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Annotated Checklist of the large branchiopod crustaceans of Idaho, Oregon and Washington, USA, with the “rediscovery” of a new species of *Branchinecta* (Anostraca: Branchinectidae)

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Abstract

We present a checklist of the large branchiopod crustaceans of Idaho, Oregon and Washington, USA. New distributional records are presented for most species, including the first records of *Branchinecta constricta* Rogers, 2006 and *Lepidurus cryptus* Rogers, 2001 from Idaho, the first record of *B. oriena* Belk & Rogers 2002 from Oregon, the first record of *B. mackini* Dexter, 1956 and *Artemia franciscana* Kellogg, 1906 co-occurring, and the first record of *L. cryptus* from Washington. Furthermore, we present the first record of *Eulimnadia diversa* Mattox, 1937 from west of the continental divide, which we interpret as an accidental introduction. In 1959, Lynch collected a new fairy shrimp species from Washington, deposited that material in the US National Museum, labeled “muddy fairy shrimp, *Branchinecta lutulenta*”, but never described it. Numerous efforts have been made to rediscover extant populations since 1999. We rediscovered this species in 2011, from two small pools from the vicinity of Lynch’s original collection site, which appears to have been destroyed. *Branchinecta lutulenta* sp. nov. is most closely related to *B. lindahli* Packard, 1883 and *B. oterosanvicentei* Obregón-Barboza *et al.*, 2002. *Branchinecta lutulenta* sp. nov. is readily separable from all other *Branchinecta* species by the form of the male second antennal distal antennomere and the ornamentation of the female dorsum.

Key words: *Branchinecta lutulenta* sp. nov., Anostraca, Notostraca, Laevicaudata, Spinicaudata, Insular Endemic Species

Introduction

We present an annotated checklist and new collection records of the large branchiopod crustaceans from Idaho, Oregon and Washington, USA. To date, 16 anostracan, three notostracan, one laevicaudatan, and one spinicaudatan species have been reported from these states. The large branchiopod fauna from Idaho was previously reviewed by Rogers *et al.* (2006), Oregon by Coopey (1946) and Rogers (2002) and from Washington by Lynch (1937, 1958, 1960, 1972a, b). As regards adjacent areas, Montana was also recently reviewed (Hossak *et al.* 2010), and California has been fairly well studied (Eng *et al.* 1990, Hill *et al.* 1997, Hill and Shepard 1997, Eriksen and Belk, 1999, Rogers 2000, Rogers and Fugate 2001, Rogers and Belk 2002). The US state of Nevada and the Canadian province of British Columbia have not been reviewed, and both regions need focused surveys. Of the taxa that occur in Idaho, Oregon and Washington, only *Eubbranchipus* and *Lepidurus* have been reviewed (Creaser 1930, Belk *et al.* 1998, Rogers 2001).

We present records of 19 anostracans (two new species records and one new species), three notostracans, one laevicaudatan, and two spinicaudatans (one new species record).