

**Amphipoda of the Northeast Pacific** (Equator to Aleutians, intertidal to abyss): V.  
Chevalioidea – a review Donald B. Cadien, LACSD  
22 July 2004 (revised 1 May 2015)

**Preface**

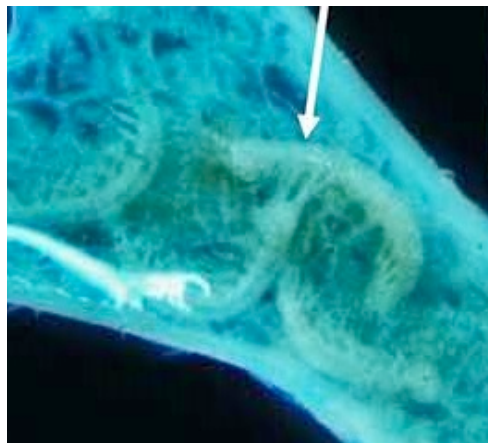
The purpose of this review is to bring together information on all of the species reported to occur in the NEP fauna. It is not a straight path to the identification of your unknown animal. It is a resource guide to assist you in making the required identification in full knowledge of what the possibilities are. Never forget that there are other, as yet unreported species from the coverage area; some described, some new to science. The natural world is wonderfully diverse, and we have just scratched its surface.

**Introduction to the Chevalioidea**

The superfamily was erected by Myers and Lowry (2003) based on the cladistic analysis of the corophiids they conducted. It consists of a single genus in the family Chevaliidae, a family newly created by Myers and Lowry (2003). Their analysis showed that the Chelurioidea and the Chevalioidea could be combined without increasing the length of their tree, but kept the two separate based on ecological uniqueness of the cheluroids. Until recently it had contained one genus in one family. Now two genera are known, *Chevalia* and *Bryoconversor* (Lörz et al 2014), both placed in the Chevaliidae.

**Diagnosis of the Chevalioidea**

“Head lateral cephalic lobe weakly extended, eye situated proximal to lobe; anteroventral margin weakly recessed, moderately excavate. Mandible palp article 3 asymmetrical, distally rounded, setae extending along most of posterodistal margin, posterior margin with setae of variable length. Gnathopod 1 not enlarged in either males or females; coxa 1 as large or larger than coxa 2. Gnathopod 2 in males larger than gnathopod 1. Pereopod 5 carpus small, lunate, dactylus with or without accessory spine on anterior margin. Urosomites 1 and 2 coalesced. Uropod 3 peduncle short, length 2 times or less breadth, with sides expanded; outer ramus without recurved spines. Telson without hooks or denticles.” (Myers and Lowry 2003).



*Bryoconversor tutus* in the colony of *Onchoporoides moseleyi*. The arrow points to three juvenile amphipods under the membrane surrounding the colony (from Lörz et al 2014)

## Ecological Commentary

Chevalioids are algal associates, taken from both macroalgae and algal turfs throughout the tropic and temperate zones of the world ocean. They are strongly laterally compressed, and well suited to both wriggling between branches in turfs, and scooting on one side on algal blades and hard substrates. The strongly armed dactyls of the last three legs look as if they might be used in movement within tubes, but no tubes have ever been mentioned for chevalioids. The lateral flattening of the body also suggests that tubicolity is not a feature of the group.

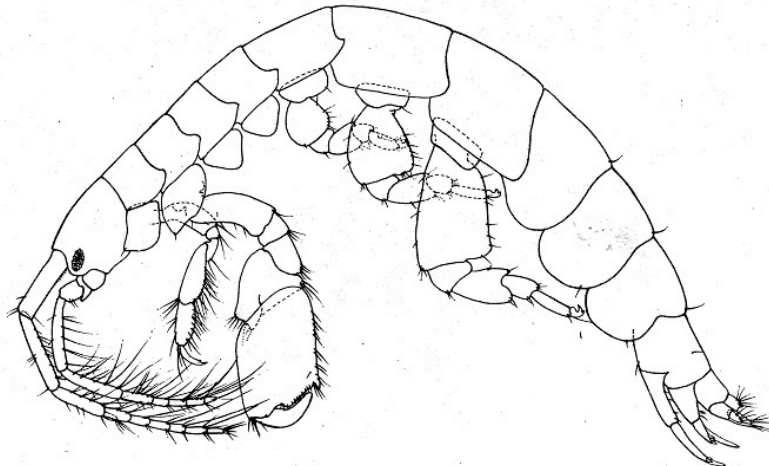
One of the members of the genus *Chevalia* has been reported to occur on sponges (Souza-Filho et al 2010), but the nature of this association is not known. The second genus of chevalioids, *Bryoconversor* is an obligate associate of a deep-water colonial bryozoan. It lives within the colony, and thus is an inquiline. The bryozoan garners no benefit from the amphipod, but the inquiline derives shelter and housing.

**NEP Chevalioidea** from McLaughlin et al. (2005) \*= Taxa on the SCAMIT Ed. 9 list (Cadien & Lovell 2014). Valid taxa **bolded**, synonyms not.

### Family Chevaliidae

\****Chevalia inaequalis*** (Stout 1913) – British Columbia to Pacific coast of Baja California; 0-38m

*Neophotis inaequalis* Stout 1913 (see *Chevalia inaequalis*)



*Chevalia inaequalis* (from J. L. Barnard 1962 as *C. aviculae*)

*Chevalia inaequalis* is now recognized as distinct from *Chevalia aviculae*, with which it had previously been synonymized (J. L. Barnard and Thomas 1987). Earlier records of *C. aviculae* from the NEP nearly all refer to this species (i.e. Shoemaker 1942; J. L. Barnard 1962b, 1964a; Conlan 1983). The exception is the record of J. L. Barnard (1979a) from the Galapagos. This is recognized as distinct both from *C. aviculae* and from *C. inaequalis* by J. L. Barnard and Thomas 1987), but remains undescribed. Good descriptions of *C. inaequalis* are available in both J. L. Barnard 1962b, and Conlan 1983. In recent years a number of new species have been created from the original “tropicopolitan” *C. aviculae*.

Stout (1913) and Pearse (1913) each described new forms from the NEP and the Gulf of Mexico, respectively. These two species were synonymized with Walkers (1903) *C. aviculae* by Shoemaker (1942), J. L. Barnard (1962), and Conlan (1983). J. L. Barnard and Thomas added an additional species from the Caribbean in 1987, and Myers a new species from New Guinea (1995). Lazo-Wasem (1999) added an additional species from the Indian Ocean, where *C. aviculae* was originally taken (Walker 1903), and discussed the growing problems within the *C. aviculae* "super-species complex". To these six species Myers added another from Australia (2009) and Souza-Filho et al (2010) added an additional six from Brazil, yielding a 13 species genus (Lowry 2015). These latter authors provide an updated inclusive key for discrimination of these species. The forms synonymized with *C. aviculae* by Shoemaker (1942) are all currently viewed as valid species while still viewed as synonymous by Chapman (2007).

As the sole constituent family of this superfamily, the diagnosis of the Chevaliidae is exactly the same as for the superfamily.

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