

## ***Gnathia wolffi* n. sp., a coral-reef inhabiting isopod from Kenya, with a key to the *Gnathia ferox* complex (Cymothoidea: Gnathiidae)**

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**Abstract.** *Gnathia wolffi* n. sp. is described. It was found on a coral reef near Tiwi, about 35 km south of Mombasa, Kenya. Its affinities to other species of the genus are discussed and a key to the members of the *Gnathia ferox* complex is given.

**Key words.** *Gnathia wolffi*, Isopoda, Kenya, new description.

### **Introduction**

Among a small collection of Gnathiidae submitted for identification to the author by the Zoological Museum Copenhagen there was a single specimen of *Gnathia* Leach, 1813 from Kenya clearly representing an undescribed species. Its description and discussion is the purpose of this note.

### **Systematic Account**

*Gnathia* Leach, 1813

*Gnathia wolffi* n. sp.

**Holotype:** ♂, Zoological Museum, Copenhagen. Coral reef near Tiwi, about 35 km south of Mombasa, Kenya; 25 June 1970, T. Wolff coll.

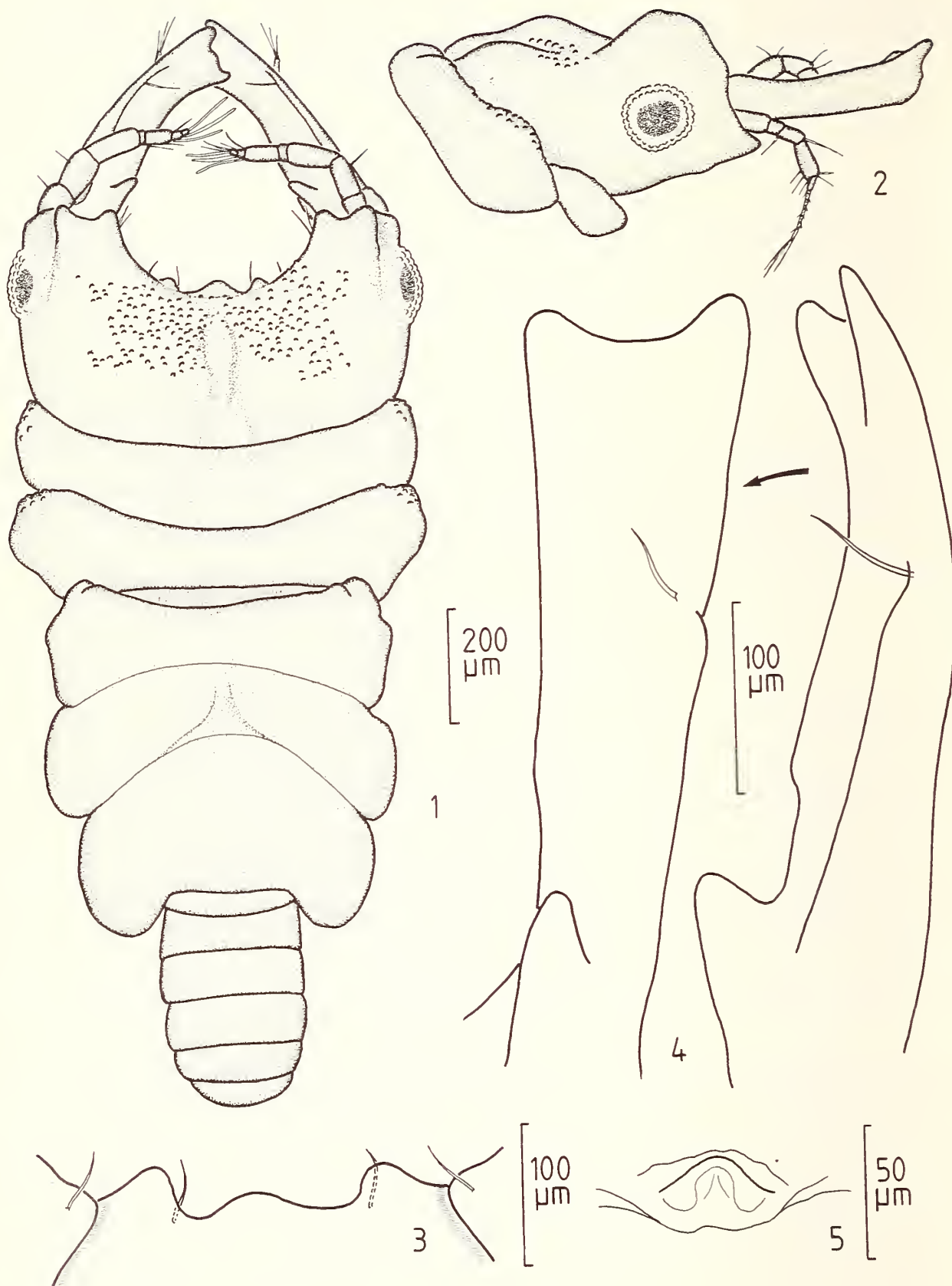
**Diagnosis:** *Gnathia wolffi* n. sp. is characterized through the presence of three shallow processes on the frontal, deeply excavated medial margin of the head and the narrow, anterolaterally directed lobe of the mandibles.

**Description:** Length about 1.6 mm (front margin of head to distal margin of fifth pleonite; pleon distally down-curved!), maximum width (across pereonite 3) 0.74 mm.

Cephalon with minute tubercles on anterior medial surface; head about 1.7 times wider than long, frontal margin deeply excavated, medially with three shallow projections; inner base of smaller frontolateral projections with short simple setae; cephalon also with a pronounced ridge above each eye and a shallower ridge medially. Pereonite 1 not visitable in dorsal view, pereonites 2 and 3 anterolaterally with some small tubercles; pereonite 6 longest; pereonite 7 very short, hidden beneath posterior margin of pereonite 6; pereonites 2—6 without setae. Pleon down-curved with pleonites subequal in length.

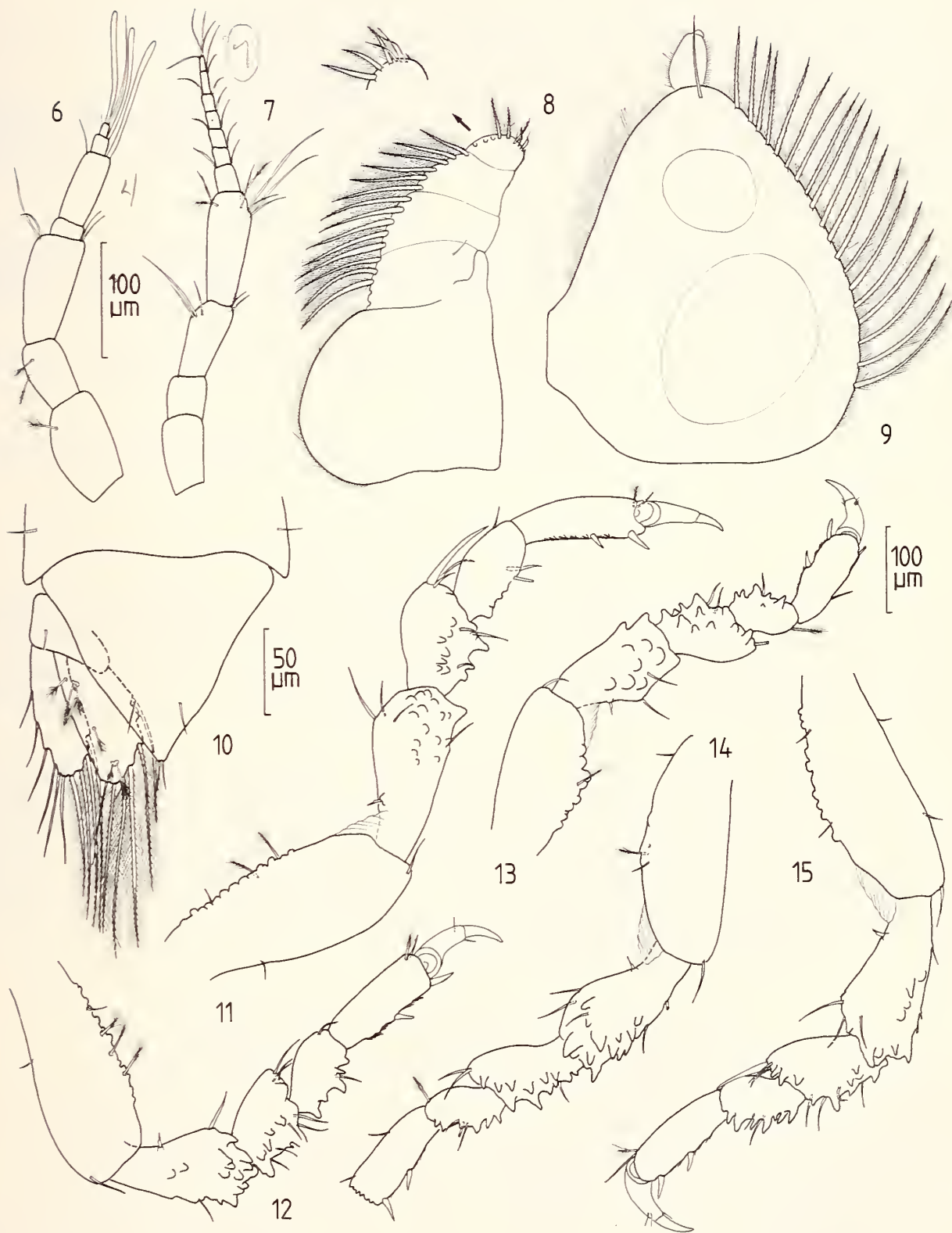
Telson triangular, slightly wider than long, lateral margins sinuous; terminal setae of telson simple, very short.

Antenna 1 with 3 peduncle articles; flagellum of 4 articles, second, third and fourth with aesthetascs. Antenna 2, peduncle with 4 articles, fourth article longest,



Figs. 1–5. *Gnathia wolffi* n. sp., ♂ holotype: 1, dorsal view; 2, head, pereonites 1 and 2 in lateral view; 3, frontal margin of head, ventral view; 4, mandible, viewed from different angles; 5, penis.

A new isopod from Kenya



Figs. 6—15. *Gnathia wolffi* n. sp., ♂ holotype: 6, antenna 1; 7, antenna 2; 8, maxilliped; 9, pylopod; 10, tail fan; 11, pereopod 1; 12, pereopod 2; 13, pereopod 3; 14, pereopod 4; 15, pereopod 5.



second shortest, first and third subequal in length; flagellum of 7 articles. Mandible robust, apically shovel-like broadened, with narrow, anterolaterally directed inner lobe and simple seta at inner dorsal margin. Maxilliped of 5 articles; basal article largest, 4 distal articles at outer margin bearing finely fringed setae; terminal article moreover with 3 short, simple setae apically. Pylopod of 3 articles; broad basal article bearing finely fringed setae at convex medial margin and a short, simple seta apically; penultimate article oval, terminal one minute.

Pereopods 1–5 as figured, relatively short and robust, with strong lateral and ventral teeth on carpus, merus and ischium, in particular; basis dorsally with shallowly rounded tubercles.

Penis very small, broader than long.

Uropodal exopod narrower than but subequal in length to endopod; dorsal surface of endopod with 7 feathered sensory setae; both rami of uropods bearing elongate, partly fringed setae.

Etymology: The species is named after Dr. Torben Wolff, Zoological Museum, Copenhagen, who collected the new isopod.

Remarks: *Gnathia wolffi* n. sp. shows affinities to three other species, all from the Indo-Pacific Ocean.

### The *Gnathia ferox* complex

A group of sibling species appears to be arranged around *Gnathia ferox* (Haswell, 1884). The interrelationships between these species seem to be clear, however, although all the species included here are known from single or few specimens only.

The following species belong to this *ferox* complex which are similar in general habitus:

*Gnathia ferox* (Haswell, 1884) from Australia, *Gnathia insolita* Stebbing, 1906 from Ceylon, *Gnathia rangifer* (Monod, 1926) from Malaysia (see Monod 1926 and Holdich & Harrison 1980), and *Gnathia wolffi* n. sp. All these species are characterized in having the mandibles elongate, robust and distally shovel-like broadened. All, except *G. insolita*, have the frontal margin of the head deeply excavated. The species named above can be distinguished as follows:

#### Key to the species of the *Gnathia ferox* complex

1. Frontal margin of head deeply excavated, at least  $\frac{1}{6}$  of cephalon length . . . . . 2
1. Frontal margin of head slightly excavated,  
less than  $\frac{1}{6}$  of cephalon length . . . . . *Gnathia insolita* Stebbing, 1906
2. Frontal margin of head without or with one shallow medial projection only . . . . . 3
2. Frontal margin of head with 3 shallow medial projections . . . . . *Gnathia wolffi* n. sp.
3. Frontal margin of head with 1 shallow  
medial projection . . . . . *Gnathia ferox* (Haswell, 1884)
3. Frontal margin of head without medial projections . . . *Gnathia rangifer* (Monod, 1926)

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### Zusammenfassung

*Gnathia wolffi* n. sp. wird beschrieben. Fundort ist ein Korallenriff in der Nähe von Tiwi, ca. 35 km südl. von Mombasa, Kenia. Die Beziehungen der Art innerhalb der Gattung werden diskutiert und ein Schlüssel zur Bestimmung der Arten des *Gnathia ferox*-Komplexes gegeben.

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