

P. M. Sagar

THE 1976-1977 SNARES ISLANDS EXPEDITION

by

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with contributions by

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The cover photograph shows Salvin's Mollymawks and Cape Pigeons at the Western Chain, Snares Islands. It was taken from the summit of Rima Islet, looking northeast toward the tip of the Southwest Promontory, Main Island.

(Photo: P.M. Sagar)

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INTRODUCTION

The 1976-1977 University of Canterbury Snares Islands Expedition was at the Biological Station from 9 November 1976 to 3 March 1977. The party members were Mr John W. Early, Mr Graham D. Fenwick (Deputy Leader), Dr Donald S. Horning, Jr. (Leader), Mr Paul M. Sagar and Miss Joy L. Woods.

Transport to the islands aboard the HMNZS TARANAKI was kindly provided by the Royal New Zealand Navy. Moderate seas were running on the morning of the arrival, but the landing of personnel and supplies was rapid and without mishap, thanks to the help of several crewmen.

The RV W.J. SCOTT arrived at the Snares during the early morning of 21 November. Mail and supplies were delivered and the whole party was taken to Rima Islet, Western Chain. We spent a valuable 8 hours ashore, taking notes on the vegetation, bird life, insect fauna and marine biology. The ship spent the day fishing and returned us to Main Island in the evening before steaming for Bluff.

The FV ENTERPRISE, SAPPHIRE and TRADE WIND were sighted off the west coast on the morning of 2 December. They remained at the islands until the morning of 6 December. The FV TRADE WIND took us to the Western Chain on the morning of 4 December but the seas were too rough for landing. On 12 December the W.J. SCOTT paid another early morning call to deliver mail and supplies. She spent the rest of the day fishing north of the Snares.

On 21 January the FV ENTERPRISE and SAPPHIRE returned to continue exploration of profitable crayfishing grounds. The RV JAMES COOK arrived in the evening of 22 January and left two visitors for the night. It returned the next evening and the visitors and Mr Early left the islands. Bulky stores were unloaded onto the SAPPHIRE and later transferred to shore because of the moderately rough seas. The two fishing vessels left for Bluff on the morning of 26 January.

The FV SAPPHIRE returned to offlift our party on the morning of 3 March. We steamed along the east coast of Stewart Island and arrived in Bluff on 4 March 1977.

The report summarises the main projects accomplished during the expedition. Some sections were drafted by other party members as follows: Mr Early (Seepage and Wrack Habitats, Life History of an Ephydrid Fly); Mr Fenwick (Amphipoda - Caprellidea, Decapoda, Isopoda, Subtidal Ecology); Mr Sagar (Buller's Mollymawks, Snares Crested Penguins, Antarctic Terns and Red-billed Gulls, Cape Pigeons, and Miscellaneous Bird Studies); Miss Woods (Freshwater Streams). Dr Horning wrote the remainder of the report and edited all sections.

WEATHER

Weather records were taken for the New Zealand Meteorological Service at the Snares Islands from 14 November 1976 to 1 March 1977. Records for the months of December, January and February are summarised and notable weather phenomena are discussed.

Amount of Cloud and Visibility - The amount of cloud is estimated in units of 0-8 with 8 as a completely clouded sky. The mean cloud cover for December, January and February was 7.3, 6.8 and 6.6 respectively. Visibility is measured in units of 0-9 with 0 as dense fog and 9 as excellent visibility. Codes 5-6, for example, are poor to moderate visibility with a range of 2 to 4 kilometres. The mean visibility for each of the three months was 6.5.

Surface winds - Surface wind speeds are estimated according to the Beaufort Wind Scale of 0 (calm) to 12 (hurricane). The days of occurrence of wind force is given in Table 1. These determinations were made at 0900 NZST and do not reflect wind conditions throughout the day. For instance, wind speeds at the Snares Islands normally increase in the afternoon. During previous expeditions gales (force 8 and above) were generally recorded in the afternoon and less commonly at night. However all seven gales of this expedition blew during early morning hours.

Table 1. Days of occurrence of surface winds at 0900 NZST

	Beaufort Scale								
	0	1	2	3	4	5	6	7	8
December	-	2	7	13	6	3	-	-	-
January	-	1	8	4	13	4	-	1	-
February	1	1	3	10	13	-	-	-	-
TOTAL	1	4	18	27	32	7	-	-	-

Days of occurrence of wind direction are given in Table 2.

Table 2. Frequency of wind direction recorded 0900 NZST.

	Direction in degrees							
	340/ ₀₂₀	030/ ₀₆₀	070/ ₁₁₀	120/ ₁₅₀	160/ ₂₀₀	210/ ₂₄₀	250/ ₂₉₀	300/ ₃₃₀
December	8	1	3	2	1	1	6	9
January	1	-	4	3	3	6	9	5
February	2	-	1	-	5	3	9	8
TOTAL	11	1	8	5	9	10	24	22

Weather Phenomena - Weather phenomena, including the appearance of the sky (e.g. cloudy, overcast, dull or gloomy skies), type of precipitation, wind (especially squalls or gales), electrical phenomena (including austral borealis), atmospheric obscurity and ground phenomena (e.g. dew) were recorded. Table 3 summarises these phenomena observed during the 1976-1977 Expedition.

Table 3. Frequency of weather phenomena

	Gale	Hail	Lightning	Thunder	Fog	Dew
December	-	-	-	-	4	1
January	2	4	-	1	2	1
February	5	-	-	-	4	1
TOTAL	7	4	-	1	10	3

Rainfall, Temperature, Humidity and Barometric Pressure
- The monthly summaries for these parameters were:

	December	January	February
Highest Daily Rainfall (mm)	17.3	20.9	74.3
Total Rain Days 0.1 mm	22	27	19
Total Wet Days 1.0 mm	20	20	14
Total Rainfall (mm)	132.3	138.0	210.3
Mean Temperature (°C)	12.8	12.2	12.6
Temperature Range (°C)	5.0	4.6	4.5
Highest Maximum (°C)	17.5	18.5	17.3
Lowest Maximum (°C)	11.4	10.8	12.0
Highest Minimum (°C)	13.0	12.0	13.5
Lowest Minimum (°C)	11.4	7.7	8.0
Mean Humidity (%)	89.1	86.7	91.0
Humidity Range (%)	79-100	68-100	75-100
Mean Vapour Pressure (mb)	1002.0	1005.6	1013.3
Range Vapour Pressure (mb)	889.1-1016.2	886.2-1017.3	997.2-1023.5
Highest 24 Hour Wind Run (km)	791	925	845

The weather during 9-30 November 1976 was most unusual. Snow fell on 9 and 10 November for the first recorded time. Then the wind veered easterly from the south and fine conditions prevailed for 9 days. The most remarkable phenomenon was the almost total lack of precipitation from 13-30 November. Only 0.4 mm of rain fell during that time. Weather records for November are not included in this report because the month was not complete. The complete weather records for this expedition are held by the New Zealand Meteorological Service, Wellington, and the Department of Zoology, University of Canterbury, Christchurch.

The weather for the remainder of the expedition was colder and wetter than for the 1974-1975 expedition. The 1974-1975 mean temperatures for December, January, and February was 13.7°C, 14.7°C and 13.4°C, respectively. The mean temperatures for these three months of the 1976-1977 expedition were significantly lower at 12.8°C, 12.2°C and 12.6°C, respectively. January is generally the hottest month of the summer but it proved to be the coldest one for this expedition. The highest temperature recorded was 18.5°C for 1977 and 21.4°C for 1975.

The total rain days (0.1 mm or more) for the three complete weather months of this expedition was 68 out of 90 days (75.6% raindays). There were 67.8% raindays in 1974-1975 and 83.8% raindays for the entire year of 1972. The most precipitation recorded during a day was 52.0 mm previous to this expedition. On 28 February 1977, 74.3 mm of nearly steady rain fell during a northerly and easterly storm.

Wind speeds for the summer were recorded for the first time during this expedition. The anemometer was on top of the 11.6 m tall upper radio mast. This is on the sheltered easterly shore. It was recorded over a 15 minute period from 0900. Daily records for the 15 minute wind speed and the total kilometres run for each day are given in figures 1 and 2. The means for each month are listed in Table 4.

Table 4. Mean wind speeds for three months at the Snares Islands.

	\bar{x} 15 minute record (KPH)	\bar{x} kilometres run 24 hours	\bar{x} wind speed for 24 hours
December	16.7	369	15.4
January	23.1	454	18.9
February	17.8	445	18.5
\bar{x} all months	19.2	423	17.6

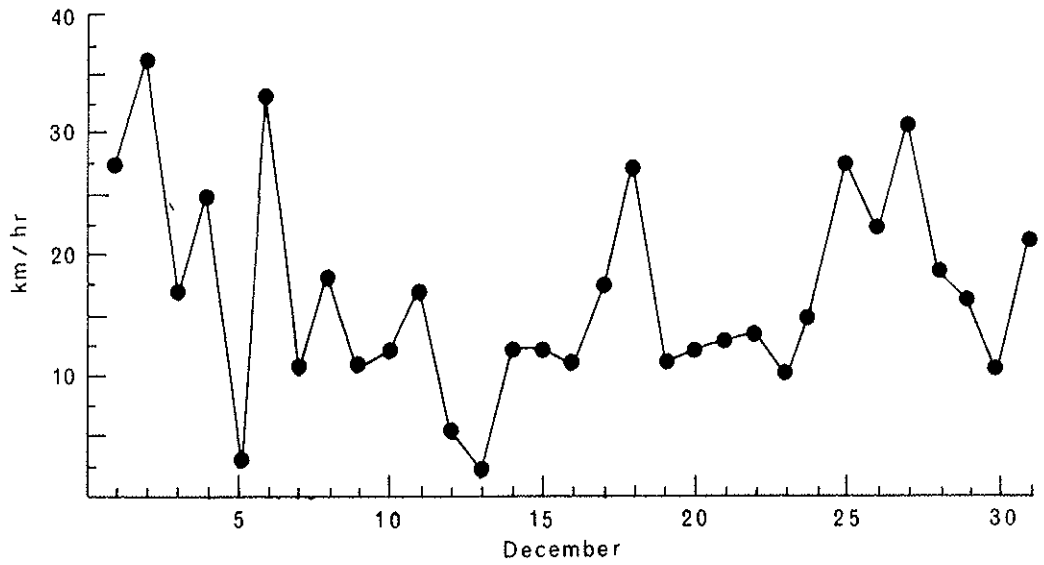
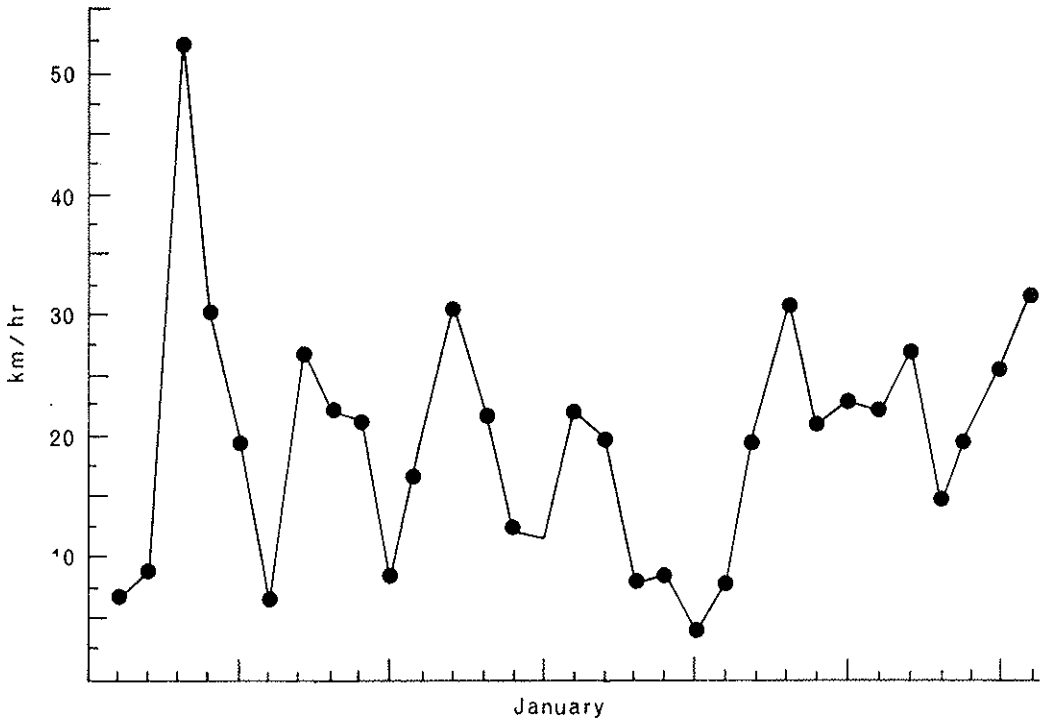
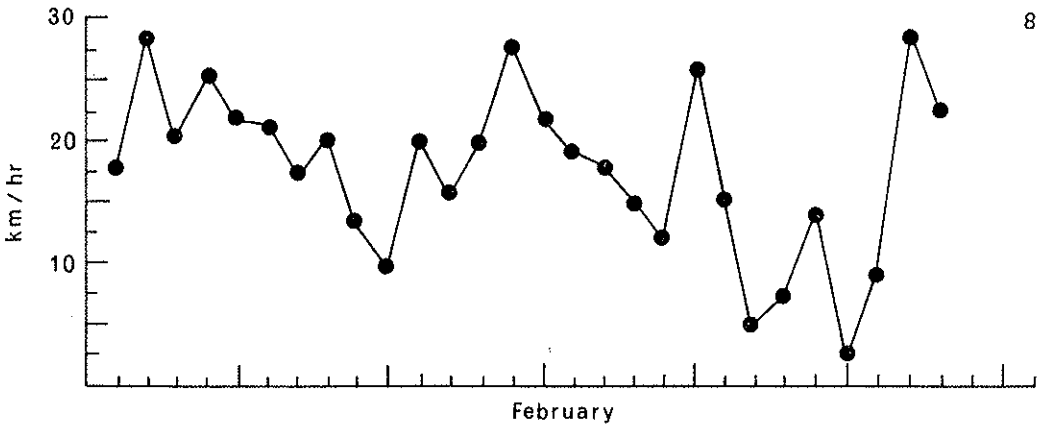


Figure 1. Daily 15 minute wind speeds for December 1976 and January and February 1977 at the Snares Islands.

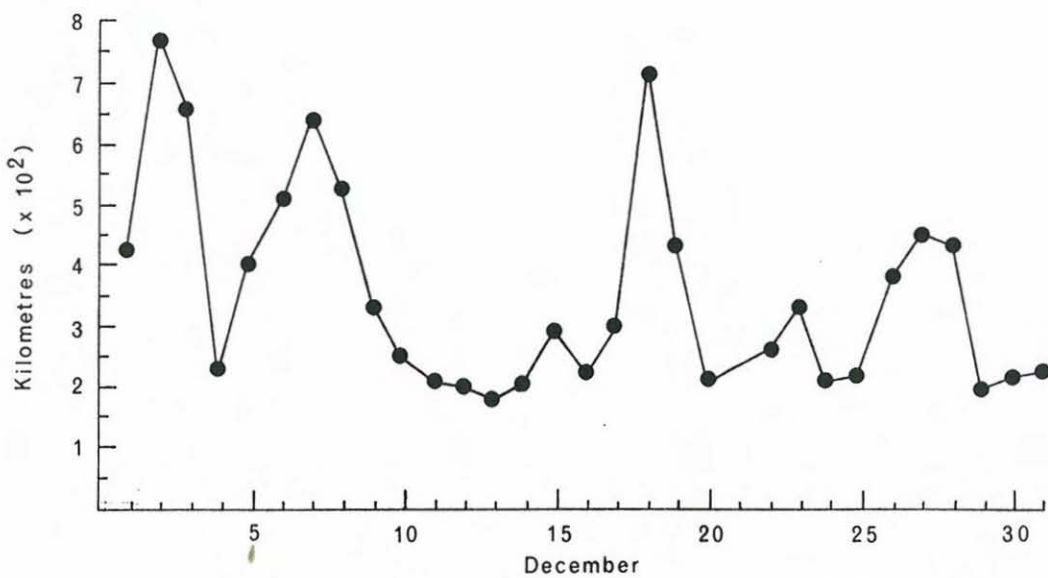
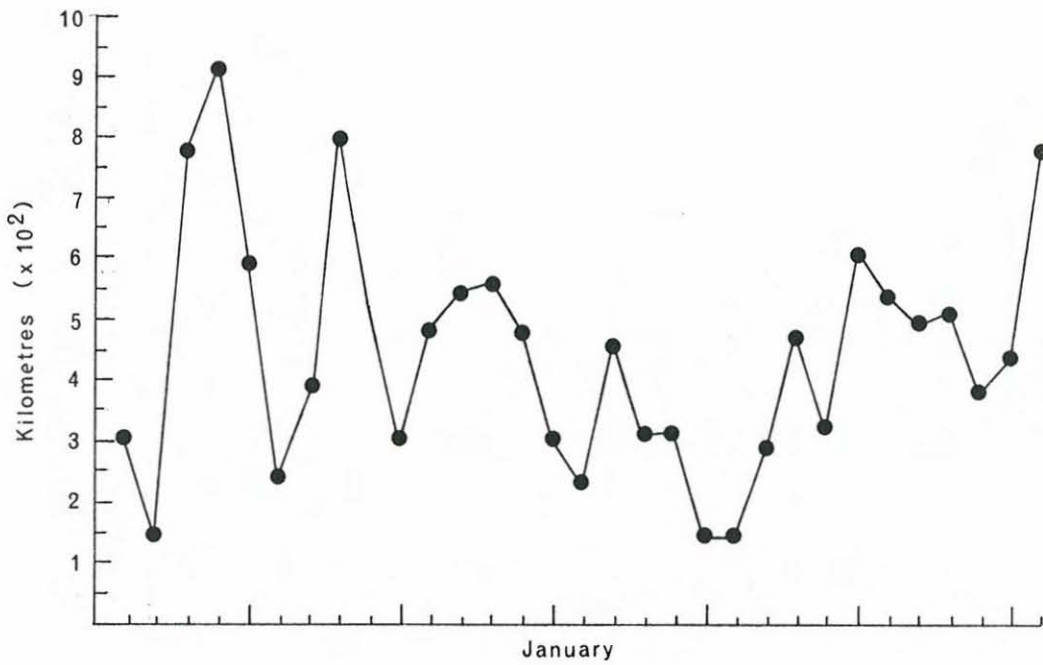
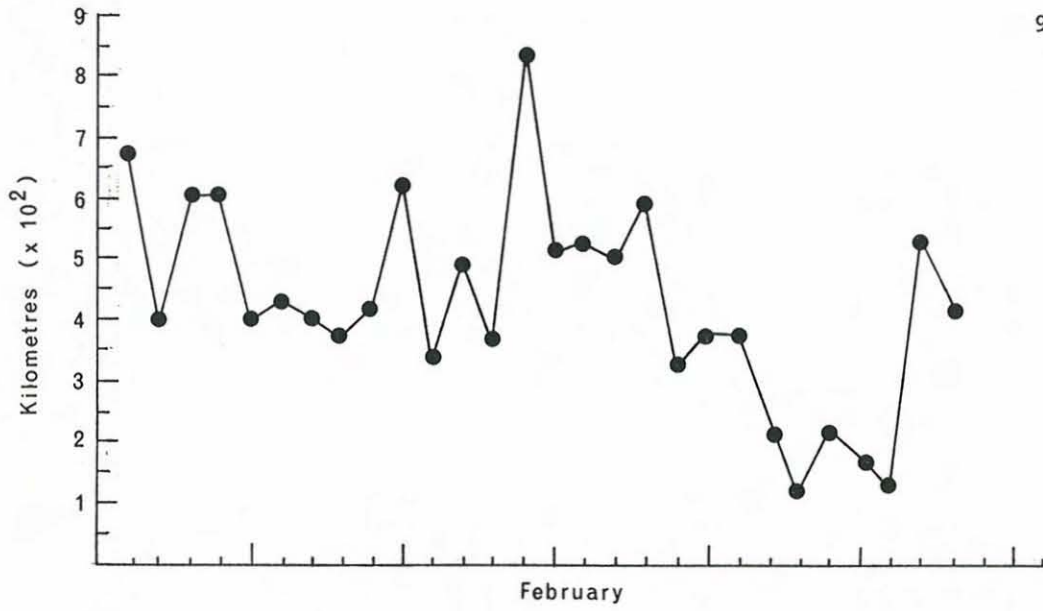


Figure 2. Daily kilometres run for December 1976 and January and February 1977 at the Snares Islands.

FRESHWATER CREEKS

There are four perennial freshwater creeks on Main Island, Penguin, Muttonbird, Ho Ho and Senecio Creeks. Several smaller ones are found on Main and Broughton Islands. They were one of the least-known habitats at the Snares. The only organisms known from the creeks were flatworms, mites and the endemic stonefly Apteroperla n.sp.

Six streams on Main Island and one on Broughton Island, were investigated (Figures 3-10). The North Promontory and South Promontory Creeks were sampled only once; Muttonbird, Ho Ho and Broughton Is Creeks twice; Senecio Creek three times and Penguin Creek six times. Samples were taken at several sites along each creek. The creek was described at each site, surrounding vegetation noted, water temperature measured and flow rate estimated. Water samples were taken for pH, chlorinity and oxygen determinations and qualitative fauna collections were made.

All the creeks begin as seepages from the peat. The creeks on Main Island flow in well-defined channels in peat, except in a few areas where they flow over granite bedrock, boulders or gravel for short distances. They all flow through Olearia lyallii forest for most of their length and large quantities of decaying O. lyallii leaves are found in the creeks. In contrast, while the Broughton Island Creek begins as peat seepages, it flows through open country over bedrock and gravel for its whole length.

The creek water is always coloured, presumably derived from organic material leached from the peat. With heavy rain, the creeks rise rapidly. Heavy loads of peat and plant debris, especially O. lyallii leaves, are transported and the water becomes frothy. Once the rain stops, the creeks rapidly return to normal levels. For example, within 24 hours of a heavy rainfall on 28 February 1977 (74.3 mm), the discharge from Penguin Creek dropped from 0.0666 to 0.0081 cumecs.

Penguin colonies drain into all creeks except Ho Ho and Senecio Creeks and the penguins presumably contribute significant quantities of nutrients to the creeks. The penguins also bathe and preen in the creeks, dislodging leaves and detritus. This was apparent in drift net samples which collected quantities of detritus during periods of low flow.

Chemically, there was little difference between the creeks (Table 5). All were acidic with high chloride concentrations.

Table 5. Mean and range of temperature and chemical factors recorded in the Snares Islands creeks.

	Temperature °C		pH		O ₂ Concentration mg/l		O ₂ Concentration % saturation		Chlorinity mg/l	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Penguin	12.3	10.0-15.0	4.70	3.70-6.00	4.77	1.37-7.57	47.85	14.26-71.18	998.0	535.5- 1246.8
Muttonbird	10.1	9.2-11.2	4.33	3.70-5.95	5.36	4.02-6.62	49.40	35.90-60.58	661.1	592.2- 765.9
Ho Ho	10.8	9.5-14.8	3.97	3.80-4.10	4.36	0.49-7.69	40.10	4.49-72.10	485.7	425.5- 553.2
Senecio	10.9	9.2-13.8	4.01	3.58-5.20	4.96	2.01-6.49	47.14	18.40-64.75	770.1	641.8- 823.0
N. Prom.	14.0	10.5-19.0	6.44	5.70-6.90	4.50	1.74-6.08	44.92	19.58-58.24	1246.6	989.3- 1510.6
S. Prom.	10.7	10.0-11.2	5.02	4.45-5.60	6.24	1.72-8.58	58.66	15.71-80.37	989.4	946.8- 1021.3
Broughton Is	17.0	14.8-21.0	4.96	4.55-5.80	6.47	4.36-6.86	65.68	58.44-70.29	8271.1	5248.1-10460.7

No rooted vegetation or macroscopic algae grow in the creeks. Most of the organisms live amongst decaying O. lyallii leaves which accumulate behind obstructions in the creeks. Many organisms were common to all the creeks (Table 6) and further investigation would probably show that some of the animals are more widely distributed than Table 6 suggests.

Table 6. Organisms found in the Snares Islands creeks.

	Penguin	Muttonbird	HO Ho	Senecio	N. Prom.	S. Prom.	Broughton Is
PHYLUM PROTOZOA							
Class Ciliata 3 spp.?	x	x	x	x	x	x	x
PHYLUM PLATYHELMINTHES							
Class Turbellaria sp.#1	x	x	x	x	x	x	x
sp.#2	x	x	x	x			
sp.#3	x		x	x			
PHYLUM ROTIFERA							
Class Bdelloidea <u>Rotaria</u> sp.	x	x	x	x	x		
PHYLUM NEMATODA 2 spp.?	x	x	x	x	x	x	x
PHYLUM ANNELIDA							
Class Oligochaeta 1 sp.	x		x	x	x	x	x
Class Hirudinea <u>Ornithobella edentula</u>	x						
PHYLUM TARDIGRADA							
Family Macrobiotidae <u>Macrobiotus</u> sp.		x			x		
PHYLUM ARTHROPODA							
Class Acarina sp.#1	x	x	x	x	x	x	
sp.#2	x	x	x	x		x	
sp.#3	x	x	x	x	x	x	x
sp.#4		x		x			
Class Ostracoda 1 sp.	x	x		x			
Class Copepoda							
Order Cyclopoida? <u>Halicyclops</u> sp.	x	x	x	x	x	x	x
sp. #1					x		
Order Harpacticoida sp. #1	x	x	x	x		x	
sp. #2	x				x	x	x
Class Malacostraca							
Order Isopoda sp. #1	x	x	x	x	x	x	
sp. #2							x
Order Amphipoda <u>Phraetogammarus</u>							
<u>propingus?</u>	x	x	x	x	x		
? <u>Paracalliope</u> sp.#1	x	x	x	x	x	x	
? <u>Paracalliope</u> sp.#2	x	x	x	x		x	
sp. #1	x	x	x	x			
sp. #2							x

	Penguin	Muttonbird	HO HO	Senecio	N. Prom.	S. Prom.	Broughton Is
Class Insecta							
Order Collembola 3 spp.?	x	x	x	x	x	x	x
Order Plecoptera							
Family Griptopterygidae							
<u>Apteroperla</u> n.sp.	x	x	x	x			
Order Coleoptera							
Family Hydrophilidae <u>Namostygnus</u>							
<u>flemingi</u>		x		x			
Order Diptera							
Family Tipulidae <u>Erioptera</u> n.sp.	x			x			
Family Chironomidae sp.#1	x	x	x	x	x	x	
sp.#2	x	x	x	x	x	x	
sp.#3				x			
Family Psychodidae 1 sp.				x		x	

This preliminary report gives an indication of the physical, chemical and biological characteristics of the Snares Islands creeks. When identification of the fauna is complete, this work will be written up as a scientific paper and submitted to the New Zealand Journal of Marine and Freshwater Research.

SUGGESTIONS FOR FURTHER RESEARCH

1. Investigation of small intermittent creeks on Main and Broughton Islands.
2. Detailed chemical analyses of creek water, especially comparing the chemical composition of creeks with and without penguin colony drainages.
3. Life history studies of many of the organisms, especially the insects.
4. Investigation of the factors involved in breakdown of O. lyallii leaves in the creeks.
5. Study of trophic relationships between organisms in the creeks.

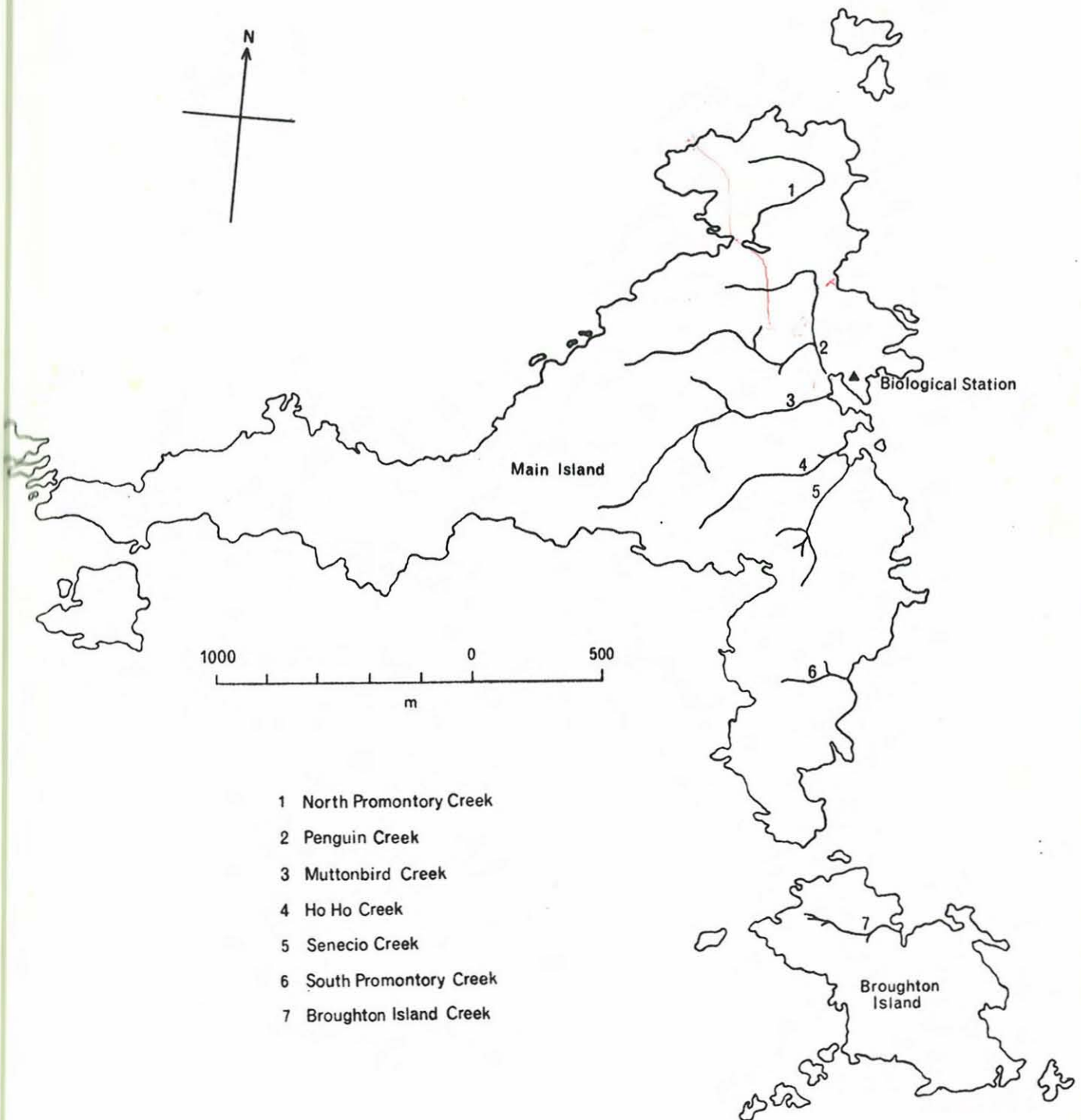




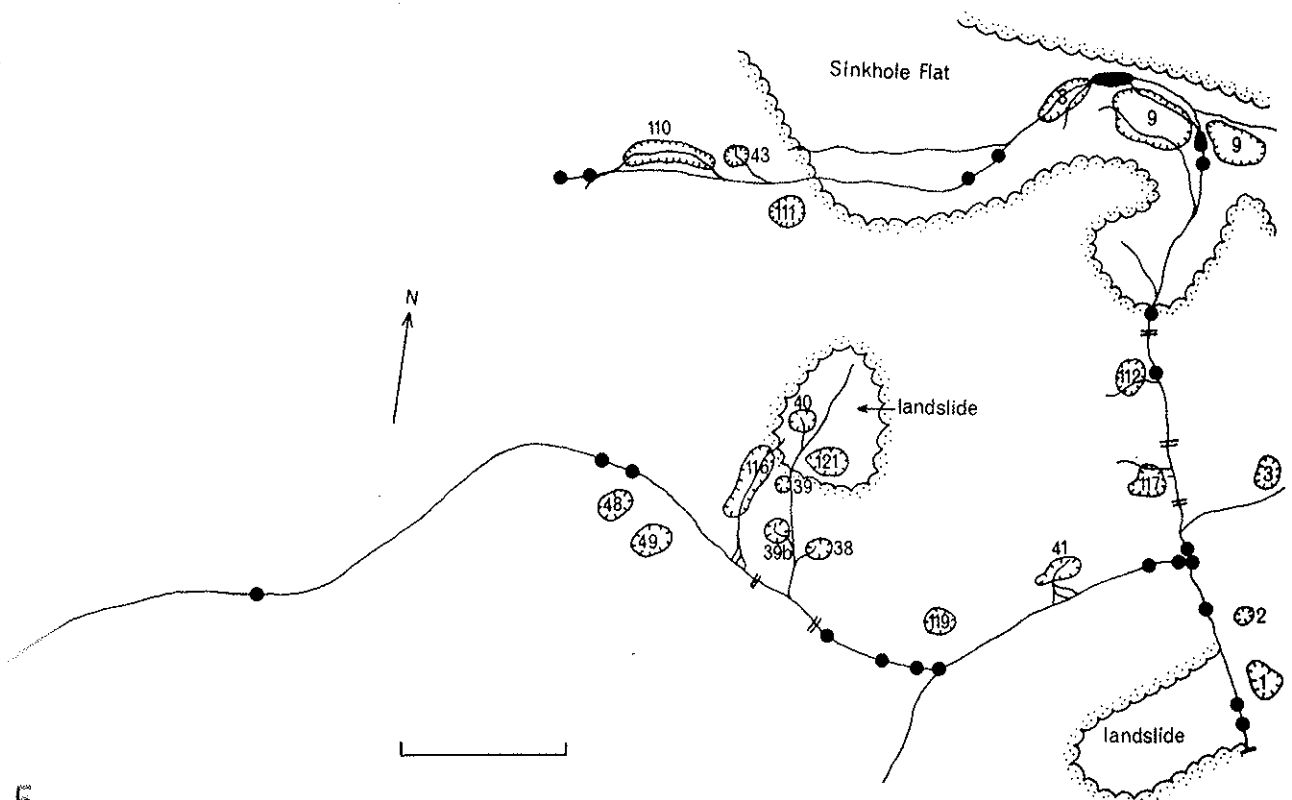
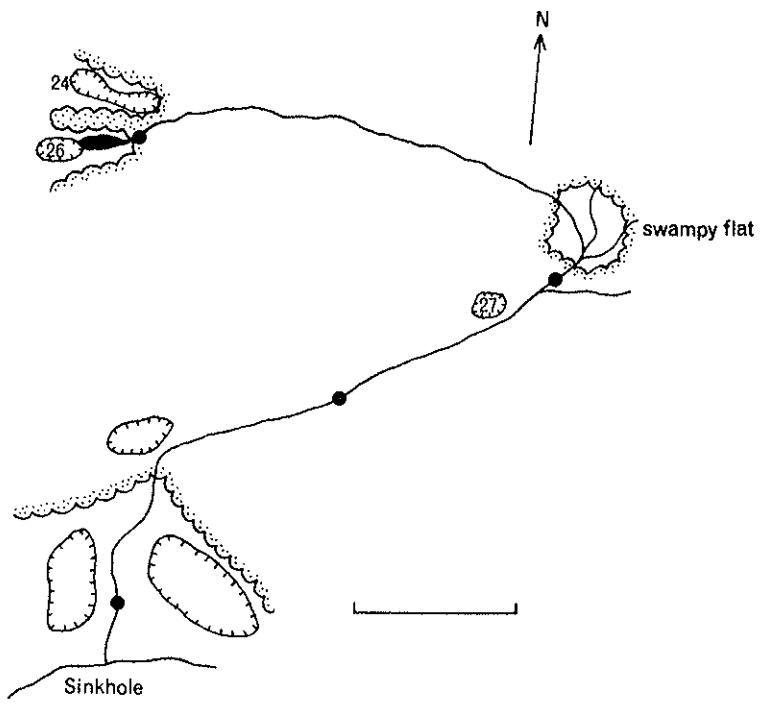
Figure 3. Map of Main Island and Broughton Island showing principle creeks.

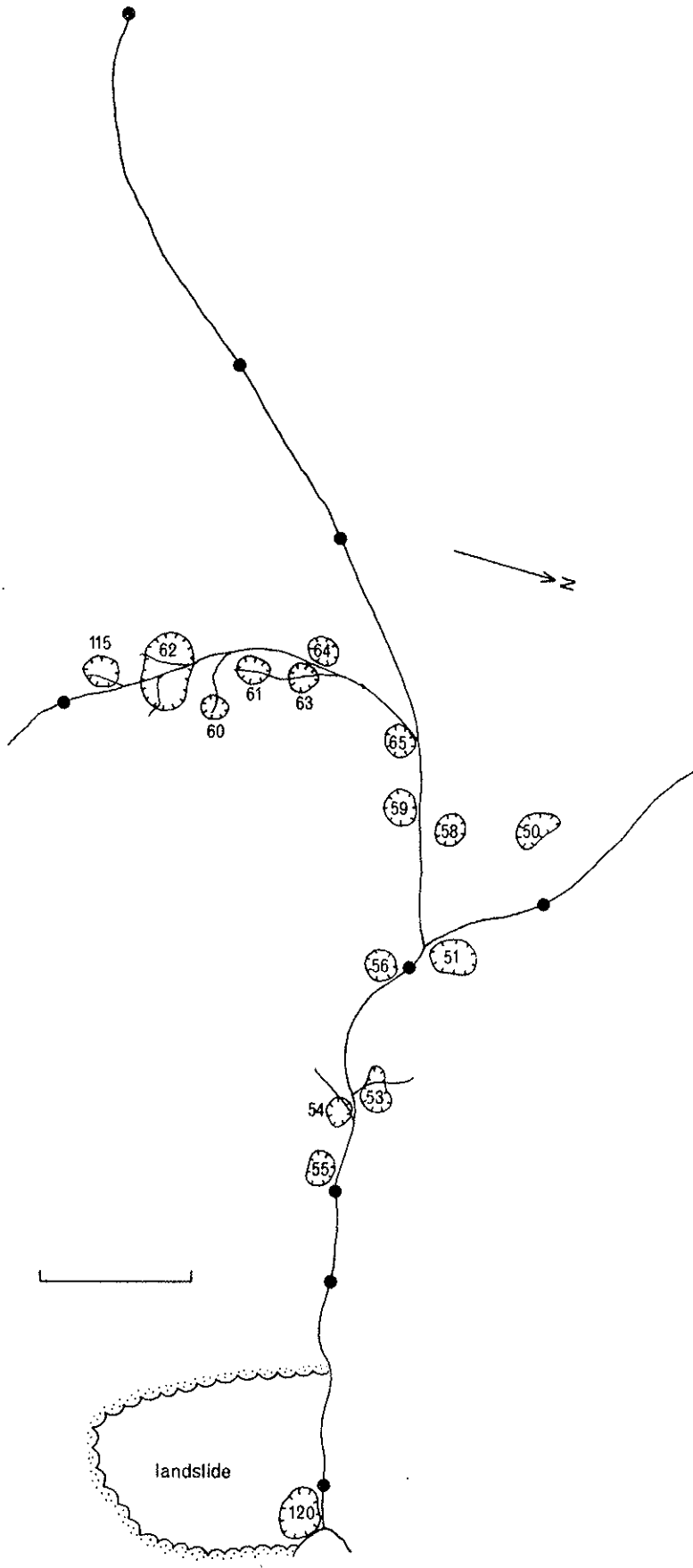
KEY FOR FIGURES 4-10

- Figure 4 - North Promontory Creek
Figure 5 - Penguin Creek
Figure 6 - Muttonbird Creek
Figure 7 - Ho Ho Creek
Figure 8 - Senecio Creek
Figure 9 - South Promontory Creek
Figure 10 - Broughton Island Creek

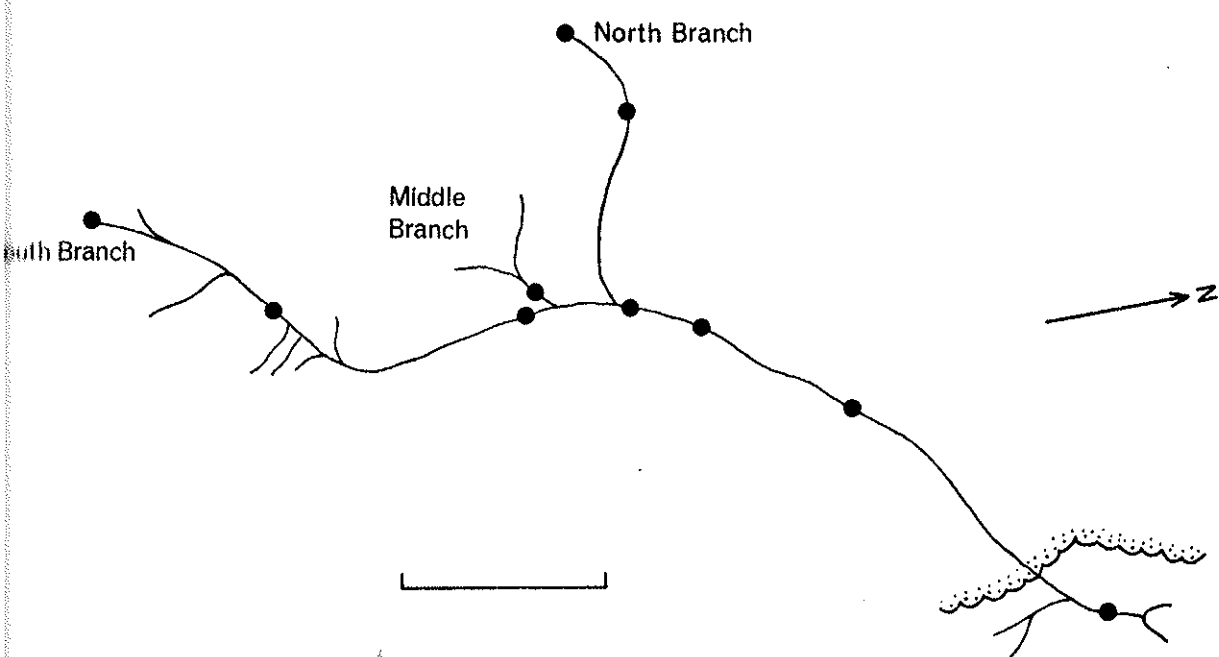
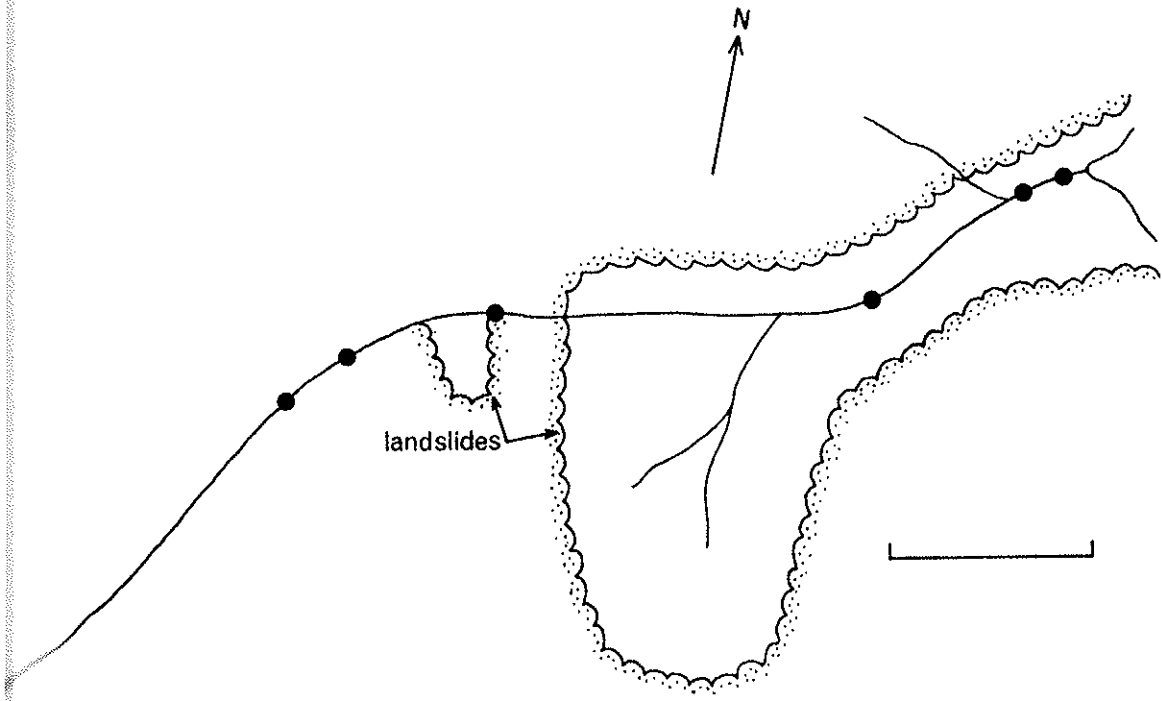
- - sampling sites
 - forest edge
 - penguin colonies

Scale on all figures = 100 m

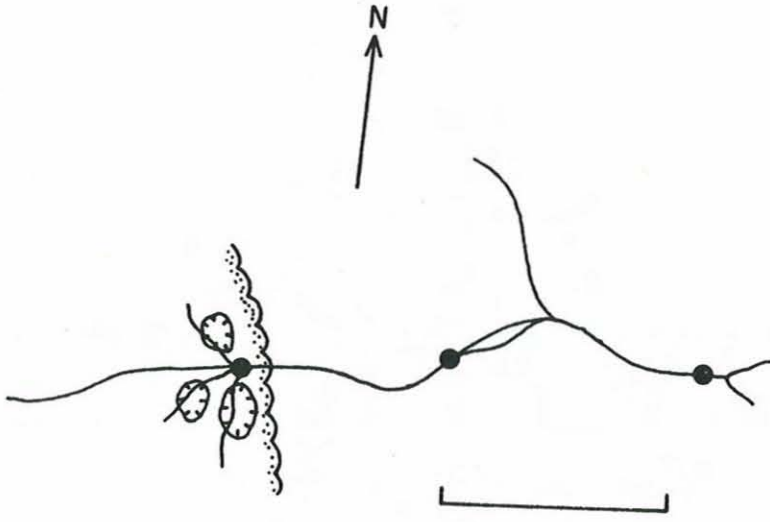




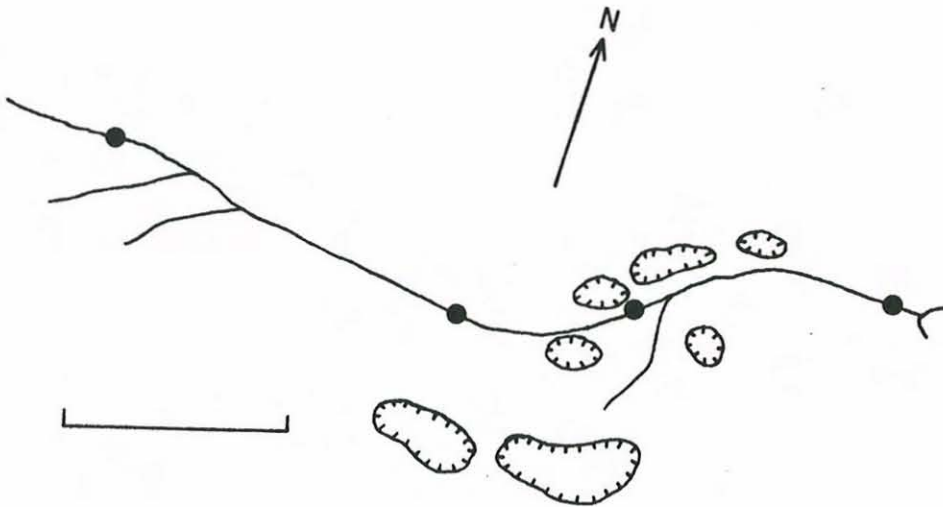
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TARDIGRADA

Tardigrada, or water bears, are microscopic animals that live in a variety of marine, freshwater and terrestrial habitats. Many of the more than 450 species in the phylum have nearly cosmopolitan distributions. Some species of Echiniscus, Hypsibius, and Macrobiotus form tuns or cysts in dry conditions and these disperse by aerial means.

Collections of water bears from New Zealand and its offshore islands, and the Chatham, Snares, Auckland and Campbell Islands have recently been studied. A manuscript has been prepared that treats the biosystematics of the 55 New Zealand species. The systematic section includes keys to the taxa, illustrations, diagnoses, and descriptions of species. The ecology and geographical distribution of tardigrades within New Zealand also are discussed. The paper has been submitted and accepted for the New Zealand Journal of Zoology. Information on the biosystematics of the eight Snares Islands species of tardigrades may be found in this forthcoming paper. In the following species list, the SA numbers refer to collections whose complete data are included at the end of this section.

MACROBIOTIDAE

Hypsibius (Diphascon) scoticus Murray, 1905
SA-272, 274, 276, and 277

Hypsibius (Hypsibius) ?oberhaeuseri (Doyère, 1840)
SA-301 and 302

Hypsibius (Hypsibius) dujardini (Doyère, 1840)
SA-252, 270, 273, 276, 277, 278, 303 and 307

Macrobiotus recens Cuénot, 1932
SA-6, 8, 60, 85, 89, 197, 198, 203, 219, 222,
271, and 301

Macrobiotus bisoctus MSS Horning, Schuster, and Grigarick
SA-255

Macrobiotus intermedius intermedius Plate, 1888
SA-23, 24, 32, 37, 38, 41, 60, 88, 92, 202,
216, 256 and 301

Macrobiotus snaresensis MSS Horning, Schuster, and Grigarick
SA-4, 9, 38, 66, 82, 91, 92, 99, 200, 238, 245,
248, 249, 260, 277, 300, 301, 302, 305, and 306.

MILNESIDAE

Milnesium tardigradum tardigradum Doyère, 1840
SA-219, 222, 248, 261, 265, 268, 271, and 280

Some of the Snares Islands tradigrades differed slightly from the New Zealand populations of the same species. Hypsibius (H.) dujardini is a cosmopolitan species which usually has eye spots but the New Zealand populations lack eye spots. Specimens from the Snares Islands have a slightly larger microplacoid, somewhat larger claws, the cuticle is minutely granulate, and the individual granules are 1-2 μm in diameter.

The identity of Hypsibius (H.) oberhaeuseri from the Snares Islands is questionable. The primary and secondary claws arise independently and are of the oberhaeuseri type but differ slightly by having larger claws with longer primary branches. Only four specimens were recovered and the recognition of the Snares population as a distinct taxon, if indeed it is, should be based on additional specimens.

There is some variation in Macrobiotus recens expressed as absence of eye spots, slightly longer and thinner than normal placoids and occasionally a hint of microplacoids. Eggs have been associated only with collections from Station Point, Snares Islands, and are the basis for assuming the identity of all the New Zealand specimens. The eggs have porous shells with processes bulbous at the base and with filamentous apices. These eggs in no way resemble those of Macrobiotus h. hufelandi. Macrobiotus snaresensis is the largest and most numerous tardigrade at the Snares Islands. Rotifer remains in the gut of one specimen suggest that the species occasionally may be predaceous.

It is surprising that species of Echiniscus or Pseudechiniscus were not found at the Snares Islands. Echiniscus is found at Stewart Island and one specimen of an unidentifiable species was taken at Campbell Island. This genus is not common in colder climates and has never been found in Antarctica, for instance. Circumstantial evidence suggests that species of Echiniscus prefer foliose and fruticose lichens as habitats. These plants are most uncommon at Snares. Pseudechiniscus s. suillus was found at Stewart and Campbell Islands. There is no apparent reason why this species was not recovered from Snares Islands cryptogam samples.

COLLECTION DATA

Biological Station, 18-I-71 (DSH)

SA 4A-B (A) Lophocolea innovata and (B) Metzgeria decipiens on live Senecio stewartiae.

Sinkhole Flat, 18-I-71 (DSH)

SA 6A-B (A) Lecidea fineranii and (B) Pertusaria laevis on live Olearia lyallii.

Boat Harbour, 19-I-71 (DSH)

SA 8 Xanthoria parietina on granite sea rocks.

Station Point, 21-I-71 (DSH)

- SA 9 Muelleriella crassifolia on supralittoral granite rocks.

Mollymawk Bay, 30-I-71 (DSH)

- SA 23 Sematophyllum contiguum in rock crevice.
SA 24 Muelleriella crassifolia on boulder.
SA 26 Mastodia tessellata on boulder.

North Promontory, 2-II-71 (DSH)

- SA 32 Macromitrium longirostre on bedrock.

Biological Station, 100 m W, 17-II-71 (DSH)

- SA 37 Macromitrium longirostre on boulder.
SA 38 Hepatics and mosses on boulder.

Southwest Promontory, 17-II-71 (DSH)

- SA 41 Metzgeria decipiens on dead, windthrown
Olearia lyallii.
SA 43 Parmelia signifera on dead, windthrown
Olearia lyallii.
SA 45 Usnea cf Du Rietzii on live Olearia lyallii.

Broughton Island, NE side, 18-II-71 (DSH)

- SA 60 Muelleriella crassifolia on supralittoral rocks.

South Promontory, N end, 18-II-71 (DSH)

- SA 66 Eriopus apiculatus on rocks.

Biological Station, 24-II-71 (DSH)

- SA 82A-B (A) Haematomma sordidum and (B) Caloplaca sublobulata on dead mat of Colobanthus muscoides at upper supralittoral.

Biological Station, 7-III-71 (DSH)

- SA 85 Muelleriella crassifolia on granite sea rocks.

Station Point, 7-III-71 (DSH)

- SA 88A-B (A) Lophocolea lenta and (B) Eriopus apiculatus on rocks at upper supralittoral
SA 89 Caloplaca sublobulata on granite sea rocks.

Sealers Cove, 8-III-71 (DSH)

- SA 91 Lophocolea innovata on live Olearia lyallii.
SA 92 Rhyncostegium laxatum on live Olearia lyallii.

Biological Station, 8-III-71 (DSH)

- SA 99 Hepatics and mosses on decomposed fronds of Polystichum vestitum.

Boat Harbour, 8-II-72 (DSH)

- SA 197 Crustose lichen on supralittoral rocks.
SA 198 Crustose lichen on supralittoral rocks in rainwater drainage.

Signpost Hill, 9-II-72 (DSH)

- SA. 199 Macromitrium longirostre on rocks exposed to heavy salt spray at 130 m above MSL.
SA 200 Crustose lichen on wind exposed cliff 130 m above MSL.
SA 202 Crustose lichen on 130 m cliff top subject to heavy sea spray.
SA 203 Crustose lichen on 130 m cliff top subject to heavy sea spray.

Seal Point, 2-III-72 (DSH)

- SA 216 Colobanthus muscoides tufts on rocks in upper supralittoral.

South side Ho Ho Bay, 18-III-72 (DSH)

- SA 219 Metzgeria decrescens on timber.

Penguin Creek, Penguin Rookery 2, 23-IX-72 (DSH)

- SA 222 Metzgeria decrescens on Olearia lyallii.

Razorback to Southwest Promontory, 8-X-72 (DSH)

- SA 238 Brachythecium plumosum in sheltered tussocks of Poa astonii.

Southwest Promontory, south side, 8-X-72 (DSH)

- SA 245 Usnea sp. on rock with a hepatic.
SA 248 Parmelia sp. on branches of Olearia lyallii.
SA 249 Parmelia sp. on branches of Olearia lyallii.

Southwest Promontory, north side, 8-X-72 (DSH)

- SA 252 Lophocolea subporosa on Olearia lyallii trunk.

South Promontory, Penguin Rookery 88, 9-X-72 (DSH)

- SA 255 Chiloscyphus physanthus on rock in drainage below rookery.

South Promontory, mid-east side, 9-X-72 (DSH)

- SA. 256 Macromitrium longirostre on exposed bedrock on ridge top.

North Promontory, east side, 10-X-72 (DSH)

- SA 260 Metzgeria decrescens swamp at edge of abandoned penguin rookery.
- SA 261 Crustose lichen in swamp at edge of abandoned penguin rookery.
- SA 265 Riccardia sp. on rock in dry abandoned penguin rookery
- SA 266 Lophocolea minor on dead Olearia lyallii.
- SA 268 Metzgeria decrescens in drainage in penguin rookery.

North Promontory, north side, 10-X-72 (DSH)

- SA 270 Macromitrium longirostre in swamp at edge of abandoned penguin rookery.
- SA 271 Crustose lichen at edge of swampy abandoned penguin rookery.
- SA 272 Metzgeria decrescens at edge of swampy abandoned penguin rookery.
- SA 273 Campylopus pallidus on Olearia lyallii rootlets and Poa astonii tussocks.
- SA 274 Chiloscyphus phisanthus on peat amongst Olearia lyallii rootlets and Poa astonii tussocks.
- SA 275 Ptychomnion aciculare on Poa astonii tussocks.
- SA 276 Ptychomnion aciculare on peat at edge of swampy abandoned penguin rookery.
- SA 277 Lophocolea subporosa on peat and Poa astonii tussocks.
- SA 278 Hypnum cupressiforme on rock and Poa astonii tussocks at edge of abandoned penguin rookery.
- SA 279 Lembophyllum divulgum on rock at edge of abandoned penguin rookery.
- SA 280 Frullania patula on rock at edge of abandoned penguin rookery.

Mouth of Muttonbird Creek, 23-X-72 (DSH)

- SA 300A-C (A) Lophocolea subporosa, (B) Telaranea martinii and (C) Sematophyllum contiguum on dead Polystichum vestitum fronds at stream edge.

Mouth of Ho Ho Creek, 23-X-72 (DSH)

- SA 301 Eriopus apiculatus on rocks in upper supralittoral.
- SA 302 Muelleriella crassifolia on rocks in upper supralittoral.

Penguin Rookery 81, 23-X-72 (DSH)

SA 303 Lophocolea subporosa on dead branches of
Olearia lyallii.

Penguin Rookery 88, 100 m NW, 23-X-72 (DSH)

SA 305 Marchantia berteroana on rock in swampy abandoned
penguin rookery.

Biological Station, 24-X-72 (DSH)

SA 306 Acanthocladum extenuatum on concrete path to
Upper Hut.

SA 307 Terrestrial green algae on bedrock at Dangerous
Goods Store.

There were 95 collections of lice, fleas, ticks and feather mites from 29 species of birds and mammals during the 1976-1977 expedition. The 4286 specimens in these collections are amongst the last to be taken for the survey of these invertebrates of the Snares Islands. Professor R.L.C. Pilgrim, Department of Zoology, University of Canterbury, and Mr Ricardo Palma, National Museum of New Zealand, Wellington, are currently studying the lice. The fleas and ticks are in the care of Professor Pilgrim and Dr Horning will retain the feather mites until someone can be found to work on them.

Special emphasis was placed on collecting from Snares Islands birds with few or no recorded lice. These included the Erect-crested Penguin, Rockhopper Penguin, Salvin's Mollymawk, Snares Cape Pigeon, Fulmar Prion, Broad-billed Prion, and Antarctic Tern. Only one species, the Shining Cuckoo, had no ectoparasites. Antarctic Terns, Snares Cape Pigeons, and Red-billed Gulls may have significantly lower louse densities than some other seabirds such as the Diving Petrel and Mottled Petrel. No lice were found on Snares Fernbirds although 9 birds were carefully searched with the aid of the insecticide Dri-Die. It seems unlikely that no lice occur on this species. Fleas and feather mites were common. It would be most worthwhile to search more Snares Fernbirds to see if lice can be found on them.

Ectoparasites were collected by hand-searching live and dead birds (HS), dissolving feathers of dead birds in hot 15% potassium hydroxide (KOH), and a combination of hand-searching and dusting with the insecticide Dri-Die (HS + D-D). Finer details are retained on specimens taken by hand-searching or with the use of Dri-Die than those that have been simmered in KOH.

The format for the collection list given below is as follows: Bird or mammal species, locality, date, collector, and the condition of the host. The number of estimated species in each major group (Mallophaga, Anoplura, Siphonaptera, and Feather Mites) is indicated in brackets, followed by the number of specimens taken in that group. The codes HS, KOH, and HS + D-D indicate the collection method.

SPHENISCIFORMES

SPHENISCIDAE

Eudyptes crestatus Miller, 1784 (Rockhopper Penguin)
Penguin Slope, 18.I.77, DSH. On moulting feathers taken from live adult. None. KOH.

Eudyptes pachyrhynchus pachyrhynchus Gray, 1845 (Fiordland Crested Penguin)

Station Cove, 3.XII.76, DSH & JLW. On neck of live yearling. Mallophaga (2), 1. HS.

Station Point, 22.XI.76, DSH & PMS. On live yearling. None. HS.

Eudyptes pachyrhynchus sclateri Buller, 1888 (Erect-crested Penguin)

South side Boat Harbour, 17.II.77, DSH. On live pre-moult fat adult. Mallophaga (1), 15. HS + D-D.

Station Cove, 27.II.77, DSH. On 48-60 hour dead moulting adult. Mallophaga (1), 10; Ticks (1), 8. HS.

Eudyptes robustus Oliver, 1953 (Snarres Crested Penguin)

Boat Harbour, 25.I.77, DSH. On fresh dead fledgling floating in water. Mallophaga (1), 17; Tick (1), 1. HS + D-D.

Penguin Colony 16, East end Sinkhole Flat, 6.II.77, DSH. On fresh dead chick. Mallophaga (1), 269; Tick (1), 1. HS + D-D.

Station Cove, 28.I.77, DSH. On fresh dead adult on sea rocks. Mallophaga (1), 132; Ticks (1), 3. HS + D-D.

Station Point, 30.XI.76, DSH. On fresh dead half grown chick. Mallophaga (1), 58. HS.

Station Point, 17.I.77, DSH. On down of 3/4 grown chick. Mallophaga (1), 22. KOH.

Eudyptula minor minor (Forster, 1781) (Southern Blue Penguin)

Mollymawk Bay, 13.I.77, DSH. On fresh dead adult on water. Mallophaga (1), 231; Feather mites (1), 4; Tick (1), 1. HS.

PROCELLARIIFORMES

DIOMEDEIDAE

Diomedea bulleri Rothschild, 1893 (Buller's Mollymawk)

Mollymawk Bay, 4.I.77, JLW. On head of live adult. Mallophaga (1), 1. HS.

Mollymawk Bay, 19.I.77, JLW. On head and neck of live adult. Mallophaga (1), 4. HS.

Mollymawk Bay, 26.I.77, DSH. On head and neck of live adult. Mallophaga (1), 3. HS.

Mollymawk Bay, 1.II.77, PMS. On neck of live adult. Mallophaga (1), 1. HS.

Mollymawk Bay, 26.II.77, DSH. On fresh dead adult. Mallophaga (3), 43. HS + D-D.

South Daption Rock, 30.XI.76, DSH. On feathers of mummified adult. Feather mite (1), 1. KOH.

South side Ho Ho Bay, 22.XII.76, DSH. On fresh dead adult. Mallophaga (1), 8; Feather mites (2), 60; Ticks (1), 3. KOH.

Diomedea cauta salvini (Rothschild, 1893) (Salvin's Mollymawk)
Rima Islet, Western Chain, 21.XI.76, DSH. On head and neck of live adult. Mallophaga (1), 11. HS.

Rima Islet, Western Chain, 21.XI.76, JWE. On dead about 30 day chick. Ticks (1), 837. HS.

PROCELLARIDAE

Daption capensis australis Mathews, 1913 (Snare Cape Pigeon)
North Promontory, 28.XII.76, PMS. On live 2-3 day old chick. Siphonaptera adults (1), 2; Siphonaptera larvae (1), 1. HS.

North Promontory, 29.XII.76, PMS. On live 7-8 day old chick. Siphonaptera adults (1), 6; Siphonaptera larvae (1), 4. HS.

North Promontory, 31.XII.76, PMS. On live 8-9 day old chicks (2). Siphonaptera adults (1), 67; Siphonaptera larvae (1), 12. HS.

North Promontory, 2.I.77, PMS. On 12-18 hour dead chick in nest. Mallophaga (1), 9; Siphonaptera larvae (1), 24; Ticks (1), 3. KOH.

North Promontory, 9.I.77, PMS. On 24-48 hour dead 3 day old chick on nest. None. KOH.

North Promontory, 12.I.77, PMS. On 18-24 hour dead 15 day old chick on nest. Siphonaptera adults (1), 7; Siphonaptera larvae (1), 22. HS.

North Promontory, 12.I.77, PMS. On 12-18 hour dead 18 day old chick. Mallophaga (1), 4. KOH.

North Promontory, 2.II.77, PMS. On 36-48 hour dead 32 day old chick on nest. Mallophaga (2), 15; Siphonaptera larvae (1), 5. KOH.

North Promontory, 9.II.77. DSH. On 18 hour dead fledgling found on nest. Mallophaga (2), 6. KOH.

Trumpeter Bay, South Promontory, 2.II.77, DSH. On live adults (2). None. HS + D-D.

Macronectes halli Mathews, 1912 (Northern Giant Petrel)

1 km East Ho Ho Bay, 28.XII.76, DSH. On neck of live adult. Mallophaga (1), 3. HS.

Pachyptila crassirostris crassirostris (Mathews, 1912)

(Fulmar Prion)

Rima Islet, Western Chain, 21.XI.76, DSH. On head and neck of live adult. Mallophaga (1), 7. HS.

Pachyptila turtur fallai Oliver, 1930 (Fairy Prion)

Alert Stack, 20.XII.76, DSH. On live adult. Mallophaga (1), 6. HS.

Biological Station, 10.II.77, DSH. On live adult. Mallophaga (1), 2. HS.

Broughton Island, 30.XI.76, PMS. On 12 hour dead adult found in skua midden - bird 1 of 2. Mallophaga (1), 13. HS.

Broughton Island, 30.XI.76, PMS. On 12 hour dead adult found in skua midden - bird 2 of 2. Mallophaga (2), 15. HS.

Broughton Island, 30.XI.76, PMS. On mummified adult found in skua midden. Mallophaga (1), 3; Feather mites (1), 2. KOH.

North Promontory, 28.XI.76, DSH. On live adult. Mallophaga (1), 1. HS.

North Promontory, 10.XII.76, PMS. On neck of live adult. Mallophaga (1), 1. HS.

North Promontory, 11.XII.76, JWE. On neck feathers of live adult. Mallophaga (1), 2. HS.

Station Point, 29.I.77, DSH. On live adult. Mallophaga (1), 2; Feather mites (1), 12. HS.

Pachyptila vittata vittata (Forster, 1777) (Broad-billed Prion)

East of Daption Rocks, 19.II.77, PMS. On 12-18 hour dead adult on sea surface. Mallophaga (1), 6. HS. Mallophaga (1), 3; Feather mites (3), 100. KOH.

South Coast, 2.I.77, DSH. On freshly skua-killed fledgling found in midden. Mallophaga (4), 35. HS. Mallophaga (2), 21; Feather mites (1), 8; Ticks (1), 2. KOH.

South side Southwest Promontory Razorback, 2.I.77, DSH. On live fledgling at nest. Mallophaga (2), 5. HS.

Station Cove, 18.I.77, JWE. On 18-36 hour dead adult on sea rocks in drainage. Mallophaga (2), 10. KOH.

Pterodroma inexpectata (Forster, 1844) (Mottled Petrel)

North Daption Rock, 21.XII.76, DSH. On live adult.
Mallophaga (1), 9; Feather mites (2), 6. HS.

North Daption Rock, 8.II.77, DSH. On wings of freshly
skua-killed adult. Mallophaga (2), 7; Feather mites (2),
50. KOH.

Sinkhole, 21.XII.76. JWE. On fresh skua-killed adult
lying on peat. Mallophaga (3), 67. Feather mites (2), 27.
KOH.

Sinkhole, 28.XII.76, JWE. On fresh skua-killed adult.
Mallophaga (2), 4. HS. Mallophaga (3), 70; Feather mites
(2), 25; Ticks (1), 2. KOH.

Puffinus griseus (Gmelin, 1789) (Sooty Shearwater)

Mollymawk Bay, 26.XI.76, DSH. On fresh dead adult
lying on peat. Mallophaga (2), 54; Feather mites (2),
120; Ticks (1), 4; Thysanoptera (1), 1. KOH.

Penguin Creek, 29.I.77, DSH. On live adult. Tick
(1), 1. HS.

PELECANOIDIDAE

Pelecanoides urinatrix chathamensis Murphy & Harper, 1916

(Southern Diving Petrel)

Biological Station, 1.I.77, JWE. On 8-12 hour dead
adult lying on peat. Mallophaga (1), 3; Feather mites (1),
4. HS. Mallophaga (2), 35; Feather mites (2), 15. KOH.

Boat Harbour, 13.XI.76, GDF. On 12-24 hour dead bird
floating on water. Mallophaga (3), 12; Feather mite species
A, 2; species B, 5; species C, 10. KOH.

Middle Arm Boat Harbour, 14.XI.76, PMS. On 12 hour
dead bird caught amongst branches of Olearia lyallii.
Mallophaga (4), 69; Feather mites (2), 15. KOH.

Middle Arm Boat Harbour, 27.XI.76, PMS. On 12-24
hour dead adult on peat. Mallophaga (1), 94; Ticks (1)-
3. KOH.

North Promontory, 19.I.77, JWE. On 3-4 day dead
adult. Mallophaga (2), 16; Feather mites (2), 7. KOH.

Sinkhole Gut, 28.XII.76, JWE. On 12 hour dead adult.
Mallophaga (3), 25. KOH.

PELECANIFORMES

PHALACROCORACIDAE

Phalacrocorax carbo novaehollandiae Stephens, 1826 (Black Shag)
Seal Point, 14.XI.76, PMS. On 12 hour dead bird on sea
rocks. Mallophaga (1), 75; Feather mites (2), 60. KOH.

ANSERIFORMES

ANATIDAE

Anas superciliosa superciliosa Gmelin, 1789 (Grey Duck)
Lake La Barge, South Promontory, 26.XI.76, DSH. On
24-48 hour dead bird floating on water. Mallophaga (1), 25;
Feather mites (1), 4. KOH.

CHARADRIIFORMES

SCOLOPACIDAE

Coenocorypha aucklandica huegeli (Tristram, 1893) (Snares
Island Snipe)
Biological Station, 22.II.77, DSH. On live fledgling.
Mallophaga (1), 15. HS + D-D.

Station Point, 29.I.77, DSH. On live adult. Mallophaga
(1), 19; Feather mites (1), 30. HS + D-D.

STERCORARIIDAE

Stercorarius skua lonnbergi (Mathews, 1912) (Southern Skua)
Sinkhole Gut, 28.XII.76, JWE. On 4-5 day dead adult
lying on boulder beach at high tide line. Mallophaga (1),
2. HS. Mallophaga (1), 2. KOH.

LARIDAE

Larus novaehollandiae scopulinus Forster, 1844 (Red-billed Gull)
Middle Arm Boat Harbour, 13.XI.76, PMS. On 12-18 hour
dead bird at edge of supralittoral - Olearia lyallii forest.
Mallophaga (2), 12; Feather mites (2), 10. KOH.

Mouth Ho Ho Creek, 12.XII.76, PMS. On 24-36 hour dead
adult on peat. Mallophaga (1), 1; Feather mites (1), 2.
KOH.

North Arm Boat Harbour, 19.XII.76, PMS. On 48-60 hour
dead adult on peat. Mallophaga (2), 2. KOH.

Station Point, 14.I.77, DSH. On fresh dead adult.
Feather mites (2), 10. KOH.

STERNIDAE

Sterna vittata bethunei Buller, 1896 (Antarctic Tern)

Middle Arm Boat Harbour, 23.XII.76, DSH. On live adult. None. HS.

Senecio Pool, 25.XII.76, DSH. On 12 hour dead female floating on water. Mallophaga (3), 17; Feather mites (3), 45. KOH.

Senecio Pool, 28.XII.76, PMS. On 24 hour dead 6 day old chick. None. KOH.

South side Boat Harbour, 3.XII.76, DSH. On live adult. None. HS.

South side Boat Harbour, 19.XII.76, DSH. On live newly fledged bird. Mallophaga (1), 2; Thysanoptera (1), 1. HS.

South Arm Boat Harbour, 3.I.77, PMS. On 12-24 hour dead 13 day old chick. Mallophaga (2), 39. KOH.

West side Ho Ho Bay, 31.XII.76, PMS. On 12-24 hour dead 11 day old chick. Mallophaga (2), 61. HS. Mallophaga (1), 4. KOH.

CUCULIFORMES

CUCULIDAE

Chalcites lucidus lucidus (Gmelin, 1788) (Shining Cuckoo)

Skua Point, 12.XI.76, PMS. On 48-72 hour dead bird found in penguin colony drainage. None. KOH.

PASSERIFORMES

MUSCICAPIDAE

Bowdleria punctata caudata (Buller, 1894) (Snares Fernbird)

Biological Station, 31.I.77, DSH. On live adult. Feather mites (1), 9. HS + D-D.

Biological Station, 5.II.77, DSH. On live adult. Feather mites (1), 39. HS + D-D.

Biological Station, 16.II.77, DSH. On live adult. Siphonaptera adult (1), 1. HS + D-D.

Biological Station, 21.II.77, DSH. On live adult. Feather mites (1), 15. HS + D-D.

Biological Station, 24.II.77, DSH. On live adult. Feather mites (1), 100. HS + D-D.

Biological Station, 25.II.77, DSH. On live adult.
Feather mites (1), 15. HS + D-D.

Penguin Colony 3, Penguin Creek, 2.III.77, DSH.
On live adult - bird 1 of 3. Feather mites (1), 200.
HS + D-D.

Penguin Colony 3, Penguin Creek, 2.III.77, DSH. On
live adult - bird 2 of 3. Siphonaptera adult (1), 1.
HS + D-D.

Penguin Colony 3, Penguin Creek, 2.III.77, DSH. On
live adult - bird 3 of 3. Feather mites (1), 7. HS +
D-D.

Petroica macrocephala dannefaerdi (Rothschild, 1894) (Black
Tit)

Biological Station, 25.II.77, DSH. On live adult.
Feather mites (1), 5. HS + D-D.

Station Point, 25.II.77, DSH. On live adult.
Mallophaga (1), 5; Feather mites (2), 35. HS + D-D.

Turdus merula merula Linnaeus, 1758 (Blackbird)

Muttonbird Creek, 28.Xii.76, PMS. On about 10 day
dead adult male. Mallophaga (2), 21; Siphonaptera adult
(1), 1. KOH.

Station Cove, 24.XII.76, JLW. On about 14 day dead
adult male lying on peat in Olearia forest. Mallophaga
(2), 56. KOH.

West side Ho Ho Bay, 15.I.77, PMS. On 6-12 hour
dead fledgling. Mallophaga (2), 102. KOH.

ZOSTEROPIDAE

Zosterops lateralis lateralis (Latham, 1801) (Silvereye)

Biological Station, 30.XII.76, DSH. In 2 hour
vacated nest. Siphonaptera larvae (1), 9. HS.

Biological Station, 6.I.77, DSH. On live adult.
Feather mites (2), 15. HS.

Station Point, 25.II.77, DSH. On live adult.
Mallophaga (1), 17; Feather mites (2), 27. HS + D-D.

PLOCEIDAE

Passer domesticus (Linnaeus, 1758) (House Sparrow)

Biological Station, 13.XI.76, DSH. On mummified male
caught in corrugated iron roof of Dangerous Goods Store.
Mallophaga (1), 2; Feather mites (2), 5. KOH.

Castaway Hut, 10.XI.76, DSH. On mummified bird found
on floor of hut. Feather mites (1), 25; Collembola (1), 1;
Planotortrix syntona laqueorum larva, 1 (Lepidoptera). KOH.

PINNIPEDIA

OTARIIDAE

Arctocephalus forsteri (Lesson, 1828) (New Zealand Fur Seal)
 South Coast, 7.II.77, DSH. On flippers of pups.
 Anoplura (1), 15. HS.

Phocarcos hookeri (Gray, 1884) (Hooker's Sea Lion)
 Biological Station, 14.I.77, DSH. On fresh dead adult
 male. Anoplura (1), 174. HS.

DICOTYLEDONES

COMPOSITAE

Senecio stewartiae J.B. Armst. (Tree Daisy)
 Biological Station, 11.XII.76, JWE. Sweeping flowers.
 Mallophaga (1), 1. HS.

MISCELLANEOUS COLLECTIONS

Litter in Cave

Tern Point, 21.II.77, PMS. In cave and nest litter
 of Pachyptila turtur fallai, Pterodroma inexpectata, and
Puffinus griseus. Siphonaptera adults (1), 8. Tullgren
 Funnel Extraction.

LIFE HISTORY OF AN EPHYDRID, SCATELLA ABBREVIATA

Scatella abbreviata is a dark brown, stout bodied brachypterous ephydrid fly about 1.5 mm long. It occurs in a variety of habitats around Main Island and I have collected it from a supralittoral plant community of Poa astonii and Tillaea moschata at Seal Cove, from a sodden muttonbird carcass lying in Tillaea above Sinkhole Gut, and most commonly from the upper seepage area at Sinkhole. In this area it can be found on the surface of wet silt. Copulating pairs are common. Scatella is brachypterous and jumps like a collembolan or retreats into crevices when disturbed.

All life history stages of Scatella occur in the seepage habitat. Immature stages (egg, larvae, and puparia) were extracted by sieving silt samples through a fine brass gauze. Some larvae were heat killed and fixed in Fester's Fluid but the majority of eggs and larvae were mounted in lactophenol-PVA/Lignin pink on slides. The immature stages will be described from this material for a paper on the fly's life history.

Crude attempts to rear Scatella in the laboratory were unsuccessful. Adult flies died within 48 hours of capture without ovipositing. Field collected eggs kept in small Petri dishes of water hatched but the first instar larvae soon died. Facilities for rearing field collected larvae were not available on this expedition, but larvae probably could be reared on soft nutrient agar to determine the duration of the immature stages and rate of development. This would make a worthwhile project for future expeditions.

SUPRALITTORAL INVERTEBRATES

On past Snares Islands expeditions scant collecting has been done from the supralittoral zone as most of the beaches are relatively inaccessible. Two beaches on the west coast of Main Island, Sinkhole and Sinkhole Gut, are accessible. A survey of their supralittoral invertebrates was made.

Sinkhole is a huge, vertical-sided hole in the plateau at the base of North Promontory. Apparently it was formed by sea erosion inside the tunnels in the west wall and continual slumping from above. In its present form, a steep boulder beach fills the eastern two thirds of the hole about 40 m below Sinkhole Flat, and the sea enters by two tunnels in the sheer west wall. Runoff from surrounding hillsides drains down the steep walls. This is often scattered by wind and mixed with sea spray, an almost constant feature here. Because the beach is so low between cliffs, it receives no direct sunshine and consequently it is cool and wet at all times.

Decaying wrack accumulates in the upper littoral. Higher up the beach are small caves and overhangs. Large boulders in this area are perpetually wet and, on the tops and sides inaccessible to seals, grow lichens and green algae. Organic detritus, mainly Poa and Hebe leaves and flowers, accumulate on rocks and ledges. Several bird carcasses accumulate among the boulders, and the upper beach is littered with sodden peat and decaying tussocks from the hillsides above. Fur seals rest on the beach in moderate numbers. They contribute significant energy to the habitat by excretia and mechanically exclude algae and lichens from many rock surfaces.

Sinkhole Gut is a much larger and more open boulder beach just south of Sinkhole. The beach of pebbles and large boulders lies between steep cliffs, and a small stream drains down a steep gully at the east end. Seepage from the slopes above trickles down the cliffs in places. The lower beach consists of huge boulders which shelter the upper beach from westerly storms. In contrast to Sinkhole, the beach is open and sunny. Usually dry, it is spray-swept during storms. It is a favoured resting place for seals and about 70 individuals may be found there at most times. Seal faeces and urine stain the rocks and these may be important in the invertebrate habitats.

THE WRACK HABITAT

SINKHOLE

Composition of the wrack is almost exclusively of Durvillea antarctica but traces of Hormosira banksii and Lessonia variegata were found.

Fresh wrack deposits were quickly colonised by the large kelp fly, Protocoelopa philpotti, whose larvae feed on and burrow through the kelp, accelerating its decomposition. The full grown larvae pupate among the rocks under the kelp and are heavily parasitised by Antarctopria coelopae, a small flightless diapiiid wasp. On one occasion, 33% of a collection of 125 fresh Protocoelopa puparia were parasitised by this wasp. Antarctopria was very abundant and it was usually found running over the damp rocks in this area of the beach. A large red talitrid amphipod abounds in the lower layers of the wrack and an oligochaete worm lives in the copious quantities of slime produced as the kelp decomposes.

SINKHOLE GUT

Wrack was not a regular feature of this beach and only one patch was found during the expedition. The deposit was among upper littoral boulders and supported large numbers of two species of kelp fly, Protocoelopa philpotti and Coelopa debilis, and talitrid amphipods. Coelopid puparia were not found so parasitism by wasps could not be investigated.

EAST COAST BEACHES

Occasionally, small wrack deposits formed at places on the east coast of Main Island.

At North Arm of Boat Harbour the wrack contained conspicuous quantities of a red alga, Gigartina sp. in addition to Durvillea. Decomposition was slow and did not produce much slime. The most abundant species on this beach was Coelopa debilis.

In Station Cove and Seal Cove fur seals preferentially rested on wrack beds and consequently they contained large quantities of seal dung. This attracted other fly species in addition to coelopids. These included Macrocanace australis (Canaceidae), the common blowfly Xenocalliphora eudypiti, and three species of Muscidae. Although there were many adults of these flies, they did not breed in such wrack since their larvae and pupae were not found. One especially putrescent patch of Durvillea at Seal Cove supported many larvae of the syrphid Helophilus hochstetteri.

In comparison with the wrack of various South Island beaches, the wrack zone at the Snares Islands has a very sparse fauna. Spiders, mites, isopods, collembola and staphylinid and hydrophilid beetles are all common members of the wrack fauna on South Island beaches but were never found at the Snares. This lack of species diversity appears to be compensated for by the vast numbers of talitrid amphipods and the large coelopid Protocoelopa philpotti which are the two dominant species living in this habitat.

SEEPAGE HABITATS

SINKHOLE - Drainage from North Promontory seeps down parts of the almost vertical north wall of Sinkhole. There are two main seepage areas which differ in a number of characteristics and have different faunas.

The largest seepage is perennial and is characterised by an extensive sward of the hepatic Lophocolea minor. It ends in a small pool amongst the rocks in the middle region of the boulder beach. Most hepatic grows in the central wettest part of the seepage where it may be up to 2 cm thick. The drier, outer margins of the seepage contain a considerable amount of accumulated silt on which a sparser growth of an unidentified Lophocolea species may be found.

The most common invertebrate species on this seepage is Aphrosylopsis sp., a dolichopodid fly. At times, it is numerous on the rock face, feeding, courting and copulating. They are predaceous and feed on small chironomid larvae which live amongst the hepatic. Dolichopodid larvae are uncommon in drier silt at the margin of the seepage. Two species of Chironomidae are found here. A large, slender bodied species was found most commonly at the base of the seepage and frequently sheltered around the bases of several large rocks. These "bloodworm" type larvae live amongst detritus in a small freshwater pool at the bottom of the seepage. Adults of a smaller, buff-coloured species occur all over the seepage. Their larvae and pupae are very abundant amongst hepatics in wetter parts of the seep and amongst the detritus in the freshwater pool. Other species found on the hepatic surface are a large red predaceous mite, a small black mite, two species of Collembola, a muscid fly (Limohelina sp.), and the diapriid wasp Antarctopria coelopae. In addition, an essentially aquatic community lives amongst the hepatics. Invertebrates in this habitat are a small black flatworm, an oligochaete, one amphipod, and two species of isopods. The small pale orange isopod (Iais sp.) was abundant amongst the very wet hepatic, but the larger black species (Paravireia sp.) occurs only at the drier extremities of the seepage.

The second main seepage is on the north wall at the top of the beach. Part of this area receives considerable water flow and the rock face is bare except for the scant growth of Lophocolea minor and adhering Poa debris. The upper part receives little water and dries periodically. A thick layer of silt covers the rock and there are a few Lophocolea patches. The rock is well weathered and is quite friable. Many of the animals live in cracks and crevices in this loose rock. All those species found in the main seep occur here and other animals include a spider, 5 species of Coleoptera and 2 species of Diptera.

Orchesia rennelli (Melandryidae) and a species of Salpingidae are uncommon on this seepage but are more abundant around patches of lichens on dry areas of the rock wall. The staphylinid beetle found on the Lophocolea seepage is the same species that occurs amongst the peat in the upper boulder

beach zone and under stones at the Sinkhole Gut beach. This species is uncommon on the seepage surface but adults, larvae, and cocoons occur in rock crevices.

Two most interesting beetles are Namostygnus flemingi (Hydrophilidae) and Meropathus johnsi (Hydraenidae) also found under the loose rock and on the surface of the seepage at times. Namostygnus larvae are predaceous and are easily recognised from other Coleoptera larvae by the well sclerotised upturned head and large curved mandibles. This is a 2 mm long black beetle. The pronotum and elytra of many specimens are colonised by a green algae which camouflages the beetle and it is very easily overlooked.

The Diptera present are Scatella abbreviata (Ephydriidae) and a species of Chironomidae. The chironomid is found only on the upper part of the seepage. It is quite small (less than 2 mm long), is pale (almost white) and the wings are shorter than the abdomen. It's almost transparent, white, slender larvae live in the silt and can be extracted by sieving.

SINKHOLE GUT - Here the main seepage area is on a rock face at the top of the beach. It is exposed to the sun and 5 cm thick mats of Lophocolea minor grow here. Tillea moschata grows among the hepatics on narrow rock ledges. The fauna of this seepage is identical to but less abundant than that of the Sinkhole seepage.

THE SUPRALITTORAL BOULDER BEACH

SINKHOLE - A large rock at the bottom of the beach and by the north wall is the unique habitat of a chironomid, Halirytus sp. The rock is directly beneath a waterfall which is the termination of a small perennial creek flowing from North Promontory through several penguin rookeries. Halirytus larvae live in gelatinous tubes coated with particles of debris on the rock surface. Adults are brachypterous and swarm over the rock where males mate with female pupae or newly emerged females.

Tipulid larvae (Limonia sp.) are common on larger boulders and rock faces. They live in and around shallow crevices and depressions in the rock and often hide among the thin layer of detritus which accumulates on the wet rock.

The detritus under stones in the middle to upper reaches of the beach has a characteristic fauna. This consists of an oligochaete worm, the large, red talitrid amphipod, the isopod Phalloniscus chiltoni, two species of mites, a collembolan, one species of staphylinid beetle, the kelp fly Coelopa debilis and its hymenopteran parasite, Kleidotoma sp. The presence of Coelopa puparia indicates that wrack is deposited on the beach at times. However, the main organic material here seems to be seal excretia, bird carcasses and peat and tussock. Sea bird carcasses were quickly colonized by amphipods almost totally excluding other species. Very few carcasses contained maggots of Xenocalliphora eudypiti (Calliphoridae) which is abundant on carcasses at higher altitudes.

Very little lives in the area of fallen in peat and tussock at the top of the beach. The species present are more characteristic of terrestrial habitats than are those found in the supralittoral. The most common species of this zone is a second species of Limonia (Tipulidae). Its larvae live among the surface layer of sodden peat, and the brachypterous adults are commonly found on the surface and on the rock walls at the side. Other species present are a large red flatworm, mites, collembola, a staphylinid and two carabids, Diglymma castigatum and Oopterus strenuus.

SINKHOLE GUT - Only a few species are found on the boulder beach here. In damper areas and lower down the beach are the usual talitrid amphipods and the isopod Phalloniscus chiltoni. Two species of staphylinid (those found at Sinkhole) and the carabid Kenodactylus adouini live on the detritus and peat beneath stones by the south wall of the beach. The most unusual insect found in this habitat is a large stenopelmaticid weta Zealandosandrus subantarcticus which lives in tunnels in the detritus. Sea bird carcasses are common

on this beach and support large numbers of Xenocalliphora eudtyti larvae, the pupae of which may be parasitised by Antarctopria coelopae. The other common fly at Sinkhole Gut is Macrocanace australis. This fly is attracted to seal dung and many adults were observed feeding and copulating on it, but larvae were never found.

The boulder beaches at Sinkhole and Sinkhole Gut share several species but each also has a number different species. Wrack is a constant feature of Sinkhole beach and this seems to determine its fauna which resembles that of many South Island beaches. By comparison, seal excretion seems to be the principal energy source on Sinkhole Gut beach, and there is a marked difference in its fauna.

BARNACLES

Barnacles are not a common element of the marine fauna of the Snares Islands. Specimens have been collected in past years, mostly from the more sheltered, eastern shores of Main Island. All the collections were assembled in 1977 and sent to Dr Brian A. Foster, University of Auckland, for identification. His prompt attention to these collections and the subsequent identifications are greatly appreciated.

There were two species of barnacles, Calantica spinosa and Epopella plicata, known from the Snares Islands before these collections were examined. Seven additional species are new records and the ranges of 5 species are extended from Stewart Island to the Snares Islands. According to Dr Foster (pers. comm.) there is a surprising absence of Megabalanus decorus. He also stated that the abundance of Ibla idiotica in the intertidal zone is striking and, except for the absence of Elminius modestus at Snares, the barnacle fauna is similar to Stewart Island shores.

All the barnacles in the below list are from the Snares Islands. The catalogue numbers (SA-904, 3040) and complete collection data are in the computerised "Collections Catalogue of the Snares Islands, New Zealand Marine Zone Survey" found in the 1974-1975 Snares Islands Expedition report (SA-293-3250) and the present report (SA-3251-3563).

BALANIDAE

Megabalanus campbelli (Filhol, 1885)

SA-3417. Rima Islet, Western Chain, 21 November 1976, G.D. Fenwick. Encrusted with sponges and hydroids in crevice in Durvillea zone.

SA-3540. North Daption Rock, 8 February 1977, D.S. Horning. Two empty, bleached specimens in rock crevice, 45 m above sea level.

SA-3541. Ho Ho Islet, 16 February 1977, D.S. Horning. Amongst sponges and algae in intertidal pool.

Notobalanus vestitus (Darwin, 1854)

SA-3440. West side Western Chain, 4 December 1976, D.S. Horning. Two Galeolaria sp. and polyzoan encrusted specimens in craypot about 120 m depth.

CHTHAMALIDAE

Chamaesipho columna (Spengler, 1790)

SA-3260. Boat Harbour? 7 February 1961. G.A. Knox. No other data known.

IBLIDAE

Ibla idiotica Batham, 1945

SA-3213. South side Boat Harbour, 4 January 1967, G.A. Knox. In intertidal pool.

SA-3279. South side Boat Harbour, 4 January 1967, G.A. Knox. In Durvillea zone pool.

SA-3281. Seal Point, 6 February 1972, K.J. Sainsbury. In mid-eulittoral zone, under rock overhang.

SA-3541. Ho Ho Islet, 17 February 1977, D.S. Horning. Amongst sponges and algae in intertidal pool.

SA-3547. Ho Ho Islet, 17 February 1977, G.D. Fenwick. On rock in crevice, upper Durvillea zone.

SCALPELLIDAE

Calantica spinosa (Quoy and Gaimard, 1834)

SA-3280 Ho Ho Bay, 26 January 1972, D.S. Horning. On rock in sea cave.

SA-3281. Seal Point, 6 February 1972, K.J. Sainsbury. In mid-eulittoral zone, under rock overhang.

SA-3282. East end Seal Point, 21 November, 1974, D.S. Horning. At mid-tide level in large tide pool.

SA-3285. Ho Ho Point, 2 February 1961, G.A. Knox. No other data known.

SA-3447. Seal Point Pool, 29 December 1976, D.S. Horning. On rock at high-tide line on seaward side of sheltered small branch of large pool.

SA-3541. Ho Ho Islet, 17 February 1977, D.S. Horning. Amongst sponges and algae in intertidal pool.

SA-3564. Seal Point Pool, 26 February 1977, D.S. Horning. On rock in upper littoral zone in sheltered cove of large pool.

Calantica villosa (Leach, 1824)

SA-3055. East end Seal Point, 1 February 1975, D.S. Horning. In large, sheltered tide pool 0-6 m depth.

SA-3279. South side Boat Harbour, 4 January 1967, G.A. Knox. In Durvillea zone pool.

SA-3283. Mollymawk Bay, 6 December 1974, D.S. Horning. On rock in crevice, 12.2 m depth.

SA-3285. Ho Ho Point, 2 February 1961, G.A. Knox. No other data known.

SA-3541. Ho Ho Islet, 17 February 1977, D.S. Horning. Amongst sponges and algae in intertidal pool.

SA-3547. Ho Ho Islet, 17 February 1977, G.D. Fenwick.
On rock in crevice, upper Durvillea zone.

TETRACLITIDAE

Epopella plicata (Gray, 1843)

SA-904. Ho Ho Islet, 7 February 1975, D.S. Horning.
In shallow mid-littoral pools.

SA-3040. East end Seal Point, 21 November 1974, D.S.
Horning. At low to mid-tide level at east end of large,
sheltered tide pool.

SA-3197. South side of Boat Harbour, 1967, G.A. Knox.
Under Durvillea antarctica.

SA-3222. North end Rocky Islet, December 1968, D.B.
Cameron. On rock platform at top of Durvillea antarctica
zone.

SA-3269. Boat Harbour?, 26 January 1961, G.A. Knox.
In lower littoral zone.

SA-3281. Seal Point, 6 February 1972, K.J. Sainsbury.
In mid-eulittoral zone, under rock overhang.

SA-3282. East end Seal Point, 21 November 1974, D.S.
Horning. At mid-tide level at east end of large, sheltered
tidepool.

SA-3285. Ho Ho Point, 2 February 1961, G.A. Knox.
No other data known.

SA-3406. Rima Islet, Western Chain, 21 November 1976,
G.D. Fenwick. From Durvillea antarctica holdfasts, upper
Durvillea zone algae.

SA-3447. Seal Point Pool, 29 December 1976, D.S.
Horning. On rock at high tide line on seaward side of
sheltered small branch of large pool.

SA-3467. Tip of Station Point, 20 December 1976,
G.D. Fenwick. Under small overhang in upper Durvillea
antarctica zone.

SA-3493. Station Point, 8 January 1977, G.D. Fenwick.
On rock encrusted with crustose coralline algae in upper
mid-littoral zone.

SA-3545. Ho Ho Islet, 16 February 1977, D.S. Horning.
On rock in Durvillea zone.

SA-3546. Ho Ho Islet, 16 February 1977, D.S. Horning.
On rock, 2 m above Durvillea zone.

SA-3564. Seal Point Pool, 26 February 1977, D.S.
Horning. On rock in upper littoral zone in sheltered cove
of large pool.

Tetraclitella purpurascens (Wood, 1815)

SA-3220. Station Cove, 3 February 1972, D.S. Horning.
On Haliotis australis shell, 3 m depth.

SA-3269. Boat Harbour?, 26 January 1961, G.A. Knox.
In lower littoral zone.

SA-3284. Trumpeter Bay, South Promontory, 10 February
1975, D.S. Horning. From upper margin of Durvillea zone.

AMPHIPODA - CAPRELLIDEA

Several hundred caprellid amphipods have been collected at the Snares but these include two species only. Caprellina longicollis (Nicolet) is extremely abundant from the intertidal to over 30 m depth on algae, Bryozoa and a variety of other habitats. The second species, Caprella equilibra, seems to be very restricted; it has been found only on hydroids in the lower littoral on exposed shores. Here it occurs in very high densities.

The New Zealand caprellid fauna consists of three intertidal - shallow water species: Caprellina longicollis, Caprella equilibra and an undescribed species. Thus the Snares caprellid fauna is similar to that of the mainland, although the more uncommon third species has not been found there.

DECAPODA

Twenty-one species of brachyuran crabs are known from the Foveaux Strait - Stewart Island region, while only 7 occur as far south as the Auckland Islands. Thus the fauna of the intermediate Snares Islands is of considerable zoogeographical interest.

Previous to the University expeditions, only 6 species of decapods were known from the Snares. Careful searching during the 1974-1975 and 1976-1977 expeditions has increased this to 13 species. Those species asterisked (*) were collected during University of Canterbury expeditions.

NATANTIA

ALPHEIDAE

- * Alpheus socialis Heller, 1865

HIPPOLYTIDAE

- * Nauticaris marionis Bate, 1888

REPTANTIA : ANOMURA

GALATHEIDAE

- * Munida gregaria (Fabricius, 1793)

PAGURIDAE

- * Paguristes subpilosus Henderson, 1888
- * Pagurus norae Chilton, 1911
- * Pagurus stewarti (Filhol, 1883)
- * Pagurus thompsoni (Filhol, 1885)
- * Porcellanopagurus edwardsi Filhol, 1884

PALINURIDAE

- * Jasus edwardsii (Hutton, 1875)

REPTANTIA : BRACHYURA

MAJIDAE

- * Jacquinotia edwardsii (Jacquinot, 1853)
- * Leptomithrax australis (Jacquinot, 1853)

PORTUNIDAE

- Nectocarcinus antarcticus (Jacquinot, 1853)
- Nectocarcinus bennetti Takeda and Miyake, 1969

Generally the decapod fauna of the Snares Islands is depauperate. Leptomithrax australis is the only crab found intertidally and in shallow water. Nauticaris marionis and Jasus edwardsii are moderately abundant subtidally in crevices and caves. The hermit crabs, Pagurus norae and P. thompsoni are the only other moderately common decapods, and they are restricted to sandy bottoms below about 30-50 m depth. Both Alpheus socialis and Munida gregaria are known only from single specimens. The remaining species are all deeper water (deeper than 40-50 m) dwellers and little is known of their abundance.

The Snares Islands decapod fauna is reported and discussed more fully in a paper presently being prepared by Mr Fenwick. The manuscript will be submitted to the New Zealand Journal of Marine and Freshwater Research.

ISOPODA

A taxonomic study of the marine Isopoda of the Snares Islands was the main marine project during this expedition. The isopod fauna of New Zealand is incompletely known and this study will help to better understand some of the species and the zoogeography of the group.

Extensive collecting in intertidal and sublittoral habitats yielded rich collections of isopods. More than 40 species in 15 families have now been found. At least 9 species appear to be previously unrecorded from New Zealand or are undescribed. One, and possibly two, species belong to families previously unknown from New Zealand waters.

A list of families and genera of isopods from the Snares is given below. In most cases specific names are not listed because many determinations have not been checked against taxonomic descriptions. Families and genera apparently not previously recorded from New Zealand are asterisked (*).

TRIBE ASELLOTA

ANTIASIDAE

Antias sp. 1
Antias sp. 2
Antias sp. 3

*IANIRELLIDAE

*Genus and species undetermined

IANIRIDAE

Iais sp.
Ianira (Ianira) neglecta Chilton
Ianira (Iathrippa) longicauda (Chilton)

*Genus and species 1 undetermined

*Genus and species 2 undetermined

ILYARACHNIDAE

*Genus and species undetermined

JAEROPSIDAE

Jaeropsis sp.

MUNNIDAE

- *Austrosignum sp.
Munna neozelanica Chilton
Munna n.sp. 1
Munna n.sp. 2
Paramunna sp.

*PLEUROGONIDAE

- *Pleurosignum sp.

STENETRIIDAE

- Stenetrium sp.

TRIBE VALVIFERA

ASTACILLIDAE

- Astacilla sp.

TRIBE FLABELLIFERA

ANTHURIDAE

- Paranthura sp.

- *Genus and species undetermined
 Genus and species undetermined

CYMOTHOIDAE

- Nerocila orbigni (Guérin)

EURYDICIDAE

- Cirolana sp. 1
Cirolana sp. 2

LIMNORIIDAE

- Limnoria (Limnoria) sp.
Limnoria (Phycolimnoria) sp.

PLAKARTHRIIDAE

- Plakarthrium typicum Chilton

SPHAEROMIDAE

Group Eubranchiatae

Amphoroidea sp.
Cymodocella tubicauda Pfeffer
Dynamenella huttoni (Thomson)
Dynamenella sp.
Scuteloidea sp.

*Genus and species undetermined

Group Hemibranchiatae

Cilicaea sp.
Cymodoce sp. 1
Cymodoce sp. 2
Exosphaeroma sp. 1
Exosphaeroma sp. 2
Exosphaeroma sp. 3
Isocladus sp.

Species of Sphaeromidae will be better understood when a revision of this family, currently in press, becomes available. A paper on the Asellota of the Snares Islands is now in preparation by Mr Fenwick. It will include an illustrated key to species and taxonomic descriptions of at least 6 new species. The rest of the study will be written up subsequent to this paper.

SUBTIDAL ECOLOGY

Observations were made on the distribution of sessile benthic organisms from 0 to 30 m depth at selected sites. Notes were taken during more than 20 dives, mainly in Punui and Ho Ho Bays on the east coast of Main Island. Caves and large pools in the area were explored and their biota noted. The aim of this work was to prepare a descriptive outline of the sublittoral biota, especially the algae.

A brief outline of the vertical distribution of algae in Ho Ho Bay is given below. Ho Ho Bay is one of the more sheltered areas on the island. The same floral zones seem to be present at more exposed localities although the width and depth of each zone varies.

The well-defined intertidal Durvillea antarctica zone stops abruptly at about ELWS (0 m depth). Immediately below this is a narrow zone of Marginariella urvilliana extending to about 2 m depth. Within this zone is a sparse understorey flora of foliose corallines, Euptilota formosissima, Ballia callitricha, Hymenocladia sanguinea and Cladhymenia oblongifolia. Between these algae the entire rock surface is covered with thick crustose coralline algae.

At 2 m depth there is sudden change in flora. M. urvilliana is infrequent and a profusion of reds dominates the scene. Hymenena sp. is marginally dominant with Streblocladia glosmerulata being the next most important species. Among these algae occur masses of Heterosiphonia sp., Schizoserus davisii, Spatoglossum chapmanii, Ptilonia willana, Desmarestia firma and a few large bladed reds. This zone extends about 1 m vertically and appears to be transitional between the M. urvilliana zone above and the Lessonia variegata zone below.

Huge L. variegata plants at 3 m depth form the upper limits of the Lessonia zone. These plants are spaced about 80 cm apart and their fronds form a dense canopy, broken occasionally where Ecklonia radiata or D. firma plants occur. There is a diverse but moderately dense understorey within this forest. It consists mainly of the reds Heterosiphonia sp., E. formosissima, Hymenena sp. ?Rhodophyllis sp., S. davisii, Plocamium sp. and Craspedocarpus erosus and the browns S. chapmanii and Halopteris sp. Very dense masses of B. callitricha and C. oblongifolia occur on the stipes of L. variegata. Thick layers of crustose coralline algae cover the rock surface. Animals first become conspicuous at about 6 m depth within this zone. Masses of foliose Bryozoa, crustose Bryozoa, sponges, anemones, pycnogonids, starfishes and the large urchin Evechinus chloroticus occur on the rock and large L. variegata holdfasts.

The lower limit of the dense Lessonia zone is at about 7 m depth. The grazing activities of E. chloroticus may limit L. variegata growth below this depth. Dense

concentrations of these urchins occur here and their effect on algal associations is well known. The effect of urchin grazing was very marked. Algal cover is sparse and consists of a few species only: Hymenena sp., S. davisii, Asparagopsis armata, S. glomerulata, Caulerpa brownii, Laingia hookeri, Heterosiphonia sp., E. formosissima and S. chapmanii. In places there are large dense patches of C. brownii with no reds, and crustose corallines cover all rock surfaces.

With decreasing densities of urchins below about 10 m, scattered plants of L. variegata and E. radiata occur, although algal cover remains sparse. This situation persists to 18 m depth where the rock slope gives way to an almost level bottom of coarse shelly sand, cobbles and small boulders and low hummocks of bedrock. L. variegata, E. radiata and Marginariella boryana occur on the bedrock outcrops. Large patches of C. brownii grow on some exposures covered with thin layers of sediment. A variety of algae is on the boulders and cobbles. These include: S. glomerulata, E. formosissima, C. erosus, A. armata, Hymenena sp., S. davisii, L. hookeri, ?Ulva sp., Curdia coriacea, D. firma and Epymenia wilsonis. Crustose coralline algae are common but there was considerable bare rock. The large holothurian, Stichopus mollis, was very common on bedrock beside the sand. Beneath most boulders were brittlestars, Ophionereis fasciata, and another holothurian, Chirodota gigas.

Under conditions of greater wave exposure these zones are depressed. The M. urvilliana zone ranges between 4-8 m. D. firma dominates the transition zone from about 8-13 m where the L. variegata zone begins. Urchins are not found above about 13 m depth and Bryozoa, hydroids and sponges are conspicuous only below 15 depth. The real situation, however, is confused by differences in dissection, slope and aspect of the substrate, by wave exposure and by the grazing activities of urchins.

A more detailed account of the subtidal zonation of algae and larger animals will be prepared in the near future. Comparisons will be made between sheltered and exposed situations and other modifying factors, including grazing by large invertebrates, will be discussed.

MARINE COLLECTIONS CATALOGUE

The sublittoral zone flora and fauna survey initiated during the 1974-75 expedition was continued this expedition. More than 20 SCUBA and snorkel dives were made along the east and west coasts of Main Island. Special emphasis was placed on collecting algae, Pycnogonida, Decapoda, Isopoda, Amphipoda and Pisces.

The collection records have been standardised and put onto computer cards. Records from previous University of Canterbury Snares Islands expeditions are included in the catalogue. This computer-based system provides an easy method for updating and adding records. A sort programme for the different groups of organisms may be added when the catalogue is more extensive. Computer print-outs are readily available for specialists who are working on various groups.

The catalogue format includes locality and ecological information followed by the groups of flora and fauna in each collection. The portion of the catalogue which includes collections made this expedition is reproduced on the following pages to illustrate the information content.

Organisms from collections that are currently being studied include marine algae (Dr Murray Parsons, Botany Division, DSIR, Lincoln), Decapoda and Isopoda (G.D. Fenwick, University of Canterbury), Echinodermata (Dr D.S. Horning and G.D. Fenwick, University of Canterbury), fishes (J. Moreland, National Museum of New Zealand), gammaridean Amphipoda (Dr J.K. Lowry, Australian Museum, Sydney), Mollusca (Dr F.M. Climo, National Museum of New Zealand), Pycnogonida (Dr W.C. Clark, University of Canterbury) and Stauromedusae (Dr P.G. Corbin, Marine Laboratory, Plymouth). A paper on Snares Islands Decapoda is in preparation by G.D. Fenwick.

The collections are held by Botany Division, DSIR, Lincoln; National Museum of New Zealand, Wellington and the Department of Zoology, University of Canterbury, Christchurch.

COLLECTIONS CATALOGUE OF THE SNARES ISLANDS,
NEW ZEALAND MARINE ZONE SURVEY

- + + + + +
- SA-3251 SKUA POINT TO HO HO POINT, SNARES ISLANDS, N.Z. 1968-1969
D.B. CAMERON SLOPING ROCK, MIDLICHEN ZONE, EXPOSED.
GREEN LICHEN, (DBC L-23).
ACARINA
COLLEMBOLA
COLEOPTERA
LICHEN
- SA-3252 SKUA POINT TO HO HO POINT, SNARES ISLANDS, N.Z. 1968-1969
D.B. CAMERON HORIZONTAL ROCK, MIDLICHEN ZONE, SEMIEXPOSED.
GREY LICHEN, (DBC L-24).
ACARINA
COLLEMBOLA
COLEOPTERA
LICHEN
- SA-3253 SKUA POINT TO HO HO POINT, SNARES ISLANDS, N.Z. 1968-1969
D.B. CAMERON SLOPING ROCK, MIDLICHEN ZONE, SEMIEXPOSED.
GREY LICHEN, (DBC L-25).
ACARINA
COLEOPTERA
LICHEN
- SA-3254 SKUA POINT TO HO HO POINT, SNARES ISLANDS, N.Z. 1968-1969
D.B. CAMERON HORIZONTAL ROCK, BOTTOM OF LICHEN ZONE,
SHELTERED.
BLACK LICHEN, (DBC L-44).
ACARINA
COLEOPTERA
LICHEN
- SA-3255 SKUA POINT TO HO HO POINT, SNARES ISLANDS, N.Z. 1968-1969
D.B. CAMERON HORIZONTAL ROCK, BOTTOM OF LICHEN ZONE,
EXPOSED.
GREEN LICHEN, (DBC L-61).
ACARINA
COLEOPTERA
LICHEN
- SA-3256 SNARES ISLANDS, N.Z. 29 -I-61
G.A. KNOX AMPHIPODA - GAMMARIDEA AMONG DURVILLEA ZONE ALGAE.
- SA-3257 SNARES ISLANDS, N.Z. 1961
G.A. KNOX IN SPONGE.
AMPHIPODA - GAMMARIDEA
- SA-3258 SNARES ISLANDS, N.Z. 6 -II-61
G.A. KNOX IN ADENOCYSTIS, INTERTIDAL.
AMPHIPODA - GAMMARIDEA
- SA-3259 SNARES ISLANDS, N.Z. 6 -I-61
G.A. KNOX INTERTIDAL.
AMPHIPODA - GAMMARIDEA
- SA-3260 SNARES ISLANDS, N.Z. 7 -II-61
G.A. KNOX CIRRIPEDIA
- SA-3261 SNARES ISLANDS, N.Z. 6 -II-61
G.A. KNOX FROM LESSONIA HOLDFAST.
AMPHIPODA - GAMMARIDEA
- SA-3262 SNARES ISLANDS, N.Z. 29 -I-61
G.A. KNOX UNDER LITTORAL ROCKS.
AMPHIPODA - GAMMARIDEA
- SA-3263 SNARES ISLANDS, N.Z. 26 -I-61
G.A. KNOX LOWER LITTORAL ROCKS.
AMPHIPODA - GAMMARIDEA
- SA-3264 SNARES ISLANDS, N.Z. 29 -I-61
G.A. KNOX AMONG DURVILLEA ZONE ALGAE.
AMPHIPODA - GAMMARIDEA
- SA-3265 SNARES ISLANDS, N.Z. 4 -II-61
G.A. KNOX AMONG DURVILLEA ZONE ALGAE.
AMPHIPODA - GAMMARIDEA
- SA-3266 SNARES ISLANDS, N.Z. 6 -II-61
G.A. KNOX IN LARGE ROCK POOL.
AMPHIPODA - GAMMARIDEA
- SA-3267 SNARES ISLANDS, N.Z. 29 -I-61
G.A. KNOX FROM SPONGES IN DURVILLEA ZONE.
AMPHIPODA - GAMMARIDEA
- SA-3268 BOAT HARBOUR, SNARES ISLANDS, N.Z. 4 -II-61
G.A. KNOX SUBLITTORAL.
AMPHIPODA - GAMMARIDEA

SA-3269 G.A. KNOX CIRRIPIEDIA	SNARES ISLANDS, N.Z. LOWER LITTORAL.	26	-I-61
SA-3270 NELLY POINT, HO HO BAY, G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z.	2	-II-61
SA-3271 G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. UNDER LOWER LITTORAL ROCKS.	29	-I-61
SA-3272 G.A. KNOX	SNARES ISLANDS, N.Z. ROCK POOL.	26	-I-61
SA-3273 OPPOSITE MOLLYMAWK ISLAND, G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. LITHOTHAMNION ZONE.	2	-II-61
SA-3274 G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. UPPER LITTORAL POOL.	2	-II-61
SA-3275 G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. FROM LESSONIA HOLDFAST.	5	-I-61
SA-3276 SENEIO CREEK, G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. UNDER LEAVES.	2	-II-61
SA-3277 G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. DURVILLEA ZONE POOL.	29	-I-61
SA-3278 G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. DURVILLEA ZONE POOL.	4	-I-61
SA-3279 SOUTH SIDE BOAT HARBOUR, G.A. KNOX CIRRIPIEDIA CALLANTICA VILLOSA(LEACH)	SNARES ISLANDS, N.Z. DURVILLEA ZONE POOL.	4	-I-67
SA-3280 HO HO BAY, D.S. HORNING CIRRIPIEDIA	SNARES ISLANDS, N.Z. ON ROCK IN SEA CAVE.	26	-I-72
SA-3281 SEAL POINT, K.J. SAINSBURY CIRRIPIEDIA	SNARES ISLANDS, N.Z. MIDLITTORAL, UNDER ROCK OVERHANG, BLACK.	6	-II-72
SA-3282 EAST END SEAL POINT, D.S. HORNING CIRRIPIEDIA	SNARES ISLANDS, N.Z. IN LARGE TIDEPOOL, EAST END, MIDTIDE LEVEL.	21	-XI-74
SA-3283 MOLLYMAWK BAY, D.S. HORNING CIRRIPIEDIA	SNARES ISLANDS, N.Z. ON ROCK CREVICE, 12.2 M DEPTH.	6	-XII-74
SA-3284 TRUMPETER BAY, SOUTH PROMONTORY, D.S. HORNING CIRRIPIEDIA	SNARES ISLANDS, N.Z. FROM UPPER MARGIN OF DURVILLEA ZONE.	10	-II-75
SA-3285 HO HO POINT, G.A. KNOX CIRRIPIEDIA POLLICIPES SPINOSUS QUAY AND GAIMARD	SNARES ISLANDS, N.Z.	2	-II-61
SA-3286 G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. AMONG CORALLINA.	6	-I-61
SA-3287 HO HO BAY, G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. FROM PACHYMENIA ZONE.	2	-II-61
SA-3288 G.A. KNOX COPEPODA	SNARES ISLANDS, N.Z. HIGH LITTORAL POOL.		1961
SA-3289 G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. DURVILLEA ZONE POOL.	29	-I-61
SA-3290 BOAT HARBOUR, G.A. KNOX ISOPODA	SNARES ISLANDS, N.Z. MIDLITTORAL CREVICES.	14	-I-67
SA-3291 SOUTH SIDE BOAT HARBOUR, G.A. KNOX ISOPODA	SNARES ISLANDS, N.Z. FROM DURVILLEA HOLDFAST.	4	-I-67
SA-3292 BOAT HARBOUR, G.A. KNOX ISOPODA	SNARES ISLANDS, N.Z. UNDER MIDLITTORAL BOULDERS.	8	-I-67
SA-3293 BOAT HARBOUR, G.A. KNOX ISOPODA	SNARES ISLANDS, N.Z. AMONG RED ALGAE.	3	-II-61

SA-3294 G.A. KNOX AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. AMONG ALGAE IN DURVILLEA ZONE POOL.	4	-I-61
SA-3295 SOUTH SIDE SOUTH PROMONTORY G.A. KNOX ISOPODA	SNARES ISLANDS, N.Z. PACHYMENIA ZONE, UNDER BOULDERS.	13	-I-61
SA-3296 BOAT HARBOUR, G.A. KNOX ISOPODA	SNARES ISLANDS, N.Z. SUPRALITTORAL CREVICE.	14	-I-67
SA-3297 STATION COVE, D.S. HORNING EUPHAUSIACEA NICTYPHANES AUSTRALIS G.O. SARS (EUPHAUSIIDAE). DET. G.D. FENWICK, 1977	SNARES ISLANDS, N.Z. INTERTIDAL ROCK POOL.	19	-I-72
SA-3298 BOAT HARBOUR, D.S. HORNING TANAIDACEA ISOPODA AMPHIPODA - GAMMARIDEA	SNARES ISLANDS, N.Z. ON MIDLITTORAL ROCK.	20	-I-72
SA-3299 BOAT HARBOUR C.J. HORNING ISOPODA	SNARES ISLANDS, N.Z. ON MIDLITTORAL ROCK.	19	-I-72
SA-3300 STATION POINT, K.J. SAINSBURY ISOPODA	SNARES ISLANDS, N.Z. LITTORAL CREVICE.	19	-I-72
SA-3301 STATION POINT, K.J. SAINSBURY SIPUNCULIDA	SNARES ISLANDS, N.Z. UNDER ROCK IN TIDE POOL.	19	-I-72
SA-3302 BOAT HARBOUR, D.S. HORNING AMPHIPODA - CAPRELLIDEA	SNARES ISLANDS, N.Z. UPPER SUBLITTORAL, ON CAULERPA BROWNII.	1	-III-72
SA-3303 BOAT HARBOUR, D.S. HORNING GASTROPODA	SNARES ISLANDS, N.Z. UPPER SUBLITTORAL, AMONG RED ALGAE.	19	-I-72
SA-3304 D.B. CAMERON OSTRACODA	SNARES ISLANDS, N.Z. SUPRALITTORAL POOL.	6	-XII-68
SA-3305 G.A. KNOX HYDROZOA	SNARES ISLANDS, N.Z. LOWER LITTORAL ROCK POOL, ON XIPHOPHORA.	26	-I-61
SA-3306 SOUTH SIDE BOAT HARBOUR, G.A. KNOX ANTHOZOA	SNARES ISLANDS, N.Z. DURVILLEA ZONE POOL.	4	-I-67
SA-3307 BOAT HARBOUR, G.A. KNOX ANTHOZOA	SNARES ISLANDS, N.Z. DURVILLEA ZONE POOL.	4	-I-67
SA-3308 EAST END SEAL POINT, D.S. HORNING DECAPODA LEPTOMITHRAX AUSTRALIS (JACQUINOT) (MAJIDAE). DET. G.D. FENWICK, 1976. LARGE FEMALE.	SNARES ISLANDS, N.Z. ON SIDE OF LARGE, 6 M DEEP TIDE POOL.	1	-II-75
SA-3309 EAST END SEAL POINT, D.S. HORNING DECAPODA LEPTOMITHRAX AUSTRALIS (JACQUINOT) (MAJIDAE). DET. G.D. FENWICK, 1976. CARAPACE ONLY.	SNARES ISLANDS, N.Z. IN BOTTOM OF LARGE, 6 M DEEP TIDE POOL.	1	-II-75
SA-3310 EAST END SEAL POINT, D.S. HORNING ATTACHED TO HYDROIDS. AMPHIPODA - GAMMARIDEA CERAPUS SP.	SNARES ISLANDS, N.Z. ON CARAPACE OF LEPTOMITHRAX AUSTRALIS,	1	-II-75
SA-3311 STATION COVE, D.B. CAMERON DECAPODA LEPTOMITHRAX AUSTRALIS (JACQUINOT) (MAJIDAE). DET. G.D. FENWICK, 1976. MEDIUM-SIZED FEMALE.	SNARES ISLANDS, N.Z. MIDTIDE POOL.	2	-I-69
SA-3312 G.A. KNOX BRACHIOPODA	SNARES ISLANDS, N.Z. DURVILLEA ZONE POOL.	30	-I-61
SA-3313 MOLLYMAWK BAY, D.S. HORNING EUPHAUSIACEA NICTYPHANES AUSTRALIS G.O. SARS (EUPHAUSIIDAE). DET. G.D. FENWICK, 1977	SNARES ISLANDS, N.Z. IN STOMACH OF TRUMPETER FISH.	27	-X-72
SA-3314 NORTH SIDE OF HO HO BAY, D.S. HORNING DECAPODA JASUS EDWARDSII (HUTTON) (PALINURIDAE). DET. G.D. FENWICK, 1976. 2 MEDIUM-SIZED ANIMALS.	SNARES ISLANDS, N.Z. ON ROCK FACE 8 M BELOW L.W.S. AT SIDE OF CAVE.	24	-XI-74

- SA-3315 SOUTHWEST OF BROUGHTON ISLAND, SNARES ISLANDS, N.Z. 25 -XI-74
K. SMITH, F.V. PRESIDENT KENNEDY IN CRAYPOT 130-165 M DEPTH.
DECAPODA
LEPTOMITHRAX AUSTRALIS (JACQUINOT) (MAJIDAE). DET. G.D. FENWICK, 1976.
4 LARGE MALES.
JACQUINOTIA EDWARDSII (JACQUINOT) (MAJIDAE). DET. G.D. FENWICK, 1976.
1 SMALL MALE, 1 SMALL GRAVID FEMALE.
- SA-3316 SENECIO POOL, SOUTH SIDE BOAT HARBOUR SNARES ISLANDS, N.Z. 20 -I-75
D.S. HORNING FROM MIXED RED ALGAE, SHELTERED,
HEAVY SEDIMENT LOAD.
- SA-3317 EAST SIDE SEAL POINT, SNARES ISLANDS, N.Z. 1 -II-75
C.E. HOLMES IN SHELTERED TIDE POOL, FROM ALGAE, 0-2 M
BELOW L.W.S.
INVERTEBRATA
ALGAE
- SA-3318 SENECIO POOL, SOUTH SIDE BOAT HARBOUR SNARES ISLANDS, N.Z. 20 -I-75
C.E. HOLMES FROM CAULERPA BROWNII, 1-2 M DEPTH.
- SA-3319 TRUMPETER BAY, SOUTH PROMONTORY, SNARES ISLANDS, N.Z. 10 -II-75
D.S. HORNING ON ROCK AT BASE OF LARGE BROWN ALGA,
(MARGINARIELLA), 12-18 M DEPTH.
PORIFERA
BRYOZOA
- SA-3320 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 21 -XI-74
C.E. HOLMES IN LARGE TIDE POOL, JUST BELOW SURFACE.
GASTROPODA
- SA-3321 SOUTH SIDE HO HO BAY, SNARES ISLANDS, N.Z. 23 -XII-74
D.S. HORNING ON BOTTOM, 6 M DEPTH, AMONG RED ALGAE.
- SA-3322 NORTH ARM BOAT HARBOUR, SNARES ISLANDS, N.Z. 18 -XI-74
D.S. HORNING
GASTROPODA
HALIOTIS IRIS GMELIN (HALIOTIDAE). DET. G.D. FENWICK, 1976.
- SA-3323 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 8 -II-75
D.S. HORNING
GASTROPODA
HALIOTIS AUSTRALIS GMELIN (HALIOTIDAE). DET. G.D. FENWICK, 1976.
- SA-3324 STATION COVE, SNARES ISLANDS, N.Z. 23 -I-75
D.S. HORNING IN BOTTOM OF 1 M DEEP TIDE POOL.
GASTROPODA
- SA-3325 WEST SIDE HO HO BAY, SNARES ISLANDS, N.Z. 26 -XI-74
D.S. HORNING LOOSE SHELLS FOUND ON BOTTOM OF BAY AT 22-24 M
GASTROPODA
- SA-3326 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 1 -II-75
C.E. HOLMES IN LARGE SHELTERED TIDE POOL, 0-2 M BELOW
L.W.S. FROM SPONGES.
- SA-3327 TRUMPETER BAY, SOUTH PROMONTORY, SNARES ISLANDS, N.Z. 10 -II-75
D.S. HORNING FROM DURVILLEA ANTARCTICA HOLDFAST.
- SA-3328 SENECIO POOL, SOUTH SIDE BOAT HARBOUR SNARES ISLANDS, N.Z. 20 -II-75
C.E. HOLMES FROM CAULERPA BROWNII, 0-2 M DEPTH. NORTH SIDE
OF POOL, SAMPLE B.
- SA-3329 WEST SIDE HO HO BAY, SNARES ISLANDS, N.Z. 16 -II-75
C.E. HOLMES FROM COMMON RED ALGA, 2 M BELOW L.W.S.
- SA-3330 OFF WEST SIDE OF MAIN ISLAND, SNARES ISLANDS, N.Z. 26 -XI-74
C.E. HOLMES & D.S. HORNING ABOARD F.V. PRESIDENT KENNEDY, FROM CRAYPOT,
146 M DEPTH, 4 COLLECTIONS.
BRYOZOA
- SA-3331 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 8 -II-75
D.S. HORNING ON NEAR VERTICAL ROCK FACES, 12-15 M DEPTH,
JUST ABOVE MARGINARIELLA FOREST, SHELTERED.
BRYOZOA
- SA-3332 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 1 -II-75
D.S. HORNING SHELLS AND DEBRIS FROM BOTTOM OF 6 M DEEP TIDE
POOL, SHELTERED.
- SA-3333 TRUMPETER BAY, SOUTH PROMONTORY, SNARES ISLANDS, N.Z. 10 -I-75
D.S. HORNING ON ROCK FACES 10-14 M DEPTH, AMONG
MARGINARIELLA HOLDFASTS.
BRYOZOA
PORIFERA
- SA-3334 SOUTH SIDE BOAT HARBOUR, SNARES ISLANDS, N.Z. -I-67
G.A. KNOX AMONG SUBLITTORAL ALGAE (KNOX 6).
- SA-3335 SKUA POINT, SNARES ISLANDS, N.Z. 9 -I-67
G.A. KNOX FROM DURVILLEA ZONE ALGAE (KNOX 4).
- SA-3336 BOAT HARBOUR, SNARES ISLANDS, N.Z. 15 -I-67
G.A. KNOX AMONG ALGAE OF DURVILLEA ZONE AND RED ALGAL
ZONE BELOW (KNOX 1).
- SA-3337 BOAT HARBOUR, SNARES ISLANDS, N.Z. 15 -I-67
G.A. KNOX AMONG DURVILLEA ZONE ALGAE AND RED ALGAL ZONE
BELOW (KNOX 7).

- SA-3338 BOAT HARBOUR, SNARES ISLANDS, N.Z. 15 -I-67
G.A. KNOX AMONG XIPHOPHORA ZONE ALGAE, SHELTERED.
- SA-3339 SKUA POINT, SNARES ISLANDS, N.Z. 9 -I-67
G.A. KNOX AMONG DURVILLEA ZONE ALGAE.
- SA-3341 TRUMPETER BAY, SOUTH PROMONTORY, SNARES ISLANDS, N.Z. 10 -II-75
D.S. HORNING AMONG RED ALGAE, 10-22 M DEPTH.
- BRACHIOPODA
AMPHINEURA
OPHIUROIDEA
SIPUNCULIDA
GASTROPODA
POLYCHAETA
TANAIDACEA
ISOPODA
DECAPODA
- SA-3442 SENECEO POOL, SOUTH SIDE BOAT HARBOUR SNARES ISLANDS, N.Z. 20 -I-75
C.E. HOLMES 0-2 M BELOW L.W.S., ON ALGAE.
GASTROPODA
- SA-3343 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 1 -II-75
C.E. HOLMES IN LARGE SHELTERED TIDE POOL, 0-2 M BELOW
L.W.S. (COLOUR ORANGE-YELLOW).
PORIFERA
- SA-3344 WEST SIDE HO HO BAY, SNARES ISLANDS, N.Z. 16 -II-75
C.E. HOLMES FROM ALGAE.
ISOPODA
- SA-3345 PUNUI BAY, SNARES ISLANDS, N.Z. 17 -II-75
C.E. HOLMES FLOATING IN MIDDLE OF BAY, 1-2 M DEPTH.
- SA-3346 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 1 -II-75
C.E. HOLMES IN LARGE SHELTERED TIDE POOL, 0-2 M BELOW
L.W.S.
BRYOZOA
PORIFERA
- SA-3347 WEST SIDE HO HO BAY, SNARES ISLANDS, N.Z. 24 -XI-74
C.E. HOLMES FROM ALGAE, 1-2 M DEPTH, SHELTERED.
ISOPODA
- SA-3348 WEST SIDE HO HO BAY, SNARES ISLANDS, N.Z. 24 -XI-74
C.E. HOLMES FROM ALGAE, 1-2 M DEPTH, SHELTERED.
GASTROPODA
ISOPODA
AMPHIPODA - GAMMARIDEA
- SA-3349 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 1 II-75
C.E. HOLMES IN LARGE SHELTERED TIDE POOL, 0-2 M DEPTH.
BRYOZOA
PORIFERA
- SA-3350 SOUTH SIDE HO HO BAY, SNARES ISLANDS, N.Z. 23 -XII-74
C.E. HOLMES FROM ALGAE 0-2 M DEPTH.
STAUROMEDUSAE
POLYCHAETA
TANAIDACEA
ISOPODA
AMPHIPODA - GAMMARIDEA
PODOCERUS
AMPHIPODA - CAPRELLIDEA
- SA-3351 BOAT HARBOUR, SNARES ISLANDS, N.Z. 1966-1967
G.A. KNOX VERTEBRATA - PISCES
SCORPAENA CARDINALIS RICHARDSON (SCORPAENIDAE). DET. J. MORELAND, 1976.
- SA-3352 HO HO BAY, SNARES ISLANDS, N.Z. 4 -II-71
D.S. HORNING HANDLINE, LIMPET BAIT, 50 FT DEPTH.
VERTEBRATA - PISCES
PSEUDOLABRUS FUCICOLA (RICHARDSON) (LABRIDAE). DET. J. MORELAND, 1976.
- SA-3353 BOAT HARBOUR, SNARES ISLANDS, N.Z. 1966-1967
G.A. KNOX VERTEBRATA - PISCES
NOTOTHENIA MICROLEPIDOTA HUTTON (NOTOTHENIIDAE). DET. J. MORELAND, 1976.
- SA-3354 HO HO BAY, SNARES ISLANDS, N.Z. 25 -II-71
D.S. HORNING CRAYPOT, 8 M DEPTH.
VERTEBRATA - PISCES
PSEUDOLABRUS MILES (BLOCH AND SCHNEIDER) (LABRIDAE). DET. J. MORELAND, 1976.
- SA-3355 MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 3 -I-70
C.H. HAY HANDLINE, DURVILLEA ZONE.
VERTEBRATA - PISCES
BOVICHYTUS VARIEGATUS (RICHARDSON) (BOVICHYTHYIDAE). DET. J. MORELAND, 1976.
- SA-3356 BOAT HARBOUR, SNARES ISLANDS, N.Z. 25 -II-71
D.S. HORNING ON INTERTIDAL ROCKS.
ECHINODERMATA - ASTEROIDEA
ASTEROTOLE SCABRA (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.

- SA-3357 ANCHORAGE, BOAT HARBOUR, SNARES ISLANDS, N.Z. 3 -I-75
 C.E. HOLMES AND C.J. HORNING FROM CRABPOT 15 M DEPTH.
 AMPHIPODA - GAMMARIDEA
 AMPHIPODA - CAPRELLIDEA
- SA-3358 STATION COVE, SNARES ISLANDS, N.Z. 4 -VI-72
 D.S. HORNING IN UPPER LITTORAL POOLS.
 GASTROPODA
 BUCCINULUM VITTATUM LITTORINOIDES (RUE) (BUCCINULIDAE). DET. F. CLIMO,
 1975.
 MARGARELLA ROSEA (HUTTON) (TROCHIDAE). DET. F. CLIMO, 1975.
 LEPISTHAIS LACUNOSUS (BRUG.) (THAISIDAE). DET. F. CLIMO, 1975.
 XYMENE SP. (MURICIDAE). DET. F. CLIMO, 1975.
- SA-3359 SEAL POINT, SNARES ISLANDS, N.Z. 8 -III-72
 K.J. SAINSBURY 1-3 M DEPTH.
 GASTROPODA
 BUCCINULUM VITTATUM LITTORINOIDES (RUE) (BUCCINULIDAE). DET. F. CLIMO,
 1975.
- SA-3360 DIVER'S COVE, BROUGHTON ISLAND, SNARES ISLANDS, N.Z. 11 -II-75
 C.E. HOLMES AMONG ALGAE, 0-2 M BELOW L.W.S.
 GASTROPODA
 POLYCHAETA
 ACARINA
 OSTRACODA
 COPEPODA
 TANAIDACEA
 ISOPODA
 AMPHIPODA - GAMMARIDEA
- SA-3361 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 1 -II-75
 C.E. HOLMES IN LARGE SHELTERED POOL, 0-2 M DEPTH, ORANGE
 SPONGE FORMING 1 CM THICK MAT.
 PORIFERA
- SA-3362 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 21 -XI-74
 C.E. HOLMES IN POOL, PALE PINK-ORANGE FOOT, DARK
 ORANGE-RED GILLS WITH WHITE TIPS.
 GASTROPODA
- SA-3363 GOD CAVERN, SNARES ISLANDS, N.Z. 24 -I-75
 C.E. HOLMES FROM CRUSTOSE CORALLINE ALGA AND SPONGE, 0-2 M
 BELOW L.W.S.
 POLYCHAETA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
- SA-3364 SENECIO POOL, SOUTH SIDE BOAT HARBOUR SNARES ISLANDS, N.Z. 20 -I-75
 C.E. HOLMES FROM CAULERPA BROWNII, 1-2 M DEPTH.
 GASTROPODA
 PYCNOGONIDA
 POLYCHAETA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
- SA-3365 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 21 -XI-74
 C.E. HOLMES IN TIDE POOL, 1-2 M DEPTH.
 POLYCHAETA
- SA-3366 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 1 -II-75
 C.E. HOLMES IN LARGE SHELTERED TIDE POOL, ON ALGAE, 1-2 M
 BELOW L.W.S.
 AMPHIPODA - GAMMARIDEA
 CERAPUS
- SA-3367 EAST END SEAL PINT, SNARES ISLANDS, N.Z. 1 -II-75
 C.E. HOLMES IN LARGE SHELTERED TIDE POOL, 1 M DEPTH,
 FLOATING.
 MOLLUSCA
- SA-3368 EAST END SEAL POINT, SNARES ISLANDS, N.Z. 1 -II-75
 C.E. HOLMES ON ALGAE IN LARGE SHELTERED TIDE POOL, 0-2 M
 DEPTH.
 ANTHOZOA
- SA-3369 STATION COVE POOL, SNARES ISLANDS, N.Z. 23 -I-75
 C.E. HOLMES FROM ALGAE IN POOL, 0.5 M DEPTH.
 ANTHOZOA
 AMPHINEURA
 PYCNOGONIDA
 POLYCHAETA
 TANAIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
- SA-3370 SENECIO POOL, SOUTH SIDE BOAT HARBOUR SNARES ISLANDS, N.Z. 20 -I-75
 C.E. HOLMES FROM ALGAE.
 MOLLUSCA ?
 GASTROPODA
 POLYCHAETA
 TANAIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA

- SA-3371 SINKHOLE,
C.E. HOLMES
BRYOZOANS, IN CREVICES, MIDLITTORAL.
PYCNOGONIDA
SNARES ISLANDS, N.Z. 11 -XII-74
ON LIMPETS ENCRUSTED WITH POLYCHAETE TUBES AND
- SA-3372 SINKHOLE,
C.E. HOLMES
AMPHINEURA
GASTROPODA
SNARES ISLANDS, N.Z. 11 -XII-74
ON ROCKS, MIDLITTORAL.
- SA-3373 SINKHOLE,
C.E. HOLMES
SIPUNCULIDA
GASTROPODA
ISOPODA
SNARES ISLANDS, N.Z. 11 -XII-74
UNDER MIDLITTORAL ROCKS.
- SA-3374 BOAT HARBOUR,
D.S. HORNING
ECHINODERMATA - ASTEROIDEA
CALVASTERIAS SUTERI (DE LORIO) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
ISOPODA
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 15 -I-71
IN TIDE POOL AND IN DURVILLEA HOLDFAST.
- SA-3375 HO HO BAY,
D.S. HORNING
COPEPODA
SNARES ISLANDS, N.Z. 31 -I-71
ON SCARLET PARROTFISH.
- SA-3376 HO HO BAY,
D.S. HORNING
COPEPODA
SNARES ISLANDS, N.Z. 31 -I-71
ON DARK PARROTFISH.
- SA-3377 BOAT HARBOUR,
D.S. HORNING
NEBALIACEA
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 11 -III-71
5 M DEPTH ON DEAD MOLLYMAWK.
- SA-3378 BOAT HARBOUR,
D.S. HORNING
AMPHIPODA - HYPERIDEA
CYLLOPUS MAGELLANICUS DANA (VIBILIIDAE). DET. G.D. FENWICK, 1977.
SNARES ISLANDS, N.Z. 14 -I-71
SWIMMING AT SURFACE.
- SA-3379 SINKHOLE,
C.J. HORNING
ISOPODA
SNARES ISLANDS, N.Z. 28 -I-71
INTERTIDAL POOL.
- SA-3380 SINKHOLE,
D.S. HORNING
POLYCHAETA
SNARES ISLANDS, N.Z. 28 -I-71
IN DURVILLEA HOLDFAST.
- SA-3381 BIOLOGICAL STATION,
D.S. HORNING
POLYCHAETA
ISOPODA
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 21 -I-71
INTERTIDAL ROCK POOL.
- SA-3382 SINKHOLE GUT,
D.S. HORNING
CIRRIPEDIA
SNARES ISLANDS, N.Z. 4 -II-71
ON DURVILLEA WRACK.
- SA-3383 HO HO BAY,
D.S. HORNING
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 21 -II-71
IN BAITED CRAYPOT.
- SA-3384 BOAT HARBOUR,
D.S. HORNING
GASTROPODA
SNARES ISLANDS, N.Z. 13 -I-71
AMONG INTERTIDAL ALGAE.
- SA-3385 NORTH SIDE PUNUI BAY,
D.S. HORNING
STAUROMEDUSAE
BIVALVIA
GASTROPODA
POLYCHAETA
OSTRACODA
COPEPODA
CUMACEA
TANAIDACEA
SNARES ISLANDS, N.Z. 17 -II-75
FROM RED ALGAE 20-26 M DEPTH.
- SA-3386 BOAT HARBOUR,
G.D. FENWICK
DURVILLEA ZONE.
GASTROPODA
TANAIDACEA
ISOPODA
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 13 -XI-76
FROM DURVILLEA ANTARCTICA HOLDFAST, UPPER
- SA-3387 SENECIO POOL,
G.D. FENWICK
3 M DEPTH.
GASTROPODA
POLYCHAETA
ACARINA
TANAIDACEA
ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 14 -XI-76
AMONG RED ALGAE, MAINLY EUPTILOTA FORMOSISSIMA

- SA-3388 SENECEO POOL TUNNEL, SNARES ISLANDS, N.Z. 14 -XI-76
 G.D. FENWICK ON BARE ROCK ABOUT 10 M INTO TUNNEL, 5 M DEPTH
 ECHINODERMATA - ASTEROIDEA
 HENRICIA RALPHAE FELL ? (ECHINASTERIDAE). DET. G.D. FENWICK, 1976.
 OBTASTER BENHAMI MORTENSEN (ODONTASTERIDAE). DET. G.D. FENWICK, 1976.
 GASTROPODA
 ARGOBUCCHINUM TUMIDUM (DUNKER) (GYMATIIDAE). DET. G.D. FENWICK, 1976.
 GASTROPODA - OPISTHOBRANCHIA
- SA-3389 SENECEO POOL TUNNEL, SNARES ISLANDS, N.Z. 14 -XI-76
 G.D. FENWICK IN ROCK CREVICES ABOUT 12 M INTO TUNNEL, 5 M
 DEPTH.
 ECHINODERMATA - OPHIUROIDEA
 OPHIOCOMA BOLLONSI FARQUHAR (OPHIOCOMIDAE). DET. G.D. FENWICK, 1976.
- SA-3390 SENECEO POOL, SNARES ISLANDS, N.Z. 14 -XI-76
 G.D. FENWICK UNDER ROCKS, ASSOCIATED WITH TERRESTRIAL PLANT
 DETRITUS, 4 M DEPTH.
 ECHINODERMATA - HOLOTHUROIDEA
 CHIRODOTA CARNLEYENSIS DET. G.D. FENWICK, 1976.
 ECHINODERMATA - OPHIUROIDEA
 OPHIOPTERIS ANTIPODUM SMITH (OPHIOCOMIDAE). DET. G.D. FENWICK, 1976.
 OPHIONEREIS FASCIATA HUTTON (OPHIOCHITONIDAE). DET. G.D. FENWICK, 1976.
 OPHIOMYXA BREVIIRIMA CLARK (OPHIOMYXIDAE). DET. G.D. FENWICK, 1976.
- SA-3391 SENECEO POOL, SNARES ISLANDS, N.Z. 14 -XI-76
 D.S. HORNING AMONG ALGAE, 3-4 M DEPTH.
 PYGNOGONIDA
 AMMOTHEA MAGNICEPS DET. D.S. HORNING, 1976.
- SA-3392 SENECEO POOL, SNARES ISLANDS, N.Z. 14 -XI-76
 G.D. FENWICK AMONG CAULERA BROWNII, 4 M DEPTH.
 MOLLUSCA
 POLYCHAETA
 ACARINA
 TANAIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
 INSECTA
- SA-3393 NORTH SIDE SEAL POINT, SNARES ISLANDS, N.Z. 13 -XI-76
 G.D. FENWICK UPPER TO SUPRALITTORAL POOL, AMONG GREEN ALGA,
 VERY ABUNDANT.
 AMPHIPODA - GAMMARIDEA
 PARACALLIDPE NOVAEZELANDIAE (DANA) (EUSIRIDAE). DET. G.D. FENWICK, 1976
- SA-3394 NORTH SIDE SEAL POINT SNARES ISLANDS, N.Z. 13 -XI-76
 G.D. FENWICK AMONG ASSORTED ALGAE IN DEEP POOL (LOWER
 LITTORAL).
 COELENTERATA - ACTINARIA
 MOLLUSCA
 TANAIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
- SA-3395 NORTH SIDE SEAL POINT, SNARES ISLANDS, N.Z. 13 -XI-76
 G.D. FENWICK AMONG GREEN ALGA (ENTEROMORPHA) IN
 SUPRALITTORAL POOL, VERY ABUNDANT.
 AMPHIPODA - GAMMARIDEA
- SA-3396 NORTH SIDE SEAL POINT, SNARES ISLANDS, N.Z. 13 -XI-76
 G.D. FENWICK AMONG DENSE CORALLINA TURF IN SHALLOW
 MIDLITTORAL POOL.
 AMPHIPODA - GAMMARIDEA
- SA-3397 NORTH SIDE BOAT HARBOUR, SNARES ISLANDS, N.Z. 12 -XI-76
 G.D. FENWICK AMONG ENTEROMORPHA IN UPPER LITTORAL POOL.
 AMPHIPODA - GAMMARIDEA
- SA-3398 SKUA POINT, SNARES ISLANDS, N.Z. 12 -XI-76
 G.D. FENWICK UNDER BOULDER ON ROCK IN FRESHWATER SEEP,
 ABOUT 20 M ABOVE SEA LEVEL, EXTREMELY ABUNDANT.
 AMPHIPODA - GAMMARIDEA
- SA-3399 STATION POINT, SNARES ISLANDS, N.Z. 17 -XI-76
 G.D. FENWICK UNDER BOULDERS IN 1.5 M DEEP ROCK POOL.
 MIDLITTORAL.
 ECHINODERMATA - OPHIUROIDEA
 AMPHIPHOLIS SQUAMATA (AMPHIURIDAE). DET. G.D. FENWICK
 1976.
 ECHINODERMATA - ASTEROIDEA
 PENTAGASTER PULCHELLUS GRAY (OREASTERIDAE). DET. G.D. FENWICK, 1976.
 ASCIDIACEA
 POLYCHAETA
 DECAPODA
 LEPTOMITHRAX AUSTRALIS (JACQUINOT) (MAJIDAE). DET. G.D. FENWICK, 1976.
- SA-3400 STATION POINT. SNARES ISLANDS, N.Z. 17 -XI-76
 G.D. FENWICK AMONG CRUSTOSE CORALLINE ALGAE, BURROWS IN
 WEATHERED GRANITE AND OTHER ALGAE IN MIDLITTORAL ROCK POOL, 0.5 M DEPTH.
 SIPUNCULIDA
 MOLLUSCA
 POLYCHAETA
 TANAIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA

- SA-3401 STATION POINT, SNARES ISLANDS, N.Z. 17 -XI-76
 G.D. FENWICK AMONG DENSE, LONG, FOLIOSE CORALLINE ALGAE IN
 DEEP ROCK POOL, 0.5 M DEPTH.
 AMPHINEURA
 BIVALVIA
 GASTROPODA
 TANAIIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
- SA-3402 STATION POINT, SNARES ISLANDS, N.Z. 17 -XI-76
 G.D. FENWICK AMONG 2 CM THICK, DENSE TURF OF ALGAE AND
 SEDIMENT ON TOP OF BOULDER IN DEEP ROCK POOL, 1 M DEPTH.
 COELENTERATA - ACTINARIA ?
 ECHINODERMATA - OPHIUROIDEA
 AMPHIPHOLIS BASILICUS KOELHER (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
 AMPHIPHOLIS SQUAMATA (AMPHIURIDAE). DET. G.D. FENWICK,
 1976.
 MOLLUSCA
 POLYCHAETA
 TANAIIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
- SA-3403 STATION POINT, SNARES ISLANDS, N.Z. 17 -XI-76
 G.D. FENWICK AMONG FOLIOSE CORALLINES ON SIDES OF DEEP ROCK
 POOL, 0.5 M DEPTH.
 COELENTERATA - ACTINARIA
 ECHINODERMATA - OPHIUROIDEA
 OPHIOMYXA BREVIKIMIA CLARK (OPHIOMYXIDAE). DET. G.D. FENWICK, 1976.
 AMPHIPHOLIS BASILICUS KOEHLER (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
 MOLLUSCA
 POLYCHAETA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
 VERTEBRATA - PISCES
- SA-3404 PENGUIN CREEK, 100 M FROM MOUTH, SNARES ISLANDS, N.Z. 19 -XI-76
 J.L. WOODS SEA LION REGURGITATION.
 DECAPODA - REPTANTIA
 JASUS EDWARDSII (HUTTON) (PALINURIDAE). DET. G.D. FENWICK, 1976.
- SA-3405 NORTH ARM BOAT HARBOUR, SNARES ISLANDS, N.Z. 19 -XI-76
 G.D. FENWICK AMONG PLANT DETRITUS UNDER LOWER LITTORAL
 ROCKS.
 COELENTERATA - ACTINARIA
 ECHINODERMATA - HOLOTHUROIDEA
 PSOLIDIELLA NIGRA (PSOLIDAE). DET. G.D. FENWICK, 1976.
 ECHINODERMATA - OPHIUROIDEA
 AMPHIURA AMOKURAE ? (AMPHIURIDAE). DET. G.D. FENWICK, 1976
 OPHIONEREIS FASCIATA HUTTON (OPHIOCHITONIDAE). DET. G.D. FENWICK, 1976.
 ASCIDIACEA
 MOLLUSCA - AMPHINEURA
 GASTROPODA
 PYCNOGONIDA
 POLYCHAETA
 ISOPODA
 AMPHIPODA - GAMMARIDEA
 VERTEBRATA - PISCES
 TRACHELOCHISMUS LINNAULATUS (BLOCH AND SCHNEIDER) (GOBIESOCIDAE).
 DET. J. MORELAND, 1977.
- SA-3406 RIMA ISLET, SNARES ISLANDS, N.Z. 21 -XI-76
 G.D. FENWICK FROM DURVILLEA ANTARCTICA HOLDFASTS, UPPER
 DURVILLEA ZONE ALGAE.
 PYCNOGONIDA
- SA-3407 RIMA ISLET, SNARES ISLANDS, N.Z. 21 -XI-76
 G.D. FENWICK AMONG DURVILLEA ZONE FLORA.
 PYCNOGONIDA
- SA-3408 RIMA ISLET, SNARES ISLANDS, N.Z. 21 -XI-76
 G.D. FENWICK UPPER LITTORAL, ON ALMOST BARE ROCK.
 GASTROPODA
- SA-3409 RIMA ISLET, SNARES ISLANDS, N.Z. 21 -XI-76
 G.D. FENWICK CORALLINE TURF, UPPER DURVILLEA ZONE POOL.
 UNSORTED
- SA-3410 RIMA ISLET, SNARES ISLANDS, N.Z. 21 -XI-76
 G.D. FENWICK SUPRALITTORAL POOL, WELL FERTILIZED WITH SEAL
 EXCRETIA.
 UNSORTED
- SA-3411 RIMA ISLET, SNARES ISLANDS, N.Z. 21 -XI-76
 G.D. FENWICK IN POOL IN DEEP CREVICE, UPPER LITTORAL.
 UNSORTED
- SA-3412 RIMA ISLET, SNARES ISLANDS, N.Z. 21 -XI-76
 G.D. FENWICK AMONG ALGAE OF DURVILLEA ZONE.
 ECHINODERMATA - ASTEROIDEA
 CALVASTERIAS SUTERI (DE LORIO) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
 GASTROPODA
 LEPISTHAIS LACUNOSUS (BRUGUIERE) (THAISIDAE). DET. G.D. FENWICK, 1976.

- SA-3413 RIMA ISLET,
G.D. FENWICK
UNSORTED
SNARES ISLANDS, N.Z. 21 -XI-76
PORPHYRA ON UPPER LITTORAL ROCK PLATFORM.
- SA-3414 RIMA ISLET,
G.D. FENWICK
UNSORTED
SNARES ISLANDS, N.Z. 21 -XI-76
ALGAE JUST ABOVE DURVILLEA ZONE.
- SA-3415 RIMA ISLET,
G.D. FENWICK
DURVILLEA ZONE.
UNSORTED
SNARES ISLANDS, N.Z. 21 -XI-76
CORALLINE ALGAE IN ROCK POOLS JUST ABOVE
- SA-3416 RIMA ISLET,
G.D. FENWICK
UNSORTED
SNARES ISLANDS, N.Z. 21 -XI-76
ALGAE JUST ABOVE DURVILLEA ZONE.
- SA-3417 RIMA ISLET,
G.D. FENWICK
ENCRUSTED WITH SPONGE.
UNSORTED
SNARES ISLANDS, N.Z. 21 -XI-76
IN CREVICE IN DURVILLEA ZONE, BARNACLES
- SA-3418 NORTH SIDE PUNUI BAY,
G.D. FENWICK
ECHINODERMATA - ASTEROIDEA
EURYGONIAS HYLACANTHUS FARQUHAR (ODONTASTERIDAE). DET. G.D. FENWICK,
1976.
HENRICIA RALPHAE FELL (ASTERINIDAE). DET. G.D. FENWICK, 1976.
ASTROSTOLE SCABRA (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
GASTROPODA
MODELIA GRANOSA (MARTYN) (TURBINIDAE). DET. G.D. FENWICK, 1976.
PYCNOGONIDA
SNARES ISLANDS, N.Z. 23 -XI-76
ON ALGAE ON ROCK FACE, 13-18 M DEPTH.
- SA-3420 NORTH SIDE PUNUI BAY,
G.D. FENWICK
19 M DEPTH.
ECHINODERMATA - HOLOTHUROIDEA
STICHOPUS MOLLIS (HUTTON) (STICHOPODIDAE). DET. G.D. FENWICK, 1976.
SNARES ISLANDS, N.Z. 23 -XI-76
ON ROCKS AND COARSE SAND AT FOOT OF ROCK FACE,
- SA-3421 NORTH SIDE PUNUI BAY,
D.S. HORNING
DEPTH.
ECHINODERMATA - OPHIUROIDEA
OPHIOMYXA BREVI RIMA CLARK (OPHIOMYXIDAE). DET. G.D. FENWICK, 1976.
PYCNOGONIDA
AMMOTHEA MAGNICEPS
DET. D.S. HORNING, 1976.
SNARES ISLANDS, N.Z. 23 -XI-76
ON SE EXPOSED NEAR-VERTICAL ROCK FACE 10-12 M
- SA-3422 MOLLYMAWK BAY,
J.W. EARLY
VERTEBRATA - PISCES
PSEUDOLABRUS FUCICOLA RICHARDSON (LABRIDAE). DET. J. MORELAND, 1977.
SNARES ISLANDS, N.Z. 26 -XI-76
CAUGHT ON HANDLINE, ABOUT 23 M DEPTH.
- SA-3423 SEAL POINT POOL,
G.D. FENWICK
CRUSTACEA CORALLINE, 0.5 M DEPTH.
MOLLUSCA
TANAIDACEA
ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 29 -XI-76
AMONG FOLIPOSE CORALLINE ALGA ENCRUSTED WITH
- SA-3424 SEAL POINT POOL,
G.D. FENWICK
DEPTH.
TANAIDACEA
ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 29 -XI-76
AMONG FOLIPOSE BRYOZOAN UNDER OVERHANG, 2.5 M
- SA-3425 SEAL POINT POOL,
D.S. HORNING
ECHINODERMATA - ASTEROIDEA
CALVASTERIAS SUTERI (DE LORIO) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
SNARES ISLANDS, N.Z. 29 -XI-76
AMONG ALGAE ON ROCK, 3 M DEPTH.
- SA-3426 SEAL POINT POOL,
G.D. FENWICK
STAUROMEDUSAE
ECHINODERMATA - OPHIUROIDEA
AMPHIPHOLIS SQUAMATA (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
ECHINODERMATA - ASTEROIDEA
ASTROSTOLE SCABRA (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
ACARINA
TANAIDACEA
ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
INSECTA - APHIDOIDEA
SNARES ISLANDS, N.Z. 29 -XI-76
ON SPONGES UNDER OVERHANG IN SIDE POOL, 2.5 M.
- SA-3427 SEAL POINT POOL,
G.D. FENWICK
DEPTH.
TANAIDACEA
ISOPODA
AMPHIPODA - GAMMARIDEA
SNARES ISLANDS, N.Z. 29 -XI-76
ON SPONGE UNDER OVERHANG AT HEAD OF POOL,
- SA-3428 SEAL POINT POOL,
G.D. FENWICK
0.5 M DEPTH.
BRACHIOPODA
TANAIDACEA
ISOPODA

- SA-3429 BETWEEN NORTH PROM. AND SOUTH DAPTION, SNARES ISLANDS, N.Z. 30 -XI-76
D.S. HORNING SWIMMING IN SWARMS UP TO 1 M DIAMETER,
0.5-1.0 M DEPTH,
EUPHAUSIACEA
NICTYPHANES AUSTRALIS G.O. SARS (EUPHAUSIIDAE). DET. G.D. FENWICK, 1977
- SA-3430 OFF SINKHOLE GUT, SNARES ISLANDS, N.Z. 30 -XI-76
G.D. FENWICK UNDER BOULDERS IN CAVE, 15 M DEPTH.
ECHINODERMATA - OPHIUROIDEA
OPHIOMYXA BREVIRIMA CLARK (OPHIOMYXIDAE). DET. G.D. FENWICK, 1976.
OPHIACTIS RESILIENS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
ECHINODERMATA - ASTEROIDEA
ODONTASTER BENHAMI (MORTENSEN) (ODONTASTERIDAE). DET. G.D. FENWICK,
1976.
- SA-3431 OFF SINKHOLE GUT, SNARES ISLANDS, N.Z. 30 -XI-76
G.D. FENWICK ON SLOPING ROCK COVERED WITH SHORT ALGAE,
12-16 M DEPTH.
ECHINODERMATA - ASTEROIDEA
PENTAGASTER PULCHELLUS GRAY (OREASTERIDAE). DET. G.D. FENWICK, 1976.
ALLOSTICASTER INSIGNIS (FARQUHAR) (ASTERIIDAE). DET. G.D. FENWICK,
1976.
PYCNOGONIDA
- SA-3432 OFF SINKHOLE GUT, SNARES ISLANDS, N.Z. 30 -XI-76
G.D. FENWICK ON ROCK IN CAVE, 16 M DEPTH.
ECHINODERMATA - ASTEROIDEA
STICHASTER AUSTRALIS (VERRILL) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
- SA-3433 OFF SINKHOLE GUT, SNARES ISLANDS, N.Z. 30 -XI-76
D.S. HORNING ON EXPOSED, NEAR-VERTICAL ROCK FACES, 12-15 M
DEPTH.
ECHINODERMATA - OPHIUROIDEA
OPHIOMYXA BREVIRIMA CLARK (OPHIOMYXIDAE). DET. G.D. FENWICK, 1976.
ECHINODERMATA - ASTEROIDEA
STICHASTER AUSTRALIS (VERRILL) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
ASTROSTOLE SCABRA (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
HENRICIA RALPHAE FELL (ASTERIIDAE). DET. G.D. FENWICK, 1976.
CALVASTERIAS SUTERI (DE LORIO) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
- SA-3434 OFF SINKHOLE GUT, SNARES ISLANDS, N.Z. 30 -XI-76
D.S. HORNING UNDER SMALL ROCKS ON BOTTOM, 12-14 M DEPTH.
ECHINODERMATA - OPHIUROIDEA
OPHIACTIS RESILIENS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
OPHIONEREIS FASCIATA HUTTON (OPHIOCHITONIDAE). DET. G.D. FENWICK, 1976.
- SA-3435 WEST COAST, SNARES ISLANDS, N.Z. 3 -XII-76
G. WEST (F.V. TRADEWIND) IN CRAYPOT ABOUT 80 M DEPTH.
ECHINODERMATA - ASTEROIDEA
PSILASTER ACUMINATUS SLADEN (ASTROPECTINIDAE). DET. G.D. FENWICK, 1976.
- SA-3436 NORTH SIDE HO HO BAY, SNARES ISLANDS, N.Z. 3 -XII-76
G.D. FENWICK ON COARSE SHELLY SAND AMONG ROCKS, 20 M DEPTH.
ECHINODERMATA - HOLOTHUROIDEA
STICHOPUS MOLLIS (HUTTON) (STICHOPODIDAE). DET. G.D. FENWICK, 1976.
- SA-3437 NW CORNER HO HO BAY, SNARES ISLANDS, N.Z. 3 -XII-76
G. WEST IN CAVE, 8 M DEPTH.
PORIFERA
- SA-3438 NW CORNER HO HO BAY, SNARES ISLANDS, N.Z. 3 -XII-76
G.D. FENWICK UNDER COBBLES ON COARSE SHELLY SAND, 20 M
DEPTH.
ECHINODERMATA - HOLOTHUROIDEA
CHIRODOTA CARNLEYENSIS DET. G.D. FENWICK, 1976.
ECHINODERMATA - OPHIUROIDEA
OPHIACTIS RESILIENS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
AMPHIPODA - GAMMARIDEA
- SA-3439 WEST SIDE OF WESTER CHAIN, SNARES ISLANDS, N.Z. 4 -XII-76
G.D. FENWICK, D.S. HORNING ABOARD F.V. TRADEWIND, FROM BAITED CRAYPOTS,
120 M DEPTH.
ECHINODERMATA - ASTEROIDEA
ASTROSTOLE SCABRA (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
SCLERASTERIAS MOLLIS (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
GASTROPODA
COMINELLA SP. (COMINELLIDAE). DET. G.D. FENWICK, 1976.
ISOPODA
AMPHIPODA - GAMMARIDEA
DECAPODA
LEPTOMITHRAX AUSTRALIS (JACQUINOT) (MAJIDAE). DET. G.D. FENWICK, 1976.
VERTEBRATA - PISCES
PHYSICULUS (PSEUDOPHYCIS) BACHUS (BLOCH AND SCHNEIDER) (MORIDAE).
DET. J. MORELAND, 1977.
- SA-3440 WEST SIDE OF WESTERN CHAIN, SNARES ISLANDS, N.Z. 4 -XII-76
D.S. HORNING ABOARD F.V. TRADEWIND. IN CRAYPOT ABOUT 120 M DEPTH.
GASTROPODA
ASTRAEA HELIOTROPIUM (MARTYN) (TURBINIDAE). DET. G.D. FENWICK, 1976.
CIRRIPEDIA
- SA-3441 WEST COAST, SNARES ISLANDS, N.Z. 4 -XII-76
G. WEST ABOARD F.V. TRADEWIND. IN CRAYPOT ABOUT 100 M DEPTH.
BRYOZOA
ECHINODERMATA - ECHINOIDEA
PSEUDECHINUS NOVAEZELANDIAE (HORTENSEN) (TEMNOPLURIDAE). DET. G.D.
FENWICK, 1976.

- SA-3442 WEST COAST, SNARES ISLANDS, N.Z. 4 -XII-76
G. WEST ABOARD F.V. TRADEWIND. ON FISH CAUGHT IN CRAYPOT, ABOUT 100 M DEPTH.
ISOPODA
- SA-3443 NW CORNER HO HO BAY, SNARES ISLANDS, N.Z. 3 -XII-76
G.D. FENWICK IN COARSE SHELLY SAND OF GENTLY SLOPING BOTTOM
20 M DEPTH.
STAUROMEDUSAE
BRACHIOPODA
BIVALVIA
GASTROPODA
SIPHUNCULIDA
POLYCHAETA
TANAIDACEA
AMPHIPODA - GAMMARIDEA
- SA-3444 NORTH SIDE MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 6 -XII-76
P.M. SAGAR 0.5 M BELOW ANTARCTIC TERN NEST WITH CHICKS,
12 M ABOVE SEA LEVEL.
VERTEBRATA - PISCES
CHEILODACTYLUS MACROPTERUS (BLOCH AND SCHNEIDER) (CHEILODACTYLIDAE).
DET. J. MORELAND, 1977.
- SA-3445 MIDDLE OF MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 9 -XII-76
G.D. FENWICK FROM BRYOZOA UNDER OVERHANG, 18 M DEPTH.
BRYOZOA
PYCNOGONIDA
ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
- SA-3446 NORTH SIDE MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 12 -XII-76
P.M. SAGAR BESIDE ANTARCTIC TERN NEST WITH CHICKS, 12 M
ABOVE SEA LEVEL.
VERTEBRATA - PISCES
- SA-3447 SEAL POINT POOL, SNARES ISLANDS, N.Z. 29 -XII-76
D.S. HORNING ON ROCK AT WATER LINE ON SEAWARD SIDE OF SIDE
POOL.
CIRRIPEDIA
- SA-3448 CAPE PIGEON COLONY, NORTH PROMONTORY, SNARES ISLANDS, N.Z. 18 -XII-76
P.M. SAGAR REGURGITATION FROM CAPE PIGEON ON NEST.
EUPHAUSIACEA
AMPHIPODA - HYPERIIDAE
HYPERIA LUZONI STEBBING (HYPERIIDAE). DET. G.D. FENWICK, 1977.
PARATHEMISTO GAUDICHAUDII (GUERIN) (HYPERIIDAE). DET. G.D. FENWICK,
1977.
- SA-3449 OPPOSITE LANDING ROCKS, BOAT HARBOUR, SNARES ISLANDS, N.Z. 18 -XII-76
G.D. FENWICK AMONG ALGAE IN SHALLOW POOL, LOWER LITTORAL.
ECHINODERMATA - OPHIUROIDEA
AMPHIPHOLIS SQUAMATA (AMPHIURIDAE). DET. G.D. FENWICK, 1976
AMPHIOPUS BASILICUS (KOEHLER) (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
- SA-3450 MIDDLE ARM, BOAT HARBOUR, SNARES ISLANDS, N.Z. 18 -XII-76
G.D. FENWICK UNDER ALGAE-COVERED ROCKS IN LOWER LITTORAL
ROCK POOL.
VERTEBRATA - PISCES
BOVICHTHYS VARIEGATUS RICHARDSON (BOVICHTIDAE). DET. J. MORELAND, 1977.
GILLOBLENNIUS TRIPENNIS (BLOCH AND SCHNEIDER) (TRIPTERYGIIDAE).
DET. J. MORELAND, 1977.
TRACHELOCHISMUS LINNAULATUS (BLOCH AND SCHNEIDER) (GOBIESOCIDAE).
DET. J. MORELAND, 1977.
- SA-3451 OPPOSITE LANDING ROCKS, BOAT HARBOUR, SNARES ISLANDS, N.Z. 18 -XII-76
G.D. FENWICK UNDER ROCKS IN SHALLOW POOL, AMONG DEPOSITS OF
TERRESTRIAL PLANT DETRITUS, LOWER LITTORAL.
ECHINODERMATA - HOLOTHUROIDEA
PSOLIDIELLA NIGRA (PSOLIDAE). DET. G.D. FENWICK, 1976.
ECHINODERMATA - OPHIUROIDEA
OPHIONEREIS NOVAEZELANDIAE ? (OPHIOCHITONIDAE). DET. G.D.
FENWICK, 1976.
AMPHIPHOLIS SQUAMATA (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
OPHIACTIS RESILIENTIS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
POLYCHAETA
NEBALIACEA
ISOPODA
AMPHIPODA - GAMMARIDEA
- SA-3452 NW CORNER HO HO BAY, SNARES ISLANDS, N.Z. 19 -XII-76
J.W. EARLY AT BACK OF CAVE ON VERTICAL ROCK, 1 M DEPTH.
WALL.
ECHINODERMATA - ASTEROIDEA
HENRICIA RALPHAE (FELL) (ASTERINIDAE). DET. G.D. FENWICK, 1976.
ASTROSTOLE SCABRA (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
PYCNOGONIDA
GASTROPODA
MAUREA PELLUCIDA (VALENCIENNES) (TROCHIDAE). DET. G.D. FENWICK, 1976.
VERTEBRATA - PISCES
BOVICHTHYS VARIEGATUS RICHARDSON (BOVICHTIDAE). DET. J. MORELAND, 1977.
- SA-3453 NW CORNER HO HO BAY, SNARES ISLANDS, N.Z. 19 -XII-76
J.W. EARLY AT BACK OF CAVE ON VERTICAL ROCK, 1 M DEPTH.
ECHINODERMATA - ASTEROIDEA
HENRICIA RALPHAE (FELL) (ASTEIIDAE). DET. G.D. FENWICK, 1976.

SA-3454 ALERT STACK,
G.D. FENWICK
ZONE.

SNARES ISLANDS, N.Z. 20 -XII-76
INTERTIDAL ALGAE, ABOVE DURVILLEA ANTARCTICA

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SA-3455 ALERT STACK,
G.D. FENWICK
ZONE.

SNARES ISLANDS, N.Z. 20 -XII-76
INTERTIDAL ALGAE, FROM DURVILLEA ANTARCTICA

ALGAE
ECHINODERMATA - ASTEROIDEA
CALVASTERIAS SUTERI (DE LORIO) (ASTERIIDAE). DET. G.D. FENWICK, 1976.

SA-3456 ALERT STACK,
G.D. FENWICK
ANTARCTIC ZONE TO 7 M DEPTH.

SNARES ISLANDS, N.Z. 20 -XII-76
SUBLITTORAL ALGAE, FROM BELOW DURVILLEA

ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
ALGAE

SA-3457 NORTH SIDE BOAT HARBOUR,
G.D. FENWICK
ALGAE

SNARES ISLANDS, N.Z. 20 -XII-76
JUST BELOW DURVILLEA ANTARCTICA ZONE.

SA-3458 STATION POINT,
G.D. FENWICK
ALGAE

SNARES ISLANDS, N.Z. 20 -XII-76
FROM DURVILLEA ANTARCTICA ZONE.

SA-3459 NW CORNER HO HO BAY,
G.D. FENWICK
ALGA, 14 M DEPTH.

SNARES ISLANDS, N.Z. 19 -XII-76
AMONG CLUMPS OF CONCENTRIC CRUSTOSE CORALLINE

COELENTERATA - ANTHOZOA
BRYOZOA
BRACHIOPODA
ECHINODERMATA - HOLOTHUROIDEA
PSEUDOPSOLUS MACQUARIENSIS (PSOLIDAE). DET. G.D. FENWICK, 1976.
ECHINODERMATA - OPHIUROIDEA
OPHIACTIS RESILIENS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
OPHIOCOMA BOLLONSI (OPHIOCOMIDAE). DET. G.D. FENWICK, 1976.
OPHIONEREIS NOVAEZELANDIAE ? (OPHIOCHITONIDAE). DET. G.D. FENWICK, 1976.
OPHIOMYXA BREVIIRIMA CLARK (OPHIOMYXIDAE). DET. G.D. FENWICK, 1976.
AMPHIURA PRAEFECTA KOEHLER (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
OPHIONEPHTHYS STEWARTENSIS (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
AMPHIPHOLIS SQUAMATA ? (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
AMPHIPLUS BASILICUS (KOEHLER) (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
AMPHIURA ASTER ? (AMPHIURIDAE). DET. G.D. FENWICK, 1976.

ECHINODERMATA - ASTEROIDEA
ALLOSTICHASTER INSIGNIS (FARQUHAR) (ASTERIIDAE). DET. G.D. FENWICK, 1976.

HEMICHORDATA - ENTEROPNEUSTA

OPISTHOBRANCHIA
BIVALVIA

GASTROPODA
POLYCHAETA
SIPHUNCULIDA
PYCNOGONIDA

TANAIDACEA
ISOPODA

AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA

DECAPODA

NAUTICARIS MARIONIS BATE (HIPPOLYTIDAE). DET. G.D. FENWICK, 1976.

SA-3460 NW CORNER HO HO BAY,
D.S. HORNING
9-13 M DEPTH.

SNARES ISLANDS, N.Z. 19 -XII-76
ON SLOPING ROCK FACE AMONG LESSONIA VARIEGATA

PYCNOGONIDA
MOLLUSCA
ALGAE

SA-3461 NW CORNER HO HO BAY,
D.S. HORNING
LESSONIA VARIEGATA, 10-12 M DEPTH.

SNARES ISLANDS, N.Z. 19 -XII-76
UNDER ROCKS IN CREVICES ON SLOPING ROCK AMONG

ECHINODERMATA - ECHINOIDEA
PSEUDECHINUS NOVAEZELANDIAE (MORTENSEN) . DET. G.D. FENWICK, 1976.

ECHINODERMATA - HOLOTHUROIDEA
CHIRODOTA CARNLEYENSIS DET. G.D. FENWICK, 1976.

ECHINODERMATA - OPHIUROIDEA
OPHIOCOMA BOLLONSI FARQUHAR (OPHIOCOMIDAE). DET. G.D. FENWICK, 1976.
OPHIONEREIS FASCIATA HUTTON (OPHIOCHITONIDAE). DET. G.D. FENWICK, 1976.

SA-3462 STATION POINT,
G.D. FENWICK
DURVILLEA ZONE.
UNSORTED

SNARES ISLANDS, N.Z. 20 -XII-76
FROM DURVILLEA ANTARCTICA HOLDFASTS, LOWER

SA-3463 PENGUIN ROOKERY 120, MUTTONBIRD CREEK, SNARES ISLANDS, N.Z. 19 -XII-76
D.S. HORNING
CRESTED PENGUIN.
MOLLUSCA - CEPHALOPODA
REGURGITATED TO CHICK BY ADULT MALE SNARES

SA-3464 LANDING ROCKS, BOAT HARBOUR,
G.D. FENWICK
ALGA

SNARES ISLANDS, N.Z. 22 -XII-76
ENCrustING ROCK AT EXTREME HIGH WATER SPRINGS.

- SA-3465 LANDING ROCKS, BOAT HARBOUR, SNARES ISLANDS, N.Z. 22 -XII-76
G.D. FENWICK ALGA IN SMALL PATCHES ON SHADED VERTICAL FACES
E.H.W.S.
ACARINA
TANAIDACEA
ISOPODA
AMPHIPODA - GAMMARIDEA
ALGA - CHLOROPHYTA
- SA-3466 LANDING ROCKS, BOAT HARBOUR, SNARES ISLANDS, N.Z. 22 -XII-76
G.D. FENWICK IN SMALL ROCK POOLS, E.H.W.S.
COELENTERATA - ACTINARIA
ISOPODA
- SA-3467 TIP OF STATION POINT, SNARES ISLANDS, N.Z. 20 -XII-76
G.D. FENWICK UNDER SMALL OVERHANG IN UPPER DURVILLEA
ANTARCTICA ZONE.
CIRRIPEDIA
- SA-3468 TIP OF STATION POINT, SNARES ISLANDS, N.Z. 20 -XII-76
G.D. FENWICK CRUSTOSE ALGAE ON ROCKS IN MID-UPPER DURVILLEA
ANTARCTICA ZONE.
ALGAE
- SA-3469 NW CORNER HO HO BAY, SNARES ISLANDS, N.Z. 19 -XII-76
G.D. FENWICK UNDER ROCK ON SLOPING ROCK FACE, 10 M DEPTH.
MOLLUSCA - CEPHALOPODA
- SA-3470 NORTH SIDE BOAT HARBOUR, SNARES ISLANDS, N.Z. 23 -XII-76
G.D. FENWICK ON RED ALGAE, MAINLY EUPTILOTA FORMOSISSIMA,
E.H.W.S.
PYCNOGONIDA
- SA-3471 NORTH SIDE BOAT HARBOUR, SNARES ISLANDS, N.Z. 23 -XII-76
G.D. FENWICK ALGAE FROM BELOW DURVILLEA ANTARCTICA ZONE,
E.L.W.S.
ALGAE
- SA-3472 TERN POINT, SNARES ISLANDS, N.Z. 19 -XII-76
P.M. SAGAR REGURGITATED BY LARGE ANTARCTIC TERN CHICK.
VERTEBRATA - PISCES
- SA-3473 BETWEEN NORTH PROM. AND SOUTH DAPTION, SNARES ISLANDS, N.Z. 23 -XII-76
J.W. EARLY TAKEN ON HANDLINE, ABOUT 20 M DEPTH.
VERTEBRATA - PISCES
- SA-3474 BETWEEN NORTH PROM. AND SOUTH DAPTION, SNARES ISLANDS, N.Z. 23 -XII-76
G.D. FENWICK SWIMMING SINGLY AND IN DENSE SWARMS, 0.25-
0.75 M DEPTH.
EUPHAUSIACEA
NICTYPHANES AUSTRALIS G.O. SARS (EUPHAUSIIDAE). DET. G.D. FENWICK, 1977
AMPHIPODA - HYPERIIDEA
- SA-3475 AT MOUTH OF CAVE, HO HO BAY, SNARES ISLANDS, N.Z. 23 -XII-76
P.M. SAGAR LARGE NUMBERS OF THESE FISH FEEDING ON A SWARM
OF HYPERIID AMPHIPODS BESIDE SHORE, 0-3 M DEPTH.
ISOPODA
AMPHIPODA - HYPERIIDEA
PARATHEMISTO GRACILIPES (NORMAN) (HYPERIIDAE). DET. G.D. FENWICK, 1977.
VERTEBRATA - PISCES
NOTOTHENIA MICROLEPIDOTA HUTTON (NOTOTHENIIDAE). DET. J. MORELAND, 1977
- SA-3476 AT MOUTH OF CAVE, HO HO BAY, SNARES ISLANDS, N.Z. 23 -XII-76
G.D. FENWICK AND D.S. HORNING LARGE SWARMS CLOSE INSHORE, 0-3 M DEPTH.
AMPHIPODA - HYPERIIDEA
PARATHEMISTO GRACILIPES (NORMAN) (HYPERIIDAE). DET. G.D. FENWICK, 1977.
- SA-3477 SENECIO POOL, BOAT HARBOUR, SNARES ISLANDS, N.Z. 24 -XII-76
G.D. FENWICK ON ROCK AT BOTTOM OF POOL, 5-6 M DEPTH.
ALGAE
PLOCAMIMUM LEPTOPHYLLUM KUETZING (PLOCAMIALEAE). DET. G.D. FENWICK, 1976
HYMENEAE SEMICOSTATA (J. AGARDH) (DELESSERIACEAE). DET. G.D. FENWICK,
1976.
- SA-3478 BOAT HARBOUR, SNARES ISLANDS, N.Z. 24 -XII-76
D.S. HORNING AMONG RED ALGAE ON BOULDERS, 4 M DEPTH.
ECHINODERMATA - OPHIUROIDEA
AMPHIPHOLIS SQUAMATA (AMPHIURIDAE). DET. G.D. FENWICK, 1976.
ECHINODERMATA - ASTEROIDEA
SCLERASTERIAS MOLLIS (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
- SA-3479 UNDERWATER TUNNEL, SENECIO POOL, SNARES ISLANDS, N.Z. 24 -XII-76
G.D. FENWICK UNDER BOULDERS ABOUT HALF WAY THROUGH TUNNEL,
7-8 M DEPTH.
ECHINODERMATA - OPHIUROIDEA
OPHIOCOMA BOLLONSI (OPHIOCOMIDAE). DET. G.D. FENWICK, 1976.
OPHIOPTERIS ANTIPODUM (OPHIOCOMIDAE). DET. G.D. FENWICK, 1976.
ECHINODERMATA - ASTEROIDEA
SCLERASTERIAS MOLLIS (HUTTON) (ASTERIIDAE). DET. G.D. FENWICK, 1976.
DECAPODA
JASUS EDWARDSII (HUTTON) (PALINURIDAE). DET. G.D. FENWICK, 1976.
VERTEBRATA - PISCES
- SA-3480 NORTH PROM. CAPE PIGEON COLONY, SNARES ISLANDS, N.Z. 24 -XII-76
P.M. SAGAR REGURGITATED BY ADULT CAPE PIGEON SITTING ON
NEST.
DECAPODA
MUNIDA GREGARIA DET. G.D. FENWICK, 1976.

- SA-3481 MIDDLE ARM, BOAT HARBOUR, SNARES ISLANDS, N.Z. 23 -XII-76
D.S. HORNING DROPPED BY ADULT ANTARCTIC TERN.
VERTEBRATA - PISCES
- SA-3482 MOUTH OF HO HO BAY, SNARES ISLANDS, N.Z. 29 -XII-76
G.D. FENWICK ALGAE ON SMALL COBBLES AND PEBBLES, ABOUT 25-
30 M DEPTH.
- SA-3483 1KM EAST OF HO HO BAY, SNARES ISLANDS, N.Z. 29 -XII-76
G.D. FENWICK TAKEN IN DREDGE, HARD BOTTOM, ABOUT 40-55 M
DEPTH.
BRYOZOA
BRACHIOPODA
- SA-3484 MOLLYHAWK BAY, SNARES ISLANDS, N.Z. 1 -I-77
G.D. FENWICK AND D.S. HORNING TAKEN ON HANDLINE, 20-28 M DEPTH.
VERTEBRATA - PISCES
PSEUDOLABRUS FUCICOLA RICHARDSON (LABRIDAE). DET. J. MORELAND, 1977.
LATRIS LINEATA (BLOCH AND SCHNEIDER) (LATRIDAE). DET. J. MORELAND, 1977
HELICOLENUS PERCOIDES (RICHARDSON) (SCORPAENIDAE). DET. J. MORELAND,
1977.
- SA-3485 MOLLYHAWK BAY, SNARES ISLANDS, N.Z. 1 -I-77
G.D. FENWICK ON TAIL OF PARROT FISH, SA-3484.
ISOPODA
- SA-3486 SINKHOLE, SNARES ISLANDS, N.Z. 5 -I-77
J.W. EARLY ON UPPER INTERITDAL ROCKS.
ISOPODA
- SA-3487 SENECIO POOL, SNARES ISLANDS, N.Z. 6 -I-77
G.D. FENWICK AMONG DEEP DEPOSITS OF TERRESTRIAL PLANT
DETRITUS, 7 M DEPTH.
ECHINODERMATA - OPHIUROIDEA
OPHIACTIS RESILIENS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1977.
AMPHIPHOLIS SQUAMATA (DELLE CHIAJE)(AMPHIURIDAE). DET. G.D. FENWICK,
1977.
MOLLUSCA
TANAIDACEA
ISOPODA
AMPHIPODA - GAMMARIDEA
- SA-3488 SENECIO POOL, SNARES ISLANDS, N.Z. 6 -I-77
G.D. FENWICK AMONG CAULERPA BROWNII ON VERTICAL ROCK, 6-7 M
DEPTH.
ECHINODERMATA - OPHIUROIDEA
AMPHIPHOLIS SQUAMATA (DELLE CHIAJE)(AMPHIURIDAE). DET. G.D. FENWICK,
1977.
OPHIONEPHTHYS STEWARTENSIS (AMPHIURIDAE). DET. G.D. FENWICK, 1977
CUMACEA
TANAIDACEA
ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
- SA-3489 SENECIO POOL, SNARES ISLANDS, N.Z. 6 -I-77
G.D. FENWICK AMONG RED ALGA (?HETEROSIPHONIA SP.) ON
SLOPING ROCK, 1 M DEPTH.
UNSORTED
- SA-3490 SKIPPED
- SA-3491 SENECIO POOL, SNARES ISLANDS, N.Z. 6 -I-77
G.D. FENWICK AMONG EPIPHYTIC ALGAE ON STIPES OF LESSONIA
VARIEGATA, 1.5 M DEPTH.
UNSORTED
- SA-3492 SENECIO POOL, SNARES ISLANDS, N.Z. 6 -I-77
G.D. FENWICK FROM LESSONIA VARIEGATA HOLDFAST, 1.5 M DEPTH.
UNSORTED
- SA-3493 STATION POINT, SNARES ISLANDS, N.Z. 8 -I-77
G.D. FENWICK ON ROCK ENCRUSTED WITH CRUSTOSE CORALLINE
ALGAE, UPPER MIDLITTORAL.
COELENTERATA - ACTINARIA
MOLLUSCA - AMPHINEURA
CIRRIPEDIA
ISOPODA
AMPHIPODA - GAMMARIDEA
- SA-3494 HO HO BAY, SNARES ISLANDS, N.Z. 16 -I-77
J.L. WOODS TAKEN ON HANDLINE, 28 M DEPTH.
VERTEBRATA - PISCES
NOTOTHENIA MICROLEPIDOTA HUTTON (NOTOTHENIIDAE). DET. J. MORELAND, 1977
- SA-3495 HO HO BAY, SNARES ISLANDS, N.Z. 16 -I-77
G.D. FENWICK IN DEEP CAVE ON WEST SIDE, 3-7 M DEPTH.
PORIFERA
COELENTERATA - ACTINARIA
ECHINODERMATA - ASTEROIDEA
SCLERASTERIAS MOLLIS (HUTTON)(ASTERIIDAE). DET. G.D. FENWICK, 1977.
MOLLUSCA - GASTROPODA
MAUREA PELLUCIDA SSP. (TROCHIDAE). DET. G.D. FENWICK, 1977.
ISOPODA
DECAPODA
LEPTOMITHRAX AUSTRALIS (JACQUINOT)(MAJIDAE). DET. G.D. FENWICK, 1977.

- SA-3496 HO HO BAY, SNARES ISLANDS, N.Z. 16 -I-77
 G.D. FENWICK AMONG ALGAE ON BOULDERS ON COARSE SHELLY SAND
 BOTTOM 30 M DEPTH.
 POLYCHAETA
 TANAIIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
 ALGAE
- SA-3497 HO HO BAY, SNARES ISLANDS, N.Z. 16 -I-77
 G.D. FENWICK UNDER ALGAE-COVERED BOULDERS ON COARSE SHELLY
 SAND BOTTOM, 30 M DEPTH.
 ECHINODERMATA - HOLOTHUROIDEA
 ECHINODERMATA - OPHIUROIDEA
 POLYCHAETA
 TANAIIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
- SA-3498 HO HO BAY, SNARES ISLANDS, N.Z. 16 -I-77
 G.D. FENWICK FROM COARSE SHELLY SAND BOTTOM, 30 M DEPTH.
 ECHINODERMATA - OPHIUROIDEA
 TANAIIDACEA
 ISOPODA
 AMPHIPODA - GAMMARIDEA
- SA-3499 HO HO BAY, SNARES ISLANDS, N.Z. 16 -I-77
 D.S. HORNING FROM COARSE SHELLY SAND BOTTOM, 30 M DEPTH.
 MOLLUSCA - BIVALVIA
 POLYCHAETA
 TANAIIDACEA
 ISOPODA
 AMPHIPODA - GAMMARIDEA
- D.S. HORNING ON CRUSTOSE CORALLINE ALGA, 30 M DEPTH.
 PYCONGONIDA
- SA-3501 COD CAVERN, SNARES ISLANDS, N.Z. 17 -I-77
 G.D. FENWICK ALGAE ON BOULDERS AND BEDROCK, 11-13 M DEPTH.
 ECHINODERMATA - OPHIUROIDEA
 ECHINODERMATA - ASTEROIDEA
 ASTROSTOLE SCABRA (HUTTON)(ASTERIIDAE). DET. G.D. FENWICK, 1977.
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
 DECAPODA
 ALGAE
- SA-3502 COD CAVERN, SNARES ISLANDS, N.Z. 17 -I-77
 G.D. FENWICK ON SIDE OF BOULDER, 15 M DEPTH.
 COELENTERATA - ACTINARIA
 CORYNACTIS HADDONI DET. G.D. FENWICK, 1977.
- SA-3503 COD CAVERN, SNARES ISLANDS, N.Z. 17 -I-77
 D.S. HOPRNING ON RED ALGA, 10-12 M DEPTH.
 ASCIDIACEA
- SA-3504 COD CAVERN, SNARES ISLANDS, N.Z. 17 -I-77
 D.S. HORNING ON SMALL ROCKS ON COARSE SHELLY SAND BOTTOM,
 15 M DEPTH.
 BRACHIOPODA
 ECHINODERMATA - OPHIUROIDEA
 MOLLUSCA - GASTROPODA
 POLYCHAETA
 ISOPODA
 AMPHIPODA - GAMMARIDAE
 CERAPUS OPPOSITUS (ISCHYROCERIDAE). DET. D.S. HORNING, 1977.
- SA-3505 SINKHOLE, SNARES ISLANDS, N.Z. 18 -I-77
 G.D. FENWICK IN CREVICE IN VERTICAL ROCK FACE, MTL,
 PYCNOGONIDS ON BACKS OF LIMPETS ENCRUSTED WITH POLYCHAETE TUBES.
 MOLLUSCA - GASTROPODA
 PYCNOGONIDA
 POLYCHAETA
- SA-3506 COD CAVERN, SNARES ISLANDS, N.Z. 17 -I-77
 G.D. FENWICK UNDER BOULDERS IN CAVE, 4-7 M DEPTH.
 ECHINODERMATA - OPHIUROIDEA
 OPHIOCOMA BOLLONSI FARQUHAR (OPHIOCOMIDAE). DET. G.D. FENWICK, 1977.
- SA-3507 COD CAVERN, SNARES ISLANDS, N.Z. 17 -I-77
 G.D. FENWICK UNDER AND ON BOULDERS IN CAVE, 5-7 M DEPTH.
 UNSORTED
- SA-3508 SINKHOLE, SNARES ISLANDS, N.Z. 18 -I-77
 G.D. FENWICK ON ROCK IN SHALLOW LOWER LITTORAL POOL.
 COELENTERATA - ACTINARIA
 ECHINODERMATA - HOLOTHUROIDEA
- SA-3509 SINKHOLE, SNARES ISLANDS, N.Z. 18 -I-77
 G.D. FENWICK UNDER BOULDERS IN SHALLOW ROCK POOL, LOWER
 LITTORAL.
 ECHINODERMATA - OPHIUROIDEA
 ISOPODA
 AMPHIPODA - GAMMARIDEA

- SA-3510 SINKHOLE, SNARES ISLANDS, N.Z. 18 -I-77
 G.D. FENWICK ON ROCK UNDER OVERHANG, LOWER LITTORAL.
 COELENTERATA - ACTINARIA
 ECHINODERMATA - HOLOTHUROIDEA
- SA-3511 SINKHOLE, SNARES ISLANDS, N.Z. 18 -I-77
 G.D. FENWICK AMONG COBBLES AND FINE GRAVEL BENEATH LOWER
 LITTORAL BOULDERS.
 ECHINODERMATA - OPHIUROIDEA
 PYCNOGONIDA
 POLYCHAETA
 ISOPODA
 AMPHIPODA - GAMMARIDEA
- SA-3512 SINKHOLE, SNARES ISLANDS, N.Z. 18 -I-77
 G.D. FENWICK ON SIDE OF LARGE BOULDER, LOWER LITTORAL.
 ECHINODERMATA - ASTEROIDEA
 CALVASTERIAS SUTERI (DE LORIO) (ASTERIIDAE). DET. G.D. FENWICK, 1977.
- SA-3513 SINKHOLE, SNARES ISLANDS, N.Z. 18 -I-77
 G.D. FENWICK AMONG UNSTABLE BOULDERS AND GRAVEL,
 MIDLITTORAL.
 COELENTERATA - ACTINARIA
 ISOPODA
 AMPHIPODA - GAMMARIDEA
- SA-3514 WEST COAST, S.W. PROM. RAZORBACK, SNARES ISLANDS, N.Z. 20 -I-77
 G.D. FENWICK AMONG FOLIPOSE CORALLINE ALGAE IN SMALL POOL ON
 TOP OF HUGE BOULDER, ABOVE DURVILLEA ZONE.
 ALGAE
 UNSORTED
- SA-3515 WEST COAST, S.W. PROM. RAZORBACK, SNARES ISLANDS, N.Z. 20 -I-77
 G.D. FENWICK ON BOULDERS BEHIND DURVILLEA ZONE.
 ALGAE
- SA-3516 WEST COAST, S.W. PROM. RAZORBACK, SNARES ISLANDS, N.Z. 20 -I-77
 G.D. FENWICK ON ROCK IN DEEP POOLS JUST ABOVE DURVILLEA
 ZONE.
 ALGAE
- SA-3517 PUNUI BAY, SNARES ISLANDS, N.Z. 21 -I-77
 J.L. WOODS TAKEN ON HANDLINE, 10 M DEPTH.
 VERTEBRATA - PISCES
 NOTOTHENIA MICROLEPIDOTA HUTTON (NOTOTHENIIDAE). DET. J. MORELAND, 1977
- SA-3518 PUNUI BAY, SNARES ISLANDS, N.Z. 21 -I-77
 G.D. FENWICK SWIMMING ALONE ABOVE BROWN ALGAE, 10 M DEPTH.
 VERTEBRATA - PISCES
 LATRIDOPSIS CILIARIS (BLOCH AND SCHNEIDER) (LATRIDAE). J. MORELAND,
 1977.
- SA-3519 PUNUI BAY, SNARES ISLANDS, N.Z. 21 -I-77
 G.D. FENWICK AMONG RED ALGAE, 12 M DEPTH.
 TANAIIDACEA
 ISOPODA
 AMPHIPODA - GAMMARIDEA
- SA-3520 PUNUI BAY, SNARES ISLANDS, N.Z. 21 -I-77
 G.D. FENWICK AMONG RED ALGAE, 0-2 M DEPTH.
 ISOPODA
 AMPHIPODA - GAMMARIDEA
- SA-3521 PUNUI BAY, SNARES ISLANDS, N.Z. 21 -I-77
 G.D. FENWICK AMONG RED ALGA, POLYSIPHONIA SP., 0-1 M DEPTH.
 UNSORTED
- SA-3522 N.W. CORNER HO HO BAY, SNARES ISLANDS, N.Z. 23 -I-77
 G.D. FENWICK AMONG THICK LAYER OF TERRESTRIAL PLANT
 DETRITUS IN MOUTH OF CAVE, 14 M DEPTH.
 ECHINODERMATA - HOLOTHUROIDEA
 CHIRODOTA CARNLEYENSIS DET. G.D. FENWICK, 1977.
 ECHINODERMATA - OPHIUROIDEA
 PECTINURA GRACILIS MORTENSEN (OPHIODERMATIDAE). DET. G.D. FENWICK,
 1977.
 OPHIONEREIS NOVAEZELANDIAE ? (OPHIOCHITONIDAE). DET. G.D. FENWICK,
 1977.
 AMPHIPHOLIS SQUAMATA (DELLE CHIAJE) (AMPHIURIDAE). DET. G.D. FENWICK,
 1977.
 MOLLUSCA - GASTROPODA
 COMINELLA NASSOIDES SSP. (COMINELLIDAE). DET. G.D. FENWICK, 1977.
- SA-3523 WEST SIDE HO HO BAY, SNARES ISLANDS, N.Z. 23 -I-77
 G.D. FENWICK AMONG THICK LAYER OF CRUSTOSE CORALLINE ALGAE,
 14-18 M DEPTH.
 UNSORTED
- SA-3524 N.W. CORNER HO HO BAY, SNARES ISLANDS, N.Z. 23 -I-77
 G.D. FENWICK ON ROCK IN CAVE, 12 M DEPTH.
 ASCIDIACEA
- SA-3525 300M S.W. BROUGHTON ISLAND, SNARES ISLANDS, N.Z. 23 -I-77
 I. LEASK ABOARD F.V. SAPPHERE IN CRAYPOT, 110 M DEPTH.
 VERTEBRATA - PISCES
- SA-3526 N.W. CORNER HO HO BAY, SNARES ISLANDS, N.Z. 23 -I-77
 G.D. FENWICK ON ROOF OF CAVE, 10 M DEPTH.
 COELENTERATA - ZOANTHARIA

- SA-3527 WEST COAST, SNARES ISLANDS, N.Z. 25 -1-77
I. LEASK ABOARD F.V. SAPPHIRE IN CRAYPOTS, 120-140 M DEPTH.
VERTEBRATA - PISCES
- SA-3528 MIDDLE OF MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 27 -1-77
G.D. FENWICK SCHOOLS OF FISH FEEDING ON SWARMS OF
EUPHAUSIDS AND HYPERIDS, 0-4 M DEPTH.
EUPHAUSIACEA
NICTYPHANES AUSTRALIS G.O. SARS (EUPHAUSIIDAE). DET. G.D. FENWICK, 1977
AMPHIPODA - HYPERIDEA
VERTEBRATA - PISCES
- SA-3529 PUNUI BAY, SNARES ISLANDS, N.Z. 28 -1-77
G.D. FENWICK AMONG LESSONIA VARIEGATA, 7-13 M DEPTH.
VERTEBRATA - PISCES
- SA-3530 PUNUI BAY, SNARES ISLANDS, N.Z. 28 -1-77
G.D. FENWICK SWIMMING IN OPEN WATER AND JUST ABOVE BOTTOM,
15 M DEPTH.
VERTEBRATA - PISCES
- SA-3531 MIDDLE OF MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 29 -1-77
J.L. WOODS TAKEN ON HANDLINE FROM AMONG LESSONIA
VARIEGATA, 10-13 M DEPTH.
VERTEBRATA - PISCES
- SA-3532 MIDDLE OF MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 29 -1-77
D.S. HORNING ON BRYOZOA ON ROCK, 14 M DEPTH.
ECHINODERMATA - ASTEROIDEA
HENRICIA SP. (ASTERINIDAE). DET. G.D. FENWICK, 1977.
- SA-3533 MIDDLE OF MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 29 -1-77
G.D. FENWICK IN SCHOOL, 0-4 M DEPTH.
VERTEBRATA - PISCES
- SA-3534 PUNUI BAY, SNARES ISLANDS, N.Z. 28 -1-77
D.S. HORNING PREY TO ASTROSTOLE SCABRA, 13 M DEPTH.
MOLLUSCA - GASTROPODA
MAUREA PUNCTULATA ? SSP. (TROCHIDAE). DET. G.D. FENWICK, 1977.
- SA-3535 MOLLYMAWK BAY, SNARES ISLANDS, N.Z. 29 -1-77
D.S. HORNING AMONG ALGAL DETRITUS ON COARSE SHELLY SAND,
23 M DEPTH.
MOLLUSCA - GASTROPODA
- SA-3536 NORTH PROM. CAPE PIGEON COLONY, SNARES ISLANDS, N.Z. 23 -1-77
P.M. SAGAR REGURGITATED BY ADULT CAPE PIGEON.
EUPHAUSIACEA
NICTYPHANES AUSTRALIS G.O. SARS (EUPHAUSIIDAE). DET. G.D. FENWICK, 1977
- SA-3537 PENGUIN COLONY 117, SNARES ISLANDS, N.Z. 31 -1-77
G.D. FENWICK SNARES CRESTED PENGUIN REGURGITATION.
MOLLUSCA - CEPHALOPODA
- SA-3538 1KM EAST OF HO HO ISLET, SNARES ISLANDS, N.Z. 3 -11-77
G.D. FENWICK AND P.M. SAGAR TAKEN ON SETLINE, 80-100 M DEPTH.
COPEPODA
PLATYHELMINTHES - TREMATODA
PLATYHELMINTHES - CESTODA
VERTEBRATA - PISCES
- SA-3539 SEAL COVE POOL, SNARES ISLANDS, N.Z. 4 -11-77
G.D. FENWICK AMONG ALGAE AND UNDER ROCKS, 0.25 M DEPTH.
COELENTERATA - ACTINARIA
ECHINODERMATA - HOLOTHUROIDEA
TROCHODOTA DUNEDINENSIS DET. G.D. FENWICK, 1977.
ECHINODERMATA - OPHIUROIDEA
OPHIONEREIS NOVAEZELANDIAE ? (OPHICHITONIDAE). DET. G.D. FENWICK,
1977.
ECHINODERMATA - ASTEROIDEA
ASTROSTOLE SCABRA HUTTON (ASTERIIDAE). DET. G.D. FENWICK, 1977
ALLOSTICHASTER INSIGNIS (FARQUHAR)(ASTERIIDAE). DET.G.D. FENWICK,
1977.
PYCNOGONIDA
AMPHIPODA - CAPRELLIDEA
- SA-3540 NORTH DAPTION ROCK, SNARES ISLANDS, N.Z. 8 -11-77
D.S. HORNING IN ROCK CREVICE, 45 M ABOVE SEA LEVEL.
CIRRIPIEDIA
- SA-3541 HO HO ISLET, SNARES ISLANDS, N.Z. 17 -11-77
D.S. HORNING AMONG SPONGES AND ALGAE IN INTERTIDAL POOL.
BRACHIOPODA
ECHINODERMATA - OPHIUROIDEA
MOLLUSCA - BIVALVIA
MOLLUSCA - GASTROPODA
PYCNOGONIDA
POLYCHAETA
CIRRIPIEDIA
ISOPODA
AMPHIPODA - GAMMARIDEA
- SA-3542 HO HO ISLET, SNARES ISLANDS, N.Z. 17 -11-77
G.D. FENWICK IN ROCK POOL, MID-DURVILLEA ZONE.
VERTEBRATA - PISCES
- SA-3543 HO HO ISLET, SNARES ISLANDS, N.Z. 17 -11-77
G.D. FENWICK AMONG DENSE TURF OF HYDROIDS ON ROCK IN
CREVICE, LOWER DURVILLEA ZONE.
COELENTERATA - HYDROIDA

COELENTERATA - ACTINARIA
 CHORDATA - ASCIDIACEA
 PYCNOGONIDA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA

- SA-3544 HO HO ISLET, SNARES ISLANDS, N.Z. 17 -11-77
 G.D. FENWICK UNDER ROCKS AND AMONG HYDROIDS IN ROCK POOL,
 LOWER DURVILLEA ZONE.
 COELENTERATA - HYDROIDA
 COELENTERATA - ACTINARIA
 ECHINODERMATA - OPHUROIDEA
 PYCNOGONIDA
 TANAIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
- SA-3545 HO HO ISLET, SNARES ISLANDS, N.Z. 16 -11-77
 D.S. HORNING ON ROCK IN DURVILLEA ZONE.
 CIRRIPIEDIA
- SA-3546 HO HO ISLET, SNARES ISLANDS, N.Z. 16 -11-77
 D.S. HORNING ON ROCK, 2 M ABOVE DURVILLEA ZONE.
 CIRRIPIEDIA
- SA-3547 HO HO ISLET, SNARES ISLANDS, N.Z. 17 -11-77
 G.D. FENWICK ON ROCK IN CREVICE, UPPER DURVILLEA ZONE.
 CIRRIPIEDIA
- SA-3548 HO HO ISLET, SNARES ISLANDS, N.Z. 17 -11-77
 G.D. FENWICK UNDER BOULDERS IN LARGE ROCK POOL.
 COELENTERATA - ACTINARIA
 ECHINODERMATA - OPHUROIDEA
 ECHINODERMATA - ECHINOIDEA
- SA-3549 HO HO BAY - SENECIO POOL TUNNEL, SNARES ISLANDS, N.Z. 18 -11-77
 G.D. FENWICK IN NARROW CREVICES IN UNDERWATER TUNNEL, 6 M
 DEPTH.
 MYSIDACEA
 DECAPODA
 NAUSICARIS MARIONIS BATE (HIPPOLYTIDAE). DET. G.D. FENWICK, 1977.
 VERTEBRATA - PISCES
- SA-3550 HO HO BAY - SENECIO POOL TUNNEL, SNARES ISLANDS, N.Z. 18 -11-77
 G.D. FENWICK AND D.S. HORNING ON WALL OF TUNNEL AMONG SPONGES AND ASCIDIANS,
 11 M DEPTH.
 MOLLUSCA - OPISTHOBRANCHIA
 AMPHIPODA - GAMMARIDEA
- SA-3551 NORTH OF NORTH DAPTION ROCK, SNARES ISLANDS, N.Z. 20 -11-77
 G.D. FENWICK ZOOPLANKTON, 1-5 M DEPTH.
 AMPHIPODA - HYPERIIDAE
 PARATHEMISTO GAUDICHAUDII (GUERIN) (HYPERIIDAE). DET. G.D. FENWICK,
 1977.
 EUPHAUSIACEA
- SA-3552 N.W. CORNER HO HO BAY, SNARES ISLANDS, N.Z. 22 -11-77
 G.D. FENWICK ALGAE ON PEBBLES-BOULDERS ON COARSE SHELLY
 SAND, 22 M DEPTH.
 MOLLUSCA - OPISTHOBRANCHIA
 PYCNOGONIDA
 TANAIDACEA
 ISOPODA
 AMPHIPODA - CAPRELLIDEA
 AMPHIPODA - GAMMARIDEA
 ALGAE
- SA-3553 N.W. CORNER HO HO BAY, SNARES ISLANDS, N.Z. 22 -11-77
 G.D. FENWICK UNDER BOULDERS ON COARSE SHELLY SAND, 22 M
 DEPTH.
 MOLLUSCA - BIVALVIA
 MOLLUSCA - GASTROPODA
 TANEA ZELANDICA (QUOY AND GAIMARD) (NATICIDAE). DET. G.D. FENWICK, 1977.
- SA-3554 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 23 -11-77
 G.D. FENWICK IN LARGE VERTICAL CREVICE, 13 M DEPTH.
 VERTEBRATA - PISCES
- SA-3555 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 23 -11-77
 G.D. FENWICK ALGAL ASSOCIATION ON SLOPING ROCK, 8-12 M
 DEPTH.
 ALGAE
- SA-3556 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 23 -11-77
 G.D. FENWICK ON SPONGES AND BRYOZOA IN NARROW CREVICE, 15 M
 DEPTH.
 MOLLUSCA - OPISTHOBRANCHIA
- SA-3557 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 24 -11-77
 D.S. HORNING ON ROCK FACE AMONG MARGINARIELLA BORYANA, 27 M
 DEPTH.
 ECHINODERMATA - ASTEROIDEA
 HENRICIA SP. (ECHINASTERIDAE). DET. G.D. FENWICK, 1977.
- SA-3558 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 24 -11-77
 D.S. HORNING ON COARSE SHELLY SAND, 41 M DEPTH.
 PORIFERA

SA-3559 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 24 -11-77
D.S. HORNING ON COARSE SHELLY SAND, 50 M DEPTH.

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PORIFERA
MOLLUSCA - GASTROPODA
DECAPODA

SA-3560 NORTH SIDE PUNUI BAY, SANRES ISLANDS, N.Z. 24 -11-77
D.S. HORNING ON BROYOZOA, 27M, AND COARSE SHELLY SAND, 50 M

ECHINODERMATA - OPHIUROIDEA
OPHIACTIS RESILIENS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1977.
PYCNOGONIDA
NEBALIACEA
TANAIDACEA
ISOPODA
AMPHIPODA - GAMMARIDEA
DECAPODA
NAUSICARIS MARIONIS BATE (HIPPOLYTIDAE). DET. G.D. FENWICK, 1977.

SA-3561 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 24 -11-77
G.D. FENWICK AMONG ALGAE AND COARSE SHELLY SAND, 50 M DEPTH

PYCNOGONIDA
ISOPODA
AMPHIPODA - CAPRELLIDEA
AMPHIPODA - GAMMARIDEA
ALGAE

SA-3562 NORTH SIDE PUNUI BAY, SNARES ISLANDS, N.Z. 24 -11-77
G.D. FENWICK ON COARSE SHELLY SAND, 50 M DEPTH.

MOLLUSCA - OPISTHBRANCHIA
DECAPODA

SA-3563 SEAL POINT POOL, SNARES ISLANDS, N.Z. 26 -11-77
D.S. HORNING ON ROCK IN UPPER LITTORAL IN SHELTERED ARM OF
LARGE POOL.

CIRRIPEDIA
AMPHIPODA - GAMMARIDEA

CIRRIPEDIA
ISOPODA
TANAIDACEA
PYCNOGONIDA
MOLLUSCA

COELENTERATA - ACTINARIA
ECHINODERMATA - ASTEROIDEA
CALVASTERIAS SUTERI (DE LORIO)(ASTERIIDAE). DET. G.D. FENWICK, 1977.
ECHINODERMATA - OPHIUROIDEA
OPHIACTIS RESILIENS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1977.
PSEUDOCNUS LEONINOIDES (MORTENSEN)(CUCUMARIDAE). DET. D.L. PAWSON AND
G.D. FENWICK, 1977.
CHIRODOTA GIGAS DENDY AND HINDLE (CHIRIDOTIDAE). DET. G.D. FENWICK,
1977.
TROCHODOTA DUNEDINENSIS (PARKER)(CHIRIDOTIDAE). DET. G.D. FENWICK,
1977.
PSEUDOCNUS LEONINOIDES (MORTENSEN)(CUCUMARIDAE). DET. G.D. FENWICK,
1977.
CHIRODOTA GIGAS DENDY AND HINDLE (CHIRIDOTIDAE). DET. D.L. PAWSON,
1977.
CHIRODOTA GIGAS DENDY AND HINDLE (CHIRIDOTIDAE). DET. D.L. PAWSON AND
G.D. FENWICK, 1977.
OPHIONEREIS FASCIATA HUTTON (OPHIOCHITONIDAE). DET. G.D. FENWICK, 1977.
OPHIONEREIS NOVAEZELANDIAE MORTENSEN (OPHIOCHITONIDAE). DET. G.D.
FENWICK, 1977.

PYCNOGONIDA
OPHIACTIS RESILIENS LYMAN (AMPHIURIDAE). DET. G.D. FENWICK, 1977.
NAUSICARIS MARIONIS BATE (HIPPOLYTIDAE). DET. G.D. FENWICK, 1977.
CAPRELLINA LONGICOLLIS (NICOLET). DET. G.D. FENWICK, 1977.

AMPHIPODA - GAMMARIDEA
AMPHIPODA - CAPRELLIDEA
CAPRELLINA LONGICOLLIS (NICOLET). DET. G.D. FENWICK, 1977.
TANAIDACEA

ISOPODA
PYCNOGONIDA

DECAPODA
NAUSICARIS MARIONIS BATE (HIPPOLYTIDAE). DET. G.D. FENWICK, 1977.

ECHINODERMATA - ASTEROIDEA
ALLOSTICHASTER INSIGNIS (FARQUHAR)(ASTERIIDAE). DET. G.D. FENWICK,
1977.

ECHINODERMATA - OPHIUROIDEA
PECTINURA GRACILIS MORTENSEN (OPHIODERMATIDAE). DET. G.D. FENWICK,
1977.
OPHIOCOMA BOLLONSI FARQUHAR (OPHIOCOMIDAE). DET. G.D. FENWICK, 1977.
AMPHIPHOLIS SQUAMATA (DELLE CHIAJE)(AMPHIURIDAE). DET. G.D. FENWICK,
1977.

AMPHIPODA - GAMMARIDEA
AMPHIPODA - CAPRELLIDEA
CAPRELLINA LONGICOLLIS (NICOLET). DET. G.D. FENWICK, 1977.

ISOPODA
TANAIDACEA

OPHIOPTERIS ANTIPODUM SMITH (OPHIOCOMIDAE). DET. G.D. FENWICK, 1977.
AMPHIPHOLIS SQUAMATA (DELLE CHIAJE)(AMPHIURIDAE). DET. G.D. FENWICK,
1977.
PSEUDECHINUS NOVAEZELANDIAE (MORTENSEN)(TEMNOPLEURIDAE). DET. G.D.
FENWICK, 1977.

STAUROMEDUSAE
CUMACEA

SNARES CRESTED PENGUIN

The objectives for the 1976-1977 season were to:

1. Check for banded birds and map the nest sites in Colony 3, the permanent study colony;
2. Record band numbers of all penguins sighted and their localities;
3. Band all chicks in Colony 3 just before they leave for the sea.

Frequent searches for banded penguins were made at Colony 3 throughout the expedition. The Station Cove landing rocks were checked for banded birds on most days and other penguin landing sites were visited frequently. Of the 36 banded penguins sighted, 23 were seen at Colony 3. Another 6 banded birds were seen on the Station Cove landing rocks. Five birds were found in colonies other than Colony 3, J-768 and J-924 at Colony 5, J-823 at Colony 117, J-938 at Colony 41 and J-1825 at the newly formed Colony 120 at the mouth of Muttonbird Creek. J-1024 and J-1832 were found on the Boat Harbour penguin landing rocks.

Fifty chicks were banded at Colony 3 from 5 to 9 January 1977. Bands used were J-1601-1618 and J-1869-1900.

A complete nest map of Colony 3 was given to Dr John Warham, University of Canterbury. Band recovery lists were sent to Dr J. Warham, University of Canterbury and Mr C.J.R. Robertson, Wildlife Service, Wellington.

BAND RECOVERIES

Colony	Band	Breeding	Mate
3	J-466	Yes	unbanded
3	J-471	Yes	unbanded
3	J-475	Yes	?
3	J-551	Yes	?
3	J-559	Yes	unbanded
3	J-595	Yes	unbanded
3	J-596	Yes	?
3	J-598	Yes	?
3	J-600	Yes	?
3	J-655	Yes	unbanded
3	J-669	Yes	?
3	J-688	Yes	?
3	J-703	Yes	?
Station Cove	J-748	?	?
3	J-749	Yes	unbanded
5	J-768	Yes	unbanded
3	J-785	Yes	unbanded

Colony	Band	Breeding	Mate
3	J-794	Yes	unbanded
3	J-796	Yes	?
Station Cove	J-800	?	?
117	J-823	Yes	unbanded
3	J-825	?	?
3	J-909	No	-
5	J-924	No	-
3	J-925	No	-
Station Cove	J-929	No	-
3	J-931	Yes	unbanded
Station Cove	J-935	?	?
41	J-938	?	?
Station Cove	J-944	?	?
3	J-949	No	-
3	J-1000	No	-
Station Cove	J-1018	?	?
Boat Harbour	J-1024	?	?
120	J-1825	No	-
Boat Harbour	J-1832	No	-

BULLER'S MOLLYMAWKS

MOLLYMAWK BAY COLONY

The objectives for the Mollymawk Bay Colony study were outlined in the 1974-1975 Snares Islands Expedition Report (p.51) and remained the same for this expedition.

Twenty-four visits were made to the study colony from 26 November 1976 to 1 March 1977. During the first visit colony maintenance was completed and few replacement nest pegs were required.

The first bird was recorded in the colony on 6 December. The first egg was found on 1 January in nest 202. The same pair of birds on the same nest were the earliest breeders in both the 1971-1972 and 1974-1975 seasons. At the last visit 85 eggs were recorded. The mean egg laying was ^{not} determined because daily visits to the colony were not practical.

Forty previously unbanded birds were banded as confirmed breeders in the study colony this season. In addition, 31 birds were rebanded to replace damaged and worn bands.

Table 7 Band numbers, nests and mates of birds banded during the 1976-1977 season.

Band Numbers	Nest Number	Mate
{ M-21562 O-2011	B123	M-3488
{ M-21563 O-1841	Ho Ho Track Colony	unbanded
{ M-21564 M-3464	71	{ M-21565 M-3462
{ M-21565 M-3452	71	{ M-21564 M-3464
{ M-21566 M-3472	122	M-3412
{ M-21567 M-3483	127	M-29432
{ M-21568 O-1879	37	M-3490
{ M-21569 M-3454	120	M-29427
{ M-21570 O-1880	50	{ M-21595 O-1964
{ M-21587 M-3451	106	{ M-21588 M-3415

Band Numbers	Nest Number	Mate
{ M-21588 M-3415	106	{ M-21587 M-3451
{ M-21589 O-1863	300	M-29436
{ M-21590 M-3489	210	non breeder?
{ M-21591 O-1996	NW109	O-2000
{ M-21592 O-1864	116	O-1955
{ M-21593 M-3463	SW52	{ M-21594 O-1878
{ M-21594 O-1878	B52/SW52	{ M-2944/M-21594 O-2006/O-1878 }
{ M-21595 O-1964	50	{ M-21570 O-1880
M-21596	229	O-1850
{ M-21597 O-1889	166	O-2017
M-21598	197	M-14790
{ M-21599 O-1885		non breeder?
{ M-21600 M-3458	unmarked nest	unbanded bird
M-29432	127	{ M-21567 M-3483
M-29433	008	M-29411
{ M-29434 O-1862		non breeder?
{ M-29435 M-3447	198	M-3475
M-29436	300	{ M-21589 O-1863
M-29437	135	M-29455
{ M-29438 O-1856	131	O-1875
{ M-29439 O-1852	124	M-3439
M-29440	133	M-29466
M-29441	220	M-29457
{ M-29442 O-1869		non breeder?
M-29443	W44	M-29458

Band Numbers	Nest Number	Mate
{ M-29444 O-2006	B52	{ M-21594 O-1878
M-29445	W167	M-29469
M-29446	B164	M-29459
M-29447	190	M-29462
M-29448	158	M-14770
M-29449	76	unbanded bird
M-29450	NE60	M-29424
M-29451	SW60	M-29475
{ M-29452 O-2020	155	non breeder?
M-29453	153	M-29464
M-29454	107	unbanded bird
M-29455	135	M-29438
M-29456	39	M-14862
M-29457	220	M-29441
M-29458	W44	M-29443
M-29459	B164	M-29446
{ M-29460 O-1966	007	M-14795
M-29461	191	M-29479
M-29462	190	M-29447
M-29463	78	M-3472
M-29464	153	M-29453
M-29465	154	M-14762
M-29466	133	M-29440
{ M-29467 O-1890		non breeder?
M-29468	004	unbanded bird
M-29469	W167	M-29445
{ M-29470 M-3407	204	M-14821
M-29471	209	M-14804
M-29472	181	M-29418
M-29473	73	M-29415
M-29474	157	unbanded bird
M-29475	SW60	M-29451
M-29476	A223	unbanded
M-29477	58	M-3425
M-29478	203	M-3480
M-29479	191	M-29461

PUNUI BAY COLONY

Checks for banded birds were made on 10 January, 5, 11 and 21 February 1977. Fifteen banded birds were found and 14 were confirmed as breeders. The non breeder (M-31466) was a bird banded as a chick on Snares in August-September 1972. One of the birds banded by Dr L.E. Richdale in 1948 was found again to be breeding at Richdale nest 14. The locations referred to follow those described in the 1974-75 Snares Islands expedition report.

Area	Band	Breeding	Mate
1	O-1974	Yes	?
2	O-1802	Yes	?
2	O-1975	Yes	?
4	O-1808	Yes	?
4	O-1814	Yes	?
4	O-1815	Yes	?
4	O-1933	Yes	?
4	O-1934	Yes	?
4	M-31466 ✓	No	-
5	O-1828	Yes	?
5	O-1831	Yes	?
5	O-1931	Yes	?
6	O-1928	Yes	?
6	M-14724	Yes	M-14852
6	M-14852	Yes	M-14724

COMMA BAY COLONY

This colony was visited on 6, 13 and 24 February and 1 March 1977. Eleven banded birds were located and nine were confirmed as breeding.

Area	Band	Breeding	Mate
2	O-1840	Yes	unbanded
3	O-1903	Yes	unbanded
3	O-1907	?	?
3	O-1908	Yes	unbanded
3	O-1912	?	?
3	O-1940	Yes	unbanded
3	O-1947	Yes	M-14862
3	O-1983	Yes	?
3	O-1984	Yes	?
3	M-14862	Yes	O-1947
3	M-14863	Yes	unbanded

HO HO BAY COLONIES

Several visits were made to the three colonies described in the 1974-1975 Snares Island Expedition Report. Eight banded birds were recorded and all were confirmed as breeding.

Area	Band	Breeding	Mate
1	O-1839	Yes	?
1	O-1842	Yes	?
1	M-14719	Yes	?
2	O-1841	Yes	unbanded
2	M-14753	Yes	unbanded
2	M-14755	Yes	unbanded
3	O-1956	Yes	unbanded
3	O-1991	Yes	unbanded

SOUTH COAST COLONIES

During the 1974-1975 expedition 30 pairs of breeding mollymawks from three colonies along the south coast were banded and standard measurements were taken for comparison with Buller's Mollymawks that breed at the Chatham Islands. Area 1 is in the forest at the base of the South West Promontory Razorback; 2 is beside the main track 100 m south east of the South West Promontory track turnoff; 3 is 10 m south west of the 1750 m track marker. Checks for banded birds were made on 2 January, 17 January, 7 and 24 February 1977. Thirty-eight banded birds were recorded and most of these were confirmed as breeding.

Area	Band	Breeding	Mate
1	M-21522	Yes	?
1	M-21523	Yes	?
1	M-21525	?	?
1	M-21527	Yes	?
1	M-21529	Yes	?
1	M-21531	Yes	M-21548
1	M-21532	Yes	M-21549
1	M-21533	?	?
1	M-21534	Yes	?
1	M-21536	Yes	M-21577
1	M-21545	Yes	?
1	M-21547	Yes	unbanded
1	M-21548	Yes	M-21531
1	M-21549	Yes	M-21532
1	M-21572	?	?
1	M-21574	Yes	?
1	M-21575	Yes	?
1	M-21576	?	?
1	M-21577	Yes	M-21536
1	M-21586	Yes	?

Area	Band	Breeding	Mate
2	M-21512	Yes	?
2	M-21514	Yes	?
2	M-21515	Yes	?
2	M-21516	?	?
2	M-21517	Yes	M-21556
2	M-21518	Yes	?
2	M-21519	?	?
2	M-21520	Yes	M-21578
2	M-21537	Yes	?
2	M-21538	Yes	M-21554
2	M-21544	?	?
2	M-21554	Yes	M-21538
2	M-21556	Yes	M-21517
2	M-21557	Yes	?
2	M-21558	?	?
2	M-21578	Yes	M-21520
2	M-21584	?	?
3	M-21579	Yes	?
3	M-21580	Yes	?

BAND RECOVERIES

O bands 51
M bands 177
Total 228

New Birds Banded 40
Birds Rebanded 31

Comprehensive lists of Mollmawk band recoveries have been given to Dr John Warham, University of Canterbury and Mr C.J.R. Robertson, Wildlife Service, Wellington.

CAPE PIGEONS

A colony of 36 nests was studied in the Cape Pigeon breeding area on the North Promontory. Thirty-nine visits were made from 20 November 1976 until the last chick left the colony on 20 February 1977. Visits were made at three-day intervals except during the hatching and fledging periods when daily checks were undertaken.

Data were obtained on egg size, incubation, hatching times and dates, chick growth (from weights and bill and tarsus measurements), food and feeding intervals of chicks, fledging period and breeding success. As birds were incubating eggs at the first visit the incubation period was not determined.

In mid-February a thorough search was made for accessible Cape Pigeon chicks in the North Promontory area. Forty-nine (including 21 from the study colony) were located. On 8 February 100 chicks were banded (H-16001-16100) at the North Daption Rock breeding colony. Seventeen birds banded before 1976 were recovered during the expedition.

Area	Band
North Daption Rock	H-4602
Punui Bay	H-4607
North Promontory	H-4625 rebanded H-19840
North Promontory	H-4626 rebanded H-19838
North Promontory	H-4627 rebanded H-19842
North Promontory	H-4628 rebanded H-19893
North Promontory	H-4630 rebanded H-19846
North Promontory	H-4631 rebanded H-19839
North Promontory	H-4634 rebanded H-19843
North Promontory	H-4635 rebanded H-19841
North Promontory	H-4636 rebanded H-19845
North Promontory	H-4639 rebanded H-19844
North Promontory	H-8911
Trumpeter Bay	H-9612
North Promontory	H-19816
North Promontory	H-19817
North Promontory	H-19818

On 2 February 30 adults were caught at sea off Trumpeter Bay. Birds were attracted to the boat by feeding fish scraps and caught by hand while feeding. Each bird was immediately weighed, bill and tarsus measurements taken and then released. These data will be compared to those obtained from chicks in the North Promontory study colony.

SOOTY SHEARWATERS

Sooty Shearwaters, Puffinus griseus, are the most abundant seabirds at the Snares Islands and also a most important species to this ecosystem. Our programme included searching for previously banded birds in the Penguin Creek - Punui Bay area and banding 999 adults.

The first surface egg was found on 19 November 1976. A chick, chipping within an egg, was discovered in a burrow on 6 January 1977. A Sooty Shearwater with an unusual colour pattern was described from Comma Bay in the 1974-1975 Snares Islands Expedition report. A similar bird was found at the lower takeoff rocks at Punui Bay on 29 November 1976. More than 30 per cent of the wing coverts and secondary wing feathers were white.

ADULT BANDING

All members of the expedition helped band 999 adults between 17 January and 19 February 1977. Surface birds were banded in the late evening in an area south and east of the Penguin Colony 3 clearing and up to the forest edge at Punui Bay.

Nearly 4700 birds, including 500 chicks, have now been banded in this area at the Snares Islands. The establishment of a large banded population of Sooty Shearwaters may provide better knowledge of the winter ranges of the species. For instance, several of the Snares Islands birds have been found at the Aleutian Islands, off the coast of Alaska.

Banding dates and numbers were: 17 January, Z-10 102 - 10 300; 19 January, Z-10 301 - 10 500; 4 February, Z-10 501 - 10 700; 17 February, Z-10 701 - 10 900; 19 February, Z-10 900 - 11 100.

BAND RECOVERIES

A total of 624 Z-bands were seen during the expedition. Z-5145 was found freshly killed by a skua near the upper takeoff rocks at Punui Bay on 15 November. A leg with band Z-6545 was found in an Olearia tree on 31 January. The band was tightly wedged in a small fork of two dead branches. This is the first record of a band being a contributing factor to the death of a Sooty Shearwater at the Snares Islands. All other bands were observed on live adults.

There were ten early morning (0300 - 0530 NZST) visits in an area south and east of the Penguin Colony 3 clearing and up to the upper and lower takeoff rocks at Punui Bay. The primary purpose of this project was to sight birds banded as chicks in 1972 (Z-7601 - 7637, 7639 - 8100, 10101). Thirteen of the 500 birds banded were seen this year. Another objective was to sight as many bands as possible to find the range still present, especially the older 5000 and 6000 series bands.

The ten visits were between 19 November and 12 December 1976. These bands were seen during the visits:

Z-5038	Z-5786	Z-6988	Z-7390	Z-15211	Z-15320
5134+	5795*	7000	7400+	15212	15321
5145	5812	7021	7406*	15213	15324
5150	5816*	7115*	7419	15216	15325
5195*	5817*	7125	7422	15220	15327
5240	5822	7130+	7425	15221	15329
5272	5829	7142	7428+	15227	15333
5273	5831*	7147	7429	15228	15336
5275*	5838	7149*	7432	15231	15340
5289*	5847*	7153	7436	15234	15341
5302	5850	7156+	7449	15235	15344
5307	5852+	7163*	7453*	15236	15345
5319	5861+*	7164*	7458	15237	15346
5324	5880	7169	7459	15239	15347
5352	5881	7174*	7464*	15242	15348
5358	5887	7179*	7466+	15243	15351
5373	5888*	7180*	7469	15244	15352
5381	5891*	7197	7478	15247	15353
5388	5907*	7204*	7481+	15249	15357
5396*	5923	7208*	7492+*	15250	15359
5397	5926	7212	7493	15253	15362
5408	5934	7214	7496	15263	15363
5450	5943	7224*	7501*	15265	15368
5455	5946	7227	7503+	15266	15371
5484*	5960	7228	7524+	15267	15373
5492*	5966	7231	7527	15270	15383
5501	5978	7233	7529	15276	15386
5504	5994	7237	7530	15277	15389
5525	5996	7238	7534+	15278	15390
5530+	6001	7246	7536	15280	15391
5566+*	6002+*	7247	7541	15282	15395
5584	6008	7250	7543*	15283	15396
5628*	6009	7253*	7552	15284	15397
5629*	6011	7255+*	7558*	15286	15400
5630	6031*	7257+	7567*	15287	15401
5635	6032*	7274+	7569*	15289	15403
5636	6033	7298*	7570*	15290	15404
5637	6037	7299+*	7572	15293	15405
5656	6048	7302	7580	15296	15406
5658	6058*	7305	7588	15298	15407
5661+	6059+*	7311	7626/	15299	15408
5668*	6068*	7316*	7628/	15300	15409
5682	6080*	7317	7659/	15301	15414
5684	6092*	7334*	7667/	15303	15415
5687	6545	7335	7734/	15304	15416
5690	6588	7337+	7736/	15305	15417
5711*	6595	7339	7745/	15307	15418
5728+	6605	7340	7760/	15308	15419
5746*	6606	7345	7836/	15309	15420
5755+	6614	7353*	7876/	15310	15422
5756+	6624	7357	7890/	15311	15425
5757+	6639+	7358	7952/	15312	15426
5758	6706	7359+	7975/	15313	15427
5764*	6725	7364	15201	15314	15428
5767+	6872	7367	15205	15315	15432
5777	6873	7370	15207	15316	15433
5780	6916	7381+*	15208	15317	15435
5784	6920	7389+	15210	15318	15438

Z-15439	Z-21434	Z-21582	Z-21746	Z-21884	Z-21989
15440	21437	21584	21747	21886	21993
15441	21438	21586	21748	21890	21997
15442	21440	21587	21754	21891	21998
15443	21442	21588	21764	21895	22000
15444	21448	21589	21767	21898	22001
15445	21455	21590	21773	21899	22005
15450	21456	21593	21779	21902	22007
21351	21460	21595	21780	21905	22009
21352	21461	21606	21785	21908	22012
21353	21462	21613	21787	21909	22017
21355	21463	21626	21788	21910	22018
21359	21466	21638	21790	21911	22019
21361	21468	21647	21791	21912	22021
21365	21469	21648	21794	21914	22023
21370	21470	21652	21801	21915	22024
21371	21471	21654	21802	21916	22026
21374	21474	21661	21807	21917	22030
21376	21477	21665	21808	21918	22031
21382	21480	21673	21809	21920	22035
21383	21481	21676	21810	21923	22036
21384	21482	21677	21812	21925	22043
21387	21483	21678	21820	21926	22044
21390	21484	21682	21826	21929	22048
21394	21485	21683	21834	21931	22049
21399	21488	21684	21837	21932	22050
21400	21492	21688	21839	21943	22051
21401	21494	21698	21853	21944	22053
21402	21500	21702	21854	21945	22054
21404	21512	21705	21855	21946	22055
21406	21513	21706	21857	21947	22056
21407	21520	21708	21858	21949	22058
21410	21523	21711	21859	21950	22059
21411	21529	21712	21861	21951	22060
21413	21532	21718	21862	21952	22063
21415	21537	21720	21863	21953	22066
21419	21538	21726	21864	21954	22067
21420	21540	21728	21866	21955	22068
21421	21542	21729	21868	21956	22069
21422	21543	21730	21869	21960	22071
21425	21546	21731	21875	21963	22078
21427	21556	21732	21878	21965	22079
21428	21567	21733	21879	21966	22084
21429	21570	21736	21880	21971	22087
21431	21576	21740	21881	21978	22089
21432	21581	21742	21882	21985	22100

+ Bands recovered 1971-1973

* Bands recovered 1974-1975

We found 624 banded birds and had 541 recaptures for a total of 1165 birds handled. Band series and numbers recovered in each series are given in Table

Table 8 . Number and percentage of band recoveries for the 1976-1977 expedition.

Year	Band Series	Total bands	Bands recovered this expedition	% of number banded
1966/67	Z-5101-5600	500	32	6.4
1968/69	Z-5601-5618 Z-6501-7000	18 500	16	3.2
1969/70	Z-5619-6100	482	70	14.5
1970/71	Z-7101-7600	500	96	19.2
1972	Z-7601-8100, 10101	*500	13	2.6
1974/75	Z-15201-15450 Z-21551-22100	1000	397	39.7

* Banded as chicks

Thirty-two birds recovered during the 1971-1973 expedition were found in 1976 and 59 bands were common to the 1974-1975 expedition. Only eight birds, Z-5566, 5756, 5861, 6002, 6059, 7255, 7299 and 7381, were common to all three expeditions.

Of the 1165 birds handled in 1976, 325 were captured one time only. The number, percentage, and mean number of captures of the 1966-1972 and 1974-1975 banded birds are given in Table

Table 9 Number, percentage and mean captures of banded Sooty Shearwaters for the 1976-1977 expedition.

Date Banded	Number of birds caught	% caught once	\bar{x} captures per bird
1966-72	331	67.6	1.47
1974-75	832	43.1	2.09

Since all birds were banded in the search areas, these figures suggest that older banded birds are more wary of the catchers and their lights.

ANTARCTIC TERNS AND RED-BILLED GULLS

The Snares Islands are one of the northernmost breeding sites for Antarctic Terns. At Snares the breeding sites of these species are very similar. All birds (Antarctic Tern and Red-billed Gulls) breeding along the coastline from Skua Point to the south side of Ho Ho Bay were located and their nests checked daily.

Emphasis was placed on the breeding of Antarctic Terns. Most of the breeding terns were colour banded for individual recognition from a distance. Egg size, clutch size, incubation period, hatching period and fledging period were recorded. Chick growth (weights and standard measurements) and development were studied until fledging. Several hours of continuous observation were made at two nests to obtain data on food and feeding of chicks.

Twenty-two terns were banded as listed below.

Band Number	Age	Colour (L)	Bands (R)
D-64338	Adult	G	M
D-64339	Adult	Y	M
D-64340	Adult	W	M
D-64341	Pullus	M	B
D-64342	Adult	B	M
D-64343	Pullus	M	
D-64344	Pullus	M	
D-64345	Pullus	M	Y
D-64346	Pullus	M	W
D-64347	Pullus	Y/M	
D-64348	Pullus	M	
D-64349	Adult		G/M
D-64350	Adult		Y/M
D-64351	Adult		W/M
D-64352	Adult		B/M
D-64353	Adult		M/Y
D-64354	Adult		M/G
D-64355	Adult		M/W
D-64356	Adult	W	M/G
D-64357	Adult	Y	M/G
D-64358	Adult		M
D-64359	Pullus	M	G

N.B. Colour Bands: G = Green, Y = Yellow, W = White, B = Blue, and M = Numbered Metal

Data collected from Red-billed Gulls were; egg size, clutch size, incubation period and time from pipping of the egg to emergence of the chick. Two banded birds were recovered, E-72316 and E-72318, both were breeding.

Observations were made on the interactions between Antarctic Terns, Red-billed Gulls and Southern Skuas. The distribution of nests of each species relative to the other was of particular interest.

ADDITIONAL BIRD STUDIES

WESTERN CHAIN During the visit to Rima Islet on 21 November 1976 observations were made on the bird fauna. Salvin's Mollymawks were breeding and the nests contained young chicks (up to 30 cm long) and eggs. A count of the adults and occupied nests was made.

Snares Crested Penguins were breeding solitarily in caves. Adults and occupied nests were counted. All occupied nests contained eggs.

Thirteen Fulmar Prion nests were found and egg measurements taken.

Dense concentrations of breeding Cape Pigeons were on the islet and 20 eggs were measured.

A paper on the birds of the Western Chain is in preparation and observations made by Dr Horning on Wha Islet will be included.

BROUGHTON ISLAND Two visits were made to Broughton Island. At the request of Mr H.A. Best, Wildlife Service, penguin colonies were mapped and a count made of the occupied nests in each colony. Additional vegetation data were recorded on a vegetation map drawn by Mr Best.

SNARES ISLAND SNIPE Sightings of six different colour banded birds were recorded on a large scale map. The birds were banded in 1968-69. These data will be given to Dr J. Warham, Zoology Department, University of Canterbury.

SOUTHERN SKUAS A count of breeding and non-breeding skuas was made during the summer. The location of skua nests found was plotted on a large scale map. These data will be compared with those collected by H.A. Best to determine any population changes since the 1974-75 expedition.

SNARES FERNBIRD AND BLACK TIT Sightings of colour-banded Fernbirds and Black Tits were recorded on a large scale map. These data will be sent to Mr H.A. Best.

BIRD SIGHTINGS A record was kept of all bird sightings made during the expedition. Four species were newly recorded at the Snares this summer: a Shining Cuckoo corpse was found; several sightings of a Long-tailed Cuckoo were made; flocks of up to 50 Black Shags were seen throughout the summer and a Racing Pigeon stayed at the station for a month. The

pigeon had been released at Invercargill on 9 December 1976 and was first seen in the station area on 10 December. It was caught the next day and its band number recorded. When released it stayed in the area and fed until 3 January 1977 when it was last seen flying north.

The Red-crowned Parakeets and the South Island Fantail seen during the 1974-1975 expedition were not recorded this expedition.

NEW ZEALAND FUR SEALS

At the Snares Islands, New Zealand Fur Seals, Arctocephalus forsteri, are most abundant along the east and west coasts of Main and Broughton Islands and the Western Chain. Breeding colonies are located on the west coasts of the two largest islands and some pups were found on the south-east coast of the South Promontory and at Mollymawk Bay in early February, 1977. Dr M.C. Crawley, University of Canterbury, reported that there were 1156 adult and 234 pup fur seals at the Snares Islands in 1970.

Mr R.H. Mattlin, University of Canterbury, is studying the growth and mortality of seal pups at the Open Bay Islands, Westland. Pups are measured and weighed several times a year to monitor their growth. I proposed that Snares Islands seal pups be measured at the same time as those at the Open Bay Islands to provide comparable data from two widely separated populations. This suggestion was feasible because access to several of the Snares Islands breeding colonies on west coast boulder beaches was found during the last three expeditions.

One hundred pups were measured on 7 February on the south coast beach below the Southwest Promontory Razorback. The measurements were curvilinear length, length of the anterior edge of the left foreflipper and the axillary (girth immediately behind the foreflippers). Each pup was weighed, sexed and the second toe on the right hindflipper was clipped.

The numbers of each sex and the mean measurements and weights for the 100 pups are listed.

	Number	Curvilinear Length (mm)	Left Fore- Flipper Length (mm)	Axillary Girth (mm)	Weight (g)
Males	53	726	219	495	7972
Females	47	704	212	484	7403
Total	100	716	216	490	7705

The complete data, given below, will be computer-analysed by Mr Mattlin and compared to Open Bay Islands populations. The results of this study will be included in his dissertation.

Pup	Sex	Curvilinear Length (mm)	Left Foreflipper Length (mm)	Axillary Girth (mm)	Weight (g)
1	Male	695	220	485	8750
2	Female	740	215	495	7800
3	Male	645	215	430	6000
4	Female	745	205	455	7050
5	Male	755	215	480	6450
6	Female	770	235	490	7400
7	Female	735	205	495	7250
8	Male	665	205	445	5500
9	Female	660	190	475	6600
10	Male	655	210	480	7750
11	Female	705	215	490	7450
12	Female	710	210	470	7150
13	Female	775	230	470	7100
14	Female	740	205	470	8250
15	Female	690	200	470	7650
16	Male	705	205	480	7400
17	Male	775	210	500	8250
18	Male	745	220	515	9250
19	Female	720	210	455	7600
20	Male	760	205	520	10650
21	Female	740	220	515	8550
22	Male	765	250	510	9050
23	Female	781	215	550	9500
24	Female	730	220	495	8400
25	Male	610	190	445	5550
26	Male	690	205	475	7000
27	Female	665	210	490	7500
28	Female	680	220	520	9750
29	Male	665	205	450	6550
30	Male	680	220	490	7550
31	Male	770	225	540	9150
32	Male	730	215	485	8100
33	Female	695	200	500	7850
34	Female	670	215	460	7950
35	Male	730	220	510	9850
36	Male	720	210	515	8200
37	Male	665	220	445	6000
38	Female	690	210	525	7150
39	Female	635	195	450	5150
40	Female	665	210	480	7950
41	Male	755	225	515	8450
42	Male	725	225	485	7750
43	Male	755	225	530	9000
44	Female	645	215	485	6200
45	Male	840	235	555	11050
46	Male	690	215	495	7600
47	Female	755	230	510	7050
48	Male	685	220	520	7650
49	Female	740	210	500	8350
50	Female	670	205	410	5150

Pup	Sex	Curvilinear Length (mm)	Left Foreflipper Length (mm)	Axillary Girth (mm)	Weight (g)
51	Female	730	220	515	7900
52	Female	670	205	480	6500
53	Male	675	220	435	5250
54	Male	775	235	550	10350
55	Male	675	200	460	5850
56	Female	770	245	510	8550
57	Male	760	210	500	7500
52	Male	775	230	500	8000
59	Female	720	250	520	8300
60	Male	640	225	420	5700
61	Male	760	215	530	9050
62	Female	735	220	470	6700
63	Male	760	215	515	9450
64	Female	680	208	440	5500
65	Male	785	225	540	10700
66	Female	630	190	395	5200
67	Male	730	225	530	8200
68	Female	750	220	520	9250
69	Female	650	225	420	6550
70	Male	660	220	440	7000
71	Female	665	205	485	7050
72	Female	590	190	440	5850
73	Female	655	210	480	6000
74	Male	705	235	500	7850
75	Male	690	215	480	6300
76	Male	735	210	490	8050
77	Female	620	200	490	6400
78	Female	705	205	500	7650
79	Male	790	220	570	9500
80	Female	775	225	540	7700
81	Female	665	230	510	7800
82	Male	720	210	510	7900
83	Male	780	230	530	5450
84	Male	815	230	480	8800
85	Male	745	220	440	7550
86	Female	740	220	560	8200
87	Female	700	200	490	9100
88	Male	690	220	460	6900
89	Female	775	215	480	8300
90	Female	735	210	450	7800
91	Male	755	230	555	9550
92	Male	820	235	510	8400
93	Female	680	185	425	5850
94	Male	670	205	445	6000
95	Male	830	245	545	10250
96	Male	665	210	440	6550
97	Male	820	255	570	12250
98	Female	710	210	500	8000
99	Male	675	220	490	8500
100	Male	730	210	475	7150

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18 April 1977



The 1976 – 1977 Snares Islands Expedition

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