



A new species of *Lynceus* (Crustacea: Branchiopoda: Laevicaudata) from Patagonia, with comments on laevicaudatan systematics

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Abstract

Lynceus mallinensis, a new species of laevicaudatan clam shrimp is described from a single temporary pool in Chubut province, Patagonia, Argentina. The form of the male rostrum necessitates a reevaluation of rostral characters for the genus. This species differs from *L. rotundirostris*, the only known *Lynceus* from Patagonia, by the absence of a distinct umbo. *L. mallinensis* is the fourth species of this genus and the fifth laevicaudatan to be reported from South America. The systematical position of the Laevicaudata is discussed in the Introduction.

Key words: Clam Shrimp, Lynceidae, Argentina

Resumen

Lynceus mallinensis, una nueva especie de Laevicaudata, es descrita a partir de material recolectado en un mallín temporal en la provincia de Chubut, Patagonia, Argentina. Esta especie difiere de *L. rotundirostris*, la única especie descrita en Patagonia, por la ausencia de umbo. *L. mallinensis* es la cuarta especie del género y el quinto Laevicaudata registrado en América del Sur.

Introduction

Laevicaudata Linder, 1945 are sometimes treated as a suborder of the Diplostraca Gerstaecker, 1866, along with the suborders Spinicaudata Linder, 1941, Cyclestherida Sars, 1899 and the Cladocera Latreille, 1829 (Martin & Davis 2001) although Linder (1945), Tasch (1969), Fryer (1987), Martin and Belk (1988), Olsen (2003; 2005) and Richter (2004) presented ample evidence that the group represents a unique order, distinct from the Diplostraca. Laevicaudata, Spinicaudata and Cyclestherida are commonly referred to as ‘clam shrimp’ and often as the ‘Conchostraca’ although this term has lost all taxonomic meaning, and is no longer considered valid (e.g. Fryer 1987; Martin & Belk 1988; Martin & Davis 2001). Laevicaudata share the large, bivalved carapace and the modified male first thoracopods with the two diplostracan clam shrimp suborders. However, these characters are convergent between Laevicaudata and Diplostraca, having different origins (Gurney 1926; Botnariuc 1947; Fryer 1987; Martin & Belk 1988). Bivalved carapaces are also shared with other classes (e.g. Ostracoda, some Maxillopoda).

The laevicaudatan carapace begins in the early instars as a shield-like carapace as in Notostraca Sars, 1867, and then splits to form two separate valves, hinged together in a groove (Tasch 1969; Dumont & Negrea 2002; Olesen 2003), whereas the diplostracan carapace begins as a folded structure and continues to grow without developing a true hinge (Tasch 1969; Martin *et al.* 1986; Walossek 1993; Olesen 2003). The laevicaudatan carapace does not develop growth lines (there may be one unspecified exception (Fryer 1987)) as does the diplostracan carapace.

The shape of the laevicaudatan head and the mouthpart morphology are different in form from any diplostracan (Sars 1896; Linder 1945; Tasch 1969; Martin *et al.* 1986; Fryer 1987; Dumont & Negrea 2002; Olesen 2003; Rich-