

First record of the Indo-Pacific species *Kleinella* (*Actaeopyramis*) *fulva* (A. Adams, 1851) (Gastropoda, Pyramidellidae) from the Mediterranean

M.S.S. LAVALEYE

Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands

& A.I. BARASH

Dept. Zoology, Tel-Aviv University, Israel

Since the opening of the Suez Canal in 1869, migration of marine Mollusca from the Red Sea into the Mediterranean and vice versa is possible. Barash & Danin (1973, 1977) have summarized and enlarged our knowledge concerning Indo-Pacific Mollusca that have been found in the Mediterranean. They record 68 species in total, among which two species of Pyramidellidae, viz. *Chrysallida maiae* (Hornung & Mermod, 1924) and *C. fischeri* (Hornung & Mermod, 1925). In the present paper a third pyramidellid species, *Kleinella* (*Actaeopyramis*) *fulva* (A. Adams, 1851), identified by the first author, who is working on a monograph of Red Sea Pyramidellidae, is reported from the Mediterranean coast of Israel. This Indo-Pacific species has been reported only once from the Red Sea, Gulf of Suez, by Adams (1870: 126). Cooke (1885: 41), however, having re-examined Adams's material, stated that this belongs to another *Kleinella* species, namely *K. amoena* (A. Adams, 1851).

Kleinella (*Actaeopyramis*) *fulva* (A. Adams, 1851)
(figs. 1, 2)

Monoptygma fulva A. Adams, 1851: 222 (no locality mentioned); 1854: 817 ('Philippines'), pl. 172 fig. 23.

Pyramidella (*Actaeopyramis*) *fulva* - Dall & Bartsch, 1906: 328, pl. 23 fig. 4.

Description of the Mediterranean specimen. - Shell elongated conical, with seven whorls, dirty yellowish white and somewhat glossy. Nuclear whorl(s) small and nearly completely immersed in the first postnuclear whorl. Postnuclear whorls moderately inflated and slightly shouldered, separated by distinct sutures. First whorl smooth except for some faint growth lines and a beginning of spiral sculpture at the end. Second and third whorls with six conspicuous spiral grooves of which the lowest is situated on the suture; fourth to sixth whorls with seven grooves, because of an additional groove on the upper part of each whorl. Last whorl with 17 grooves. Grooves crossed by prominent axial riblets and, therefore, looking like rows of pits. Interstices between the grooves two to over three times as broad as the grooves themselves and very minutely spirally striated. Last whorl without any trace of a keel at the periphery. Peristome discontinuous. Columellar side of the aperture oblique, merging into the parietal side almost without an angle. Aperture without teeth or folds.

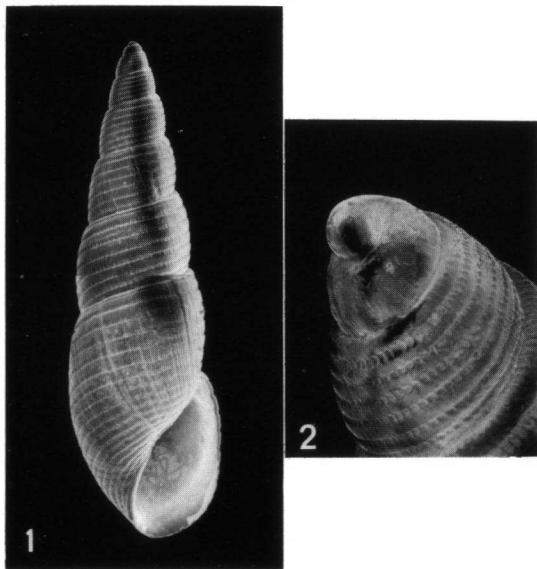
Height, 8.9 mm; diameter, 2.7 mm; height of last whorl, 4.8 mm; height of the aperture 2.9 mm.

Locality data. – Israel, S. of Haifa, Atlit-Dor, depth 22 m, E. Gilat leg., 15.II.1967 (Tel-Aviv University, Dept. Zoology SFRS 1357).

Distribution of the species. – Japan, Philippines, Bombay, Karachi and ? Red Sea.

Remarks. – So far only two *Kleinella* species have been found in the Mediterranean, viz. *K. bulinea* (Lowe, 1840) and *K. humboldti* (Risso, 1826). Both belong to the subgenus *Euparthenia*, because of the uninterrupted axial ribs on the whorls and are, therefore, clearly different from *K. fulva*. In *K. bulinea* forma *sulcata* Bucquoy, Dautzenberg & Dollfus, 1883, however, the axial sculpture is completely absent (also in the spiral grooves).

K. amoena and *K. casta* (A. Adams, 1851) [= *concinna* (A. Adams, 1854)], both belonging to the subgenus *Actaeopyramis*, which is characterized by an axial sculpture as described for *K. fulva*, are the only other species of *Kleinella* that have been reported from the Red Sea. *K. amoena* differs from *K. fulva* by a vertical (= parallel to the axis) columellar side of the aperture and an angle of ca. 135° between columellar and parietal side of the aperture, whereas the base is not rounded but straight or even concave (in front view). Moreover *K. amoena* has five grooves on the second and the third whorls, six at the fourth to sixth and 15 at the last whorl (seventh), and is slightly smaller (height, 7 mm; with seven whorls). *K. casta* differs from *K. fulva* by having more spiral grooves, i.e. ten on the third to fourth whorls, 11 from the fifth on and 23 on the body-whorl; the species is also much smaller (height, 8 mm; with 11.3 whorls).



Figs. 1, 2. *Kleinella* (*Actaeopyramis*) *fulva* (A. Adams, 1851), Atlit-Dor, S. of Haifa, Israel, at 22 m depth, E. Gilat leg., 15.II.1967; Tel Aviv University, Dept. Zoology, reg. no. SFRS 1357. 1, shell, actual height 8.9 mm; 2, apex (same specimen).

SUMMARY

The Indo-Pacific small gastropod *Kleinella (Actaeopyramis) fulva* (A. Adams, 1851) (Pyramidellidae) is reported for the first time from the Mediterranean, where it has been found at Atlit-Dor, S. of Haifa, Israel, at 22 m depth.

REFERENCES

- ADAMS, A., 1851. A monograph of the genus *Monopygma* of Lea. - Proc. zool. Soc. Lond. 1851: 222-224.
- , 1854. Monographs of the genera *Eulima*, *Niso*, *Leiostraca*, *Obeliscus*, *Pyramidella*, and *Monopygma*. In: G.B. SOWERBY (2nd), *Thesaurus Conchyliorum* 2: 793-825.
- , 1870. On some genera and species of gastropodous Mollusca collected by Mr. M'Andrew in the Gulf of Suez. - Ann. Mag. nat. Hist. (4) 6: 121-129.
- BARASH, A.I., & Z. DANIN, 1973. The Indo-Pacific species of Mollusca in the Mediterranean and notes on a collection from the Suez Canal. - Israel J. Zool. 21: 301-374.
- , 1977. Additions to the knowledge of Indo-Pacific Mollusca in the Mediterranean. - Conchiglie 13: 85-116.
- COOKE, A.H., 1885. Report of the testaceous Mollusca obtained during a dredging-excursion in the Gulf of Suez in the months of February and March 1869. By Robert MacAndrew. - Republished, with additions and corrections. Part 2. - Ann. Mag. nat. Hist. (5) 16: 32-50.
- DALL, W.H., & P. BARTSCH, 1906. Notes on Japanese, Indopacific and American Pyramidellidae. - Proc. U.S. natn. Mus. 30: 321-370.

SAMENVATTING

Reeds tenminste 68 soorten Mollusca zijn via het Suezkanaal van de Rode Zee in de Middellandse Zee doorgedrongen. Aan deze lijst kan nu *Kleinella (Actaeopyramis) fulva* (A. Adams, 1851) worden toegevoegd. De door habitus en sculptuur (fig. 1, 2) goed herkenbare soort werd aangetroffen voor de kust van Israel, zuidelijk van Haifa.