



New species of Acoela from the Mediterranean, the Red Sea, and the South Pacific

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Abstract

Eight new species of Acoela are reported including the first Acoela recorded from New Caledonia and the first acoel described from volcanic carbon dioxide vents. *Pharyngia furva* gen. et sp.nov. (Isodiametridae) and *Philactinoposthia brevis* sp.nov. (Actinoposthiidae) from the Red Sea; *Childia curinii* sp.nov. (Childiidae), *Philactinoposthia ischiae* sp.nov. and *Philactinoposthia multipunctata* sp.nov. from the Mediterranean; *Philactinoposthia novaecaledoniae* sp.nov., *Childia aculifera* sp.nov. and *Solenofilomorpha justinei* sp.nov. (Solenofilomorphidae) from the South Pacific are described. Nucleotide sequences for the nuclear ribosomal 18S rRNA, 28S rRNA and the mitochondrial COI genes were determined for the new species and used in a Bayesian molecular phylogenetic analysis.

Key words: Carbon dioxide vents, Interstitial, Meiofauna, New Caledonia