

— LETTER —

Historical record on brine shrimp *Artemia* more than one thousand years ago from Urmia Lake, Iran

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The brine shrimp *Artemia* (Crustacea, Anostraca) is an organism of great economical importance in the aquaculture industry (Sorgeloos, 1980a; Bengtson *et al.*, 1991; Sorgeloos *et al.*, 1998, 2001). With a wide distribution all over the world and more than 500 reported sites (Abatzopoulos *et al.*, 2002) the brine shrimp stands out as one of the most researched organisms. Mankind has known *Artemia* for many years. For example, Amerindian and Libyan natives have been using *Artemia* as food. Although all scientific manuscripts attribute the first report of *Artemia* to Schlösser in 1755 from Limington, England, the first scientific record belongs to an unknown Iranian author in 982 from Urmia Lake, Iran. “*The Limits of The World from The East to The West*”, is the first Per-

sian geography book written by an unknown geographer in 982. It was dedicated to one of the Ghurid Kings that they had governed in the North East of ancient Iran.

The unique facsimile of this text was presented to the Russian orientalist Toumansky in 1892 by M. A-bolfazl Golpayegani. The copy edition with introduction and index was published by W. Barthold in 1930. A thoroughly commented English translation called “*The regions of the world: A Persian geography*”, was made by V. Minorsky (1937) and printed by Oxford University. M. Sotude rewrote the Persian text in 1961 which was published by the Tehran University (Iran) (Sotude, 1961).

Persian text:

«و دوم دریای کیوزان [دریای کبودان = دریاچه ارومیه] بآرمینیه [به آرمینیه = به ارومیه] درازاء او پنجاه فرسنگ است اندر پهنای سی فرسنگ. اندر میان این دریا دهیست کبودان [کبودان نام یکی از جزایر دریاچه ارومیه است] گویند و این دریا بدان ده باز خوانند و از گرد او آبادانیست و اندر او هیچ جانور نیست از شوری آبش مگر کرم.»

English translation:

“And second lake is Kabuzan [Kabudan Lake or Urmia Lake] from the Urmia. Its length is 50 Parasangs [an ancient unit of length] and its width is 30 Parasangs. There is a village in this lake, called Kabuzan [Kabuzan = Kabudan; an island in the Urmia Lake] and this lake is called with this village. There are cities around that and there are no animals because its water

is salty, except a worm.”

The Persian word of آرمینیه had been translated to “Armenia” by V. Minorsky but according to Dehkhoda’s Dictionary, the famous Persian encyclopedia with 16 volumes and more than 23,000 pages, Urmia is correct and there is a pronunciation mistake between “Armenia” and “Urmia” by re-writer and translator (Dehkhoda, 1998).

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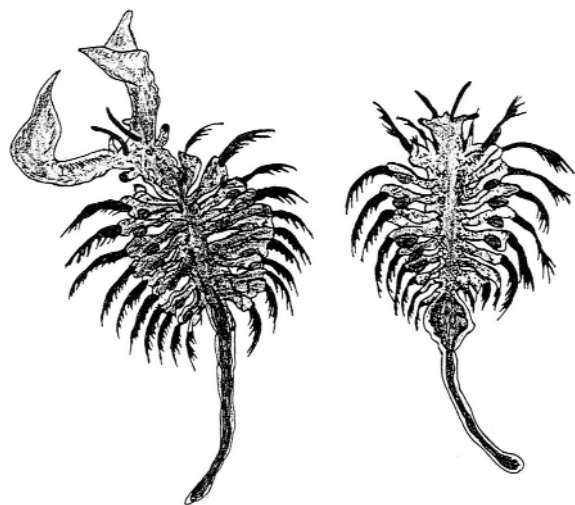


FIG. 1. Schlösser's drawing of *Artemia* in 1756 (from Kuenen & Baas-Becking, 1938).

This book is a geography covering the whole known world and one of the earliest works of Persian prose. It was designed to accompany a map and, though the product of cabinet scholarship rather than original observation, it preserves much material from earlier compositions which are lost and shows originality in its organization.

The unknown Iranian geographer had introduced *Artemia* from Urmia Lake as a "worm" that can live in the lake's saline water. It is interesting that "brine worm" is one of the popular names of *Artemia* (Sorgeloos, 1980b). Schlösser had described *Artemia* as "unknown insect" (un insecte peu connu) in 1755. This first description was not accompanied by a picture (Kuenen & Baas-Becking, 1938). Schlösser's famous original description was illustrated in July 1756 (Schlösser, 1756). Therefore, the historical record of existence of *Artemia* dates back to 982, more than one thousand years ago, from Urmia Lake, Iran by an unknown geographer and Schlösser was the first person to give drawings of *Artemia* in 1756 (Fig. 1).

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