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### Designation of type genus for the holothuroid family Cucumellidae (Echinodermata : Holothuroidea : Dendrochirotida) with re-examination of the holotype of *Cucumella decaryi* Cherbonnier

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#### Abstract

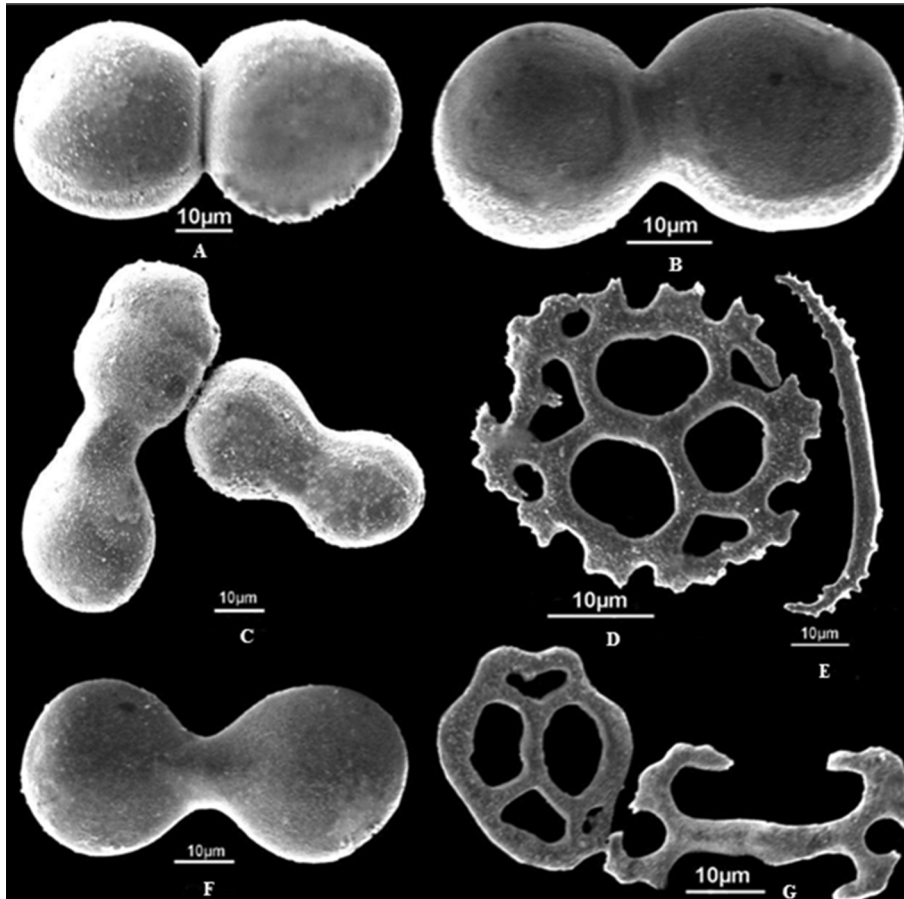
Thandar & Arumugam (2011), in their erection of the new dactylochirotid family Cucumellidae, inadvertently omitted to designate its type genus. This error is here rectified and *Cucumella* Heding (in Ludwig & Heding, 1935) is designated the type genus of the new family Cucumellidae to comply with the requirements of Article 61 of the International Code. Following Smirnov (2012), in his revised classification of the Holothuroidea, the new family is now classified in the order Dendrochirotida. In addition, the holotype of *Cucumella decaryi* Cherbonnier is re-examined to confirm its synonymy with *Neostichopus grammatus* (H.L. Clark).

**Key words:** Dactylochirotida, Dendrochirotida, Cucumellidae, *Cucumella*, *Neostichopus*, type genus.

#### Introduction

Recently, Thandar & Arumugam (2011) described a new species of a holothuroid echinoderm, *Cucumella triperforata*, taken from fairly deep waters (710–775 m) off the east coast of South Africa, between Port St Johns and East London. The species is characterized by few, reduced tube feet, simple digitate tentacles and body wall tables with a trilocular disc. Because of the simple digitate tentacles they transferred the genus *Cucumella* Heding (in Ludwig & Heding, 1935), together with its type species, *C. triplex* Ludwig & Heding, 1935, to the order Dactylochirotida Pawson & Fell, 1965, in a new family Cucumellidae but failed to designate the type genus. Recently Smirnov (2012), in his new classificatory system of the Holothuroidea, declared the taxon Dactylochirotida, a synonym of Dendrochirotida as a test of imbricating plates and simple digitate tentacles, stated by Pawson & Fell (1965) to characterise the Dactylochirotida, “originated repeatedly in various branches of the Dendrochirotida” (Smirnov 2012: 819). As an example *Psolidium acorbulum* described by Thandar (2006) in the family Psolidae, has simple digitate tentacles unlike other psolids which are characterised by dendritic tentacles. A similar form was also encountered by Pawson (pers. com.). Even the rhopalodinid *Rhopalodinopsis capensis* Heding, has tentacles which appear minutely branched and not simple and digitate as in other rhopalodinids (see Thandar 2001). Hence, Smirnov’s synonymy is here accepted without reservation. In support of this it must be mentioned that most current dactylochirotid families were once classified within the Dendrochirotida and all possess retractor muscles, a diagnostic character of the latter order. Cucumellidae has been recognized by Smirnov as one of the 15 families of the newly constituted Dendrochirotida.

In the same paper Thandar & Arumugam (2011) referred two of the remaining species of *Cucumella* with branched dendritic tentacles (*C. problematica* Heding & Panning, 1954 and *C. indonesiae* Massin, 1987), to the dendrochirotid genus *Neoamphicyclus* Hickman, 1962 as was done with *C. mutans* by O’Loughlin in 2007. However, they declared the remaining species of *Cucumella* (*C. decaryi* Cherbonnier, 1988), a synonym of *Neostichopus grammatus* (H.L. Clark, 1923) based only on its description, without examining the holotype. This omission is here rectified by examination of the holotype of *C. decaryi* by Drs Samyn and Van den Spiegel from Brussels. According to Dr Samyn, the calcareous ring of the holotype is typically stichopodid and the ossicles are unreservedly identical to those of *Neostichopus grammatus*, including the very characteristic dumb-bell-shaped deposits (Figure 2) in the papillae. Hence, the original



**FIGURE 2.** Holotype of *Cucumella decaryi* (= *Neostichopus grammatus*). Dumb-bell shaped deposits, reduced table disc, rods and minute plate from the dorsal papillae.

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