



-Editorial Note-

Clarification of the publication date for *Artemia urmiana* Günther (Crustacea: Anostraca): 1890, 1899 or 1900?

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The taxonomy and nomenclature of the genus *Artemia* has been generally confused (Barigozzi 1980, Belk and Brtek 1995, Triantaphyllidis *et al.*, 1998, Asem *et al.*, 2010). This has been compounded by the lack of clear resolution on *Artemia* species definitions using either morphological (Browne and Macdonald 1982, Mura and Del Cado 1992, Triantaphyllidis *et al.*, 1997a,b), molecular (Triantaphyllidis *et al.*, 1997b, 1998, Abatzopoulos *et al.*, 2002, Hou *et al.*, 2006, Baxevanis *et al.*, 2006, Muñoz and Pacios 2010), or cross fertility techniques (Gajardo *et al.* 2001). The result being that all species have been generally referred to as *Artemia salina* or *Artemia* "superspecies" (Abreu-Grobois and Beardmore, 1982; Gajardo *et al.*, 2002; Asem *et al.*, 2010). Errors in reporting *Artemia* names have been specifically addressed by Belk and Brtek (1995) and Asem *et al.*, (2010).

Artemia urmiana is a putative basal species within the genus that has been reported with three different description dates: 1890, 1899 and 1900. This species was described by Robert Theodore Günther (1869-1940), a science historian, zoologist, and founder of the Museum of the History of Science, Oxford. Günther received a grant in 1897 to study the natural

history of Urmia Lake (Günther and Manley 1899) which resulted in four publications that he authored (Günther 1898, 1899 a,b, Günther and Manley 1899).

However, Günther did not refer to the *Artemia* in Urmia Lake until his third publication (Günther 1899a, pg 509), and then only by the genus name and as being one of only two aquatic invertebrates living in the lake (the other being a dipteran; *Ephydra urmiana* Günther, 1899). Günther's description of *Artemia urmiana* is in his last publication (1899b, pg 395), in a special issue of volume 27 (Issue 177, pages 345-453, December 1899) of the Journal of the Linnean Society given over to the natural history of Urmia Lake and edited by Günther. Volume 27 comprised six separate issues (173-178). Issues 173 through 177 (which included Günther's contributions) were published in 1899. However, the last issue of volume 27 (178) was published in 1900 with the first three issues of volume 28. This may have caused some of the confusion surrounding the correct date as both Browne and Bowen (1991) and Triantaphyllidis *et al.*, (1998) both give the correct citation for Günther's original description except the date. Belk & Brtek (1997) thought the confusion stemmed from when the paper was read (1899) and were unaware that this

issue of volume 27 was published in December 1899. It is, however, unclear why some authors give the description date as 1890.

Artemia urmiana Günther, 1899

- "worm" Anonymous 982

- *Artemia urmiana* Günther, 1899: Parker 1900; Belk and Brtek 1995; Brtek 1997; Eimanifar *et al.*, 2006a; Baxevanis *et al.*, 2006; Asem and Rastegar-Pouyani 2008; Djamali *et al.*, 2010; Asem *et al.*, 2010; Esmaeili *et al.*, 2011; Ben Naceur 2011

- *Artemia urmiana* (Günther, 1899) in error: Jafaryan *et al.*, 2010; Jafaryan *et al.*, 2011

- *Artemia urmiana* Günther, 1890 in error: Davoodi *et al.*, 2009; Abatzopoulos *et al.*, 2009; Farazmand *et al.*, 2009; Mohammed *et al.*, 2010; Manaffar *et al.*, 2011; Noori *et al.*, 2012

- *Artemia urmiana* (Günther, 1890) in error: Triantaphyllidis *et al.*, 1997b; Abatzopoulos *et al.*, 1998; Sun *et al.*, 1999; Van Stappen *et al.*, 2001; Abatzopoulos *et al.*, 2002; Amat *et al.*, 2004; Eimanifar *et al.*, 2006b; Hou *et al.*, 2006; Hajirostamloo 2008; Masudi Asil *et al.*, 2012

- *Artemia urmiana* Günther, 1900 in error: Bowen *et al.*, 1978; Bowen *et al.*, 1985; Mura *et al.*, 1989; Browne and Bowen 1991; Pador 1995; Belk and Brtek 1997; Muñoz and Pacios 2010

- *Artemia urmiana* (Günther, 1900) in error: Triantaphyllidis *et al.*, 1998; Crespo and Baessolo 2002; Castro-Mejía *et al.*, 2011

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