A review of the genus *Erotendomychus* Lea (Coleoptera: Endomychidae)

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Abstract – Species of the Australian genus *Erotendomychus* are reviewed. The following new species are described and illustrated: *E. dentatus, dorrigo*, *elongatus*, *emarginatus*, *erectus, joalah, kirrama, leai, micropunctatus*, *micrus*, *ovatus, peckorum, yeatesi*. Nomenclatural history, diagnoses and distribution are provided for each species. A key to the species of the genus is presented.

Résumé – **Révision du genre *Erotendomychus* Lea (Coleoptera: Endomychidae)**. Les espèces suivantes sont décrites et illustrées : *E. dentatus, dorrigo*, *elongatus*, *emarginatus*, *erectus, joalah, kirrama, leai, micropunctatus*, *micrus*, *ovatus, peckorum, yeatesi*. L'histoire nomenclaturale, les diagnoses et la distribution sont données pour chaque espèce. Une clé des espèces du genre est présentée.

Erotendomychus was described by Lea (1922) to accommodate his new species, *E. bimaculatus* from Victoria and New South Wales. Lea indicated *Erotendomychus* as "apparently an aberrant genus of Endomychidae", similar "at first glance… to small erotylids". Strohecker (1953) in his classification of the family Endomychidae placed *Erotendomychus* in a large and very diverse subfamily Mycetaeinae. Strohecker, however knew that this subfamily was a highly heterogenous group, united only by combination of characters like: small size, very rarely longer than 2.5 mm, tarsi 3-joined and linear or distinctly 4-joined and antennae 8-11 segmented. According to the recent classification of Endomychidae (Tomaszewska 2000), the subfamily Mycetaeinae includes only two genera (*Mycetaea* Stephens and *Agaricophilus* Motschulsky) while *Erotendomychus* was classified as a member of the subfamily Anamorphinae.

After almost 80 years from the first description by Lea, one more species (*E. lawrencei*) was added to the genus (Tomaszewska 2000). An additional, very rich material from the Australian National Insect Collection, the Queensland Museum and the Florida State Collection of Arthropods, allowed preparing a comprehensive revision of the genus *Erotendomychus* which turned to be a speciose taxon. Furthermore, after detailed studies of male genitalia of large material of *Erotendomychus* it was found that the type material of *E. lawrencei* (Tomaszewska 2000) included two discrete species. This revision clarifies the status of hitherto described species, adds 13 new species, bringing the total number of known species up to 15.

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Material and methods

Specimens examined were obtained from the following institutions:

ANIC	Australian National Insect Collection, Canberra, Australia
FSCA	Florida State Collection of Arthropods, Gainesville, Florida, USA
MIZ	Museum and Institute of Zoology, PAS, Warsaw, Poland
NHMB	Naturhistorisches Museum, Basel, Switzerland
NZAC	New Zealand Arthropod Collection, Auckland, New Zealand
QMB	Queensland Museum Brisbane, Australia.

The measurements were made using a micrometer attached to a dissecting microscope as follows: body length, from apical margin of clypeus to apex of elytra; width, across both elytra at widest part; pronotal length, from the middle of anterior margin to margin of basal foramen; pronotal width at widest part; elytral length along suture, including scutellum. External feature

drawings (made from dry specimens or preserved in glycerine), and the internal structures (preserved in glycerine), were drawn using a camera lucida attached to an Olympus (SZH10) dissecting microscope. The photographs of the beetles were executed on ProgRes 3012 digital camera and enhanced using Auto Montage software. The distribution maps were produced from BioLink.

SYSTEMATICS

Genus ***Erotendomychus*** Lea

Erotendomychus Lea, 1922: 302. Type species, by monotypy, *Erotendomychus bimaculatus* Lea, 1922. – Tomaszewska 2000: 484 (description).

Diagnostic combination – Length 1.9-3.1 mm. Body (fig. 1, 2) long-oval to short-oval, moderately to strongly convex; shiny, smooth, covered with minute or moderately dense and long, suberect, pale setae; most often coarsely and densely punctured. Colour dark brown to black, sometimes with more or less distinct contrasting markings on elytra and/ or pronotum. Head weakly transverse; eyes large, oval, moderately prominent, coarsely faceted. Antennal sockets visible from above. Antenna about as long as head and prothorax together, 11-segmented with more or less distinct 3-segmented, narrow and loose club (sometimes looks like 2-segmented). Mandible bifid at apex, with blunt, large subapical tooth (looks like 3 apical teeth). Maxilla with terminal palpomere slightly shorter than remaining palpomeres combined, subcylindrical, rounded at apex. Labium with palpi widely separated basally; terminal palpomere slightly longer than wide, truncate at apex. Tentorium with anterior arms broadly fused medially, and widely divergent anteriorly; corpotentorium curved medially. Pronotum transverse, widest at base, almost as wide basally as base of elytra; hardly bordered laterally; sulci absent; anterior angles weakly produced, blunt; posterior angles almost right. Pronotal disc convex. Prosternal process very narrow and short. Scutellum very small. Mesoventrite with intercoxal process most often about as long as wide, rounded and prominent anteriorly, directed between front coxae to meet prosternum; broadly separates mesocoxae. Mesocoxal cavities widely closed outwardly; trochantin concealed. Elytron elongate-oval, most often strongly convex; epipleuron broad anteriorly, gradually tapering towards abdominal ventrite 2, thence abruptly, strongly narrowing towards ventrite 3 or 4, incomplete to apex. Metaventrite with anterior margin broadly bordered, especially behind coxae, and provided with large, postcoxal pits (one on each side); discrimen absent. Metacoxae oval, very widely separated. Hind wings brachypterous. Legs: trochanterofemoral attachment heteromeroid; tibia gradually widening towards tarsus, surrounded by short and stout spines. Tarsal formula 4-4-4 in both sexes; tarsomeres simple but almost in all species male tarsomeres 1 and 2 flattened dorso-ventrally and tarsi look somewhat pseudotrimerous. Abdomen with six freely articulated ventrites or sometimes only apex of ventrite 6 visible. Ventrite 1 longest, sometimes with shallow femoral lines and rarely with postcoxal pits. Sternite of male abdominal segment 9 with single apophysis. Median lobe moderately to well sclerotized, usually strongly curved; resting on its side when retracted. Tegmen almost always absent. Ovipositor weakly sclerotized with two, elongate coxites; styli present or absent. Spermatheca usually oval, membranous; accessory gland rounded and membranous.

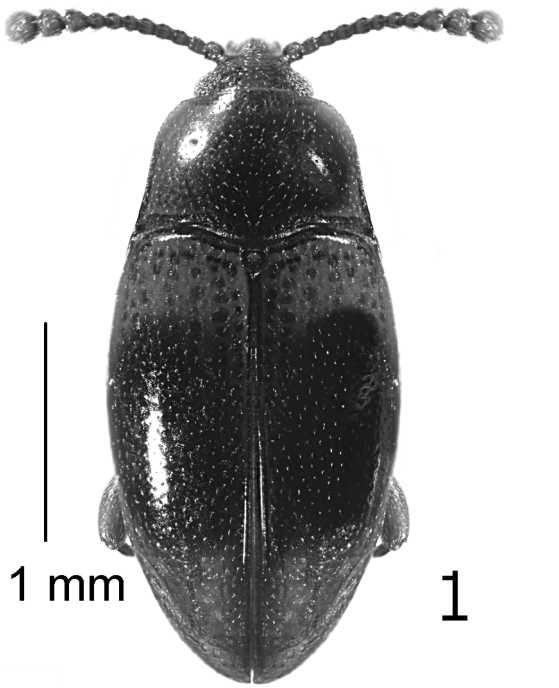


Figure 1
Erotendomychus bimaculatus Lea – Habitus.

Distribution – Australia (figs. 139-142).

Biology – Larvae unknown. Adults have been collected most often in Berlese funnels from leaf and log litter, rotten wood, flood debris and moss samples. Many species were also collected in pitfalls and some in flight intercept traps.

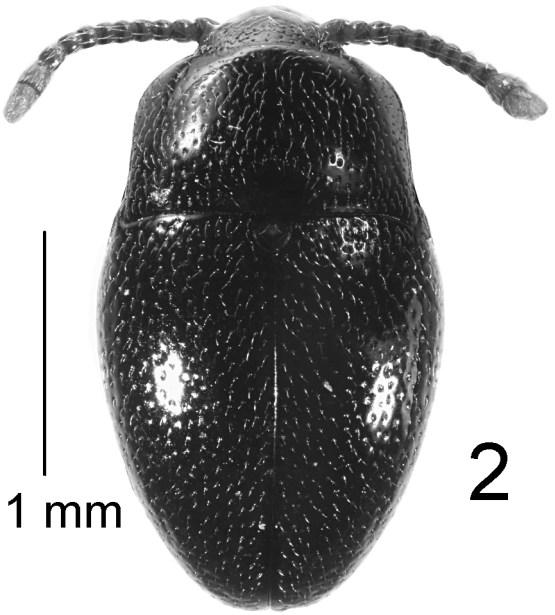


Figure 2
Erotendomychus lawrencei Tomaszewska – Habitus.

Key to the species of *Erotendomychus*

1. Abdominal ventrite 1 with large postcoxal pits (fig. 5); abdomen with five visible ventrites and apex of ventrite 6; ventrite 5 arcuate in both sexes (figs. 6, 7); elytron brown with black spot in mid length; fore and mid tarsi 4-segmented, simple in both sexes; body 2.10-2.18 times as long as wide; aedeagus as in figs. 10, 11; Victoria and NSW (fig. 140) . . . . . ***E. bimaculatus*** Lea
– Abdominal ventrites without postcoxal pits; abdomen with six ventrites visible; ventrite 5 truncate or emarginate; elytra not as above; fore and mid tarsi in male with tarsomeres 1 and 2 flattened dorso-ventrally; body 1.61-2.07 times as long as wide **2**
2. Abdominal ventrite 1 with femoral lines **3**
– Abdominal ventrite 1 without femoral lines (postcoxal area at most narrowly bordered) **6**
3. Intercoxal process of mesoventrite at least 1.5 times longer than wide and narrowly bordered laterally and anteriorly; male hind tibia with distinct thickness beyond mid length (figs. 15, 62) **4**
– Intercoxal process of mesoventrite at most slightly longer than wide and comparatively widely bordered laterally and anteriorly; hind tibiae simple in both sexes **5**
4. Femoral lines on ventrite 1 somewhat V-shaped (fig. 63); hind margin of male ventrite 5 distinctly emarginate medially (fig. 73); antennomere 3 as long as 2 and slightly longer than 4 (fig. 71); elytra coarsely punctured; aedeagus as in figs. 78, 79; NE Queensland (fig. 139) . . . . . ***E. kirrama*** n. sp.
– Femoral lines on ventrite 1 arcuate (fig. 16); hind margin of male ventrite 5 almost straight (fig. 17); antennomere 3 slightly longer than 2 and 4 (fig. 13); elytra moderately coarsely punctured; aedeagus as in figs. 20, 21; NE Queensland (fig. 139) . . . . . ***E. dentatus*** n. sp.
5. Ventrite 6 in female subtruncate at apex while in male gently arcuate (figs. 84, 86); antennomeres 3-8 subquadrate (fig. 81); coxites with styli small (fig. 90); intercoxal process of mesoventrite slightly wider at base than coxal diameter; elytral punctation moderately coarse and dense; aedeagus as in figs. 88, 89; QLD (fig. 141) . . . . . ***E. leai*** n. sp.
– Ventrite 6 subtruncate at apex in both sexes (figs. 93, 94); antennomeres 3-8 distinctly longer than wide (fig. 91); coxites without styli (fig. 99); intercoxal process of mesoventrite almost 1.5 times wider at base than coxal diameter; elytral punctation rather sparse and fine; aedeagus as in figs. 96, 97; NE QLD (fig. 141) . . . . . ***E. micropunctatus*** n. sp.
6. Elytra more elongate (1.29-1.33 times as long as wide); antennomere 3 longer than 2 (fig. 33, 39) **7**
– Elytra less elongate (at most 1.24 times as long as wide); antennomere 3 as long as 2 or shorter (fig. 46) **8**
7. Hind margin of male ventrite 5 strongly emarginate medially (fig. 41); male sternite 8 gently rounded apically and tergite with poined apex (fig. 42); antennomeres 4-7 at most as long as wide (fig. 39); aedeagus as in figs. 44, 45; NE NSW (fig. 139) . . . . . ***E. emarginatus*** n. sp.
– Hind margin of male ventrite 5 weakly emarginate medially (fig. 35); male sternite 8 subtruncate at apex and tergite arcuate (fig. 35); antennomeres 4-7 longer than wide (fig. 33); aedeagus as in figs. 37, 38; QLD (fig. 142) . . . . . ***E. elongatus*** n. sp.
8. Body more elongate (1.94 times longer than wide); elytra 1.28 times wider than pronotum; intercoxal process of mesoventrite slightly narrower at base than coxal diameter; aedeagus thin and straight throughout most of its length (figs. 50, 51); ME Queensland (fig. 140) . . . . . ***E. erectus*** n. sp.
– Body less elongate (at most 1.87 times longer than wide); elytra at most 1.19 times wider than pronotum; intercoxal process of mesoventrite at least as wide at base as coxal diameter; aedeagus stout and strongly curved (figs. 78, 79) **9**
9. Antennomere 10 larger than terminal one (longer- and at least as wide as antennomere 11) (fig. 71); female sternite 8 truncate and tergite 8 almost truncate at apex (figs. 75, 76); aedeagus as in figs. 78, 79; Northern Queensland (fig. 139) . . . . . ***E. lawrencei*** Tomaszewska
– Antennomere 10 at least slightly smaller than terminal antennomere (figs. 130); female segment 8 with sternite and tergite not as above 10
10. Hind margin of female ventrite 6 subtruncate (fig. 134); terminal antennomere gently rounded at apex (fig. 130); antennomere 7 slightly smaller than antennomere 9; coxites without styli and spermatheca elongate (fig. 138); aedeagus as in figs. 136, 137; NE Queensland (fig. 140) . . . . . ***E. yeatesi*** n. sp.
– Hind margin of female ventrite 6 produced backwardly into narrow, rounded lobe (fig. 125); terminal anten-

nomere truncate at apex (fig. 121); antennomere 7 distinctly smaller than antennomere 9; coxites with styli and spermatheca oval (fig. 129) **11**

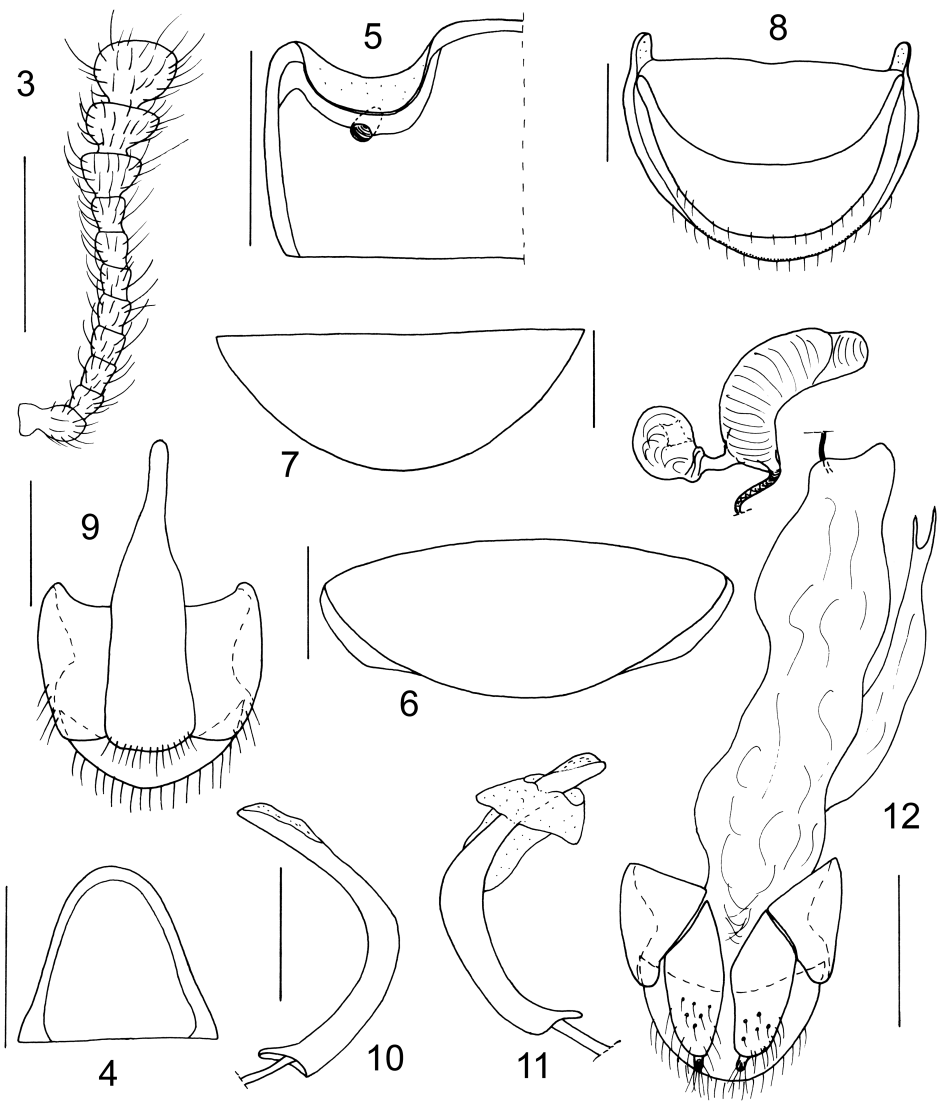
11. Dorsum densely punctured; hairs on pronotum much longer than spaces between punctures and on elytra at least as long as interspaces; female tergite 8 triangularly produced backwardly with somewhat pointed apex (fig. 125); [body most often black with some reddish reflections at least on pronotum; aedeagus as in figs. 128, 129]; NSW (fig. 142) . . . . . ***E. peckorum*** n. sp.

– Dorsum punctured moderately densely to sparsely; hairs on pronotum as long as spaces between punctures or slightly longer and on elytra as long as interspaces or shorter; female tergite 8 not pointed apically **12**

12. Antennal club distinctly 3-segmented (figs. 52, 110); intercoxal process of mesoventrite at least slightly longer than wide (figs. 53, 116); hind margin of male ventrite 5 scarcely emarginate or straight (figs. 54, 111) **13**

– Antennal club looking like 2-segmented (figs. 23, 100); intercoxal process of mesoventrite at most as long as wide or shorter (figs. 24, 101); hind margin of male ventrite 5 distinctly emarginate medially (figs. 25, 102) **14**

13. Antennomere 2 longer than 3 (fig. 110); dorsum punctured sparcely and finely; body less elongate (1.61-1.69



Figures 3-12
Erotendomychus bimaculatus Lea. – 3, Antenna. – 4 intercoxal process of mesoventrite. – 5, abdominal ventrite 1. – 6, abdominal ventrite 5, male. – 7, abdominal ventrite 5, female. – 8, abdominal segment 8, male, ventral. – 9, male genital segment, ventral. – 10, median lobe, ventral. – 11, aedeagus, dorsal. – 12, female genitalia, ventral view. Scale bar = 0.5 mm for Figures 3, 5. Scale bar = 0.2 mm for Figures 4, 6, 7, 8, 9, 10, 11, 12.

times as long as wide); pronotum 0.54-0.56 times longer than wide; aedeagus is in figs. 118, 119; SE Queensland (fig. 142) . . . . . ***E. ovatus*** n. sp.

– Antennomere 2 as long as 3 (fig. 52); dorsum punctured rather densely and coarsely; body more elongate (1.72-1.84 times as long as wide); pronotum 0.57-0.63 times longer than wide; aedeagus is in figs. 57, 58; NE NSW and SE Queensland (fig. 140) . . . . . ***E. joalah*** n. sp.

14. Punctuation of dorsal surface of body rather sparse and fine; dorsum of body most often bicoloured; antennomere 3 longer than 4 (fig. 100); male sternite 8 rounded at apex (fig. 103); aedeagus as in figs. 107, 108; NSW (fig. 139) . . . . . ***E. micrus*** n. sp.

– Punctuation of dorsal surface of body moderately coarse and dense; dorsum of body unicoloured; antennomere 3 as long as 4 (fig. 23); male sternite 8 narrowly rounded or somewhat truncate at apex (fig. 27); aedeagus as in figs. 30, 31; NSW (fig. 141) . . . . . ***E. dorrigo*** n. sp.

Erotendomychus bimaculatus Lea
(figs. 1, 3-12)

Erotendomychus bimaculatus Lea 1922: 303. – Strohecker (1953: 34).

Diagnosis – This is the most distinctive species of the genus characterized by its elongate and moderately convex body, elytron orange-brown with black spot and with rows of dark micropunctures; tarsi simple in both sexes and the abdominal ventrite 1 with large postcoxal pits.

Redescription – Length 2.70-3.10 mm. Body (fig. 1) long-oval, 2.10-2.18 times as long as broad, moderately convex, strongly shiny; very finely and sparsely punctured on pronotum, with more or less distinct regular rows of coarse, dark punctures on elytra. Vestiture consists of minute, pale hairs. Body dark reddish-brown, with at least part of pronotum black (sometimes pronotum entirely black with only angles pale); each elytron with one black, moderately large or large spot in middle length. Antenna (fig. 3) with distinctly 3-segmented club; antennomeres 2-8 subequal in size, almost as long as wide. Pronotum 0.65-0.66 times as long as broad; anterior angles rounded, posterior angles right-angled or weakly acute. Elytra 1.38-1.50 times as long as broad; 2.60-3.00 times as long as pronotum, 1.22-1.31 times as broad as pronotum; widest near basal third; blunt at apices. Mesoventrite with intercoxal process (fig. 4) almost as long as broad. Metaventrite and abdominal ventrite 1 (fig. 5) with anterior margin broadly bordered anteriorly, provided with large postcoxal pits. Abdominal ventrite 5 widely rounded apically in both sexes (figs. 6, 7); male segment 8 with sternite subtruncate and tergite rounded apically (fig. 8). Male genital segment as in fig. 9. Aedeagus (figs. 10, 11) curved; penis thin, weakly sclerotized; tegmen small, reduced, submembranous. Ovipositor (fig. 12) moderately sclerotized, with distinct, terminal styli; spermatheca long-oval, membranous with somewhat sclerotized apex; accessory gland small, round, membranous with internal sclerites.

Material examined – *Types* –Paratype, "*Erotendomychus bimaculatus*" cotype, Victoria/ Dividing Range, Blackburn's collection" (QMB).

Other material. *Erotendomychus bimaculatus* Lea, det. J.F. Lawrence, compared with holotype; Acheron Gap nr. Warburton, VIC 750 m, 28-30 IV.1978, S. & J. Peck; *Nothofagus* litter (1: ANIC); VIC. VAUS Exp. Study 37° 34' S 148° 39' E Rich Coupe 509.08, Gully site, pitfall traps, 28 Oct.-5 Nov. 1991, R. Coy coll. (1: ANIC); NSW, Kosciuszko NP, Mt. Kosciuszko, Thredbo, 7-8.X.1986, S. Kiener (1: NHMB; 1: MIZ).

Distribution – Victoria and New South Wales (fig. 140).

Erotendomychus dentatus n. sp.
(figs. 13-22)

Type material – *Holotype* ♀, QLD: Hinchinbrook Is. NE QLD, Gayundah Ck, 10 m, 8-18.XI.1984, pitfalls, Monteith, Thompson & Cook (QMB). – *Paratypes*: same data as holotype (1: QMB; 1: MIZ – completely dissected); same but 12.XI.1984, Monteith, Davies, Thompson & Gallon / QM Berlesate 669, 18.22S 146.13E, rainforest, 80 m, sieved litter (1: MIZ).

Diagnosis – This species is most similar to *E. kirrama* in sharing the male hind tibiae thickened beyond mid length and the intercoxal process of mesoventrite about 1.5 times longer than wide. Both species also have the femoral lines on abdominal ventrite 1 (present as well in *E. leai* and *E. micropunctatus*). *E. dentatus* differs from *E. kirrama* in having the hind margin of the male ventrite 5 almost straight (fig. 17), antennomere 3 longer than 2 (fig. 13), femoral lines arcuate (fig. 16) and the body less coarsely punctured.

Description – Length 2.07-2.27 mm. Body short-oval, 1.68-1.79 times as long as broad, convex, shiny; punctation moderately coarse but dense, irregular. Surface between pronotal punctures finely reticulate, and between elytral punctures very finely reticulate to highly polished. Hairs on pronotum distinctly longer than spaces between punctures, and on elytra at least as long as interspaces. Body brownish-black with antennae, mouthparts, legs and sometimes last abdominal ventrites brown. Antenna (fig. 13) with club more or less distinctly 3-segmented; antennomere 3 longer than 2 or 4; antennomeres 4-6 and 8 equal in size, about as long as wide; antennomere 7 slightly longer; terminal antennomere gently rounded to weakly sinuate at apex. Pronotum 0.55-0.63 times as long as broad. Elytra 1.12-1.27 times as long as broad; 2.23-2.41 times as long as pronotum, 1.12-1.16 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 14) distinctly longer than wide, about as wide basally as coxal diameter, moderately broadly bordered laterally and anteriorly. Male hind tibia with distinct thickness near apical third (fig. 15). Abdominal ventrite 1 without postcoxal pits, with postcoxal area very narrowly bordered and with shallow femoral lines; ventrite 5 rather simple in both sexes (figs. 17, 18); male segment 8 with sternite weakly arcuate apically, and tergite somewhat produced backwardly and narrowly rounded (Fig. 17); in female sternite and tergite 8 scarcely arcuate at apex (fig. 18). Male genital segment as in fig. 19. Aedeagus (figs. 20, 21) strongly curved, rather thin and

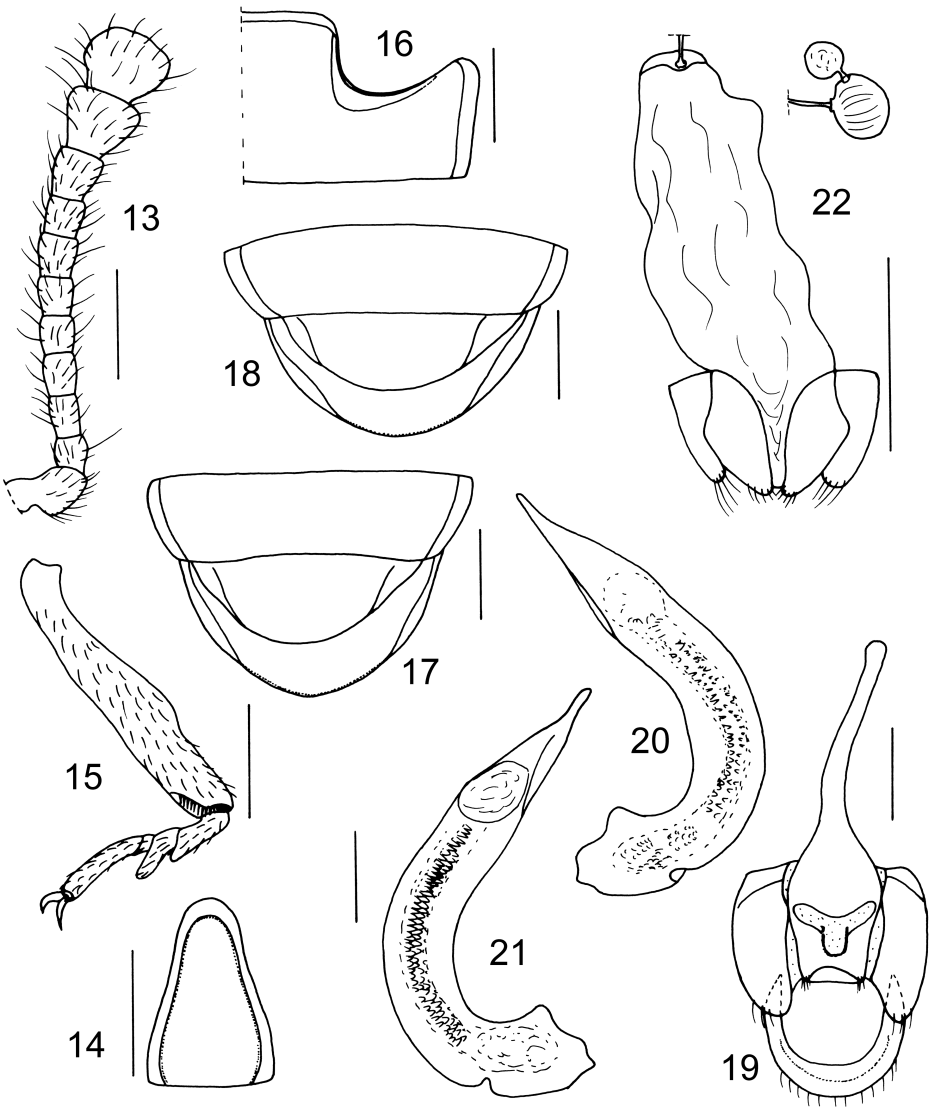
moderately stout, well sclerotized with distinct internal sclerites; tegmen absent. Female genitalia (fig. 22) moderately sclerotized; coxites without styli; spermatheca and accessory gland minute, rounded, and membranous.

Etymology – The name refers to the teeth-like internal sclerites of the median lobe found in this species.

Distribution – NE Queensland (fig. 139).

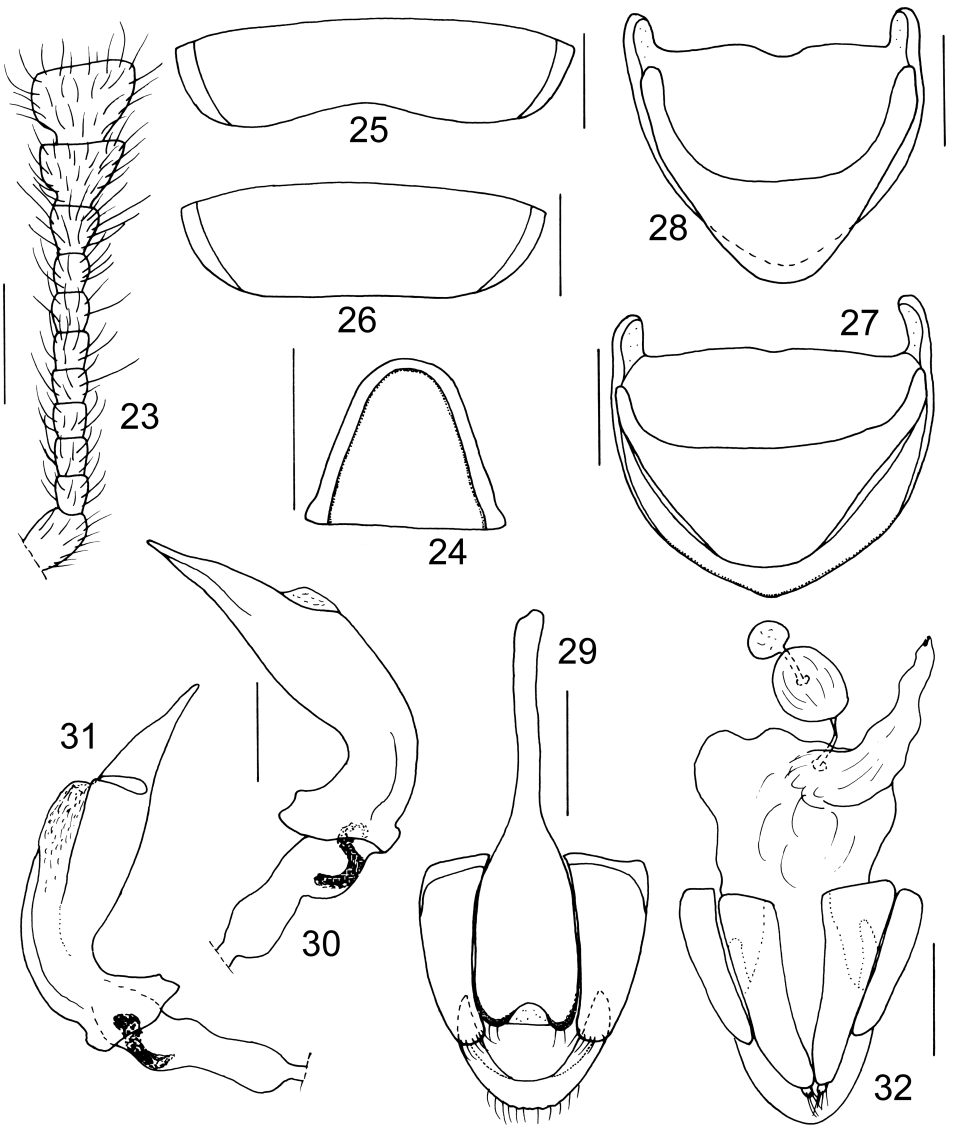
Erotendomychus dorrigo n. sp.
(figs. 23-32)

Type material – *Holotype*, ♂: "30° 23' S 152° 44' E, Dorrigo Nat. Pk. NSW 600 m, 14 June 1982, L. Hill / Berlesate, ANIC 838, closed forest litter / *Erotendomychus* sp. J.FL. "93./ *Erotendomychus lawrencei* Tomaszewska, paratype" (ANIC). – *Paratypes*, ♂: "Australia: NSW: Wiangaree SF, Brindle Ck, 740 m, 29.II-3.III.1980, subtrop. rainfor. A. Newton, M. Thayer / berlesed



Figures 13-22
Erotendomychus dentatus n. sp. – 13, Antenna. – 14 intercoxal process of mesoventrite. – 15, hind tibia and tarsus, male. – 16, abdominal ventrite 1. – 17, abdominal segments 7 and 8, male, ventral. – 18, abdominal segments 7 and 8, female, ventral. – 19, male genital segment, ventral. – 20, aedeagus, ventral. – 21, aedeagus, dorsal. – 22, female genitalia, ventral view. Scale bar = 0.5 mm for Figure 22. Scale bar = 0.2 mm for Figures 13, 14, 15, 16, 17, 18, 19, 20, 21.

from log & leaf litter / *Erotendomychus lawrencei* Tomaszewska, paratype" (MIZ, completely dissected on slide); NSW: Dorrigo NP, E end Blackbut Track, 710 m, 28.II.-5.III.1980, subtrop. rainforest, A. Newton, M. Thayer, berlesed from log & leaf litter (1: ANIC); same but 790 m, 5.III.1980 (2: ANIC; 2: MIZ); 30° 22' S 152° 43' E NSW, The Glade Area / Wonga Track, Dorrigo N.P., 13-15.XI.1990, T.A. Weir, Berlesate ANIC 1130, rainforest litter (1: ANIC; 1: MIZ); 30° 36' S to 30° 44' S & 152° 05' E to 152° 10' E, Styx R.SF. approx. SE Wollomombi, NSW, VIII.1993 – III.1994, D.S. Chandler, Berlesate ANIC 1839, 870-990 m, rotten wood / leaf litter (1: ANIC); 30° 37' S 152° 09' E NSW, Styx River SF., Falls Road, 22 km SE Wollomombi, 870 m, 25.VI.1993, D.S. Chandler, Berlesate ANIC 1668, old dry sclerophyl litter nr. dry stream (1: MIZ – dissected on slide); NSW Dorrigo Nat. Pk. 5.IX.1967, rainforest, E.B. Britton, c. 3,000 ft., ANIC Berlesate No. 27, leafmould (1: ANIC); 30° 30' S 152° 23' E NSW, New England NP., Wrights Lookout Tr. 1,330 m, 20.VI.1993, D.S. Chandler,



Figures 23-32
Erotendomychus dorrigo n. sp. – 23, Antenna. – 24, intercoxal process of mesoventrite. – 25, abdominal ventrite 5, male. – 26, abdominal ventrite 5, female. – 27, abdominal segment 8, male, ventral. – 28, abdominal segment 8, female, ventral. – 29, male genital segment, ventral. – 30, aedeagus, ventral. – 31, aedeagus, dorsal. – 32, female genitalia, ventral view. Scale bars = 0.2 mm.

Berlesate ANIC 1665, old cool temp. closed forest, *Nothofagus moorei* & log litter (1: ANIC); Dorrigo NP, 2.7 km NW Never Never, 760 m, 28.II-5.III.1980, subtrop. rainforest, A. Newton, M. Thayer, pitfall trap (1: ANIC).

Diagnosis – This species resembles *E. micrus*, but differs from it in having the body always unicoloured, dorsal surface of the body more coarsely and densely punctured, the intercoxal process of mesoventrite at least as long as wide, the hind margin of the male ventrite 6 somewhat truncate at apex (fig. 27) and the antennomere 3 as long as 4 (fig. 23).

Description – Length 2.02-2.56 mm. Body short-oval, 1.64-1.83 times as long as broad, convex, shiny; punctuation moderately coarse and dense, irregular. Surface between pronotal and elytral punctures feebly reticulate. Vestiture consists of golden hairs – on pronotum as long as spaces between punctures or slightly longer, and on elytra usually slightly shorter than interspaces (generally hairs on pronotum are slightly longer than those on elytra). Body dark brown to black or sometimes yellow (probably teneral), with a few rows of dark punctures on elytra; antennae, legs and mouthparts lighter. Antenna (fig. 23) with club indistinctly 3-segmented; antennomere 2 slightly longer than 3; antennomeres 3-6 subequal in size, almost as long as wide; antennomere 7 slightly longer and wider than 6 or 8. Pronotum 0.51-0.57 times as long as broad; anterior angles rounded, posterior angles weakly acute. Elytra 1.02-1.20 times as long as broad; 2.19-2.60 times as long as pronotum, 1.10-1.19 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 24) about as long as wide, comparatively broadly bordered laterally and anteriorly, subtriangular in shape. Abdominal ventrite 1 without postcoxal pits and femoral lines, with postcoxal area rather narrowly bordered; ventrite 5 in male emarginate and in female simple at apex (figs. 25, 26); male segment 8 with sternite narrowly rounded to somewhat truncate, and tergite weakly pointed at apex (fig. 27); in female sternite and tergite triangularly produced backwardly (fig. 28). Male genital segment as in fig. 29. Aedeagus (figs. 30, 31) comparatively strongly curved, stout, sclerotized; tegmen absent. Female genitalia (fig. 32) moderately sclerotized; coxites with styli small but distinct, terminal; spermatheca oval, membranous; accessory gland very small, round, membranous.

Etymology – The name of this new species refers to the Dorrigo National Park, the type locality.

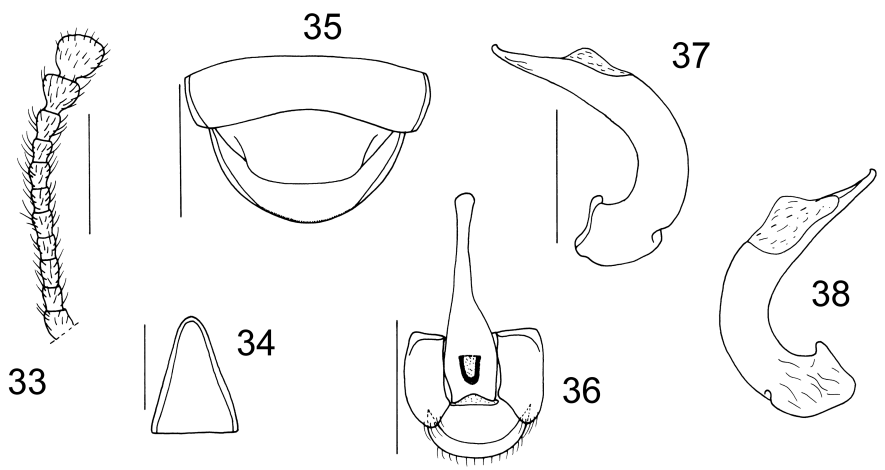
Distribution – NSW (fig. 141).

Erotendomychus elongatus n. sp.
(figs. 33-38)

Type material – **Holotype** ♂: "QLD, 1,140 m, nr. Mt. Haig, 30.VI.1971, Taylor, Feehan" (ANIC). – **Paratype** ♂: "QLD, 840 m, Mt. Tiptree, 29.VI.1971, Taylor, Feehan" (1: MIZ).

Diagnosis – Most similar to *E. emarginatus* having the body about twice as long as wide, the elytra about 1.3 times longer than wide and antennomere 3 longer than 2. It can be separated from *E. emarginatus* in having the hind margin of the male ventrite 5 less emarginate medially (fig. 35), the male ventrite 6 subtruncate at apex (fig. 35), antennomere 7 only slightly smaller than antennomere 9 (fig. 33) and intercoxal process of mesoventrite triangular with narrowly rounded anterior angle (fig. 34).

Description – Length 2.70-2.77 mm. Body long-oval, 1.98-2.07 times as long as broad, convex, shiny; punctation moderately coarse and comparatively dense, irregular. Surface between prono-



Figures 33-38
Erotendomychus elongatus n. sp. – 33, Antenna. – 34, intercoxal process of mesoventrite. – 35, abdominal segments 7 and 8, male, ventral. – 36, male genital segment, ventral. – 37, aedeagus, ventral. – 38, aedeagus, dorsal. Scale bar = 0.5 for Figures 33, 35, 36, 37, 38. Scale bar = 0.2 mm for Figure 34.

tal and elytral punctures highly polished. Hairs on pronotum distinctly longer than spaces between punctures, and on elytra usually as long as interspaces with a tendency to be slightly longer than interspaces on sides and slightly shorter than interspaces on disc. Body either almost uniformly dark brown or black, then anterior margin of pronotum medially and angles, posterior margin of pronotum medially and apex of elytra dark brown, while ventral surface of head, prothorax, antennae, fore and mid legs and two last ventrites brown, and meso-, metaventrite, ventrite 1 and hind legs deeply infuscated to black. Antenna (fig. 33) with club indistinctly 3-segmented; antennomeres 2-8 longer than wide; antennomere 3 longer than 2 or 4; antennomeres 4, 6 and 8 subequal in length, slightly shorter than antennomeres 5 and 7 that are equal in length; antennomere 9 only slightly longer and wider than 7; terminal antennomere weakly rounded to somewhat sinuate at apex. Pronotum 0.65-0.66 times as long as broad. Elytra 1.29-1.33 times as long as broad; 2.27-2.37 times as long as pronotum, 1.15-1.16 times as broad as pronotum; widest near basal third, thence narrowing towards their apices. Mesoventrite with intercoxal process (fig. 34) triangular in shape; about 1.30 times longer than wide, as wide basally as coxal diameter, narrowly bordered laterally and anteriorly. Abdominal ventrite 1 without postcoxal pits and femoral lines, and postcoxal area very narrowly bordered; ventrite 5 in male weakly emarginate medially (fig. 35); male segment 8 with sternite subtruncate, and tergite strongly arcuate (fig. 35). Male genital segment as in fig. 36. Aedeagus (figs. 37, 38) strongly curved, moderately large and stout, well sclerotized; tegmen absent.

Female unknown.

Variation – This species is represented by two different forms of body colouration. The specimen from Mt. Haig is almost uniformly brown, while the specimen from Mt. Tiptree has more complicated body colouration – as described above.

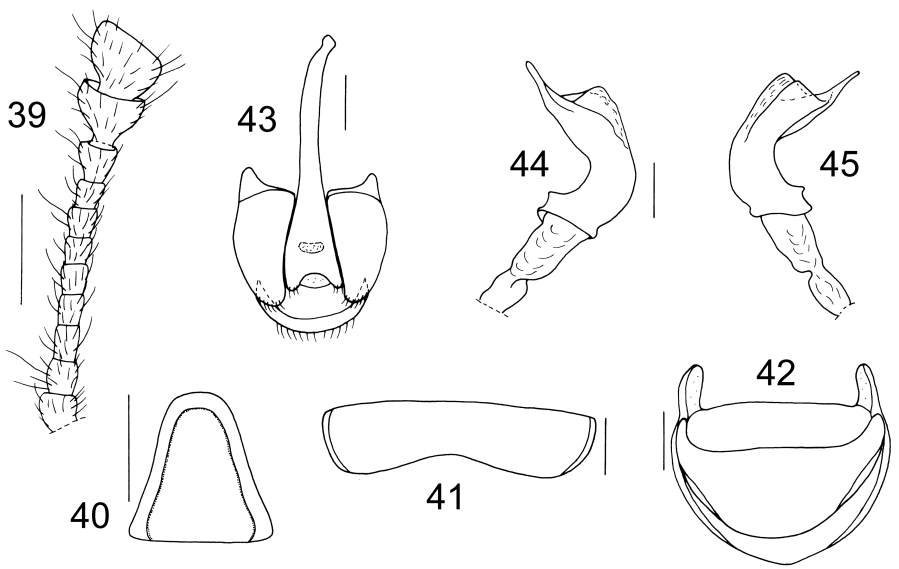
Etymology – The name *elongatus* refers to the elongate body of this species.

Distribution – Queensland (fig. 142).

Erotendomychus emarginatus n. sp.
(figs 39-45)

Type material – **Holotype** ♂: "NSW (NE), Gibraltar Range N.P. 10.XI.1980, G.B. Monteith/ QM Berlesate No. 270, rainforest, granite, sieved litter" (QMB). – **Paratype** ♂, same data as holotype (MIZ).

Diagnosis – This species resembles *E. elongatus* and *E. erectus* in general body shape, being about twice as long as wide with the elytra about 1.3 times longer than wide. *E. emarginatus* shares also with *E. elongatus* the shape of antennomere 3 which is longer than 2. The hind margin of the male ventrite 5 which is strongly emarginate medially (fig. 41), the male tergite 8 somewhat pointed at apex (fig. 42) and a differently shaped intercoxal process of mesoventrite (fig. 40) will separate *E. emarginatus* from both above mentioned species. Moreover the male ventrite 6 which is gently rounded at apex (fig. 42) and the antennomere 7 much smaller than 9 distinguish *E. emarginatus* from *E. elongatus.* The antennomere 3 which is longer than 2, the dorsal surface



Figures 39-45
Erotendomychus emarginatus n. sp. – 39, Antenna. – 40, intercoxal process of mesoventrite. – 41, abdominal ventrite 5, male. – 42, abdominal segment 8, male, ventral. – 43, male genital segment, ventral. – 44, aedeagus, ventral. – 45, aedeagus, dorsal. Scale bars = 0.2 mm.

of the body punctured much coarsely and densely, and the very differently shaped male genitalia (figs. 44, 45) separate *E. emarginatus* from *E. erectus*.

Description – Length 2.50-2.82 mm. Body elongate-oval, 1.84-2.01 times as long as broad, convex, shiny; punctation moderately coarse, irregular, dense on pronotum and base of elytra, with hairs much longer than spaces between punctures, and moderately dense from basal fifth to elytral apex, then with hairs shorter than interspaces. Surface between pronotal and elytral punctures densely reticulate. Body dark reddish-black with antennae and legs infuscated and mouthparts brown. Antenna (fig. 39) with club indistinctly 3-segmented (antennomere 9 much narrower than 10 or 11); antennomere 3 slightly longer than 2 or 4; antennomeres 4-5 equal in size, scarcely longer than wide; antennomere 6 and 8 equal in size, as long as wide, shorter than antennomere 7 or 5; terminal antennomere truncate at apex. Pronotum 0.60-0.63 times as long as broad. Elytra 1.31-1.32 times as long as broad; 2.41-2.73 times as long as pronotum, 1.17-1.24 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 40) almost as long as wide, as wide as coxal diameter, rather narrowly bordered laterally and anteriorly, subtriangular in shape. Abdominal ventrite 1 without postcoxal pits and femoral lines, with postcoxal area very narrowly bordered; ventrite 5 in male with hind margin deeply emarginate medially (figs. 41); male segment 8 with sternite widely rounded, and tergite pointed apically (fig. 42). Male genital segment as in fig. 43. Aedeagus (figs. 44, 45) strongly curved, short and stout, sclerotized; tegmen absent.

Female unknown.

Etymology – The name *emarginatus* refers to the deeply emarginate 5th abdominal ventrite of male.

Distribution – New South Wales (fig. 139).

Erotendomychus erectus n. sp.
(figs. 46-51)

Type material – **Holotype**, ♂: "QLD, ME: Kroombit Tops, 65 km SW Gladstone, 22-26.II.1982, G. Monteith & G. Thompson / QM Berlesate No. 383, 24° 22' S 150° 59' E, rainforest, 1100 m, sieved litter" (QMB).

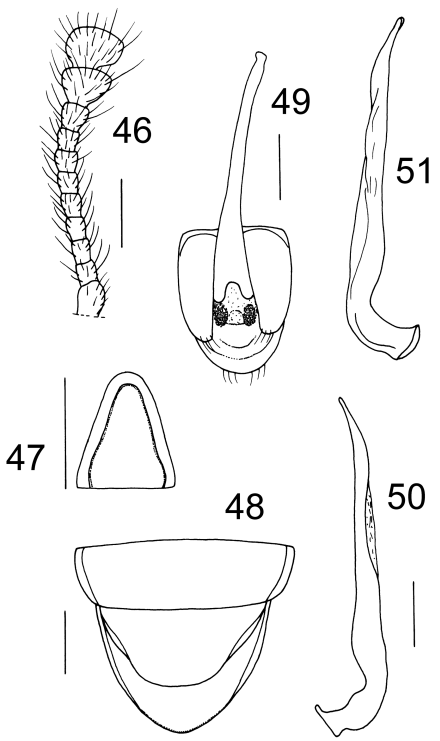
Diagnosis – Similar to *E. emarginatus* and *E. elongatus* but is distinguished from both species in having the intercoxal process of mesoventrite narrower than coxal diameter, hind margin of the male ventrite 5 straight and the very peculiar shape of the aedeagus (figs. 50, 51).

Description – Length 2.23 mm. Body elongate-oval, 1.94 times as long as broad, convex, shiny; punctation moderately dense and rather fine, irregular. Hairs on pronotum longer than spaces between punctures, and on elytra shorter than interspaces. Surface between pronotal and elytral punctures rather densely reticulate. Body dark brown with femora partially infuscated, antennae and tarsi light brown. Antenna (fig. 46) with more or less distinct 3-segmented club; antennomeres 2-5 subequal in size, slightly longer than wide; antennomeres 6-8 subequal in size, as long as wide, or antennomere 7 scarcely wider than 6 or 8; terminal antennomere gently rounded at apex. Pronotum 0.64 times as long as broad. Elytra 1.20 times as long as broad; 2.38 times as long as pronotum, 1.28 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 47) triangular in shape, weakly elongate, slightly narrower at base than coxal diameter, rather narrowly bordered laterally and anteriorly. Abdominal ventrite 1 without postcoxal pits and femoral lines, with postcoxal area very narrowly bordered; ventrite 5 in male simple (fig. 48); male segment 8 with sternite gently rounded to subtruncate at apex and tergite produced backwarly into a narrow rounded lobe (fig. 48). Male genital segment as in fig. 49. Aedeagus (figs. 50, 51) comparatively long and thin, well sclerotized, straight almost throught its length and curved only near base; tegmen absent.

Female unknown.

Etymology – The name *erectus* refers to the straight median lobe (almost throughout of its length), not observed in other examined species of the genus.

Distribution – Queensland (fig. 140).

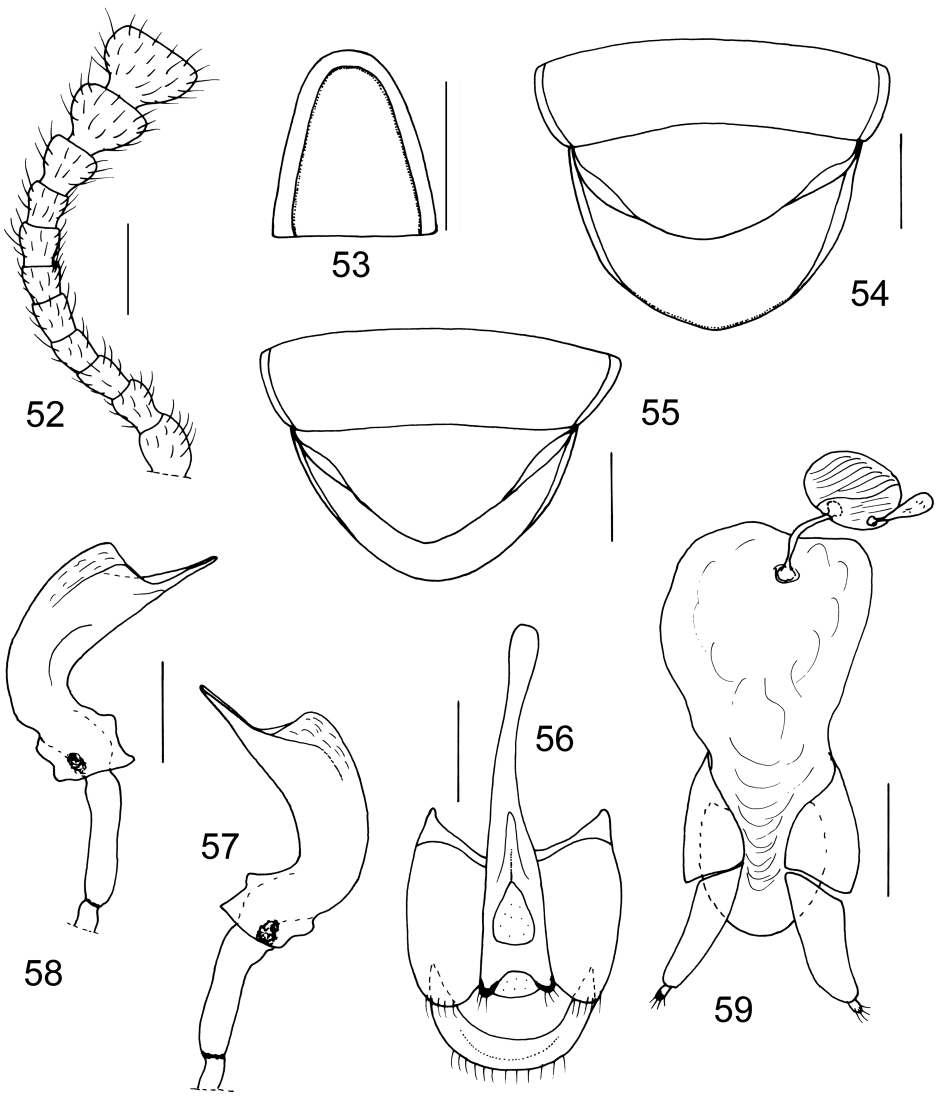


Figures 46-51
Erotendomychus erectus n. sp. – 46, Antenna. – 47, intercoxal process of mesoventrite. – 48, abdominal segments 7 and 8, male, ventral. – 49, male genital segment, ventral. – 50, aedeagus, ventral. – 51, aedeagus, dorsal. Scale bars = 0.2 mm.

Erotendomychus joalah n. sp.
(figs. 52-59)

Type material – **Holotype** ♂, QLD: 27° 55' S 153° 12' E Joalah Nat. Park QLD, rainforest c. 380 m, 14.III.1973 (ANIC). – **Paratypes**: same data as holotype (2: ANIC); same and Berlesate ANIC, 453, R.W. Taylor (1: ANIC; 1: MIZ); same but Berlesate No. 452, R.J. Kohout (1: ANIC); Joalah Nat. Park, Tambourine Mt, 23.VII.1979, J.F. Lawrence / ANIC Berlesate No. 656, litter and flood debris (2: MIZ – completely dissected); 27° 56' S 153° 11' E QLD, SSW N. Tambourine, 31.XII.1988, #9833, P.S. Ward, ex sifted litter (leaf mold, rotten wood) rainforest (1: ANIC); SEQ: 27° 36' S 153° 13' E, Mt. Cotton, Scott's Dam, 12.XII.1997-7.V.1998, G.B. Monteith, 5808, rainforest, intercept, 120 m. (1: QMB; 1: MIZ – completely dissected); same but 5809 (1: QMB; 1: MIZ); same but Mt. Cotton, upper gully, 150 m, rainforest, pitfall. 5810 (QMB); 28° 24' S 153° 16' E NSW, Mt. Warning NP, 400 m, 19.VI.1993, D.S. Chandler, Berlesate ANIC 1656, subtr. closed forest, litter in dry streambed (1: MIZ); Lamgtn. Nat. Park, 4 km NNW O'Reilly's dry rainforest, 11.IV.1993, C. Carlton, D. Chandler, ex: sifting (1: NZAC).

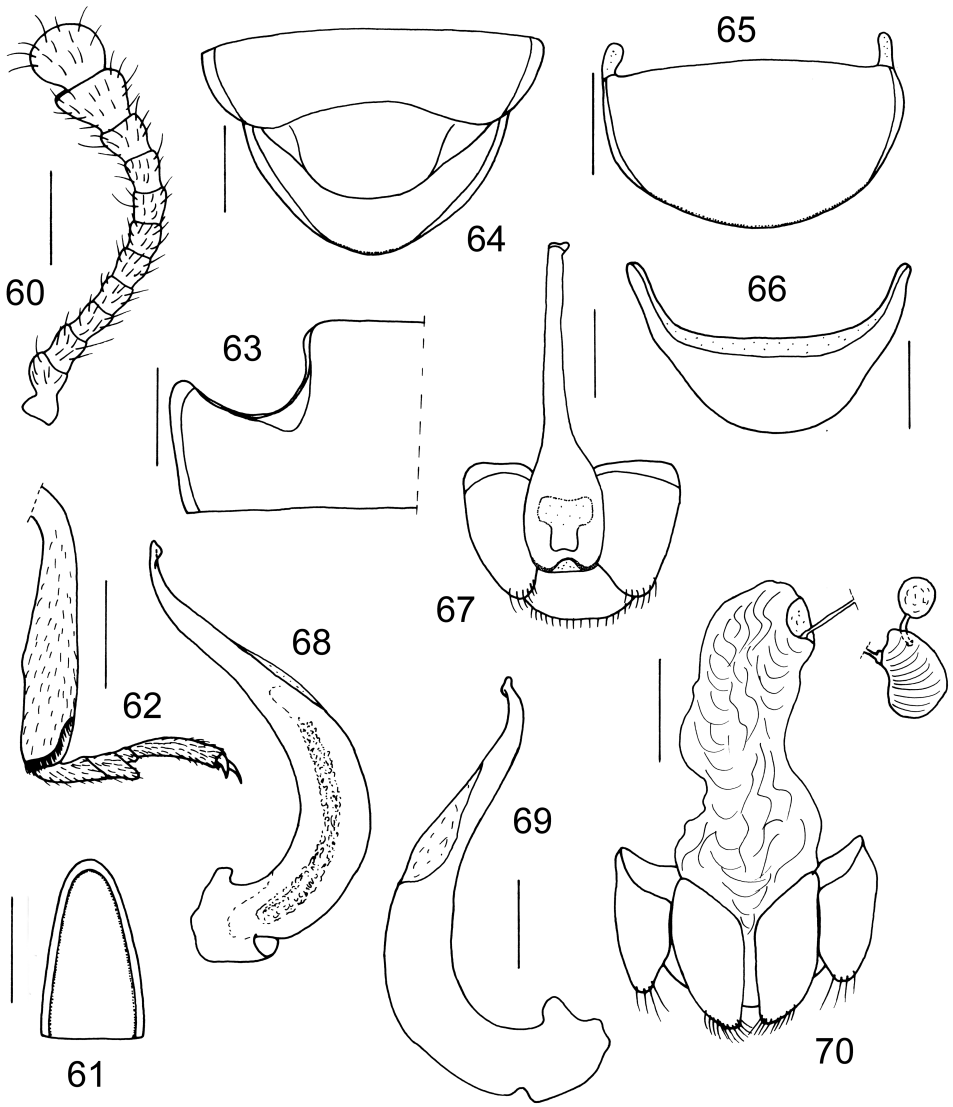
Diagnosis – This species resembles *E. peckorum* and *E. dorrigo*, but the female ventrite 6 with almost pointed apex (Fig. 55) separate it from both these species.



Figures 52-59
Erotendomychus joalah n. sp. – 52, Antenna . – 53, intercoxal process of mesoventrite. – 54, abdominal segments 7 and 8, male, ventral. – 55, abdominal segments 7 and 8, female, ventral. – 56, male genital segment, ventral. – 57, aedeagus, ventral. – 58, aedeagus, dorsal. – 59, female genitalia, ventral view. Scale bars = 0.2 mm.

Additionally *E. joalah* differs from *E. dorrigo* in having the antennal club distinctly 3-segmented (fig. 52), the intercoxal process of mesoventrite of different shape (fig. 53) and the male ventrite 6 arcuate apically (fig. 54), and from *E. peckorum* it differs in having the body less densely punctured, the hairs on the pronotum and elytra shorter and antennomere 4 shorter than 5.

Description – Length 2.23-2.46 mm. Body oval, 1.72-1.84 times as long as broad, convex, very shiny; punctation moderately coarse, irregular, dense on sides of pronotum and moderately dense on pronotal disc and elytra. Hairs on pronotum distinctly longer than spaces between punctures, and on elytra at most as long as interspaces. Surface between pronotal and elytral punctures usually finely reticulate. Body black, reddish-black or deep reddish and yellow (probably immature), legs infuscated to black and antennae, and mouthparts brown. Antenna (fig. 52) with club 3-segmented; antennomere 3 as long as 2 and 5, and slightly longer than 4; antennomeres 4, 6 equal in size, about as long as wide; antennomere 7 and 8 equal in size, slightly longer and wider than antennomere 6; terminal antennomere truncate at apex. Pronotum 0.57-0.63 times as long as broad. Elytra 1.13-1.24 times as long



Figures 60-70
Erotendomychus kirrama n. sp. – 60, Antenna. – 61, intercoxal process of mesoventrite. – 62, hind tibia and tarsus, male. – 63, abdominal ventrite 1. – 64, abdominal segments 7 and 8, male, ventral. – 65, abdominal tergite 8, female, ventral view. – 66, ventrite 6, female. – 67, male genital segment, ventral. – 68, aedeagus, ventral; 69, aedeagus, dorsal. – 70, female genitalia, ventral view. Scale bars = 0.2 mm.

as broad; 2.11-2.36 times as long as pronotum, 1.08-1.17 times as broad as pronotum; heart-shaped, widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 53) weakly elongate, as wide as coxal diameter, narrowly bordered laterally and anteriorly, subtriangular in shape. Abdominal ventrite 1 without postcoxal pits and femoral lines, with postcoxal area very narrowly bordered; male ventrite 5 simple (figs. 54); male segment 8 with sternite and tergite widely rounded apically (fig. 54); in female sternite 8 narrowly produced backwards and tergite rounded at apex (fig. 55). Male genital segment as in fig. 56. Aedeagus (figs. 57, 58) strongly curved, short and moderately stout, sclerotized; tegmen absent. Female genitalia (fig. 59) moderately sclerotized; coxites with styli small but distinct, terminal; spermatheca oval, membranous; accessory gland minute, elongate, membranous.

Variation – This species is somewhat variable in presence and / or density of reticulate microsculpture on dorsal surface. The population from Joalah N.P. has the surface between pronotal punctures rather finely reticulate, while on the elytra the interspaces are highly polished with feeble trace of reticulation. The specimens from Mt. Cotton have pronotum and elytra comparatively densely reticulate between punctures.

Etymology – Named after Joalah National Park, the type locality.

Distribution – North-eastern New South Wales and South-eastern Queensland (fig. 140).

Erotendomychus kirrama n. sp.
(figs. 60-70)

Type material – **Holotype** ♂: "Aust: QLD: NE: Kirrama Range, 9.XII.1986, G. Monteith, G. Thompson / QM Berlesate No. 730, 18° 10' S 145° 45' E, rainforest, 700 m, sieved litter" (QMB). – **Paratypes**: same data as holotype (2: QMB; 2: MIZ – totally dissected); Kirrama Range, N.E. QLD, (Douglas Ck Rd, 800 m, 10.XII.1986-11.I.1987, Monteith, Thompson & Hamlet, RF, pitfall traps (2: QMB; 2: MIZ); Mt. Fisher, 7 km, SW Millaa Millaa, N. QLD, 22.IV.1982, Monteith, Yeates & Cook / QM Berlesate No. 412, 17° 34' S 145° 34' E, rainforest, 105 m, sieved litter" (2: QMB); Mt. Fisher summit, 8.II.1999, Monteith & Cook / QM Berlesate 991, 17° 34' S 145° 33' E, rainforest, 1,360 m, sieved litter (1: MIZ – totally dissected); 19° 07' S 145° 23' E, Mt. Halifax summit 1,050 m, I.-20.III.1991, A. Graham, heath traps (1: QMB).

Diagnosis – This species is most similar to *E. dentatus*, but it has the body more coarsely punctured, hind margin of the male ventrite 5 more deeply emarginate, the femoral lines somewhat V-shaped and antennomeres 2 and 3 subequal in length (fig. 60).

Description – Length 2.23-2.60 mm. Body oval, 1.70-1.89 times as long as broad, convex, shiny; punctation rather coarse and dense, irregular. Surface between pronotal and elytral punctures densely reticulate. Hairs on pronotum at least as long as spaces between punctures, and on elytra usually slightly shorter than interspaces; in both cases hairs are slightly longer and denser on sides than on disc. Body black or deep reddish with antennae dark brown to infuscated and antennomere 10 and 11 lighter, mouthparts brown, and legs blackish or at least infuscated. Antenna (fig. 60) with club rather distinctly 3-segmented; antennomeres 2 and 3 subequal in length, slightly longer than wide, longer than 4; antennomeres 4-7 equal in length, about as long as wide; antennomere 8 almost as long as 3; terminal antennomere rounded at apex. Pronotum 0.57-0.63 times as long as broad. Elytra 1.17-1.24 times as long as broad; 2.20-2.53 times as long as pronotum, 1.14-1.17 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 61) about 1.70 times longer than wide, as wide basally as coxal diameter, rather narrowly bordered laterally and anteriorly. Male hind tibia weakly thickened beyond mid length (fig. 62). Abdominal ventrite 1 without postcoxal pits and with shallow, somewhat V-shaped femoral lines (fig. 63); ventrite 5 in male emarginate medially (fig. 64) and in female simple; male segment 8 with sternite weakly arcuate apically, and tergite strongly arcuate (fig. 64); in female sternite 8 slightly more arcuate than tergite (figs. 65, 66). Male genital segment as in fig. 67. Aedeagus (figs. 68, 69) strongly curved, rather thin, long and moderately stout, well sclerotized with small internal sclerites; tegmen absent. Female genitalia (fig. 70) moderately sclerotized; coxites without styli, but with brushes of setae at apex; spermatheca small, oval, membranous; accessory gland minute, rounded, membranous.

Variation – This species is somewhat variable in body colouration. In addition to the specimens described above, some specimens are black with anterior margin of pronotum and apex of elytra reddish, the ventral surface of anterior angles of the prothorax and sometimes one or two last abdominal ventrites also lighter.

Etymology – Named after Kirrama Range, the type locality.

Distribution – NE Queensland (fig. 139).

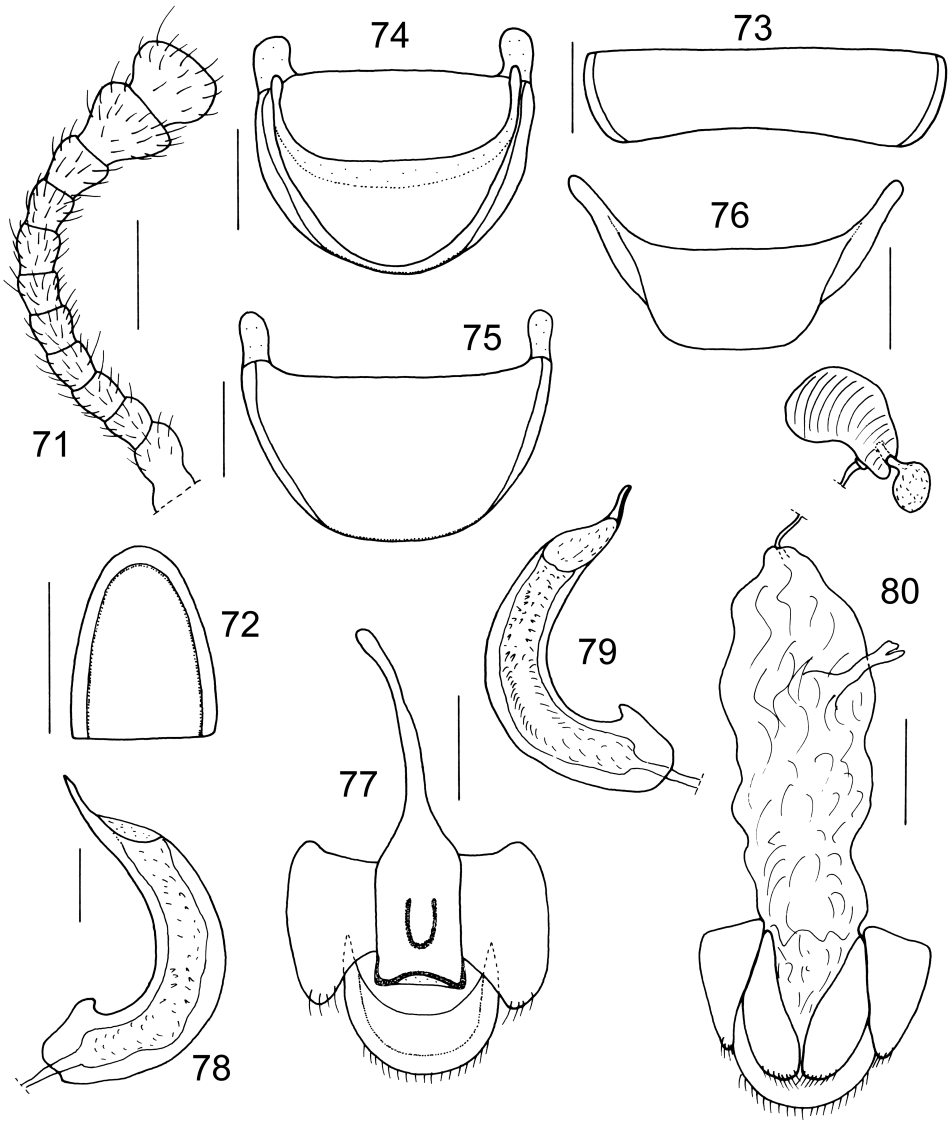
Erotendomychus lawrencei Tomaszewska
(figs. 2, 71-80)

Erotendomychus lawrencei Tomaszewska 2000: 485.

Diagnosis – The 10th antennomere at least slightly larger than the terminal one (fig. 71) and the female segment 8 with sternite truncate and tergite subtruncate apically (figs. 75, 76) separate this species from all its congeners.

Redescription – Length 2.30-2.60 mm. Body (fig. 2) short-oval, 1.71-1.88 times as long as broad, convex, shiny; punctation coarse, dense and irregular; punctures on pronotum slightly denser than those on elytra. Surface between pronotal and elytral

punctures finely reticulate (more distinctly on pronotum). Vestiture consists of golden hairs, distinctly longer on pronotum than spaces between punctures, and on elytra usually at least as long as interspaces. Body brownish-black, with antennae, legs and mouthparts dark brown. Antenna (fig. 71) with club 3-segmented; antennomeres 2-8 subequal in size, almost as long as wide; antennomere 10 distinctly longer and at least as broad as terminal one. Pronotum 0.57-0.61 times as long as broad; anterior angles rounded, posterior angles weakly acute. Elytra 1.16-1.22 times as long as broad; 2.26-2.45 times as long as pronotum, 1.15-1.20 times as broad as pronotum; widest just behind shoulders (near basal fourth), thence gradually narrowing towards their apices. Mesoventrite with intercoxal process (fig. 72) weakly elongate. Abdominal ventrite 1 without postcoxal pits and femoral lines, with postcoxal area narrowly bordered laterally and anteriorly; ventrite 5 in male weakly emarginate (figs. 73) and in female straight apically; male segment 8 with sternite narrowly- and tergite widely rounded apically (fig. 74); in female sternite 8 truncate and tergite 8 subtruncate at apex (figs. 75, 76). Male genital segment as in fig. 77. Aedeagus (figs. 78, 79) curved, stout, moderately sclerotized; tegmen absent. Female genitalia (fig. 80) moderately sclerotized; coxites without styli; spermatheca elongate-oval, membranous; accessory gland very small, round, membranous.



Figures 71-80
Erotendomychus lawrencei Tomaszewska. – 71, Antenna. – 72, intercoxal process of mesoventrite. – 73, abdominal ventrite 5, male. – 74, abdominal segment 8, male, ventral. – 75, abdominal tergite 8, female, ventral view. – 76, ventrite 6, female. – 77, male genital segment, ventral. – 78, aedeagus, ventral. – 79, aedeagus, dorsal. – 80, female genitalia, ventral view. Scale bars = 0.2 mm.

Material examined – Types. **Holotype** – Australia: "15° 29' S 145° 16' E, Mt. Cook Nat. Pk., QLD, 10-12 May 1981, A. Calder & J. Feehan / Berlesate, ANIC 731, rainforest litter" (ANIC). – **Other material**. QLD: same data as holotype (1: ANIC); 16° 03' S to 16° 05' S 145° 28' E Cape Tribulation area, Qld. 21-28.III.1984, A. Calder & T. Weir; berlesate, ANIC 939, lowland rainforest (2: ANIC; 1: MIZ); same but ANIC 940, litoral rainforest (2: ANIC; 2: MIZ); same but ANIC 942, rainforest (2: ANIC; 1: MIZ); same but ANIC 944 rainforest on steep slope (1: ANIC); Cape Tribulation, Qld. 40 km N of Daintree, 10 m. 12.VII.1982, S. & J. Peck, SBP75, rainforest leaf and log litter (1: ANIC); Cape Tribulation, N. QLD. 200 m, 14.VII.1982, S. & J. Peck, SBP77, rainforest leaf litter (1: ANIC; 1: MIZ); same but 10 m, 15.VII.1982, rainforest streamside flood litter (1: MIZ); 16° 04' S 145° 28' E QLD, CT1 10m. 1 km WNW Cape Tribulation, 5.XII.1995-4.I.1996, L. Umback, pitfall traps (1: ANIC); C. Tribulation, 13.X.1980, G. Monteith, QM Berlesate No.254, 16° 08' S 145° 28' E, rainforest, 10 m, sieved litter (1: QMB); NE QLD 2.5 km W of C. Tribulation (Site 5), 2.I.1983, G.B. Monteith, QM Berlesate No. 502, 16° 05' S 145° 27' E, rainforest, 180 m, sieved litter (1: QMB); same but 2.X.1982, Monteith, Yeates & Thompson, QM Berlesate No. 481 (1: QMB); same but 3.0 km W of C. Tribulation (Site 6), 20.IX.1982, Berlesate No. 421, 500 m (1: QMB); 2.0 km W of C. Tribulation (Site 4), 23.IX-7.X.1982, 200 m, same collectors, rainforest pitfall traps (1: QMB); same but Site 2, (1: QMB); 2.7 km W of C. Tribulation (Site 5A), January 1983, G.B. Monteith, Berlesate No. 508, 16° 05' S 145° 27' E, rainforest, 400 m, sieved litter (3: MIZ); 2 km WNW of C. Tribulation (Site 2), 28.IX.1982, Monteith, Yeates & Thompson, QM Berlesate No. 430, 16° 08' S 145° 28' E, rainforest, 50 m, sieved litter (1: QMB); same but 1.5 km W of C. Tribulation (Site 3) 21.IV.1983, Monteith & Yeates, Berlesate No. 527, rainforest, 150 m (2: QMB); Table Mtn. 10 km S of C. Tribulation, 24.IV.1983, G.B. Monteith, D. Cook, Berlesate No. 542, 16° 09' S 145° 26' E, rainforest, 320 m, sieved litter (1: QMB); Noah Head, via C. Tribulation, 16.X.1980, G.B. Monteith, Berlesate No. 260, 16° 08' S 145° 27' E, 40m (1: QMB); 16° 05' S 145° 27' E, 1.5 km Ebyn Mt., Sorrow QLD, 25.III.1984, A. Calder & T. Weir, Berlesate ANIC 945, rainforest on stony slope (1: ANIC); Noah Head, via Cape Tribulation, 16 Oct, 1980, G.B. Monteith/QM Berlesate No. 260, 16° 08' S 145° 27' E rainforest, 40 m sieved litter (1: NZAC).

Comment – During a present study it was found that the original series of *E. lawrencei* Tomaszewska consists of two species. The Queensland material is here regarded as a genuine *E. lawrencei* while population from Dorrigo N.P. (NSW) is described here as new species *E. dorrigo*.

Distribution – NE Queensland (fig. 139).

Erotendomychus leai n. sp.
(figs. 81-90)

Type material – **Holotype** ♂, QLD: "Mt. Glorious, 630 m, QLD, 14.XI.1986-30.I.1987, T. Hiller, flight intercept through trap, rainforest" (ANIC). – **Paratypes**: same data as holotype (14: ANIC; 5: MIZ); Mt. Glorious, Q, 20.VI.1974, V. Davies, leaf litter (1: ANIC); SEQ, Mt. Glorious, I.-III.1982, A. Hiller, flight intercept trap (1: QMB); QLD, Conondale National Park, Sandy Creek Road, 950 m, 26° 41' 55'' S 152° 33' 28'' E R.S. Anderson, 20.I.2000, mixed rainforest litter, RSA2000-011A (3: FSCA; 2: MIZ – totally dissected); same but RSA2000-011B (2: FSCA; 1: MIZ – totally dissected); same but RSA2000-011C (1: MIZ – totally dissected); same but Booloumba Creek State Forest River Trail, 350 m, 15.I.2000, 26° 38' 50'' S 152° 38' 45'' E, RSA2000-001B (5: FSCA; 2: MIZ); same but RSA2000-001D (2: FSCA); same but 26° 36' 38'' S 152° 38' 44'' E, RSA2000-002A (8: FSCA; 3: MIZ); QLD, SEQ, Cooran Tbld (Barracks), 12.IV.1995, G.I. Thompson, QM Berlesate No. 885, 26° 17' S 152° 50' E, wet sclerophyll, 400 m, sieved litter (1: QMB); Yabba Creek for Qld, 150 m, 7 km, SW Kenilworth, 15.VIII.1982, S & J. Peck SBP107 (1: ANIC; 1: MIZ); Dingo Ck, 1 km, E. Traveston Q. poor rainforest c. 80 m, 18.III.1973/ Berlesate ANIC 456, R.J. Kohout, 26° 18' S 152° 48' E (1: ANIC; 1: MIZ); Queensland: Main Range National Park, cpgrd. on Hwy. 15, 700 m, 6.IV.1993, C. Carlton, ex: UV lights (1: NZAC; 1: MIZ).

Diagnosis – Similar to *E. kirrama*, *E. dentatus* and *E. micromaculatus* in having abdominal ventrite 1 with femoral lines. It can easily be separated from *E. kirrama* and *E. dentatus* by less elongate intercoxal process of mesoventrite and the male hind tibiae simple. It differs from *E. micromaculatus* in having the body more coarsely and densely punctured, the female ventrite 6 subtruncate at apex (fig. 85) and antennomeres 3-8 at most as long as wide (fig. 81).

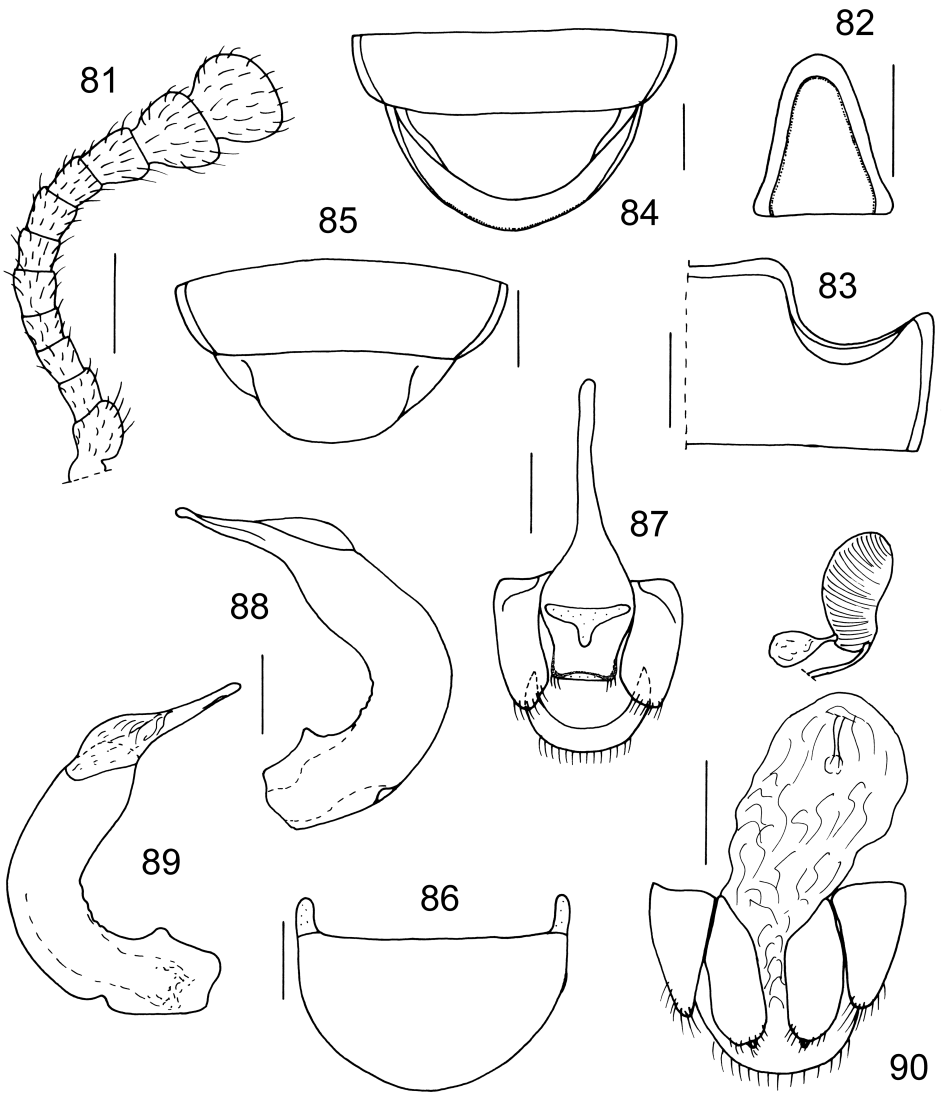
Description – Length 2.10-2.57 mm. Body oval, 1.75-1.86 times as long as broad, convex, moderately to very shiny; punctation moderately coarse and dense, irregular. Hairs on pronotum as long as spaces between punctures, or sometimes slightly shorter, and on elytra slightly shorter than interspaces. Surface between pronotal and elytral punctures most often feebly reticulate to highly polished. Body colour varying: black with antennae and mouthparts brown and legs at least partially infuscated; deep reddish with ventral surface, antennae, mouthparts and legs dark brown; most often bicoloured with pronotum, elytra and ventral surface black and deep reddish, with legs infuscated and antennae, and mouthparts brown. Antenna (fig. 81) with more or less distinct 3-segmented club; antennomere 3 slightly shorter than 2 and as long as 4, 6 and 8; antennomeres 5 and 7 equal in size, slightly longer than 6; terminal antennomere rounded at apex. Pronotum 0.58-0.62 times as long as broad. Elytra 1.18-1.27 times as long as broad; 2.22-2.46 times as long as pronotum, 1.13-1.17 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 82) longer than wide, slightly wider at base than coxal diameter, moderately broadly bordered laterally and anteriorly. Abdominal ventrite 1 without postcoxal pits, with postcoxal area narrowly bordered and with shallow femoral lines (fig. 83); ventrite 5 simple in both sexes (figs. 84, 85); male segment 8 with sternite and tergite rounded at apex (fig. 84); in female sternite 8 rounded and tergite subtrun-

cate at apex (figs 85, 86). Male genital segment as in fig. 87. Aedeagus (figs. 88, 89) comparatively large and stout, strongly curved, well sclerotized; tegmen absent. Female genitalia (fig. 90) moderately sclerotized; coxites with styli very small, terminal; spermatheca long-oval, membranous; accessory gland minute, oval, membranous.

Variation – This species is variable in body colouration. Black, deep reddish and bicoloured specimens were found together in all localities. The bicoloured specimens however from Mt. Glorious and Main Range National Park differ from those from other localities (e.g. Conondale National Park) in having the elytra black with suture and apex reddish-brown instead of having base and apex reddish-brown, and middle part of each elytron including suture black.

Etymology – This species is dedicated to a memory of Dr. A.M. Lea, an Australian coleopterist, and the author of the genus *Erotendomychus*.

Distribution – SE Queensland (fig. 141).



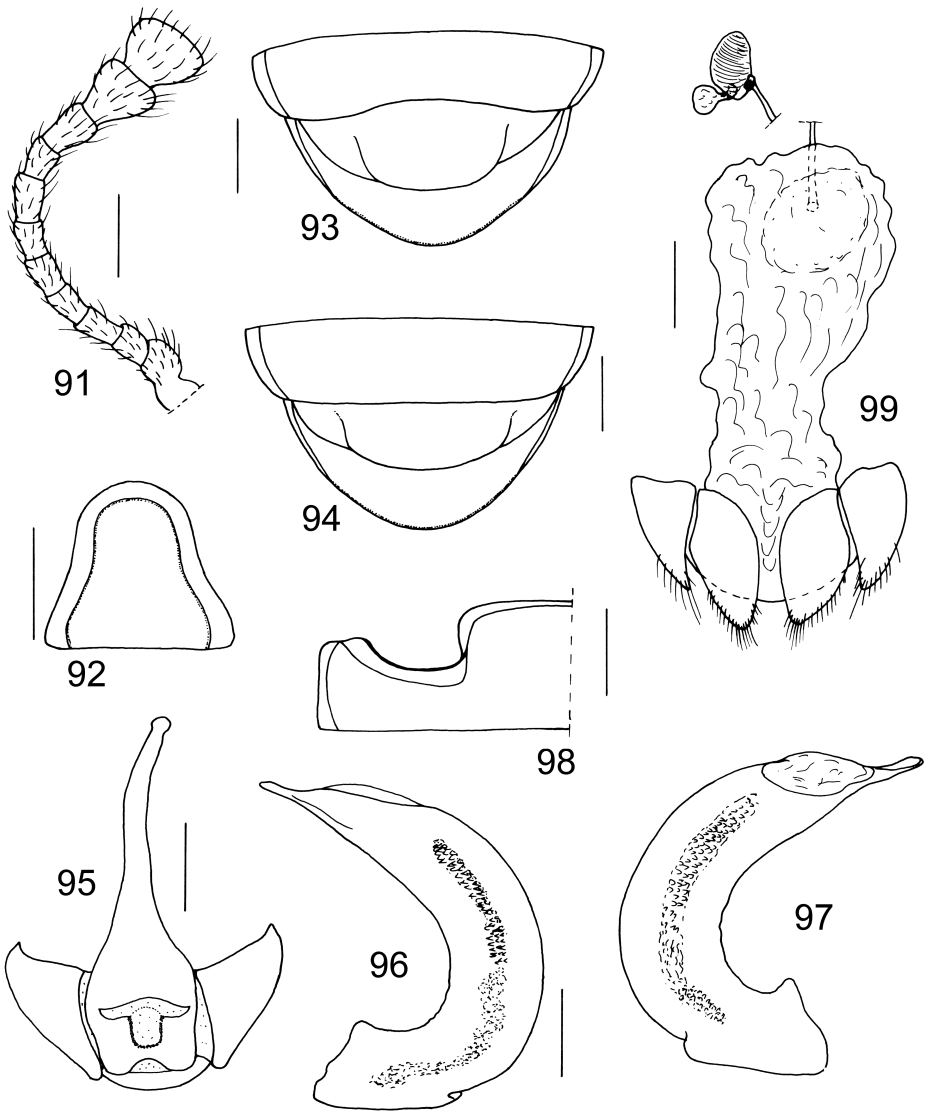
Figures 81-90
Erotendomychus leai n. sp. – 81, Antenna. – 82, intercoxal process of mesoventrite. – 83, abdominal ventrite 1. – 84, abdominal segments 7 and 8, male, ventral. – 85, abdominal ventrites 5 and 6, female, ventral. – 86, abdominal tergite 8, female, ventral view. – 87, male genital segment, ventral. – 88, aedeagus, ventral; 89, aedeagus, dorsal. – 90, female genitalia, ventral view. Scale bars = 0.2 mm.

Erotendomychus micropunctatus n. sp.
(figs. 91-99)

Type material – **Holotype** ♂: "N.E. QLD, 19° 30' S 146° 57' E, Mt. Elliot summit, 1,150 m, I-III 26.1991, A. Graham, pitfall and intercepts, fern glade" (QMB). – **Paratypes**: same data as holotype (3: QMB; 2: MIZ).

Diagnosis – This is a distinctive species of the genus by having the body very strongly shiny, sparsely and finely punctured and comparatively finely pubescent with interspaces highly polished. The intercoxal process of mesoventrite which is distinctly wider than the coxal diameter and ventrite 6 in both sexes subtruncate at apex (figs. 93, 94) are also diagnostic.

Description – Length 2.43-2.70 mm. Body short-oval, 1.63-1.72 times as long as broad, strongly convex, very shiny; punctation sparse to moderately dense, fine, irregular. Surface between pronotal and elytral punctures highly polished. Hairs on pronotum shorter than spaces between punctures or sometimes as long as interspaces, and on elytra shorter than interspaces. Body brownish-black with antennae, mouthparts, legs and ventral surface of pronotum brown to dark brown. Antenna (fig. 91) with club



Figures 91-99
Erotendomychus micropunctatus n. sp. – 91, Antenna. – 92, intercoxal process of mesoventrite. – 93, abdominal segments 7 and 8, male, ventral. – 94, abdominal segments 7 and 8, female, ventral. – 95, male genital segment, ventral. – 96, aedeagus, ventral. – 97, aedeagus, dorsal. – 98, abdominal ventrite 1. – 99, female genitalia, ventral view. Scale bars = 0.2 mm.

more or less distinctly 3-segmented; antennomeres 2-8 longer than wide; antennomeres 3-6 subequal in size; antennomere 7 distinctly longer than 6 or 8; terminal antennomere gently rounded at apex. Pronotum 0.50-0.53 times as long as broad. Elytra 1.11-1.14 times as long as broad; 2.37-2.46 times as long as pronotum, 1.11-1.14 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 92) weakly transverse, about 1.44 times broader than coxal diameter, rather broadly bordered laterally and anteriorly. Metaventrite with small postcoxal pits. Abdominal ventrite 1 without postcoxal pits and with shallow femoral lines (fig. 98); ventrite 5 in male weakly emarginate medially and in female simple at apex (figs. 93, 94); male segment 8 with sternite gently rounded to subtruncate at apex, and tergite somewhat produced backwardly and narrowly rounded (fig. 93); in female sternite 8 almost truncate and tergite widely rounded at apex (fig. 94). Male genital segment as in fig. 95. Aedeagus (figs. 96, 97) strongly curved, moderately large and stout, sclerotized; tegmen absent. Female genitalia (fig. 99) moderately sclerotized; coxites without styli but with long apical hairs; bursa copulatrix with round sclerite at apex; spermatheca small, oval, membranous; accessory gland minute, round, membranous.

Etymology – The name refers to finely punctured body.

Distribution – NE Queensland (fig. 141).

Erotendomychus micrus n. sp.
(figs. 100-109)

Type material – **Holotype** ♂: "30° 15' S 153° 07' E, NSW, Bruxner Floral Res., Sealy Lookout Rd., 5 km NW Coffs Harbour, 260 m, 23.V.1993, D.S. Chandler / Berlesate, ANIC 1611, cut wet sclerophyl subtr. rainforest litter" (ANIC). – **Paratypes**, same data as holotype (1: ANIC; 1: MIZ – dissected on slide); Bruxner Park, 200 m Coffs Harbour, NSW, 9.VII.1978, S.& J. Peck / ex leaf log litter (1: ANIC; 1: MIZ); NSW, Coffs Harbour, Bruxner Park, rainforest, 25.VI.1967, R.W. Taylor / ANIC Berlesate No. 29, leafmould (1: ANIC); NSW, Tuckers Knob, 21 km SW, Coffs Harbour, 760 m, 12.I.1970, N.J. Mitchel / ANIC Berlesate No. 201, rainforest (1: ANIC); 30° 22' S 152° 43' E NSW Dorrigo N.P. 0.3 km NW Visitor Centre, 770 m, 20.VI.1993, D.S. Chandler / Berlesate ANIC 1663, cut subtr. closed forest rotten wood litter (1: MIZ); New South Wales: Bruxner Park, via Coffs Harbour, 22.III.1980, G. Monteith / QM Berlesate No. 212, rainforest, sieved litter (1: QMB).

Diagnosis – Resembles *E. dorrigo* in many aspects, but can be separated by having the body most often bicoloured, the dorsal surface of the body sparsely and finely punctured, hind margin of the male ventrite 6 rounded (fig. 103), the intercoxal process of mesoventrite wider than long (fig. 101) and antennomere 3 longer than 4 (fig. 100).

Description – Length 1.90-2.30 mm. Body short-oval, 1.65-1.74 times as long as broad, convex, strongly shiny; punctation fine and rather sparse, irregular. Surface between pronotal and elytral punctures highly polished rather without reticulation. Hairs on pronotum slightly longer than those on elytra; on pronotum usually as long as spaces between punctures, and on elytra slightly shorter than interspaces. Body colour variable: black with legs and antennae infuscated and mouthparts brown, or most often bicoloured, with anterior part of pronotum and posterior part of elytra yellowish to dark brown while the rest of dorsal surface infuscated to black and ventral surface with meso-, metaventrite and at least abdominal ventrite 1 dark while the rest of ventral surface lighter. Antenna (fig. 100) with club looking like 2-segmented, comparatively broad with terminal antennomere truncate at apex; antennomere 2 slightly longer than 3 and antennomere 3 slightly longer than 4; antennomeres 4-6 subequal in size, almost as long as wide; antennomere 7 slightly longer than 6 or 8. Pronotum 0.48-0.55 times as long as broad. Elytra 1.02-1.13 times as long as broad; 2.02-2.49 times as long as pronotum, 1.09-1.15 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 101) slightly wider than long, broadly bordered laterally and anteriorly. Abdominal ventrite 1 without postcoxal pits and femoral lines, with postcoxal area rather narrowly bordered; ventrite 5 in male (fig. 102) emarginate and in female simple at apex; male segment 8 with sternite gently rounded, and tergite weakly pointed at apex (fig. 103); in female sternite and tergite 8 somewhat triangularly produced backwardly with narrowly rounded apices (figs. 104, 105). Male genital segment as in fig. 106. Aedeagus (figs. 107, 108) moderately stout and comparatively strongly curved, sclerotized; tegmen absent. Female genitalia (fig. 109) moderately sclerotized; coxites with styli small, terminal. Spermatheca not studied.

Etymology – The name *micrus* refers to the small body of this species.

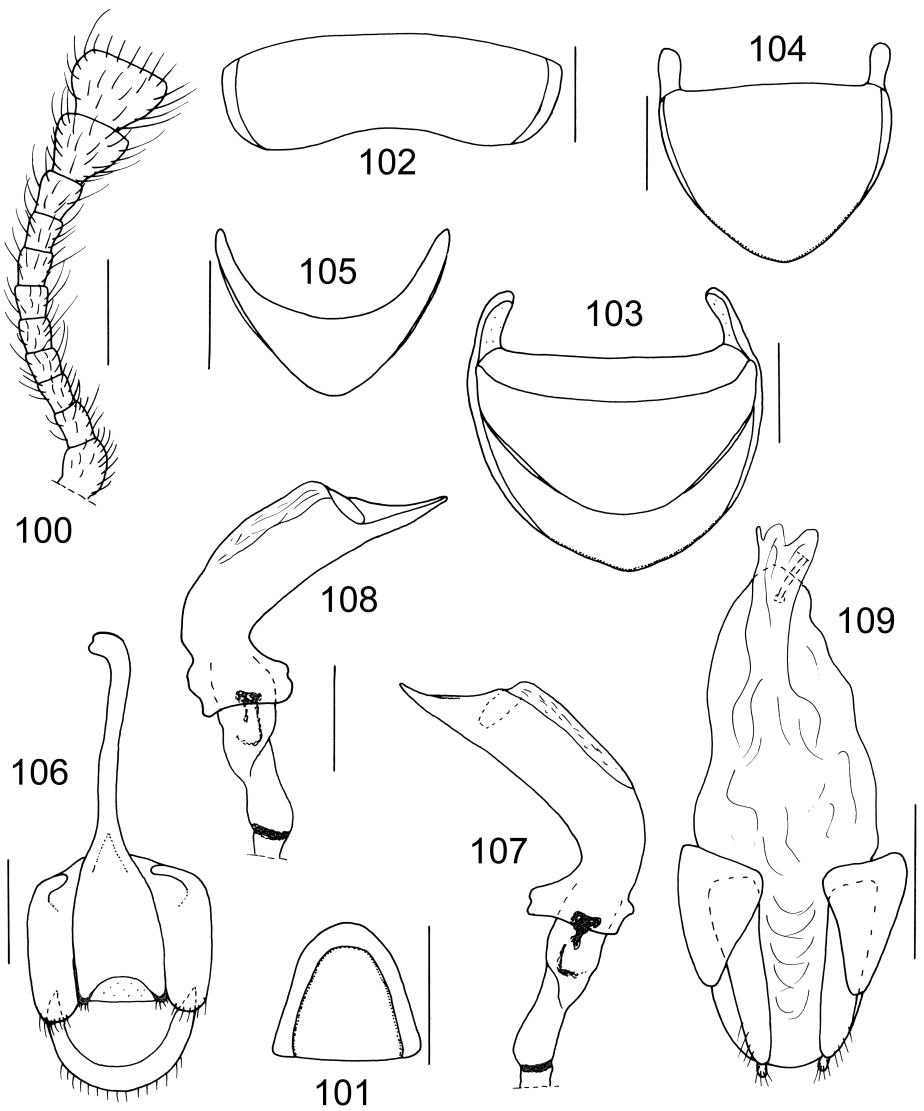
Distribution – New South Wales (fig. 139).

Erotendomychus ovatus n. sp.
(figs. 110-120)

Type material – **Holotype** ♂: "Upper Tallebudgera Valley, Below Springbrook, S.E.Qld, 8.I.-17.III.1985, Monteith, Cook & Thompson, RF pitfall traps, 550 m" (QMB). – **Paratype** ♀: same data as holotype (1: MIZ).

Diagnosis – This species is similar to *E. micropunctatus* sharing the body sparsely and finely punctured and rather finely pubescent. *E. ovatus* has however interspaces more or less distinctly reticulate, the abdominal ventrite 1 without femoral lines, hind margin of the male ventrite 5 straight and sternite and tergite of segment 8 rounded apically in both sexes (figs. 112, 114, 115). Moreover *E. ovatus* is a distinctive species of the genus by its body colouration – dark brown to blackish with antennae brown and abdominal ventrites 2-6 light brown.

Description – Length 2.20-2.33 mm. Body short-oval, 1.61-1.69 times as long as broad, convex, moderately shiny; punctation rather fine and sparse, becoming slightly denser on sides on pronotum, irregular. Hairs on sides of pronotum longer than spaces between punctures, on pronotal disc at most as long as interspaces, and on elytra distinctly shorter than interspaces. Surface between punctures on pronotum and disc of elytra very finely reticulate, and on sides of elytra comparatively densely reticulate. Body dark brown to blackish with antennae brown, and abdominal ventrites 2-6 light brown. Antenna (fig. 110) with distinctly 3-segmented club; antennomere 3 shorter than 2 and longer than 4, as long as 5, 6 and 8; antennomeres 4 and 6 equal in size, slightly shorter than 5 or 7; terminal antennomere subtruncate at apex. Pronotum 0.54-0.56 times as long as broad. Elytra 1.08-1.20 times as long as broad; 2.22-2.65 times as long as pronotum, 1.15-1.18 times as broad as pronotum; widest near basal third, thence narrowing towards their apices. Mesoventrite with intercoxal process (fig. 116) longer than wide, slightly wider at base than coxal diameter, moderately broadly bordered laterally and anteriorly. Abdominal ventrite 1 without postcoxal pits and femoral lines, with postcoxal area narrowly bordered; ventrite 5 in male truncate and in female gently rounded on sides and truncate to scarcely emarginate medially (figs. 111, 113); male segment 8 with sternite and tergite roun-



Figures 100-109
Erotendomychus micrus n. sp. – 100, Antenna. – 101, intercoxal process of mesoventrite. – 102, abdominal ventrite 5, male. – 103, abdominal segment 8, male, ventral. – 104, abdominal tergite 8, female, ventral view. – 105, ventrite 6, female. – 106, male genital segment, ventral. – 107, aedeagus, dorsal. – 108, aedeagus, ventral. – 109, female genitalia, ventral view. Scale bars = 0.2 mm.

ded at apex (fig. 112); in female sternite 8 produced backwards into narrowly rounded lobe, and tergite rounded at apex (figs. 114, 115). Male genital segment as in Fig. 117. Aedeagus (figs. 118, 119) moderately large and stout, strongly curved, well sclerotized; tegmen absent. Female genitalia (fig. 120) moderately sclerotized; coxites with styli moderately large, terminal; spermatheca not studied.

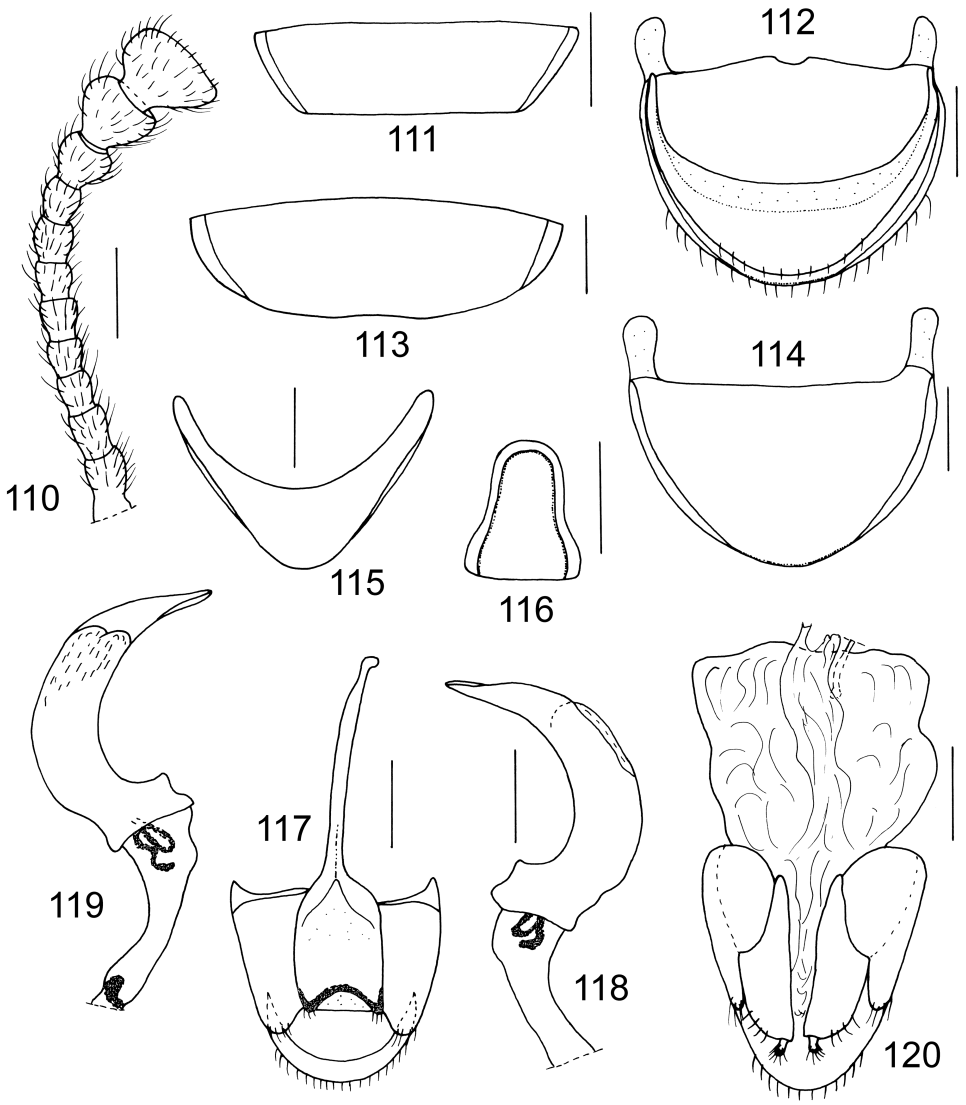
Etymology – The name is derived from short-oval shape of the body of this beetle.

Distribution – SE Queensland (fig. 142).

Erotendomychus peckorum n. sp.
(figs. 121-129)

Type material – **Holotype** ♂, NSW: Wilson Park, NSW, 50 m, 3 km SE of Lismore, 25.VIII.1982, S. & J. Peck, SBP113/ dry rainforest litter (ANIC). – **Paratypes**: same data as holotype (4: ANIC; 3: MIZ – 2 completely dissected on slides).

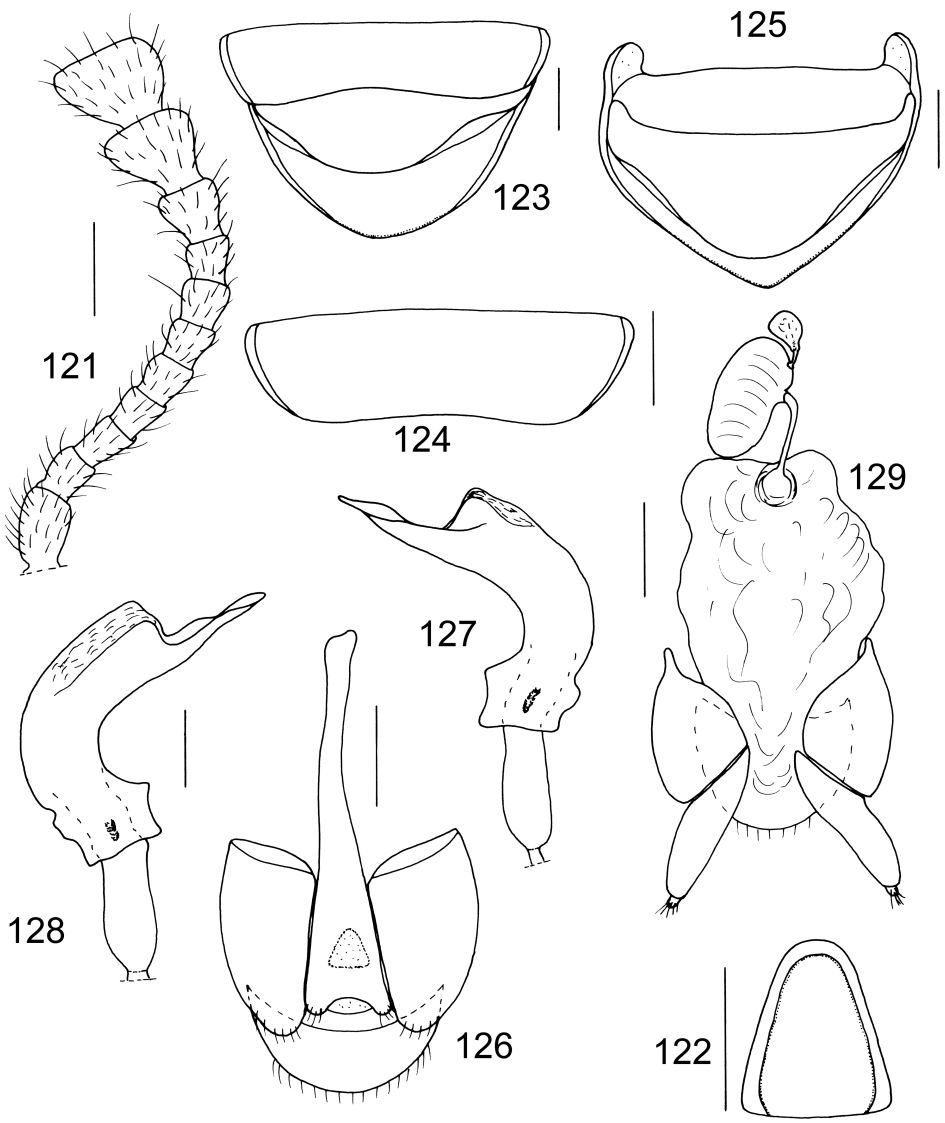
Diagnosis – This species is most similar to *E. joalah* and *E. dorrigo*, but can be separated from both species in having the body usually blackish with reddish reflections and more densely punctured, the hairs longer and



Figures 110-120
Erotendomychus ovatus n. sp. – 110, Antenna. – 111, abdominal ventrite 5, male. – 112, abdominal segment 8, male, ventral. – 113, abdominal ventrite 5, female. – 114, abdominal tergite 8, female, ventral view. – 115, ventrite 6, female. – 116, intercoxal process of mesoventrite. – 117, male genital segment, ventral. – 118, aedeagus, ventral. – 119, aedeagus, dorsal. – 120, female genitalia, ventral view. Scale bars = 0.2 mm.

denser and the female tergite 8 pointed at apex (fig. 125). Moreover the antennal club which is larger and distinctly 3-segmented, the male ventrite 6 rounded at apex (fig. 123) and intercoxal process of mesoventrite more elongate will separate *E. peckorum* from *E. dorrigo*. The abdominal ventrite 6 in female with a narrowly rounded apex (fig. 125) and the antennomere 4 as long as 5 will separate *E. peckorum* from *E. joalah.*

Description – Length 2.23-2.33 mm. Body short-oval, 1.74-1.81 times as long as broad, convex, shiny; punctation dense but moderately coarse to fine, irregular. Surface between pronotal and elytral punctures very feebly reticulate. Hairs on pronotum much longer than spaces between punctures, and on elytra at least as long as interspaces. Body black with some reddish reflections at least on pronotum, or rarely body deep reddish; antennae and mouthparts dark brown and legs infuscated. Antenna (fig. 121) with club 3-segmented; antennomere 3 weakly elongate, as long as antennomere 2 and slightly longer than 4; antennomeres 4-6 and 8 subequal in size, as long as wide; antennomere 7 slightly larger (longer and wider) than 6 or 8; terminal antennomere truncate at apex. Pronotum 0.59-0.63 times as long as broad. Elytra 1.12-1.18 times as long as broad; 2.06-

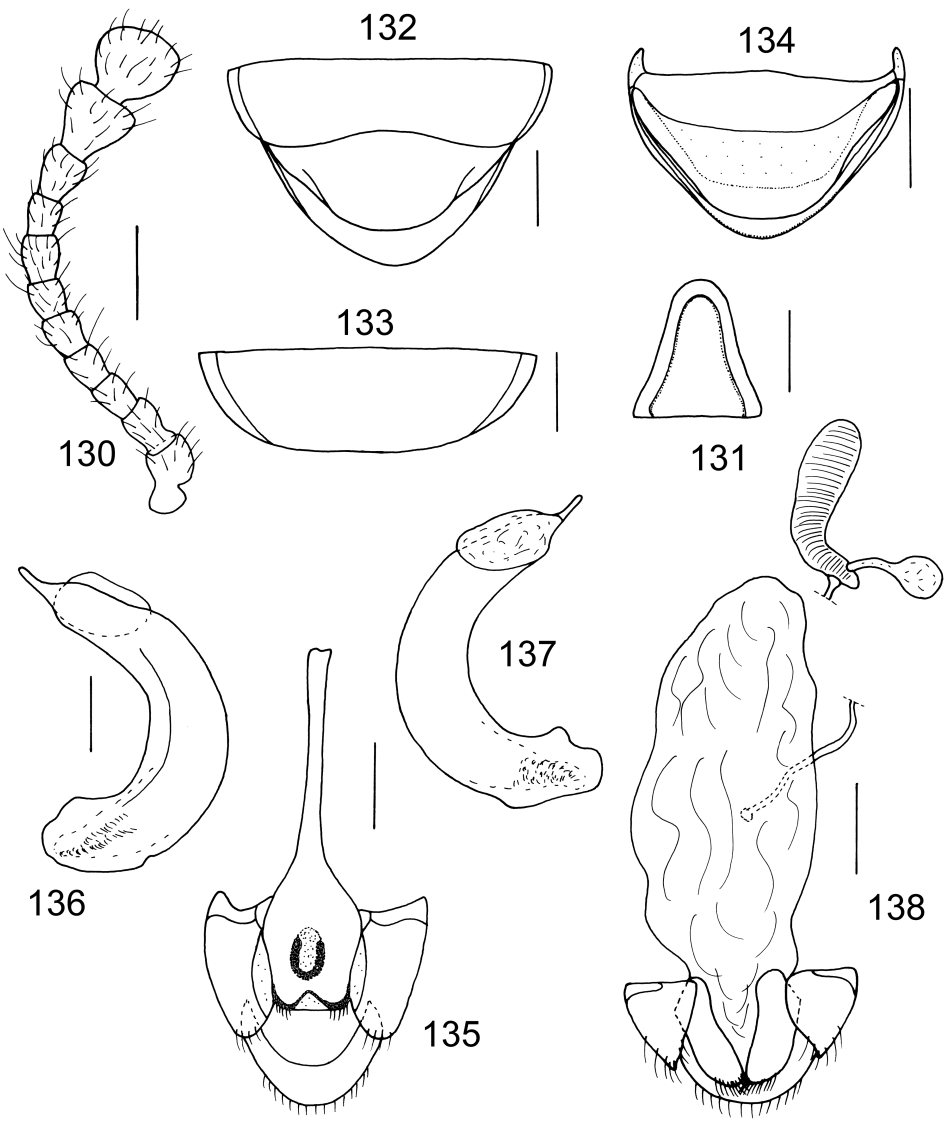


Figures 121-129
Erotendomychus peckorum n. sp. – 121, Antenna. – 122, intercoxal process of mesoventrite. – 123, abdominal segments 7 and 8, male, ventral. – 124, abdominal ventrite 5, female. – 125, abdominal segment 8, female, ventral. – 126, male genital segment, ventral. – 127, aedeagus, ventral. – 128, aedeagus, dorsal. – 129, female genitalia, ventral view. Scale bars = 0.2 mm.

2.27 times as long as pronotum, 1.15-1.18 times as broad as pronotum; widest near basal third, thence abruptly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 122) weakly elongate, as wide as coxal diameter, rather narrowly bordered laterally and anteriorly. Abdominal ventrite 1 without postcoxal pits and femoral lines, with postcoxal area narrowly bordered; ventrite 5 in male weakly emarginate and in female very weakly emarginate at apex (figs. 123, 124); male segment 8 with sternite gently, widely rounded, and tergite somewhat produced into narrowly rounded apical lobe (fig. 123); in female sternite 8 narrowly rounded and tergite triangularly produced backwardly with pointed apex (fig. 125). Male genital segment as in fig. 126. Aedeagus (figs. 127, 128) strongly curved, moderately large and stout, sclerotized; tegmen absent. Female genitalia (fig. 129) moderately sclerotized; coxites with styli small but distinct, terminal; spermatheca oval, membranous; accessory gland minute, round, membranous.

Etymology – The species honours Drs J. Kukálova-Peck and S. Peck, eminent entomologists and excellent beetle collectors.

Distribution – New South Wales (fig. 142).



Figures 130-138
Erotendomychus yeatesi n. sp. – 130, Antenna. – 131, intercoxal process of mesoventrite. – 132, abdominal segments 7 and 8, male, ventral. – 133, abdominal ventrite 5, female. – 134, abdominal segment 8, female, ventral. – 135, male genital segment, ventral. – 136, aedeagus, ventral. – 137, aedeagus, dorsal. – 138, female genitalia, ventral view. Scale bars = 0.2 mm.

Erotendomychus yeatesi n. sp.
(figs. 130-138)

Type material – **Holotype** ♂: "Bellenden Ker Range, NQ, Cable tower 3, 1,054 m, 25-31.X.1981, Earthwatch/ Qld. Museum/ Q.M. Berlesate No. 328, 17° 16' S 145° 52' E, rainforest, sieved litter/ ANIC Coleoptera, Voucher No. 83-0835/ *Erotendomychus* sp. det. T.A. Weir 1983" (ANIC). – **Paratypes**: same data as holotype but 1 km S. of Cable Tower 6, 500 m, without voucher No. (1: ANIC; 1: MIZ); same but 1 km S. of Cable Tower 6, 500 m, 17-24.X. 1981, and ANIC Coleoptera, Voucher No. 83-835, Earthwath Expdn, *Erotendomychus* sp. 1 (2: QMB; 1: MIZ – completely dissected); NE QLD, Bell Peak North 10 km E Gordonvale, 13.X.1982, Monteith, Yeates & Thompson/ QM Berlesate No. 475, 17° 06' S 145° 53' E, rainforest, 1000 m, sieved litter/ Endomychidae, *Erotendomychus*, det. J.F. Lawrence (2: QMB); NE Queensland, Nth. Bell Peak, via Gordonvale, 16.IX.1981, G. Monteith & D. Cook/ QM Berlesate 300, rainforest, 900-1000 m, litter and moss (1: QMB); Qld: NE: North Bell Peak, 22.XI.1990, G. Monteith & G. Thompson/ QM Berslesate 845, 17° 06' S 145° 52' E, rainforest, 600 m, sieved litter (1: MIZ); Mt Graham, 8 km N. Abergowrie, N.E. Qld, 26.XII.1986-17.I.1987, S. Hamlet, pitfall traps, RF, 600-700 m (2: QMB); Mt. Bartle Frere, N. Qld, Wside 700 m, 30.VII.1982, S. & J. Peck, SBP95, rainforest leaf and log litter (1: QMB; 1: MIZ); NEQ: 17° 17' S 145° 58' E, Graham Range, 550 m, 8-9.XII.1995, Monteith, Thompson & Cook, pitfall traps (1: MIZ); N. Qld, Tully Falls s.f. 1000 m, 9.5 km, SSW Ravenshoe, 7.I.-9.II.1988, Storey & Dickinson/ MDPI intercept, trap site no. 29A (1: ANIC); NE QLD Boulder Ck via Tully, 27.X.1983, Monteith, Yeates & Thompson/ QM Berlesate No. 598, 17° 50' S 145° 54' E, rainforest, 650 m, sieved litter (1: QMB); same but rainforest, 900 m (1: MIZ); 17° 37' S 145° 34' E Qld, BS3 Massey Creek, 30.XI.1995-3.I.1996, L. Umback, 1000 m, fi trap JCU (1: ANIC); Graham Range, 8 Dec 1995, Cook, Monteith & Thompson/ QM Berlesate 901, 17° 17' S 145° 58' E, rainforest, 550 m, leaf litter (1: NZAC).

Diagnosis – Similarly to *E. elongatus* and *E. micromaculatus*, *E. yeatesi* has antennomeres 2-8 at least slightly longer than wide and antennomere 7 almost as large as 9. *E. yeatesi* however is distinguished from both these species in having the male ventrite 6 rounded apically (fig. 132) and the differently shaped intercoxal process of mesoventrite. Moreover it can also be separated from *E. micromaculatus* by having the body more coarsely punctured and the abdominal ventrite 1 without femoral lines, while it differs from *E. elongatus* in having the body less elongate and surface between pronotal and elytral punctures highly polished.

Description – Length 2.23-2.46 mm. Body oval, 1.66-1.87 times as long as broad, convex, shiny; punctation moderately coarse and dense, irregular; elytra of yellow specimens bear a few regular rows of minute punctures along with irregular punctation. Surface between pronotal and elytral punctures highly polished, rather without reticulation, especially on elytra. Hairs on pronotal disc as long as spaces between punctures and on sides of pronotum slightly longer, and on elytra at most as long as interspaces or shorter. Body uniformly yellow (probably immature), reddish-brown to reddish-black or black with antennae and legs infuscated and mouthparts brown, sometimes also with sides or only anterior angles of ventral surface of prothorax and one or two last abdominal ventrites lighter. Antenna (fig. 130) with club rather distinctly 3-segmented; antennomeres 2-8 at least slightly longer than wide; antennomere 2 distinctly longer than 3; antennomeres 3-5 equal in length, longer than 6; antennomere 7 almost as long as antennomere 2, distinctly longer than 6 and 8, which are equal in length, and scarcely elongate; terminal antennomere gently rounded at apex. Pronotum 0.55-0.61 times as long as broad. Elytra 1.15-1.23 times as long as broad; 2.23-2.51 times as long as pronotum, 1.11-1.20 times as broad as pronotum; widest near basal third, thence distinctly narrowing towards their apices. Mesoventrite with intercoxal process (fig. 131) as long as wide, slightly broader basally than coxal diameter, moderately broadly bordered laterally and anteriorly. Abdominal ventrite 1 without postcoxal pits and femoral lines; ventrite 5 in male emarginate medially and in female simple (figs. 132, 133); segment 8 with sternite very weakly- and tergite strongly arcuate apically in both sexes (figs. 132, 134). Male genital segment as in fig. 135. Aedeagus (figs. 136, 137) strongly curved, long and moderately stout, well sclerotized; tegmen absent. Female genitalia (fig. 138) moderately sclerotized; coxites without styli, densely setose at apex; spermatheca moderately large, long-oval, membranous; accessory gland small, rounded, membranous.

Etymology – Dedicated to one of its collectors, Dr. David Yeates of the Australian National Insect Collection.

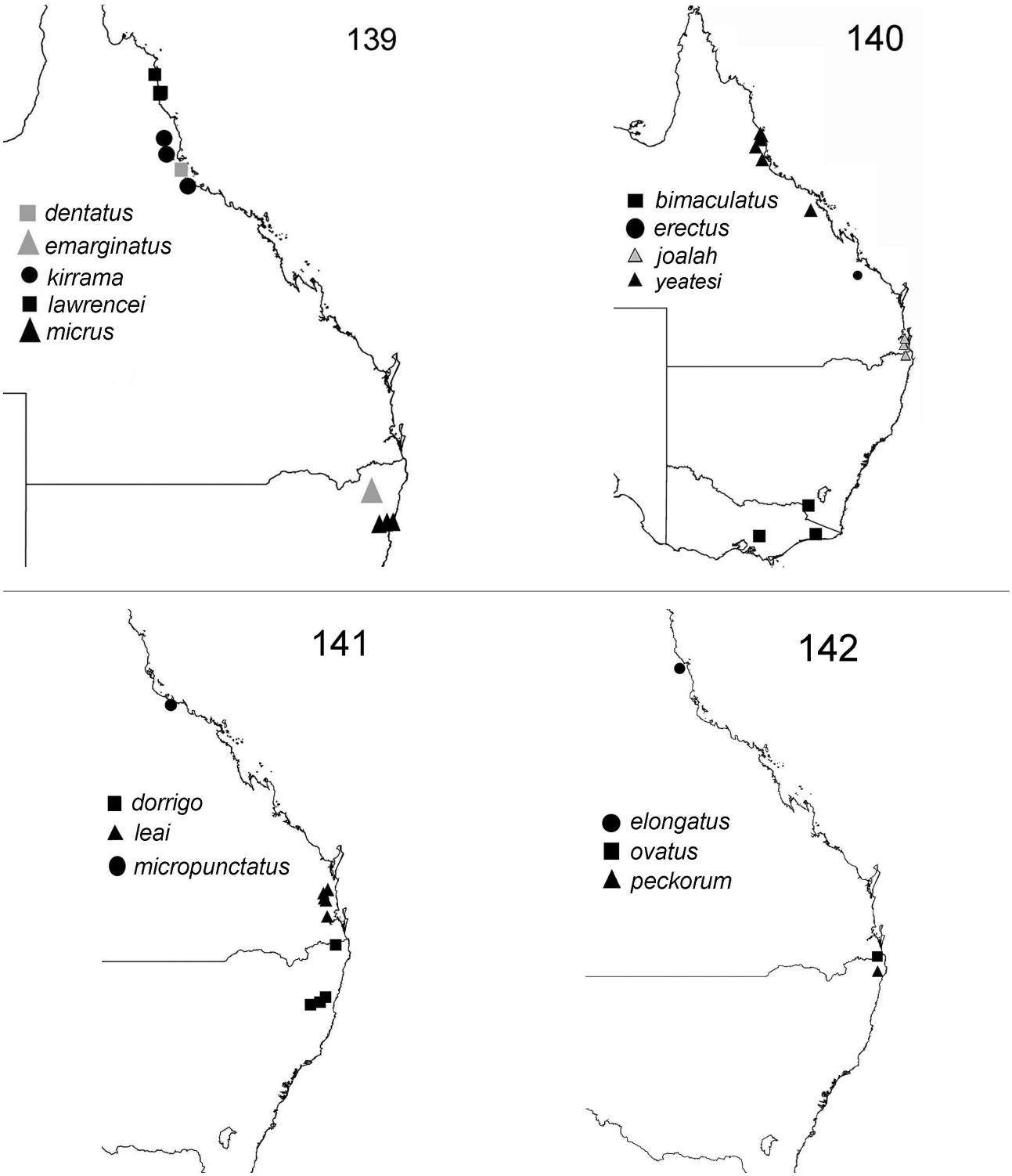
Distribution – NE Queensland (fig. 140).

DISCUSSION

The genus *Erotendomychus* was neglected for decades since its original description of Lea (1922), and surprisingly nobody studied this group of beetles for years, although a rich material has been accumulated in the Australian collections.

The placement of *Erotendomychus* in the subfamily Mycetaeinae in the Strohecker's world catalogue (1953) was artificial, because there was no single phylogenetic hypothesis of the higher taxa of Endomychidae at that time, and the classification was based on overall similarities.

Sasaji (1978) during his study on Japanese Endomychidae discovered laterally closed mesocoxal cavities in some genera of the former Mycetaeinae. This character was not known before within the family, and this fact allowed him to establish the subfamily Mychotheninae, elevated subsequently (Sasaji 1990) to the family status. This group is currently regarded



Figures 139-142
Distribution of the species of *Erotendomychus*.

as a subfamily in Endomychidae (Pakaluk, Ślipiński and Lawrence 1994, and Lawrence and Newton 1995) under the name Anamorphinae due to a nomenclatorial priority.

The first phylogenetic study on the family Endomychidae (Tomaszewska 2000) delimited the subfamily Mycetaeinae to the genera *Mycetaea* and *Agaricophilus* alone and confirmed the monophyly of Anamorphinae. Along with studied genera, e.g. *Symbiotes* Redtenbacher, *Mychothenus* Strohecker, *Micropsephodes* Champion, *Anamorphus* LeConte, *Erotendomychus* was included in the Anamorphinae, based on the mesocoxal cavities widely closed outwardly by sterna, the character postulated as synapomorphy of this subfamily.

Anamorphinae are distributed in all zoogeographical regions but *Erotendomychus* is endemic to the eastern part of Australia ranging from North Queensland to Victoria and South Australia. It forms a moderately large and homogenous group within Anamorphinae differing from all other genera of this subfamily by having the intercoxal process of mesoventrite rounded and prominent anteriorly. All species are very similar one to another having discreet diagnostic characters and the study of the genitalia are most often necessary for their proper identification.

Despite of relatively rich adult material available for study, the larva of *Erotendomychus* and biology of these beetles remain unknown. Adults have mostly been collected by sifting leaf and log litter, rotten wood, flood debris and moss samples, which may suggest that *Erotendomychus* is mycophagous as most Endomychidae.

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