Torresiella Dyne 1997

Torresiella Dyne, 1997: 153.

Type-species: *Torresiella singularis* Dyne, 1997. (Monotypic genus).

Diagnosis (after Dyne 1997)
Setae 8 per segment, prostates a single pair in XIX; male pores a single pair combined with the latter, on XIX. Spermathecal pores a single pair, ventro-lateral, in 7/8. Wholly meronephric, with astomate exonephric nephridia throughout; tufting present in the pharyngeal region. Gizzard well developed, in V. Calciferous glands absent. Holandric, testis-sacs absent. Penial setae and genital setae present.

Description
As for the type-species.

Remarks
Torresiella, like *Neodiplotrema*, is meronephric. It appears to be related to the *Diplotrema-Neodiplotrema* assemblage. Balantin reduction (male pores migrating posteriorly to unite with a single pair of prostatic pores, in XIX), which distinguishes *Torresiella* from all other Australian acanthodriles, is a much less common phenomenon than is the microscolecin transformation (male pores migrating forwards to unite with a single pair of prostatic pores, in XVII). The term derives from a meronephric West African species described by Michaelsen (1898) for which he erected a new genus, *Balanta*. This was on the basis of the combined male and prostatic pores being located on XIX, an arrangement that had not previously been recorded. Only two years later, in 'Das Tierreich', Michaelsen (1900b) suppressed *Balanta* in *Dichogaster*, as its only species, *B. ehrhardti*, had close apparent affinities to other members of that genus [including meronephry] despite the acanthodrilin male genital terminalia of *Dichogaster* (Dyne 1997).

Other balantin genera include *Balanteodrilus* (monotypic) recorded from Yucatan Caves by Pickford (1938), and *Sylvodrilus*, a New Zealand

taxon. Partial balantin reduction is known from *Udeina montanus*, and *Pickfordia hemibalantina* Omodeo, 1958; in these species, the posterior prostates are retained, but the male pore has not migrated, remaining in XVIII. In *Sylvodrilus*, the male pores have shifted to the posterior part of XVIII, and in *Balanteodrilus*, they are located in 18/19. The most advanced degree of transformation is thus to be found in *Torresiella*, in which the male and prostatic ducts are intimately associated (fused?) behind the combined pore. This condition is approached in *Dichogaster ehrhardti*.

Why the balantin condition should be so rare is not known. In acanthodrile genera, there is a distinct tendency for the anterior prostate glands to be conspicuously larger than the posterior organs. Correspondingly, the anterior spermathecae are often smaller than those posterior. Again, there is no satisfactory explanation for these observations, but they do indicate a certain predisposition to the microscolecin reduction. Intermediate stages in reduction suggest that in both reductions, elimination of one of the prostatic sets is a gradual process. The migration of the terminal end of the vas deferens must be largely influenced by the differential effects of the two prostatic pairs. This is presumed to be an embryonic phenomenon, the relative size of the prostatic primordia having a deterministic effect on the length of the vas deferens and the positioning of the male pore (the 'balanced' effect of subequal prostatic sets resulting in an equatorial or slightly presetal position of the male pore, as is commonly the case). A gradualist interpretation, where the male pore migrates progressively over many generations owing to some external selective force, though difficult to accept, appears to be appropriate in this instance. In cases where the male pore fails to migrate despite elimination of either prostatic pair, stabilising selection or some other influence may be involved (Dyne 1997).
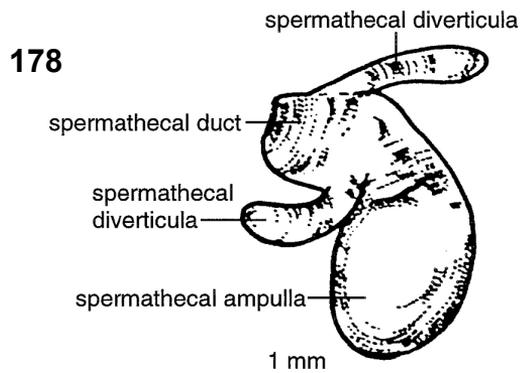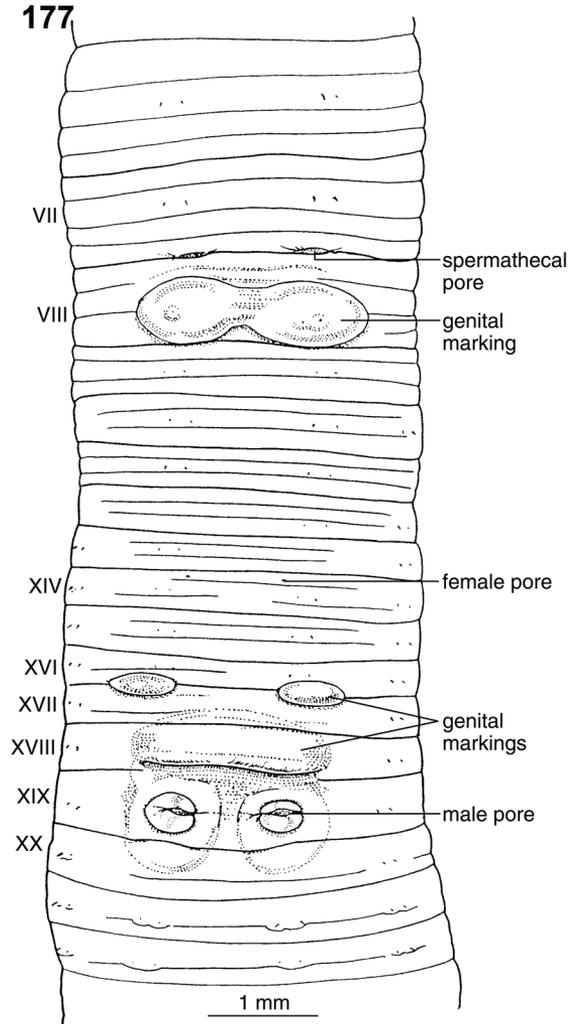
Torresiella singularis Dyne, 1997
(Figs 177, 178)

Torresiella singularis Dyne, 1997: 153–155, figs 10, 11A.

TYPE LOCALITY: Qld, 10°37'S 42°17'E, Horn Island, Torres Strait, 0.4 km E of the airstrip, in moist clay near eucalypts, beside a narrow creek. Coll. R. Raven, 27 Jan 1975.

HOLOTYPE: QM GH 2936.

PARATYPE: QM GH 2937.

Description (after Dyne 1997)

Length 74–92 mm. Width (midclitellar) 3.3–3.4 mm. Segments ca 164–202. Uniformly circular in cross-section, pigmentless grey in alcohol. Prostomium prolobous, peristomium with a dorsal cleft. First dorsal pore 8/9. Setae 8 per segment, commencing in II; caudal setae conspicuously enlarged with respect to the other somatic setae; ventral setal couples of XIX modified as enlarged penial setae; those of XVII and XVIII lacking. Nephropores not externally recognisable. Clitellum not developed. Combined male and prostatic pores in *ab* on XIX, coincident with the penial seta orifices. The combined pores are located on low mounds, the anterior and posterior approaches of which have a darker, glandular appearance; the male field generally depresses, with a conspicuous furrow at 18/19, overhung anteriorly by a lightly tumid region across *bb*. Accessory markings slight tumid swelling associated with the development of genital setae usually present in VIII, below the spermathecal pores. Female pores minute points presetally, in an intrasegmental furrow, median of *a* lines, in XIV. Spermathecal pores a single pair, in *ab*, in 7/8, conspicuous as expanded, rimless orifices.

Septa 5/6 delicate, 6/7, 7/8, 8/9 with a slight to moderate thickening, 9/10–10/11 moderately muscularised, 11/12 slightly so. Dorsal blood vessel single, continuous onto the pharynx; last hearts in XIII, those in X–XIII larger than the more anterior commissurals, and with connectives to both the dorsal and supra-oesophageal vessels (the remainder dorso-ventral only); supra-oesophageal vessel weakly developed, widest in XIV, not traceable anteriad of VIII. Gizzard moderately large, muscular, dolioform, compressible, in V; oesophagus in VI–XVI, fairly wide, well supplied with blood vessels, dilating slightly intra-segmentally; expanded into broad outpouchings in XIII–XIV, not demarcated from the lumen, or calciferous gland-like. Intestine commences with gradual expansion in XVII, a strongly developed dorsal typhlosole present after XXV. Meronephric

Figs 177, 178, *Torresiella singularis* Dyne, 1997. **177**, genital field of Holotype; **178**, left spermatheca of Paratype 1.   [After Dyne 1997]