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**Remarks concerning the description and status of
*Murex forskoehlii mediterranea***

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Abstract: The recently proposed subspecies *Murex forskoehlii mediterranea* Kovalis & Korkos, 2009, was not described according to the rules of the International Code of Zoological Nomenclature. This name has therefore no status in the zoological nomenclature. In addition the proposed new subspecies agrees in full details with specimens of *Murex forskoehlii* living in the proper Red Sea, the Gulf of Suez and the Bitter Lakes in the Suez Canal, and closely fits the type bearing figure in Colonna (1616). Specimens of the *Murex forskoehlii*-complex living in the Gulf of Aqaba differ from the nominal species by their extremely long and heavy spines.

A few months ago a new subspecies of *Murex forskoehlii* Röding, 1798 was described as *Murex forskoehlii mediterranea* Kovalis & Korkos, 2009. Although the authors mentioned my name in the acknowledgements, I had no idea that they had the intention to describe the Spiny murex occurring in the eastern Mediterranean i.e. the Levant Sea, as a new subspecies.

First I like to make clear my personal opinion that everybody has the right to describe

a new taxon, however such a description has to fit several basic standards as proposed in the International Code of Zoological Nomenclature (ICZN, 1999). The most up to date rules of the Code came into effect on 1 January 2000 (ICZN, 1999). The authors have the responsibility to ensure that the new taxon fits the rules of the Code but unfortunately this is not the case in the recently published description of *Murex forskoehlii mediterranea*.

Kovalis and Korkos (2009) explain in a quite acceptable way why they consider members of the *Murex forskoehlii*-complex living off the Mediterranean coast of Israel as different from its counterparts living in the Red Sea, more precisely they compared the Mediterranean material with that from the Gulf of Aqaba (=Gulf of Eilat), although this is nowhere stated in the article. According to their data and my own experience of the matter, the conchological characteristics of specimens living in the Mediterranean Sea and those living in the Gulf of Aqaba, seem to justify a separation on the subspecific level. Nevertheless their description of the new subspecies *Murex forskoehlii mediterranea* has to be rejected for both technical and taxonomical reasons.

The name *Murex forskoehlii mediterranea* has to be rejected for technical reasons because the authors failed to designate name-bearing types as stipulated in Article 16.4 and the references mentioned in Article 16.4.1 and Article 16.4.2 (ICZN, 1999). With other words: because of the fact that the authors did not select a holotype, paratypes and a type locality of the new taxon the name *Murex forskoehlii mediterranea* was not established in a valid way.

As I have already mentioned above the authors compared their Mediterranean specimens with those collected in waters of the Gulf of Aqaba along the east coast of the Sinai Peninsula in Israel and Egypt. They most probably assumed that the specimens from the Gulf of Aqaba represent the typical form of the name-bearing type of *Murex forskoehlii* Röding, 1798. This is unfortunately not the case.

Ponder & Vokes (1988: 32-34) re-established the use of *Murex forskoehlii* for a Spiny *Murex* living in the Red Sea. They showed that three species of Spiny *Murex* are living in the Red Sea: *Murex scolopax* Dillwyn, 1817, *Murex carbonnieri* (Jousseaume, 1881) and a third species which had constantly been misidentified either as *Murex tribulus* (non Linnaeus, 1758) or *Murex ternispina* (non Lamarck, 1822). For this Arabian species they used the name *Murex forskoehlii* introduced by Röding (1798: 145). In the absence of any type material they selected Röding's reference to a figure in Colonna (1616: pl. 60, fig. 6) as the type of *Murex forskoehlii*. This figure is here reproduced (Fig. 1). Although it is a rather crude figure, it shows that the type-bearing specimen is characterized by rather short spines, quite unlike the specimens living in the Gulf of Aqaba, which are characterized by very long spines (Fig. 2).

As a matter of fact this short-spined *Murex* is commonly encountered in the northern part of the Red Sea (Fig. 3), the Gulf of Suez and in the Bitter Lakes (Taylor, 1954: 1111-1112) (Fig. 4) and agrees in full detail with the specimens occurring in the eastern Mediterranean (Figs 5-6). Even if *Murex forskoehlii mediterranea* Kovalis & Korkos, 2009 had been validly established then it should be considered a junior synonym of *Murex forskoehlii* Röding, 1798.

All these problems concerning the true identity of *Murex forskoehlii* Röding, 1798 could have been avoided if Ponder & Vokes (1988) had selected a neotype instead of the crude figure in Colonna. Röding used the name: *Murex forskoehlii* or in German "Der forskoehliche Spinnenkopf", most probably because he or more likely J. F. Bolten had seen such specimens in the collection of Forsskål*. That unfortunate Danish traveller and naturalist had collected the short-spined *Murex* in Arabia, more particularly in Jeddah (Forsskål in Niebuhr, 1775: XXXIII, as *Murex tribulus*), as I could check by means of a photograph taken by Dr. Tom Schiøtte, present in the archive of the late Dr. Isaac (Jitzchak) Yaron, from a specimen in the Forsskål collection in the Zoological Museum of the University of Copenhagen, Denmark.

Another factor has to be considered. Migrant species settling in the Mediterranean have to cope with a different chemistry and temperature of sea water, while the food is also often of a different composition as are their natural enemies. Some species react to these changes in their new environment by becoming either more or less colourful, by building a larger or smaller shell, and so on, all purely conchological changes.

Although these changes are catching the eye especially among shell collectors, they are often temporary events and are not part of a process leading to the development of a subspecies. Such an evolutionary process, the development into a subspecies, does not take place overnight and even not in one or two centuries especially not if we leave the door wide open i.e. the Suez Canal, through which juvenile and adult specimens from the original population may intermingle with the migrant populations. The descriptions of such taxa like *Strombus (Conomurex) decorus raybaudii* Nicolay & Romagna Manoja, 1983 (although not a Lessepsian migrant but an exotic species from the Persian Gulf), *Erosaria turdus micheloi* Chiapponi, 2009 and *Murex forskoehlii mediterranea* Kovalis & Korkos, 2009, all based on relatively recent migrant populations in the Mediterranean Sea, do not serve any better understanding of zoological and evolutionary processes taking place in the Mediterranean Sea and have therefore to be condemned.

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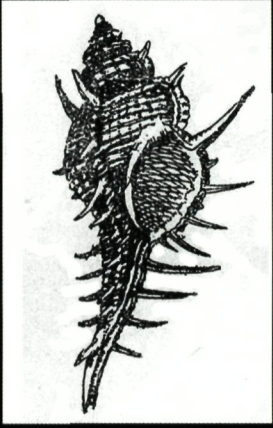
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- The correct spelling of his family name is Forsskål (see Yaron et al., 1986), however even this name was misspelled in his posthumously published work in 1775.

Plate 1: *Murex forskoehlii* Röding, 1798.

1. Reproduction of the type bearing figure from Colonna, 1616;
 2. Gulf of Aqaba, Eilat (TAU MO 43885);
 3. Red Sea, Hurghada (TAU MO 61387);
 4. Suez Canal, Great Bitter Lake (TAU MO 45246);
 5. Mediterranean Sea, off Bardawil (TAU MO 22459);
 6. Mediterranean Sea, off Tantura (TAU MO 43781).
- (All photographs: Oz Rittner)



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