

Bella S. Galil* & Gianna Innocenti**

A note on coral-rubble mimetic leucosiid crabs from Kenya

Abstract - Two leucosiid crabs, *Oreophorus horridus* and *Alox rugosum*, are recorded as new to the East African coast.

Key words: *Oreophorus*, *Alox*, Leucosiidae, Brachyura, East Africa.

Riassunto – Una breve nota su due granchi leucosidi mimetici del Kenya. Vengono segnalati per la prima volta per l’Africa Orientale due granchi leucosidi, *Oreophorus horridus* e *Alox rugosum*, specie mimetiche tipiche del detrito corallino.

Parole chiave: *Oreophorus*, *Alox*, Leucosiidae, Brachyura, Africa Orientale.

Introduction

The leucosiid crab fauna of the east African coast is still poorly known. None of the coral-rubble mimetic oreophorine species were previously recorded from the east African coast, though *Oreophorus horridus* Rüppell, 1830 is known from the Red Sea and the Gulf of Aden, *Alox glene* Tan & Ng, 1995, from Yemen, and the latter species as well as *A. rugosum* (Stimpson, 1858), and *Oreotlos havelocki* (Laurie, 1906) are known from Madagascar (Tan & Ng, 1995).

A few leucosiid crabs were collected during a month-long expedition, organized by the Museo di Storia Naturale dell’Università di Firenze, Sezione Zoologica ‘La Specola’, to study the reef, lagoon and mangrove invertebrates of Kenya.

Abbreviations used: MZUF, Museo di Storia Naturale dell’Università di Firenze, Sezione Zoologica ‘La Specola’; RMNH, Rijksmuseum van Natuurlijke Historie, Leiden.

* National Institute of Oceanography, Israel Oceanographic & Limnological Research, P.O.B. 8030, Haifa 31080, Israel. e-mail: bella@ocean.org.il

** Museo di Storia Naturale dell’Università di Firenze, Sezione Zoologica ‘La Specola’, via Romana 17, 50125 Firenze, Italia. e-mail: ganesh@unifi.it; corresponding author.

Oreophorus horridus Rüppell, 1830
Fig. 1, 2

Oreophorus horridus Rüppell, 1830: 18; A. Milne Edwards, 1865: 151; Nobili, 1906: 150; Tan & Ng, 1995: 106, fig. 2, pl. 1.

Material examined

Red Sea. Djeddah, 1881, coll. Kruyt: 1 F 11.7 mm, 1 juv. 7.1 mm (RMNH 791). Kenya. Watamu, 15 September 2000, rocky intertidal pool among coral debris, collectors S. Cianfanelli, G. Innocenti, E. Talenti: 1 M 8.4 mm, 3 F 11.3–13.5 mm, 1 juv. 4.0 mm (MZUF 2563); Twiga, November 1991, coll. M. Vannini: 1 F 9.2 mm (MZUF 2553).

Description

Carapace subtriangular, 1.4 times as wide as long, branchial regions gibbous, dorsal surface coarsely pitted, bearing irregular cavities. Front narrow, produced, uptilted, bilobed, with deep longitudinal notch medially. Antennular fossa rimmed, partially sealed by basal plate on antennule; antennules fold obliquely within fossa. Antennae short, inserted between antennular fossa and orbit. Orbits small, eyes retractible, barely visible in dorsal view. External maxillipeds irregularly covered with closely clustered flattened granules; endopod merus triangulate, half as long as subrectangular ischium. Lateral margins of carapace pitted. Subhepatic region faceted, protruding. Posterolateral margin bearing two obtuse lobes. Posterior margin narrow, bilobed. Six deep, irregularly-shaped cavities across branchial and hepatic regions; cavities lined with fungiform granules. Hepatic cavity reniform, linked to anterior branchial cavity through perforation in dividing septum. Branchial cavities open to branchiostegal region through perforations in lateral margin; anterior branchial cavity linked to smaller posterior branchial cavity through narrow chink. Cardiac region clearly demarcated by deep, granulate grooves, save urogastric region. Intestinal region similarly demarcated.

Branchiostegal region densely covered with fungiform granules. Thoracic sternites in male bearing four rounded pits on each side of abdominal sulcus, median pair the largest. Abdominal sulcus deep, elongate, nearly reaching buccal cavity. Male abdomen narrowly triangular; medially granulate. Female abdomen shield-like, coarsely pitted, telson lacinate. First male pleopod elongate, shaft slightly sinuous, dorso-ventrally flattened, setose. Second male pleopod short, curved distally, apex scoop-like.

Chelipeds subequal, coarsely, irregularly granulate. Merus proximally set with 3 tubercles on outer margin. Palm somewhat inflated, immovable finger thickset, concave. Dactyl, bearing rows of granules on upper margin, 1.2 (1.4 in female) as long as upper margin of palm. Pereiopods short, prominently granulate, dactyls slender.

Colour

Carapace and legs whitish.

Distribution

Red Sea, Gulf of Aden, Kenya (new record).

Alox rugosum (Stimpson, 1858)

Fig. 3

Oreophorus rugosus Stimpson, 1858: 161; 1907: 159, t. 19, figs. 6, 6a; A. Milne Edwards, 1874: 49; Ortmann, 1892: 575; Ihle, 1918: 212; Sakai, 1934: 285; Takeda, 1973: 87, pl. 2, fig. C (part); 1982: 96, fig. 280; 1989: 140; Tan & Richer de Forges, 1993: 128, fig. 4c, d.

Oreophorus (Oreophorus) rugosus Sakai, 1937: 117; 1976: 80, textfig. 41; Miyake, 1961: 14; 1983: 201.

Alox rugosum Tan & Ng, 1995: 128, fig. 12, pl. 6d-f, 7.

Material examined

Kenya. Watamu, 15 September 2000, rocky intertidal pool among coral debris, colls S. Cianfanelli, G. Innocenti, E. Talenti: 1 F 9.4 mm (MZUF 2564).

Description

Carapace 1.4 times as wide as long, branchial regions gibbous, dorsal surface coarsely pitted, bearing irregular cavities. Front narrow, produced, uptilted, bilobed, with deep longitudinal notch medially. Antennular fossa rimmed, partially sealed by basal plate on antennule; antennules fold obliquely within fossa. Antennae short, inserted between antennular fossa and orbit. Orbits small, eyes retractible, barely visible in dorsal view. External maxillipeds irregularly covered with closely clustered flattened granules; endopod merus triangulate, half as long as subrectangular ischium. Lateral margins of carapace pitted. Subhepatic region faceted, protruding. Posterolateral margin bearing two obtuse lobes. Posterior margin narrow, bilobed. Six deep, irregularly-shaped cavities across branchial and hepatic regions; cavities lined with fungiform granules. Hepatic cavity reniform, linked to anterior branchial cavity through perforation in dividing septum. Branchial cavities open to branchiostegal region through perforations in lateral margin; anterior branchial cavity linked to smaller posterior branchial cavity through narrow chink. Cardiac region clearly demarcated by deep, granulate grooves, save urogastric region. Intestinal region similarly demarcated.

Branchiostegal region densely covered with fungiform granules. Thoracic sternites in male bearing four rounded pits on each side of abdominal sulcus, median pair largest. Abdominal sulcus deep, elongate, nearly reaching buccal cavity. Male abdomen narrowly triangular; medially granulate. Female abdomen shield-like, coarsely pitted, telson lacinate. First male pleopod elongate, shaft slightly sinuous, dorso-ventrally flattened, setose. Second male pleopod short, curved distally, apex scoop-like.

Chelipeds subequal, coarsely, irregularly granulate. Merus proximally set with 3 tubercles on outer margin. Palm somewhat inflated, immovable finger thickset, concave. Dactyl, bearing rows of granules on upper margin, 1.2 (1.4 in female) as long as upper margin of palm. Pereiopods short, prominently granulate, dactyls slender.

Colour

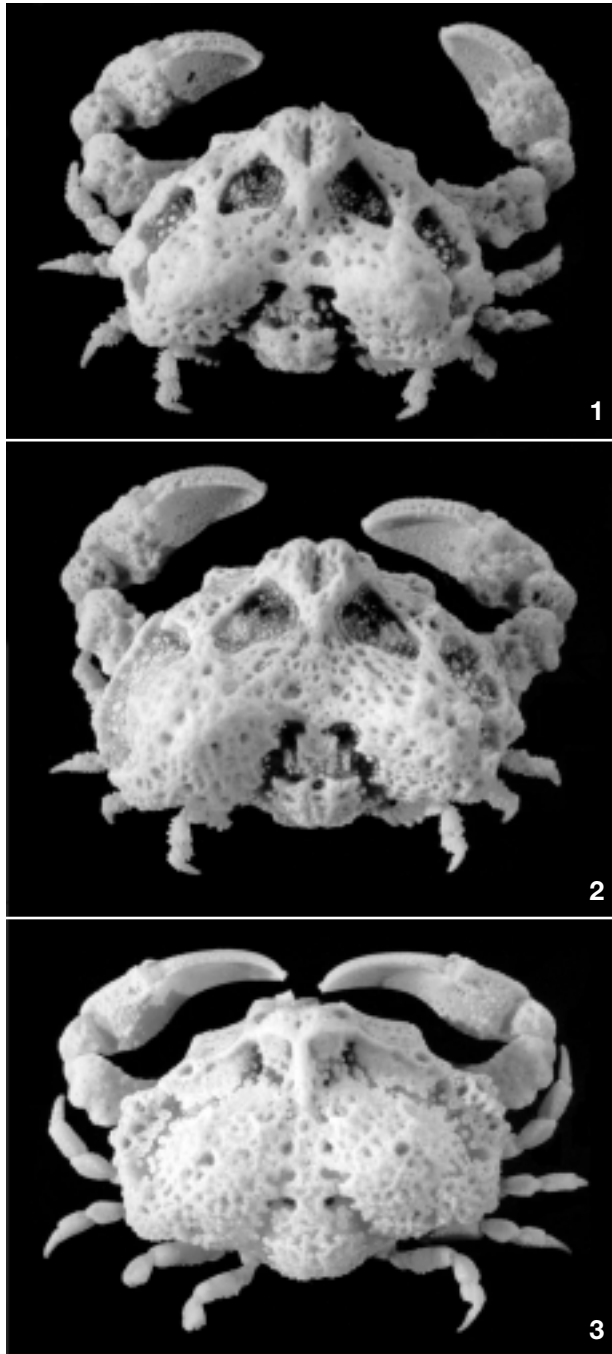
Carapace and legs whitish.

Distribution

Kenya (new record), Madagascar, Thailand, Palau Is., Japan, New Caledonia.

Acknowledgement

The photographs were taken by A. Shoob.



Figs. 1-3 – 1) *Oreophorus horridus* Rüppell, 1830, (MZUF 2563), male, dorsal view; 2) female, dorsal view. 3) *Alox rugosum* (Stimpson, 1858), (MZUF 2564). Female, dorsal view.
Figg. 1-3 – 1) *Oreophorus horridus* Rüppell, 1830, (MZUF 2563), maschio, visione dorsale; 2) femmina, visione dorsale. 3) *Alox rugosum* (Stimpson, 1858), (MZUF 2564). Femmina, visione dorsale.

References

- Ihle J.E.W., 1918 - Die Decapoda Brachyura der Siboga-Expedition. III. Oxystomata: Calappidae, Leucosiidae, Raninidae. *Siboga Exp.*, 39b2: 1-322.
- Milne Edwards A., 1865 - Description de quelques espèces nouvelles de Crustacés Brachyures. *Ann. Soc. Entomol. France*, ser. 4 (5): 151.
- Milne Edwards A., 1874 - Recherches sur la faune carcinologique de la Nouvelle Calédonie. *Nouv. Arch. Mus. Hist. Nat.*, Paris, 10: 39-58.
- Miyake S., 1961 - Decapod Crustacea. Fauna and Flora of the sea around the Amakusa Marine Biological Laboratory, Kyushu University. *Amakusa Mar. Biol. Lab., Kyushu University*, 2: i-iv, 1-30.
- Miyake S., 1983 - Japanese crustacean decapods and stomatopods in colour. Vol. II. Brachyura. *Hoikusha*, Osaka.
- Nobili G., 1906 - Faune Carcinologique de la Mer Rouge: décapodes et stomatopodes. *Ann. Sci. Nat. (Zool.)* ser. 9 (4):1-347.
- Ortmann A., 1892 - Die Abteilungen Hippidea, Dromiidea und Oxystomata: Die Decapoden-Krebse des Strassburger Museums, mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und Z. im Strassburger Museum aufbewahrten Formen. Theil. 5. *Zool. Jahrb.*, 6: 532-588.
- Rüppell E., 1830 - Beschreibung und Abbildung von 24 Arten kurzschwänziger Krabben, als Beitrag zur Naturgeschichte des roten Meeres. *H. L. Brönner Verlag*, Frankfurt.
- Sakai T., 1934 - Brachyura from the coast of Kyusyu, Japan. *Sci. Rep. Tokyo, Bunrika Daigaku B*, 1 (25): 281-330.
- Sakai T., 1937 - Studies on the crabs of Japan. II. Oxystomata. *Sci. Rep. Tokyo, Bunrika Daigaku*, 3: 67-192.
- Sakai T., 1976 - Crabs of Japan and the adjacent seas. *Kodansha*, Tokyo.
- Stimpson W., 1858 - Prodromus descriptionis animalium vertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem a Republica Foederata Missa. *Proc. Acad. Nat. Sci. Philadelphia*, 10 (4): 31-163.
- Stimpson W., 1907 - Report on the Crustacea (Brachyura and Anomura) collected by the North Pacific Exploring Expedition 1858-59. *Smiths. Misc. Coll.*, 49: 1-240.
- Takeda M., 1982 - Keys to the Japanese and foreign crustaceans fully illustrated in colours. *Hokuryukan*, Tokyo.
- Takeda M., 1989 - Shallow-water Crabs from the Oshima Passage between Amami-Oshima and Kakeroma-jima Islands, the Northern Ryukyu Islands. *Mem. Natl. Sci. Mus.*, Tokyo, 22: 135-184.
- Tan C. G. S. & Ng P. K. L., 1995 - A revision of the Indo-Pacific genus *Oreophorus* Rüppell, 1830 (Crustacea: Decapoda: Leucosiidae). In: Les fonds meubles des lagons de Nouvelle-Calédonie (Sédimentologie, benthos). Richer de Forges B. (ed.). *Etudes & Thèses, ORSTOM*, 2: 101-189.
- Tan C. G. S. & Richer de Forges B., 1993 - On the systematics and ecology of mimetic crabs belonging to *Oreophorus* Rüppell, 1830 sensu lato (Crustacea: Decapoda: Leucosiidae). *Raffles Bull. Zool.*, 41(1): 119-132.

Ricevuto: 2 ottobre 2001

Approvato: 5 novembre 2001