Qld, 1100m, rainforest, 15°49'S, 145°17'E, 28-30 Nov 1985, GM, DC, L. Roberts (QM S3799). PARATYPES: NE Qld: 1 ♂, same locality, 27 Sep 1975, RR (QM S4470).

DIAGNOSIS. Differs from *T. magnum* and *T. pseudomagnum* in abdomen with 3 pairs of white

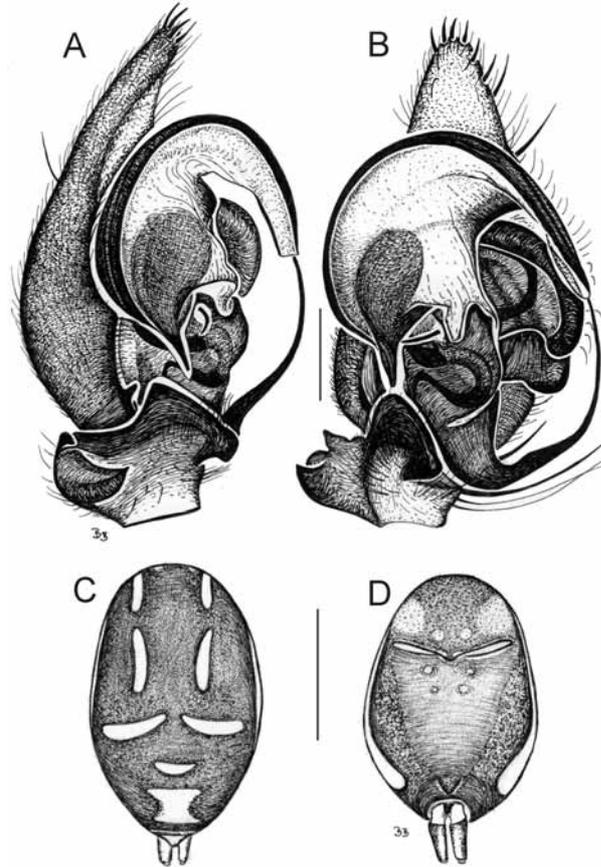


FIG. 27. *Tropasteron robertsi*. A,B, palp; A, lateral; B, ventral; scale 0.5mm; C,D, abdomen; C, dorsal; D, ventral; scale 1mm.

patches, 1, 2 long stripes, third horizontal and 3 in front of the spinnerets.

DESCRIPTION. *Male* (holotype). Total length 4.68. Ceph 2.36 long, 1.80 wide, 1 high; cl/cw 1.31; sternum 1.04 long, 1 wide; sl/sw 1.04; abdomen 2.32 long, 1.48 wide.

Colour: carapace pale brown. Sternum sepia brown; chelicerae pale brown, distally dark brown; maxillae and labium medium brown, distally white. Abdomen (Fig. 27C,D) sepia brown; frontally with 1 pair of small white dots; dorsally with 3 pairs of white patches, 1, 2 long stripes, third horizontal and 3 in front of the spinnerets; lateral with 1 white stripe reaching front; ventrally dark brown. Legs medium brown, with darker brown lateral stripes; coxae I-IV white; trochanter I-IV white; femur I-IV pale with brown ring distally.

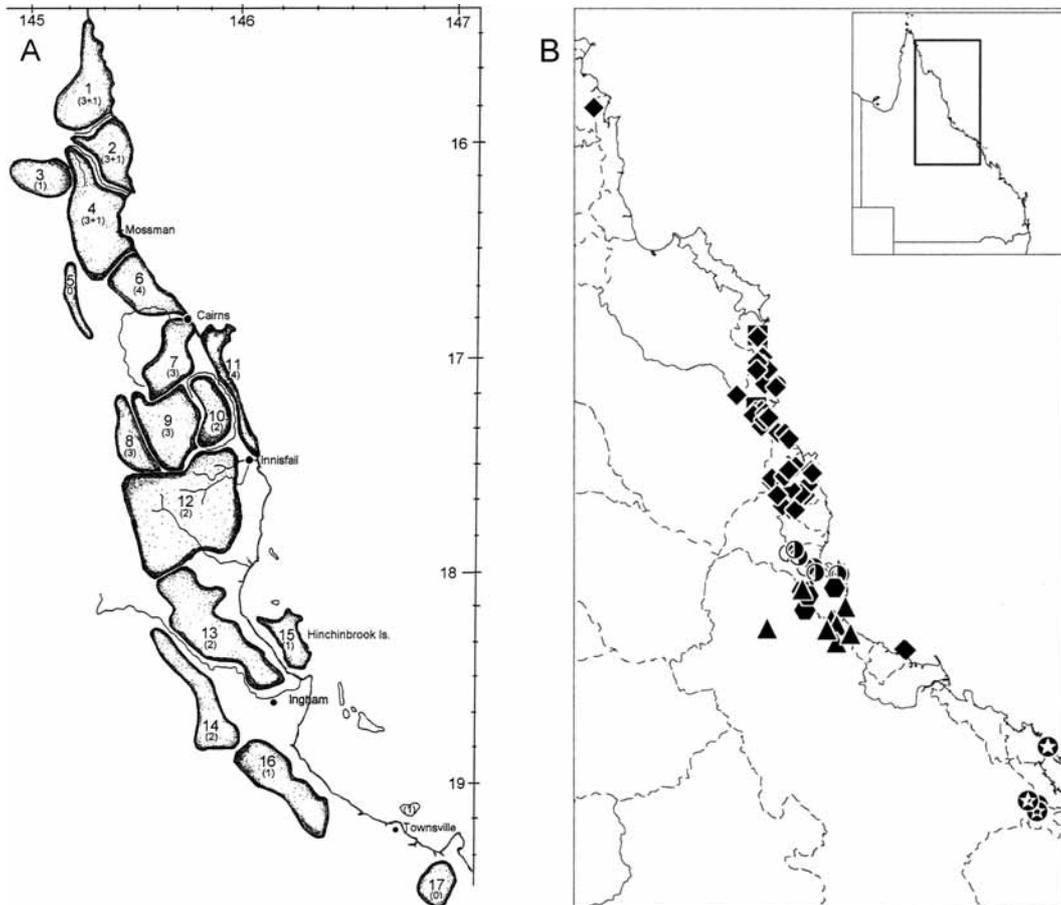


FIG. 28. Maps of the northern Queensland Wet Tropics. A, limits of the 17 mountain/rainforest blocks according to Monteith (1995), modified in Bouchard (2002): 1, Mount Finnigan; 2, Thornton Peak; 3, Windsor Tableland; 4, Carbine Tableland; 5, Hann Tableland; 6, Black Mountain; 7, Lamb Range; 8, Walsh/Hugh Nelson Ranges; 9, Atherton Tableland; 10, Mount Bellenden Ker; 11, Malbon Thompson Range; 12, Walter Hill Range; 13, Kirrama/Cardwell Ranges; 14, Seaview Range; 15, Hinchinbrook Island; 16, Paluma/Blue Water Ranges; 17, Mount Elliot. In brackets, number of species occurring in the rainforest block. B, distribution range of *Tropasteron* spp.

Eyes: AME smallest; eye group width 0.46 of headwidth; AME 0.08; ALE 0.10; PME 0.12; PLE 0.12; AME-AME 0.04; AME-ALE 0.04; PME-PME 0.06; PME-PLE 0.10; ALE-PLE 0.06; eyes group AME-PME 0.34; AME-AME 0.20; PME-PME 0.30. Clypeus 0.60 high.

Male palp (Fig. 27A,B): tegulum (LTA) a long spine, at least twice as long as wide; sperm duct semicircular; EP distally flattened (Fig. 6J).

DISTRIBUTION. Queensland, Wet Tropics block 1 (Fig. 32). Restricted to the summit plateau of Mt Finnigan. Rainforest.

DISCUSSION

With 22 species, *Tropasteron* is one of the largest genera in the *Asteron*-complex and the only one that has radiated in rainforests (Fig. 28B). Most species of *Tropasteron* are found only in montane rainforests; however, *T. cleveland*, *T. fox* and *T. raveni* are also found in adjacent open forest, and *T. luteipes* have been found only in the open forest, at Mt Spurgeon. (ca. 1100m) surrounded by rainforest.

PHYLOGENETIC RELATIONS. All species of *Tropasteron* are closely related in their uniform

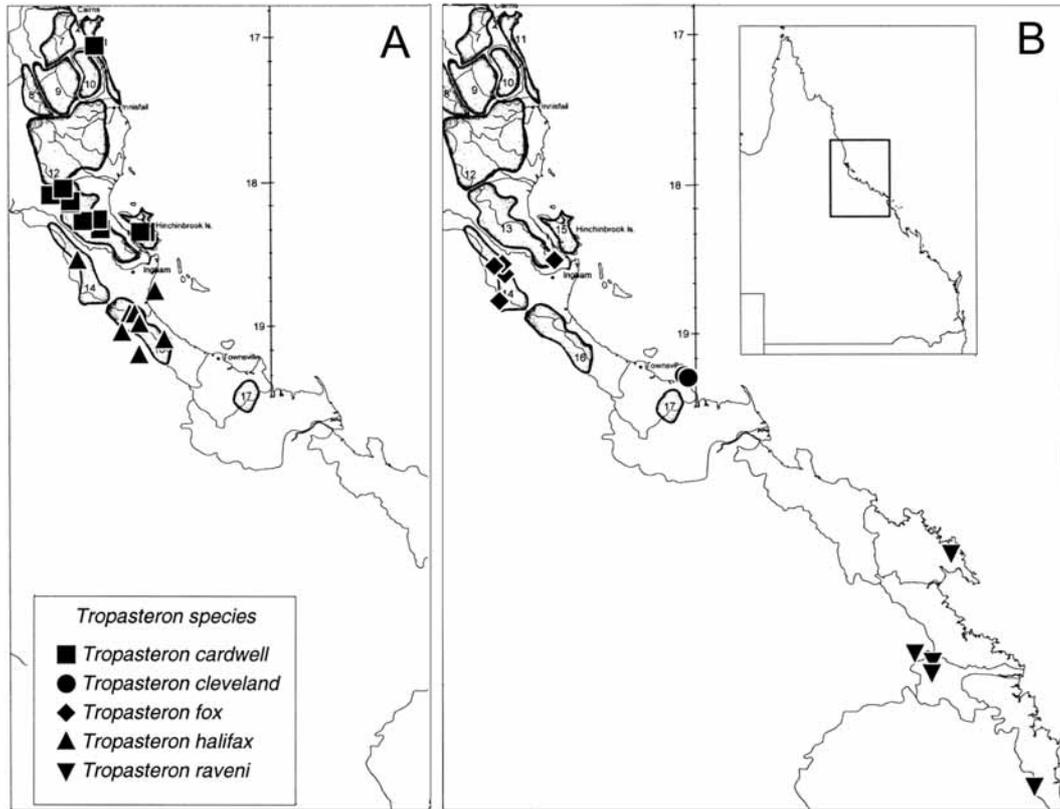


FIG. 29. Distribution of *Tropasteron* species A, *T. cardwell*, *T. halifax*; B, *T. cleveland*, *T. fox*, *T. raveni*.

palps and epigynes but distinct from all other genera of the *Asteron*-complex by their synapomorphies, mentioned in Table 1 (2, 6, 8, 9, 10, 11, 12, 13). Hence, it is difficult to find phylogenetic relationships within the separate species-groups, because parallel evolution obviously took place when ancient aridity events caused the loss of forest corridors connecting each block (Reid & Storey, 2000). Therefore, a complete phylogenetic analysis cannot be done. Nevertheless, there are quite a few character states (Table 1), which help to reconstruct some phylogenetic relations. Two quite distinct species-groups — *T. cleveland*-group and *T. andreae*-group — have evolved.

The combination of the most plesiomorphic characters:

(1) abdomen with 2 pairs of white dots on top and 1-3 dots in front of the spinnerets (Figs 1A, 12C, 19C), as it is found also in the outgroup *Pentasteron* and some other genera of the *Asteron*-complex e.g. in *Asteron*, *Leptasteron*.

(3) male palp with a short external prong of dorsal tibial apophysis (EP) (Figs 5A,D,F, 6B), occur only in 2 (*T. cleveland*, *T. raveni*) of 18 species in *T. cleveland*-group. All 16 other species have longer EP or a more evolved colour pattern with additional white dots.

T. andreae-group seems to be the more apomorphic group, because of (7) the more evolved cymbial flange with hook CH (Fig. 24A), (4) the dorsal tibial apophysis with EP distally flattened (Fig. 6G-J) and (12) the lyrifiform copulatory opening (CO) (Fig. 24D). *T. andreae* sp. nov. (5) without any basal bump (BB) on the external prong of the dorsal tibial apophysis seems to be the most plesiomorphic species in the *T. andreae*-group. All other more evolved species possess this basal bump.

Final phylogenetical results cannot be discussed here because the knowledge of relationships from all genera in the *Asteron*-complex are not yet known.

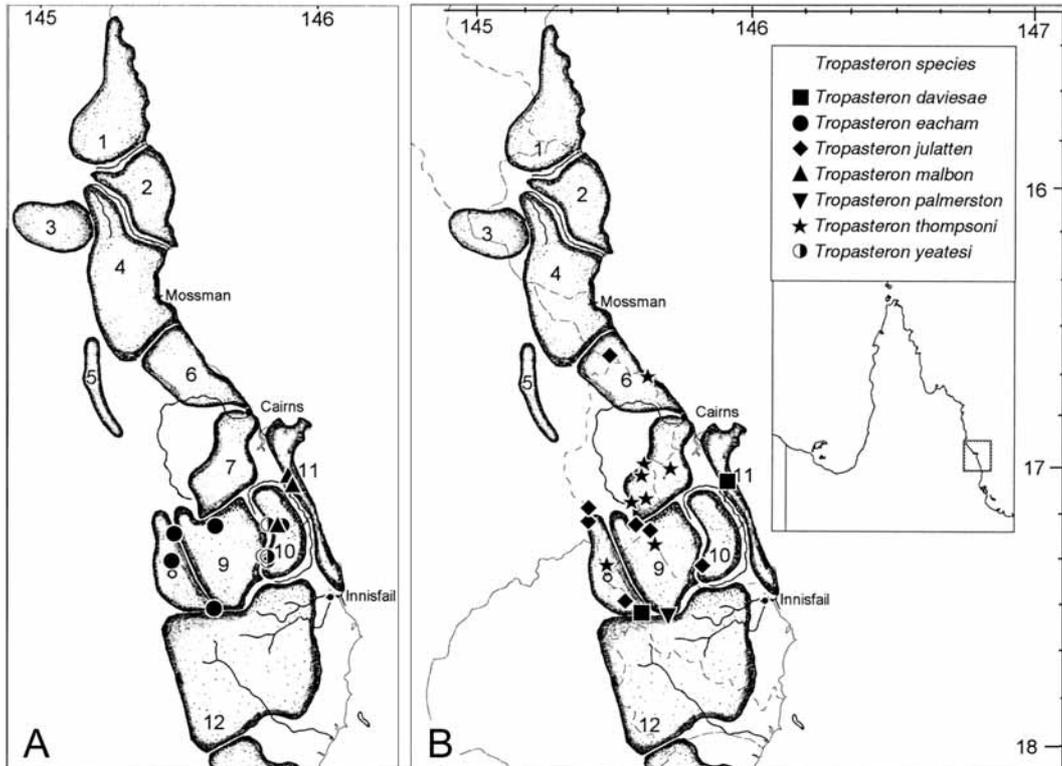


FIG. 30. Distribution of *Tropasteron* species A, *T. eacham*, *T. malbon*, *T. yeatesi*; B, *T. daviesae*, *T. julatten*, *T. palmerston*, *T. thompsoni*.

DISTRIBUTION AND BIOGEOGRAPHY

Methods used for collecting *Tropasteron* specimens were similar (pitfall trapping and hand collecting) and sampling effort has been effectively uniform across all sites. Hence, gaps or absences are taken here to be real and not simply an indication of heterogeneous sampling. Based on the examined material of *Tropasteron*, the following conclusions can be made.

All species of the *T. andreae*-group are highly endemic to single localities (Table 2). They are allopatric on the three northern massifs and include a southern outlier at Eungella (*T. andreae*). Their main centre of diversity is in the most northern rainforest blocks: 1 Mt Finnigan (*T. robertsi*), 2 Thornton Peak (*T. magnum*), 4 Carbine Tableland (*T. pseudomagnum*). At all these sites, species of the *T. andreae*-group are sympatric with those of the *T. cleveland*-group.

The much bigger and more diverse *T. cleveland*-group, with 18 species, occurs from Iron Range with its centre in Wet Tropics and also a southern

outlier at Carmila (*T. raveni*). Of the other two species that occur outside the WTWHA, most material of *T. tribulation* is from Cape Tribulation and Shiptons Flat with a northern outlier from Iron Range (1 ♂) and the southern *T. cleveland* to which mountain it is endemic both in areas of rainforest and open forest at Cape Cleveland. None of the species at the limits of the genus distribution are sympatric with any other species. As in other examined taxa with low vagility (e.g. beetles: Baehr, 1995; Bouchard, 2002; Reid & Storey, 2000) the main centre of diversity of *T. cleveland*-group is in the northern part of the mountain/rainforest blocks of North Queensland (defined by Monteith, 1995), with 2-4 species in each block: 14 (Seaview Ra.: *T. halifax*, *T. fox*), 13 (Cardwell Ra.: *T. fox*, *T. cardwell*), 12 (Walter Hill Ra.: *T. daviesae*, *T. palmerston*), 11 (Malbon Thompson Ra.: *T. cardwell*, *T. cooki*, *T. malbon*), 10 (Mt Bellenden Ker: *T. yeates*, *T. malbon*), 9 (Atherton Tableland: *T. eacham*, *T. julatten*, *T. thompsoni*), 8

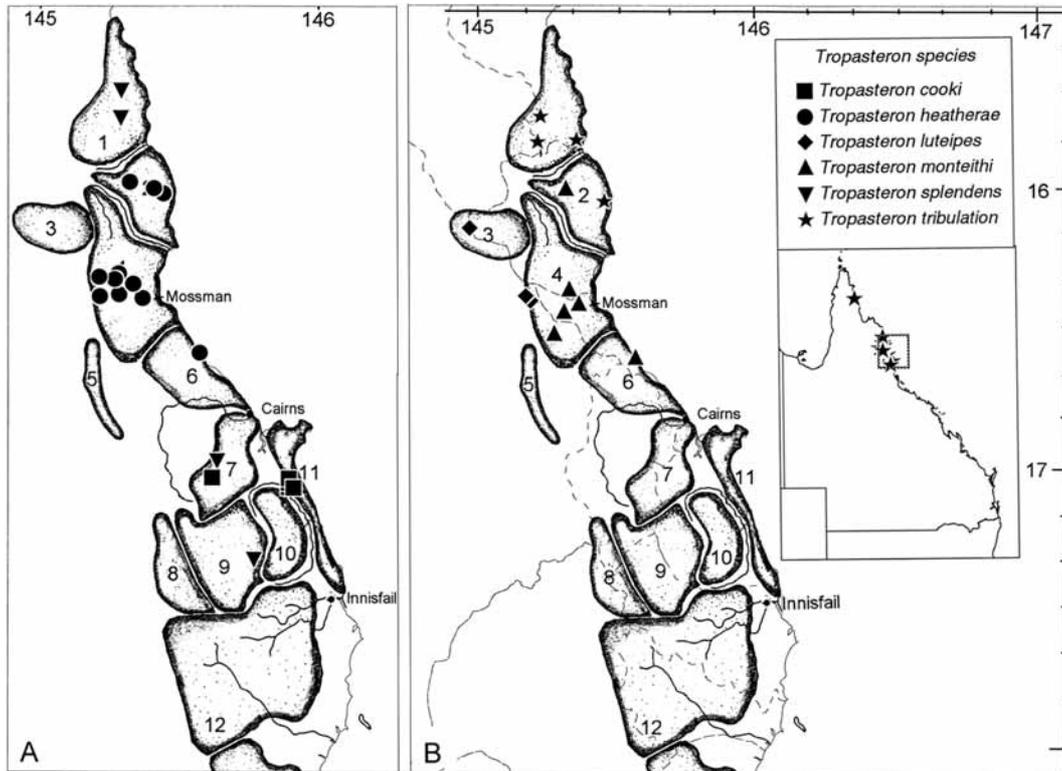


FIG. 31. Distribution of *Tropasteron* species A, *T. luteipes*, *T. monteithi*, *T. tribulation*; B, *T. cooki*, *T. heatherae*, *T. splendens*.

(Walsh/Hugh Nelson Ranges: *T. eacham*, *T. julattern*, *T. thompsoni*), 7 (Lamb Ra.: *T. cooki*, *T. splendens*, *T. thompsoni*), 6 (Black Mt: *T. julattern*, *T. thompsoni*), 4 (Carbine Tableland: *T. heatherae*, *T. monteithi*, *T. luteipes*), 2 (Thornton Peak: *T. heatherae*, *T. tribulation*), 1 (Mt Finnigan: *T. heatherae*, *T. splendens*, *T. tribulation*).

Margin rainforest blocks have only 1 or no species 17 (Mt Elliot 0), 16 (Paluma Ra.: *T.*

TABLE 1. Character states and their phylogenetical value in *Tropasteron*.

	Character	Plesiomorphic	Apomorphic
1	Abdominal pattern	2 pairs of white spots	with additional frontal and dorsal pairs
2	DtiA	roughly triangular	with 2 sharp tips (IP, EP)
3	DtiA external prong EP	short, about as long as wide	long, at least twice as long as wide
4	DtiA, EP, tip	sharp	distally flattened
5	DtiA, EP, basally	without bump	with basal bump
6	Cymbium retrolaterally	with flange	with additional small rounded extension
7	Flange on cymbium	straight	hook-shaped
8	Flange on cymbium	at least 1/3 of cymbium long	10-15% length of cymbium
9	LTA	not separated from tegulum	spine-like separated from tegulum
10	Base of embolus	not separated from tegulum	separated from tegulum, cylindrical
11	DTA	simple, spoon-shaped	semicircular, distally folded with short PE
12	Epigyne CO	inverted u or V-shaped	semicircular, to flat oval or lyriform
13	Epigyne CD	CD short only few loops	elongate with big semicircular distal loops

halifax), 15 (Hinchinbrook I: *T. cardwell*), 5 (Hann Tbl.: 0), 3 (Windsor Tbl.: *T. luteipes*).

In contrast to the above mentioned beetles, only about 40 % of the species (9 species) are endemic to 1 single rainforest block. The distribution ranges of most species are over 2 sometimes 3 adjacent rainforest blocks (Table 2). Hence, the main centre of species diversity is in the northern central part of the rainforest blocks in the Wet Tropics of Northern Queensland. According to their distribution pattern, both *T. andreae*-group and *T. cleveland*-group must have diverged or evolved before Eungella/Carmila and Mt Cleveland — where the most plesiomorphic species, *T. andreae*, *T. cleveland* and *T. raveni*, exist — were isolated from the main rainforest block.

Significantly, sympatric species have divergent abdominal patterns.

Within the WTWHA, synapomorphies could be found only for the *T. andreae* and *T. cleveland* group, but not for groups of species within each species group. All other species differ from each other in small differences in palp (length of LTA, length of EP) and or in colour pattern but no evolutionary pattern is evident. At least within *Tropasteron*, parallel evolution obviously took place, when, as a result of ancient arid incursions, the rainforest blocks split up.

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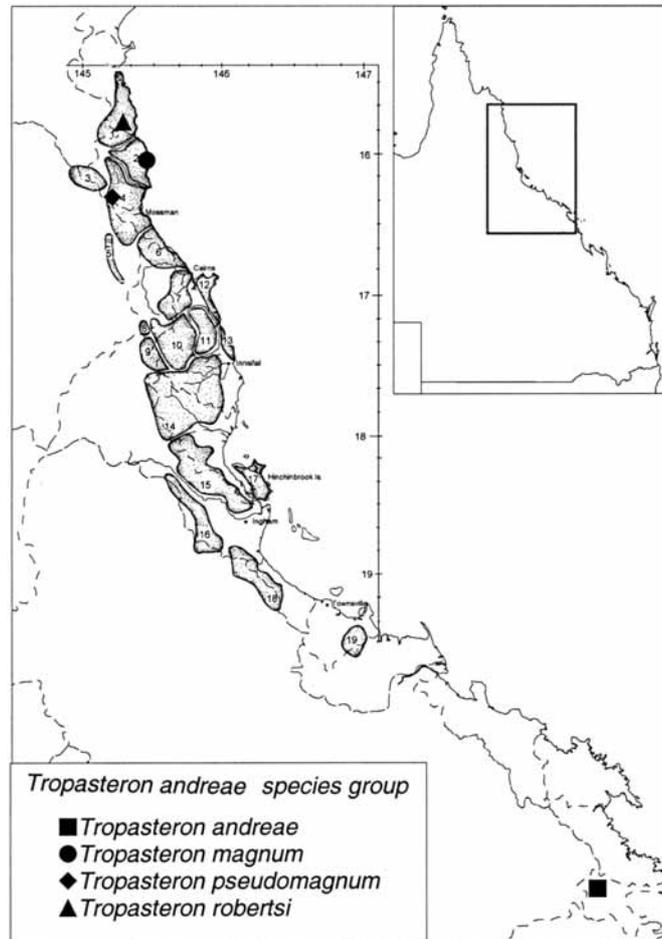


FIG. 32. Distribution of *Tropasteron* species *T. andreae*, *T. magnum*, *T. pseudomagnum*, *T. robertsi*.

Raven. Last, I thank Marshall from the Headlands Chalet (North Stradbroke Island) for providing a wonderful place and spirit for finishing the manuscript. The study is funded by the Australian Biological Resources Study Participatory Program.

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TABLE 2. Distribution of the *Tropasteron* species in the Mountain Rainforest Blocks (Fig. 28A), defined by Monteith (1995) modified in Bouchard (2002). Recorded altitudes are given. Number of examined specimens (in brackets); species in bold occur only at one block. Species are listed from North to South.

Species (specimens)	Altitude	Locality
<i>T. robertsi</i> (2)	1100m	1
<i>T. tribulation</i> (18)	50-730m	Iron Ra., 1, 2
<i>T. magnum</i> (2)	500m	2
<i>T. pseudomagnum</i> (4)	1250m	4
<i>T. splendens</i> (24)	700-1200m	1, 7
<i>T. heatherae</i> (50)	440-1330m	2, 4
<i>T. luteipes</i> (12)	1100-1180m	3, 4
<i>T. monteithi</i> (63)	600-1100m	4
<i>T. thompsoni</i> (28)	700-1200m	6, 7, 8, 9
<i>T. julatten</i> (36)	750-1100m	6, 8, 9
<i>T. cooki</i> (23)	850-1000m	7, 11
<i>T. eacham</i> (27)	750-1000m	8, 9
<i>T. malbon</i> (19)	500-900m	10, 11
<i>T. yeatesi</i> (106)	1054-1560m	10
<i>T. daviesae</i> (22)	800-1000m	12
<i>T. palmerston</i> (15)	670m	12
<i>T. cardwell</i> (74)	250-800m	11, 13, 15
<i>T. fox</i> (60)	500-650m	13, 14
<i>T. halifax</i> (87)	720-1050m	14, 16
<i>T. cleveland</i> (42)	500-560m	Mt Cleveland
<i>T. raveni</i> (44)	350m	C Qld, Carmila
<i>T. andreae</i> (3)	350m	Eungella NP

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