



## ***Bindius triquetrus* gen. nov. sp. nov. (Eutardigrada, Hypsibiidae) from Sicily (Italy)**

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### **Abstract**

A new species is described for which a new genus, *Bindius* **gen. nov.**, is also instituted. This new genus belongs to the family Hypsibiidae. The claws are of the *Hypsibius* type; the bucco-pharyngeal apparatus is of the *Diphascon* model (*i.e.*, with an anterior rigid buccal tube and a posterior, flexible pharyngeal tube), and it is a variant of the *Diphascon* type; it is characterized by large apophyses for the insertion of the stylet muscles, asymmetrical with respect to the frontal plane for shape and dimensions; the dorsal apophysis is triangular in shape with rectilinear dorsal margin and posterior apex very distant from the buccal tube wall; the ventral apophysis is similar to the one of *Diphascon*, *i.e.*, in the shape of a semilunar hook, but larger. The new species, *Bindius triquetrus* **sp. nov.**, has smooth cuticle; eye spots absent; elongated pharyngeal bulb with small apophyses and three long, rod-shaped macroplacoids; a small, very faint, microplacoid may be present; septulum absent; claws slender; lunules and other cuticular thickenings on the legs absent.

**Key words:** Eutardigrada, *Bindius triquetrus* **gen. nov.**, **sp. nov.**, Sicily, Italy

### **Introduction**

The shape of the apophyses for the insertion of the stylet muscles in the eutardigrades is a character not variable at the generic level (Pilato 1969, 1975). In some genera the shape of those apophyses are variants of the same model (in *Hypsibius*, *Acutuncus*, *Diphascon*, *Hebesuncus* and others, they are in the shape of a hook (Fig. 2); in *Isohypsibius*, *Thulinus*, *Ramajendas*, *Platicrista*, *Itaquascon*, and others, in the shape of longitudinal ridges). Some genera have apophyses perfectly similar in shape (*Hypsibius* and *Diphascon* have apophyses in the shape of a “semilunar hook”, *Isohypsibius* and *Thulinus* in the shape of a narrow “ridge”, *Mesocrista*, *Platicrista*, *Itaquascon*, *Astatumen* and others in the shape of a “plate ridge”).

The constancy of that character considered, it is evident that a clear difference in the shape of the apophyses for the insertion of the stylet muscles between two species (or groups of species) indicates a phyletic divergence that must be reflected as those species (or groups of species) belonging to different genera. This criterion is accepted by all tardigradologists and allowed, after 1969, the institution of some new genera.

In moist sphagnum samples collected in two localities of the Madonie Mountains, we found a new species of Hypsibiidae having many characters of the genus *Diphascon* (subgenus *Adropion*) but with apophyses for the insertion of the stylet muscles very different from those of the species of this genus, and therefore we think it justified to institute for it the new genus *Bindius* here described.