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Preliminary diagnoses of three new species of Tasmanian mountain shrimps, *Anaspides* Thomson, 1894 (Syncarida, Anaspidacea, Anaspididae)

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The endemic Tasmanian mountain shrimps of the genus *Anaspides* Thomson, 1894 (Anaspidacea) have attracted considerable scientific interest as potential basal eumalacostracans and as 'living fossils', closely resembling their Triassic forbears (Coineau & Camacho 2013). Two species are currently recognised, with *A. tasmaniae* (Thomson, 1893) (type locality: Mount Wellington) accorded a wide range throughout most of central, western and southern Tasmania, and *A. spinulae* Williams, 1965, believed restricted to central Tasmania from Lake St. Clair (type locality) and immediate environs (O'Brien 1990). Despite the current taxonomy, heterogeneity in *A. tasmaniae* has been increasingly suggested, which may have important conservation management implications (e.g., Jarman & Elliot 2000). Jarman & Elliott (2000) recognised three potential clades (based on mitochondrial 16S sequences) that may correspond to separate species. A taxonomic and phylogenetic revision of the genus, now in progress, found *A. tasmaniae* to be restricted to the vicinity of Mount Wellington, and all *Anaspides* from other localities to represent other species. Owing to delays in the completion of the revision, however, some of the new species of *Anaspides* are briefly diagnosed below in order to make the formal species names available for other studies now underway. Full accounts of the species of *Anaspides* will be given when the revision of the genus is completed.

Specimens are deposited in the collections of the Australian Museum, Sydney (AM); South Australian Museum, Adelaide (SAM); Tasmanian Museum and Art Gallery, Hobart (TMAG); and Queen Victoria Museum and Art Gallery, Launceston (QVM). Measurements of specimens are of total body length, measured from the apex of the rostrum to the tip of the telson. A feature of adult males, newly recognised herein for its taxonomic utility, is in the modification of the inner flagellum of the antennule (Fig. 1B, F, J). Adult males have the sixth and seventh segments of the inner flagellum enlarged, with the seventh segment bearing 1–4 prominent, slender, conical protrusions on the mesial margin, the number of which is diagnostic. These protrusions are herein termed "cone setae".

Systematics

Syncarida Packard, 1885

Anaspidacea Calman, 1904

Anaspididae Thomson, 1893

Anaspides Thomson, 1894

Anaspides clarkei sp. nov.

(Fig. 1A–D)

Type material. HOLOTYPE: SAM BS1848a, male (29 mm), Exit Cave, Ida Bay Karst, Tasmania, Australia, coll. E. Hamilton Smith, 24 May 1969. PARATYPES: SAM BS1848b, female (32 mm), Exit Cave, Ida Bay Karst, Tasmania, Australia, coll. E. Hamilton Smith, 24 May 1969; AM P73045, 1 female (18 mm), Base Camp Tributary, Exit Cave, Ida Bay Karst, Tasmania, Australia, 43°28.2'S, 146°51'E, coll. S. Gersbach (#64631); TMAG, 1 female (38 mm), Exit Cave, Ida Bay Karst, Tasmania, Australia, from rock pool in Skeleton Creek, IB-120, coll. A. Clarke, 20 January 1998.

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