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MONTHLY STAFF BULLETIN

19(2) Feb 1970

DEPARTMENT OF PARKS AND WILDLIFE

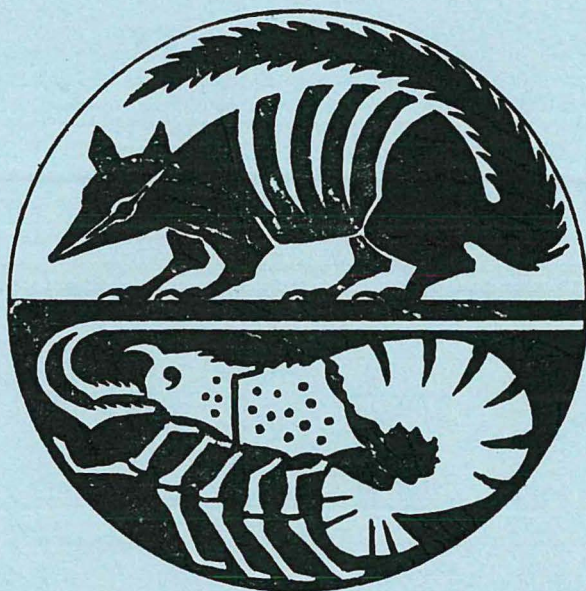
STAFF

BULLETIN

18 MAR 1970

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FEBRUARY, 1970

VOL. XIX, No. 2

DEPARTMENT OF FISHERIES AND FAUNA
108 Adelaide Terrace, Perth, Western Australia

SCALLOPS

Mr. J.P. Robins, Research Officer heading the development team, in his talk on A.B.C. Radio on February 10, spoke of a fishery relatively new to Western Australia and of its potential to develop into a major fishery.

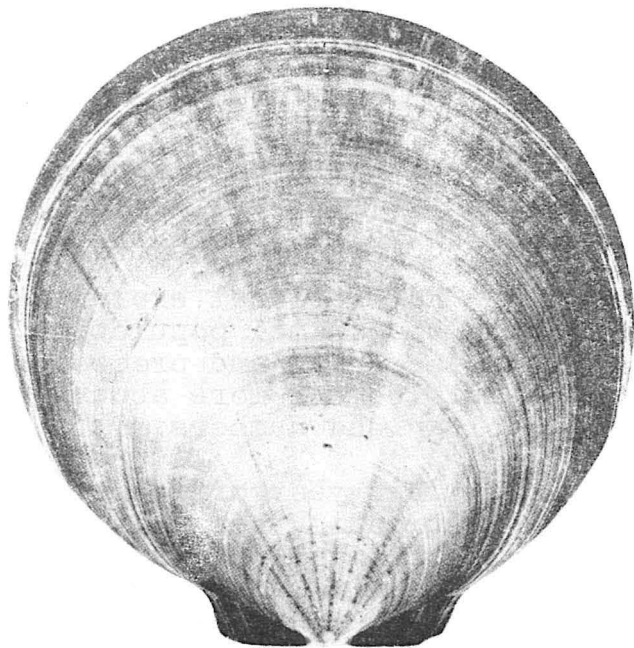
Here is the text of Mr. Robins' talk:

"What is a scallop? It is a mollusc and a member of a very large group of animals which includes oysters, whilks, octopuses and mussels. It belongs to the group of molluscs which possess two shells and are thus called bivalves. Unlike the single-shelled molluscs and bivalves which are fixed to the bottom, e.g. oysters, the scallop has good powers of locomotion and actually moves by jet propulsion, whereby water is drawn in and then forcibly expelled between the two valves of the shell. Repeated action of this type causes the animal to swim rather well though jerkily.

The scallop is what is known as a filter feeder whereby the gills of the animal create water currents which bring in food and oxygen necessary for life. Feeding is selective in that the gills act as a selective filter for food particles, which are mostly microscopic plants, and carries them towards the mouth.

In some scallop species, the sexes are separate but in some they are hermaphrodite, i.e. both sexes occur in the one animal.

In the Shark Bay fishery the scallop taken by commercial enterprise is the saucer or moon scallop whose scientific name is Amusium balloti. This scallop has the sexes in separate individuals. The ripe female reproductive organ is of a bright orange red colour and the male organ is creamish in colour.



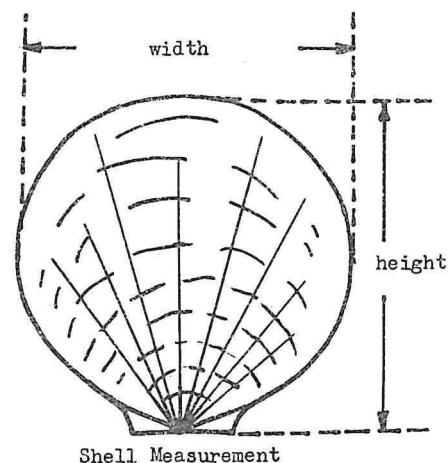
Saucer Scallop (*Amusium balloti*)

The distribution of this saucer scallop in Western Australia extends, as far as we presently know, from Shark Bay to slightly east of Albany in the south and from shallow water out to 50 fathoms.

However the depths of water from which scallops are taken commercially in Shark Bay range from about 8-14 fathoms. Commercial quantities have at times been taken in 22 fathoms in the Abrolhos Islands area. Fishing commercially for scallops in Shark Bay commenced in late 1968 with a few vessels and in 1969 the season started in February after which the vessels fished for prawns. Later, in July, after the prawn catch rate began to decrease some vessels began to fish for scallops. Some very good catches were made and by the end of October approximately 3.5 million pounds of scallops had been taken.

DATA ON SAMPLE FROM SHARK BAY, EXAMINED 2/9/66.

Shell Height (inches)	No. of Scallops (liveweight/lb.)	No. of Meats /lb. (Roe off)	Av. wt. of Meats (oz.)	Per cent recovery of Meats
3	16.00	64	.250	25.00
3 $\frac{1}{4}$	11.75	50	.320	23.49
3 $\frac{1}{2}$	9.25	41	.390	23.16
3 $\frac{3}{4}$	7.50	34	.471	22.08
4	6.00	29	.552	20.70
4 $\frac{1}{4}$	5.00	25	.640	20.00
4 $\frac{1}{2}$	4.00	22.5	.711	17.78
4 $\frac{3}{4}$	3.50	19.5	.821	17.96



With rational exploitation it is anticipated that this fishery, new to W.A. will develop to the stage where it will rival prawns as an income earner.

For rational exploitation to be effective in terms of both the animal population and a steady income earner for the fisherman and processor, we need to know as quickly as possible much more about the population in terms of its biology and numbers.

This year officers of the Fisheries Department will be investigating scallops to determine size composition of the catch from all areas fished in Shark Bay, the growth rates, the breeding season and the effects spawning has on the condition of the animal. They will work in close co-operation

with the fishermen to determine catch rates which will lead to estimations of densities of scallops.

From the analyses of these various types of information it will be possible to make first estimates of the state of the population and from these estimates, the department will be in a better position to more wisely manage the fishery.

In lighter and more pleasing vein is the act of eating these shellfish. To many people scallops are a gastronomic delight, and especially when the method of preparation and cooking is kept simple so that the scallop tastes of what it is and helps to add to the flavour of accompanying dishes and drinks.

My favourite unadorned scallop dish is prepared simply and the method is to lightly blanch the scallop in boiling water, roll in flour seasoned with salt and pepper and fry in oil at 360°F for 2-3 minutes and then serve hot."

* * * * *

STANDING COMMITTEE ON FISHERIES MEETS IN HOBART

The Director, Mr. B.K. Bowen, accompanied by Mr. H.B. Shugg, attended a special meeting of the Standing Committee on Fisheries in Hobart from February 9 to February 12, 1970. This meeting coincided with the official opening of the Tasmanian Fisheries Research Laboratory on Monday, February 9, which Mr. Bowen and Mr. Shugg attended.

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Staff Notes

Mr. M.A. John, Clerk at Head Office, accepted a cadetship in Architectural drafting and has joined the staff of the Public Works Department.

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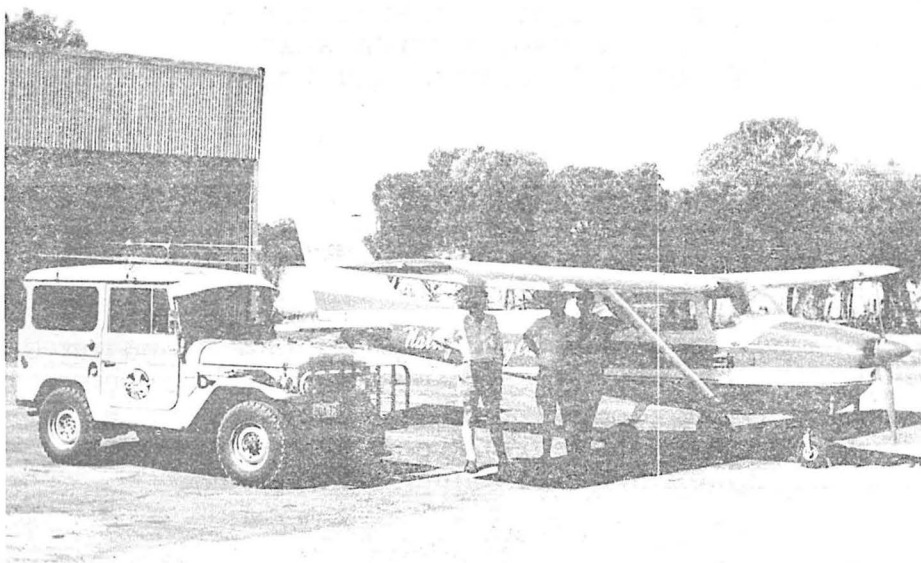
The Director, Mr. B.K. Bowen, is to commence Long Service Leave as from April 1, followed by his Annual Recreation Leave. During his period of leave Mr. Bowen is planning to take his family on an overseas holiday trip.



WARDENS CONDUCT AERIAL INSPECTION FOR DUCK TRAPS

Departmental wardens carried out an aerial inspection of Fauna Patrol Districts, Nos. 9 and 12, during January 1970. The purpose of the patrol was to locate illegal duck traps and to survey lakes, dams and waterfowl concentrations in these areas. Shires covered by the aerial inspection included Katanning, Broomehill, Tambellup, Cranbrook, Woodanilling, Wagin, Dumbleyung, Narrogin, Wickepin, Corrigin, Quairading, Beverley, Brookton, Pingelly and Cuballing.

Large concentrations of waterfowl were noted on most of the lakes that still contained water, although many of



Ready for take-off

L. to R. - Pilot-John Douglas, Warden A. Pearce, Warden K. Morrison on the Narrogin Airfield.

the lakes that would in normal years have water in them were dry or too salty for waterfowl. A number of duck traps were located and confiscated by a follow-up mobile patrol of the areas involved.

The aerial inspection proved to be very efficient in locating such illegal devices. It further provided a very quick and efficient appraisal of the waterfowl situation and of the conditions of the lakes and other suitable water-

fowl habitat in the areas inspected.

A situation report of some of the lakes inspected is as follows:

A. DISTRICT NO. 12

Lake Ewlymartup

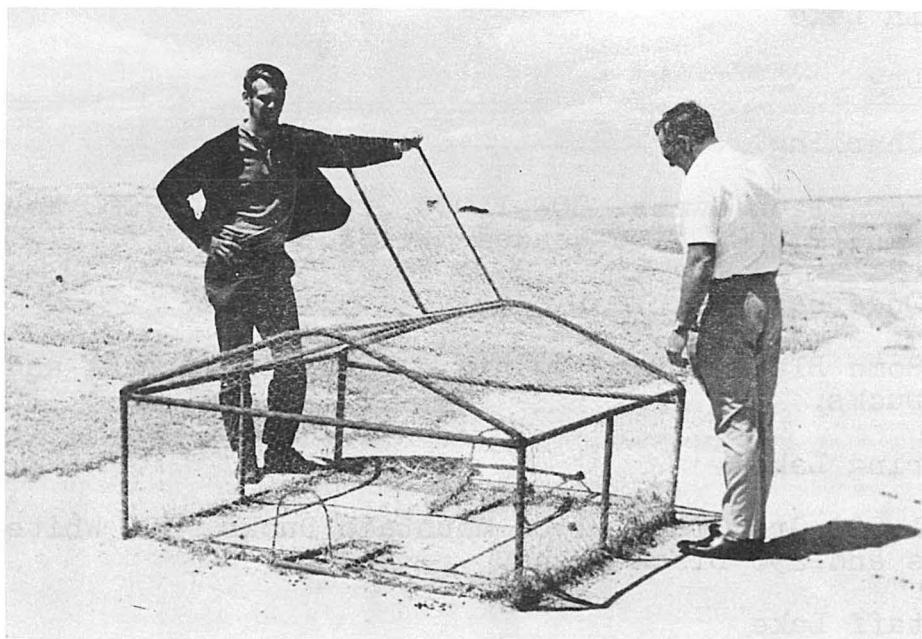
Water level fairly high with extremely large populations of Black Swans, White-headed Stilts, Grey Teal and Mountain Ducks. Very few Black Ducks.

Lake Coyrecup

Water level extremely low. About 500 Mountain Ducks, 400 Grey Teal and 600 White-headed Stilts were sighted. Several Yellow Spoonbills and White Egrets were also noted.

Kwobrup Swamps

Between 150 and 200 Mountain Ducks, 250 Grey Teal and a few Black Ducks.



One of the duck traps located during the patrol

On Lake 11778, just south-east of Wansborough, several thousand Mountain Ducks, several thousand Black Swans and about one thousand Grey Teal were sighted.

Lake Tom South

Extremely large populations of Black Swans, Mountain Ducks and Grey Teal, with large numbers of Coots, White-headed Stilts and Dotterels.

A number of dams in District No. 12 had large populations of Maned Geese present. All other lakes not mentioned above were either dry, too salty for waterfowl, or had only a few birds present on them. Very few Black Ducks were observed throughout this district.

B. DISTRICT NO. 9

Martinup Lake

Water level getting very low. 600 Black Swans, 2,000 Grey Teal, 400 Mountain Ducks, 3 Pelicans, and some White-faced Herons, with a large population of White-headed Stilts.

Munapin Lake

Dry

Lake Charling

500 Black Swans, 800-1,000 Grey Teal, 1,000 Mountain Ducks and 2,000 White-headed Stilts.

Lake Queereannup

Some Black Swans, Mountain Ducks, Grey Teal and White-eyed Ducks.

Wardering Lake

1,800 Grey Teal, 1500 Mountain Ducks, 300 White-headed Stilts and 250 Black Swans.

Flagstaff Lake

Too low and salty - no waterfowl present.

Norring Lake

2,000 - 3,000 Grey Teal, 1,000 - 2,000 Mountain Ducks,

800 Black Swans and numerous White-headed Stilts.

Little Norring Lake

1,200 Mountain Ducks, 1,000 Grey Teal and 500 Black Swans.

Lake Quarbing

Dry

Porkeyerring Lake

Water level very low with about 700 Grey Teal, 350 Mountain Ducks and 150 Black Swans present.

Salt Lake 2089

Dry

Mundualmurrin Lake

Dry

Wagin Lake

Nearly dry with 300 Grey Teal, 100 Mountain Ducks and 600-1,000 Black Swans present.

Little Dornducking Lake

Dry

Dornducking Lake

Dry

Gundaring Lake

Water level very low - too salty for waterfowl.

Lake Dumbleyung

4,000 Grey Teal, 2,000 Black Swans, 2,000 White-headed Stilts, 200 Blue-winged Shovellers and 1,500-2,000 Mountain Ducks.

Toolabin Lake

Nearly dry - with a small colony of White Egrets present (approximately 20 birds).

Lake Mears

100 Mountain Ducks, 500 Grey Teal, a few Black Ducks, 300 White-headed Stilts and some Dotterels.

Completely dry were: Yenyenning Flats, Channel Lakes, Arthur River Flats, White Lake, Nomans Lake, Bokan Lake, Billy Lake, Ibis Lake, Taarblin Lake and Mudhut Lake.

* * * * *

PERU SAVES ANCHOVIES FOR BIRDS

A dramatic example of the damages that may be done to an important marine resource by uncontrolled tampering with regional ecology has been afforded by the catastrophic decline in the Peruvian guano industry. Guano, prized for its nitrate content, is the accumulated manure of millions of sea birds. Peru's vast white deposits were once among the world's finest, and an important source of wealth. But uncontrolled fishing for anchovies, the bird's major food, has reduced stocks of the fish so much that mass starvation of the seabirds has occurred. The Peruvian Sea Institute reports that of the former bird population of 36 million, only 3 million remain. The government has hence banned fishing during certain periods of the year and on weekends, and set an upper limit of 8 metric tons per season on the catch of anchovies.

(Sea Secrets
Vol. 13, No. 10)

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Staff Notes

Fauna Cadet Warden D.J. Mell is at present assisting District Warden K.D. Morrison at Pingelly.

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Congratulations are extended to Mr. R.G. Emery, the District Inspector at Bunbury, on the reclassification of his position to Inspection, Grade 1, G-II-2, as from February 1, 1970.

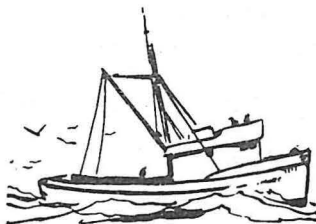
OFFENCES UNDER THE FISHERIES ACT

NAME	D.O.O.	D.O.H.	COURT	NATURE	FINE
WILLIAMS, V.J.	1.11.69	15.1.70	Pinjarra	Marron c/s	\$40
GIBBS, J.M.	11.11.69	15.1.70	"	C/W	\$50
COOK, B.E.	2.6.69	16.1.70	Perth	C/W	\$40
DAVIS, G.G.	24.4.69	14.11.69	"	C/W	\$200
DIX, G.E.	26.4.69	14.11.69	"	C/W	\$100
PAVLOVICH, A.	1.4.69	30.7.69	"	A/L	\$20
SEWELL, H.E.	21.7.69	14.11.69	"	net over C/W	\$40
WILSON, R.H.	26.4.69	14.11.69	"	C/W	\$100

C/W = Closed Waters
A/L = Abusive Language
C/S = Closed Season
P/F = Protected Fauna

OFFENCES UNDER THE FAUNA CONSERVATION ACT

NAME	D.O.O.	D.O.H.	COURT	NATURE	FINE
JACKOBSON, S.	19.4.69	16.1.70	Perth	Fauna C/S	\$30
WILLIAMS, R.	16.8.69	12.12.69	"	Taking P/F	\$100
SMITH, H.J.	30.8.69	10.12.69	Harvey	Taking P/F	\$20
BOSICH, D.A.	16.8.69	12.12.69	Perth	Taking P/F	\$100
WATSON, M.	11.5.69	14.11.69	"	Fauna C/S	\$10



10
**FISHERIES ACT
REGULATIONS**

(Extract from Government Gazette (No. 126) of 17th December, 1969)

FISHERIES ACT, 1905-1969.

Department of Fisheries and Fauna,
Perth, 9th December, 1969.

HIS Excellency the Governor in Executive Council acting pursuant to the provisions of the Fisheries Act, 1905-1969, has been pleased to make the regulations set forth in the schedule hereunder, to take effect on and after the 1st day of July, 1970.

B. K. BOWEN,
Director of Fisheries.

Schedule.
Regulations.

Principal
regulations.

1. In these regulations the Fisheries Act Regulations published in the *Government Gazette* on the 6th May, 1938, and reprinted as amended pursuant to the Reprinting of Regulations Act, 1954, and published as so reprinted in the *Government Gazette* on the 30th May, 1967, are referred to as the principal regulations.

Reg. 3AA
added.

2. The principal regulations are amended by adding after regulation 3A a heading and regulation as follows:—

Inland Fishing License.

3AA. (1) A person who catches or attempts to catch for his personal use any species of fish described in the Schedule to this regulation by any means of capture shall hold an inland fisherman's license which shall be issued in Form B4 in the Appendix to these regulations.

(2) The fee payable for and on the issue of an inland fisherman's license shall be two dollars.

(3) Every inland fisherman's license issued in pursuance of this regulation is subject to the following conditions:—

- (a) That no brown trout, rainbow trout, redfin perch, freshwater cobbler or barramundi shall be caught by any means other than a single rod, reel and line, or by a single line, held in the hand.
- (b) That no more than six drop nets, or one pole snare or one hand scoop net shall be used in the taking of marron or cherabin.
- (c) That not more than ten trout shall be taken in any one day.
- (d) That not more than thirty marron shall be taken in any one day.
- (e) That fish caught by a person licensed in accordance with this regulation shall not be sold, consigned or offered or exposed for sale.



Schedule.

Marron—*Cherax tenuimanus*.
Trout, Brown—*Salmo trutta*.
Trout, Rainbow—*Salmo gairdnerii*.
Redfin Perch—*Perca fluviatilis*.
Freshwater Cobbler—*Tandanus bostocki*.
Barramundi—*Lates calcarifer*.
Cherabin—*Macrobrachium spp.*

Reg. 3F
amended.

3. Regulation 3F of the principal regulations is amended—
- (a) by substituting for the passage, "3F. Every" in line one, the passage "3F. (1) Subject to subregulation (2) of this regulation, every"; and
 - (b) by adding at the end thereof a subregulation as follows:—
 - (2) Every inland fishing license shall expire on the 30th day of June next following the date on which it is issued.

4. Regulation 26F of the principal regulations is amended—
- (a) by deleting paragraph (a) and substituting the following paragraph—
- (a) take or attempt to take trout by any means other than by a single rod, reel and line or by a single line held in the hand with an artificial or natural bait as lure; : and
- (b) by substituting for the word "twelve" in paragraph (b), the word "ten".
5. After Form B3 in the Appendix to the principal regulations, the following Form is added—

Reg. 26F
amended

Form B4
added.

Form B4. Western Australia.
 Fisheries Act, 1905.

INLAND FISHERMAN'S LICENSE.

Place of issue Date

Name
of

is hereby licensed in pursuance of the Fisheries Act Regulations to catch any species of fish mentioned in the Schedule at the back hereof, from the date hereof to 30th June and no longer.

Fee Paid \$

.....
Licensing Officer.

This license is issued subject to the conditions endorsed on the back hereof.

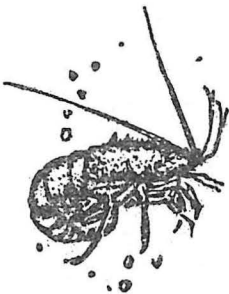
(Extract from Government Gazette (No. 1)
of 9th January, 1970)

FISHERIES ACT, 1905-1969.

Department of Fisheries and Fauna,
Perth, 23rd December, 1969.

F.D. 283/64.

THE Minister for Fisheries and Fauna, pursuant to the powers conferred by section 9 of the Fisheries Act, 1905-1969, does hereby prohibit all persons from taking by any means of capture, other than by means of traps known as or called rock lobster pots, the fish known as or called "rock lobster", in all that portion of Western Australian waters specified in the schedule hereto.



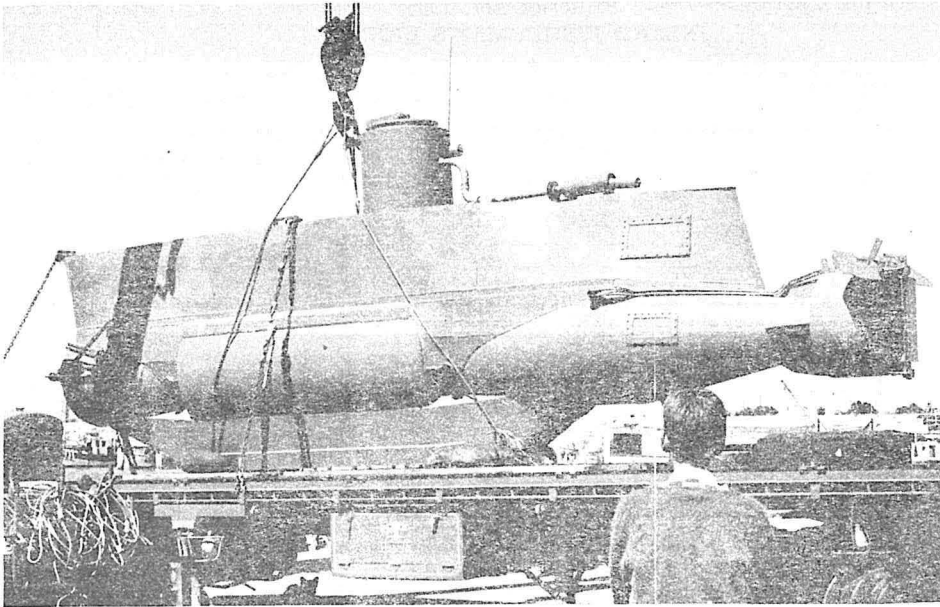
Schedule.

The Abrolhos Islands area, comprising the whole of the Western Australian waters, bounded by lines starting from the intersection of 27 degrees 30 minutes south latitude and 113 degrees 37 minutes east longitude and extending southeasterly to the intersection of 29 degrees 30 minutes south latitude and 114 degrees 30 minutes east longitude; thence west to 113 degrees east longitude; thence north to 27 degrees 30 minutes south latitude aforesaid; and thence east to the starting point.

G. C. MacKINNON,
Minister for Fisheries and Fauna.

News items—**Geraldton**

Inspector R.M. Green while on relieving duties at Geraldton in September 1969 took photographs of a new type of vessel that has received substantial publicity in recent months.



The vessel before launching

The craft, an experimental submarine designed and constructed as a private project by a Geraldton man, is 27 feet long and needs a crew of two to operate it. Its electronic devices have been designed to lure the elusive northern green rock lobster to the vessel where they will be scooped up and then buoyed to the surface and taken on board by a mother vessel.

The northern green rock lobster is not attracted by conventional rock lobster pots because of its vegetarian habit. It is considered by those supporting this project that, if the submarine proves successful, an untapped wealth of the sea will be available.