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Natural History of the Safety Cove Area,
Tasman Peninsula.

Easter Camp Report, 1946

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No. 1.

PLANT SURVEY OF SAFETY COVE

By J. Somerville and C. G. Elliott.

THE vegetation in the Safety Cove area of Tasman Peninsula may be considered under three headings—beach and dunes, woodland, and coastal heath.

1. BEACH AND DUNES:—The two kinds of sand dunes, active and stable, are well illustrated at Half-Moon Bay. The first kind is seen to the east of the creek which runs out at the centre of the bay; a stable dune rises behind it, and appears alone farther to the West, forming the very high slides. In active dunes the loose sand accumulates and changes its position as it is blown by the wind. Marram grass grows here alone, its shoots pushing through the shifting sand and stabilising it by the intertwining of its roots, thus making way for other plants which cannot grow under present conditions. Such a plant is pig-face, which by its prostrate habit further binds the sand. *Suaeda* and bracken are common on the dunes at Half-Moon Bay, and farther back from the beach we find sheoaks and various gums. *Tetragonia*, a plant with yellow flowers common on most sand dunes, was not observed anywhere in the district. The fleshy nature of the leaves of many plants, especially the gums, collected along the beach, and indeed, throughout the whole area, was remarked upon. Succulence (due to the development of tissues for water storage) seems to be general in coast plants.

2. WOODLAND:—The character of the woodland was found to vary considerably according to the rock formation it covered. At the south-east end of Safety Cove, for example, is a dolerite headland. The chief tree here was the stringy bark, with blue and white gums and peppermint, and some *Eucalyptus occidentalis*. Mr. Rodway (1) has referred to the presence of a "blue peppermint" related to *E. ricdonii* "at the entrance to the port," but we did not see any. The ground flora

consists chiefly of bracken, white-heards, heath (which was flowering profusely), *Hibbertia*, and orchids, seven kinds of which were found, all told.

At the north end of the Cove, the rock is a sandstone, and here the undergrowth was much thicker; Prickly Moses, *Goodenia*, bat-brush and *Haloragis* made going difficult, while cutting-grass grew in the damper places and climbing blue berries twined through the scrub.

Where the bush abuts on cliffs, some characteristic plants appear, such as *Geranium*, sea parsley, prickly box.

3. COASTAL HEATH:—The composition of this most interesting association varies with situation. That on exposed headlands, such as Brown Mountain and the coast along to Remarkable Cave differs from that on the Safety Cove side of the moor, and the plants frequenting the sandy soil are different from those in the wetter peaty hollows.

In 1929, the late Mr. Rodway (2) wrote: "Two interesting Heaths grow near the Blowhole at the Heads, neither of which occurs anywhere near Hobart. They are *Epacris myrtifolia* and *Epacris heterocoma*. The former is so like the dwarf tea tree growing in the vicinity that a close scrutiny had to be made to distinguish between them when not in flower. This heath occurs only in the extreme south of Tasmania. The Port Arthur plant (of *E. heterocoma*) is typical, with closely imbricate, erect, pungent, pointed leaves." We were fortunate enough to collect both these at the Blowhole mentioned. A third *Epacris* confused with both of these which we collected on the sandstone cliff near Pt. Puer probably is *Epacris stricta* Stapf. The dwarf tea tree Rodway mentions is *Leptospermum scoparium*; that growing near Remarkable Cave we found to have unusually large fruits.

A TRIBUTE

PUBLICATION of this issue of "The Naturalist" was aided substantially by a generous donation to the funds by the widow of Dr. Arndell Neil Lewis, a leading member of the Field Naturalists' Club (for many years president) whose death, following war service, on 27th December, 1943, was lamented widely.

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Photograph by permission of the Tasmanian Field Naturalists' Club, 1945

Pimelea in the same area we found showing the same luxuriance. The sides of Brown Mountain present large areas of exposed rock with plants growing in the cracks and shingle. Here grow the two heaths, *Calythrix*, *Banksia*, *Hakea*, *Leucopogon*, several *Ocotea* species; they form dense rounded bushes about 4 ft. high. A dwarf gum, *Eucalyptus cordata*, is recorded, but we did not see any.

In the dry parts of the heath removed from the coast the soil is sandy. The vegetation consists of shrubs some feet high, such as *Epacris impressa* and *E. laevis*, and *Sprengelia*. Isolated dwarf gums (*Eucalyptus salicifolia* and *E. creata*) occur, and shrubs like *Banksia*, *Aotus*, sweet *Acacia* and

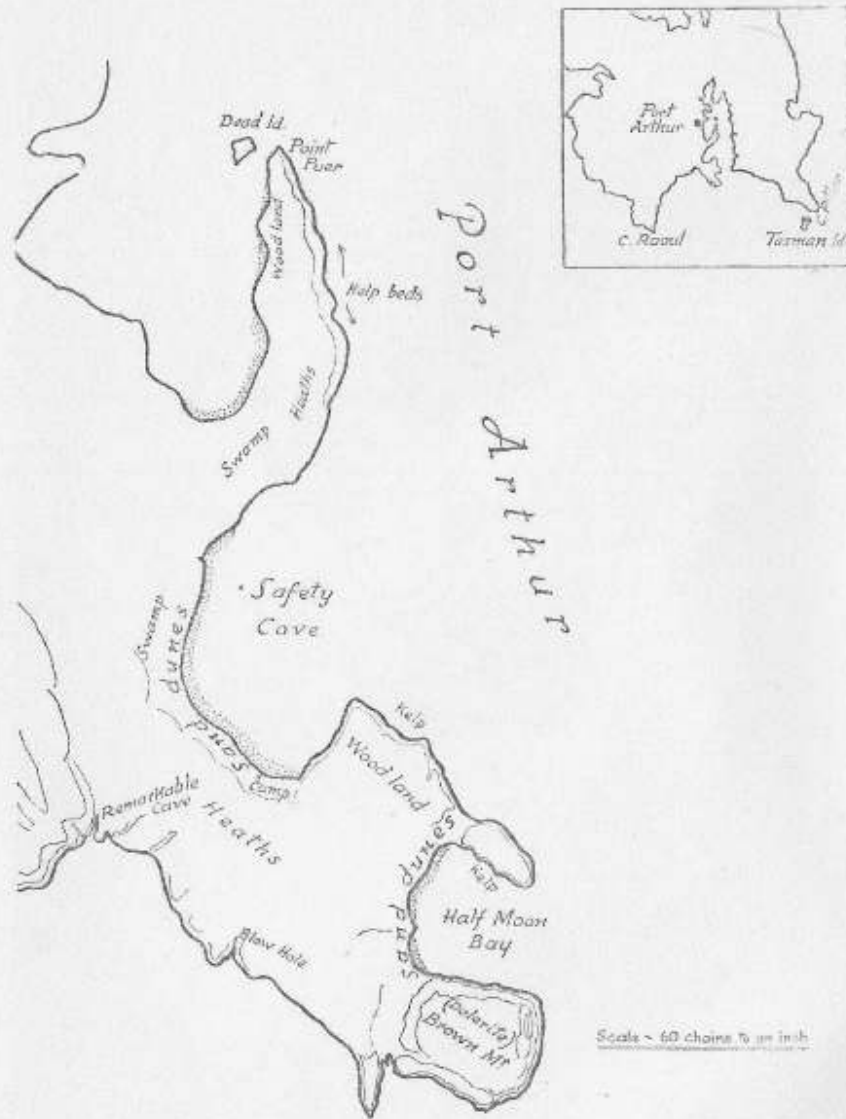
dwarf oak are common. In the heath are depressions where the soil is wetter and more peaty. Here bottle-brush and button-grass occur, together with rushes and sedges in great numbers. These depressions sometimes are quite swampy and here *Myriophyllum* and *Triglochin* flourish.

The following table has been compiled as the result of a general survey made during the Easter Camp of the Field Naturalists' Club from 18th—22nd April, 1944, hence the list is by no means complete. With such a cursory examination it is difficult to estimate the frequency of those plants at present marked "occasional" or "rare." No statistical analysis was attempted.

Abbreviations:—vc = very common; c = common; lc = locally common; f = frequent; o = occasional; r = rare.

Plants seen in flower are marked with an asterisk.

Vernacular Name	Botanical Name	Sand Dune	Shore Cliffs	Heaths		Open Woodland	Exposed Roadside	Swampy
				1.	2.			
*Buttercup	RANUNCULACEAE. <i>Ranunculus cuneatus</i> , Banks et Sol.	—	—	—	—	—	—	—
*Guinea flower	DILENIACEAE. <i>Hibbertia stricta</i> , R. Br.	f	f	f	—	f	—	—
*Trailing Guinea flower	<i>angustifolia</i> , Sol.	f	—	—	f	—	—	—
Violet	VIOLACEAE. <i>Viola hederacea</i> , Lab.	—	—	—	—	f	—	—
Prickly Box	PITOSPORAEEA. <i>Borreria villosa</i> , Cav.	—	o	—	—	o	—	—
Climbing Blue-berry	<i>Bilantiera longiflora</i> , Lab.	—	—	—	—	o	—	—
*Small St. John's Wort	HYPERICACEAE. <i>Hypericum gracincum</i> , Forst.	f	—	—	—	—	—	—
*Geranium	GERANIACEAE. <i>Geranium dissectum</i> , L.	o	o	—	—	—	—	—
*Yellow Wood Sorrel	<i>Oxalis corniculata</i> , L.	r	c	f	—	—	—	—
*Native Fuchsia	RUTACEAE. <i>Coccoloba speciosa</i> , Al.	—	f	—	—	—	—	—
*Coast Fuchsia	<i>c. ba. Andr.</i>	—	o	—	—	—	—	—
*Boronia	<i>Boronia pinnata</i> , Sm.	—	—	o	—	—	—	—
*Golden Pea	LEGUMINOSAE. <i>Pultenaea gunnei</i> var. <i>haecheoides</i> , Sm.	c	c	vc	c	f	f	—
Gunn's Pea	<i>daphnoides</i> , Wendl.	—	—	f	—	—	—	—
Native Daphne	<i>Banania cuneata</i> , R. Br.	—	—	c	—	—	—	—
Wily Pea	<i>Connarus prostrata</i> , R. Br.	—	—	c	—	—	—	—
Coral Pea	<i>Indigofera australis</i> , WEDD.	—	f	—	—	o	—	—
Native Indigo	<i>Acacia diffusa</i> , Lindl.	—	—	c	—	f	—	—
Spreading Acacia	<i>verticillata</i> , WEDD.	—	—	—	—	f	—	—
Prickly Moses	<i>suaveolens</i> , WEDD.	—	o	r	—	—	—	—
*Sweet Acacia	<i>myrtifolia</i> , WEDD.	—	—	c	—	c	—	—
Myrtle Acacia		—	—	—	—	—	—	—



Map of area at Safety Cove, showing botanical areas.

Vernacular Name	Botanical Name	Sand Dune	Shore Cliffs	Heaths 1. Open 2. Hollows	Open Woodland 1. Doleritic 2. Sandstone	Exposed Headland	Swamp
Burr or Bidgee	ROSACEAE. <i>Acacia saximinorata</i> , Vahl.	e					
Bauera or River Rose	SAXIFRAGACEAE. <i>Bauera rubiginosa</i> , Andr.			e o			
Razowert	HALORAGACEAE. <i>Halimolobos tenax</i> , Gray.	o	e	e	f		
Water Milfoil	<i>Myriophyllum spicatum</i> , Gaud.						f
*Fringe Myrtle	MYRTACEAE. <i>Caathrix tetragyna</i> , Lab.						lc
*Heath Myrtle	<i>Dacrydium diffusum</i> , Sieb.			e	f		
Blue Gum	<i>Eucalyptus globulus</i> , Lab.	o					
Stringy Bark	<i>obliqua</i> , L'Her.	f	f	o		e	e
White Gum	<i>viticina</i> , Lab.	o	o			o	e
Coast Gum	<i>ovata</i> , Lab.	o	o	o			
*Black Peppermint	<i>salicifolia</i> , Cav.	o	o	o			f
*Prickly Teatree	<i>Leptospermum scoparium</i> , Forst.		o	f	f		e
*Slender Teatree	<i>fuscum</i> var. <i>nitidum</i> , Sm.			f	f		
Alpine Teatree	<i>rupestris</i> , H.						o
Yellow Bottlebrush	<i>Melaleuca squarrosa</i> , Sm.				vc		vc
Pig Face	FIGOIDEAE. <i>Mossambicantemum australe</i> , Sol.	o					
Pennywort	UMBELLIFERAE. <i>Hydrocotyle asiatica</i> , D.C.				e		
Sea Parsley	<i>Apium australe</i> , Hook.		o				f
Scaly Daisy Bush	COMPOSITAE. <i>Olunia leptophylla</i> , Benth.						e
*Starry Daisy Bush	<i>stellata</i> , D.C.			e			o
*Blue Daisy	<i>Brachycoma decipiens</i> , Hook.	o				f	
Water Buttons	<i>Cotula coronopifolia</i> , D.C.						
Common Everlasting	<i>repens</i> , Benth.				e		e
Fireweed	<i>Helichrysum scorpioides</i> , Lab.	o	o			o	o
*Native Dandelion	<i>Senecio australis</i> , Willd.	o					
Everlasting Bush	<i>Micranis forsteri</i> , Hook.	e	e				
Slender Honeywood	<i>Ocotelea rosmariniifolia</i> , D.C. var. <i>ericifolia</i> , <i>scutellifolia</i> , Hook.		lc			o	o
*Trigger Plant	<i>Redfordia linearis</i> , D.C.		o				
*Parrot's Food	STYLIDIACEAE. <i>Stylidium graminifolium</i> , Sw.	o	o	o	o	o	o
*Blue bell	GOODENOVIACEAE. <i>Goodenia ovata</i> , Sm.		f				e
Lobelia	CAMPANULACEAE. <i>Wahlenbergia gracilis</i> , D.C.	f	f			f	
*Cranberry	<i>Lobelia gibbosa</i> , Lab.	o		o			
*Rough White beard	EPACRIDACEAE. <i>Antrozona humifusum</i> , R. Br.	o	f			f	f
*Coast White beard	<i>Leucopogon calidus</i> , R. Br.	f	o	vc	e	vc	vc
Pink White beard	<i>richii</i> , R. Br.		o				
Broom Heath	<i>ericoides</i> , R. Br.				o		
*Common Heath	<i>Monotoca linearis</i> , R. Br.	o	f				
*White Swamp Heath	<i>Epacris impressa</i> , Lab.		o	vc	vc		vc
*Myrtle Heath	<i>lanuginosa</i> , Lab.		o	e	vc		o
*Pink Swamp Heath	<i>myrtifolia</i> , Lab.						lc
	<i>heteranema</i> (Lab.), Staph.						lc
	<i>stuartii</i> , Staph.		o				
	<i>Sprengelia incarnata</i> , Sm.			vc	vc		
*Eyebright	SCROPHULARIACEAE. <i>Euphrasia brownii</i> , F. v. M.			o			
Coast Plantain	PLANTAGINACEAE. <i>Plantago brownii</i> , Rapp.				lc		lc
Macquarie Vine	POLYGONACEAE. <i>Muehlenbeckia adpressa</i> , Meisn.			e			

Vernacular Name	Botanical Name	Sand Dunes	Shrub Cliffs	Heath 1. Dunes 2. Rocks	Ocean Woodland 1. Dunes 2. Sandstone	Exposed Headland Swamp
PROTEACEAE.						
Juniper Berry	<i>Persea juniperina</i> , Lab.	—	—	—	—	—
Dazzer Bush	<i>Banksia myrsiniformis</i> , Cav.	—	—	—	—	—
*.....	<i>spicifolia</i> , Lab.	—	—	—	—	—
*Guitar Plant	<i>Leucostictis</i> , R. Br.	—	—	—	—	—
*Banksia	<i>Banksia marginata</i> , Cav.	—	—	—	—	—
*Woolly Blue-dweller	<i>THYMELIACEAE.</i> <i>Pimelea nivea</i> , Lab.	—	—	—	—	—
She-oak	CASUARINAE. <i>Casuarina quadrivalvis</i> , Lab.	—	—	—	—	—
Dwarf-oak	<i>duplex</i> , Vent.	—	—	—	—	—
*Goat Orchid	ORCHIDACEAE. <i>Acianthus anseris</i> , R. Br.	—	—	—	—	—
*Little Duck Orchid	<i>Calceana minor</i> , R. Br.	—	—	—	—	—
*Autumn Bird Orchid	<i>Chilopistia diphylla</i> , R. Br.	—	—	—	—	—
*Pink Autumn Orchid	<i>Eriochilus autumnalis</i> , R. Br.	—	—	—	—	—
*Trim Greenhood	<i>Pterostylis concinna</i> , R. Br.	—	—	—	—	—
*Tiny Greenhood	<i>parviflora</i> , R. Br.	—	—	—	—	—
*Summer Greenhood	<i>recurva</i> , Rogers.	—	—	—	—	—
Blue Iris	IRIDACEAE. <i>Palaemonia glauca</i> , R. Br.	—	—	—	—	—
Blue Lily	LILIACEA. <i>Dianella tasmanica</i> , Hook.	—	—	—	—	—
*Yellow Star	AMARYLLIDACEAE. <i>Hypoxis glabella</i> , R. Br.	—	—	—	—	—
Yellow Eye	XYRIDACEAE. <i>Xyris operculata</i> , Lab.	—	—	—	—	—
Broad Rush (Suez)	JUNCACEAE. <i>Nerata longifolia</i> , R. Br.	—	—	—	—	—
Arrow Grass	NAIADACEAE. <i>Typhochloa striata</i> , Ruiz. et Pav.	—	—	—	—	—
Tassel Rush	RESTIACEAE. <i>Hypochaeris fastigiata</i> , R. Br.	—	—	—	—	—
Twine Bush	<i>Leptocarpus tenuis</i> , R. Br.	—	—	—	—	—
Cord Rush	<i>Ruellia oligocarpus</i> , F. v. M.	—	—	—	—	—
Button Grass	CYPERACEAE. <i>Gymnoschoenus sphaerocephalus</i> , Hook.	—	—	—	—	—
Button Rush	<i>Scirpus nodosus</i> , Roth.	—	—	—	—	—
Cutting Grass	<i>Lepido sperrus longifolius</i> , Lab.	—	—	—	—	—
Twig Rush	<i>Cladium junceum</i> , R. Br.	—	—	—	—	—
*.....	<i>Gahnia trifida</i> , Lab.	—	—	—	—	—
Sword Grass	<i>pathecorum</i> , Lab.	—	—	—	—	—
Coast Spear-Grass	GRAMINEAE. <i>Stipa lewisii</i> , Steud.	—	—	—	—	—
Maree Grass	<i>Poa arvensis</i> , Beauv.	—	—	—	—	—
Salt Grass	<i>Diatichia maritima</i> , Rafin.	—	—	—	—	—
Swamp Club Moss	PTERIDOPHYTA. <i>Selaginella selaginoides</i> , Spreng.	—	—	—	—	—
Hill Fern	<i>Diachnum procerum</i> , R. Br.	—	—	—	—	—
Soft Water Fern	<i>var. pulchrum</i>	—	—	—	—	—
Flabellum Fern	<i>bicolor</i> , Willd.	—	—	—	—	—
Wiry Coral Fern	<i>Gleichenia dicarpa</i> , R. Br.	—	—	—	—	—
Oak or Silver Fern	<i>Hypolepis laevis</i> , J. Sm.	—	—	—	—	—
Screw Fern	<i>Lindsaea linearis</i> , Sw.	—	—	—	—	—
Common Bracken	<i>Pteridium aquilinum</i> , Kuhn.	—	—	—	—	—
Comb Fern	<i>Selaginella blanda</i> , Willd.	—	—	—	—	—
Common Shield	<i>Psilotum vestitum</i> , Presl.	—	—	—	—	—

NOTE.—Rodway's "The Tasmanian Flora," has been used for classification and names.

REFERENCES.

- 1 and 2. Rodway L., 1920, Tas. F.N.C. Easter Camp Report, p. 11.
 ———— 1926, Tas. F.N.C. Easter Camp Report, p. 10.

BIRDS OF PORT ARTHUR and SAFETY COVE

By M. S. R. Sharland.

LARGE gatherings of honey-eating birds principally of the Crescent and New Holland Honeyeaters, were a feature of the bird life observed during the Easter camp of the Field Naturalists' Club, from 18th April to 23rd April, 1926.

Many flowering plants on the moors were the attraction for these birds. The Crescent Honeyeater was the most numerous of the birds recorded.

Most of the migrant birds—Cuckoo, Cuckoo-shrike, Tree Martin, and waders—appeared to have left. We also failed to record the Ground Parrot which has been reported from this district.

Nevertheless, a fairly large list was compiled, by myself and other campers, and this is as follows:—

BROWN QUAIL (*Synopsis australis*).—Some of the party disturbed a small flock on the edge of the heath near Mr. Briggs' farm.

SOOTY SHEARWATER (*Puffinus griseus*).—Although none of this species was seen, members of the party obtained views looking across to Tasman Island, the only known nesting station of the bird in Australian waters. The island, with its lighthouse on top of the great dolerite cliffs, stands nearly 1,000 ft. out of the sea, close to the rugged peaks of Cape Pillar. To the lighthouse keepers and others on Tasman Island, the bird is known as the "king mutton-bird" to distinguish it from the somewhat smaller Short-tailed Shearwater (*Puffinus tenuirostris*).

SHORT-TAILED SHEARWATER (*Puffinus tenuirostris*).—Tasman Island also is the breeding place of this species, the common mutton-bird, which also has colonies on several high promontories along the southern coast.

DIVING PETREL (*Pelecanoides urinator*).—A number of small petrels observed from the cliffs of Brown Mountain, some distance out to sea, appeared to be this species. It is believed the bird also breeds on Tasman Island.

LITTLE BLACK CORMORANT (*Phalacrocorax sulcirostris*).—A number were feeding in the quiet bay alongside Point Puer, but, in general, none of the Cormorants was common in the locality.

LITTLE PIED CORMORANT (*Microcarbo melanoleucus*).—This species was seen feeding with the Little Black Cormorant in the above-mentioned locality. Three birds only were counted.

SILVER GULL (*Larus novae-hollandiae*).—There were always some Gulls on the beach at Safety Cove. They made a pretty picture, their white forms contrasting against the sand and the blue water. They were seen at Port Arthur and in other parts of the estuary as well.

PACIFIC GULL (*Gabianus pacificus*).—The only representative of this rather common species was an immature bird which visited the beach in the vicinity of the camp frequently. Its dark, mottled plumage, greyish-white bill with brown tip, is an entirely different pattern from that of a mature bird, which has the body and head white, with black mantle and wings, a black band across the tail and an orange beak. Immature birds of the species are usually called "nellies." Both this and the Silver Gull are shore-lovers and are not seen far at sea.

PIED OYSTER-CATCHER (*Haematopus ostralegus*).—One bird flew into Half-Moon Bay when the party was having lunch one day at the end of the beach. It alighted on the sand, but did not stay for more than a moment or two. On almost all of these sheltered beaches the bird breeds, in early summer.

HOODED DOTTEREL (*Charadrius cucullatus*).—One or two were seen on Half-Moon Bay beach. The blackish head is a conspicuous feature, although the remainder of the bird's figure merges with the colour of the sand. Tasmania is the headquarters of this attractive beach bird, and it is especially well dispersed over the southern part of the State.

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SPUR-WINGED PLOVER (*Lobelia noreo-hollandiae*).—The bird was fairly common. There was always a flock of from 15 to 20 on the beach at the Cove, and it was noted also along the shore towards Port Arthur and at Point Puer. At night its calls were heard about the camp.

WHITE-FACED HERON (*Noto-phaga noreo-hollandiae*).—Fairly numerous, especially in the quiet bays near the township of Port Arthur. Several large nests of sticks and leaves in the tall gum trees along the shore evidently belonged to this species.

BROWN BITTERN (*Botaurus poecilopterus*).—We were informed that the Bittern lived in a thick area of reeds about a lagoon on Mr. Briggs' property, but we neither saw nor heard it. The presence of so many people may have caused it to seek quieter retreats.

WHITE-BREADED SEA EAGLE (*Haliaeetus leucopostus*).—The coast of Tasman Peninsula is one of the strongholds of this species, which may be seen always, flying along the edge of the cliffs of Brown Mountain or sailing placidly over the beaches and headlands. In addition to observing several fully mature forms in the vicinity of Half-Moon Bay, the party also observed an immature bird which more than once came close to the camp, and at times selected a tree on the hillside, 150 to 200 yards from camp, on which to perch. Instead of having the pure white underparts, this one possessed a dark brown breast and brownish back, with a little white on top of the head. Its markings could be seen clearly, as it occasionally sailed quite low over the camp.

GREEN ROSELLA (*Ptilinopus caledonicus*).—Several were observed along the road to Port Arthur, as well as in the town. They were feeding on weed seeds in gardens, and were in fine colour. The Green Rosella is well dispersed in Southern Tasmania and would appear to be more numerous than the common Rosella. It is a purely Tasmanian species.

EASTERN ROSELLA (*Ptilinopus edwardsi*).—In the trees along the road to Port Arthur a few were seen, but it was not common in the district.

GROUND PARROT (*Pezoporus wallicus*).—This species was not seen. It is included in this list to indicate that it inhabits the area about Safety Cove, chiefly on the moors leading to Brown Mountain and the Remarkable Cave, according to Mr. Briggs, who has seen it. This shy, ground dwelling parrot, which also makes its nest on the ground, is extremely difficult to flush and is not common near settlement, the remote button-grass plains of Western and South-Western Tasmania being its headquarters. Button-grass also grows on the Safety Cove moors, as well as many low forms of heath and silled plants, providing an environment well suited to the secretive habits of *Pezoporus*. All campers had been instructed to keep a sharp lookout for it.

SCARLET ROBIN (*Petroica multicolor*).—This was not a common species. One well-coloured male was seen at Point Puer and another in some scrub along the waterfront about a mile from Port Arthur.

FLAME ROBIN (*Petroica phoenicea*).—Fairly common. This species flocks in autumn and winter and comes into the open. It can be distinguished from the Scarlet Robin by its red throat and greyish back, the Scarlet Robin having a black throat and black back.

DUSKY ROBIN (*Amazodryas cincta*).—There was a small flock inhabiting some light timber about half a mile from camp, along the bank of the beach, and some of the birds responded to our mimicry of their calls, coming close enough for a good inspection. The species normally is not seen in flocks.

GOLDEN WHISTLER (*Pachycephala pectoralis*).—One bird was seen at camp—a fine male. Another was located in a thicket of *Melaleuca* on the way to Point Puer, its attractive call being heard to perfection.

GREY SHRIKE THRUSH (*Collyriocichla harmonica*).—Common, and calling well. A pair at camp gave both their summer and winter notes. One bird was seen flying and hopping among rock crevices on the sheer cliffs of Point Puer. The bird often breeds in cavities on the face of cliffs.

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BROWN THORNBILL (*Acanthistis pusilla*).—In common with a noticeable distinction in the numbers of this species in Tasmania, few were seen in the Safety Cove area. A pair one day drifted into camp to feed in the scrub behind the cook's tent, but they did not stay long. "Brown-tail" is a common name for the species.

BROWN SCRUB WREN (*Sericornis humilis*).—Not common. This purely Tasmanian species prefers thicker undergrowth than that which occurred in the camping area, and would most likely be found in greater numbers in some of the deep gullies towards Cape Raoul, which were not investigated.

FIELD WREN (*Calamanthus fuliginosus*).—The low heath would seem to have suited this species, but few were seen. Not more than three birds, widely separated, were recorded. The shyness of the species, however, makes it hard to find. It is a fine songster in the breeding season.

BLUE WREN (*Melanurus cyanus*).—Common in the heath and scrub. Some of the young males were changing into the dull dress that they wear in winter.

SPOTTED PARDALOTE (*Pardalipicus punctatus*).—Clumps of scattered gum trees contained this species, which, however, was not common. It is a widely dispersed bird in Tasmania, but is not so numerous as the Striped Pardalote (*P. striata*), although this species was not seen.

SILVEREYE (*Zosterops lateralis*).—Fairly common in the Point Puer area, where it was observed in small flocks. After the breeding season, in summer, the pairs come together and form quite substantial flocks. At Easter the flocking was just beginning.

STRONG-BILLED HONEY-EATER (*Meliphaga solidirostris*).—A flock of about seven birds flew into the camp area one day, and this was the only record. Animated birds, characterised by a black head with a white crescent across the nape, they are a most sociable species, and feed chiefly on insects. As they suffer from an awkward name, it is suggested the title "strong-billed" should be changed for "bark honeyeater," since they gather food mostly from the stems and branches of trees

and lever off loose pieces of bark for insects concealed beneath. The species does not occur outside of Tasmania.

SPINEBILL HONEYEATER (*Acrotherops lineirostris*).—A handsome bird especially plentiful amongst the flowering heaths.

YELLOW-THROATED HONEY-EATER (*Meliphaga fasciata*).—Four birds were noted at different times in the trees near camp. Others were heard calling. This also is a purely Tasmanian honey-eater.

CRESCENT HONEYEATER (*Phylidonyris pyrrhoptera*).—Excellent pentitini. The flowering *Sports* attracted scores of the birds, and their calling, especially at daybreak, was the most common bird call in the area. They never left the vicinity of the camp, and also were dispersed thickly through the old sand dune country and over the adjacent moors.

YELLOW-WINGED, OR NEW HOLLAND, HONEYEATER (*Melioris noreo-hollandiae*).—This species was almost as common as the Crescent Honeyeater, more especially on the moors and open heathlands. As well as feeding on the nectar from the heaths, the birds also were catching insects on the wing. Observers asserted they had not seen such large congregations of the two species.

NOISY MINER (*Myciophaga melanocapala*).—Uncommon. Two were noted in the blue gums along the Port Arthur road.

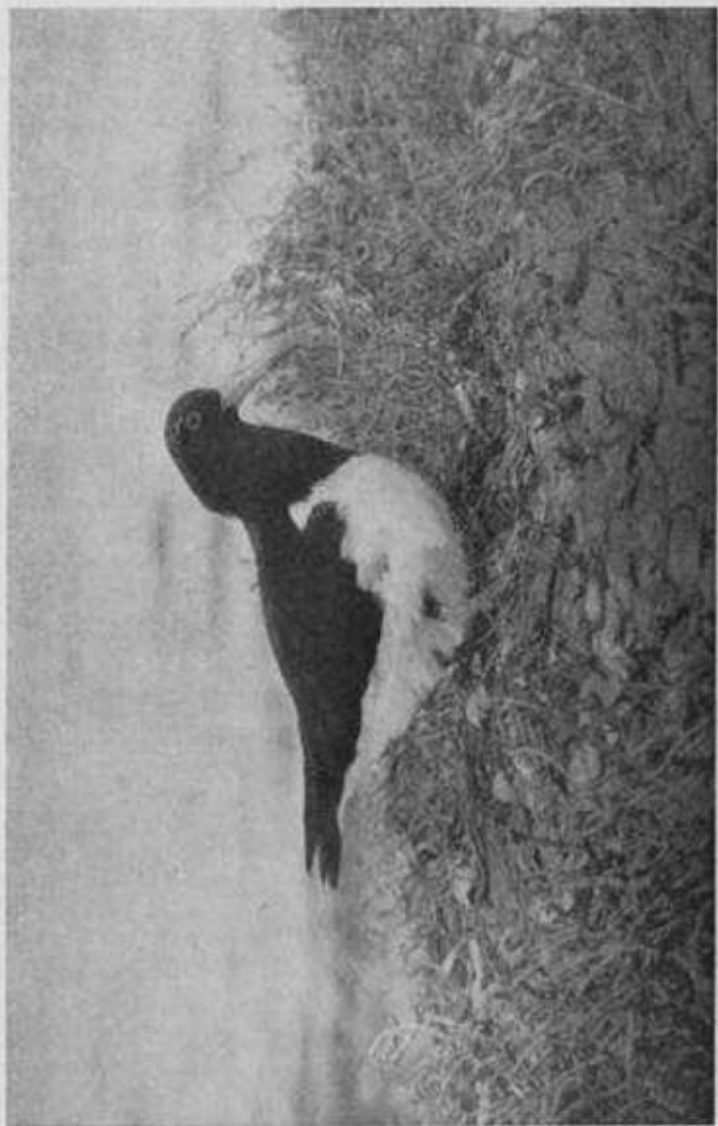
LITTLE (MOCK) WATTLE BIRD (*Aethya chrysoptera*).—Four birds were noted in the gum trees on the way to Point Puer. Their bronze-coloured wings were handsome in the sun.

PIPIT (*Anthus australis*).—Two birds were noted on the moors near Remarkable Cave.

PIRETAIL FINCH (*Zonotrichia bellina*).—One of Mr. Briggs' family told us that this species occurred in the ranges behind his farm, but in much reduced numbers. The species is gradually dwindling in Tasmania. It is the State's only native Finch.

RAVEN (*Corvus coronoides*).—Only two or three noted.

WHITE-BACKED MAGPIE (*Gymnorhina hypoleuca*).—One bird noted at Port Arthur.



Field Oyster-catcher at Nest.

MARINE NOTES

By C. G. Elliott and J. Somerville.

THE moors with the various heaths and orchids in flower, the open woodlands, the dunes, the pools golden brown from the peat, each offered a varied and alluring field for intensive work at Safety Cove.

But the beach called, too, for the tides each day brought in treasure trove from the deep sea—seaweeds, brown, red, salmon and white; a few shells and hundreds of tunicates.

The tunicates were some of the most intriguing of the beach material. They receive the name tunicate from the fact that the body is enclosed in a sort of tunic or mantle, and, strange as it may seem for an animal, this tunic is chemically almost identical with celluloid or cellulose. The clear translucent appearance was most marked in the Salpa, and on the living specimens the muscle banding was easily seen. On placing some in a dish of sea water, it was evident that movement was effected by muscular contraction and expansion. We noticed, too, the rhythmic pulsing of the heart first in one direction, then in the opposite.

The majority of the specimens were single individuals, but Mrs. Murray and Mr. Widdicombe obtained some that were temporarily united in a colony. The latter represented a later stage in development. We gathered one colony of six, but they quickly separated. These colonies are formed

by the growth of buds, and among the material collected two specimens show buds partly developed.

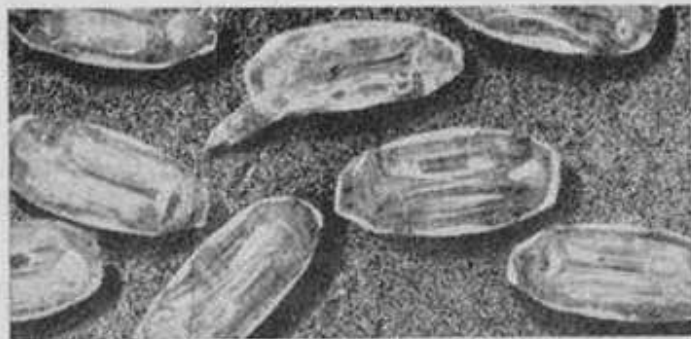
Two species were collected—*Saxia conaris* and *Salpa* —, the latter species not yet determined.

Even more numerous than the Salpa were the Pyrosomas (*P. atlanticum*) cylindrical and pearly white, though after exposure a pinkish tint quickly appeared. Sizes varied from a finger length to 15 or 20 inches, the latter with a diameter of 3 in. Pyrosoma is a colonial tunicate each of the protuberances on the cylinder representing one individual. Only one species was collected, *Pyrosoma atlanticum*, though the specimens showed marked variation.

All are brilliantly phosphorescent. Among the Salpa and Pyrosomas were the empty tunics of another tunicate which had been taken over as a nursery by the quaint Hermit or Goat Shrimp (*Phronimidae*).

On the rocks to the south-east of the camp lived mail fish, large limpets, barnacles, and hundreds of sea anemones—red, green, striped. The latter when disturbed threw out from the stalk long slender stinging threads, whilst the red anemones were feasting on Pyrosomas which had been carried in on the tide.

Shells were not plentiful. Frilled Venerid, Ridged Venus, Smoky Venus, Cockle, Razor Shell, Limpets, Seaweed Shell, Warriner, Triton and Sand Snail were gather-



Examples of Salpa collected at Safety Cove.

ed. Under the rocks, however, a Sea Lemon (*Doris* sp.) was obtained and when removed to a bowl of sea water it quickly settled down, thus enabling us to watch its movements and see the circle of feathery gills on the back. Starfish—orange, purple, pink, blue—were well hidden under the rocks. These were mainly the "Cushion Star" with five rays. Two or three live "Sea Urchins" were cast up, but the beach near Pt. Puer, on the northern shore, provided dried specimens in profusion. This quiet, sheltered cove is another area which would well repay a visit.

Out in the bay, the fishing party, Messrs. Brownell, Johnson, & Co. were intrigued by the hordes of Tunicates (Salps and Pyrosomans) and the resulting luminosity in the water, whilst their description of the beauties of the sea-floor made us realise that he who stays ashore misses much.

TASMANIAN FIELD NATURALISTS' CLUB (Founded 1904)

MEETINGS are held at the Royal Society's room, Tasmanian Museum, Hobart, on the third Thursday in each month, except December and January. The annual meeting is held in February.

Annual subscription: Adults 5/-; Juniors (under 18) 2/6.

Anyone interested in Nature Study is welcomed to membership.

Application for election should be made to the Hon. Secretary, c/o Sargison's, Jeweller, 21 Elizabeth St., Hobart, or direct to the Secretary (Mr. H. G. Vaughan) on meeting nights. Subscriptions may be paid to Mr. H. F. Sargison, 21 Elizabeth St., or to secretary.

Lectures, field outings, and nature study camps, are the chief activities of the Club.

The Field Naturalists' Club is supporting the establishment of a library at the Lindisfarne School in memory of one of its most active members, Mr. G. W. Knight, who was killed in an air crash at Seven-Mile Beach. Donations of books will be welcomed.

Fine beds of brown seaweeds may be seen off the cliffs at Pt. Puer, also by the cliffs east of Safety Cove and from the northern headlands of Half-Moon Bay, whilst on Safety Cove Beach were many specimens of red seaweed torn adrift by the waves.

Thirty species were collected representing the following genera:—

Green:—Ulva, Enteromorpha, Chlamydomorphus (?), Codium.

Red:—Calliophyllis, Phaeocarpus, Plocamium, Callithamnion, Ceramium, Gigartina, Peyssonnelia, Gelidium, Dasys, Ballia, Lawrenceia, Corallina.

Brown:—Sargassum (?), Phyllopora, Hormosira, Niphopora, Sarcophycus, Nethela, Splachnidium, Ecklonia, Maerocystis, Lessonia, Perithalia, Stypocaulon.

APPRECIATION.—Special thanks are given for the work done by Mr. L. G. Bulge (Safety Cove) in helping to erect tents and providing services. The camp was held on his property. His entered into the spirit of the outing and his enthusiasm was a big factor in its success. The Club also is indebted to city trades people and others who assisted the committee with special problems.

CLUB BADGE.—Members are reminded that the club badge is available; price 4/6. The emblem of the club, a platypus, is the chief figure in the attractive design.

FOR SALE: "A Guide to Collecting and Preserving Plants, Shells, Seaweeds, Insects, etc." Useful to all members. Price 3d. A club publication. Apply to Harold F. Sargison, 21 Elizabeth St., Hobart, or to club meetings.

PUBLICATION FUND.

Members are asked to subscribe to the publication fund to help defray the cost of "The Naturalist." Names of subscribers to date:—Mr. M. S. H. Sharland, Mrs. A. N. Lewis, Miss J. Somerville, "Friends" (N.S.W.), Royal Society of Tax, Captain D. Colbron Pearce, Mr. K. Aves, the late G. W. Knight, Mr. J. A. Tubb, Col. C. H. Elliott.

NATURE STUDY CAMP At Safety Cove, Tasman Peninsula.

GENERAL ACCOUNT

By M. S. R. Sharland.

OPEN AIR study and pleasant recreation were combined in the first postwar camp of the Tasmanian Field Naturalists' Club held at Safety Cove, near Port Arthur, from Thursday, 18th April, to Tuesday, 23rd April, 1946. Reports on the observations concerning plants, birds, furred animals, and marine life, are given elsewhere in this issue.

TO ORGANISE the first nature study camp since the outbreak of the Second World War required no little effort. The high cost of food and new equipment, the uncertainty of being able to procure rationed goods, the difficulty about transport, precluded the use of records of previous camps as a satisfactory basis for this postwar camp; the fact that some of the club's equipment had deteriorated and had to be replaced with new and expensive items, and a complete overhaul of all this

equipment was necessary, caused some doubt whether the time was yet opportune for a resumption of this field activity. Practically a completely new set-up was required.

In addition, inquiries had to be made as to the location of a satisfactory site, and alternative sites had to be considered with a view to determining their suitability. As far as possible the Club has endeavoured to select a different site each year, and in the past has camped at several places offering opportunity for nature study and at the same time containing some scenic attractions that might appeal to walkers and others not directly interested in the natural history aspect.

Largely because transport was restricted to a few routes, buses being difficult to procure at the busy Easter period, and because



Campers at Point Puer, looking across to Arthur's Seat.

the committee did not wish to risk spoiling the first postwar camp through selecting an untried site, the Safety Cove area was chosen—the site of some successful camps in the past.

Indeed, it is a favourite site, sheltered from the "southerlies" behind a well-clothed sand ridge at the north-eastern end of the beach, the little strip of flat ground behind the dunes affords an ideal spot for camping. There are scattered gum trees and flowering shrubs, extending from the beach up to the hills behind the flat, a fair amount of wood for cooking and camp fires, and a permanent water supply. The view from the dunes is exceptionally pretty. It embraces the whole of Safety Cove beach, the strip of yellow sand extending in an arc to the rocky walls of the long headland of Point Puer, the edge of which is honey-combed with wave-washed caverns, while on the opposite side of the Port Arthur estuary are well-clothed hills buttressed by weathered dolerite along the shore.

Although several of the camps had been there before and were well acquainted with its attractions, final selection of the site for yet another outing was practically unanimous, and it is a high tribute to the work of Mr. Harold P. Sargison, who bore the burden of organization, that in spite of the difficulties peculiar to the times, the camp proved to be one of the most enjoyable in the Club's long history of camping.

There were 46 in the party. It included two of the oldest club campers, Colonel C. H. Elliott and Mr. G. L. Propping, the first an original member, the second an honorary life member; several ladies, including Miss J. Somerville, Museum Education Officer, and some quite junior members, a few of whom, we hope, will eventually graduate as active field naturalists. Two cooks were engaged to attend to an important aspect of any camp, and the very least that can be said of these is that they did their job well. How well, only those who were present could really appreciate.

And the weather? . . . It was made for camping! Nature, or whoever governs the weather, turned on a really good show. We were favoured with three days of warm sunshine, the last day be-

ing overcast. Its dullness somehow matching our spirits when it came for the time to pack up. Some members of the party indulged in self-criticism for having arrived without bathing costumes, and those who thought to put theirs in never missed a swim each morning, although at times the early morning wind was not altogether tropical!

There were 21 tents, erected in rows along the narrow cart track running in between the dunes. We also had a large marquee tent that served to accommodate the party for meals and for after-dinner talks in the light of petrol lamps; while a smaller tent housed the cooking staff and the great accumulation of food and cooking gear.

Three tons of food and equipment! That was the load we had to get transported over the 59 odd miles from Hobart. It came by lorry, and the last part was over an unmade road, formed of sand, which contained some awkward holes and necessitated the crossing of a creek on a primitive "home-made" bridge. There was relief at its safe arrival!

After an advance party had got the camp in order, having arrived two days previously to erect the tents and sort out luggage, the main party of campers turned up by motor bus about 11 o'clock on the night of Thursday, 18th April. They found hot coffee and supper awaiting them, and it was not long afterwards that all turned in to "lights out."

"Reveille" was sounded, by means of hand bells, at 8 o'clock each morning; breakfast was served at 8.30, lunch (when in camp) at 12.30 p.m., and dinner at 5.30. Except on Good Friday, when dinner was served in the middle of the day for the benefit of Vice-Royal visitors, lunch was taken on the field outings and excursions to different points of interest.

THE CLUB was privileged in being able to entertain on Good Friday the Governor (Admiral Sir Hugh Binney, K.C.B., D.S.O.) and Lady Binney, who motored down from Hobart especially to visit the camp and meet the members informally. This is the first time a Field Naturalists' camp has been honoured by Vice-Royal visitors.

Although delayed by a mishap to their car, having to walk the last half mile into camp, His Excellency and Lady Binney were able to spend two or three hours in camp. They had dinner, and afterwards inspected tents and chatted to members about their field work. Lady Binney, being a member of the Royal Australian Ornithologists' Union, showed much interest in the birds and was able to identify some species new to her.

At the informal dinner Lady Binney was presented with a brooch which embodied the badge of the Club—a platypus—edged with gold leaf, and also was given a silver ash tray, with the Club lodge in the centre, which she was asked to "lend" to her distinguished husband whenever he might need it, he not being permitted to accept gifts. Both objects, designed by our hon. organiser, were dignified and attractive little gifts, and may serve as a memento of the camp.

The days passed quickly, as members were busy on field work and outings. On Easter Saturday the party walked to Half-Moon beach, where a picnic lunch was served at the mouth of a fresh-water creek; then most of them climbed to the summit of Brown Mountain, whence a wide view was obtained of the coast, extending from Cape Pillar and Tasman Island in the east, to the distant end of Bruny Island and the Friars in the south-west, with the jagged line of Cape Raoul in the middle distance. Some members also went on to the Remarkable Cave.

Easter Sunday was spent at Point Puer, on an arm directly opposite the old prison station of Port Arthur, which formed a pretty picture with the sun illuminating the yellow walls of the old penitentiary and emphasising the Autumn colours of oaks and elms. A few managed to get a brief trip to Dead Island, off the end of the point.

On Easter Monday, some of the campers visited Port Arthur and examined the ruins of prison buildings and the old church; others revisited the moors between Brown Mountain and the coast, while some stayed about camp,

collecting plants and marine life and taking photographs.

Miss Somerville was an ardent collector. She obtained a fine assortment of beach life, including glass-like sips, "sea-cucumbers," and sea-urethras, which she displayed one night in the marquee tent and answered many questions from the younger members. Her tent was full of plants, marine life, shell-fish, and assorted "wogs." (Human company excepted!)

And were the fish good—fish you can eat, I mean? We were never short of fish, thanks to the good work by Messrs. Johnson and Brownell and a gift from a visitor. Perch, troutpeter, flathead, and cod. No weighing scales (it is said) would have been capable of accommodating one particularly large cod which fell to Mr. Johnson's line. Had it been possible to preserve it until his return to town, he would have needed nothing less than a weightbridge!

Always a feature of our annual camps, the camp fire concerts on this occasion, conducted in the evenings round the blazing logs in a natural basin among the sand dunes, revealed new talent and many new songs, and we were especially fortunate in having as leaders several really good vocalists. Miss G. Morris, Miss Freda Elliott, Miss Phoebe Batt, and Mr. W. N. Gots, and Mr. Burn Widdcombe did much towards the success of the concerts, which also included community singing, for which we draw on many songs, old and new.

Stories and nature study talks were interspersed with the singing.

THE LAND around Safety Cove, the foot tracks across the wide sweep of moorland behind it, the summit of Brown Mountain overlooking the entrance to Port Arthur estuary, the road to the Remarkable Cave, have over the years since the inception of the Club's camps, all been trodden by many field naturalists, some of whom older campers on this occasion recalled with somewhat poignant memories, their faces no longer with us.

In records of previous camps one may read their names. There also is contained their record of field work undertaken in this

locally, covering the subjects in which each was most interested and therefore specialised. Thus, in some directions, there was little new ground to explore. Nevertheless, using their work as a guide, naturalists of the party were able to follow special lines of investigation and look for specimens which had not been recorded, or only rarely; and some of the party also took the opportunity of reaching out a little beyond the beaten tracks. The camp endeavoured to cater for all tastes. For those who wanted birds, there were honeyeaters by the score; for those who wanted plants, the moors provided the rewards. Others who wanted fishing, swimming, walking, or scenery were not denied, and all were content.

So it was natural that on the final day, when tents had to be dismantled and loaded for return to store, all should express regret that the holiday was over—regret tempered, however, with the determination that they would come again. And there is no better hallmark of complete enjoyment than that we should want a little

more, to look forward to pleasures which bear repetition. We shall have another camp, next year!

Personnel attending the camp were:—

Mr. M. S. R. Sharland (president), Mr. E. W. Cruickshank (vice-president), Mr. Harold F. Sargison (hon. organiser), Colonel C. H. Elliott, Dr. W. Freeman, Dr. E. K. Hamery, Messrs. G. A. Propsting, A. Brownell, C. B. Widdicombe, E. F. O. Apps, W. N. Oats, T. J. N. Johnson, G. Sargison, R. Sargison, C. Elliott, D. Elliott, H. Parsons.

Misses C. H. Elliott, G. Sargison, Murray, Johnson, Freeman, Brownell, Widdicombe.

Misses J. Somerville, A. Ewin, M. Gorrings, M. Scott, M. Cruickshank, G. Morris, P. Butt, P. Elliott, M. Murray.

Juniors: Jennifer Murray, Elizabeth Sharland, Susanne Sargison, Eleanor Widdicombe, Danielle Freeman, John Freeman, John Brownell, Reg. Brownell, Graham Brownell, Donald Widdicombe, Ian MacDougall.

Cook: Mr. & Mrs. N. G. Rowsow.

FURRED ANIMALS OF SAFETY COVE

By D. M. Elliott.

ALTHOUGH the camp was situated in an excellent position as regards open moorland and lightly timbered areas, the list of animals seen is rather disappointing.

Several members stated they had seen numerous wombat tracks but no wombats. Traces of a bandicoot were also reported by one member. Apparently this animal had been disturbed while feeding, as very recent scrapings showed an orchid bulb, left, as if in haste.

During a trip to nearby Point Paer, several brush wallabies were seen, and also one hare. Rabbits were reported on different occasions.

This exhausts the list of furred animals seen during the camp. Perhaps we were unlucky, but a

short talk with Mr. Briggs, on whose land the camp was situated, opened up a mine of information. Kangaroos are fairly common in the more remote parts, notably toward Cape Riout, while kangaroo rats, opossum-eaters, bats, flying squirrels and echidnas are also to be seen.

Mr. Briggs also suggested the possibility of a new species of rat occurring in the area. Should any specimens of rats of doubtful species be caught, this Club will be pleased to forward them to the proper authorities.

In the timbered areas, ringtailed and brush opossums are not uncommon. It is typical country for these animals, and, although no actual search was made, it is surprising that none was seen.

TASMANIAN FIELD NATURALISTS' CLUB

1946.

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Mr. M. S. R. Sharland.

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