CYCHRAMPTODINI, A NEW TRIBE OF NITIDULIDAE (COLEOPTERA) FROM AUSTRALIA

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Abstract

A new tribe, *Cychramptodini*, is described, including 3 genera *Cychramptodes* Reitter, *Miskoramus* gen.n. and *Cylindroramus* gen.n. Comparisons are made between this tribe and other groups of Nitidulinae, including the Lawrencerosini. The following new species are described: *Miskoramus pulcher*, *Cylindroramus accretus*, *C. dressleri*, *C. fraucai*, *C. macropunctatus*, *C. medvedevi*, *C. monteithi*, *C. moorei*, *C. nitens*, *C. rectifrons* and *C. uptoni*.

Introduction

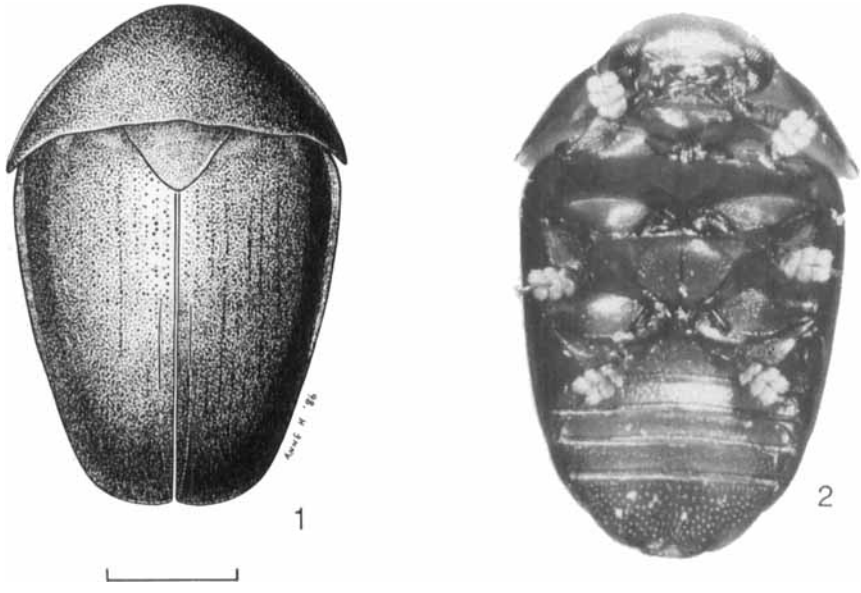
Among the Australian Nitidulinae, two endemic tribes, the Cychramptodini trib.n., discussed below, and the Lawrencerosini, a group of 4 genera described by Kirejtshuk (1990), share a suite of attributes which are absent in all other members of the subfamily: (1) the close approximation of all pairs of coxae; (2) the elevation of the posteromesal portion of the metasternum above the lower plane of the body (as observed from below), forming a pair of impressions into which the hind femora may be fitted; (3) the reduced mandibular mola and prostheca and presence of a sharp mandibular apex; and (4) the strongly flattened and broadened tibiae, often modified apically to receive the tarsi. A narrow separation of the fore coxae occurs in many groups, but approximation of all 3 pairs is known only in a few derived Carpophilinae, the tribe Arhinini (Kirejtshuk 1981, 1987) of the Cryptarchinae, a few Cillaeinae and some members of the *Cyllodes* complex (e.g. *Vietherchnus* Kirejtshuk, 1985), and it is never as extreme as in the 2 above tribes. The metasternal elevation is unique to Cychramptodini and Lawrencerosini, although we are not sure if it is evidence for their close kinship. The mandibular peculiarities occur in some Neotropical and Indo-Malayan genera related to *Cyllodes* Erichson, and also in the afrotropical Arhinini. An expansion and flattening of the tibiae occurs in the Meligethinae and is approached in some Nitidulinae.

At present, the mode of life of the Cychramptodini is known only for *Cychramptodes murrayi* Reitter, which is a predator of the wattle tick scale (see below), but it is likely that similar habits occur in the other 2 genera. The ventrally-projecting hypomera and epipleura conceal the legs and ventral surfaces of these beetles, protecting them from attack by ants which tend the scale insects. The Lawrencerosini have the appearance of symphiles, although only one specimen has actually been collected in an ant nest (*Koryaga johni* Kirejtshuk in the nest of *Myrmecia forficata* F). Perhaps, most of the features shared by these 2 groups are correlated with the evolution of defensive mechanisms for survival in close proximity with aggressive ant species. The peculiar features of the legs and mouthparts are very similar to those occurring in other known myrmecophiles, such as paussine Carabidae and ptinine Anobiidae. In any event, the 2 tribes are readily distinguished from all other groups of Nitidulinae and may be separated from one another by the characters given in the key below and perhaps by the mode of life.

Body strongly convex above and flattened below; head strongly turned downward with extremely short gular region (except in *Miskoramus*); pronotal hypomera and elytral epipleura sharply sloped downwardly; pronotum gently curved at sides, not explanate, its hind edge concealing the base of the elytra and scutellum; abdominal apex transverse or broadly rounded; mouthparts moderately developed and normally shaped; antennae short with moderately large scape; legs rather short, broadened and strongly compressed dorsoventrally, their short femora wider than tibiae, transverse or not very elongate (except in *Miskoramus*, where they are as much as 2.5 times as long as wide), with convex hind leg . . . . . **Cychramptodini**

Body moderately convex above and below; head normally inclined with fairly long gular region; pronotal hypomera slightly sloped downwardly, but elytral epipleura almost horizontal or distinctly sloped upwardly, so that outer edge is on slightly higher plane than inner one; pronotum with depressions and elevations of intricate configuration, its hind edge exposing the elytral bases and scutellum; abdominal apex in both sexes sharply pointed; mouthparts somewhat reduced, especially palps, which are rectilinearly directed forward; antennae moderately long with scape strongly produced laterally; legs narrower, their femora scarcely or moderately compressed dorsoventrally, considerably narrower than tibiae, rather elongate (about 3.5 times as long as wide), with concave hind edge . . . . . **Lawrencerosini**

The phylogenetic relationships and thus systematic position of this new tribe are not clear, but a sister group relationship with Lawrencerosini is a distinct possibility, based on the features discussed above. Superficially, the cychramptodines are similar to members of the *Cyllodes* complex in that both groups have the pronotal hypomera and elytral epipleura strongly and sharply declined and ventrally produced (Figs 2, 18), so that the legs may be completely concealed beneath the body; also the 2 groups have reduced dorsal vestiture, distinct or indistinct rows of elytral punctures, enlarged antennal club, and a tendency for the coxae to be approximate. The strongly declined and almost opisthognathous head of some cychramptodines resembles the condition in the *Cyllodes* complex (e.g. *Vietttherchnus*) and in the cryptarchine genus *Arhinella* Kirejtshuk (1981).



FIGS **1-2**—*Cychramptodes murrayi*, adult: **(1)** body, dorsal (line = 1.0 mm); **(2)** body, ventral (living specimen on glass plate).

Abbreviations: AMS, Australian Museum, Sydney; ANIC, Australian National Insect Collection, Canberra; BMNH, The Natural History Museum, formerly British Museum (Natural History), London; MACL, Macleay Museum, University of Sydney; MVM, Museum of Victoria, Melbourne; QDPI, Queensland Department of Primary Industries, Brisbane; QFS, Queensland Forest Service, Brisbane; QMB, Queensland Museum, Brisbane; SAM, South Australian Museum, Adelaide; ZINL, Zoological Institute, Academy of Sciences, Leningrad.

Tribe **Cychramptodini** trib.n.

Body strongly convex dorsally and more or less flattened ventrally, with sides of pronotum and elytra

strongly and steeply sloping ventrally. Dorsal surface without any conspicuous pubescence; ventral surface and pygidium usually clothed with sparse, short, fine hairs; punctation and surface sculpture (reticulation) more or less reduced. Head short, moderately to strongly declined and sometimes opisthognathous, with comparatively large eyes and short antennae, bearing an enlarged, 3-segmented club, with sensilla evenly distributed over all segments. Labrum bilobed, exposed or partly concealed beneath frons, horizontal except in *Miskoramus*, where it is almost vertically oriented as in Lawrencerosini. Mandibles stout, usually with obsolete mola and reduced prostheca. Maxillary and labial palps somewhat reduced, often partly or completely concealed beneath mandibles or behind an enlarged mentum (*Miskoramus*). Antennal grooves well developed and more or less parallel. Pronotum without projecting anterior or posterior angles; edges not margined (*Cylindroramus*) or finely margined anteriorly and posteriorly. Scutellum more or less triangular, sometimes with rounded apex. Elytra not margined laterally, with more or less individually rounded apices or truncate. Prosternum short, with more or less narrow intercoxal process; procoxae narrowly closed behind. Mesosternum depressed and slightly tumid anteriorly, gradually to abruptly elevated posteriorly. Metasternum comparatively short, with posteromesal portion more or less elevated, forming paired femoral impressions posterolaterally. All coxae more or less approximate; coxal lines on metasternum and ventrite 1 well developed, the latter diverging from hind coxal cavities, except in *Cylindroramus*. Last abdominal ventrite transverse; pygidium short and convex. Legs short and stout, more or less concealed under sloping portions of pronotum and elytra. Tibia strongly flattened, with simple outer edge. Tarsi short, with tarsomeres 1-3 bilobed and claws well developed. Genitalia of both sexes well sclerotised.

Key to the Genera of Cychramptodini

1. Body elongate, nearly cylindrical; elytra squarely truncate at apex, exposing most of the pygidium; femora shorter than wide; all tibiae trapezoidal; head strongly truncate, scarcely projecting in front of the eyes; pronotal hypomera without impressions for antennal clubs; antennae 11-segmented . . . . **Cylindroramus** gen.n.
   Body ovoid to hemispherical; elytra rounded or slightly truncate at apex, usually concealing pygidium or exposing apex only; femora longer than wide; pronotal hypomera with distinct impressions for receiving antennal clubs 2
2. Head slightly projecting in front of eyes; maxillae and labium largely concealed behind mentum (only apices of palps exposed); femora 2.5 times as long as wide; all tibiae triangular; antennae 11-segmented; mid coxae approximate but distinctly separated, the distance between them 0.2 times coxal width (greatest diameter); posteromesal part of metasternum only feebly raised; upper surfaces shiny . . . . . **Miskoramus** gen.n.
   Head scarcely projecting in front of eyes; maxillae and labium with palps almost entirely exposed; femora 2 times as long as wide; all tibiae trapezoidal; antennae 10-segmented; mid coxae subcontiguous, the distance between them less than 0.1 times coxal width (greatest diameter); posteromesal portion of metasternum strongly elevated; upper surfaces dull . . . . **Cychramptodes** Reitter

Cychramptodes Reitter

Cychramptodes Reitter, 1878: 383. Type species, by monotypy, *C. murrayi* Reitter, 1878: 383.
Pantocryptus Arrow, 1943: 391; Lawrence, 1988: 53. Type species, by monotypy, *P. laticollis* Arrow, 1943: 392.

Redescription

Body (Figs 1, 2, 4)—Oval, strongly convex dorsally, flat ventrally, glabrous.

Head (Figs 2, 5)—Strongly declined, with distinct supraorbital ridges (connected to a transverse occipital ridge posteriorly), the anterior ends of which curve mesally and fade out just in front of the eyes; eyes strongly projecting anterolaterally; clypeus horizontal and exposed, slightly projecting in front of eyes, anterior edge broadly emarginate. Labrum (Fig. 5) well-developed and exposed, sclerotised, slightly transverse, deeply notched at apex. Antennae (Fig. 6) 10-segmented with compact, 3-segmented club. Mandibles moderately curved with apices acute. Antennal grooves well-developed and sharply delimited mesally; genae produced forward forming short teeth; gular region moderately well-developed. Maxillae and labium (Fig. 7) exposed.

Dorsal Surfaces—Pronotum (Fig. 1) moderately strongly, evenly arched; sides very finely, narrowly margined, visible from above; anterior edge broadly margined mesally, narrowly so laterally; posterior edge broadly margined mesally, emarginate laterally. Elytra strongly arched; sides almost vertical, edges very finely margined and barely visible from above; apices subtruncate but concealing pygidium; disc very finely striate.

FIG. 3—*C. murrayi*, larva, left mandible, dorsal (line = 100 µm).

Ventral Surfaces—Prosternum in front of coxae strongly transverse, slightly tumid, with sharp lateral edges mesally delimiting ovoid, antennal cavities formed on hypomera; intercoxal process only slightly curved, slightly expanded at apex; fore coxal cavities closed by slender bar. Mesosternum slightly convex mesally, concave laterally, abruptly, obliquely elevated posteriorly to form intercoxal process; mid coxae separated by less than 0.1 times coxal width (greatest diameter). Metasternum (Fig. 8) with posteromesal portion distinctly elevated, forming a plate and delimiting two posterolateral cavities for reception of hind femora. Caudal marginal line behind mid coxal cavity transverse for more than half its length, then abruptly curved and extending to posterior end of metepisternum. Coxal lines on ventrite 1 broadly rounded, not extending to middle of ventrite.

Legs (Fig. 9)—Femora about 2 times as long as wide, each with well-developed, posterior excavation for reception of tibia. All tibiae trapezoidal, strongly flattened, with very narrow base. Tarsi short with tarsomeres 1-3 expanded.

Distribution and Biology

See under species below.

Notes

This genus differs from *Miskoramus* in having a more truncate head only slightly projecting in front of eyes, distinct supraorbital ridges, exposed maxillary and labial palps, shorter and broader femora, trapezoidal (rather than triangular) tibiae, 10-segmented antennae, subcontiguous mid coxae, and strongly elevated metasternal plate. It differs from *Cylindroramus* in its much shorter, and broader body, rounded elytral apices concealing the pygidium, 10-segmented antennae and more elongate femora.

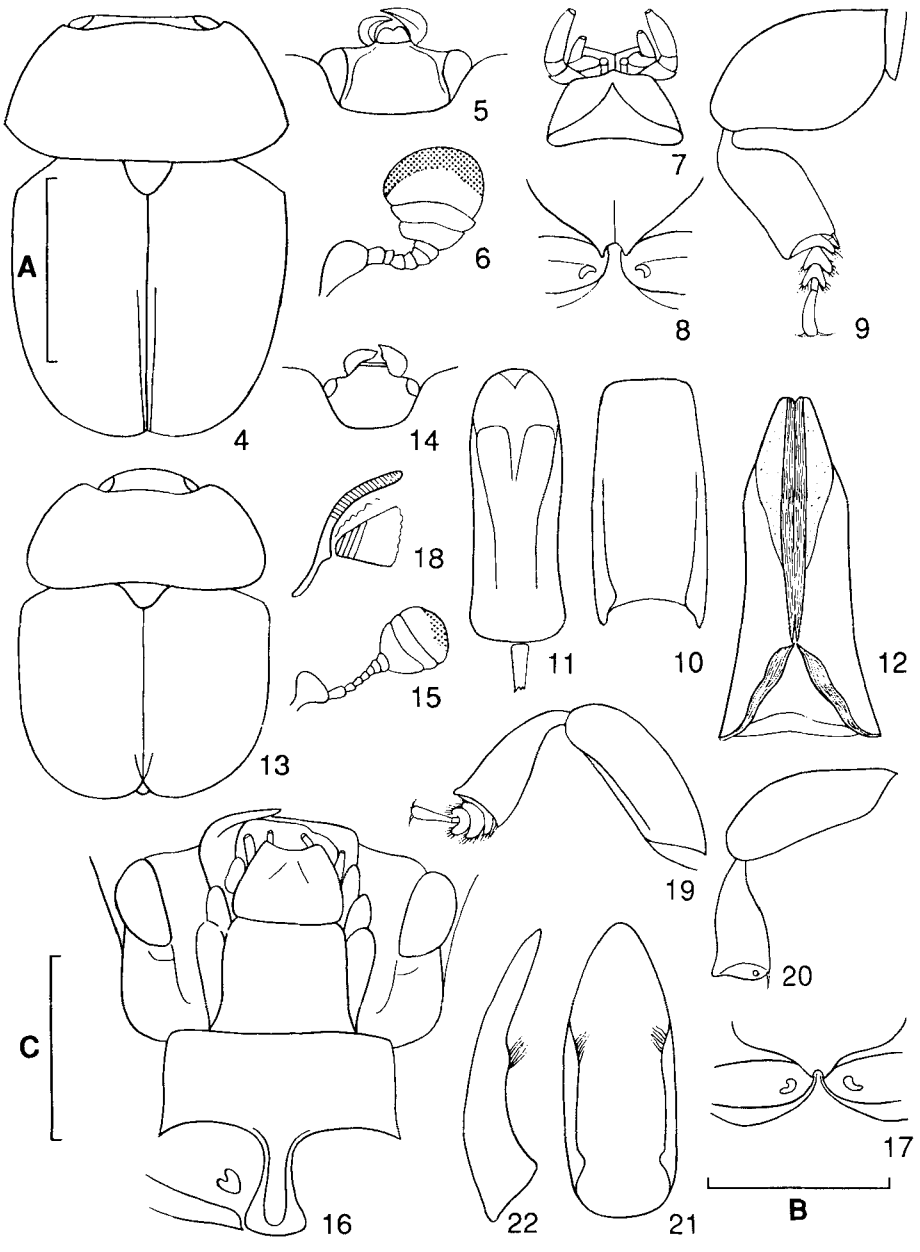
Cychramptodes murrayi Reitter (Figs 1, 2, 4-12)

Cychramptodes murrayi Reitter, 1878: 383. Type locality: Adelaide. Type in Muséum National d'Histoire Naturelle, Paris (?), not examined.

Pantocryptus laticollis Arrow, 1943: 392. Type locality: Adelaide. Type in The Natural History Museum, London, examined.

Specimens examined—QUEENSLAND: 1, Leyburn, 21.x.1989, M. de Baar (QFS); 1, Upper Kedron Brook, 26.iv.1964, *Eucalyptus* with giant coccid, J. H. B. (QDPI); 9, Wongi S. F. via Maryborough, 21.iii.1989, Acc. 6474, F. R. Wylie, M. de Baar (QFS). NEW SOUTH WALES: 3, 2.7 km NE of Queanbeyan, 670 m, no date, I. F. B. Common (ANIC); 1, Sawpit Ck, 7 km W of Gundaroo, 18.iv.1985, C. Reid (ANIC); 2, 15 km NE of Thredbo Village (36.30 S, 148.19 E), 27.ii.1962, R. N. Norris (ANIC, ZINL). AUSTRALIAN CAPITAL TERRITORY: 1, Black Mtn (35.16 S, 149.06 E), no date, ex *Euc. rossi*, C. Reid (ANIC); 1, same locality, 26.viii.1966, K. Pullen (ANIC); 1, same locality, 27.iii.1967, T. Weir (ANIC); 2 larvae, same locality, 18.i.1985, feeding on *Cryptes baccata* on *Acacia baileyana*, J. F. Lawrence (ANIC); 1, same locality, 22-28.x.1990, at light, A. G. Kirejtshuk (ZINL); 1, same locality, 22-29.xi.1990, at light, A. G. Kirejtshuk (ZINL); 3, Black-Mtn, summit (35.16 S, 149.06 E), 12.iii.1987, at light, C. Reid (ANIC,

ZINL); 5 and 10 larvae, Campbell, 4.viii.1979, feeding on *Cryptes baccata* females on *Acacia baileyana*, M. Carver (ANIC); 1, Canberra, 11.iii.1931, feeding on coccids (ANIC); 2, Monash (35.24 S, 149.06 E), 27.vii.1987, under bark, T. & W. Dressler (ANIC); 50+ larvae, Oxley, 29.xi.1990, larvae in colony of *Cryptes baccata* on *Acacia floribunda*, A. A. Calder (ANIC, ZINL); 1, Weston, 15.i.1986, T. Bellas (ANIC). VICTORIA: 1, no specific locality (MACL); 1, Barter, J. E. Dixon (MVM); 4, Bendigo, J. E. Dixon (MVM); 6, Healesville (MVM); 1, La Trobe University, 11.iv.1983, ex *Acacia*, P. Lillywhite (MVM); 1, Ringwood, 4.viii.1917, F. E. Wilson (MVM); 1, Rosanna, 28.viii.1954, A. Neboiss (MVM); 1, Sea Lake, Goudie (MVM);



FIGS **4-12**—*Cychramptodes murrayi*: **(4)** body, dorsal, with prothorax elevated; **(5)** head, frontal; **(6)** antenna; **(7)** mentum, labial and maxillary palps; **(8)** posteromesal portion of metasternum, hind coxae and intercoxal process of ventrite 1; **(9)** fore leg; **(10)** tegmen, dorsal; **(11)** penis, ventral; **(12)** ovipositor, ventral; FIGS **13-22**—*Miskoramus pulcher*: **(13)** body, dorsal, with prothorax elevated; **(14)** head, frontal; **(15)** antenna; **(16)** head and prosternum, ventral; **(17)** posteromesal portion of metasternum, hind coxae and intercoxal process of ventrite 1; **(18)** lateral portion of elytron and abdomen (diagrammatic); **(19)** fore leg; **(20)** hind leg; **(21)** tegmen, ventral; **(22)** tegmen, lateral. Scale A for Figs 4, 5, 13, 13, 18; scale B for Figs 6, 8, 8, 15, 17, 19, 20; scale C for Figs 7, 10-12, 16, 21.

1, Tarrawanga, 2.viii.1953, F. E. Wilson (MVM); 1, Victorian Alps, H. W. Davey (MVM). NORTHERN TERRITORY: 1, 39 km E of Alice Springs (23.41 S, 134.15 E), 25.ix.1978, M. S. Upton (ANIC); 1, Henbury Stn, ix.1936, H. O. Fletcher, W. Barnes (AMS). SOUTH AUSTRALIA: 1, Adelaide, Hart (BMNH); 1, same locality, A. H. Elston (AMS); 1, Buckaringa Gorge, c. 30 km NNW of Quorn, 18.xii.1985, C. Reid (ANIC); 5, Nat. Park, near Belair, 4.iv.1965, on stem with scale insects and ants, on *Acacia* sp. (non-native), N. McFarland (SAM); 3, 21 km SE of Oodnadatta (30.40 S, 135.37 E), 20.ix.1978, M. S. Upton (ANIC, ZINL); 1, 33 km SE by S Oodnadatta (27.47 S, 135.39 E), 23.ix.1972, J. Upton (ANIC). WESTERN AUSTRALIA: 1, 7 mi. E by N of Balladonia H. S., 13.x.1968, E. B. Britton, M. S. Upton, J. Balderson (ANIC); 1, 85 km SE by E of Broome (18.22 S, 122.53 E), 17.viii.1976, I. F. B. Common (ANIC); 2, 101 km SE by E of Broome (18.27 S, 123.03 E), 20.viii.1976, I. F. B. Common (ANIC, ZINL); 1, 102 km SE by E of Broome (18.25 S, 123.05 E), 18.viii.1976, I. F. B. Common (ANIC); 2, 163 km SE by E of Broome (18.49 S, 123.17 E), 3.viii.1976, I. F. B. Common (ANIC, ZINL); 1, 2 mi. NE of Fraser Range H. S., 12.x.1968, E. B. Britton, M. S. Upton, J. Balderson (ANIC); 1, Rockhole Rd., Munglinup, 8.x.1983, F. H. Uther Baker (ANIC); 1, 13 km E by N of Newman (23.15 S, 119.52 E), 12.xi.1970, E. B. Britton (ANIC); c. 30 km N of Yuna, 22.viii.1975, K. & E. Carnaby (ANIC).

Redescription

Length 3.6-4.7 mm; width 2.5-3.1 mm; depth 1.0-1.2 mm. Dorsal surfaces reddish-brown to reddish-black or black; ventral surface yellowish-red to reddish-brown. Dorsal surfaces glabrous; ventral surfaces clothed with very short, fine hairs; hind edges of abdominal ventrites finely ciliate. Head moderately finely and sparsely punctate. Antenna with segments 5-7 subequal; club expanded apically, 3rd segment widest and almost as long as first 2 together. Head and pronotum very finely and sparsely punctate; intervals finely reticulate. Scutellum more coarsely and densely punctate. Elytral striae very fine, subsutural striae visible only in distal half. Elytral intervals each with a longitudinal band of punctures, 2 or 3 wide, separated from the striae on each side by an impunctate area, which is finely reticulate; punctures on band coarse and dense anteriorly, finer and sparser posteriorly. Prosternum and mesosternum impunctate and finely reticulate; metasternum and ventrites 1-4 finely and sparsely punctate (except for row of larger punctures along coxal lines), intervals almost smooth; ventrite 5 coarsely and densely punctate, intervals finely reticulate. Apex of ventrite 5 in male shallowly emarginate, in female bisinuate with median tuft of hairs. Aedeagus as in Figs 10-11. Ovipositor as in Fig. 12.

Distribution

The single species is widespread throughout the southern part of Australia, from southern Queensland to Victoria and west through South Australia and the southern part of the Northern Territory to Western Australia, where it extends north almost to the 18th parallel.

Biology

Adults of this species are not uncommonly collected on branches of *Acacia* spp. being attacked by the wattle tick scale, *Cryptes baccatus* (Maskell) (Hemiptera: Coccidae). Adults were observed by Farrell (1985) to pierce the large, white, globular female scales, and to feed on the exuding body fluids. Eggs were laid beneath the body of the scale but on top of the wax plug on which the scale sits. The first instar remains in the same position as the egg, with the body partly buried in the wax plug and feeds on the scale in approximately the same manner as the adult. The first instar remains with a single scale, and its feeding appears to have no effect on the scale's growth. The second instar is more active and kills the scale, consuming the soft tissue; the third instar is even more active, and consumes numerous scales as it tunnels through the colony. Farrell noted that scale eggs formed the main component of the larval diet, since the active, third instars of *C. murrayi* are most abundant during the period when oviposition has been completed and the scale's body organs have degenerated. The full-grown nitidulid larvae were quite active when disturbed and dropped quickly to the bottom of the rearing cage. It is almost certain that these beetles pupate in the soil, as do other Nitidulidae, but pupation could not be induced in the laboratory by Farrell or us.

Larvae of *C. murrayi* are lightly sclerotised, except for the head, protergal plate and legs, which are yellow, and the mandibles, mouth frame and small urogomphi, which are dark brown. The body is somewhat curved dorsally and the upper surface is smooth, without a trace of tubercles or asperities. The head is strongly transverse with very short antennae (less than 0.1 times as long as head width) and with the posterior 2 stemmata reduced to eye spots, which are barely visible in some specimens. The mandible (Fig. 3) is short and stout, with a reduced, tridentate apical lobe, which is perpendicular to the plane of movement; in first instars 2 of the 3 apical teeth are well-developed and acute, while the third (ventral) is reduced. The mola is laterally

compressed and highly reduced, with a few teeth only, and the prostheca consists of a few simple hyaline processes; dorsal spine rows are absent, as are cibarial plates. The maxilla has a reduced mala with a few stout setae on the inner edge but no uncus. The legs are very short (about 0.2 times as long as mesothoracic width). Urogomphi are small and simple, posterodorsally oriented and acute; pregomphi are absent. The spiracles lie within sclerotised rings but are not placed at the ends of spiracular tubes.

Miskoramus gen.n.

Type species—Miskoramus pulcher sp.n.

Description

Body (Fig. 13)—Broadly oval, nearly hemispherical, strongly convex dorsally and flattened ventrally; glabrous.

Head (Figs 14, 16)—Moderately declined, with small, slightly projecting eyes; supraorbital ridges absent; transverse frontal ridge absent; clypeus horizontal and exposed. Labrum scarcely exposed beneath clypeus. Mandibles with moderately curved and acute apices. Antennal grooves well developed; gular region moderately long. Maxillae and labium lying behind enlarged mentum (Fig. 16), so that only apices of palps exposed.

Dorsal Surfaces—Pronotum and elytra gently arched; sides unmargined; elytral apices concealing pydidium (Fig. 13).

Ventral Surfaces—Prosternum (Fig. 16) sharply delimited laterally, where it forms on each side edge of hypomeral cavity in which antennal club rests; fore coxal cavities not completely closed posteriorly; prosternal process moderately curved along ventral plane of body. Mesosternum very weakly carinate, abruptly, steeply elevated posteriorly at base of intercoxal process, but not forming horizontal plate. Mid coxae approximate, but separated by about 0.2 times coxal width (greatest diameter). Metasternum as long as prosternum (incuding intercoxal process), slightly elevated posteromesally (Fig. 17), forming weak impressions on each side for hind femora. Coxal lines of both mid and hind coxal cavities deviating from hind edges of cavities.

Legs—Femora (Figs 19, 20) about 2.5 times as long as wide. All tibiae triangular, widened to apices, and strongly compressed. Tarsi short; tarsomeres 1-3 very wide.

Distribution

Known only from vicinity of Port Macquarie, New South Wales.

Notes

This genus differs from *Cylindroramus* in the more hemispherical form, rounded elytral apices, elongate femora and distinct antennal cavities on the pronotal hypomera, and in the absence a transverse frontal ridge. From *Cylindroramus* it may be distinguished by the concealed maxillae and labium, 11-segmented antennae, more widely separated mid coxae, shiny surface, and the absence of supraorbital ridges. This genus resembles certain species of Lawrencerosini in the shape of the labrum (vertically abrupt) and in the somewhat concave tibial apex, in which the tarsus may be partly enclosed; these features are absent in *Cychramptodes* and *Cylindroramus*.

The generic name is formed from the name Misko, in memory of the late Stephan Misko, once an employee of C.S.I.R.O. and also a well-known artist and member of Canberra's Ukranian community.

Miskoramus pulcher sp.n. (Figs 13-23)

Type—New South Wales: *holotype* ♂, 5 mi W of Port Macquarie, 28.iii.1965, I. F. B. Common, M. S. Upton (ANIC).

Description

Length 3.6 mm; width 2.6 mm; depth 1.0 mm. Head from above, pronotum, and elytral epipleura reddish-brown; elytra metallic blue; ventral surfaces (except hypomera and epipleura), antennae and legs yellowish-red. Glabrous and shiny. Head diffusely punctured with sparse and very small punctures; intervals 4-6 puncture diameters, intervals finely and densely alutaceous, almost smooth. Antennae (Fig. 15) somewhat longer than head width. Base with line near scutellum. Pronotal punctation very fine and sparse, the punctures scarcely visible and intervals almost smooth. Elytra with subsutural striae exposed just before apices, which are separately rounded; sides and apices subexplanate. Elytra with longitudinal rows of punctures nearly as large as eye facets alternating with rows of very small punctures; intervals as on pronotum. Metasternum mesally impressed; caudal marginal line of mid coxae almost reaching distal third

of metepisternum, that of hind coxal cavity arcuate, deviating from hind edge of cavity and extending to middle of first ventrite. Legs more or less similar, but fore tarsi 0.67 times as wide as antennal club, while mid and hind ones are somewhat narrower; claws simple. Pygidial apex broadly rounded and last ventrite with bisinuate apex. Punctures on ventral surfaces nearly as large as or somewhat smaller than eye facets; intervals 3-5 puncture diameters wide and more or less smooth. Aedeagus as in Figs 21-23. Female unknown.

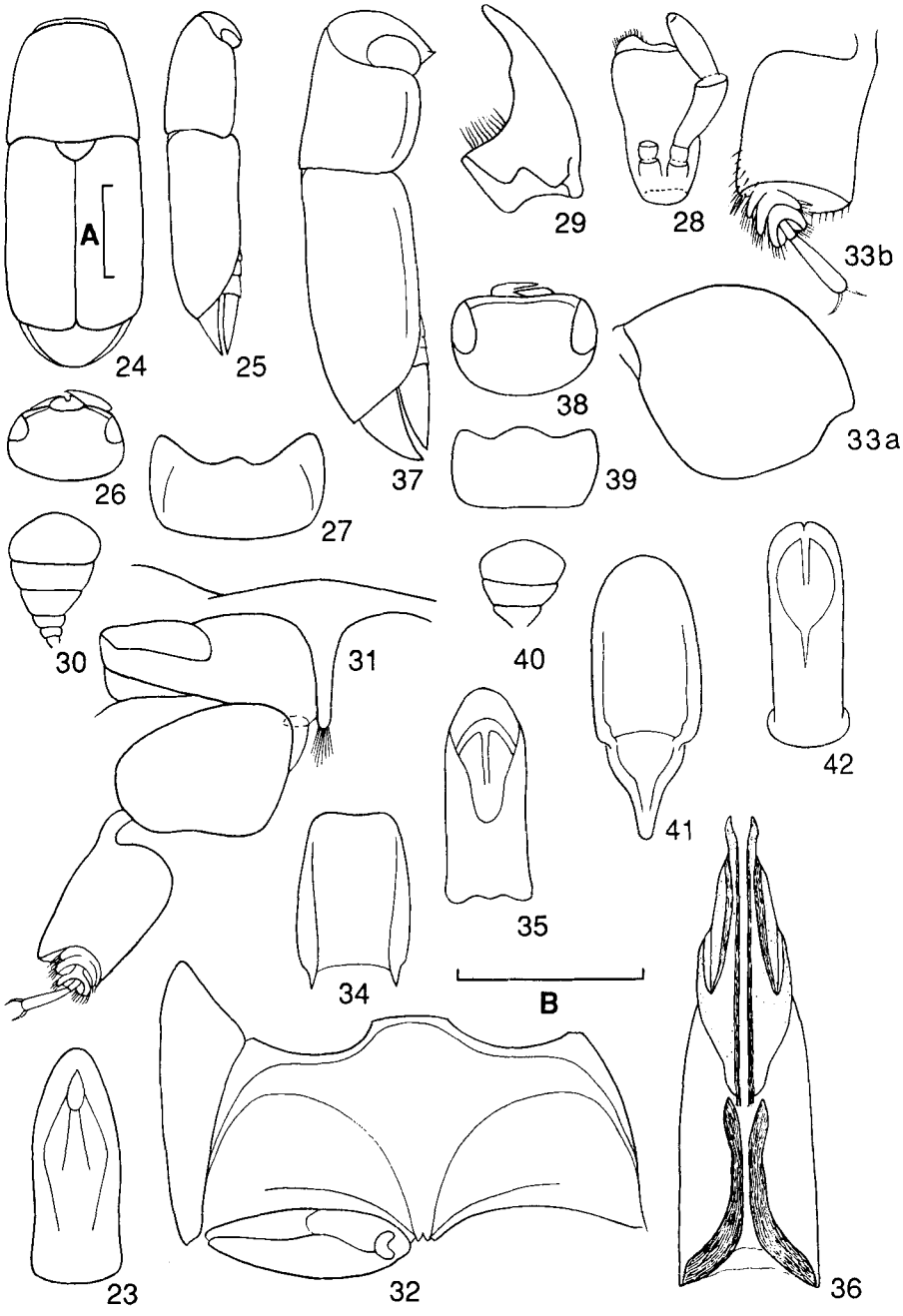


FIG. 23—*Miskoramus pulcher*, penis, dorsal. FIGS 24-42—*Cylindroramus* spp.: (24-36) *C. fraucai*: (24) body, dorsal; (25) same, lateral; (26) head, frontal; (27) mentum, ventral; (28) labium with palp; (29) mandible, ventral; (30) antennal club; (31) prosternum and fore leg; (32) metasternum with hind coxa; (33) hind leg (a, femur; b, tibia and tarsus); (34) tegmen, lateral; (35) same, dorsal; (36) ovipositor, ventral; (37-42) *C. medvedevi*: (37) body, lateral; (38) head, frontal; (39) mentum; (40) antennal club; (41) tegmen, ventral; (42) penis, dorsal. Scale A for Figs 24-26, 37, 38; scale B for Figs 23, 27-36, 39-42.

Cylindroramus gen.n.

Type species—Cylindroramus fraucai sp.n.

Description

Body (Figs 24, 57, 72)—Elongate, nearly cylindrical (strongly convex dorsally, flattened or almost horizontal ventrally). Upper surfaces glabrous.

Head—Strongly declined (Figs 25, 43, 66), eyes not projecting and frontoclypeal region subtruncate, scarcely projecting in front of eyes (Figs 38, 47, 58). Supraorbital ridges absent (although eye may be very finely margined); frons with more or less well developed, transverse ridge (Figs 38, 47, 74), sometimes absent mesally; clypeus reduced, more or less vertically oriented and often not visible beneath frontal ridge. Apical lobes of labrum concealed or slightly exposed. Mandibles weakly to moderately well developed, with moderately curved and acute apices. Antennae 10-segmented with 3-segmented, compact club. Antennal grooves deep and sharply delimited; mentum and gular region short. Maxillary and labial palps completely exposed or concealed at base only.

Dorsal Surfaces—Pronotum (Figs 25, 37, 57, 73) gently arched dorsally, strongly declined laterally, sides unbordered and not visible from above. Elytra gently curved and strongly declined to sides, which are unbordered and not visible from above; apices truncate, exposing apex of pygidium (Figs 24, 72).

Ventral Surfaces—Prosternum (Fig. 31) very short, with extremely narrow and short intercoxal process; fore coxal cavities open; antennal cavities absent on pronotal hypomera. Mesosternum short, moderately, evenly elevated posteriorly. Metasternum (Fig. 32) somewhat longer than prosternum (including intercoxal process), its posteromesal portion strongly elevated, forming femoral impression on each side; median longitudinal impression absent. Caudal marginal line of mid coxal cavity (Fig. 32) deviating from hind edge, that of hind coxal cavity following hind edge.

Legs (Fig. 31)—Femora shorter than wide. Tibiae short and strongly widened, nearly rectangular. Tarsi short, with tarsomeres 1-3 very wide.

Genitalia—Well-sclerotised in both sexes.

Distribution

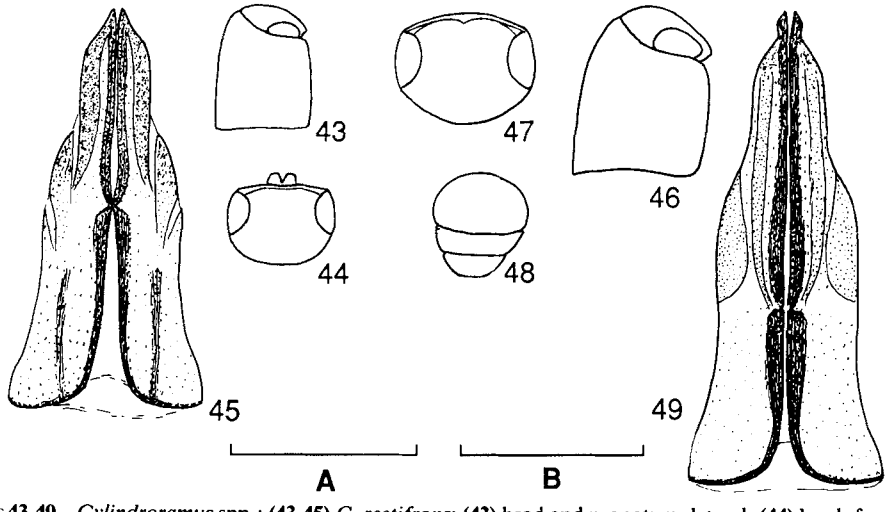
Known from both closed and open forest habitats along the east coast from the A.C.T. to Cape York and west to Arnhemland.

Biology

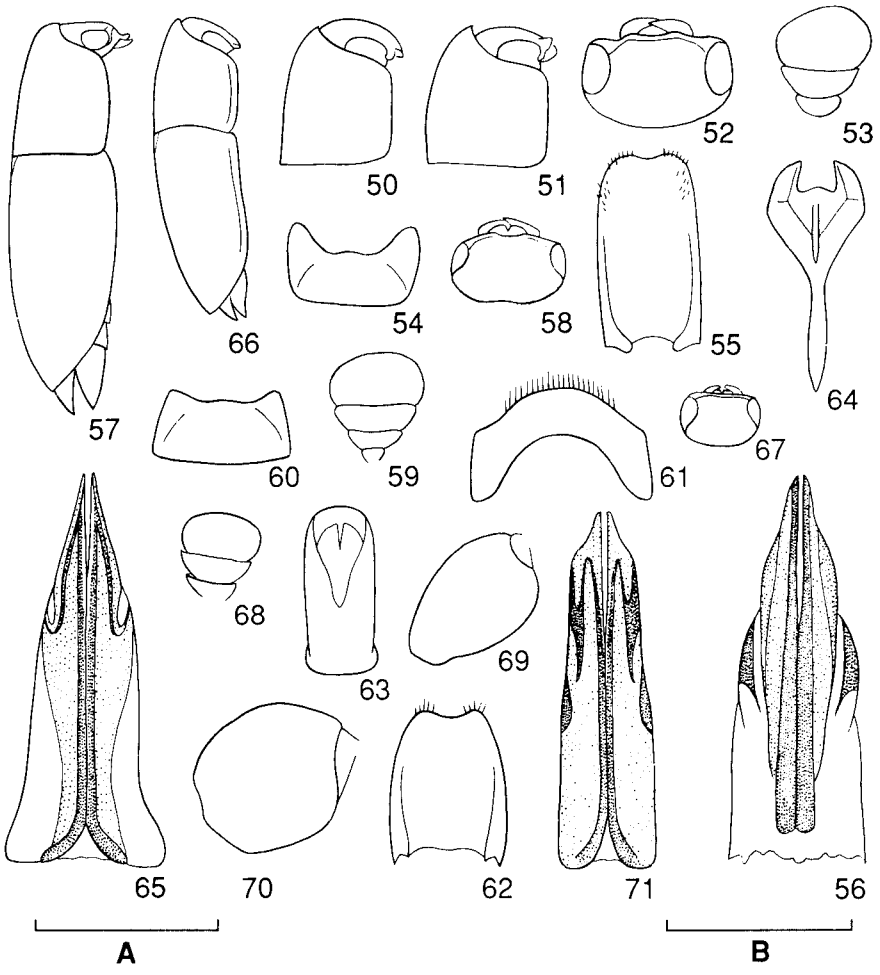
Nothing is known of the habits. Adults have been collected rarely at light.

Notes

This genus differs from other cychramptodines in the much more elongate, often nearly cylindrical, body, truncate elytral apices, very short femora, strongly truncate head (scarcely projecting in front of the eyes) with distinct frontal ridge and more or less concealed clypeus, and lack of antennal cavities on the pronotal hypomera.



FIGS **43-49**—*Cylindroramus* spp.: **(43-45)** *C. rectifrons*: **(43)** head and pronotum, lateral; **(44)** head, frontal; **(45)** ovipositor, ventral; **(46-49)** *C. monteithi*: **(46)** head and pronotum, lateral; **(47)** head, frontal; **(48)** antennal club; **(49)** ovipositor, ventral. Scale A for Figs 43, 44, 46, 47; scale B for Figs 45, 48, 49.



FIGS **50-71**—*Cylindroramus*: **(50-56)** *C. dressleri*: **(50)** head and pronotum of holotype, lateral; **(51)** head and pronotum of paratype, lateral; **(52)** head, frontal; **(53)** antennal club; **(54)** mentum; **(55)** tegmen, ventral; **(56)** ovipositor, ventral; **(57-65)** *C. moorei*: **(57)** body, lateral; **(58)** head, frontal; **(59)** antennal club; **(60)** mentum; **(61)** genital capsule of male, ventral; **(62)** tegmen, ventral; **(63)** penis; dorsal; **(64)** sternite 8 and spiculum ventrale of female, ventral; **(65)** ovipositor, ventral; **(66-71)** *C. nitens*: **(66)** body, lateral; **(67)** head, frontal; **(68)** antennal club; **(69)** fore femur; **(70)** hind femur; **(71)** ovipositor, ventral. Scale A for 50-52, 57, 58, 66, 67; scale B for 53-56, 59-65, 68-71.

Key to Species of *Cylindroramus* gen.n.

1. Head not projecting forward at middle (Figs 38, 67, 87) 2
   Head slightly projecting forward at middle (Figs 26, 52, 58, 74, 81) . . 5
2. Anterior edge of head absolutely truncate; punctation of upper surface coarse, dense and even, with punctures scarcely smaller than eye facets and separated by 0.25 to 0.5 puncture diameter; intervals dull, extremely finely reticulated; elytra without trace of subsutural striae; antennal club almost triangular (widened to apex). 3.8-4.6 mm. Figs 85-90. Queensland . . . . . **macropunctatus** sp.n.
   Anterior edge of head somewhat emarginate; punctation of upper surface very fine and sparse, with punctures less than 0.33 X as large as eye facets; with indistinct longitudinal rows of punctures on elytra; head nearly impunctate; elytra with submarginal lines; body more or less shiny; antennal club more or less oval 3
3. Smaller (3.0 mm) and more slender, with smaller, flattened head; elytra and pronotum smooth and shiny, elytra with trace of microreticulation; irregular, longitudinal elytral bands consisting

of 1-2 punctures transversely aligned; subsutural striae present in distal third of elytra; fore femur oval, slightly longer than wide; hind femur as long as wide. Figs 66-71. Queensland . . **nitens** sp.n.

Larger (3.7-4.1 mm) and more robust, with comparatively large and convex head; microreticulation of pronotum and elytra fairly well expressed; longitudinal puncture bands on elytra wider (2-4 punctures transversely aligned); fore femur triangular, slightly longer than wide; hind femur much wider than long 4

4. Pronotal surface not sloping anteriorly (Fig. 37); pygidium almost impunctate; subsutural striae present only at elytral apices; labral lobes not exposed beneath frons. 4.1 mm. Figs 37-42. Northern Territory . . . . . **medvedevi** sp.n.

Pronotal surface distinctly sloping anteriorly (Fig. 43); pygidium with distinct punctures as large as eye facets, separated by about 0.5 puncture diameter; subsutural striae present at distal third of elytra; labral lobes exposed beneath frons. 3.7 mm. Figs 43-45. Queensland . . . . . **rectifrons** sp.n.

5. Extremely smooth and shiny from above; pronotum impunctate; head with reduced punctures; elytra with longitudinal bands of punctures near suture and impunctate at sides; anterior edge of head convex at middle; subsutural striae present only at elytral apices; hind femur as wide as long. Male: last ventrite much wider than pydidium, with hypopygidial hind edge deeply concave at middle. 4.3-4.8 mm. Figs 72-79. Northern Territory . . **uptoni** sp.n.

Moderately shiny but usually with elytra alutaceous; head and pronotum with more or less evident punctures (but *C. fraucai* and *C. moorei* with head almost impunctate); anterior edge of head scarcely emarginate at middle. Male: last ventrite slightly wider than pygidium, with hypopygidial edge convex or feebly emarginate at middle. 6

6. Head more than 2 times as wide as long, with feebly convex dorsal surface, almost vertical from lateral view; disc of pronotum somewhat flattened; dorsal surface full, moderately alutaceous, with dense, distinct punctation (intervals between punctures on pronotum nearly as large as a puncture diameter); last antennal segment much larger than 2 preceding ones taken together. Male: apex of last ventrite broadly rounded. 5.6 mm. Figs 80-84. New South Wales . . . . . **accretus** sp.n.

Head narrower; pronotal disc convex; dorsum shinier, with more or less alutaceous elytra and with sparser punctation; last antennal segment nearly as large as 2 preceding taken together 7

7. Head vertically truncate; surfaces of 5th ventrite and pydigium with finer and sparser punctation, punctures (especially on pydidium) considerably smaller than eye facets; head without distinct punctures; subsutural striae present at distal third of elytra; last antennal segment shorter than 2 preceding taken together. Male: apex of last ventrite slightly, broadly emarginate. 3.8-4.3 mm. Figs 57-65. New South Wales and Australian Capital Territory . . . . . **moorei** sp.n.

Dorsal surface of head evenly convex, not abruptly truncate; last ventrite and pygidium with coarser and denser punctation, punctures on last ventrite, at least, nearly as large as or larger than eye facets (except in *C. fraucai* where they are somewhat smaller); without other characters in combination 8

8. Larger and more robust (length 4.6-5.0 mm, width 2.3-2.4 mm); pronotum slightly sloping anteriorly (Fig. 46); antennal club nearly as long as wide; last ventrite with extremely large punctures, which are almost contiguous; head and pronotal surfaces with distinct punctures, intervals between them about 1.5-2.0 puncture

diameters and more or less distinctly reticulate. Figs 46-49. Queensland . . . . . **monteithi** sp.n.

Smaller and more slender (length 3.2-4.1 mm, width 1.4-1.7 mm); pronotum steeply sloping anteriorly (Figs 25, 50, 51); antennal club distinctly longer than wide; last ventrite with smaller and more widely separated punctures 9

9. Surface of head without distinct punctation (or with a faint trace); intervals between punctures on dorsum more or less smooth; frontal lobes before eyes less projecting (Fig. 26); subsutural striae present in distal two-fifths of elytra; punctures on pygidium much smaller than eye facets. Male: apex of last ventrite shallowly emarginate. 3.6-4.1 mm. Figs 24-36. Queensland . . **fraucai** sp.n.

Surface of head with small, distinct punctures; intervals between punctures on dorsum distinctly reticulated; frontal lobes in front of eyes more projecting (Fig. 52); subsutural striae present only in distal fifth of elytra; punctures on pygidium nearly as large as eye facets. Male: apex of last ventrite truncate. 3.2-3.8 mm. Figs 50-56. Queensland . . . . . **dressleri** sp.n.

Cylindroramus accretus sp.n. (Figs 80-84)

Type—NEW SOUTH WALES: *holotype* ♀, Pt Lookout, via Ebor, 4500', 22.i.1967, *Nothofagus* forest, B. Cantrell (QMB).

Description

Length 5.4 mm; width 2.5 mm; depth 1.6 mm. Body moderately robust. Colour light red, elytra yellowish red; upper surfaces glabrous; head and pronotum with small dense punctures separated by 1 puncture diameter; intervals extremely finely and densely reticulate, so that surface is matt, with only a dull sheen. Head (Fig. 81) strongly transverse, very slightly produced anteriorly; anterior edge trisinuate, with narrow mesal and 2 broad, lateral emarginations. Last antennal segment (Fig. 82) much larger than preceding 2 taken together. Anterior angles of mentum (Fig. 83) only slightly produced. Pronotal disc (Fig. 80) somewhat flattened. Elytral punctation similar to that on head and pronotum, except that punctures tend to be aligned in longitudinal bands or rows; subsutural stria present on posterior 6th. Pygidium with coarser and denser punctation, punctures separated by less than 1 puncture diameter; intervals distinctly granulate and dull. Ventrite 5 broadly rounded, almost truncate, at apex; punctation coarse and dense as on pygidium; ventrites 1-4 with smaller, dense punctures. Mid and hind femora scarcely longer than wide. Ovipositor as in Fig. 84. Male unknown.

Notes

This species is distinguished from most of its congeners by body shape combined with the matt upper surface, flattened pronotum, fine punctation which is almost diffuse on parts of elytra, and extremely short, strongly transverse head. It differs from *C. macropunctatus* in having a somewhat more slender body, much finer and sparser punctation, slightly projecting mesal portion of frontoclypeus, convex pygidial apex and distinct subsutural striae. From *C. dressleri* and *C. monteithi* it may be distinguished by the somewhat more robust form and evenly rounded apex of the last ventrite in the female. It lacks the strongly widened last ventrite of *C. uptoni*, from which it also differs in having distinct punctation and somewhat longer subsutural striae. It is larger than *C. nitens*, with more steeply sloping elytral apices and a convex pygidial apex in the female. It differs from *C. moorei* by having a more convex frontoclypeus, more steeply sloping elytral apices, and more elongate hind femora. The steeply sloping elytral apices also distinguish it from *C. fraucai* and *C. medvedevi*, as does the more coarsely and densely punctate pygidium.

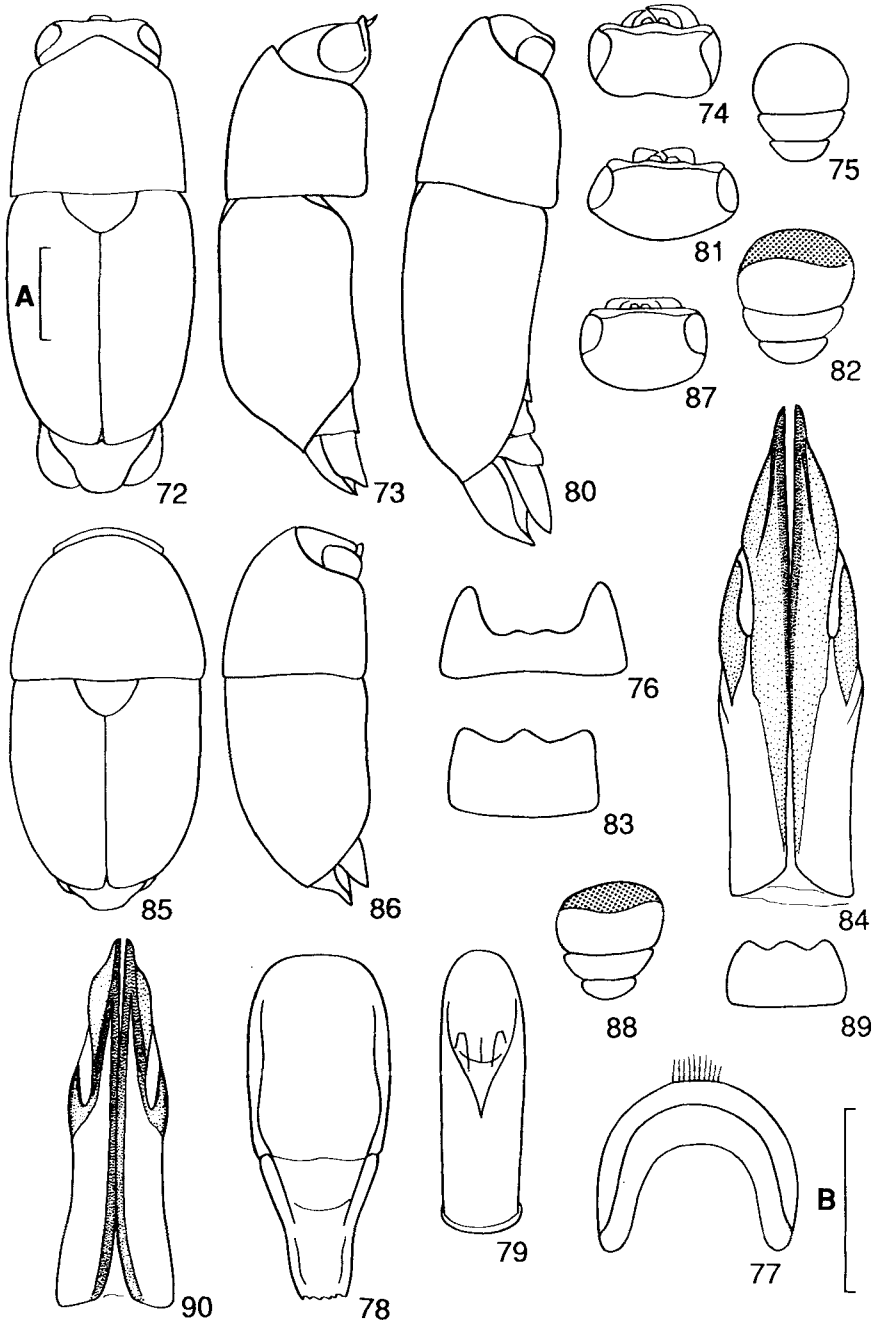
Cylindroramus dressleri sp.n. (Figs 50-56)

Types—QUEENSLAND: *holotype* ♂, Cow Bay, N of Daintree, 9-27.xii.1983, J. C. Cunningham (QMB); *paratypes*: QUEENSLAND: 1 ♀, Christmas Ck, 15 km W of Fairview via Laura, 26.vi.1975, G. B. Monteith (QMB); 1, Mt Webb Nat. Park (15.04 S, 145.07 E), 30-30.ix.1980, T. A. Weir (ANIC).

Description

Length 3.2-3.8 mm; width 1.4-1.7 mm; depth 0.8-1.2 mm. Colour red to reddish-brown; glabrous. Head (Figs 50-52) with frontoclypeus very slightly produced and broadly trisinuate, frontal lobes projecting

somewhat in front of eyes; punctures very small and dense, shallow, separated by nearly 1 puncture diameter; intervals finely and densely alutaceous. Last segment of antennal club (Fig. 53) longer than preceding 2 segments taken together. Mentum (Fig. 54) with anterior angles strongly produced forward and explanate, so that anterior edge is deeply emarginate. Sides of pronotum and elytra almost impunctate and finely alutaceous; pronotal disc with punctation and sculpture similar to that on head, but punctures somewhat sparser and sometimes much larger. Elytral punctation and sculpture similar to that in *C. medvedevi*,



FIGS **72-90**—*Cylindroramus* spp.: **(72-79)** *C. uptoni*: **(72)** body, dorsal; **(73)** body, lateral; **(74)** head, frontal; **(75)** antennal club; **(76)** mentum; **(77)** genital capsule of male, ventral; **(78)** tegmen, dorsal; **(79)** penis, dorsal; **(80-84)** *C. accretus*: **(80)** body, lateral; **(81)** head, frontal; **(82)** antennal club; **(83)** mentum; **(84)** ovipositor, ventral; **(85-90)** *C. macropunctatus*: **(85)** body, dorsal; **(86)** body, lateral; **(87)** head, frontal; **(88)** antennal club; **(89)** mentum; **(90)** ovipositor, ventral. Scale A for Figs 72-74, 80, 81, 85-87; scale B for Figs 75-77, 82-84, 88-90.

but more variable. Subsutural striae present on posterior 6th. Pygidium in both sexes with almost truncate apex, surface with large, shallow punctures, as large as eye facets, separated by narrow intervals and coarse reticulation, which is almost granular. Last ventrite 2.5 times as wide as long, its apex almost truncate in both sexes, but slightly curved laterally in female; punctures larger, denser and deeper than those on pygidium, with narrow intervals similarly reticulate; remainder of ventral surface with very small, dense punctures and reticulate intervals. Genital capsule of male as in *C. fraucai* and *C. medvedevi*. Aedeagus (Fig. 55) strongly sclerotised, similar to *C. medvedevi*, but with a different tegminal apex. Ovipositor as in Fig. 56.

Notes

This species is very similar to *C. medvedevi* but is easily separated from that species by the shape of the pronotum and head, the projecting fore part of the frons, shorter mentum with explanate and strongly projecting anterior angles, longer apical antennal segment, the longer last ventrite and the slightly different genitalia. It is also similar to *C. fraucai* and *C. monteithi*, differing from the former by the more steeply sloping anterior portion of the prothorax (as seen from lateral view), the smaller and more slender body and ovipositor structure, and from the latter by peculiarities of puncturation and reticulation (especially on the head), shorter subsutural striae and different genital structures.

The species is named in honour of Mr Walter Dressler.

Cylindroramus fraucai sp.n. (Figs 24-36)

Types—QUEENSLAND: *holotype* ♂, Bundaberg (24.51 S 152.21 E), 28.vi.1972, H. Frauca (ANIC). *Paratypes*: QUEENSLAND: 3, same data as holotype (ANIC, ZINL).

Description

Length 3.6-4.1 mm; width 1.5-1.7 mm; depth 1.0 mm. Body (Figs 24-25) moderately slender, somewhat flattened. Colour red, shiny; dorsal surfaces glabrous, ventral surfaces moderately pubescent; hind edges of ventrites 1-4 ciliate, each cilia as long as tarsal claw. Head (Fig. 26) with anterior edge moderately projecting in front of eyes, broadly, shallowly emarginate mesally; punctures extremely fine, moderately dense and shallow; intervals 2 times as large as puncture diameter, finely alutaceous. Labrum slightly exposed from beneath clypeus. Antenna 0.75 times as long as head width; club (Fig. 30) comprising more than one-third of total antennal length. Mandibles (Figs 26, 29) extremely asymmetrical, right one more developed than left one. Mentum (Fig. 27) with strongly produced, explanate anterior angles; labium as in Fig. 28. Pronotum (Fig. 25) moderately curved anteriorly; punctures slightly larger and sparser than on head, with alutaceous intervals nearly 4 times as large as puncture diameter; scutellum almost impunctate, smooth and extremely shiny. Elytra (Figs 24, 25) slightly sloping posteriorly; surface with irregular, longitudinal bands of transversely disposed, shallow punctures, 2-4 punctures wide, between which there are scattered punctures; punctures much larger than those on head and pronotum but somewhat smaller than eye facets; intervals more or less alutaceous; punctation and sculpture subject to some variation. Pygidium with diffuse punctures as large as those on elytra, with more conspicuous reticulation; pygidial apex subtruncate in male, broadly rounded in female (Fig. 24). Tibiae (Figs 29, 33a) slightly longer than wide. Fore femur (Fig. 29) more elongate than mid and hind femora (Fig. 33b). Tarsi (Figs 31, 33b) short, with tarsomeres 1-3 widened; claws short and narrow. Last ventrite (Fig. 25) twice as long as preceding one, with apex slightly emarginate. Abdominal punctation as on pygidium, but punctures on last ventrite somewhat larger and deeper. Genital capsule subtruncate apically. Aedeagus as in Figs 34, 35. Ovipositor as in Fig. 36.

Notes

C. fraucai is superficially similar to *C. medvedevi*, *C. monteithi*, *C. dressleri* and *C. moorei*. It may be distinguished from the first of these by the head being less exposed from above, with the anterior edge slightly projecting, the abdominal apex of a different shape, and the distinct punctation. It differs from *C. dressleri* and *C. monteithi* in the shape of the anterior edge of the head and the much finer punctation and both male and female genitalia. From *C. moorei* it is distinguished by the moderately convex head, peculiarities of the punctation, especially on the last ventrite, and by genital structures.

The species is named in honour of Mr Harry Frauca.

Cylindroramus macropunctatus sp.n. (Figs 85-90)

Types—QUEENSLAND: *holotype* ♂, 7 km NE of Tolga, 24.xi.1988, R. Storey, S. DeFaveri (QMB); *paratypes*: QUEENSLAND: 1 ♀, 17 km WNW of South Johnstone, 3.i.1986, light trap, Fay, Halpapp (QMB); 1 ♀, 3 km N of Lockerbie, Cape York, 30.i.-4.ii.1975, MV light, G. B. Monteith (ANIC).

Description

Length 4.1-5.0 mm; width 2.0-2.3 mm; depth 1.5-1.8 mm. Body (Figs 85, 86) relatively large and robust, moderately strongly and evenly curved above. Colour dark reddish-brown; glabrous. Upper surfaces almost monotonously punctured and sculptured, with punctures on head, pronotum, pygidium and last ventrite as large as eye facets and subcontiguous, those on elytra slightly smaller and sparser, but still separated by less than a puncture diameter; intervals distinctly reticulate; punctation of remaining ventrites finer and sparser. Head (Fig. 87) with frontoclypeus absolutely truncate, not produced anteriorly. Antennal club (Fig. 88) with last segment more than twice as long as preceding 2 together. Mentum (Fig. 89) with apex bisinuate and anterior angles slightly produced and explanate. Elytra without subsutural striae. Pygidium (Fig. 85) in male flat before truncate apex, that in female slightly concave before apex, which is almost truncate. Mid and hind femora distinctly longer than wide, with arcuate hind edge. Last ventrite in male with shallowly emarginate apex, in female with transverse apex. Aedeagus heavily sclerotised, shaped nearly as that in *C. uptoni*, with concave upper surface on tegmen. Ovipositor as in Fig. 90.

Notes

This species differs from all its congeners by the coarse, dense punctation, subcontiguous on head and pronotum, and the completely reduced subsutural striae; it is also the only species in which the head is absolutely truncate anteriorly (neither produced, nor emarginate).

Cylindroramus medvedevi sp.n. (Figs 37-42)

Type—NORTHERN TERRITORY: *holotype* ♂, Katherine (14.30 S 132.15 E), 12.xi.1979, G. Medvedev (ANIC).

Description

Length 4.2 mm; width 1.8 mm; depth 1.2 mm. Colour red, pronotal edges and lateral and apical edges of elytra darker; upper surfaces glabrous, ventral surfaces moderately pubescent, with hind edges of ventrites 1-4 ciliate (each cilia almost as long as claw). Anterior edge of head (Fig. 38) concave; labrum concealed. Mandibles asymmetrical but size differing only slightly. Antennae nearly 0.75 as long as head, with club (Fig. 40) less than one-third total antennal length. Mentum (Fig. 39) similar to that in *C. fraucai* but more flattened and with anterior angles less produced. Head surface without any distinct punctation, extremely finely and densely alutaceous. Pronotum (Fig. 37) slightly concave in middle, with small, indistinct punctures mesally, but sides impunctate and alutaceous as on head. Elytra (Fig. 37) moderately sloping posteriorly; subsutural striae present only at elytral apices; surface with weak, longitudinal striae, between which there are longitudinal bands of small but distinct punctures, which are separated by more than a puncture diameter; intervals more conspicuously alutaceous, but at sides surface more similar to that on head and sides of pronotum. Pygidial apex very broadly rounded, almost truncate. Pygidial surface impunctate, with fine granular reticulation. Tibiae barely longer than wide; fore femur barely longer than wide; mid and hind femora distinctly transverse; tarsi as in *C. fraucai*. Ventral surfaces shinier than dorsal, with small, distinct, sparse punctures, separated by much more than a puncture diameter; intervals smooth or lightly reticulate; last ventrite 3 times as wide as long and twice as long as preceding ventrite, with truncate apex, with punctures almost as large as eye facets, rather shallow and separated by 1 to 2 puncture diameters. Anal sclerite with truncate apex. Aedeagus as in Figs 41, 42. Female unknown.

Notes

This species is very similar to *C. rectifrons*, from which it differs in having the anterior portion of the pronotum relatively flat and not sloping anteriorly, the pygidium impunctate, the subsutural striae shorter and the labrum concealed beneath the frons. It is also similar to *C. monteithi*, *C. fraucai* and *C. moorei*, but differs from all of them in having the anterior edge of the head concave and not projecting forward. It is lighter in colour than *C. monteithi*, from which it also differs in the shape of the antennal club, almost transverse pygidial apex in the female and structure of the ovipositor. It differs from *C. fraucai* in the contour of the body as seen from the side, peculiarities of the punctation and reticulation, the flat mentum and the form of the male genitalia. From *C. nitens* it differs in being less shiny and more distinctly punctate dorsally, with a somewhat exposed head, longer mentum and different ovipositor structure. It may be distinguished from *C. moorei* by the more well developed punctation and reticulation, shape of the mentum, structure of the tegmen and transverse apex of male genital capsule, and from *C. dressleri* in the longer mentum with weakly projecting anterior angles, and peculiarities of the punctation, reticulation and genital structure.

The species is named in honour of Prof Gleb S. Medvedev.

Cylindroramus monteithi sp.n. (Figs 46-49)

Types—QUEENSLAND: *holotype* ♂, Tolga, 25.iii.1983, light trap, J. D. Brown (QMB); *paratype*: QUEENSLAND: 1 ♀, Kirrama Range, Douglas Ck Rd, 800 m, 9-12.xii.1986, G. Monteith, G. Thompson, S. Hamlet (ANIC).

Description

Length 4.8-5.2 mm; width 2.1-2.2 mm; depth 1.6 mm. Colour reddish-brown, elytra somewhat darker; glabrous. Head (Fig. 47) with anterior edge projecting and narrowly emarginate at middle; punctation fine, punctures about half as large as eye facets and separated by 1.5-2.0 puncture diameters; intervals lightly, finely and densely reticulate. Labrum slightly exposed. Antennal club (Fig. 48) comparatively large, slightly less than half antennal length, nearly as long as wide. Mentum as in *C. fraucai*, *C. medvedevi* and *C. moorei*. Pronotum (Fig. 46) slightly sloping anteriorly; punctation and sculpture as on head. Elytra with longitudinal bands of transversely aligned punctures, 3-4 punctures in width; intervals slightly alutaceous. Legs as in *C. fraucai*, *C. dressleri* and *C. moorei*. Pygidium slightly concave before broadly rounded apex; punctures as large as or larger than eye facets; intervals somewhat more than half a puncture diameter. Last ventrite broadly rounded, almost truncate, at apex. Ovipositor as in Fig. 49.

Notes

This species is most similar to *C. fraucai*, *C. moorei*, *C. accretus* and *C. dressleri*, especially the last. It differs from *C. dressleri* and *C. fraucai* in having a smaller body, darker colouration, more weakly sloping anterior part of pronotum (as seen in lateral view), coarser punctation on pygidium and last ventrite, and in the structure of the ovipositor, and from the latter also by the more distinct and dense punctation and well-developed reticulation on the dorsum. From *C. moorei* and *C. accretus* the species differs in the configuration of the head and pronotum, as seen in lateral view, peculiarities of the punctation and reticulation and ovipositor structure, and from the latter it also differs in having a more elongate head.

The species is named in honour of Dr G. B. Monteith.

Cylindroramus moorei sp.n. (Figs 57-65)

Types—NEW SOUTH WALES: *holotype* ♂, Gundaroo Property, xi.1977, at light, B. P. Moore (ANIC); *paratype*: AUSTRALIAN CAPITAL TERRITORY: 1 ♀, Black Mtn, Canberra, ii.1973, at light, B. P. Moore (ZINL).

Description

Length 3.8-4.3 mm; width 1.7 mm; depth 1.2-1.3 mm. Colour red, with large, vague, black macula on each elytron; glabrous, shiny. Head (Fig. 57) abruptly declined anteriorly, its anterior edge slightly produced and broadly emarginate mesally (Fig. 58), surface impunctate and inconspicuously reticulate. Antennal club as in Fig. 59. Mentum (Fig. 60) narrowed to anterior angles, which are moderately produced and explanate. Pronotum with small, distinct punctures separated by 1 to 3 puncture diameters; intervals extremely finely and densely alutaceous; sides of pronotum impunctate. Elytra with longitudinal bands of transversely aligned punctures, 2-3 punctures wide; intervals between bands with vague longitudinal furrows. Subsutural striae present on distal 3rd of elytra. Pygidium broadly rounded at apex in both sexes; punctation fine and sparse; intervals finely reticulate. Legs as in *C. dressleri*. Last ventrite about twice as wide as long, with emarginate hind edge in male and concave one in female; punctation distinct, punctures almost as large as eye facets at base and gradually decreasing in size posteriorly. Remainder of ventrites finely and densely punctate with intervals finely reticulate. Genital capsule (Fig. 61) with rounded apex. Aedeagus as in Figs 62, 63. Sternite 8 in female as in Fig. 64; ovipositor as in Fig. 65.

Notes

This species is similar to *C. monteithi*, *C. medvedevi*, *C. rectifrons*, *C. dressleri* and *C. nitens* from which it differs in the shape of the anterior part of the pronotum, as viewed from the side, the sharply declined frons, the short head and the structure of the genitalia in both sexes. In addition, *C. moorei* differs from *C. fraucai* in the shape of the elytral apices, as viewed from the side, shape of the mentum, shorter subsutural striae, and rounded apex of the genital capsule. It differs from *C. medvedevi* in the less well developed punctation, especially on the last ventrite, presence of subsutural striae on the apical 3rd of the elytra, rounded apex on the male genital capsule, and much longer apical ventrite. From *C. dressleri* and *C. monteithi* it differs in the finer punctation on the last ventrite, more symmetrical antennal club and rounded apex on the male genital capsule. From *C. nitens* it differs by the more well developed punctation and reticulation, larger body and shape of the hind femora.

The species is named in honour of Dr Barry P. Moore.

Cylindroramus nitens sp.n. (Figs 66-71)

Type—QUEENSLAND: *holotype* ♀, Cow Bay, N of Daintree, 20.ii-15.iii.1984, J. C. Cunningham (QMB).

Description

Length 2.8 mm; width 1.2 mm; depth 0.8 mm. Colour red; glabrous. Head (Figs 66, 67) relatively small and flattened smooth and shiny, with faint and extremely small punctures. Antennal club as in Fig. 68. Pronotum (Fig. 66) only slightly sloping anteriorly, disc with small but distinct punctures, much smaller than eye facets, absent on sides; intervals at middle 4-5 puncture diameters, smooth and shiny. Scutellar punctures extremely fine, like those on head. Elytra with somewhat irregular bands of more or less distinct, sparse punctures, nearly as large as those on pronotal disc; interstices extremely finely alutaceous, some with weak longitudinal furrows. Subsutural striae present on distal 3rd. Pygidium transversely concave before apex, which is broadly rounded and almost truncate; punctation almost like that on pronotal disc. Legs similar to those in *C. moorei*, with fore femur (Fig. 69) longer than wide but hind femur (Fig. 70) nearly as long as wide, with hind edge not evenly curved. Last ventrite with apex evenly, broadly rounded; punctation distinct at base, with punctures half as large as eye facets and interspaces finely reticulate; at apex surface impunctate and shiny. Remaining ventrites with small and dense punctures and finely reticulate intervals. Ovipositor as in Fig. 71. Male unknown.

Notes

This species is distinct from all its congeners in its small size. It also differs from most species in having the frontoclypeus emarginate and not at all projecting in front of the eyes, a feature which it shares with *C. medvedevi* and *C. rectifrons* only. It differs from both of these species in having a small, flattened head and very smooth and shiny dorsal surface, with very fine and sparse punctation and barely a trace of microreticulation.

Cylindroramus rectifrons sp.n. (Figs 43-45)

Types—QUEENSLAND: *holotype* ♂, Bamaga (10.53 S, 142.14 E), 5-12.xii.1986, at light, K. Houston, K. Sadler (DPIQ).

Description

Length 3.7 mm; width 1.7 mm; depth 1.0 mm. Colour red, similar to that in *C. medvedevi*; dorsal surfaces glabrous, ventral surfaces moderately pubescent. Anterior edge of head (Fig. 44) slightly concave; labrum projecting well in front of clypeus. Antennae and mouthparts as in *C. medvedevi*. Pronotum (Fig. 41) very slightly sloping anteriorly; punctation and sculpture as in *C. medvedevi*. Elytra more or less as in *C. medvedevi*; sutural striae present on apical third of elytra. Pygidium with distinct punctures nearly as large as eye facets, tending to be smaller posteriorly; intervals about half as large as a puncture diameter, finely, densely and distinctly reticulate. Ovipositor as in Fig. 45. Female unknown.

Notes

This species is extremely similar to *C. medvedevi*, but quite distinct from it in the shape of the head and pronotum, well exposed labral lobes, more distinct punctation on pygidial surface and longer subsutural striae.

Cylindroramus uptoni sp.n. (Figs 72-79)

Types—NORTHERN TERRITORY: *holotype* ♂, Magela Creek, 2 km N of Mudginbarry H. S. (12.35 S, 132.52 E), 14.xi.1972, M. S. Upton (ANIC); *paratype*: NORTHERN TERRITORY: 1 ♂, same data as holotype (ZINL).

Description

Length 4.3-4.8 mm; width 1.8 mm; depth 1.4 mm. Body (Figs 72, 73) large and robust. Colour red; glabrous. Head (Fig. 74) with anterior edge produced and bisinuate, without median emargination; punctures extremely small and shallow; intervals nearly 3 puncture diameters, finely and very densely reticulate. Antennal club as in Fig. 75. Mentum (Fig. 76) with anterior angles strongly produced and explanate, so that anterior edge is deeply emarginate. Pronotum and elytra smooth and shiny, with very fine and sparse punctures, arranged in irregular, longitudinal rows on elytra, becoming more diffuse and larger at elytral apices. Subsutural striae present at most on distal 5th of elytra. Pygidium (Fig. 72) with subtruncate apex; surface with comparatively large and shallow punctures, almost ⅔ as large as eye facets, separated by less than a puncture diameter. Last ventrite (Figs 72, 73) strongly widened from base to middle, much wider than pygidium lying above it, with wide and deep excision at apex; punctation similar to that on pygidium, but punctures separated by more than a puncture diameter; intervals finely and densely reticulate. Remaining ventrites with small and sparse punctures, with intervals somewhat smooth. Fore femur almost triangular, but mid and hind femora with hind margin evenly rounded. Genital capsule of male as in Fig. 77. Aedeagus as in Figs 78, 79.

Notes

This species has the smoothest pronotal and elytral surfaces, with very fine and sparse punctation and almost no trace of surface sculpture. The species is also distinguished by the contour of the elytral apices as seen in lateral view, the deeply excised mentum and the very unusual structure of the last ventrite.

The species is named in honour of Murray S. Upton.

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