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## First record of *Leucisca squalina* MacLeay, 1838 (Decapoda: Leucosiidae) from Gujarat state, India

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### Abstract

*Leucisca squalina* MacLeay, 1838 is known to be distributed along South African coast, while in India it is reported only from Karnataka. In the present study, *L. squalina* is reported for first time in coastal waters of Gujarat, India. Morphological details of the species are described and illustrated.

**Keywords:** New record, *Leucisca squalina*, Gujarat, India

### 1. Introduction

Family Leucosiidae is represented by 86 species in Indian waters [1-3] out of which only five species are reported from Gujarat [2-5]. The genus *Leucisca* MacLeay, 1838 is characterized by flattened carapace raised granulated carapace margin and eyes not visible dorsally [6]. It is currently represented by three species: *L. levigena* George & Clark, 1976, *L. squalina* MacLeay, 1838 and *L. rubifera* (Müller, 1887) [7]. Out of these three species *L. squalina* MacLeay, 1838 and *L. rubifera* (Müller, 1887) are reported from Indian waters [1, 8, 9]. MacLeay [10] described *L. squalina* from Cape of Good Hope, South Africa, later on the species was redescribed by Barnard [6] on the basis of fresh material collected from Natal, South Africa. *L. squalina* is distributed along the South African coast [6, 10], while in India it is reported only from Karnataka [9]. In the present study, *L. squalina* is first time reported from coast of Gujarat and its detailed morphological description is given in the report.

**2. Materials and Methods:** The specimen was hand-picked during field work from rocky intertidal area of Veraval, Gujarat. The specimen was washed and photographed on the field. For detailed examination later, specimen was preserved in 10% formalin and deposited in the Zoology Museum, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India. All the measurements are taken in mm. Abbreviations: CW: carapace width; CL: carapace length; Male G1: first left gonopods, coll.: collector.

### 3 Results and Discussion

#### 3.1 Taxonomy

Family Leucosiidae Samouelle, 1819

Genus *Leucisca* MacLeay, 1838

*Leucisca squalina* MacLeay, 1838 (Figs 1, 2)

*Carcinaspis marginatus* Stimpson, 1858: 161; Stimpson, 1907: 162, pl. 14, fig. 7; Stebbing, 1910: 338.

*Leucisca phaenomma* Stebbing, 1920: 271, pl. 31.

*Leucisca squalina* MacLeay, 1838: 70, pl. 3; Stebbing, 1910: 338; Barnard, 1947: 373; Barnard, 1950: 371, fig. 71 a-c.; George & Clark, 1976: 309, table.2; Ng & Ah Yong, 2001: 88, fig. 6g.

**3.2 Material examined:** India, Gujarat. One Male (ZL-AR-CR-99) (CW 5.73, CL 5.10), Veraval (20°54'37.2"N 70°21'08.8"E), rocky intertidal area, 22 November 2016, coll. Swapnil Gosavi

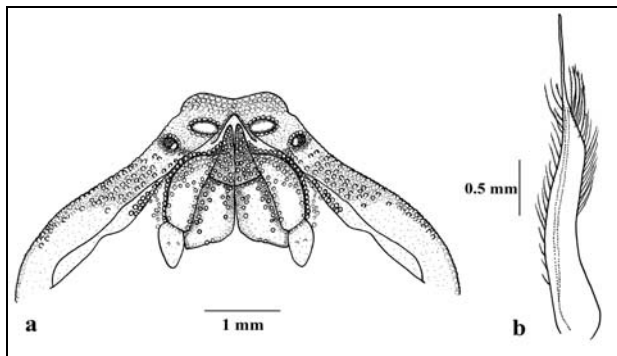
**3.2 Diagnosis:** Carapace sub-circular (Fig. 1), broader than long, dorsal surface smooth, moderately bi-lobed narrow front, margin markedly granulated, eyes hidden beneath the front;

two isolated moderately convex gastric and slightly convex cardiac regions both bearing set of granules; depression observed between moderately convex gastric region and moderately raised margin. Anterior region of pterygostomial region tuberculated (Fig. 2a); Third maxilliped granulated; exterior border of thoracic sternum granulated.

Cheliped about as half as long as carapace, sharply trigonal cheliped with edges of palm granulated, fingers closed with pointed tips and pits on the surface, dactylus and pollex shorter than the palm with two longitudinal crest on dorsal surface, edges of carpus and merus granulated; Ambulatory legs not granulated with extensor margin of meri and carpi unicate, dactyli and propodi bicarinate. Male abdomen with sharp triangular telson. Male G1 stout with long slender spiniform apex (Fig. 2b).



**Fig 1:** *Leucisca squalina* MacLeay, 1838; male (ZL-AR-CR-99) (CW 5.73, CL 5.10); dorsal view



**Fig 2:** *Leucisca squalina* MacLeay, 1838; male (ZL-AR-CR-99) (CW 5.73, CL 5.10). a. ventral view of frontal region; b. Male G1 dorsal view

**3.4 Distribution:** The species is so far reported from different coastal areas of South Africa [6, 10-17]. In India, the species is reported earlier from Karnataka [9] and now from Gujarat.

**3.5 Remarks:** The specimen examined in the present study showed agreement with the description and illustrations provided by MacLeay [10], Barnard [6] and George and Clark [16]. In present specimen the denticle on the sixth segment of male abdomen is not as prominent as observed in African specimens [6]. Peyrot-Clausade and Seréne [18] synonymised *L. rubifera* with *L. squalina* by, but Ng and Ahyong [17] proposed that on hand comparison of specimens of both species is required to check the validity of *L. rubifera*.

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