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A N A R E
R E S E A R C H
N O T E S

55

A survey of the marine fauna in shallow coastal waters
of the Vestfold Hills and Rauer Islands, Antarctica

M.J. Tucker and H.R. Burton

ANTARCTIC DIVISION
DEPARTMENT OF THE ARTS, SPORTS, THE ENVIRONMENT,
TOURISM AND TERRITORIES

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MAPS

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2.	Rauer Islands sampling sites	pocket (front cover)

A SURVEY OF THE MARINE FAUNA IN SHALLOW COASTAL WATERS
OF THE VESTFOLD HILLS AND RAUER ISLANDS, ANTARCTICA

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ABSTRACT

A twelve month sampling program was conducted in the Vestfold Hills, Antarctica to determine the coastal marine fauna of the area. A species list of the animals inhabiting the benthic, pelagic, planktonic and ice/water interface communities investigated is presented with ecological information about each collection site. Most of the collected species appear to be circumpolar and some information is provided on their distribution within the Vestfold Hills region.

1. INTRODUCTION

This publication is a result of the ANARE 1982 expedition to Davis. Before this expedition only one study has been undertaken in the inshore marine area of the Vestfold Hills (Everitt et al. 1980). The primary aim of the present study was to survey the marine fauna of this area. Much of the work was done in the summer of 1981-82 when samples were collected by SCUBA diving at sites along the coast of the Vestfold Hills.

This publication presents the list of marine species found in this shallow area and their distribution. It is intended to be a taxonomic and biogeographic guide for future research in the coastal area of the Vestfold Hills and Rauer Islands.



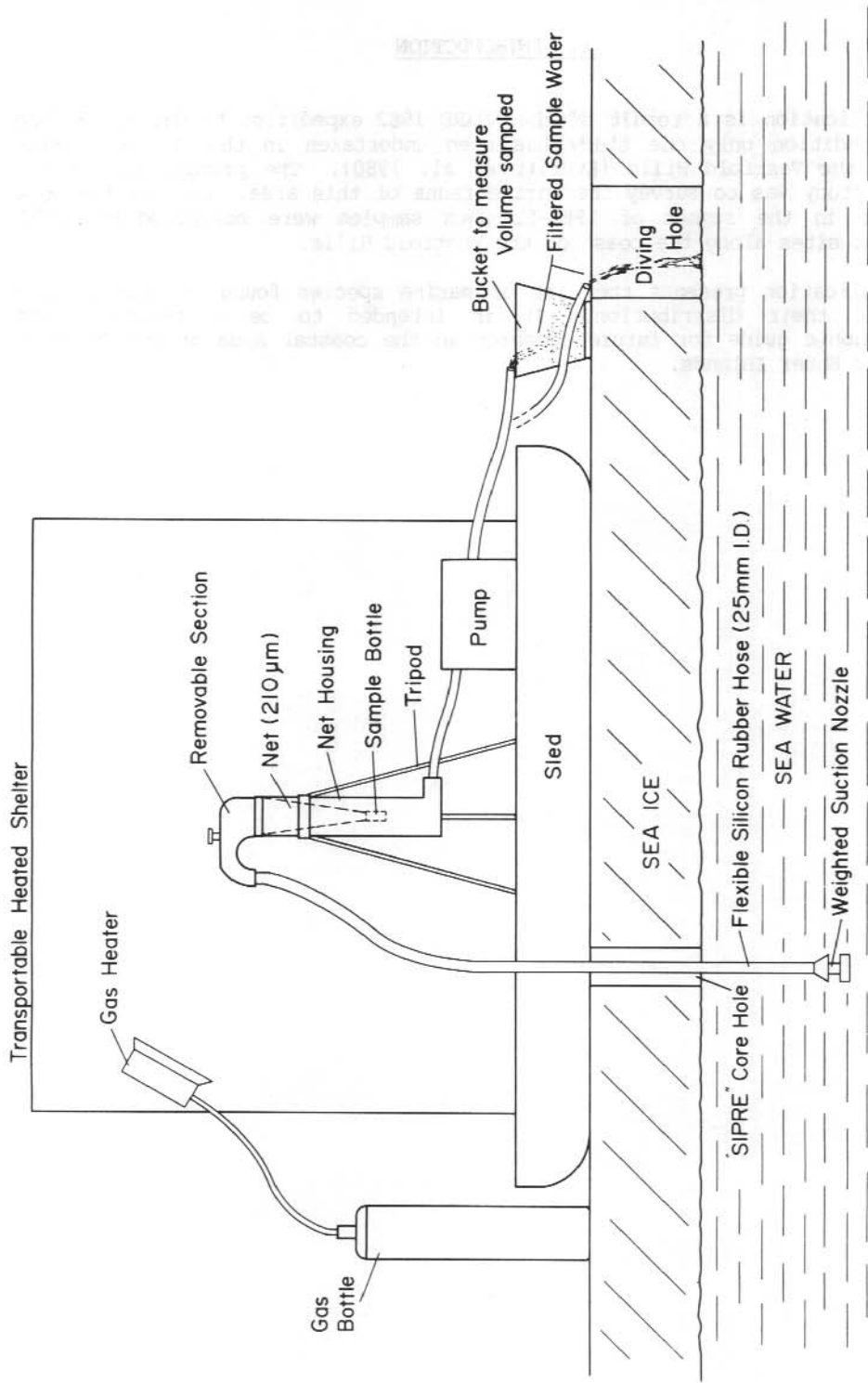


Figure 1. Pump sampling apparatus.

2. MATERIALS AND METHODS

2.1 STUDY AREA

The Vestfold Hills occupy an ice-free triangle of land approximately 400 km² at the eastern side of Prydz Bay on the coast of Princess Elizabeth Land between latitudes 68°22'S and 68°40'S and longitudes 77°49'E and 78°33'E (Johnstone et al. 1973). Isostatic uplift has occurred since the glacial maximum of 18 000 BP (Burton 1981) and the terrestrial aspect of low relief is continued under the sea. Most of the sea floor within 5 km of the coast is less than 25 m deep and islands are numerous. Icebergs do not usually enter the area but are grounded in the adjacent shallow areas seaward of the islands. Sea ice extends beyond the inshore islands for most of the year reaching a thickness of up to 2 m, but usually thaws and is cleared from the area in January each year. New sea ice reforms in March and April.

The Rauer Islands lie south of the Sørdsdal Glacier which forms the southern boundary of the Vestfold Hills, between latitudes 68°45'S and 68°56'S and longitudes 77°30'E and 78°04'E. Map 1 shows the Vestfold Hills and location of sampling sites. Map 2 shows the Rauer Islands and sampling site.

2.2 FIELD AND LABORATORY TECHNIQUES

Collections at sites 1 to 4, 6 to 12 and 16 to 21 were made by divers using SCUBA.

Many different bottom substrates (for safety reasons, not deeper than 20 m) were sampled. Most had a rocky substrate as dives were generally made from islands. Dives at these sites were completed between December 1981 and February 1982. Divers picked specimens from the substrate and placed them in collecting bags. Fish collections were also made in summer by this method.

Collections at sites 5, 13 and 15 were made with plankton nets (200 micron mesh) in December 1981. All were vertical hauls from the substrate to the surface. Site 22 was investigated by beachcombing which yielded a large number of species, particularly after a storm in early February 1982.

Sites A, B and C were sampled monthly from January to December 1982. Site D was sampled only in January and February. The benthic and ice/water interface animals at these sites were examined by divers using a hookah (surface supply) system. Divers also assisted in laying 50 mm gill nets monthly at sites A and C; they were retrieved some twenty-four hours later and the captured fish removed. Zooplankton samples were also taken monthly at sites A, B and C using a pump sampler adapted from Coughlan and Fleming (1978) (Figure 1) and a collapsible net (Figure 2) that could be opened and closed like an umbrella with the use of ropes.

All samples were sorted in the Davis biology laboratory with the microscopic animals sorted under a Wild M5 binocular microscope. All specimens were preserved in either 4% formaldehyde and sea water, 80% ethanol and sea water, or frozen.

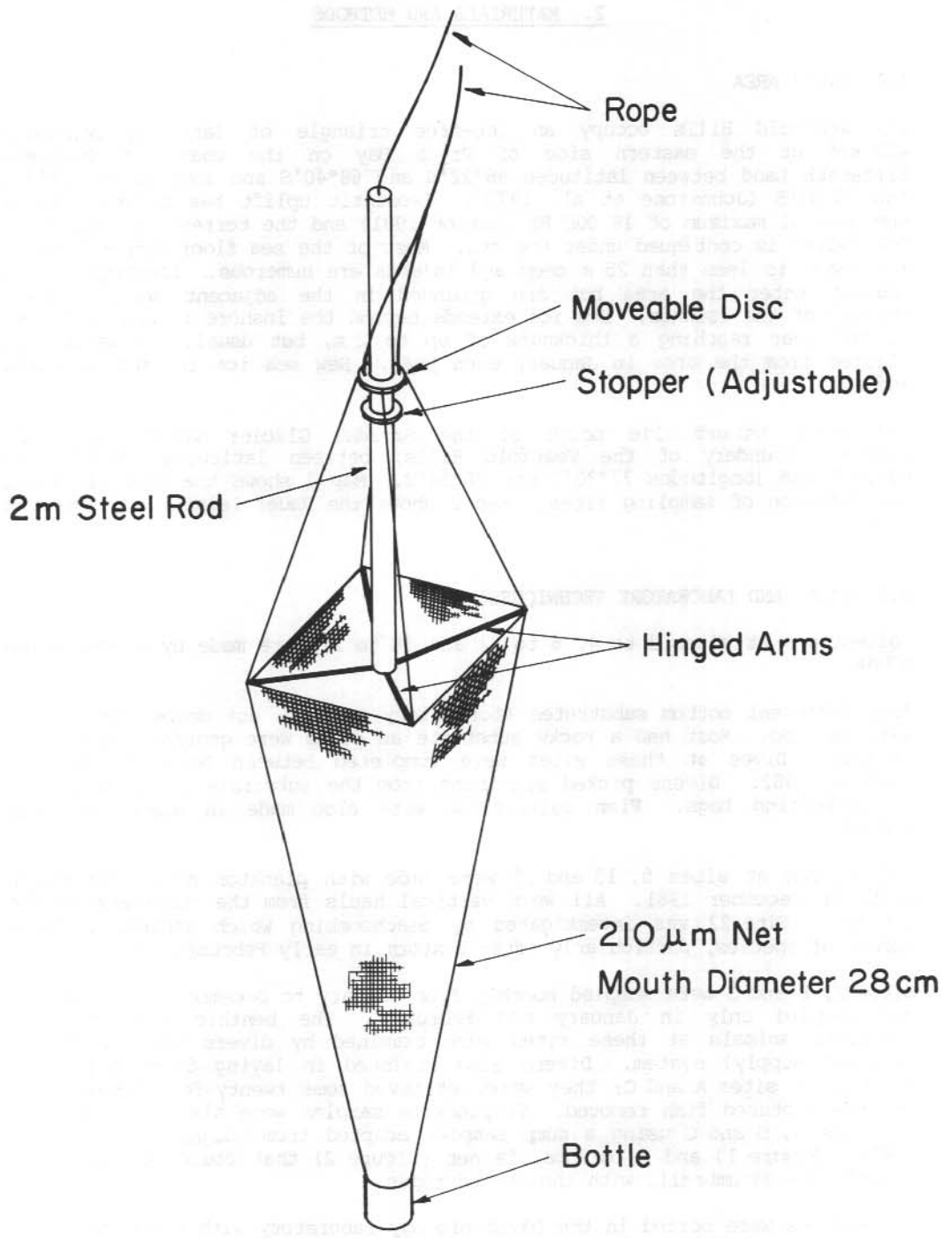


Figure 2. Collapsible net.

3. RESULTS

Table 1 describes the sampling sites and Table 2 gives the complete species list of the collected fauna, their collection sites and mode of life.

Site	Date	Depth (m)	Substrate	Water Temp (°C)	Sampling Method	Macrophyte cover (%)
1	6/12/81	7	rock with sand pockets	-1	diving and plankton net	60
2	7/12/81	9	rock	-1	diving	80
3	8-11/12/81	20	silt	-1	diving	10
4	12/12/81	5	rock	-1	diving	80
5	13/12/81	10	sand	-1	plankton net	N/A
6	14/12/81	5	rock, some silt	-1	diving	60
7	24/12/81	6	rock, some silt	-1	diving	10
8	17/12/81	20	rock, some silt	-1	diving	0
9	21/12/81	4	rock with some sand, silt	-1	diving	90
10	23/12/81	9	rock with some sand, silt	-1	diving	80
11	20/12/81	21	rock covered by silt	-1	diving	0
12	28/12/81	20	rock covered by silt	-0.5	diving	0
13	12/12/81	30	silt	-1	plankton net	N/A
15	26/12/81	1	sand	N/A	plankton net	N/A
16	31/12/81	17	rock	0	diving	20
17	3/1/82	19	rock	0	diving	N/A
18	8/1/82	15	rock, silt	0	diving	0 (on silt)
19	24/1/82	16	rock covered by silt	+0.2	diving	0
20	15/1/82	14	rock, sand	0	diving	100 (on rock)
21	10/2/82	16	sand	0	diving	0
22	13/2/82	0	sand		beachcombing	
A	Jan-Dec 82	9	sand, some rocks	1 to -2	diving, gill net, plankton pump, plankton net	5
B	Jan-Dec 82	20	silt	1 to -2	diving, plankton pump, plankton net	0
C	Jan-Dec 82	15	rock with pockets of sand, shell fragments	1 to -2	diving, gill net, plankton pump, plankton net	10-20
D	Jan-Feb 82	12	rock with pockets of sand, shell fragments	-0.5 to -1.6	diving, plankton pump	10-20

N/A not available

Table 1. Description of collection sites.

Table 2. Species list of the inshore marine fauna of the Vestfold Hills and Rauer Islands. (Note Be=benthic; Pl=planktonic; Iw=ice/water interface)

Taxa	Sites Collected	
PHYLUM PROTOZOA (Identified by Dr P.G. Quilty)		
Order Foraminiferida		
<u>Trochammina antarctica</u> Parr	A,B,C	Be
<u>Saccamina sphaerica</u> M. Sars	A,B	Be
<u>Fissurina</u> sp.	A	Be
<u>Discorbinella araucana</u> (d'Orbigny)	A	Be
<u>Trifarina earlandi</u> (Parr)	A	Be
<u>Globeringa bulloides</u> d'Orbigny	A	Pl
<u>Haplophragmoides canariensis</u> (d'Orbigny)	B	Be
<u>Trochammina squamata</u> Jones and Parker	B,C	Be
<u>Eponides pusillus</u> Parr	C	Be
PHYLUM PORIFERA		
Class Desmospongiae (Identified by Dr J. Hooper)		
Subclass Ceractinomorpha		
<u>Desmacidon</u> sp.	11	Be
? <u>Cladocroce</u> sp.	6	Be
<u>Halichondria</u> sp.	16	Be
<u>Homoeodictya</u> sp.	1,22,B	Be
<u>Hymeniacion</u> sp.	1,6,B	Be
<u>Reniera</u> sp.	8,A	Be
<u>Toxadocia</u> sp.	6,D	Be
Subclass Tetractinomorpha		
? <u>Axinella</u> sp.	11	Be
PHYLUM CNIDARIA		
Class Hydrozoa (Identified by Dr J. Watson and Mr D. O'Sullivan)		
<u>Oswaldella antarctica</u> (Jaderholm)	3,B	Be
<u>Obelia</u> cf. <u>longissima</u> (Pallas)	16	Be
<u>Symplectoscyphus flexilis</u> ? (Hartlaub)	B	Be
<u>Symplectoscyphus</u> sp.	3	Be
<u>Halecium tenellum</u> Hincks	8	Be
? <u>Halecium cymiforme</u> Allman	8	Be
<u>Lafoeina longithecata</u> Jaderholm	8	Be
<u>Chromatonema rubrum</u> (Fewkes)	C	Pl
<u>Solmudella bitentaculata</u> (Quoy and Gaimard)	C	Pl
? <u>Halitiarā</u> sp. 1	C	Pl
? <u>Halitiarā</u> sp. 2	C	Pl
siphonophore sp.	C	Pl
Class Scyphozoa (Identified by Mr D. O'Sullivan)		
Scyphozoa sp.	10	Pl
<u>Desmonema gaudichaudi</u> (Lesson)	C	Pl

Class Anthozoa

Order Actinaria (Identified by Dr D.F. Dunn)

Glyphoperidium bursa Roule 16,C Be

Order Alcyonacea (Identified by Dr P. Alderslade)

Alcyonium sp. 1 10 Be

Alcyonium sp. 2 12 Be

PHYLUM CTENOPHORA

ctenophore sp. 1 13,15,A Pl

PHYLUM NEMATOMORPHA

Lineus corrugatus McIntosh (Plate 1) 1,3,8,9,17,22,A,B,C Be

PHYLUM NEMATODA

nematode spp. 1,3,5,7,9,10,17,18,
20,21,A,B,C Be

PHYLUM ANNELIDA

Class Polychaeta

Lepidonotinae sp. (Plate 2) 1,3,4,6,7,9,16,18,
20,22,A,B,C Be

polychaete sp. 1 3,4,18,B Be

Terebellidae sp. (Plate 3) 4,6,7,11,16,17,20,
21,B,C Be

polychaete sp. 2 8 Be

Sabellinae sp. 7,8,16,A,C Be

Serpulidea sp. 1,21,A,D Be

polychaete sp. 3 1,16 Be

polychaete sp. 4 B Be

polychaete sp. 5 C Be

PHYLUM MOLLUSCA

Class Gastropoda

Subclass Prosobranchia (Identified by Dr W. Ponder)

Laevilacunaria sp. 1,4,6,7,9,10,21,22,
A,C,D Be

Lepeta coppingeri (Smith) 12,C Be

Submargarita crebrilirulata (Smith) A,C Be

Skenella paludinoidea (Smith) A,C,D Be

Skenella sp. 10,A,C Be

Onoba gelida (Smith) D Be

Onoba kergueleni (Smith) C,D Be

Onoba turqueti (Lamy) A,C,D Be

<u>Cerithiopsis</u> sp.	C	Be
<u>Cerithiopsis</u> cf. <u>austrina</u> (Hedley)	C	Be
<u>Laevilitorina antarctica</u> (Smith)	A,C	Be
<u>Eatoniella demissa</u> (Smith)	C,D	Be
<u>Eatoniella kerguelenensis regularis</u> (Smith)	C,D	Be
<u>Powellisetia deserta</u> (Smith)	C	Be
<u>Pareuthria innocens</u> (Smith)	C,D	Be
<u>Lamellaria</u> sp.	3,A,B	Be
<u>Neobuccinum eatoni</u> (Smith) (Plate 4)	A	Be
<u>Trophon longstaffi</u> (Smith)	A	Be
<u>Omalogyra</u> sp.	9	Be
<u>Nacella</u> (<u>Patinigera</u>) <u>concinna</u> (Strebel)	12	Be
Subclass Opisthobranchia (Identified by Dr W.B. Rudman)		
Order Bullomorpha		
<u>Philine</u> sp.	B	Be
<u>Toledonia</u> sp.	9	Be
Order Gymnosomata		
<u>Clione limacina antarctica</u> Smith	C	Pl
<u>Spongiobranchaea australis</u> d'Orbigny	C	Pl
<u>pteropod</u> sp.	C	Pl
Order Nudibranchia		
<u>Archidoris</u> sp.	B	Be
<u>Notaeolidia</u> sp.	17	Be
Class Bivalvia (Identified by Dr W. Ponder)		
<u>Adacnarca nitens</u> Pelseneer	9,18,D	Be
<u>Philobrya sublaevis</u> Pelseneer	9,18,D	Be
<u>Kellia nimrodiana</u> Hedley	A	Be
<u>Scintilla</u> sp.	A	Be
<u>Laternula elliptica</u> King and Broderip (Plate 5)	B	Be
<u>Adamussium colbecki</u> (Smith) (Plate 6)	18,22,A,C	Be
PHYLUM ARTHROPODA		
Class Arachnida (Identified by Dr D.C. Lee)		
<u>Agau</u> nr. <u>occultus</u> (Lohmann)	1,4,22	Be
<u>Agau</u> nr. <u>hamiltoni</u> Womersley	4	Be
Class Pycnogonida (Identified by Mr D.A. Staples)		
<u>Achelia spicata</u> (Hodgson)	1,3,4,8,11,18	Be
<u>Amothea glacialis</u> (Hodgson) (Plate 7)	17	Be
<u>Amothea gigantea</u> (Gordon) (Plates 8, 9)	B	Be
<u>Nymphon australe</u> (Hodgson)	3,11,A,C	Be
Class Crustacea		
Subclass Ostracoda (Identified by Dr K. McKenzie)		
<u>Scleroconcha gallordoi</u> Kornicker	1,A,C,	Be
<u>Serratocythere</u> cf. <u>robusta</u> (Skogsberg)	1,9,A	Be
<u>Philomedes assimilis</u> Brady	A	Be
<u>Philomedes charcoti</u> Daday	D	Be
<u>Philomedes heptathrix</u> Kornicker	A,B	Be

<u>Philomedes orbicularis</u> Brady	B,C	Be
<u>Paradoxostoma antarcticum</u> Muller	9	Be
Subclass Copepoda (Identified by Mr M. Tucker)		
<u>Calanoides acutus</u> (Giesbrecht)	15,A,B,C	Pl
<u>Calanus propinquus</u> Brady	15,A,B,C	Pl
<u>Ctenocalanus vanus</u> Giesbrecht	15,A,B,C	Pl
<u>Metridia gerlachei</u> Giesbrecht	15,A,B,C	Pl
<u>Paralabidocera antarctica</u> (I.C. Thompson)	13,A,B,C	Pl
<u>Stephos longipes</u> Giesbrecht	A,B,C	Pl
<u>Stephos antarcticum?</u> Wolfenden	C	Pl
<u>Drepanopus bispinosus</u> Bayly	13,A,C	Pl
Order Cyclopoida		
<u>Oncaea curvata</u> Giesbrecht	15,A,B,C,D	Pl
<u>Oithona similis</u> Claus	13,15,A,B,C,D	Pl
cyclopoid sp. 1	A	Be
cyclopoid sp. 2	1	Be
cyclopoid sp. 4	1	Pl
cyclopoid sp. 5	15	Pl
cyclopoid sp. 6	15	Pl
Order Harpacticoida		
<u>Harpacticus furcatus</u> Lang	1,6,7,15	Pl,Be
<u>Tisbe</u> sp.	1,2,4	Pl,Be
harpacticoid sp. 1	1	Be
<u>Idomene</u> sp.	1,7	Be
<u>Dactylopodia frigida</u> (T. Scott)	1,4	Be
harpacticoid sp. 4	1	Be
<u>Laophonte</u> sp.	1,5	Be
<u>Laophontodes whitsoni</u> (T. Scott)	1,4,5	Be
<u>Mesochra</u> sp.	1	Be
harpacticoid sp. 8	1	Be
harpacticoid sp. 9	1	Be
<u>Idomene antarctica</u> (Giesbrecht)	1	Pl,Be
harpacticoid sp. 11	1	Be
harpacticoid sp. 12	1	Be
harpacticoid sp. 13	1	Be
harpacticoid sp. 14	1,A	Be
harpacticoid sp. 15	1	Be
harpacticoid sp. 16	1	Be
harpacticoid sp. 17	1,5	Be
harpacticoid sp. 18	1	Be
harpacticoid sp. 19	13	Be
harpacticoid sp. 20	13	Be
harpacticoid sp. 21	7	Be
harpacticoid sp. 22	7	Be
<u>Microsetella</u> sp.	B	Pl
Subclass Malacostraca		
Order Leptostraca (Identified by Dr D.I. Williamson)		
<u>Nebaliella antarctica</u> Thiele	22,B	Be
<u>Nebalia</u> sp.	C	Be

Order Cumacea (Identified by Dr N.S. Jones)			
<u>Vaunthompsonia inermis</u> Zimmer	C		Be
<u>Eudorella gracilior</u> Zimmer	B		Be
<u>Makrokyllindrus</u> sp.	22,B,C,		Be
Order Tanaidacea (Identified by Dr G.C.B. Poore)			
Family Pseudotanaidae			
<u>Cryptocope antarctica</u> Vanhoffen	B,C,		Be
Family Notontanaidae			
<u>Nototanais dimorphus</u> (Beddard)	9,10,17,22,A,B,C		Be
<u>Nototanais antarcticus</u> Hodgson	8,9,10,22,A,B,C		Be
Order Isopoda (Identified by Dr G.C.B. Poore)			
Family Abyssianiridae			
<u>Santia mawsoni</u> (Hale)	9,10,22		Be
Family Arcturidae			
<u>Antarcturus furcatus</u> (Studer)	8,16,B		Be
Family Desmosomatidae			
<u>Desmosoma</u> sp.	C		Be
Family Gnathiidae			
<u>Gnathia</u> sp.	1,18,C,D		Be
Family Idoteidae			
<u>Glyptonotus antarcticus</u> Eights	(Plates 10,11) 21,B,C		Be
Family Ilyrachnidae			
<u>Ilyrachna spicata</u> (Hodgson)	C		Be
Family Janiridae			
<u>Iathrippa sarsii</u> (Pfeffer)	21,22,C		Be
<u>Ectias turqueti</u> Richardson	9,B		Be
<u>Neojaera furcata</u> (Hodgson)	B		Be
Family Munnidae			
<u>Munna antarctica</u> Pfeffer	1,9,18,21,22, A,B,C		Be
<u>Munna</u> sp. aff. <u>neglecta</u> Monod	7,9,C		Be
<u>Munna</u> sp. aff. <u>pallida</u> Beddard	1,9,10,18,A,C,D		Be
<u>Paramunna dubia</u> (Hale)	1,9,C		Be
Family Pleurogoniidae			
<u>Austrosignum glaciale</u> Hodgson	9,C		Be
<u>Austrosignum lunatum</u> (Hale)	9,A,C		Be
Family Sphaeromatidae			
<u>Cymodocella tubicauda</u> Pfeffer	9		Be
Order Amphipoda (Identified by Dr J. Lowry)			
Family Acanthonotozomatidae			
<u>Gnathiphimedia incerta</u> Bellan-Santini	C		Be
Family Ampeliscidae			
<u>Ampelisca barnardi</u> Nicholls	22,B		Be
<u>Ampelisca</u> sp.	B		Be
Family Amphilocheidae			
<u>Amphilochea simplicarpus</u> Schellenberg	B		Be
Family Corophiidae			
<u>Haplocheira barbimana</u> (Thomson)	B		Be
Family Dexaminidae			
<u>Polycheria antarctica</u> (Stebbing)	9		Be
Family Eusiridae			
<u>Eusirus perdentatus</u> Chevreux	(Plate 12) 22,B		Be

<u>Eusirus</u> cf. <u>fragilis</u> Birstein and Vinogradov	C	Be
<u>Oradarea</u> <u>walkeri</u> Shoemaker	1, 2, 21, 22, C	Be, Iw
<u>Oradarea</u> cf. <u>rossi</u> Thurston	A	Be
<u>Oradarea</u> sp.	C	Be, Iw
<u>Paramoera</u> <u>walkeri</u> (Stebbing)	1, 2, 3, 5, 6, 7, 10, 15, 21, 22, A, B, C	Be, Iw
<u>Prostebbingia</u> <u>serrata</u> Schellenberg	C	Be
<u>Schraderia</u> <u>gracilis</u> Pfeffer	10	Be
Family Isaeidae		
<u>Isaeidae</u> sp.	A, B	Be, Iw
Family Leucothoidae		
<u>Leucothoe</u> sp.	18	Be
Family Liljeborgiidae		
<u>Liljeborgia</u> cf. <u>georgiana</u> Schellenberg	22, B	Be
<u>Liljeborgia</u> sp.	A, B	Be
Family Lysianassidae		
<u>Cheirimedon</u> <u>femoratus</u> (Pfeffer)	C	Be
<u>Hippomedon</u> <u>kergueleni</u> (Miers)	A, B	Be
<u>Orchomene</u> <u>franklini</u> (Walker)	1, 6, A, B, C	Be
<u>Orchomene</u> <u>pinguides</u> (Walker)	B, C	Be
<u>Orchomene</u> cf. <u>macronyx</u> (Chevreux)	A	Be
<u>Orchomene</u> cf. <u>plebs</u> (Hurley)	A, B, C	Iw
<u>Orchomene</u> sp.	B	Be
<u>Tryphosella</u> sp.	B	Be
<u>Uristes</u> <u>georgianus</u> (Schellenberg)	22, B	Be
<u>Uristes</u> <u>murrayi</u> (Walker)	22	Be
Family Oedicerotidae		
<u>Monoculodes</u> sp.	A, C	Be
<u>Oediceroides</u> <u>similis</u> Nicholls	22, B	Be
<u>Oediceroides</u> sp.	C	Be
Family Phoxocephalidae		
<u>Heterophoxus</u> <u>videns</u> Barnard	A, B, C	Be
Family Stenothoidae		
<u>Stenothoidae</u> sp.	1	Be
Family Hyperiididae		
<u>Hyperia</u> <u>macrocephala</u> Dana	B	Pl, Iw
Order Euphausiacea (Identified by Mr M. Tucker)		
<u>Euphausia</u> <u>crystallorophias</u> Hold and Tattersall	22, B	Pl
<u>Thysanoessa</u> <u>macrura</u> G.O. Sars	B	Pl
Order Decapoda (Identified by Mr J.M. Kirkwood)		
<u>Chorismus</u> <u>antarcticus</u> (Pfeffer)	22, A	Be
PHYLUM BRYOZOA (Identified by Dr P. Boch)		
<u>Harpecia</u> <u>spinosissima</u> (Calvet)	10, 21, C, B	Be
<u>Celleporella</u> cf. <u>tuberculata</u> (Hincks)	10	Be
<u>Lichenopora</u> sp.	C	Be
<u>Inversiula</u> <u>nutrix</u> Jullien	C	Be
? <u>Tubulipora</u> sp.	C	Be

PHYLUM ECHINODERMATA (Identified by Dr F.W.E. Rowe)

Class Holothuroidea

<u>Ekmoducumis spatha</u> (Cherbonnier)	3,22,C	Be
<u>Cucumaria antarctica</u> Vaney	(Plate 13) 12	Be
<u>Cucumaria pithnacon</u> Lampert	3,22	Be
<u>Cucumaria</u> sp. aff. <u>grandis</u> Vaney	(Plate 14) 22	Be
<u>Psolus charcoti</u> Vaney	(Plate 15) 12,16	Be

Class Echinoidea

<u>Sterechinus neumayeri</u> (Meissner)	(Plate 16) 1,2,3,4,6,7,10,12 16,17,18,19,22,C	Be
<u>Abatus shackletoni</u> Koehler	(Plate 17) 21,A	Be

Class Asteroidea

<u>Diplasterias brandti</u> (Bell)	(Plate 18) 1,2,3,4,6,7,9,10,16 17,18,19,22,A,C	Be
<u>Diplasterias brucei</u> (Koehler)	12,17,22,A,B	Be
<u>Perknaster antarcticus</u> (Koehler)	3,11,12,B,C	Be
<u>Odontaster meridionalis</u> (Smith)	(Plate 19) 3	Be
<u>Odontaster validus</u> Koehler	(Plate 20) 3,7,9,16,A,B,C,D	Be
<u>Notasterias haswelli</u> Koehler	(Plates 21,22) 3,11,18,C	Be
<u>Rhopiella hirsuta hirsuta</u> (Koehler)	(Plates 23,24) 16	Be
<u>Acondontaster capitatus</u> (Koehler)	(Plate 25) 10	Be

Class Ophiuroidea

<u>Ophiurolepis martensi</u> (Studer)	(Plates 26,27) 3,8,9,12,18,A,C	Be
<u>Ophiosparte gigas</u> Koehler	(Plates 28,29) 3	Be
<u>Ophiura flexibilis</u> (Koehler)	A	Be
<u>Ophiura meridionalis</u> (Lyman)	(Plate 30) 9	Be
<u>Ophiura rouchi</u> (Koehler)	3,12,18	Be

PHYLUM CHORDATA

Class Ascidacea (Identified by Dr P. Mather)

<u>Pyura setosa</u> (Sluiter)	11	Be
<u>Distaplia cylindrica</u> (Lesson)	D	Be
<u>Cnemidocarpa verrucosa</u> (Lesson)	A	Be

Class Larvacea

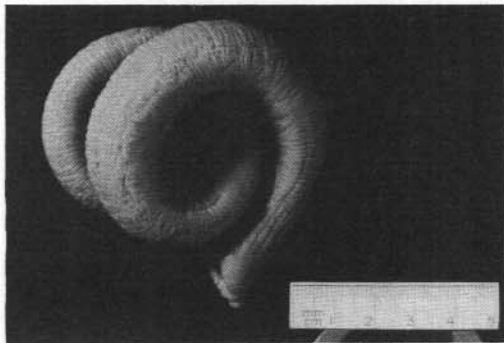
<u>Oikopleura</u> sp. (Identified by Mr M. Tucker)	B,C	Pl
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Class Osteichthyes (Identified by Mr R. Williams)

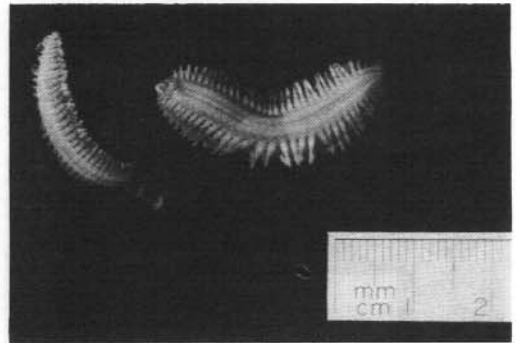
Infraclass Teleostei

<u>Pagothenia bernacchii</u> Boulenger	(Plate 31) 2,7,18,22,A,B,C	Be
<u>Pagothenia hansonii</u> Boulenger	(Plates 32,33) C	Be
<u>Pagothenia newnesi</u> Boulenger	7	Be
<u>Pagothenia scottii</u> (Boulenger)	(Plate 34) 22,C	Be
<u>Pagothenia borchgrevinkii</u> (Boulenger)	(Plate 35) 2,22,A,B	Iw,Be
<u>Gymnodraco acuticeps</u> Boulenger	(Plate 36) A	Be
<u>Artedidraco shackletoni?</u> Waite	(Plates 37,38) 22	Be
<u>Chionodraco hamatus</u> (Lonnberg)	(Plates 39,40) 21,A,C	Be

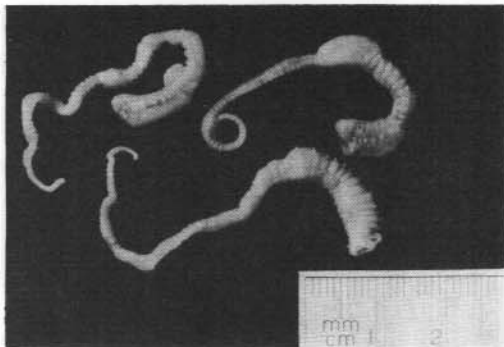
The Tasmanian Museum and Art Gallery holds the taxa listed in Appendix I. Most of the taxonomists involved in the identification hold representative collections for their particular group.



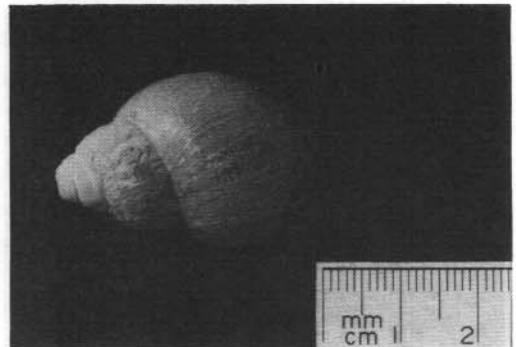
1. Lineus corrugatus



2. Lepidonotinae sp.



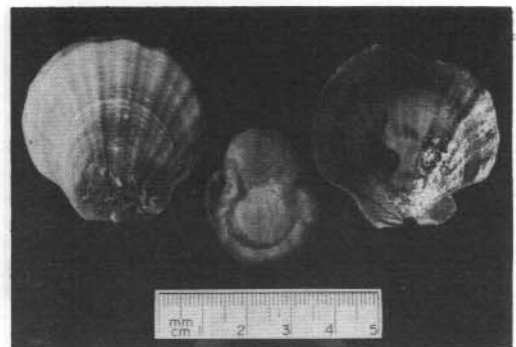
3. Terebellidae sp.



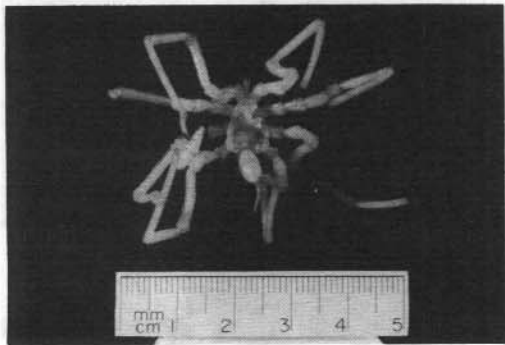
4. Neobuccinum eatoni



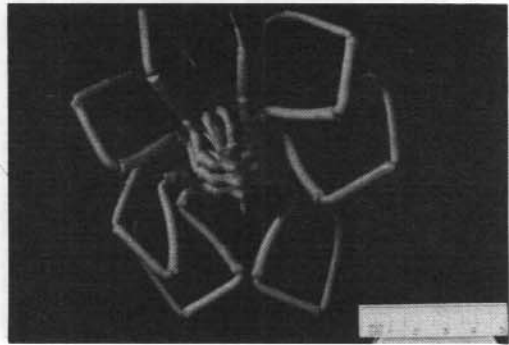
5. Laternula elliptica



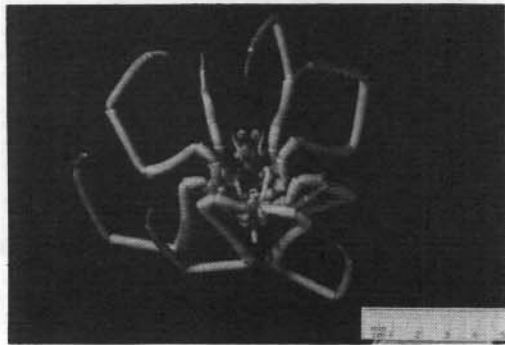
6. Adamussium colbecki



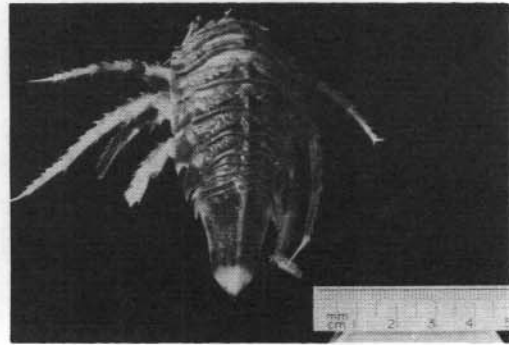
7. Ammothea glacialis (ventral)



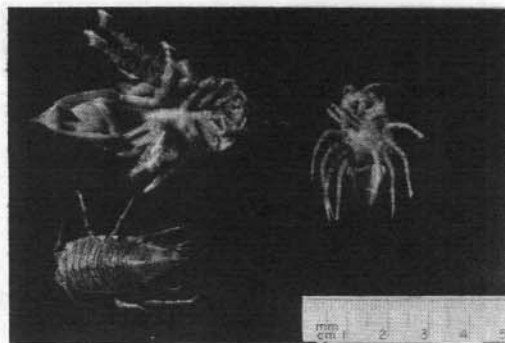
8. Ammothea gigantea (dorsal)



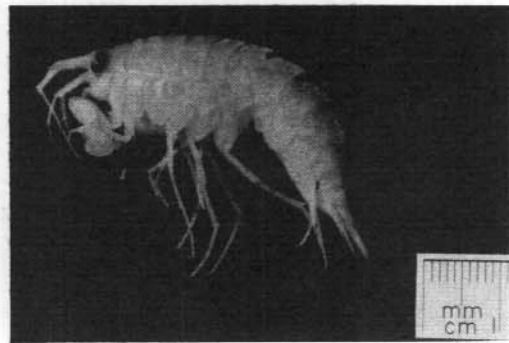
9. Ammothea gigantea (ventral)



10. Glyptonotus antarcticus
(dorsal)



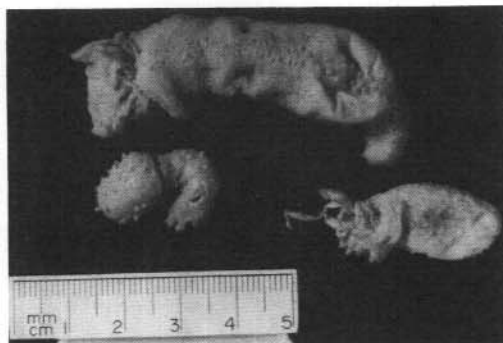
11. Glyptonotus antarcticus



12. Eusirus perdentatus



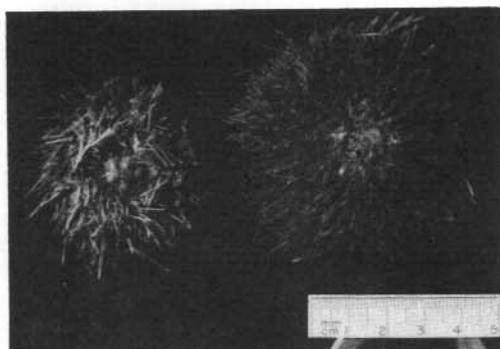
13. Cucumaria antarctica



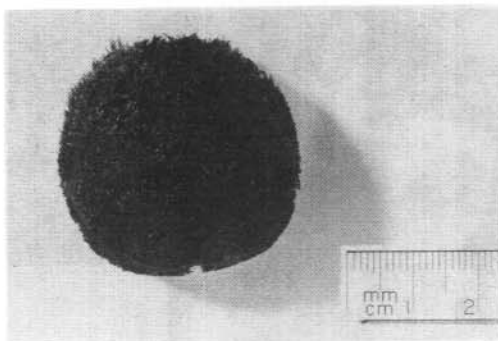
14. Cucumaria sp. aff. grandis



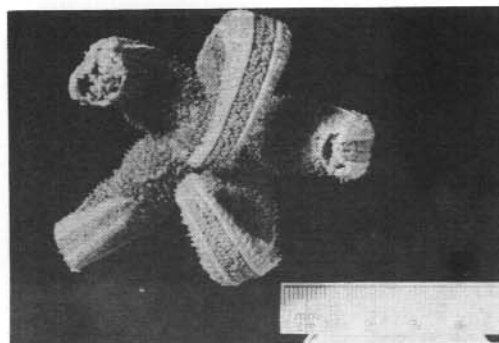
15. Psolus charcoti



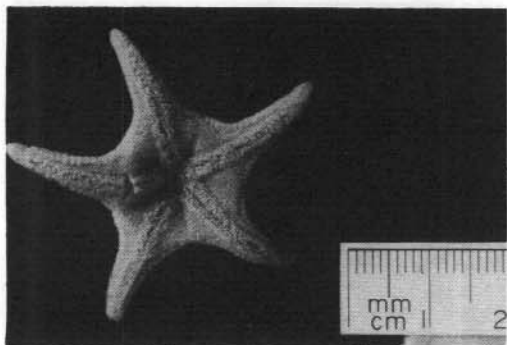
16. Sterechinus neumayeri



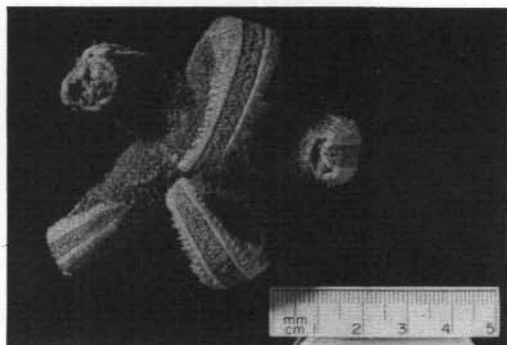
17. Abatus shackletoni (dorsal)



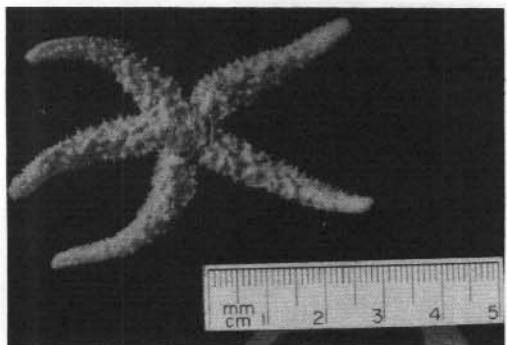
18. Diplasterias brandti (dorsal)



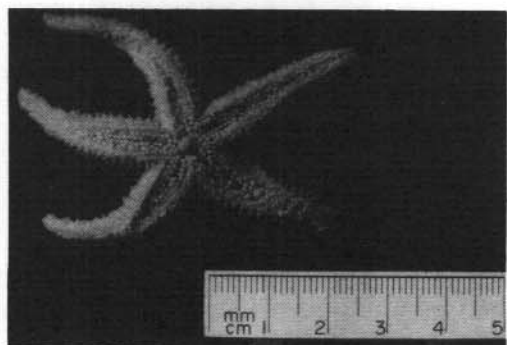
19. Odontaster meridionalis (ventral)



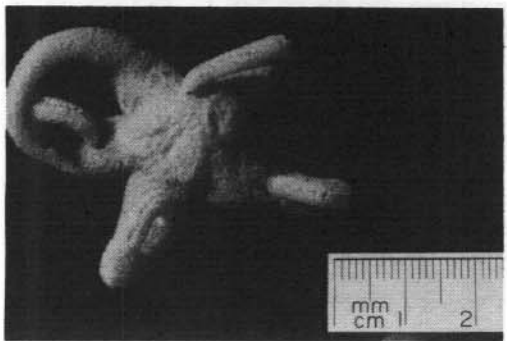
20. Odontaster validus



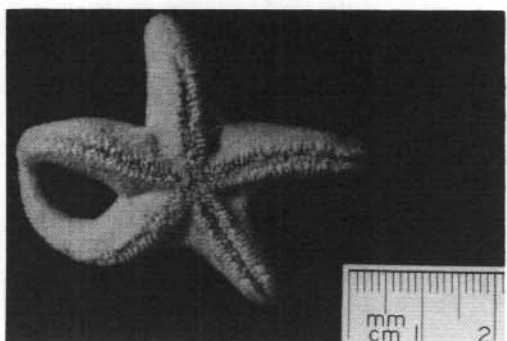
21. Notasterias haswelli (dorsal)



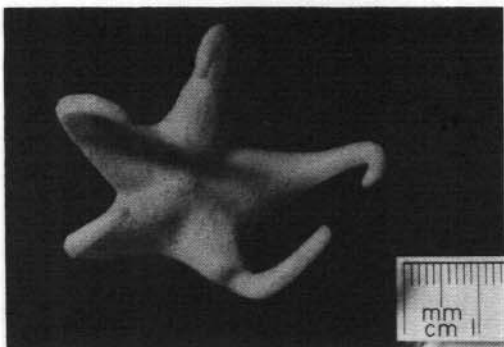
22. Notasterias haswelli (ventral)



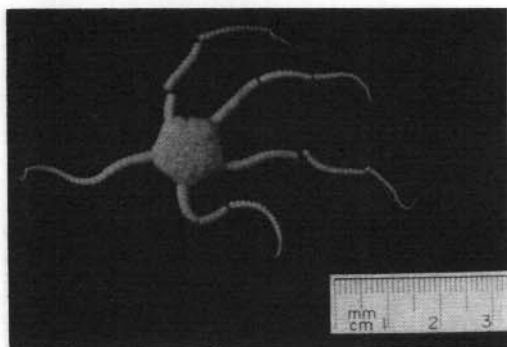
23. Rhoপিella hirsuta hirsuta
(dorsal)



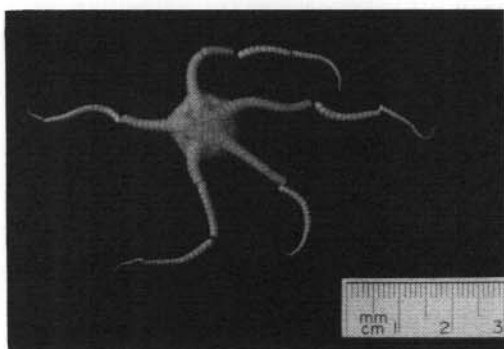
24. Rhoপিella hirsuta hirsuta
(ventral)



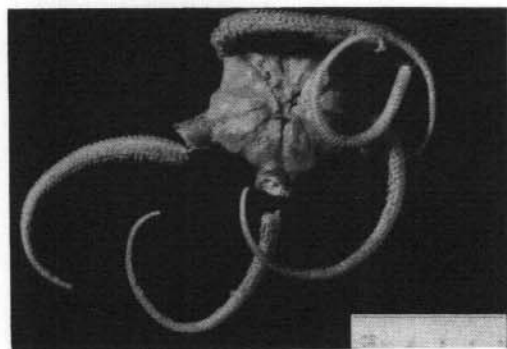
25. Acondontaster capitatus (dorsal)



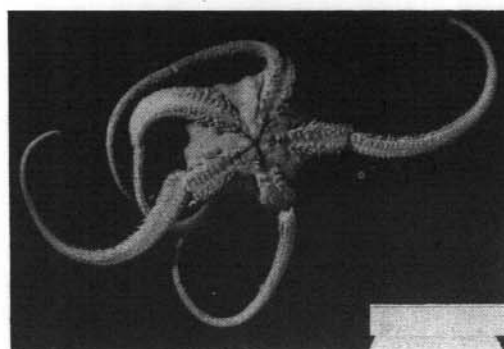
26. Ophiurolepis martensi (dorsal)



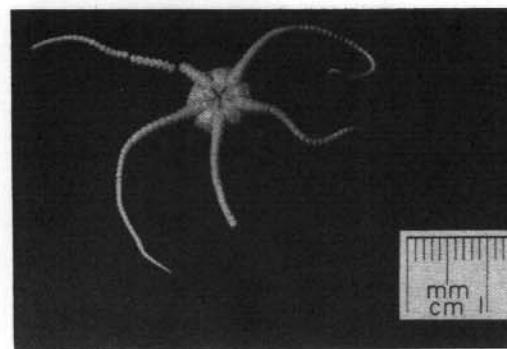
27. Ophiurolepis martensi (ventral)



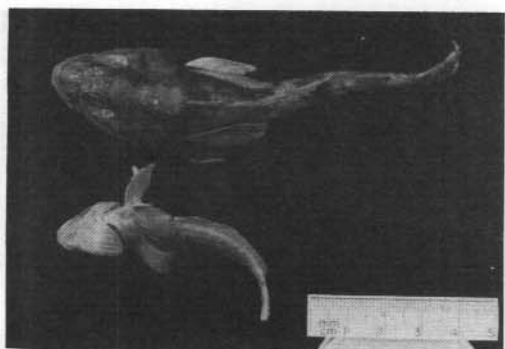
28. Ophioparte gigas (dorsal)



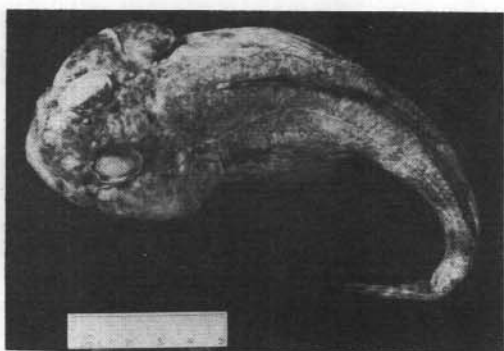
29. Ophioparte gigas (ventral)



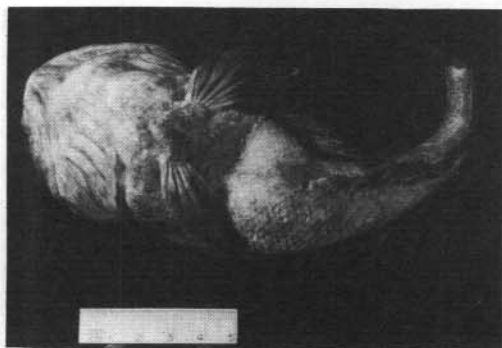
30. Ophiura meridionalis (ventral)



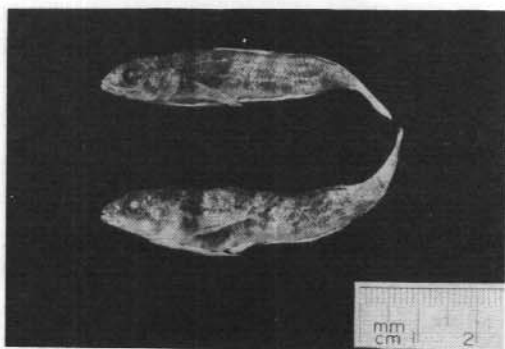
31. Pagothernia bernacchii



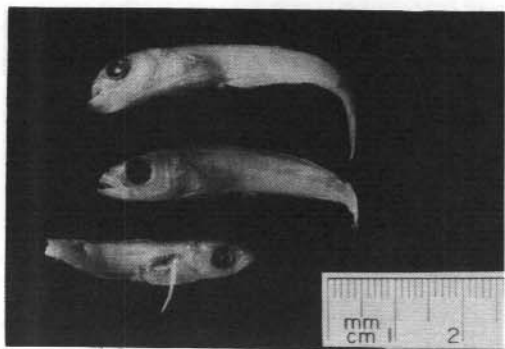
32. Pagothernia hansonii (dorsal)



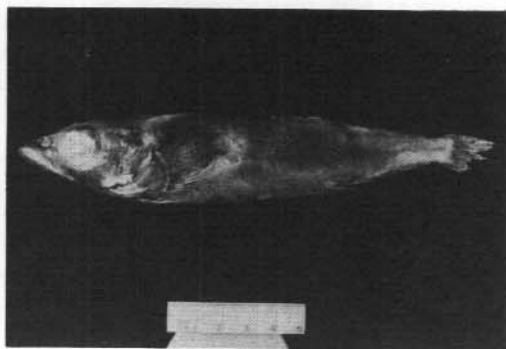
33. Pagothernia hansonii (ventral)



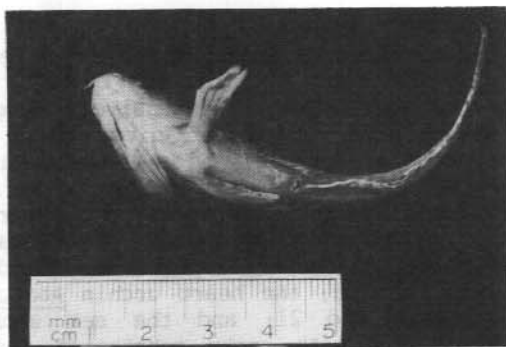
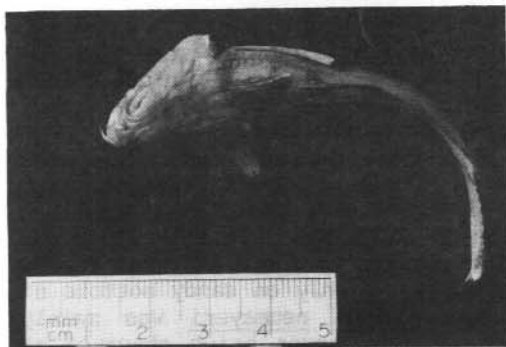
34. Pagothernia scotti



35. Pagothernia borchgrevinki (juv.)

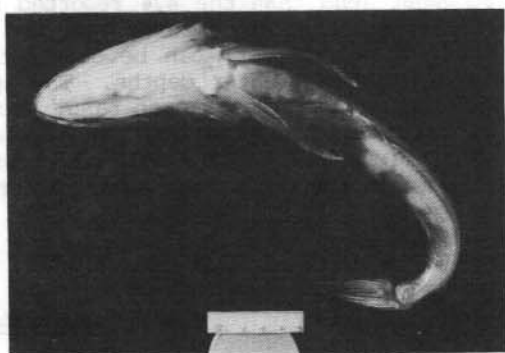
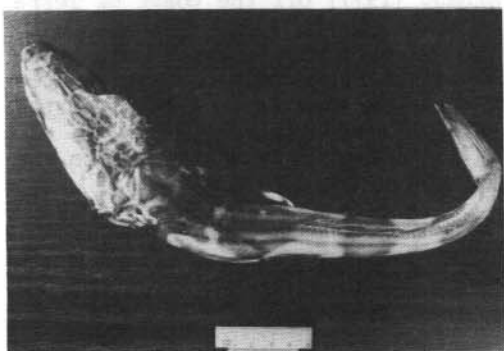


36. Gymnodraco acuticeps



37. Artedidraco shackletoni? (dorsal)

38. Artedidraco shackletoni?
(ventral)



39. Chionodraco hamatus (dorsal)

40. Chionodraco hamatus (ventral)

4. DISCUSSION

Certain species appear to have limited distribution, i.e. they were found at only one site, but this may be as a result of the sampling technique. Some sites were examined intensively (e.g. sites A, B and C), while at other sites only very brief dives on a single occasion were possible. Most species are probably widely distributed throughout the area and indeed many appear to have circumpolar distribution (Dell 1972). Sediment type influences species composition. Everitt et al. (1980) found that substrate influenced the distribution of crustaceans in Davis Bay. In this study the bivalve Laternula elliptica was found only at site B, where it could burrow into the mud; the heart urchin Abatus shackletoni only on sandy bottoms at sites A and 21; and the sea urchin Sterechinus neumayeri was mainly associated with rocky substrates and macrophytes, never being observed at Site B.

The inshore marine fauna of this area is relatively diverse, especially the benthic fauna. The number of species collected (approximately 226) is somewhat less than the 474 reported by Arnaud (1977) off the coast of Terre Adélie and the 500 species recorded by Gruzov et al. (1967) in the Davis Sea. This, however, can be attributed to the fact that these studies were taken to much greater depths. The species assemblages inhabiting the three sediment classifications of sand, mud and rock are similar to those reported by previous investigations on similar Antarctic substrates (Gruzov et al. 1967, Gruzov 1977, Dell 1972 and Lowry 1975) lending further support to the circumpolar nature of the Antarctic shallow water benthic fauna.

ACKNOWLEDGMENTS

Grateful acknowledgment must go to all those who identified the collected material and to Mr B. Hill for preparation of the figures. Special thanks to Mr K. Beinssen, Mr R. Perrin, Mr P. Lu, Mr R. Ricker, Dr A. Dick and Mr P. Butler for their invaluable assistance in the field. The authors also thank Miss Alison Green for the Tasmanian Museum and Art Gallery registration numbers.

APPENDIX I. Registration numbers for taxa held at the Tasmanian Museum and Art Gallery, 5 Argyle Street, Hobart 7001, Tasmania, Australia.

<u>Taxa</u>	<u>Plate</u>	<u>Registration Number</u>
Foraminiferida		
from site A		K1083
from site B (125-250 μ m)		K1084
from site B (>250 μ m)		K1085
from Site C		K1086
<u>Lineus corrugatus</u>	1	K1087
<u>Lepidonotinae sp.</u>	2	K1088
<u>Terebellidae sp.</u>	3	K1089
<u>Neobuccinum eatoni</u>	4	E17228
<u>Laternula elliptica</u>	5	E17229
<u>Adamussium colbecki</u>	6	E17230
<u>Ammonothea glacialis</u>	7	J2300
<u>Ammonothea gigantea</u>	8 & 9	J2301
<u>Glyptonotus antarcticus</u>	10 & 11	G3163
<u>Cucumaria antarctica</u>	13	H1962
<u>Cucumaria sp. aff. grandis</u>	14	H1963
<u>Psolus charcoti</u>	15	H1964
<u>Sterechinus neumayeri</u>	16	H1965
<u>Abatus shackletoni</u>	17	H1966
<u>Diplasterias brandti</u>	18	H1967
<u>Odontaster meridionalis</u>	19	H1968
<u>Odontaster validus</u>	20	H1969
<u>Notasterias haswelli</u>	21 & 22	H1970
<u>Rhopiella hirsuta hirsuta</u>	23 & 24	H1971
<u>Acondontaster capitatus</u>	25	H1972
<u>Ophiurolepis martensi</u>	26 & 27	H1973
<u>Ophiosparte gigas</u>	28 & 29	H1974
<u>Ophiura meridionalis</u>	30	H1975

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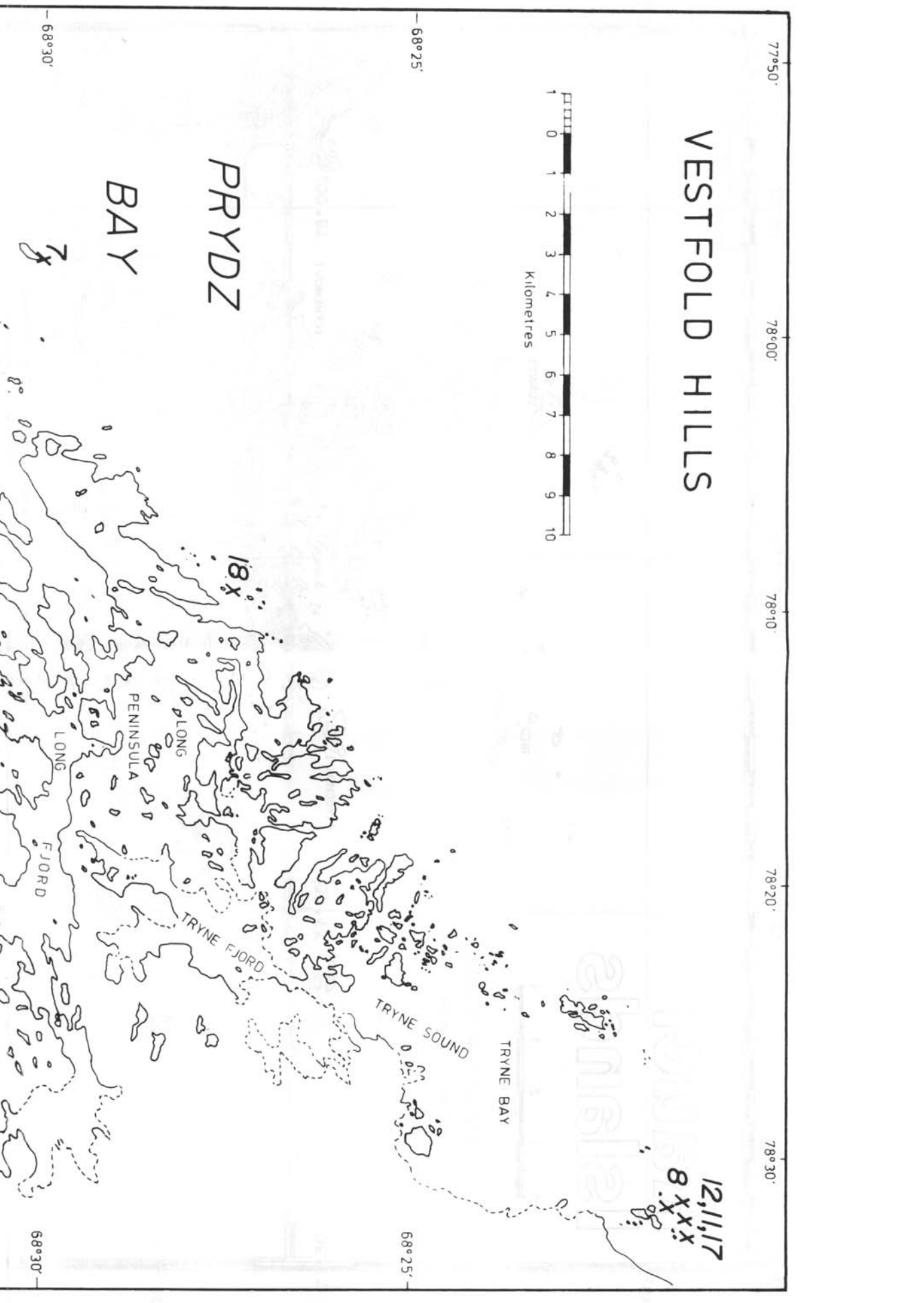
WESTFOLD HILLS

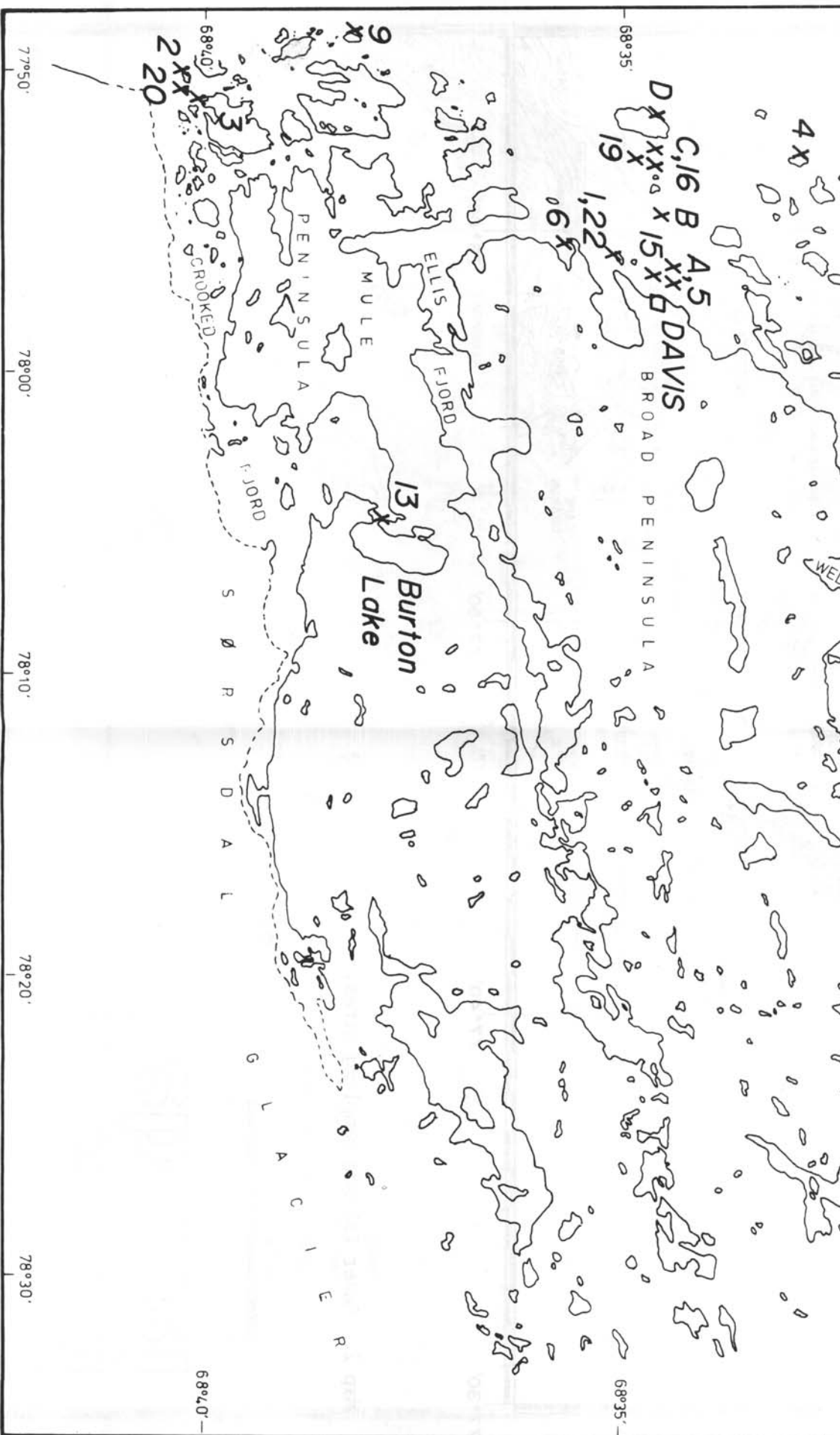


PRYDZ
BAY

18 X

12,11,17
8 X X X X





Map 1. Vestfold Hills sampling sites.



Rauer Islands



-  CONTOURS AT 20m INTERVALS
-  SPOT HEIGHT IN METRES
-  LAKES

77° 30'

77° 40'

77° 50'

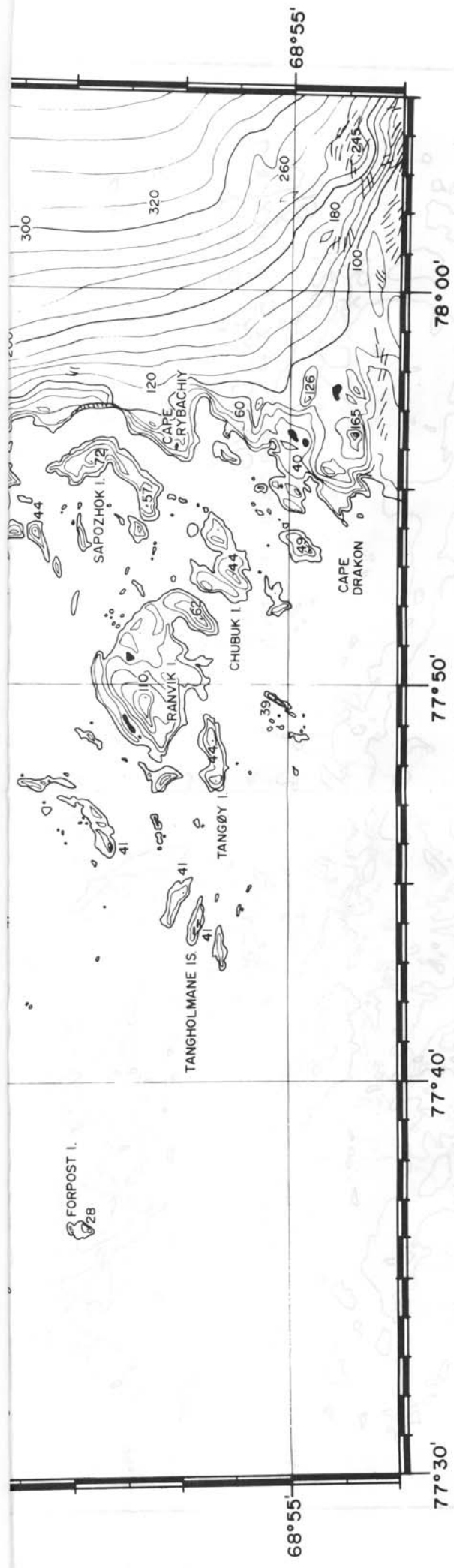
78° 00'

68° 45'

68° 45'

68° 50'

68° 50'



Map 2. Rauer Islands sampling sites.