THE AMPHIPODA OF SOUTHERN AFRICA

PART 2

THE GAMMARIDEA AND CAPRELLIDEA OF SOUTH WEST AFRICA SOUTH OF 20°S

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(With 7 figures)

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Contents

Introduction

The present paper is the second of a series aimed at reviewing present knowledge of the gammaridean and caprellid amphipod fauna of Africa south of 20°S. The first of the series (Griffiths 1973) dealt with the coast of Moçambique below 20°S and recognized 65 species, 3 of them new to science and over 30 new to Moçambique. South West Africa has been chosen as the second area for analysis since its fauna makes an interesting comparison with that of Moçambique, particularly because collecting effort in the two areas has been comparable.

The marine environment of South West Africa is considerably colder than that of Moçambique, the dominant water current being the northerly flowing Benguela current, in contrast with the warm Moçambique current which bathes the east coast. The flow of the Benguela current is most intense in summer with a flow of $\frac{1}{2}$ to 1 knot 150 km offshore between 34°S and 23°S.

At Walvis Bay temperature at 50 m varies between 17°C in summer and 10°C in winter. Off Moçambique the main body of the southward flowing current passes some 90 to 120 km offshore at a surface velocity of about 3 knots (the velocity falling rapidly with depth). Inshore counter-currents often form, their intensities varying with local wind conditions. Temperature at 50 m varies from 24 to 27°C.

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The first record of an amphipod from South West Africa appears to have been one of a species of *Podocerus* by Schultze (1907). These animals were about 2 mm long with transverse brown bands across their backs and were found living in small upright tubes attached to firm objects in mud and projecting about 4 mm above the surface. This species has not yet been identified or described.

Since this early record little work has been done on the Amphipoda of the area. A few records are to be found in the works of K. H. Barnard and in J. L. Barnard (1961) while more detailed surveys have been conducted by Schellenberg (1925, 1953) and Penrith & Kensley (1970).

In 1925 Schellenberg recorded 17 species from South West Africa to which 11 further species were added in 1953, 5 of them new to science. A time of inactivity followed Schellenberg's work and it was not until 1970 that Penrith & Kensley, while undertaking a survey of rocky shores in the vicinity of Lüderitz, recorded 28 species of amphipod, 15 of them new to the area; a striking demonstration of the work still to be done.

The University of Cape Town Ecological Survey has been collecting in South West Africa since 1946, particularly between 1956 and 1964. In the following account records resulting from these collections are incorporated with those of earlier workers in listing the fauna of the area. The University's collections are coded according to area and the various areas are discussed separately below: the stations are shown on Figures 1 and 2.

The Collecting Stations

South West Africa dredge stations (SWD)

The series of samples referred to by this code consists of 95 grabs and dredges taken by the Division of Sea Fisheries research vessel *Sardinops*, the R.V. *Rockeater* and the University of Cape Town's vessel the R.V. *Gilchrist*. Thirty-four of the 95 samples contained amphipods with a total of 37 species being recorded. The general pattern of distribution indicates a number of locally abundant species, well differentiated into soft and hard substrate types, plus a larger number of relatively rare but well distributed species.

Most of the samples from soft substrates were dominated by a single species, but different species dominated closely adjoining samples. The number of amphipods in a 0,2 m^2 grab often exceeded 400 individuals of the dominant species, while the total population per m^2 was frequently in excess of 1 000. This patchy distribution is well exemplified by the two common ampeliscids of the area, *Ampelisca brevicornis* and *A. palmata*. Although each dominated most of the samples in which it was found, and both occurred in close proximity to each other, they were seldom recovered from the same sample. Each of the species probably prefers a particular substrate type although unfortunately insufficient data has been collected to confirm this.

Apart from the species of *Ampelisca* mentioned, the common species of mud

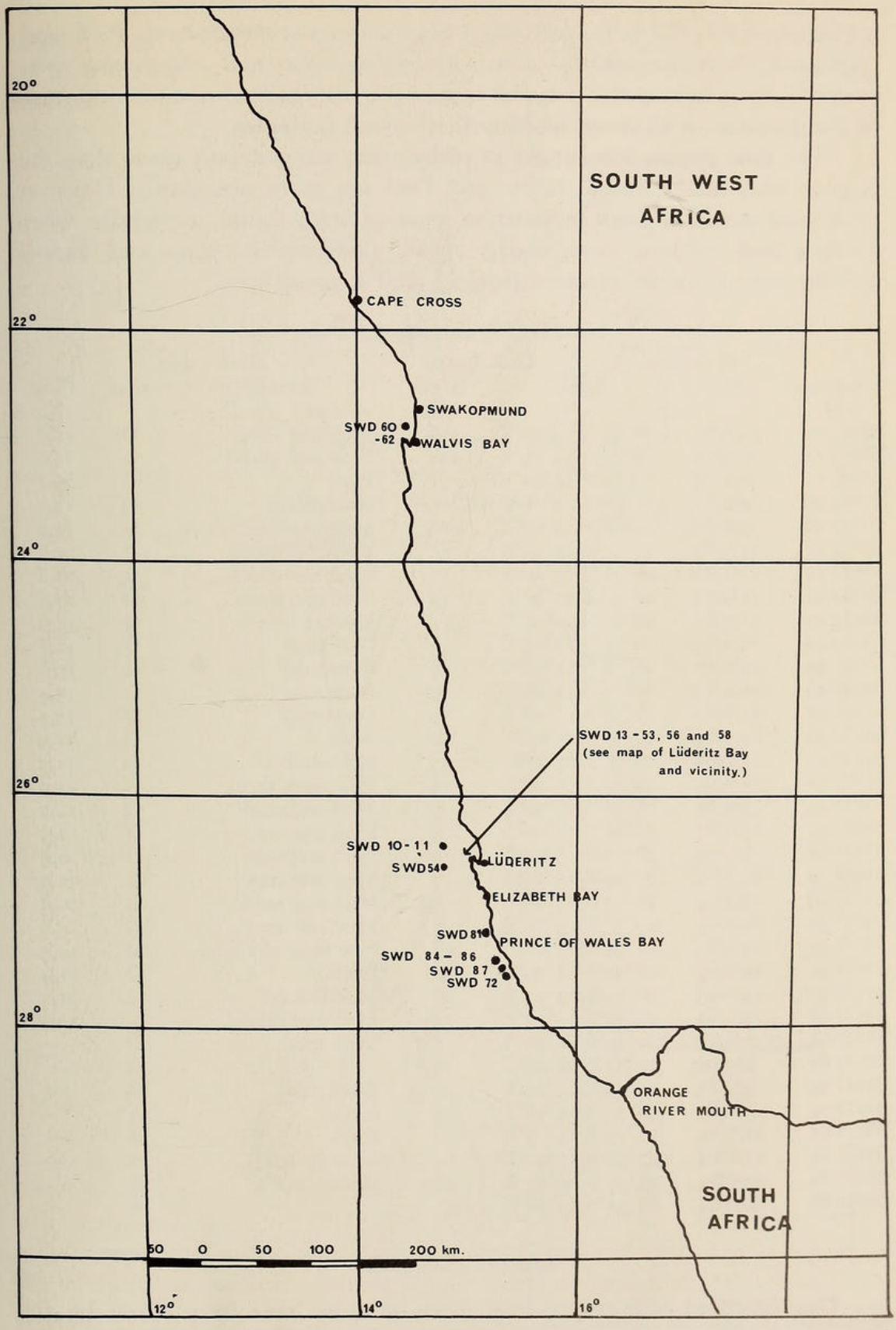

Fig. 1. South West Africa south of 20°S showing the positions of collecting stations mentioned in the text.

and sandy-mud off South West Africa were *Eriopisa epistomata* n. sp, *Perioculodes longimanus*, *Photis longidactylus* n. sp, *Photis longimanus* and *Megaluropus namaquaeensis*. *Paramoera capensis* was also common but it is found on the bottom and in the plankton in all areas, whether hard or soft bottomed.

The total population density in rocky areas was generally lower than that of mud and sand (where shelter and food are more abundant). However, occasional areas of high population density were found, especially where sponges and bryozoa covered the rocks. *Laetmatophilus purus* and *Caprella equilibra* were the most common species found in rocky areas.

South West Africa dredge station data

G = grab D = dredge A = airlift pump

Catalogue no.	Date	*Position*	*Depth (m)*	*Substrate*	*Gear*	*Temp. °C.*
SWD 10	10/6/63	26°34′S/14°55′E	128	Mud and rock	D	11,6
SWD 11	10/6/63	26°34′S/14°55′E	128	Mud and gravel	G	11,6
SWD 13	10/6/63	26°35′S/15°01′E	71	Rock	D	12,1
SWD 16	10/6/63	26°36′S/15°06′E	26	Sandy mud	D	12,2
SWD 18	10/6/63	26°36′S/15°06′E	26	Sandy mud and shells	G	12,2
SWD 21	11/2/63	26°37′S/15°04′E	35	Rock and shells	D	11,6
SWD 24	11/2/63	26°38′S/15°06′E	11	Mud and shells	D	11,6
SWD 26	11/2/63	26°38′S/15°06′E	11	Mud and shells	D	11,6
SWD 27	11/2/63	26°38′S/15°06′E	11	Mud and shells	G	11,6
SWD 30	13/2/63	26°38′S/15°08′E	6	Grey mud	G	13,6
SWD 33	13/2/63	26°38′S/15°08′E	6	Grey mud	G	13,6
SWD 36	11/2/63	26°38′S/15°08′E	9	Dark mud	D	13,4
SWD 37	11/2/63	26°38′S/15°08′E	9	Dark mud	G	13,4
SWD 39	12/2/63	26°37′S/15°04′E	40	Rock	G	11,9
SWD 40	12/2/63	26°36′S/15°06′E	35	Fine sand	D	11,9
SWD 41	13/2/63	26°36′S/15°06′E	35	Fine sand, shells	G	11,9
SWD 44	13/2/63	26°36′S/15°10′E	5	Mud and sand	G	12,7
SWD 45	13/2/63	26°36′S/15°10′E	5	Mud and sand	G	12,7
SWD 46	13/2/63	26°25′S/15°09′E	7	Mud and sand	G	12,9
SWD 47	13/2/63	26°25′S/15°09′E	7	Mud and sand	G	12,9
SWD 48	13/2/63	26°37′S/15°10′E	6,5	Mud and sand	G	12,8
SWD 49	13/2/63	26°37′S/15°10′E	6,5	Mud and sand	G	12,8
SWD 51	14/2/63	26°37′S/15°07′E	20	Fine mud and sand	D	11,9
SWD 54	14/2/63	26°40′S/14°50′E	91	Rock	D	11,9
SWD 56	14/2/63	26°37′S/15°07′E	20	Muddy sand	G	11,9
SWD 58	14/2/63	26°39′S/15°02′E	73	Mud and gravel	D	11,9
SWD 60	9/9/63	22°53′S/14°27′E	7,6	Dark mud	G	—
SWD 61	9/9/63	22°53′S/14°27′E	14	—	G	—
SWD 62	9/9/63	22°53′S/14°27′E	14	Black mud	G	—
SWD 72	–/6/64	27°37′S/15°28′E	23	Rock	A	—
SWD 81	22/7/64	27°13′S/15°15′E	32	Rock	A	—
SWD 84	21/6/64	27°30′S/15°25′E	24	Gravel, rock	A	—
SWD 86	20/6/64	37°30′S/15°25′E	35	Gravel, stone	A	—
SWD 88	20/9/64	27°31′S/15°26′E	35	—	A	—

Lüderitz shore (LU)

One hundred and twenty-two shore samples have been taken by the University of Cape Town in the Lüderitz area and are denoted by the code LU.

Lüderitz Bay (Fig. 2) is situated on the coast of South West Africa at

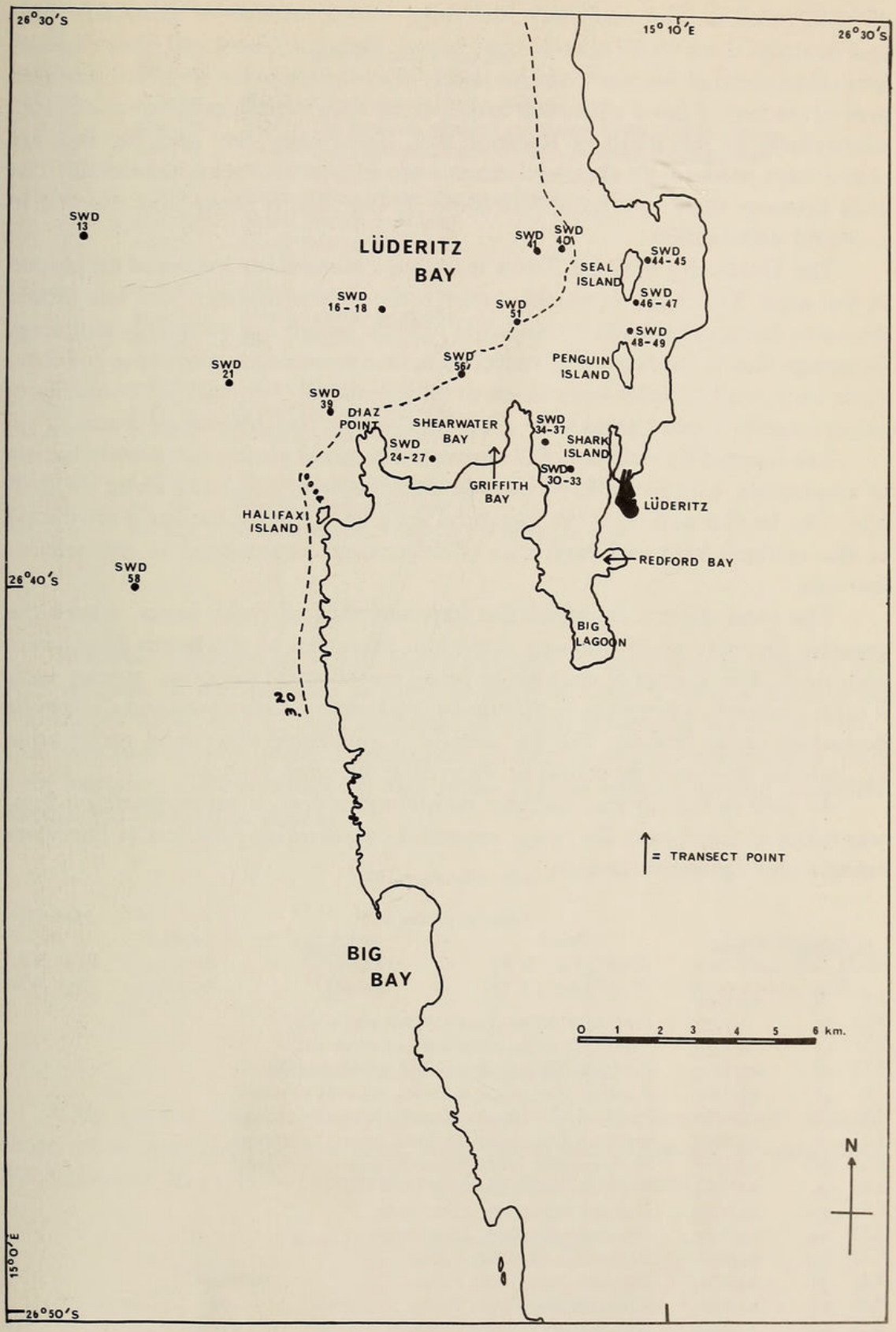

Fig. 2. Collecting stations in the Lüderitz Bay area.

26°36'S/15°08'E. The main bay is divided into a number of subsidiary bays and contains three rocky islands, Seal Island, Penguin Island and Shark Island. The shore north of the town is either sandy or rocky while the sheltered southern arm of the bay is lined with rock interspersed with considerable areas of mud, particularly to the south of Redford Bay. Shearwater Bay and Big Bay are sandy bays moderately sheltered from wave action by rocky headlands. The area between these two bays, and south of Big Bay, is rocky and exposed to powerful wave action.

The University of Cape Town team has collected 27 species of amphipod in this area. The fauna of muddy areas of the southern area of the bay lacked diversity, being dominated by *Ampelisca palmata*, which was extremely abundant (although this is inadequately reflected by the number of specimens collected since very small samples were taken at each station). The only other species of importance in muddy areas were *Lysianassa ceratina* and *Eriopisa epistomata* n. sp.

The intertidal sand flats of Shearwater Bay were almost completely barren of amphipods, with just a few *Talorchestia quadrispinosa* occurring along the drift line. The barren nature of the intertidal zone here can probably be attributed to the extreme heat and high rate of desiccation experienced in the area at low tide.

The most diverse fauna in the bay was that of rocky areas, where the greatest diversity of niches was available. Members of the genus *Hyale* were abundant, five species of that genus being recorded. Many other species were locally common, among them *Allorchestes inquirendus* on seaweeds and *Calliopiella michaelseni* under limpets. Further details of amphipod records in rocky areas of Lüderitz Bay may be found in Penrith & Kensley (1970).

As well as the bottom samples mentioned above, a single plankton haul was taken at night near the town, revealing considerable numbers of *Paramoera capensis* and *Lysianassa ceratina*.

Lüderitz station data

Catalogue no.	*Date*	*Locality*
LU 8	16/7/46	—
LU 33	–/7/57	Intertidal rocks (location not recorded)
LU 34	–/7/57	Intertidal rocks (location not recorded)
LU 36	23/2/63	Redford Bay (mud transect, general sievings)
LU 41	23/2/63	Redford Bay (mud transect, general sievings)
LU 42	23/2/63	Redford Bay (mud transect, general sievings)
LU 44	23/2/63	Redford Bay (mud transect, general sievings)
LU 46	23/2/63	Redford Bay (mud transect, general sievings)
LU 52	24/2/63	Animals from seaweeds, Diaz Point
LU 53	24/2/63	General collection, Diaz Point
LU 54	24/2/63	General collection, Diaz Point
LU 55	24/2/63	Exposed rock, Diaz Point
LU 56	24/2/63	Exposed rock, Diaz Point
LU 57	24/2/63	Exposed rock, Diaz Point
LU 58	24/2/63	Exposed rock, Diaz Point
LU 61	25/2/63	Lüderitz township, general collection
LU 64	25/2/63	Shearwater Bay sand transect

Catalogue no.	*Date*	*Locality*
LU 66	25/2/63	Shearwater Bay sand transect
LU 76	26/2/63	End of Big lagoon, general digging
LU 78	11/2/63	Redford Bay, general mud collection
LU 81	26/2/63	End of Big Lagoon, general collection from muddy rocks
LU 82	26/2/63	End of Big Lagoon, general collection from muddy rocks
LU 86	11/2/63	Diaz Point, general collection, rocks
LU 94	21/2/63	Redford Bay, under muddy stones
LU 97	22/2/63	Shark Island, west side
LU 98	22/2/63	Shark Island, west side
LU 99	22/2/63	Shark Island, west side
LU 101	22/2/63	Shark Island, west side
LU 103	22/2/63	Shark Island, west side
LU 104	22/2/63	Shark Island, west side
LU 105	22/2/63	Shark Island, west side
LU 106	22/2/63	Shark Island, west side
LU 107	22/2/63	Shark Island, west side
LU 108	22/2/63	Shark Island, west side
LU 112	22/2/63	Shark Island, west side, bases of *Laminaria*
LU 113	22/2/63	Shark Island, west side, bases of *Champia*
LU 114	22/2/63	Shark Island, west side
LU 121	22/2/63	Plankton haul, Lüderitz township, 11 p.m.

'*Africana*' *dredges* (AFR)

Material collected by vessels of the Division of Sea Fisheries, notably the R.S. *Africana II*, and donated to the University of Cape Town, is denoted by the symbol AFR. Few of these samples fall within the region considered here, and only two of these include amphipods. Three species were recovered from these samples; *Paramoera capensis* and *Atylus guttatus* from 7 m, and *Lemboides crenatipalma* from 60 m depth.

Africana station data

Catalogue no.	*Date*	*Vessel*	*Locality*	*Depth*	*Substrate*
AFR 1278	9/11/48	*Palinurus*	26°07′S/14°58′E	7 m	Sand and mud
AFR 1335	13/11/48	*Africana*	25°51′S/14°50′E	60 m	Green mud

South West Africa shore (SWA)

This symbol denotes material collected from the South West African shore other than the Lüderitz area. Amphipoda were collected at only three SWA stations, five species being recovered, none of them common.

South West Africa shore station data

Catalogue no.	*Date*	*Location*
SWA 1	–/7/57	Swakopmund—general collection
SWA 2	–/7/57	Elizabeth Bay—general collection
SWA 4	12/7/57	Cape Cross shore—general collection

Orange River mouth (OR)

This material was collected when the University of Cape Town Ecological Survey Team, under Professor A. C. Brown, visited the Orange River mouth in 1956. The results of this survey have been published in detail by Brown (1959).

The Orange River estuary was found to be faunistically barren, indeed no true estuarine species of any group was found. This paucity can be attributed to the fact that during the wet season fresh-water flow extends throughout the system and estuarine conditions cease to exist. Those animals which were recovered represented either true fresh-water types (found in the upper reaches), or true marine types (from the sea shore). The only amphipod found, *Talorchestia quadrispinosa*, occurred above the drift line on the beach and amongst the sand dunes surrounding the river mouth.

Orange River station data

Catalogue no.	*Date*	*Location*
OR 2	7/7/56	Above H.W.S. at mouth of estuary

Systematics

In the following account families and genera are presented in alphabetical order. No attempt has been made to provide a full list of synonyms or references for each species, but reference is given to one or more of the better and more readily available descriptions. Preference has been given to descriptions which incorporate good figures, or which refer specifically to the southern African region. Brief diagnostic descriptions are given for those species not described in Part I of this series. The diagnoses are intended to differentiate the species in question from others of the same genus, or in the largest genera (e.g. *Ampelisca*) from those members of the genus found in the southern African area.

Diagnoses of Gammaridean families and genera, and keys to generic level, may be found in J. L. Barnard (1969*b*, 1970). References to all known caprellid species and species lists for various areas are found in McCain & Steinberg (1970). Taxonomy within the Caprellidea follows McCain (1970). The type material of all new species has been placed in the South African Museum, Cape Town.

The limbs of the pereon are refered to throughout as gnathopods 1 and 2, followed by pereiopods 1 to 5 (as in K. H. Barnard and J. L. Barnard). It should be noted that authors such as McCain, Schellenberg and Ledoyer number pereiopods according to the pereon segments on which they occur, i.e. gnathopods 1 and 2 followed by pereiopods 3 to 7. The articles of a limb are numbered from 1 to 7, the coxal plate (whether present or absent) being the first article. Numbers in brackets following each catalogue number refer to the number of individuals in that sample. Material from depths of over 1 000 m is not considered to form a part of the continental fauna and has thus been excluded.

Suborder GAMMARIDEA

Family **Ampeliscidae**

Ampelisca brachyceras Walker, 1904

Ampelisca brachyceras Walker, 1904: 252, pl. 2, fig. 13.

Records: SWD 21F (1).

Diagnosis: Antennae subequal, less than $\frac{1}{2}$ body length, antenna 2 originating immediately below 1; gnathopod 1 normal; article 5 of pereiopods 3 and 4 produced postero-distally for $\frac{3}{4}$ length of article 6; article 3 of pereiopod 5 longer than article 4, article 4 not lobed posteriorly; hind margin of third pleonal epimeron convex, lower corner upturned.

Distribution: Ceylon, southern Africa.

Ampelisca brevicornis (Costa, 1853)

Ampelisca brevicornis: Ledoyer, 1967: 123, fig. 2. Reid, 1951: 204–210, figs 9–15.

Records: SWD 44J (10), SWD 46J (9), SWD 47N (33), SWD 48R (3), SWD 49Q (47); Lüderitz (Schellenberg 1925, Penrith & Kensley 1970).

Diagnosis: Antenna 1 shorter than peduncle of 2, antenna 2 half body length, its origin well separated from that of antenna 1; gnathopod 1 normal; article 5 of pereiopods 3 and 4 not produced posteriorly-distally; article 3 of pereiopod 5 slightly shorter than article 4, article 4 lobed postero-distally to completely overlap triangular article 5; hind margin of third pleonal epimeron deeply bisinuate, lower corner with a large upturned tooth.

Distribution: Cosmopolitan.

Ampelisca fusca Stebbing, 1888

Ampelisca fusca Stebbing, 1888: 1052, 1651, pl. 105.

Records: SWD 84W (6), SWD 88E (1), SWD 86B (common).

Distribution: Moçambique to South West Africa.

Remarks: The present specimens are much larger (12 mm excluding antennae) than those from the east coast and differ from them in having a distinct red pigment spot behind the upper pair of eyes and short plumose setae on the inside of article 2 or pereiopod 5.

Ampelisca palmata K. H. Barnard, 1916

Ampelisca palmata K. H. Barnard, 1916: 136, pl. 28, figs 30–31.

Records: SWD 16K (17), SWD 18C (8), SWD 21G (14), SWD 26G (11), SWD 27M (11), SWD 33E (448), SWD 36C (116), SWD 37K (188), SWD 40L (5), SWD 41H (7), SWD 44G (1), SWD 45F (1), SWD 48P (2), SWD 51H (6), SWD 60C (32), SWD 61C (159), SWD 62C (55); LU 46B (21), LU 78E (8), LU 121J (1).

Distribution: Senegal to Moçambique.

Remarks: This species is more variable than indicated by Barnard's description, in particular the antennae may be considerably shorter than in the type specimens. This has led to confusion between this species and *Ampelisca spinimana* but the two can be readily distinguished by the presence of a produced lobe on the anterior margin of article 4 of pereiopod 5 in *A. palmata.*

Ampelisca spinimana Chevreux, 1887

Ampelisca spinimana: Chevreux & Fage, 1925: 81, fig. 73.
Ampelisca spinimana f. aspinosa Schellenberg, 1925: 127.

Records: Lüderitz (Schellenberg 1925).

Diagnosis: Antenna 1 slightly exceeding peduncle of 2; antenna 2 less than $\frac{1}{3}$ body length, its origin well separated from that of antenna 1; palm of gnathopod 1 spinose (variable); article 5 of pereiopods 3 and 4 not produced postero-distally; article 3 of pereiopod 5 longer than article 4, article 4 not lobed anteriorly or posteriorly; hind margin of third pleonal epimeron straight, lower corner quadrate.

Distribution: Eastern Atlantic.

Family **Amphilochidae**

Cyproidea ornata Haswell, 1880

Cyproidea ornata: Schellenberg, 1953: 113, fig. 2. Ledoyer, 1967: 125, fig. 4a.

Records: Lüderitz, Walvis Bay (Schellenberg 1953).

Diagnosis: Article 3 of gnathopod 2 postero-distally produced into an acute lobe, terminating in two large spines; article 6 not expanded distally, palm smooth.

Distribution: Indo-Pacific, extending to South West Africa.

Gitanopsis pusilla K. H. Barnard, 1916

Gitanopsis pusilla K. H. Barnard, 1916: 144.

Records: Swakopmund, Lüderitz (Schellenberg 1925); Lüderitz (Penrith & Kensley 1970).

Distribution: Moçambique to South West Africa.

Hoplopleon medusarum K. H. Barnard, 1932

Hoplopleon medusarum K. H. Barnard, 1932: 105, fig. 54.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Hind margin of article 2 of pereiopods 4 and 5 straight; dactyl of gnathopod 2 simple; palm of gnathopod 2 transverse, concave, defining angle rounded, bearing four strong spines.

Distribution: Endemic, Saldanha Bay to Lüderitz.

Hoplopleon similis Schellenberg, 1953

Hoplopleon similis Schellenberg 1953: 113. fig. 2.

Records: Lüderitz (Schellenberg 1953).

Diagnosis: Hind margin of article 2 of pereiopods 4 and 5 straight; dactyl of gnathopod 2 cut into two teeth; palm of gnathopod 2 transverse, concave, defined by a single very large spine.

Distribution: Endemic, known only from the above record.

Family **Ampithoidae**

Ampithoe falsa K. H. Barnard, 1932

Ampithoe brevipes: K. H. Barnard, 1916: 255, pl. 28, fig. 34.
Ampithoe falsa: Ruffo, 1969: 57, figs 18–20.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Article 2 of gnathopod 2 not lobed; article 6 of gnathopod 1 rectangular, palm transverse; palm of gnathopod 2 concave but otherwise not distinct from hind margin, a small rectangular tooth at the finger hinge; article 2 of pereiopods 1 and 2 ovate, strongly expanded.

Distribution: Gulf of Aden, Arabian Sea, India, southern Africa.

Ampithoe ramondi (Audouin, 1826)

Ampithoe vaillanti: K. H. Barnard, 1916: 253.
Ampithoe ramondi: Ledoyer, 1967: 135, fig. 24.

Records: LU 61Z (1), LU 112S (2); Lüderitz (Penrith & Kensley 1970).

Distribution: Cosmopolitan in warm and temperate seas.

Family **Aoridae**

Aora typica Kröyer, 1845

Aora typica: Ledoyer, 1967: 131, fig. 15.

Records: LU 112V (2); SWD 51N (1); Lüderitz (Schellenberg 1953, Penrith & Kensley 1970).

Distribution: Cosmopolitan.

Lemboides afer Stebbing, 1895

Lemboides afer: K. H. Barnard, 1932: 222, fig. 137.

Records: SWD 26J (2).

Diagnosis: Pereon of ♂ with ventral processes on segments 2–6; gnathopod 1 ♂ palm transverse, a broad denticulate cavity between a strong tooth near finger hinge and two smaller teeth at defining angle, dactyl hardly exceeding palm;

gnathopod 2 palm concave, defined by a large stout spine, dactyl slightly longer than palm, denticulate.

Distribution: Endemic, False Bay to South West Africa.

Lemboides crenatipalma K. H. Barnard, 1916

Lemboides crenatipalma K. H. Barnard, 1916: 240, pl. 28, figs 9–10.

Records: SWD 13T (4), SWD 21M (2), SWD 58B (8); AFR 1335 (present).

Diagnosis: Pereon of ♂ without ventral processes; gnathopod 1 ♂, palm transverse, crenulate, defined by a blunt lobe-like projection; dactyl overlapping palm; gnathopod 2 palm concave, defined by a long, stout, subacute tooth with a short spine at its base; dactyl longer than palm, denticulate.

Distribution: Endemic, Saldanha Bay to South West Africa.

Lembos hypacanthus K. H. Barnard, 1916

Lembos hypacanthus K. H. Barnard, 1916: 237, pl. 28, figs 5–6.

Records: SWD 60B (3), SWD 61B (8), SWD 62B (9); Swakopmund (Schellenberg 1925).

Diagnosis: Male pereon segments 3–7 with strong medio-ventral spines; article 6 of gnathopod 1 ♂ equal to article 5, palm slightly oblique, a small tooth near the finger hinge and a spiniform process and stout spine at the defining angle, finger serrate, longer than palm; gnathopod 2 ♂ with distal apex of article 2 produced into a recurved hook.

Distribution: Endemic, Natal to South West Africa.

Lembos teleporus K. H. Barnard, 1955

Lembos teleporus K. H. Barnard, 1955: 94, fig. 47. Ledoyer, 1967: 133, figs 16–17.

Records: SWD 13U (4), SWD 21P (4).

Distribution: Southern Africa, Madagascar.

Family **Calliopiidae**

Calliopiella michaelseni Schellenberg, 1925

Calliopiella michaelseni Schellenberg, 1925: 147. K. H. Barnard, 1940: 451, fig. 24.

Records: LU 33H (1), LU 81P (2), LU 96C (1), LU 108A (1); SWA 2T (1); Swakopmund (Schellenberg 1925); Lüderitz (Penrith & Kensley 1970).

Diagnosis: Found under limpets, where it is common. Article 6 of gnathopod 2 twice as long as broad, palm oblique, defined by 2–5 large spines, dactyl cut into 5 teeth, a setule in each notch; uropod 3 with rami equal to peduncle, spination variable; telson varying from cleft to rounded with age.

Distribution: Endemic, False Bay to South West Africa.

Remarks: Extensive sampling throughout the range of this species has shown it to be much more variable than was previously thought. Colour varies with the species of *Patella* under which the animal lives and there seems to be a preference for particular hosts. For example, 90% of *Patella compressa* shelter *Calliopiella* of a bright pink to plum colour, whereas 50% of *Patella tabularis* reveal pale blue specimens with bright red dorsal stripes. Less favoured species are *Patella barbara* (5%, pale brown), *P. cochlear* (5%, pale brown to green), *P. argenvillei* (10%, whitish with green gut), and *P. granularis* (20%, pale brown to green). Other species of *Patella* show an intermediate percentage of amphipods.

In all species of *Patella* there is a size relationship between the host and amphipod, specimens of *Calliopiella* being as large as 17 mm in the largest *Patella compressa*. The amphipods are almost always found in pairs, the male and female being of similar size.

A number of morphological changes with age have been noted, for example, in the smallest specimens (4 mm) the telson is up to 40% cleft, a continuous range being found through notched and emarginate, to smoothly rounded in the largest specimens (17 mm). The uropods are also extremely variable, uropod 3 ranging from pointed to rounded and showing a variable number of spines on its inner surface. Terminal setae may or may not be present.

The number of defining spines on gnathopod 2 varies between 2 and 5. These morphological changes appear to vary solely with size and are independent of the species of *Patella* occupied.

Metaleptamphopus membrisetata J. L. Barnard, 1961

Metaleptamphopus membrisetata J. L. Barnard, 1961: 105, fig. 73.

Records: 20°04′S/11°56′E, 537 m (J. L. Barnard 1961).

Diagnosis: Antenna 1 longer than antenna 2, accessory flagellum uniarticulate; upper lip rounded below, not incised; gnathopods subchelate, not greatly elongate, article 5 slightly shorter than 6; article 7 of pereiopods 1–5 bearing anterior pectinations in the form of short spines; rami of uropod 3 subequal to the elongate peduncle, spinose, outer slightly the shorter; telson apically rounded, smooth.

Distribution: The above record is the only one to date.

Family **Corophiidae**

Corophium acherusicum Costa, 1857

Corophium acherusicum: Sivaprakasam, 1970*b*: 156, fig. 14.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Article 4 of antenna 2 ♂ distally produced into a large curved tooth with a smaller tooth on its inner edge; rostrum obsolete, head deeply invagi-

nated in dorsal view; article 7 of gnathopod 2 tridentate; pleon segments coalesced.

Distribution: Cosmopolitan in tropical and temperate seas.

Grandidierella chelata K. H. Barnard, 1951

Grandidierella chelata K. H. Barnard, 1951: 708, fig. 7.

Records: SWD 13S (2).

Diagnosis: Body without ventral spines; coxae 1 and 2 semicircular, very shallow, not pointed; gnathopod 1 ♂ with article 5 ovoid, lower margin with a strong spiniform projection proximally and a stout tooth distally, the teeth becoming further apart with growth; gnathopod 1 ♀ with article 5 ovate and article 6 with four strong spines on its lower margin.

Distribution: Endemic, Natal to South West Africa. This is the first record of this species from the open sea.

Siphonoecetes dellavallei Stebbing, 1893

Siphonoecetes dellavallei: Stebbing, 1906: 684.

Records: SWD 21H (1).

Diagnosis: Rostrum acute; eyes well developed; antenna 1 scarcely extending to the tip of peduncle of antenna 2, flagellum less than half as long as peduncle, five-articulate; coxa 1 blunt anteriorly.

Distribution: Bay of Naples, southern Africa.

Family **Dexaminidae**

Atylus guttatus (Costa, 1851)

Nototropis guttatus: Chevreux & Fage, 1925: 194, figs 201–203.

Records: AFR 1278F (1).

Diagnosis: Pereon segment 7 and pleon segments 1–3 each with a single dorsal carina; urosomite 1 with two teeth separated by a marked slit; composite urosomite 2–3 with two spinose humps; pereiopod 3 with article 2 moderately produced postero-distally.

Distribution: Mediterranean, Atlantic.

Atylus swammerdami (Milne-Edwards, 1830)

Atylus swammerdami: Chevreux & Fage 1925: 195, fig. 204.

Records: SWD 16N (3), SWD 21K (3), SWD 26H (3).

Diagnosis: Pereon and pleon dorsally smooth; urosomite 1 with a small dorsal tooth followed by a much larger one; composite urosomite 2–3 without spinose humps; pereiopod 3 with article 2 moderately produced.

Distribution: Mediterranean, Atlantic (including south coast of South Africa).

Guernea (*Guernea*) *rhomba* n. sp.

Fig. 3

Guernea laevis: K. H. Barnard, 1916: 213–215.
Guernea coalita laevis: Schellenberg, 1953: 118–119 (Lüderitz).
Guernea laevis: Penrith & Kensley 1970: 230 (Lüderitz).

Description of female (3 mm): Head slightly longer than two pereon segments; eyes composed of regularly sized, closely compacted ommatidea; article 1 of antenna 1 lacking a dorsal notch, longer than articles 2 plus 3, flagellum 4-articulate, accessory flagellum not visible; article 4 of antenna 2 lobed ventrally, distally finely setose, flagellum 3-articulate; palp of maxilla 1 extending to tip of outer lobe, terminating in five setae; inner plate of maxilla 2 tipped by seven strong setae, outer plate longer than inner, apex rounded, six long setae terminally and another on the outer margin.

Coxa 1 60% as long as coxa 2; apex subacute, rounded; articles 5 and 6 of gnathopod 1 subequal, article 5 with a group of strong setae postero-inferiorly, palm defined by three strong spines; article 2 of gnathopod 2 widening from its origin, articles 5 and 6 longer than those of gnathopod 1, palm straight, transverse, defined by four strong spines, a row of small spines along inner margin of palm; article 5 of pereiopod 1 with six strong spines along its posterior margin, article 6 with four spines; pereiopod 2 with three strong terminal spines on article 5 and four posterior and two lateral spines on article 6; article 2 of pereiopod 3 rhomboidal, anterior margin convex, posterior margin extended into a subacute process, anterior margin naked, article 4 with a single plumose seta antero-distally and another postero-distally, articles 5 and 6 terminating in small spines; article 2 of pereiopod 4 evenly rounded posteriorly, article 4 with a few plumose setae anteriorly, article 5 with two posterior and two terminal spines; article 2 of pereiopod 5 quadrate, article 4 and 5 with plumose setae on both posterior and anterior margins, article 6 unarmed.

Pleonal epimera postero-inferiorly rounded; urosomite 1 slightly concave dorsally, urosomites 2 and 3 fused, not notched, not spinose, evenly rounded posteriorly; uropod 1 with outer ramus slightly longer than inner, terminating in two lateral spines and a medial spine which is less than 25% the length of the ramus (fig. 3F); uropod 2 similar to 1 but shorter; uropod 3 broader than 1 and 2, rami unarmed.

Cuticular ornamentation moderate, fairly strong polygons visible on article 2 of pereiopods.

Colour (in life): Yellowish, pereon segments 6 and 7 and pleon segment 1 bright orange.

Holotype: SAM A2936, female, 3 mm.

Type-locality: Sea Point, near Cape Town, 26 February 1914. This specimen, rather than one from South West Africa, has been chosen as the holotype as it is the one erroneously described by K. H. Barnard as *G. laevis*.

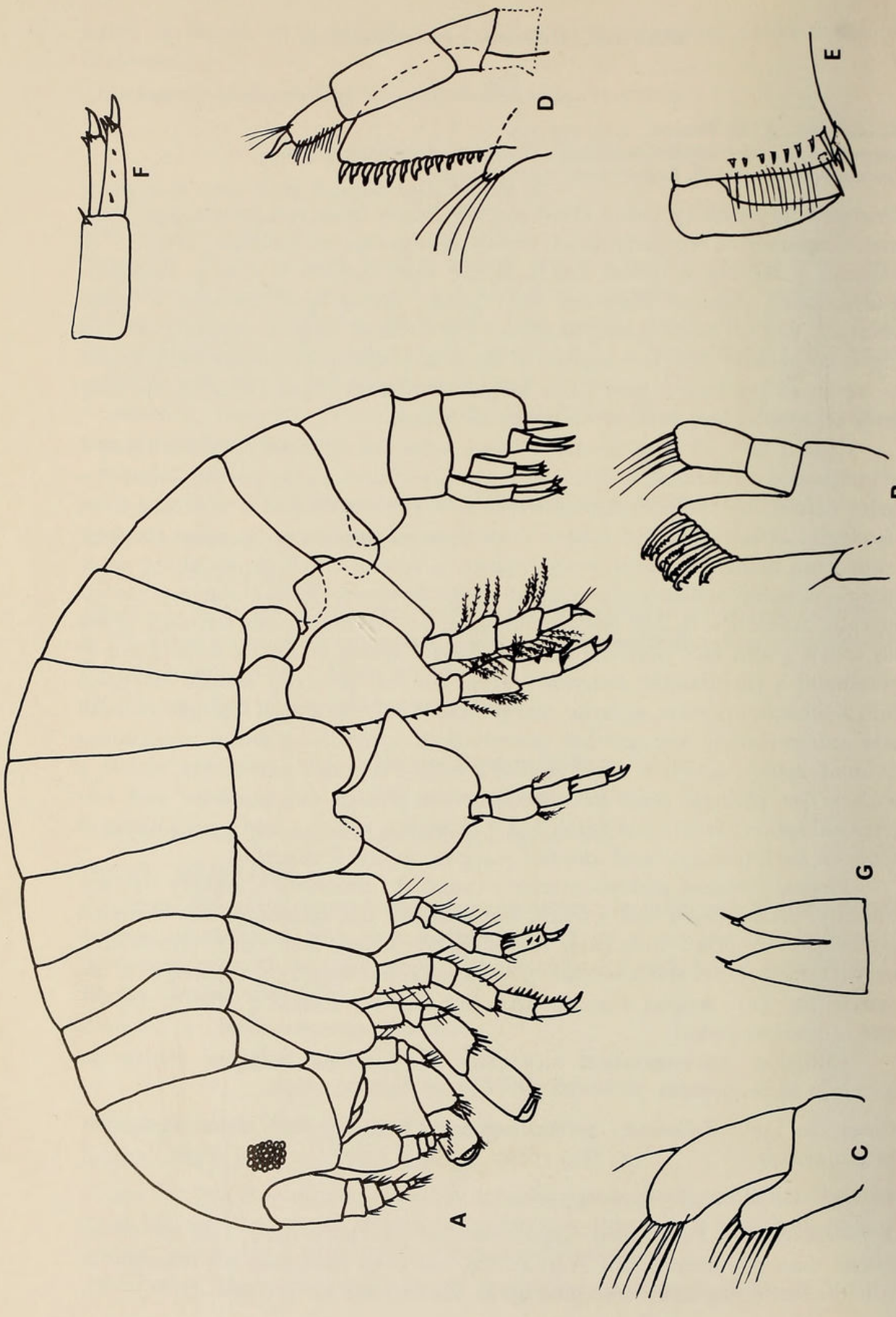

Fig. 3. *Guernea (Guernea) rhomba* n. sp., holotype, female, 3 mm.
A. Lateral aspect. B. Maxilla 1. C. Maxilla 2. D. Maxilliped. E. Palm of gnathopod 2. F. Uropod 1. G. Telson.

Remarks: These specimens, although they lie close to *Guernea coalita* (Norman), differ from that species in the following respects:

Urosomite 2 plus 3 is not dorsally notched; article 4 of antenna 2 is lobed; the inner lobe of maxilla 2 has seven rather than two setae; article 2 of pereiopod 3 lacks anterior setae and has a pronounced posterior semiacute process; the spines on uropods 1 and 2 are much shorter.

The short spines on the uropods of this species also distinguish it from other members of the subgenus *Guernea*.

Species of the subgenus *Prinassus* are distinguished by a retrose dorsal process on the urosome of the female and a high dorsal keel in the male.

Distribution: Lüderitz to Cape Town.

Polycheria atolli Walker, 1905

Polycheria antarctica: K. H. Barnard, 1916: 211.
Polycheria atolli: Ledoyer, 1967: 131, fig. 13a.

Records: Lüderitz (Schellenberg 1925).

Distribution: Antarctic and southern oceans, tropical Indian Ocean.

Family **Eusiridae**

Paramoera bidentata K. H. Barnard, 1932

Paramoera bidentata K. H. Barnard, 1932: 211, figs 118 m, 129.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Rostrum small, acute; post-antennal angle of head acutely produced; eyes nearly meeting on top of the head; pleon segments 1 and 2 postero-dorsally produced into subacute triangular teeth; third pleonal epimeron quadrate with a small postero-inferior point; urosomite 1 with a dorsal transverse depression medially; apices of telson acute, with 2 unequal spiniferous notches.

Distribution: Endemic, Still Bay to South West Africa.

Paramoera capensis (Dana, 1853)

Paramoera capensis: K. H. Barnard, 1916: 183–186; 1932: 210, figs 118 m, 129.

Records: SWD 16H (18), SWD 26B (190), SWD 27K (2), SWD 30F (1), SWD 33F (2), SWD 36E (1), SWD 37N (2), SWD 41K (4), SWD 44K (70), SWD 45E (1), SWD 46K (3), SWD 47P (22), SWD 48M (65), SWD 49R (75); LU 52H (4), LU 54E (5), LU 57H (1), LU 58M (1), LU 61Z (7), LU 82Q (1), LU 99J (3), LU 101Z (2), LU 112R (21), LU 121K (53); AFR 1278E; Swakopmund, Possession Island, Lüderitz (Schellenberg 1925); Lüderitz (Penrith & Kensley 1970).

Diagnosis: Rostrum represented by a short point; post-antennal angle of head rounded-quadrate, not produced; eyes nearly meeting on top of the head; pleon

segments lacking teeth; third pleonal epimeron rounded-quadrate with a small postero-inferior point; urosomite 1 not dorsally depressed; apices of telson truncate, cut into five to eleven teeth.

Distribution: Atlantic, and Indo-Pacific.

Family **Gammaridae**

Ceradocus rubromaculatus (Stimpson, 1855)

Ceradocus rubromaculatus: Ledoyer, 1968: 39, fig. 14.

Records: SWD 81E (1); LU 54A (6); Swakopmund, Lüderitz (Schellenberg 1925); Lüderitz (Penrith & Kensley 1970).

Diagnosis: Pleon segments 1–5 postero-dorsally toothed; pleonal epimera 1–3 strongly serrate posteriorly and slightly serrate below; gnathopod 2 with article 6 large, palm oblique, defined by a large tooth and with a large flat topped tooth along its length; rami of uropod 3 large, foliate, subequal, both margins strongly serrate; telson cleft nearly to base, two spines at apex of each lobe; colour mottled or banded rose pink.

Distribution: Indo-Pacific, extending to South West Africa.

Elasmopus japonicus Stephensen, 1932

Elasmopus spinimanus (*non* Walker 1905): K. H. Barnard, 1925: 358.
Elasmopus japonicus: Sivaprakasam, 1968: 278, figs 3–5.

Records: LU 57H (1).

Distribution: Japan, India, southern Africa.

Eriopisa epistomata n. sp.

Fig. 4

Description of male (14 mm): Anterior margin of head concave, eyes absent; antenna 1 extending to end of body, articles 1 and 2 subequal, article 3 very short, flagellum 30–40 articulate, twice as long as peduncle, accessory flagellum of two small articles; antenna 2 less than half as long as 1, article 2 produced ventrally, articles 4 and 5 subequal, flagellum of one long and two small articles; primary cutting edge of mandible with five teeth, secondary cutting edge of four teeth, palp article 3 medially expanded and setose, subequal to article 2; inner plate of maxilla 1 heavily setose, outer plate with six spines; inner and outer plates of maxilliped with plumose setae.

Article 4 of gnathopod 1 with a posterior pellucid lobe, articles 5 and 6 subequal, palm evenly convex, dactyl equal to palm; coxa 1 strongly produced anteriorly; gnathopod 2 much larger than 1, article 5 subtriangular, article 6 oval, palm oblique, irregularly nodulose, convex near finger hinge but concave proximally, defined by two large spines; dactyl marginally longer than palm;

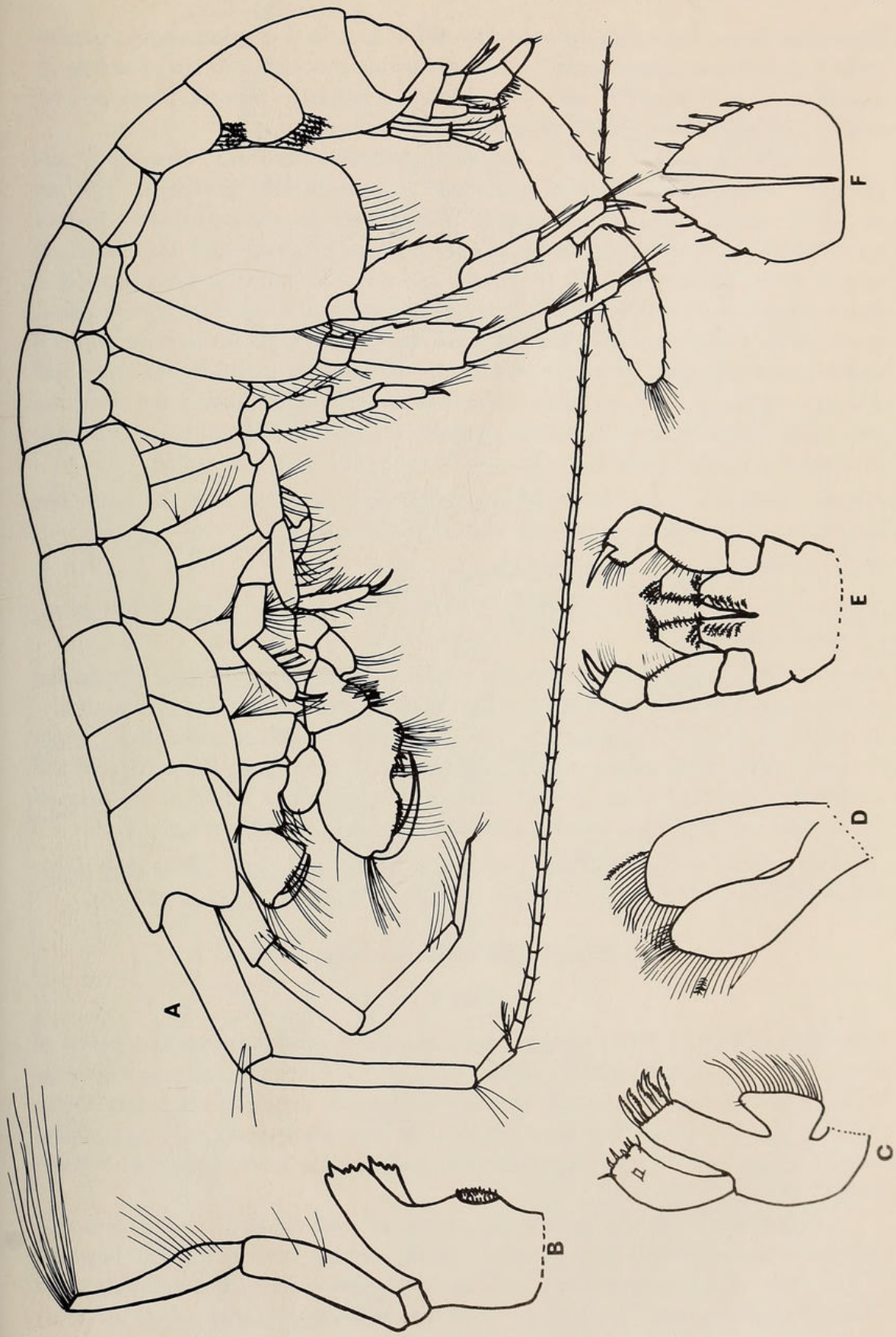

Fig. 4. *Eriopisa epistomata* n. sp., holotype, male, 14 mm.
A. Lateral aspect. B. Mandible. C. Maxilla 1. D. Maxilla 2. E. Maxilliped. F. Telson.

branchiae large, extending beyond the end of article 2 of gnathopods; pereiopods 1–3 much smaller than 4 and 5, branchiae extending to tip of article 3; article 2 of pereiopods 4 and 5 expanded, especially that of pereiopod 5; article 4 of both limbs with 4 or 5 posterior serrations.

Pleonal epimera 1 and 2 rounded-quadrate, ventrally bearing a few plumose setae; third pleonal epimeron postero-distally produced into an upturned tooth; peduncle of uropod 1 quadrate in section, dorsal surface terminating in two spines, inner ramus with one dorsal and two terminal spines, outer ramus with three dorsal and two terminal spines; uropod 2 shorter than 1 but with similar spination; peduncle of uropod 3 subtriangular, inner ramus small, oval with two terminal spines; outer ramus as long as pleon and urosome together, articles 1 and 2 subequal, article 1 distally excavate and laterally slightly serrate, its distal corners spinose, article 2 with 5 serrations on each edge and a dense terminal tuft of setae; telson extending to tip of peduncle of uropod 3, cleft to base, outer margin of each lobe with four spines.

Female: Similar to male but with a smaller second gnathopod, its palm less deeply concave; antenna 1 shorter than that of male.

Holotype: SAM A13070, male, 14 mm.

Type-locality: SWD 37L, 26°38′S/15°08′E, 11 February 1963, depth 9 m, substrate dark mud.

Remarks: This species belongs to the group with an elongate article 2 to the outer ramus of uropod 3. From amongst these species the lack of eyes and produced third pleonal epimeron distinguish it from *E. chilkensis* (Chilton) while the inner plate of maxilla 1 differs from that of *E. garthi* J. L. Barnard, and the anteriorly produced coxa 1 from that of *E. philippensis* Chilton. *E. elongata* (Bruzilius) can be distinguished by its lateral cephalic notch.

Material: SWD 27N (8), SWD 30B (25), SWD 33B (31), SWD 36B (13), SWD 37L (24), SWD 47Q (1), SWD 48N (1), SWD 49T (1); LU 78B (8).

Eriopisella epimera n. sp.

Fig. 5

Description of male (5 mm): Ocular lobes angularly rounded, eyes composed of about nine well spaced ocelli; article 1 of antenna 1 large, remaining segments missing; article 2 of antenna 2 ventrally produced, article 4 extending to tip of article 1 of antenna 1, flagellum 9 articulate; maxilla 2 setose only terminally; articles 2 and 3 of mandibular palp subequal, article 3 terminally with three long setae.

Coxa 1 produced forwards as far as rear of eye; coxae 1–4 each with two small setae in minute notches at antero-distal corners; article 4 of gnathopod 1 finely setose posteriorly, article 6 as long as 5, palm convex, not defined; palm of gnathopod 2 defined by a large spine and bearing six large spines along its length, each with a seta on its posterior margin; article 5 of pereiopods 1 and 2

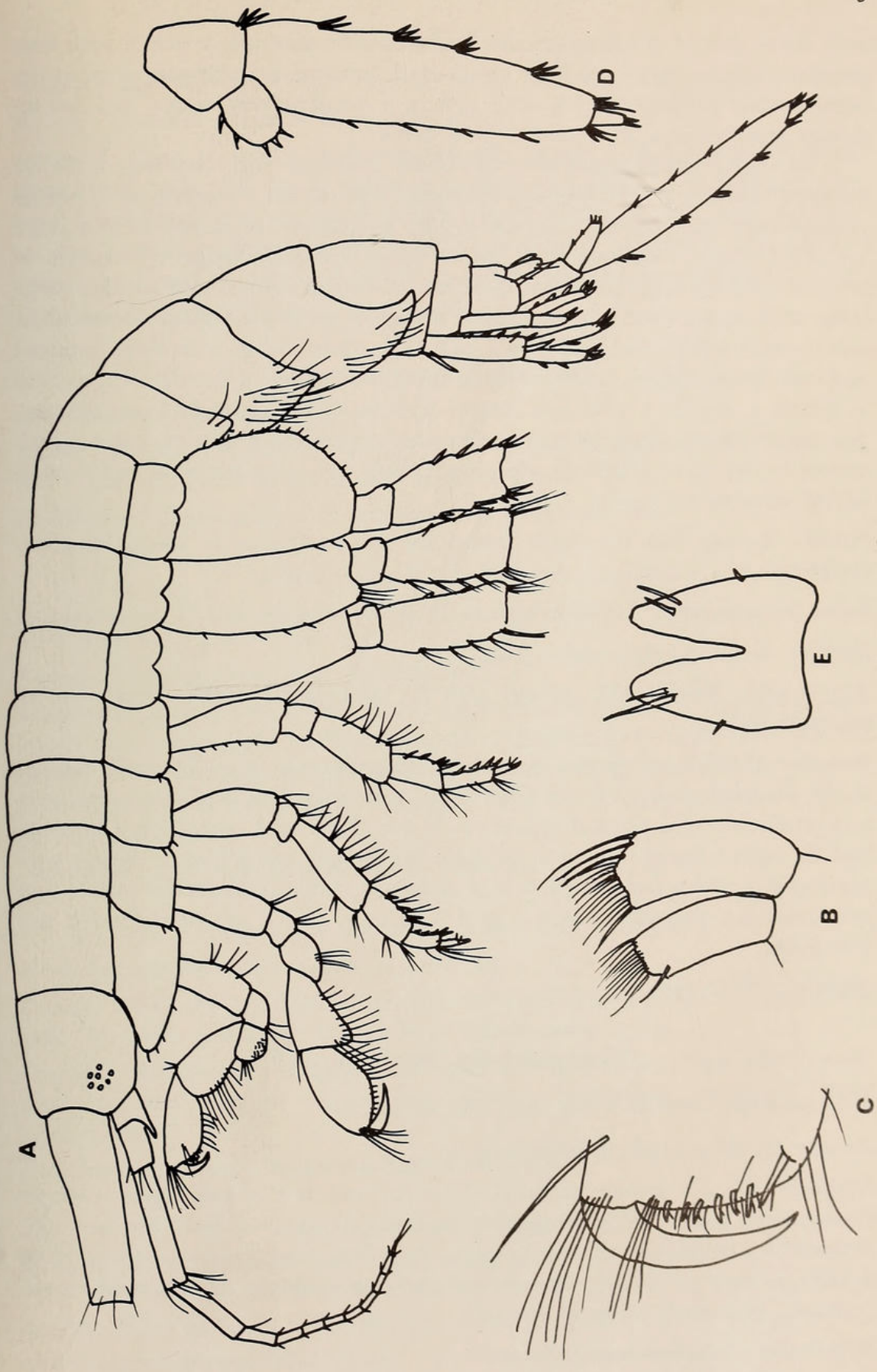

Fig. 5. *Eriopisella epimera* n. sp., holotype, male, 5 mm.
A. Lateral aspect. B. Maxilla 2. C. Palm of gnathopod 2. D. Uropod 3. E. Telson.

with three groups of heavy spines along posterior margins, article 6 with four groups of spines, dactyl medially constricted, bearing two accessory setae at the constriction; pereiopods 3–5 with article 2 progressively wider and faintly serrate posteriorly, a short seta in each notch.

First pleonal epimeron postero-distally quadrate with two long setae on its outer surface; second pleonal epimeron with about 20 lateral setae; third pleonal epimeron broadly convex below, posteriorly produced into a large upturned tooth, scattered setae on its lower external surface; peduncle of uropod 1 with a large proximal spine on its ventral surface and another large spine at its apex; rami subequal; outer ramus of uropod 2 slightly shorter than inner; outer ramus of uropod 3 20% as long as inner ramus, with three terminal and two lateral spines, inner ramus bi-articulate, article 2 hardly 10% as long as article 1, article 1 with four lateral fascicles of spines on its inner margin, four single spines along its outer edge and a terminal group of spines which extend to the tip of article 2; telson 70% cleft, two large terminal and a small lateral spine on each lobe.

Female: Exactly like the male except for the possession of brood lamellae. Ovigerous at 4,5 mm.

Colour (as preserved): Uniform brown.

Holotype: SAM A13071, male, 5 mm.

Type-locality: SWD 13R, 26°35′/15°01′E, 10 February 1963, depth 71 m, substrate rocky.

Remarks: The present species is readily distinguishable from *Eriopisella capensis* K. H. Barnard and *E. pusilla* Chevreux by its relatively well-developed eyes and produced third pleonal epimeron. It lies closer to *E. sechellensis* Chevreux and *E. nagatai* Gurganova, but of these the former has a hirsute article 2 to pereiopod 5 and a longer article 2 of uropod 3, while in the latter article 2 of pereiopod 5 overhangs article 3 and articles 5 and 6 of gnathopod 2 are triangular.

Material: SWD 13R (9).

Maera grossimana (Montagu, 1808)

Maera grossimana: Chevreux & Fage, 1925: 239, figs 248, 250.

Records: Swakopmund (Schellenberg 1925).

Diagnosis: Coxa 1 acutely produced forwards; article 6 of gnathopod 2 longer than broad, palm oblique, regularly serrate (♂) or irregularly notched (♀), defined by a distinct tooth; third pleonal epimeron posteriorly smooth, postero-distally acutely produced; uropod 2 slightly exceeding 1 and 2, rami equal, truncate, terminally strongly setose.

Distribution: Mediterranean, Atlantic.

Maera hirondellei Chevreux, 1900

Maera hirondellei: Chevreux & Fage, 1925: 241, fig. 252. Reid, 1951: 239, fig. 34.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Coxa 1 acutely produced forwards; article 6 of gnathopod 2 longer than broad, palm oblique, irregularly toothed but always with a larger tooth near finger hinge and an acute defining tooth; third pleonal epimeron posteriorly smooth, postero-distally slightly produced; uropod 3 considerably exceeding 1 and 2, rami subequal, rounded, terminally moderately setose.

Distribution: Eastern Atlantic, Mediterranean.

Maera inaequipes (Costa, 1851)

Maera inaequipes: J. L. Barnard, 1959: 25, pl. 5.

Records: SWD 21J (1), SWD 84Y (1); LU 86X (1), LU 99H (1), LU 112V (2), LU 114W (1); Lüderitz (Penrith & Kensley 1970).

Distribution: Cosmopolitan in tropical and temperate seas.

Maera vagans K. H. Barnard, 1940

Elasmopus levis K. H. Barnard, 1916: 200, pl. 27, fig. 15.
Maera vagans K. H. Barnard, 1940: 459.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Coxa 1 not acutely produced forwards; article 6 of gnathopod 2 longer than broad, palm oblique, irregularly dentate, most of the teeth bearing spines; third pleonal epimeron posteriorly smooth, postero-distally slightly produced; uropod 3 slightly exceeding 1 and 2, rami equal, lanceolate, apices acute, not setose.

Distribution: Endemic, Mossel Bay to Lüderitz.

Megaluropus namaquaeensis Schellenberg, 1953

Megaluropus namaquaeensis Schellenberg, 1953: 117, fig. 5.

Records: SWD 16J (4), SWD 18D (6), SWD 26C (200), SWD 27L (7), SWD 41K (8), SWD 51F (88); Walvis Bay (Schellenberg 1953).

Diagnosis: Gnathopods simple; gnathopod 2 with article 5 medially dilated, article 6 linear; uropod 3 exceeding uropod 1, rami equal, foliaceous, outer 1-articulate.

Distribution: Endemic, Saldanha Bay to Walvis Bay.

Melita appendiculata (Say, 1818)

Melita fresnelii: K. H. Barnard 1916: 189, pl. 28, fig. 32.
Melita appendiculata: J. L. Barnard 1970*b*: 161, figs 103, 104.

Records: SWD 21N (1), SWD 36G (2), SWD 37Q (1).

Distribution: Cosmopolitan.

Melita orgasmos K. H. Barnard, 1940

Melita orgasmos K. H. Barnard 1940: 454. Sivaprakasam, 1966: 114, fig. 12k–m.

Records: LU 54B (11), LU 112V (1); Lüderitz (Penrith & Kensley 1970).

Diagnosis: Upper apex of article 6 of gnathopod 1 overhanging base of dactyl; article 6 of gnathopod 2 ♂ longer than broad, palm transverse, shorter than hind margin, defined by a rounded lobe, otherwise smooth, dactyl normal; pleon segments 1–3 smooth, 4 produced into a slender median tooth, 5 with two submedian spines on each side.

Distribution: India, southern Africa.

Melita subchelata (Schellenberg, 1925)

Melita fresnelii var. subchelata Schellenberg, 1925: 153. K. H. Barnard, 1932: 211, fig. 130.

Records: SWD 61F (3), SWD 62F (6); Lüderitz (Schellenberg 1925); Walvis Bay (K. H. Barnard 1932).

Diagnosis: Upper apex of article 6 of gnathopod 1 not produced; article 6 of gnathopod 2 ♂ broader than long, palm transverse, as long as hind margin, a single tooth near finger hinge; dactyl massive, inner margin sinuous, distally hooked; pleon segments all dentate.

Distribution: Endemic to South West Africa.

Family **Haustoriidae**

Bathyporeia sp.

Bathyporeia gracilis: K. H. Barnard, 1951: 704 [*non* Sars 1891]

Records: SWD 18A (3), SWD 26L (4), SWD 27M (2), SWD 48Q (1), SWD 51E (11), SWD 56S (2).

Diagnosis: Antenna 2 of adult ♂ as long as body; apex of article 1 of antenna 1 broadly rounded with four or five feathery setae on the ventral margin; article 4 of pereiopod 3 expanded.

Distribution: Endemic, False Bay to South West Africa.

Remarks: Barnard's material has been re-examined by Vader (1970) and found to differ from *B. gracilis* Sars, the main point of difference being that in *B. gracilis* Sars the antenna 2 ♂ is short, having only 12 flagellar articles. The material lies close to but is not identical with *B. tenuipes* and is to be described as a new species by Vader.

Urothoe grimaldi Chevreux, 1895

Urothoe grimaldii: Chevreux & Fage, 1925: 99, fig. 93. K. H. Barnard, 1955: 84, fig. 41b.

Records: SWD 41L (8).

Diagnosis: Accessory flagellum long, five-articulate; gnathopods similar, article

6 elongate, slender, with a short blunt palm; article 5 of pereiopod 3 twice as wide as long; dactyl shaped like a pruning-knife, six to eight slender spines in a single row along the front margin.

Distribution: India, eastern Atlantic, Mediterranean.

Family **Isaeidae**

Photis longidactylus n. sp.

Fig. 6

Description of male (5 mm): Head not quite as long as pereon segment 1; ocular lobes short, angular; eyes small, dark, composed of closely packed ommatidea; antenna 1 with ratio of peduncular articles 2:3:2, flagellum 7-articulate, accessory flagellum absent; antenna 2 equal to 1, article 2 produced ventrally, articles 4 and 5 equal, flagellum shorter than peduncle, 7-articulate.

Coxa 1 slightly produced forwards, 1,5 times as long as broad, coxae 2–4 similar in shape but slightly longer than coxa 1; article 2 of gnathopod 1 widening rapidly from a narrow attachment, article 6 hardly wider than, and about 1,2 times as long as article 2; palm slightly excavate, not defined, dactyl considerably longer than palm, cut into four teeth; gnathopod 2 with article 6 about 1,5 times as wide as article 2, palm concave, defined by a blunt process on the inner margin of the palm; dactyl extending beyond this process about halfway along hind margin of hand and closing outside the defining process, inner margin of dactyl cut into five teeth; pereiopod 1 longer than 2, article 4 slightly shorter than article 2, anteriorly hirsute; articles 4 and 5 of pereiopod 2 wider and stouter than those of pereiopod 1; article 2 of pereiopod 3 subrotund, article 6 distally with one large and one small spine, dactyl with a pair of accessory cusps; pereiopod 4 similar to 3; pereiopod 5 more elongate than 3 or 4, dactyl straight with two accessory cusps.

Pleonal epimera 1–3 smoothly rounded; uropods 1–3 terminating on the same plane; uropod 1 with its subequal lanceolate rami slightly upturned distally and $\frac{2}{3}$ length of peduncle; outer ramus of uropod 2 slightly shorter that inner, each with four dorsal spines and one long terminal spine, peduncle with a single distal spine on dorsal surface; outer ramus of uropod 3 subequal to peduncle, article 2 very short, with two small terminal spines and a group of setae lying alongside its origin, inner ramus less than 20% length of outer, terminating in one short spine; telson subquadrate, one seta at each distal corner.

Female: Ovigerous at 4 mm. Coxae much longer than those of the male, extending to end of article 2 of gnathopods and pereiopods. Gnathopods smaller, but of similar structure to those of the male.

Holotype: SAM A13072, male, 5 mm.

Type-locality: SWD 51L, 26°37′S/15°07′E, 14 February 1963, depth 20 m, substrate fine muddy sand.

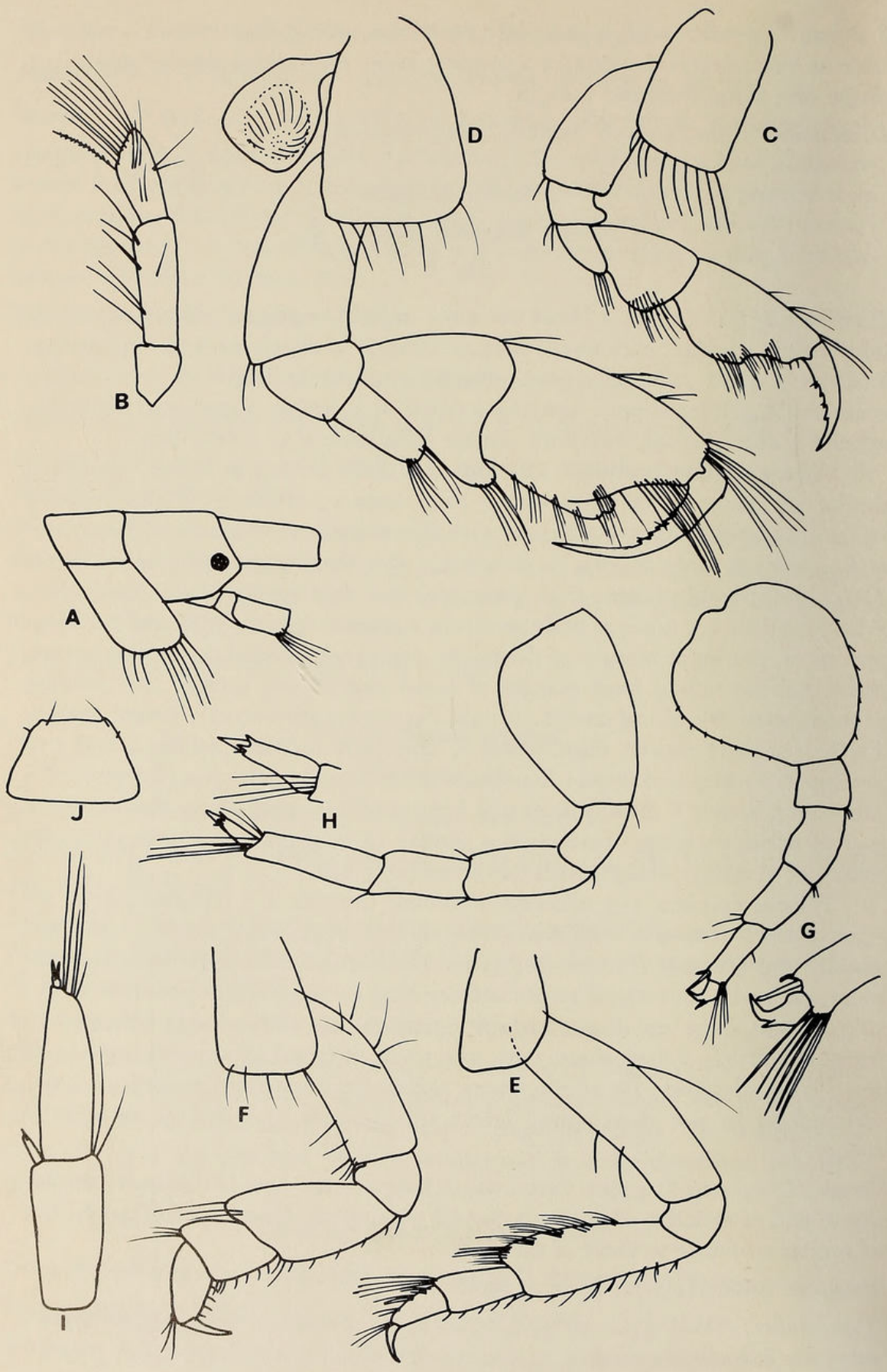

Fig. 6. *Photis longidactylus* n. sp., holotype, male, 5 mm:
A. Head. B. Mandibular palp. C. Gnathopod 1. D. Gnathopod 2. E. Pereiopod 1. F. Pereiopod 2. G. Pereiopod 3 with tip of article 6 enlarged. H. Pereiopod 5 with tip enlarged. I. Uropod 3. J. Telson.

Remarks: Taxonomy of the genus *Photis* is complicated by the fact that males appear to pass through a series of developmental stages before attaining their terminal features. Despite the number of individuals which have been found, I have been unable to allocate these specimens to any known species. They bear some relationships to *P. africana* Schellenberg but have a longer dactyl to gnathopod 2 and lack a defining spine on gnathopod 1. Amongst southern African species they can be confused with *P. uncinata* Barnard, but lack the antero-distal process on article 2 of gnathopod 2 which characterizes that species.

Material: SWD 16P (1), SWD 18B (3), SWD 26D (39), SWD 40H (2), SWD 48S (1), SWD 51L (53), SWD 56T (3), SWD 58A (5).

Photis longimanus Walker, 1904

Photis longimanus: K. H. Barnard, 1916: 244. Sivaprakasam, 1970*a*: 567, fig. 8.

Records: SWD 30C (11), SWD 33C (12), SWD 36F (4), SWD 37M (21), SWD 51M (4), SWD 61D (21); Lüderitz (Schellenberg 1925).

Diagnosis: Gnathopod 2 ♂ with a large terminal rounded lobe on article 2 reaching to the tip of article 3; article 3 with a rounded lobe projecting horizontally inwards, palm very oblique, defined by a strong, elongate curved tooth, two other smaller teeth along the palmar margin.

Distribution: Southern Africa, India, Ceylon.

Remarks: The palmar teeth of these specimens are much more pronounced than those figured by Walker (1904) or Sivaprakasam (1970*a*). The defining tooth is strongly curved terminally and the other two teeth more elongate. The dactyl is shorter than the palm, whereas in Barnard's specimens it extended to the middle of the hind margin. These differences are probably growth changes—the present specimens of over 5 mm being larger than those of previous authors.

Family **Ischyroceridae**

Ischyrocerus anguipes Kröyer, 1838

Ischyrocerus anguipes: K. H. Barnard, 1916: 264. Schellenberg, 1953: 120, fig. 7a–c. J. L. Barnard, 1969: fig. 107b.

Records: SWD 21L; LU 52H (1); Lüderitz (Schellenberg 1953, Penrith & Kensley 1970).

Diagnosis: None of pereon segments dorsally carinate; article 2 of gnathopod 2 ♂ elongate, curved, anteriorly smooth, article 6 extremely large, elongate, palm almost parallel with convex anterior margin and bearing a broad denticulate tooth near finger hinge, dactyl smooth; rami of uropod 3 equal, the outer minutely hooked apically and bearing four or five small denticles on upper margin.

Distribution: Atlantic, Indo-Pacific.

Ischyrocerus carinatus K. H. Barnard, 1916

Ischyrocerus carinatus K. H. Barnard 1916: 266, pl. 28, fig. 18.

Records: Swakopmund (K. H. Barnard 1916).

Diagnosis: Pereon segments 1, 2, 6 and 7 each with a high mediodorsal carina; article 2 of gnathopod 2 ♂ remarkably elongate and slender, anterior margin proximally and distally serrate, article 6 of moderate size, narrow-oval, palm almost parallel with convex anterior margin and bearing a medial step and a distal bifid tooth, dactyl smooth; inner ramus of uropod 3 shorter than outer, outer ramus with an apical recurved spine and two minute dorsal denticles.

Distribution: Endemic, False Bay to South West Africa.

Ischyrocerus ctenophorus Schellenberg, 1953

Ischyrocerus ctenophorus Schellenberg, 1953: 121, fig. 7d–g.

Records: Lüderitz (Schellenberg 1953).

Diagnosis: None of pereon segments dorsally carinate; article 2 of gnathopod 2 ♀ (♂ unknown) elongate, anteriorly smooth, article 6 moderately elongate, palm oblique, defined by a narrow acute tooth, crenulate near finger hinge, dactyl with combs of setae on both faces; rami of uropod 3 equal, the outer almost as broad as long, bearing an apical spine and three large dorsal teeth.

Distribution: Endemic, the above record is unique.

Jassa falcata Montagu, 1808

Jassa falcata: Sexton & Reid, 1951: 30–47, pls 4–30. J. L. Barnard, 1969*a*: 155, figs 38–39.

Records: Swakopmund (K. H. Barnard 1916, Schellenberg 1925).

Diagnosis: Article 6 of gnathopod 2 ♂ elongate, hind margin ending in an enormous distally-directed acute process, palm bearing a stout tooth near finger hinge; rami of uropod 3 half length of peduncle, outer ramus bearing two dorsal flattened cusps and a large curved basally-immersed terminal spine; telson dorsally smooth.

Distribution: Cosmopolitan in shallow waters.

Jassa frequens (Chilton, 1883)

Jassa frequens: Schellenberg, 1953: 119, fig. 6.

Records: Lüderitz (Schellenberg 1953).

Diagnosis: Article 6 of gnathopod 2 ♂ oblong, hind margin ending in a square process distal to which the palm is deeply indented, palm otherwise smooth; rami of uropod 3 almost as long as peduncle, slender, nearly naked; telson with two or three sharp dorsal denticles.

Distribution: Chile, New Zealand, South West Africa.

Family **Leucothoidae**

Leucothoe spinicarpa (Abildgaard, 1789)

Leucothoe spinicarpa: K. H. Barnard, 1916: 148. Sivaprakasam 1967: 384, fig. 1.

Records: SWD 21E (6).

Distribution: Cosmopolitan.

Family **Liljeborgiidae**

Listriella lindae n sp.

Fig. 7

Description of male (8 mm): Lower anterior corner of head rounded and slightly produced, eyes oblique-oval, well developed, enclosed in a distinct capsule; antenna 1 extending to middle of article 4 of antenna 2, articles 1 and 2 of penduncle subequal, article 3 short, flagellum subequal to peduncle, 11-articulate; accessory flagellum 4-articulate, extending to article 3 of primary flagellum; antenna 2 as long as pereon, flagellum slightly shorter than peduncle, 15-articulate; article 1 of mandibular palp elongate but shorter than article 2 which is medially bent.

Palm of gnathopod 1 oblique, extremely convex, with a series of alternating small and large spines along its length, the longer spines with accessory cusps, hind margin separated from palm by an indistinct step; gnathopod 2 much larger than 1, palm defined by a single strong spine, finely setose throughout, a distinct step near finger-hinge (Fig. 7F); dactyl as long as palm, a distinct rugose hump on its inner margin opposite the palmar step; pereiopods as in *L. goleta* J. L. Barnard.

Third pleonal epimeron upturned with a small notch at the postero-inferior corner; urosome segment 1 with a small dorsal tooth on its posterior margin, urosomite 2 with two such teeth; peduncle of uropod 1 with a large distal spine; rami of uropod 3 subequal, outer narrower than inner and with a small second article, four fascicles of spines along outer edge of basal article, inner margin of inner ramus proximally spinose, outer margin with a single row of small spines, seven strong spines around tip; telson with two large spines at apex of each lobe.

Colour (as preserved): Pereon and top of head uniform dark, otherwise white.

Holotype: SAM A13073, male, 8 mm.

Type-locality: SWD 40J, 26°36′S/15°06′E, 12 February 1963, depth 35 m, substrate fine sand.

Remarks: Gnathopod 2 of juveniles and females resembles gnathopod 1 in size and shape and has a more transverse, less convex palm than the adult male figured. Small specimens (3 mm) show a distinct dark brown band across article 3 of antenna 1 and article 4 of antenna 2 as well as various pereiopod segments.

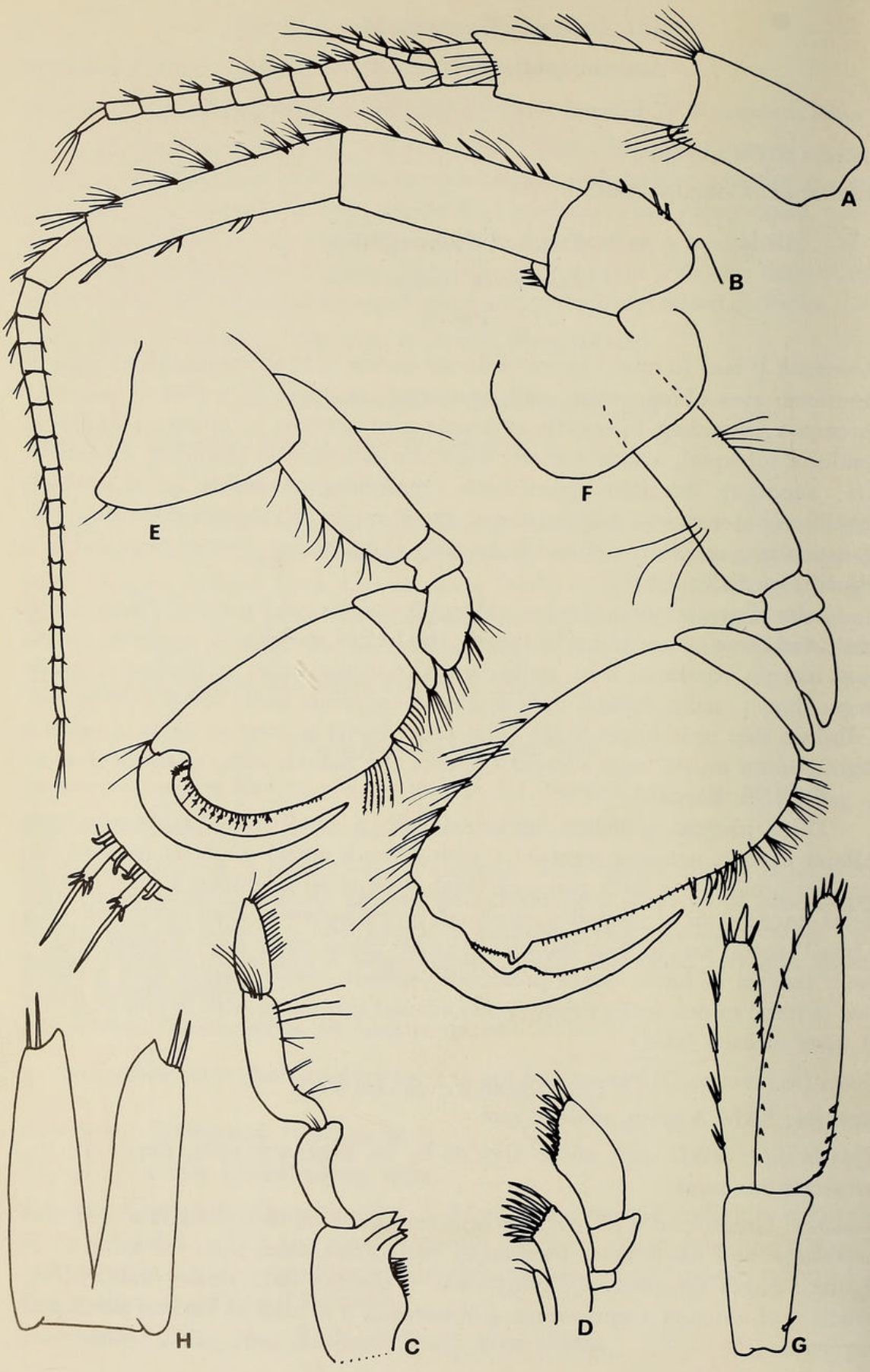

Fig. 7. *Listriella lindae* n. sp., holotype, male, 8 mm:
A. Antennae 1. B. Antenna 2. C. Mandible. D. Maxilla 1. E. Gnathopod 1 with portion of palm enlarged. F. Gnathopod 2. G. Uropod 3. H. Telson.

This species can be distinguished from *L. albina* J. L. Barnard and *L. eriopisa* J. L. Barnard by virtue of its well-developed eyes. The very short article 2 of the outer ramus of uropod 3, the urosomal teeth and the oblique palm of gnathopod 2 male distinguish it from the other species of the genus. The closest known relative appears to be *L. goleta* J. L. Barnard but the spination of uropod 3 and form of gnathopod 2 are different.

Material: SWD 11N (3), SWD 16M (4), SWD 30A (9), SWD 33A (9), SWD 40J (2), SWD 41J (8), SWD 48T (1), SWD 49S (4), SWD 54J (3).

Family **Lysianassidae**

Amaryllis macrophthalma Haswell, 1880

Amaryllis macrophthalma: K. H. Barnard, 1916: 114.

Records: LU 56B (1), LU 99M (8), LU 101Y (2), LU 112V (1); SWA 2P (1).

Distribution: Indo-Pacific, extending to South West Africa.

Remarks: These specimens display a marked increase of the length of the flagellum of antenna 1 with size. A specimen of 4 mm had a 14-articulate flagellum, while one of 10 mm, had 26 articles to its flagellum.

Aristias symbiotica K. H. Barnard 1916

Aristias symbiotica K. H. Barnard, 1916: 122. Schellenberg, 1953: 111.

Records: Lüderitz (Schellenberg 1953).

Distribution: Endemic, Moçambique to South West Africa.

Cyphocaris challengeri Stebbing, 1888

Cyphocaris challengeri Stebbing, 1888: 661, pl. 17. Bowman & McCain 1967: 1–14, figs 1–9.

Records: 24°31S'12°15'E (K. H. Barnard 1932).

Diagnosis: First pereon segment dorsally humped such that the top of the head faces forwards, the profile becoming lower and more rounded during development; hind margin of article 2 of pereiopod 3 acutely produced to the tip of article 6, the process having 3–7 teeth on its upper surface, none on its lower; article 2 of pereiopods 4 and 5 posteriorly cut into 14 and 13 strong teeth respectively; uropod 3 extending beyond the telson.

Distribution: Cosmopolitan, pelagic 25–2 200+ m.

Lysianassa ceratina (Walker, 1889)

Lysianassa cubensis: K. H. Barnard, 1916: 120.
Lysianassa ceratina: Chevreux & Fage, 1925: 42, fig. 23. Reid, 1951: 194.

Records: SWD 10B (1); LU 8C (1), LU 41B (1), LU 61Z (4), LU 86Z (1), LU 94C (4), LU 101Y (2), LU 103M (4), LU 112Q (2), LU 114Y (3), LU 121L (31); Lüderitz (Schellenberg 1925, Penrith & Kensley 1970).

Diagnosis: Article 1 of antenna 1 twice as long as wide, a flat lateral tooth on inner margin, accessory flagellum 5-articulate; eyes large, vertically elongate; third pleonal epimeron postero-distally rounded; inner ramus of uropod 2 strongly constricted; peduncle of uropod 3 strongly keeled, rami shorter than peduncle, subequal; telson oval, entire.

Distribution: Eastern Atlantic, Mediterranean, southern Indian Ocean.

Lysianassa minimus (Schellenberg, 1953)

Proannonyx minimus Schellenberg, 1953: 108, fig. 1.

Records: Lüderitz, Walvis Bay (Schellenberg 1953).

Diagnosis: Article 1 of antenna 1 twice as long as wide, without lateral tooth, accessory flagellum 2-articulate; eyes small, round; third pleonal epimeron postero-distally rounded-quadrate; inner ramus of uropod 2 simple; peduncle of uropod 3 with a plate-like distal expansion, outer ramus equal to peduncle, inner ramus shorter than outer; telson rounded, entire.

Distribution: Endemic, known only from the above records.

Lysianassa variegata (Stimpson, 1855)

Lysianassa variegata: Stebbing, 1888: 682, pl. 23.

Records: LU 61Z (1); Lüderitz (Penrith & Kensley 1970).

Diagnosis: Article 1 of antenna 1 twice as long as wide, without lateral tooth, accessory flagellum 4-articulate; eyes large, dark, vertically elongate; third pleonal epimeron postero-distally upturned with a small tooth; inner ramus of uropod 2 simple; peduncle of uropod 3 faintly keeled, rami shorter than peduncle, the outer slightly the longer; telson subquadrate, notched.

Distribution: Africa south of the equator.

Orchomene plicata (Schellenberg, 1925)

Orchomenopsis chilensis: Schellenberg, 1925: 119, fig. 3. K. H. Barnard, 1925: 330.
Orchomenella plicata: K. H. Barnard, 1940: 440.

Records: SWD 26K (24); Lüderitz (Schellenberg 1925).

Diagnosis: Eyes elongate oval, nearly meeting on top of head, third pleonal epimeron quadrate; telson twice as long as broad, $\frac{4}{5}$ cleft; article 1 of antenna 1 very stout, almost as broad as long and twice as long as articles 2 plus 3, flagellum 10–12 articulate, accessory flagellum 6-articulate; gnathopod 1 stout, article 2 twice as long as broad, article 5 very short with a narrow apical posterior lobe, palm transverse, cut into four or five little teeth; lower apex of article 5 of gnathopod 2 produced into an acute thumb, dactyl straight, closely fitting; article 4 of pereiopods 3 and 4 strongly expanded posteriorly.

Distribution: Cosmopolitan.

Tryphosella normalis (K. H. Barnard, 1955)

Tryphosa normalis K. H. Barnard, 1955; 80, fig. 39.

Records: SWD 49V (1).

Diagnosis: Eyes absent; third pleonal epimeron postero-inferiorly bluntly quadrate; first urosomite with a rounded dorsal hump; palm of gnathopod 1 very oblique, almost as long as hind margin, defined by two slender spines; telson with two pairs of dorsal spines and a pair of small spines at apex of each lobe.

Distribution: Endemic, False Bay to Lüderitz.

Family **Ochlesidae**

Ochlesis levetzowi Schellenberg, 1953

Ochlesis levetzowi Schellenberg, 1953: 115, fig. 4. J. L. Barnard, 1969*b*: 372, fig. 134a.

Records: Lüderitz, Walvis Bay (Schellenberg 1953).

Diagnosis: Maxillipedal palp absent; pleon segments not posteriorly carinate; third pleonal epimeron postero-inferiorly quadrate, not upturned; peduncular articles of antenna 1 not ventrally produced.

Distribution: Endemic to South West Africa.

Family **Oedicerotidae**

Perioculodes longimanus (Bate & Westwood, 1868)

Perioculodes longimanus: Chevreux & Fage, 1925: 162, figs 162–3. Ledoyer, 1967: 127, fig. 7.

Records: SWD 16L (100), SWD 18E (3), SWD 26A (195), SWD 27J (12), SWD 30D (2), SWD 33D (2), SWD 36D (5), SWD 37R (6), SWD 40K (8) SWD 41G (15), SWD 46H (1), SWD 49U (1), SWD 51G (125), SWD 56R (1), SWD 62D (22), SWD 72L (1).

Distribution: Mediterranean, Atlantic and Indian Oceans.

Family **Phliantidae**

Temnophlias capensis K. H. Barnard, 1916

Temnophlias capensis K. H. Barnard, 1916: 158, pl. 26, figs 25–35.

Records: LU 53M (3).

Diagnosis: Pereon smooth, coxae subrectangular; pleon segment 2 ♂ with a pair of anterior submedian tubercles, a second pair near the posterior margin, posterior margin of segment ventrally produced backwards as a rounded lobe overhanging segment 3; pereiopods 1–3 of ♂ chelate, 4 and 5 simple.

Distribution: Endemic, Still Bay to South West Africa.

Family **Podoceridae**

Laetmatophilus purus Stebbing, 1888

Laetmatophilus purus Stebbing, 1888: 1198, pl. 132. K. H. Barnard, 1916: 274.

Records: SWD 21S (500), SWD 39P (16).

Podocerus africanus K. H. Barnard, 1916

Podocerus africanus K. H. Barnard, 1916: 278, pl. 28, figs 24–25; 1925: 367; 1937: 176, fig. 19.

Records: LU 52G (1).

Diagnosis: Body not carinate, article 4 of gnathopod 2 ♂ strongly and acutely produced, palm with a short area of plumose setae distally and two strong teeth near the hinge; antero-distal margin of article 2 of pereiopods 1 and 2 lobed; article 2 of pereiopods 3–5 widest at base and tapering distally.

Distribution: South Arabian coast, Natal to South West Africa.

Podocerus cristatus (Thompson, 1879)

Podocerus cristatus: K. H. Barnard, 1916: 276. J. L. Barnard, 1962: 67, fig. 31.

Records: Swakopmund (Schellenberg 1925).

Distribution: Cosmopolitan in tropical and warm temperate seas.

Family **Stenothoidae**

Stenothoe valida Dana, 1853

Stenothoe affinis: K. H. Barnard, 1925: 345.
Stenothoe valida: Ledoyer, 1967: 125, fig. 4b. Sivaprakasam, 1967: 373, fig. 2a–b.

Records: LU 112V (1).

Distribution: Cosmopolitan in tropical and temperate seas.

Superfamily TALITROIDEA

Family **Hyalidae**

Allorchestes inquirendus K. H. Barnard, 1940

Allorchestes inquirendus K. H. Barnard, 1940: 477, fig. 34b–c.

Records: LU 8B (1), LU 55A (1), LU 105C (2), LU 106D (4), LU 107A (1), LU 108B (1), LU 112P (10) 114X (7); SWA 4J (2).

Diagnosis: Article 5 of gnathopod 2 ♂ lobed, the lobe extending between articles 4 and 5; palm oblique, defined by a pocket-like cavity and two spines, hind margin quite long.

Distribution: Endemic, Port Elizabeth to South West Africa.

Hyale diastoma K. H. Barnard, 1916

Hyale diastoma K. H. Barnard, 1916: 232, pl. 28, fig. 8.

Records: LU 52F (1), LU 56C (3), LU 57H (1), LU 61W (4), LU 99L (1), LU 103L (4), LU 112V (13); Lüderitz (Penrith & Kensley 1970).

Diagnosis: Antenna 1 extending to centre of flagellum of antenna 2, articles 1 and 2 not distally lobed; coxae 1–4 with triangular process at centre of hind margins; article 2 of gnathopod 2 ♂ with large anterior lobe, article 3 not lobed, palm nearly transverse, sinuous, defined by two spines, dactyl stout, inner margin sinuous; article 2 of pereiopod 5 subcircular, bearing a few posterior setiferous indents.

Distribution: Endemic, False Bay to South West Africa.

Hyale grandicornis Kröyer, 1845

Hyale grandicornis: K. H. Barnard, 1916: 230. Stephensen, 1949; 33, figs 14–15. K. H. Barnard, 1955: 93, fig. 46.

Records: LU 33T; Lüderitz (Penrith & Kensley 1970).

Distribution: Indo-Pacific, southern Atlantic.

Hyale hirtipalma (Dana, 1852)

Hyale hirtipalma: K. H. Barnard, 1916: 234. Stephensen, 1949: 30, fig. 13.

Records: LU 52H (4), LU 54E (1), LU 57H (1), LU 86Y (5), LU 101W (1), LU 106C (1), LU 112N (7); SWA 2N (1); Lüderitz (Penrith & Kensley 1970).

Diagnosis: Antenna 1 extending $\frac{1}{3}$ way along flagellum of antenna 2, articles 1 and 2 not distally lobed; coxae 1–4 with triangular process at centre of hind margin; article 2 of gnathopod 2 ♂ with a large anterior lobe, article 3 not lobed, palm very oblique, strongly setose, defined by two spines, dactyl evenly tapering; article 2 of pereiopod 5 oval, posteriorly faintly crenulate.

Distribution: Pacific, South Atlantic.

Hyale macrodactyla Stebbing, 1899

Hyale macrodactyla: K. H. Barnard, 1916: 235. Sivaprakasam, 1969: 308.

Records: LU 52H (12), LU 54C (26), LU 61Y (15), LU 101V (5), LU 103J (14), LU 112M (22).

Diagnosis: Antenna 1 extending $\frac{1}{3}$ way along flagellum of antenna 2, articles 1 and 2 not distally lobed; coxae 1–4 posteriorly smooth; articles 2 and 3 of gnathopod 2 ♂ anteriorly lobed, palm very oblique, bordered on both sides by rows of slender spinules, defined by two spines in a pocket, dactyl widest medially, reaching end of article 4; article 2 of pereiopod 5 circular, posteriorly serrate.

Distribution: India, southern Atlantic.

Hyale saldanha Chilton, 1912

Hyale saldanha Chilton, 1912: 509, pl. 2, figs 24–29. K. H. Barnard, 1916: 229, pl. 27, fig. 37.

Records: LU 33S (1), LU 52E (6), LU 54D (6), LU 61X (12), LU 82Q (1), LU 99K (5), LU 101X (4), LU 103H (13), LU 105B (1), LU 112 L (10); SWA 1P (6); Lüderitz (Schellenberg 1925, Penrith & Kensley 1970).

Diagnosis: Antenna 1 extending $\frac{1}{3}$ way along flagellum of antenna 2, articles 1 and 2 distally lobed; coxae 1–4 posteriorly smooth; articles 2 and 3 of gnathopod 2 ♂ anteriorly lobed, palm oblique, straight except for a small lobe near the hinge, defined by two spines in a pocket; dactyl evenly tapering, equal to palm; article 2 of pereiopod 5 circular, smooth.

Distribution: Endemic, East London to South West Africa.

Orchestia rectipalma (K. H. Barnard, 1940)

Parorchestia rectipalma K. H. Barnard, 1940: 473, fig. 32.

Records: LU 34F (15), LU 36B (7).

Diagnosis: Scabrous lobes on articles 4 to 6 of gnathopod 1 ♂, article 6 of gnathopod 2 ♂ widest at defining angle, palm straight, separated from the hind margin by a distinct step carrying a short strong spine, dactyl evenly convex, fractionally longer than palm; article 2 of pereiopod 5 with very faint setiferous serrations posteriorly.

Distribution: Endemic, Natal to South West Africa.

Talorchestia australis K. H. Barnard, 1916

Talorchestia australis K. H. Barnard, 1916: 220, pl. 27, figs 33–34; 1940: 470, fig. 30.

Records: Lüderitz (Penrith & Kensley 1970).

Distribution: Moçambique to South West Africa.

Talorchestia quadrispinosa K. H. Barnard, 1916

Talorchestia quadrispinosa K. H. Barnard, 1916: 217, pl. 27, figs 29–32.

Records: LU 8A (1), LU 64C (5), LU 66A (1); OR 2 (fairly common); Walvis Bay, Prince of Wales Bay (Schellenberg 1925); Lüderitz (Penrith & Kensley 1970).

Diagnosis: Eyes separated dorsally by less than their diameter; coxa 2 not lobed; pleon segments 1 and 2 (and sometimes 3) each with 2 medio-dorsal tubercles in adult ♂; article 4 of gnathopod 1 ♂ not lobed, article 5 distally lobed, article 6 shorter than 5, not widening much distally; palm of gnathopod 2 ♂ distally concave, a strong triangular tooth near the hinge, defined by a tubercle from short hind margin; dactyl as long as palm or extending well beyond it, slightly emarginate proximally.

Distribution: Endemic, False Bay to South West Africa.

Suborder CAPRELLIDEA

Family **Caprellidae**

Caprella danilevskii Czerniavski, 1868

Caprella danilevskii: Chevreux & Fage, 1925: 454, fig. 432. McCain, 1968: 22–25, figs 10–11.

Records: Swakopmund (K. H. Barnard 1916).

Diagnosis: Head elongate, anteriorly rounded-quadrate; article 2 of gnathopod 2 shorter than pereon segment 2, article 6 elongate, palm oblique, equal to hind margin, bearing a distal rectangular tooth and defined by a poison tooth, dactyl shorter than palm; gills elliptical, long axis usually parallel to body, pereiopods 3–5 lacking grasping spines.

Distribution: Widespread, pan-tropical.

Caprella equilibra Say, 1818

Caprella equilibra: McCain, 1968: 25–30, figs 12–13.

Records: SWD 21R (37), SWD 26F (1), SWD 27H (3), SWD 39R (38); Swakopmund (K. H. Barnard 1916).

Distribution: Cosmopolitan 0–300 m.

Caprella penantis Leach, 1814

Caprella penantis: McCain, 1968: 33–40, figs 15–16.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Head short, bearing a large triangular antero-dorsal process; article 2 of gnathopod 2 shorter than pereon segment 2, palm occupying almost whole length of hand, bearing a rectangular projection near hinge and defined by a poison tooth, dactyl equal to palm; gills subcircular, pereiopods 3–5 each with a pair of grasping spines.

Distribution: Cosmopolitan in tropical and temperate seas.

Caprella scaura Templeton, 1836

Caprella scaura: K. H. Barnard, 1925: 371. McCain, 1968: 40–44, figs 17–18.

Records: LU 113N (1).

Distribution: Cosmopolitan.

Family **Phtisicidae**

Phtisica marina Slabber, 1769

Phtisica marina: K. H. Barnard, 1916: 283. McCain, 1968: 91–97, figs 46–47.

Records: SWD 21Q (12), SWD 26E (3), SWD 39Q (1), LU 121M (1).

Distribution: Atlantic, Black Sea, Mediterranean, east coast of southern Africa.

Caprellina longicollis (Nicolet, 1849)

Caprellina longicollis: McCain, 1969: 289, fig. 2.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Body dorsally smooth, a pair of antero-lateral projections on pereon segments 2 and 3; palm of gnathoped 2 ♂ half as long as hand, cup-shaped distally; pereiopods 1 and 2 absent, periopod 3 three or four-segmented.

Distribution: Southern oceans, Mediterranean.

Caprellina spiniger K. H. Barnard, 1916

Caprellina spiniger K. H. Barnard, 1916: 282, pl. 28, fig. 35; 1955: 99.

Records: Lüderitz (Penrith & Kensley 1970).

Diagnosis: Pereon segment 3 bearing a forward-directed longitudinally-bifid dorsal tubercle, segments 2 and 4 sometimes with similar but smaller tubercles; a pair of antero-lateral spines on pereon segment 2 above insertion of gnathopod 2; gnathopod 2 as in *C. longicollis*; pereiopods 1 and 2 absent, pereiopod 3 of 3 segments.

Distribution: Endemic, False Bay to Lüderitz.

Summary

The records of the University of Cape Town Ecological Survey have been incorporated with the findings of previous workers in listing the known gammaridean and caprellid amphipod fauna of South West Africa south of 20°S.

Eighty-one species are recognized in all. Of these five are presented here as new to science, namely *Guernea rhomba* n. sp., *Eriopisa epistomata* n. sp., *Eriopisella epimera* n. sp., *Photis longidactylus* n. sp. and *Listriella lindae* n. sp. A further 26 species are recorded from South West Africa for the first time. References and synonyms are given for all the species and short diagnoses for those not described in Part I of this series.

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