

TASMANIAN FIELD NATURALISTS' CLUB.

G.P.O. Box 68A

HOBART, 7001

PRINCIPAL OFFICE BEARERS

President

Mrs. T.L. Stephens,
25 Hazell Street,
BLACKMANS BAY 7152

Hon. Secretary

Miss. M.L. Westbrook,
6 Richardson.Ave.,
DYNMYRNE. 7005

Hon. Treasurer

Mr. L.E. Wall,
63 Elphinstone Road,
NORTH HOBART 7000

BULLETIN OF THE TASMANIAN FIELD NATURALISTS' CLUB

Price 20 cents p.a.

NEXT MEETING will be held at the Royal Society Room, Tasmanian Museum, on Thursday, February 19th, at 7.45 p.m.

This will be the ANNUAL MEETING

NOMINATIONS

Must be in WRITING.

Must have the consent of the Nominee.

Must be in the hands of the Secretary before the meeting begins.

*****SUBSCRIPTIONS ARE NOW DUE - Family \$3.50, Single \$2.50, Junior \$1.00.

"Specimen of the Evening" will be presented by Miss C.H. Mosey.

The ANNUAL MEETING will be followed by the Presidential Address.

LAST OUTING - Bus Trip to the Hartz Mountains.

The bus was fully booked and the day was pronounced a GREAT SUCCESS.

NEXT OUTING - Coningham-Oyster Cove District.

Objects - to look for orchids, and aboriginal artifacts.

Meet at the Prince Theatre at 9.30 on Saturday, Feb. 21st.

Leader, Miss M.L. Westbrook.

MEMBERSHIP - Nomination, Simon Marshall, 48 Strickland Avenue.

EASTER CAMP - Place - "Kelvedon", 6 miles south of Swansea - on bus route.
Accommodation - Shearers' Cottage. Water available.
More information will be given on this at the meeting.
There is room round the cottage for campers.
Close to good sandy beach. Lagoon nearby. Lightly wooded gullies back in the hills.

Retiring office bearers -

President	- Mrs. T.L. Stephens
Vice-Presidents	- Mr. M. Hurburgh, Mr. M.S.R. Sharland
Secretary	- Miss M.L. Westbrook
Ass. Secretary	- Mrs. T.L. Stephens
Treasurer	- Mr. L. Wall
Committee Members	- Miss F.E. Warren, Mr. F. King, Mr. D. Ziegeler *Mr. G. VanMunster Mr. K. Aves Mr. M. Bennett.

* Not available for re-election

✓ Hon. Auditor - Miss R. Warren.

Delegates - Federation of Field Naturalists' Clubs

✓ Mr. D. Thomas (President), Mr. L. Wall, Miss M.L. Westbrook.

✓ South West Committee - Mrs. J. Luckman (retiring)

✓ Flora and Fauna Committee - Mr. D. Milledge

Mr. G. VanMunster

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BULLETIN OF THE TASMANIAN FIELD NATURALISTS' CLUB.

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NEXT MEETING will be held at the Royal Society Room, Tasmanian Museum, on THURSDAY, March 19th., at 7.45 p.m.

Speaker: Mr. E. Martyn, State Government Entomologist.

Subject: "Aphids"

The Five-Minute Talk will be given by Phillip Young.

LAST OUTING - was to Coningham/Oyster Cove area. Two autumn orchids were found - Parson's Bands (*Eriochilos cucullatus*) and Autumn Bird Orchid, (*Chiloglottis reflexa*), and members were very interested to see the reef from which the Tasmanian Aborigines had chipped their tools. A number of interesting specimens of coastal flora were collected. Some of the younger members were fascinated with the actions of a pair of Tiger snakes which caught a bandicoot and dragged it off to their hole.

NEXT OUTING: Leader: D. Ziegeler
Area: Knocklofty
Meet: by the Prince Theatre
Time: 9.30 a.m.
Date: Saturday, March 21st.

EASTER CAMP: Last chance to give names to Secretary for -

a) Transport b) a place indoors
Swansea Bus Service leaves 96 Harrington Street, Mon.- Fri. 8.35 a.m.
Leaves Swansea, Mon.- Fri. 1.30 p.m.

But check with the Office in case Easter time-table is changed or for other times.

MEMBERSHIP: Simon Marshall was declared elected.
Nominations were received from -
Mr. J.P. Schofield and Mr. M.A. Potter.

At the ANNUAL GENERAL MEETING, held in February, the following persons were elected:-

President: Mrs. T.L. Stephens

Vice-Presidents: Mr. K. Aves, Mr. M. Hurburgh

Secretary: Miss. M.L. Westbrook

Treasurer: Mr. L.E. Wall

Committee Members:-

Miss. F.E. Warren Mr. F. King

Mr. M. Bennett Mr. D.G. Thomas

Mrs. E. Thorpe Mr. Ivor Lea

Hon. Auditor: Miss. R. Warren

Delegates: Federation of Field Naturalists' Clubs of
Tasmania.

Mr. D.G. Thomas (President)

Mr. L.E. Wall

Miss. M.L. Westbrook

South-West Committee: Miss. R. Warren

Flora and Fauna Committee: Mr. D. Milledge

Mr. G. VanMunster

RECORD BOOK Miss Mosey has volunteered to look after this for a minimum period of three months. It is hoped that other members will volunteer to continue with it when Miss. Mosey feels she would like someone else to take over.

Mr. Hurburgh continues as Club Publicity Officer, with the assistance of Miss F.E. Warren.

Mr. D.G. Thomas is the Editor of "The Tasmanian Naturalist".

BIRD OBSERVERS' CLUB meets on APRIL 3rd., 8 p.m. 147 Liverpool St.

ANNUAL MEETING of the Federation of F.N. Clubs will be held at LAUNCESTON on March 21st.

I have pleasure in presenting the Annual Report of the Tasmanian Field Naturalists' Club for the year 1969. This year has been a pleasing and successful one, and we look forward to an even better year in 1970. The Easter Camp was held at Tooms Lake in the Midlands, and was well attended.

Mrs. J. Townrow lecturer at the Tasmanian University requested a collection of grasses in this area. This was done, along with many more botanical specimens. Aboriginal artifacts were also found. The fauna appeared very scarce, but some very enjoyable bird observing was done. Evening camp-fire discussions by the shore of the Lake were most enjoyable. January long-weekend was spent at National Park. Saturday's programme was the continuation of a Botanical Survey begun in 1968. This is done by marking out a selected area, collating and naming every plant in that given space. When the same area is again examined at a later date, difference in growth, and possible introduction of a new species or loss of an old one is noted. Sunday was full of interest, trying to rediscover flora listed by Von Muellir in 1869. Of 58 species named 27 were found again, working from Lake Fenton to the summit of Mt. Field East. Evenings and Monday morning were employed classifying and naming specimens.

Prof. W.D. Jackson lecturer in Botany at the Tas. University finds the Club's interest in this work assist, the University. Field outings have been generally well supported, with an increase in numbers coming along to share days of interest spent in observing and collecting.

The last trip was to the Hartz Mountains by bus transport. This was so successful that we plan more outings of a similar nature.

Thank you to those people who arranged and led these excursions. Their efforts were much appreciated.

A variety of absorbing lectures often beautifully illustrated were enjoyed by the club in 1969. Our sincere thanks is expressed to busy men and women who gave their time and knowledge so generously.

The Club's representatives on the Sth. West Committee and the Flora and Fauna Conservation Committee have kept us well informed of matters under discussion.

The A.G.M. of the "Federation of Field Naturalists' Clubs of Tasmania" was held at the Queen Victoria Museum, Lecture Theatre in Launceston on Saturday March 29th. 1969. Miss. M.L. Westbrook and Mr. D.G. Thomas attended as delegates. Mr. Thomas was elected President, Miss. Westbrook Secretary. The Bi-Annual Meeting was conducted at the Adult Education Centre Nth. Hobart on September 20th. 1969, closing with a barbeque at Roche's Beach in the evening. At both these meetings some good items were put forward. Various aspects of pollution, preservation and extension of National Parks were of concern to delegates, Mr. D.G. Thomas, President, Miss. M.L. Westbrook Secretary and Mr. L. Wall delegates. Congratulations to Mr. D. Milledge on his appointment to the Flora and Fauna Board.

We thank Dr. Bryden who was again judge for the Junior Natural History Prize. He had high praise for the winning entry on the Tasmanian Aborigine, by Philip Young. Fourteen new members were welcomed to the Club in 1969. We hope they will enjoy the Club's activities, and that the association will be of mutual benefit.

Life membership was conferred on Mrs. Alice Elliott O.B.E. and Mrs. F.I. Green, who have shown such interest over a great many years.

There has been an exchange of publications with other Naturalists' Clubs, and organisations with similar interests. Mr. D.G. Thomas assisted by Mr. L. Wall have ably edited "The Tasmanian Naturalist" during 1969. Please help to make their task easier by supplying them with more items!

Mr. M. Hurburgh has been appointed publicity manager, for the Club assisted by Miss. F.E. Warren. They will be pleased to receive any material on Natural History relevant to the "Field Naturalists' Club" which can be used for publication in the "Mercury" thereby stimulating public interest.

During the latter part of '69 another item was included in the agenda. Namely a five minute talk on a subject to be chosen by a member. This has proved to be very popular and will be continued in 1970.

As a result of a questionnaire sent to members some good, and in some instances, surprising answers were returned. The Committee thanks those people who answered the questionnaire and gave such thoughtful replies.

Your Committee has met 5 times during the year to administer Club affairs. Owing to the conscientious interest shown, problems and other topics were dealt with satisfactorily.

My very sincere thanks to the Committee and all Members who have helped during 1969, and a special thank you to our Guest Speakers!

THE TASMANIAN FIELD NATURALISTS' CLUB
REVENUE ACCOUNT, "TAS. NATURALIST" 1969

Printing costs	\$68.84	Subscriptions	\$54.65
		Loss (reimbursed from Reserve Fund)	14.19
	\$68.84		\$68.84

REVENUE ACCOUNT, "T.F.N.C. BULLETIN", 1969

Printing costs	\$50.00	Donations	\$50.00
Postage & wrappers	8.16	Subscriptions	14.10
Excess of Income over Expenditure transferred to General Revenue A/c.	5.94		
	\$64.10		\$64.10

REVENUE ACCOUNT, RESERVE FUND, 1969

Loss on "Tas. Naturalist"	\$14.19	Bank Interest	\$38.54
Excess of Income over Expenditure tr.	24.35		
	\$38.54		\$38.54

REVENUE ACCOUNT, GENERAL FUND, 1969

P.O. Box Rent	\$ 9.00	Subscriptions	\$138.45
Subscriptions- S.W. Committee	5.00	Bank Interest	9.79
F.F.N.C.T.	2.50	Profit on sales of "Aust. Plants"	1.30
Postages and Stationary	5.00	Profit on Badge sales	1.00
Rent of Room for meetings	42.00	Donation	2.00
Entertaining F.F.N.C.T. Delegates	3.00	Profit from "Bulletin" A/c	5.94
Depreciation - Addressograph	8.50		
- Tent	6.80		
Excess of Income over Exp.	76.68		
	\$158.48		\$158.48

BALANCE SHEET AT 31st. DECEMBER 1969

CLUB FUNDS AND LIABILITIES

CLUB FUNDS

Reserve Fund at 1/1/'69	\$1324.04		
less cost of Tent	68.00		\$1256.04
add Excess of Income over Expenditure, 1969		24.35	\$1280.39
General Fund at 1/1/'69	227.20		
add Excess of Income over Expenditure, 1969	76.68		
Cost of Tent	68.00	371.88	\$1652.27

OUTSIDE LIABILITIES

Subscriptions paid in advance - "Tas. Naturalist"	\$ 18.00		
"T.F.N.C. Bulletin"	3.00		
General Fund	17.00		38.00
			\$1690.27

CLUB ASSETS covering the Liabilities

Hobart Savings Bank			\$1544.47
Duplicator			10.00
Addressograph	\$68.10		
less Depreciation	8.50		59.60
Tent	68.00		
less Depreciation	6.80		61.20
Library			10.00
Badges in hand			5.00
			\$1690.27

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NEXT MEETING will be held at the Royal Society Room, Tasmanian Museum on THURSDAY, April 16th., at 7.45 p.m.

SUBJECT: Review of Easter Camp.

Please bring along any slides, photos or other items of interest.

FIVE MINUTE TALK will be given by Mr. I. Lea.

LAST OUTING: Owing to inclement weather, the outing was not held, but will become the NEXT OUTING -

Leader: D. Ziegeler

Area: Knocklofty

Meet: by the Prince Theatre

Time: 9.30 a.m.

Date: Saturday, 18th. April.

MEMBERSHIP: The following were elected members:-

Mr. Michael Potter, 5 Darling Parade, Mt. Stuart.

Mr. John Schofield, 30 Glebe St., New Norfolk.

EASTER CAMP: Numbers present:-

Resident	25
Visitors	9
Total	34

Although the weather was wet, and many of us had wet feet at times, there was a happy spirit in the camp. We deeply appreciated the generosity of Mr. Doug. Cotton, in allowing us the use of his shearers' cottage, which was well equipped with electrical appliances - including a hot water service!

* * *

FEDERATION OF FIELD NATURALISTS' CLUBS OF TASMANIA

At the Annual meeting of the Federation, the setting up of a new Conservation and Wildlife Act was discussed.

It was felt that the Federation should submit a log of demands, also to seek the assurance that adequate opportunity for comment would be allowed before final arrangements were made.

The following motions were carried-

"That the Federation take the lead in convening a general get-together of the three conservation organisations." and "That we make a submission regarding our aims for the new National Parks and Wildlife Bill".

It was agreed that each member club be asked to submit their own views to the Secretary by April 21st. From these, a tentative submission would be written and presented to a general meeting of delegates to be held in Launceston on Saturday May 2nd. Those then present would then work on this submission to produce a copy acceptable to all. It will then be submitted to the appropriate authorities.

~~***~~

In the light of the above, I will be pleased to receive your ideas on what should be incorporated in the new bill.

Please put your ideas in writing and send to -

Miss. M.L. Westbrook,

6 Richardson Ave.,

Dynnyrne, 7005.

or ring 23 7308,

or bring to meeting on April 16th.

There will then be a meeting of the committee of the Tasmanian Field Naturalists' Club, at the above address, on Monday April 20th., at 8.00 p.m.

Business - to discuss these ideas and make final draft to submit to the Federation.

WILL YOU PLEASE CONSIDER THIS MATTER AS URGENT?

* * * * *

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May, 1970

NEXT MEETING Will be held at the Royal Society Room, Tasmanian Museum on THURSDAY May 21st. at 7.45 p.m.
SPEAKERS: Mr. L.E. Wall and Mr. D.G. Thomas.
SUBJECT: Birds of Lake Pedder.
FIVE MINUTE TALK: will be given by Mr. Frank Angel.

LAST OUTING: was to Knocklofty, led by Mr. David Ziegeler. This proved to be an interesting area and it is planned to visit the same area in Springtime.

NEXT OUTING: Leader: Mr. L.E. Wall.
Area: Pawleena
Meet: by the Prince Theatre 10.00 a.m.
Date: Sunday, 24th. May

MEMBERSHIP: Nominations were received from:
Mr. Colin Mather, 33 Federal St., North Hobart.
interested in Marine Biology, and nature generally.
Mr. Ian Officer, Bracken Lane, Fern Tree - Zoology.

CONSERVATION AND WILD LIFE ACT:

The Club's delegates attended a meeting of the Federation of Field Naturalists' Clubs of Tasmania held in Launceston on May 2nd. This was to formulate the Federation's policy for use when asked to comment and make suggestions on the draft of the new Act.

CONGRATULATIONS: To Mr. L. E. Wall for being chosen to give the John Skemp Memorial Lecture at Launceston on May 5th., and having the honour to receive the John Skemp Memorial Medal.

BIRD OBSERVERS GROUP meets on Friday May 29th. at 8 p.m. in the Wireless Institute Room, 147 Liverpool st.,
SPEAKER: Mr. David Thomas.
SUBJECT: Australian Nesting Record Scheme.

Visitors Welcome.

May, 1970

CROWN-OF-THORNS STARFISH (Acanthaster Planci)

Owing to the present controversy regarding the increase of the Crown-of Thorns Starfish the following information might be of interest.

Description: Average size, 15" in diameter, arms 13-17. Upper surface covered with prominent spines about 1" in length with tips reddish or orange. Upper surface of arms, bluish-grey, centre from which arms arise often variegated colouring in which greys and greens predominate. This colouring blends with that of living corals, and makes them hard to detect. Injury incurred through treading on the spines often causes severe pain and protracted vomiting.
Habitat: On the sheltered side of coral reefs, from a few inches below the surface at low tide, to a depth of 80 feet probably lower in places.

Breeding: The sexes are separate, and the breeding season is short and well defined - over a period of about one month from December 20th. to January 20th.

Spawning starfish tend to aggregate on the uppermost branches of corals in water about 10 feet in depth.

NATURAL ENEMIES: Experiments were made to find a possible predator. Starfish were caged with a great variety of potential predators - gropers and other large fish, turtles, large carnivorous mollusca such as bailers, helmets, etc. large crabs. Only ONE predator was found. This is the giant triton, or trumpet shell (*Charonia tritonis*). It is the second largest gastropod mollusc in the Indo-West Pacific region and attains a length of 16"-18" when fully grown.

Feeding Habits: A study of a group feeding by the Starfish revealed that in ONE WEEK, 6 specimens killed SEVEN square feet of coral. When it attacks coral, it protrudes the stomach from its body and then applies strong suction. The polyp is then sucked from its tube, roots and all! Studies of caged starfish showed that adult starfish can survive for at least 4 months without food, but when free on coral reefs the starfish appears to feed continuously.

It is hoped that enough finance will be forth coming to provide adequate measures of control

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NEXT MEETING will be held at the Royal Society Room, Tasmanian Museum on THURSDAY June 18th. at 7.45 p.m.
SPEAKER: Mr. D. Lynch, Inland Fisheries Commission.
SUBJECT: "Pollution"!

FIVE MINUTE TALK: Miss. M.L. Westbrook.

LAST OUTING: Was to Pawleena, led by Mr. I.E. Wall. NO ducks were seen on the dam, but there were a number of other birds about, and three of the Autumn orchids were found.

NEXT OUTING: Leader: M.L. Westbrook
Area: Risdon Brook Dam
Meet: In Murray Street by St. David's Cathedral at 9.25 a.m. (If insufficient private transport 9.30 a.m. Bus will be caught).
Date: Saturday, June 20th.

Objects: to collect specimens of Eucalypts for identification, and to look for any endemic species of plants, and other things - birds, fungi, etc.

MEMBERSHIP: A letter has been received from Mr. Masahiro Aoyanagi, Japan, who is a teacher of biology. He has recently visited Australia and is now writing an account of his trip for a magazine of plants and insects. He saw our Club's address in "Common City Birds", by Graeme Chapman, and has expressed a wish to become a member of our Club.

SUBSCRIPTIONS: If there is a cross here ___ we have not yet received your membership dues for 1970, we are sure you have overlooked it, we suggest you get in touch with the treasurer without delay.

JUNIOR NATURAL HISTORY PRIZE: any person under 16 (member or non-member may enter for this prize. It will be a project of their own choice, on some natural history subject. The Project should be handed in to the Secretary by Thursday October 15th. Prize will be awarded on Thursday November 19th., which is the final meeting for the year.

June, 1970

D.D.T.

It is interesting to compare an article written in 1949 about DDT with present day knowledge of its longterm effects.

These notes were gathered from the Science Jottings section of a school magazine of that year.

"In 1874, a student in Strasburg artificially produced the compound D.D.T. He recorded the result of his researches in a short thesis for a degree, but he lived and died without once suspecting that he had discovered a most effective insecticide. For over sixty years the thesis lay neglected on a shelf, but about 1939, Muller, a Swiss scientist, discovered by accident the amazing insecticidal properties of D.D.T.

"Since that time its properties have been thoroughly tested, with results that were startling. Sprayed on the walls, it killed flies for three weeks - most valuable for hospitals etc. where flies are common and very dangerous. Powdered D.D.T. dusted on clothes renders them immune from lice for a month, even after several launderings, and a bed sprayed with it is fatal to bed-bugs for almost a year. During and epidemic of typhus in Italy in 1944, the powder was blown down the sleeves and necks of dressed persons. Not one of the persons thus treated contracted the disease. During the war, our fighting men were dressed in underclothing impregnated with a solution of D.D.T. TO KEEP THEM FREE FROM typhus, trench fever, and lice. It is also useful to control mosquitoes and thus malaria. A wide range of pests, in the house, on the farm and in the garden are controlled, and even codlin moth and apple blossom weevil are said to retreat before the new weapon. But D.D.T. is without effect on snails, and, fortunately, it is perfectly harmless to earthworms, fishes and bees." .. end quotes.

There is no doubt that wonderful things have been done with D.D.T. - but after over 20 years of its use, we have learned more of its bad side effects.

It goes to show that the discoveries of science are not static - what appear to be facts to one generation are proved, by later generations to be superceded by quite different

June, 1970

"facts" - we cannot afford to accept things at their face value - but must keep on with research and long term experiments. Here is a topical example of what can be unearthed by serious research.

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NEXT MEETING will be held at the Royal Society Room, Tasmanian Museum on Thursday July 16th., at 7.45 p.m.
SPEAKER: Dr. G.C. Bratt.
SUBJECT: Lichens.

FIVE MINUTE TALK: Mr. D. Thomas.

LAST OUTING: Leader, Miss. M.L. Westbrook to Risdon Brook Dam. Pleasant mild day - Variety of fungi were found, several types of orchid leaves, two main species of Eucalypts, and quite a number of birds. Including hoary-headed grebe, and black ducks on the Risdon Dam. There was a good stand of Blackboys (*Xanthorrhoea Australis*) on one of the hills.

NEXT OUTING: Leader: Dr. G.C. Bratt.

Area: To be chosen by Dr. Bratt, who will tell us at next meeting.

Meet: Prince Theatre, 9.30 a.m.

WALKING HOLIDAY IN TASMANIA! Brochures have been received about the availability of a complete guide service for a four-day walk through the Cradle Mt.-Lake St. Clair National Park. The Guide is Eric Sargent. Food, sleeping and waterproof gear will be provided by the Guide. They give dates from October to Easter. Copies of the brochure will be available at the meeting.

BIRD OBSERVERS CLUB: will meet at the Wireless Institute Room, 147 Liverpool St., Friday 31st. July at 8 p.m.
Speaker: Dr. J.L. Madden -

"Birds of the Pine Forest"
Visitors welcome!

(Gibson)

The Editor would be pleased to receive material for "The Tasmanian Naturalist" which should be in by July 15th.

* * * * *

July, 1970

BIRD IN DANGER.

The largest of the swans, and indeed the largest of all water birds, is the trumpeter swan (*Olor buccinator*). It is found exclusively in North America, where it is the fifth rarest bird (the four others are the ivorybilled woodpecker, the whooping crane, the Everglade kite and the Californian condor). It breeds in only four places - Alberta and British Columbia in Canada, and Montana and Wyoming in the United States.

In the winter it flies south principally to California. Fifty years ago there were very few trumpeter swans, and those that there were were liable to be shot by hunters.

But nowadays they are fully protected, in a number of reserves on the west coast of North America, and the population has lately been increasing. There are, however, still only 1,400 of them.

* * * * *

KINGFISHER.

About 80 species of kingfisher are known to exist throughout the world, mostly in tropical regions, and particularly in the islands of the South Pacific.

A species found in Europe is Alcedo atthis. It lives near rivers and streams, feeding on fish, for which it makes spectacular dives. An engaging characteristic of the chicks is the way in which they queue up for food.

The nest is built at the end of a tunnel excavated in a bank and each chick comes forward in turn as the parent arrives at the entrance with a fresh mouthful.

According to a Greek myth the kingfisher bred in mid-winter in a nest floating on the open sea, which remained calm for long enough for the bird to rear its young. Hence the expression 'halcyon' days for a period of calm. "Alcyon" being a transliteration of the Greek for kingfisher.

* * * * *

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July, 1970

ANIMALS HAVE CLOCKS.

The American Institute of Biological Sciences recently reported that many animals have remarkable correct 'built-in clocks'.

An example of this is the annual swarming of midges which begins on precisely the same day each year, and at the precisely the same twilight hour on two successive evenings.

A recent discovery has been that of a 'clock gland' in the head of cockroaches. This is closely associated with the activities of these insects. If this gland is surgically transplanted to another cockroach, it will show a daily activity regulated by the implanted clock.

Studies of crabs and bees indicate that both maintain an accurate daily rhythm, even when sealed away from their natural environment.

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August, 1970

NEXT MEETING will be held at the Royal Society Room, Tasmanian Museum on Thursday August 20th. at 7.45 pm.
 SPEAKER: Dr. P.A. Tyler. Illustrated Address.
 SUBJECT: "Life in Lakes."

FIVE MINUTE TALK: Mr. D. Milledge.

LAST OUTING: Was to Grass Tree Hill and Bowen Park area and the leader was Dr. G.C. Bratt who directed our search for lichens. We now have 23 different specimens of lichen, one of which was Heteradia meullerii - a lichen which has not been found in many places and for which Dr. Bratt was searching. He has discovered 60 species previously unlisted in Tasmania.

NEXT OUTING: Leader: Mrs. T.L. Stephens.
 Area: Cole River Valley and Brown Mountain.
 Object: To ascertain what regeneration has occurred since the Club visited this area in September, 1967. (after the Bush Fires).
 Meet: The Prince Theatre at 9.30 a.m.
 Date: Saturday 22nd. August.

CORRESPONDENCE: You will be interested to hear that we have heard from our newly-elected Japanese member. He has sent some colourful brochures about Japanese National Parks and Wildlife Conservation. These will be displayed at our next meeting.

JUNIOR NATURAL HISTORY PRIZE: Any person under 16 (member or non-member) may enter for this prize. It will be a project of their own choice, on some natural history subject. The project should be handed in to the Secretary by Thursday October 15th. Prize will be awarded on Thursday November 19th. which is the final meeting of the year.

QUIZ:- What is the longest animal recorded? A JELLYFISH! It - including its tentacles - measured 120 feet! Not all jellyfish can boast this length - in fact some could be comfortably accommodated on the tip of one's finger. Some jellyfish have not been called 'sea-nettles' for nothing for they are armed

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with a multitude of stinging cells. While these tentacles are useful for defense, their prime function is to capture their prey.

Stinging cells are marvels of engineering. They consist of a tiny bulb full of paralysing drug, a microscopic coiled tube, and a hair-trigger. The lightest touch on the trigger - and out shoots the tube, a needle-sharp point punctures the skin, and in flows the poison.

The technical name for these stinging cells is 'nematocyst' meaning a thread (the tube) and a bladder (the bulb). Dozens of 'stingers' lie crowded together in batteries, so that anything brushing against them receives an instantaneous broadside. By thrashing about to get free, the prey is stung again and again.

But this is not all. Other cells aid the stingers. Some are gummy and stick fast, others curl round and entangle the prey. The different weapons are arranged in groups. The sticky and entangling ones, which have longer triggers, are on the outside and secure the victim; then the stingers which have the shorter triggers, deliver the 'coup de grace'.

Essentially a jellyfish consists of two parts: a swimming 'bell' which varies considerably in shape from one species to another, and a number of appendages suspended from the bell, the most prominent being the tentacles. A hollow stomach ending in a primitive mouth hangs from the middle of the bell.

Jellyfish are found in all seas of the world, from the Arctic to the Antarctic. Most of them live near the surface, but some have been brought up in trawls from more than a mile down.

Surprising as it sounds, jellyfish are not confined to the sea. Occasionally tiny ones, three-quarters of an inch or less across, are found in waters which have been artificially heated. They can be found in a tank of tropical fish, and they have also been found in the warm water tanks of botanical gardens, in a colliery reservoir, and in the Essex Ship Canal.

A specimen of the lion's mane jellyfish (*Cyanea*) taken off the coast of Massachusetts many years ago had a lens-shaped bell $7\frac{1}{2}$ feet across and 3 feet thick, with nearly

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1,000 tentacles, some more than 120 feet long. This made it the longest animal that has ever been recorded. It probably weighed not less than 200 pounds - or more than a 14 stone man.

* * *

ANIMAL IN DANGER

The Cretan wild goat (*Capri hircus aegagrus*) was formerly found in every country round the eastern Mediterranean, but during the present century it became confined to a very small region around the Gorge of Samaria in the White Mountains of Crete, where it is called the 'kri-kri'. After the last war even these survivors were threatened, and the Greek Government decided in 1954 to transport a number of them to some of the islets off the north coast of Crete, where, cared for in semi-captivity, they are flourishing. At present there are thought to be about 100 of them on the various islands.

* * *

TASMANIAN FIELD NATURALISTS' CLUB

G.P.O. BOX 68A
HOBART 7001

PRINCIPAL OFFICE BEARERS

President	Mrs. T.L. Stephens, 25 Hazell Street, BLACKMANS BAY 7152
Hon. Secretary	Miss. M.L. Westbrook, 6 Richardson Avenue, DYNMYRNE 7005
Hon. Treasurer	Mr. L.E. Wall, 63 Elphinstone Road, NORTH HOBART. 7000

BULLETIN OF THE TASMANIAN FIELD NATURALISTS' CLUB.

Price 20c. p.a.

September, 1970

NEXT MEETING will be held at the Royal Society Room Tasmanian Museum on Thursday Sept. 17th. at 7.45 p.m.
 SPEAKER: Mr. J.B. Thwaites.
 SUBJECT: "An Expedition across Central Australia, in search of Aboriginal Rock Engravings."

FIVE MINUTE TALK: Mrs. T. Stephens.

LAST OUTING: to Cole River, led by Mrs. Stephens. This was to note regeneration since 1967 Bush Fires. This was considered to be quite advanced. Trees which were too severely burnt to survive were now being cut down. We found quite a number of orchids either in flower or leaf, *Styphelia pinifolia* was in flower and *Leucopogon* was in abundance. Those who were there suggested an extra outing at the end of October to the same place as most of the plants now in bud should then be out.

NEXT OUTING: will be to Carlton. A variety of interest in this area. Lagoon, seashore, and an abundance of birds, aboriginal middens and plenty of flora.
 Leader: Mrs. E. Thorpe.
 Meet: The Prince Theatre at 10.00 a.m.
 Date: Saturday, 19th. September.

RESERVATIONS for the bus trip to Scott's Peak (Gordon River) planned for the November Outing, should be in to the Secretary, by the end of October. Juniors will be free provided we get enough adults. We suggest you book early as our last trip by bus was booked out.

BIRD OBSERVERS CLUB: next meeting will be held at 147 Liverpool street, at 8 p.m. on Friday Sept. 25th.

PROPOSAL TO FORM A BIRD GROUP WITHIN TAS. FIELD NATURALISTS' CLUB.

The future form of meeting of the Bird Observers Club is in doubt. At present the B.O.C. has been meeting unofficially with the R.A.O.U. The R.A.O.U. has revised its constitution and now does not have State Branches, but representatives in the North and South of Tasmania, At the last meeting of the B.O.C. it was proposed that the T.F.N.C.

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be approached to see whether they would be willing to form a Bird Group within their Club.

Your Committee has already discussed the proposal. It was decided to put points for and against a Bird Group in this Bulletin so that members could think this over.

The matter will be raised at the coming General Meeting where it is hoped that we can come to some arrangement about this proposal.

The side FOR the Proposal.

Advantages.

1. Could increase membership by introducing Bird Lovers who are not interested in other branches of Natural History.
2. Regular Bird Notes in the Naturalist could further increase the circulation, so that it may pay for itself. Interstate circulation could increase substantially.

The side AGAINST the Proposal.

Disadvantages.

1. It might draw off some present members whose only interest is in birds, so that they wouldn't participate in general Club activities.
2. There would be a greater demand for Bird Outings which might detract from present Club Outings.
3. Meetings of the Bird Group would result in extra charges for rent of a meeting room, unless an alternative could be found.

THINK THIS OVER AND PRESENT YOUR VIEWS TO THE MEETING

* * *

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September 2nd. (M.L. Westbrook)

While a friend and I were having morning coffee in the sun in the back garden, a sign of spring fluttered by - it was a white cabbage butterfly. A few minutes later - three yards away from us, an Eastern Spinebill swooped on to the butterfly and carried it to a nearby bush. It kept dropping and catching it again as it tried to get away - till there was no more flutter left. Do Honeyeaters eat insects???

Mrs. Stephens has seen both Yellowthroats and Crescent Honeyeaters eating insects.

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NEXT MEETING will be held at the Royal Society Room, Tasmanian Museum, on Thursday October 15th. at 7.45pm
 SPEAKER: Dr. J.L. Madden.
 SUBJECT: Some aspects of the Ecology of the Sirex Wasp. (Illustrated).

FIVE MINUTE TALK: Miss. F.E. Warren.

LAST OUTING:- was to Carlton - Leader, Mrs. Thorpe. This was an outing of general interest - a lovely day- and the members had lunch at Mrs. Thorpe's holiday cottage, "Westwood".

NEXT OUTING:- Leader: Dr. J.L. Madden
 Object: to visit the Pine Plantation at Seven Mile Beach. Meet at the Prince Theatre at 9.30 am on Sunday, October, 18th.

BUS OUTING, on November 21st.
 Reservations for seats a rapidly filling. The list of names must be completed by the October general meeting. Names of Juniors hoping to come, should be in by the same date, so that the seating can be arranged.
 Adults - \$4.00 Juniors - FREE.
 Contact Miss. F.E. Warren, at the general meeting, or phone her between 2.15 and 5 pm on Thursday,
 Phone number: 23 2033

FEDERATION BI-ANNUAL MEETING was held at Ulverstone on Saturday, September 19th. In the evening the delegates were guests at a Games Evening held by the North West Walking Club. It was decided to meet again, this time in Launceston on October 10th., to discuss the proposed Wildlife Bill.

NATURAL HISTORY PROJECT:- Here is a reminder that entries must be in by the October meeting if possible - in any case not later than October 31st. JUNIORS - this is for YOU !!

SPECIAL INTEREST GROUPS within this club - Be prepared for a discussion on this - it has been suggested that several small groups be formed (including a bird group)

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to give opportunity to club members to follow their special line of interest. You will hear more of this at the coming meeting. Bring your ideas as to how this could be organised.

* * *

"COULD ANTS INHERIT THE EARTH?"

It is generally agreed that a nuclear war might exterminate the entire human population of the planet. Those who did not die in the holocaust would be wiped out by radiation.

According to Dr. S.H. Skaife, the South African naturalist, if this were to happen ants might inherit the earth.

In an article in the South African 'Pretoria News' of 9th. January 1963, he discussed radiation experiments he had carried out on colonies on ants. He deduced from these experiments that these insects were virtually immune to radiation - unlike mammals, birds and reptiles.

When the ants were put under an X-ray machine, delivering 450 rontgens a minute (enough to kill a man), they showed no sign of distress. Even colonies that received enormous doses of 5,000 rontgens showed no abnormalities. In fact, the behaviour of all the X-rayed colonies was no different from the colonies which had not received any treatment - and Dr. Skaife kept them under observation for 18 months afterwards.

Dr. Skaife also drew attention to the experiments of an Oxford University scientist, Dr. H.B.D. Kettlewell, who carried out similar experiments with radio-active phosphorus in the Zoology Department of the University of Capetown.

First, he fertilized some maize plants with the phosphorus until these plants were radio-active. Then he fed grasshoppers on the leaves so that they too became radio-active. Unfortunately, Argentine ants got into the grasshoppers' cages during the long vacation; they killed and cut up the grasshoppers and carried them away as food. So the ants became radio-active in their turn, but like the grasshoppers showed no ill effects.

It would seem from this, that if the world is insane

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enough to plunge itself into a nuclear war, ants, and other other insects might be among the chief survivors.

* * *

"VAMPIRE BATS CARRY RABIES"

Vampire bats, as well as dogs, can give rabies by their bites. Fortunately the vampire bat prefer to feed on the blood of cattle rather than that of man. They have been known to attack man, however, and thus have been responsible for rabies. In the Americas in 1960 there was a total of 132 deaths from rabies and of these 22 were caused by bats. The World Health Organisation has pointed out that rabies can never be completely eliminated while these bats exist.

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Registered for posting as a periodical - Category B.

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NEXT MEETING will be held at the Royal Society Room, Tasmanian Museum, on Thursday Nov. 19th. at 7.45 p.m.
SPEAKER: Prof. (Bill) Mollison
SUBJECT: Mammal behaviour - Importance of sex ratios in animals and man.

FIVE MINUTE TALK: Miss. B. Greenstreet.

MEMBERSHIP: Mr. S.B. Greenstreet, 336 Davey St., South Hobart. (Application)

LAST OUTING: Was to Seven Mile Beach, where Dr. J.L. Madden, conducted us through the Research Station, showing various aspects of the work they were doing to control the Sirex Wasp. After this a walk was taken through the Plantation to see the field work.

As a follow up of the September Outing to the Coal River area, a few members went to the same place on 24th. October, and concentrated on the heathy hills. Leucopodon, Tetratheca, creeping Hibbertia, and Parson-in-the-Pulpit orchids, were in abundance.

NEXT OUTING - The Bus Trip to Scott's Peak Road, Mr. L. Sutherland, geologist will accompany us. Time: Meet at 8.15 as bus leaves at 8.30 sharp. This is necessary so as to make the best use of the day. Date: Saturday, November 21st. Meet: Prince Theatre Be prepared for any type of weather (you know our CLIMATE).

There are still a few seats available at \$4 each. Get in touch quickly with Miss. F.E. Warren at Tel.23 2033

BIRD OBSERVERS' CLUB Meets on Friday November 27th. at 8 p.m. in the wireless Institute Room at 147 Liverpool St., Visitors Welcome.

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RHINCODON, the World's Largest Fish.

The whale shark was first described to science in 1829 but in the 134 years since then fewer than 100 have been scientifically recorded and only a fraction of these in detail. The whale shark is at once the most colourful, the most specialised, and one of the least known of the large sharks.

Length and weight - the average size of a full grown adult seems to be about 30 or 40 feet, but some grow even larger. One measured a little over 45 feet and another caught in a fish trap, almost 60 feet. But the Victorian naturalist, E. Percival Wright, writing of his stay in the Indian Ocean, in the Seychelles, says that many trustworthy men are accustomed to calculating the length of the sperm whale told him of sharks measuring upwards of 70 feet.

Exact weights for the largest specimens are not known, but the American ichthyologist, Dr. Leonard P. Schultz, says that a 70 footer would weigh about 150,000 lb. or seventy tons.

Huge as the whale shark is, it is not the largest fish to have existed. This distinction goes to the shark, Carcharodon megalodon which is believed to have measured up to 100 feet and weighed 125 tons! Fossil Hunters still sometimes find Carcharodon's 6 inch triangular teeth.

Rhincodon's tiny, re-curved teeth are carried in two bands spanning the whole width of the great jaws - 5 feet across, with a gape wide enough to allow two men to crouch inside. That the greatest living shark has such tiny teeth is the more remarkable because most other large sharks have big triangular teeth so sharp they have actually been used as razors. But the teeth of the whale shark are useless for biting anything; their only function seems to be to hold small organisms when the mouth is nearly closed. And this gives a clue to its food and method of feeding.

All sharks have tough skins which, unlike those of other fish, have a shagreen, or sandpaper-like surface. In addition to the shagreen, the whale shark has an inner protective coat of several inches of rubbery gristle, as rigid and impenetrable as a solid rubber tyre on a heavy lorry.

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All told the skin of a 30 foot whale shark is about 4 inches thick, and that of a 60 footer, 6 inches. No wonder a fisherman who examined a whale shark close up described it as 'hard and unyielding as a brick wall.'

Sharks have no ribs, their muscles being attached directly to the skin which acts as an external skeleton. Like other sharks, the whale shark can, if necessary, increase the strength of its armour. How it does this is not known for certain, but it is probably done by tightening the surface muscles which 'set' the skin in a steel-like mould. Even harpoons bend as if they had struck steel.

Clad in this well-nigh impervious armour, Rhincodon fears not man. Such indifference to man's weapons poses the question whether it was the whale shark and not the whale as is generally supposed, which prompted Job's questions:

"Canst thou draw out Leviathan with a hook or with a cord which thou lettest down? Canst thou put a hook on his nose? Wilt thou play with him or wilt thou bind him? Canst thou fill his skin with barbed irons or his head with fish spears? He esteemeth iron as straw and brass as rotten wood. The arrow cannot make him flee. Darts are counted as stubble.

* * *

As this is the last bulletin for 1970, we would wish you all

A HAPPY CHRISTMAS

We hope that 1971 will bring us all another happy year together.

First meeting next year will be the

ANNUAL GENERAL MEETING

On Thursday, 18th. February.

* * *