

**SOUTH AFRICAN ANIMAL LIFE**

*Results of the Lund University Expedition in 1950—1951*

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**ISOPODA: FLABELLIFERA  
SPHAEROMATIDAE**

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## Chapter I

# Isopoda: Flabellifera Sphaeromatidae

By K. P. JANSEN

### *Pseudosphaeroma barnardi* MONOD, 1931

(Fig. 1)

This species was collected in 1894 from a freshwater stream flowing into Hout Bay near Cape Town, and first described by MONOD (1931). MONOD remarked on sexual dimorphism in the pereopods, a mat of setae being present on the sternal aspect of the articles in males. Mature females however were absent from his material since he did not observe oöstegites; the 'sexual dimorphism' could therefore have been a change with growth. Further, he recorded 'dimensions' (overall length) of 4—5 mm, indicating that juveniles also were absent from his material.

The Swedish South Africa Expedition 1950—51 collected *P. barnardi* in a number of coastal stations in the Cape Province of South Africa. The samples included both mature and immature males and females as well as juveniles. It is worth recording some of the morphological information not available to MONOD, as well as the additional geographic and ecological information.

Sample Locality		Numbers and lengths (mm) of specimens							
No.	No.	males		females		juveniles		total	
2956	108	1	5,0			1	3,0	2	3,0—5,0
3056	108	20	3,0—4,0	9	2,5—3,5	4	2,0	33	2,0—4,0
3228	108	24	3,0—5,0	10	2,5—3,5	7	1,5—2,5	41	1,5—5,0
3266	108	35	3,0—5,0	37	2,5—3,5	7	1,0—2,0	79	1,0—5,0
3268	108	30	3,0—5,0	19	2,5—3,5	1	2,0	50	2,0—5,0
3303	138	3	4,0—7,0	1	5,5	3	2,0—3,0	7	2,0—7,0
3331	138	3	4,5—5,5	3	4,5—5,0	3	2,0—3,0	9	2,0—5,5
3354	136	8	3,0—5,0	7	3,0—4,5	13	1,5—3,0	28	1,5—5,0

Dimensions: The range of overall length (measured to the nearest 0,5 mm) thus extends from 1,0 to 7,0 mm; mature males are larger than mature females.

Oöstegites and brood sacs: In mature females there are three pairs of oöstegites, one pair behind each of the 1st, 2nd, and 3rd pereopods, which do not reach the midline, a key character in HANSEN'S (1905) classification. There are four pairs of brood sacs, of the

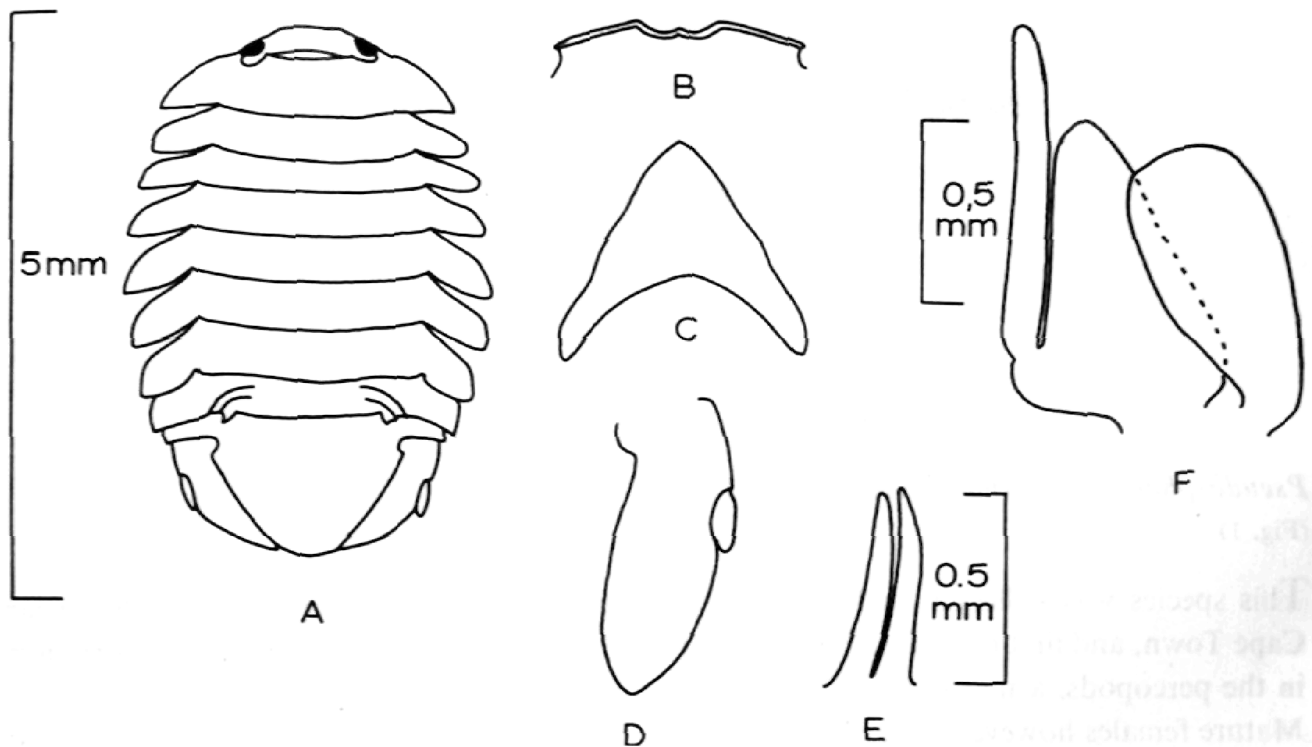


Fig. 1. *Pseudosphaeroma barnardi* MONOD, 1931. Mature male. A. Whole animal, dorsal, appendages omitted.—B. Anterior margin of cephalon, dorsal.—C. Epistome.—D. Uropod.—E. Penis.—F. 2nd pleopod with appendix masculina, setae omitted.

'typical' sphaeromatid form. The openings appear in the 2nd, 3rd, 4th, and 5th sternites, beneath the oöstegites.

**Sexual dimorphism:** The mat of setae present on the sternal aspect of the pereopodal articles in mature males is absent in females and juveniles, and is thus confirmed as sexual dimorphism. Apart from the differences in the pereopods and in size, the sexes are morphologically similar.

**Cape Prov.:** De Hoop Vlei, Windhoek Farm, 20 miles ENE Bredasdorp, about 100 miles ESE Cape Town 2—3.I.1951, loc.no. 108, samples 2956, 3056, 3266, 3268 from brackish stream; sample 3228 from under stones on stream.—Tzitzikama Forest, Storms River mouth, about 300 miles E Cape Town, 14.I.1951, loc.no. 138, samples 3303, 3331, from stream; *ibid.* loc.no. 136, sample 3354 from freshwater pool near sea.

*P. barnardi* appears to be a brackish water species with a large tolerance of freshwater conditions, similar to *P. campbellensis* CHILTON 1909, the type species, which occurs in brackish waters in New Zealand and the subantarctic islands south of New Zealand (CHILTON 1909; STEPHENSEN 1927; MONOD 1931, 1931a; JANSEN 1971; HURLEY and JANSEN *in press*).

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