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MONTHLY STAFF BULLETIN

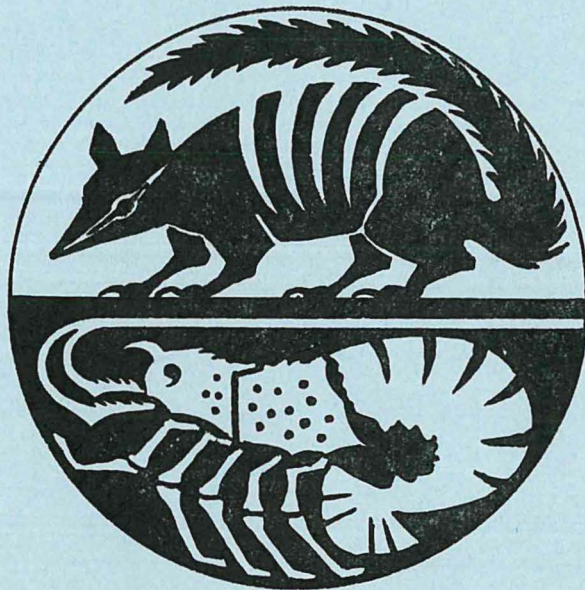
18(1) Jan 1969

DEPARTMENT OF PARKS AND WILDLIFE

STAFF

BULLETIN

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JANUARY, 1969

VOL. XVIII, No. 1

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

PROTECTIVE CLOTHING

It may interest staff to know that all issues of Protective Clothing must be authorised by the Public Service Commissioner.

Only some of the field staff qualify for this issue and before any replacements are made the matter must be referred once more to the Public Service Commissioner's office for consideration in the light of the current duties being performed by such officers.

Fisheries inspectors are entitled to receive a waterproof suit, sea boots, and one pair of overalls for inspecting fish in processing works.

Fisheries Research personnel required to work on seagoing vessels may be issued with a waterproof suit and sea-boots. In addition they may be issued with overalls if more than half their time is spent in handling fish at shore based plants.

The supply of waterproof suits and seaboots to Fauna Wardens and Fauna Research personnel is not in accordance with the general protective clothing policy applying to the Public Service. As wet weather gear is already on issue, however, the Public Service Commissioner is prepared to let the matter stand without change. Any further applications for the issue of protective clothing to officers of the fauna branch must be forwarded to him for prior approval.

Prawn Research in W.A.

Senior Research Officer, Mr. R.J. Slack-Smith, gave the following talk on ABC Radio recently:-

"The previous speakers in this series of talks have described the Western Australian Marine Research Laboratories and the place of fisheries research in the fishing industry. Also descriptions of the marine disciplines which make up fisheries research have been described. Today I propose to talk about an example of an investigation of a fishery. For this talk I have selected the West Australian prawn fishery.

In 1952 exploratory fishing for prawns commenced in Western Australia but it was not until 1962 that a sound industry became established in Shark Bay. In 1963 regulations were imposed to check possible over-exploitation, but these regulations were based on educated guesses and it was then necessary to commence an intensive research programme to check their validity. The basic aims for such research are to measure the abundance of prawns (both within and between years) and to determine how fishing is affecting it. The most comprehensive measures of abundance are made from the fishing operations themselves. These, if properly recorded, provide the scientist with far more intensive sampling than can ever be achieved through research boats or other sampling methods.



prawn catch in Exmouth Gulf

The prawn fishermen were issued with log books to record their operations in 1963 and the data that has been collected since that time is now being analysed. These analyses will initially make assessments and predictions of the effects of fishing operations in the Shark Bay fishery to the present time, but will later include the whole of the prawn fisheries of Western Australia.

Thus this system of data collecting is now being extended to other areas in Northern Australia so that this similar assessment can also be made. Because of the value of log book data that has

been collected computer analyses are now being developed and carried out. For example, in 1968 over eighteen thousand individual records were collected in Shark Bay alone.

The Automatic Data Processing section of the Treasury Department has designed a computer analysis system which will provide monthly summaries of fishing operations in each area of the West Australian coast within one week of the end of each month. These summaries will give the catch of prawns taken, the amount of fishing that has been carried out and estimates of the density of prawns in the particular areas.

This type of data obviously doesn't give the whole of the answers necessary for management and specialized programmes have to be undertaken to solve problems that cannot be solved from log book data. One such problem is on breeding and on juvenile life of the prawns. Information on this aspect of prawn biology is necessary so that natural variations in abundance from year to year can be differentiated from variations in abundance caused by the fishery operations themselves. This programme of prawn breeding biology is being carried out in Shark Bay and it entails the study of prawns in the processing factories and of the juveniles that live on the shallow banks that border the waters of Shark Bay (called Nursery areas).

To date we have found that juvenile prawns about $\frac{1}{2}$ " long enter these nursery areas remaining there for about 6 weeks during which time they grow to about $1\frac{1}{2}$ " long and then move out towards the fishing ground. They mostly enter and leave the nursery areas by deep channels that dissect the nursery area banks. Prawns complete their life history within one year.

Also we need to know how fast adult prawns migrate from area to area so that we can tell whether any changes in abundance are due to the effects of fishing or to prawns migrating in or out of a particular fishing ground. Tagging experiments carried out in 1965, 1966 and 1968 have shown that they move about 2 to $2\frac{1}{2}$ miles per week over the fishing grounds."

WELCOME TO NEW STAFF

The Department welcomes Arthur Jenkins, Michael John, Pam Van den Dries and Janet Huggins to the Head Office staff.

RABBIT PROBLEM ON CARNAC ISLAND

Research workers under the direction of Dr. A.A. Burbidge have been attempting to combat the rabbit problem on Carnac Island.

During November last year, Mr. T. Evans, Mr. D. Mell and Mr. J. Lane accompanied Dr. Burbidge to the island aboard the P.V. "Vlaming".

From 8 to 11 p.m. attempts were made to capture rabbits using spotlights and hand nets. Many rabbits were seen but none were caught as they were all very wary and entered burrows immediately after being spotted.

From 4 to 7 a.m. the next day attempts were made to run down the rabbits in daylight but this method also failed.

The rabbit population on the island was large and appeared to be on the increase. There were a large number of burrows mainly on the northern side of the island. It is feared that the high rabbit density could easily interfere with the nesting of mutton birds and fairy penguins.

Another trip to the island was made during December and different trapping methods were employed.

At 10 a.m. 22 rabbit traps were laid in warren entrances. The traps were visited and shifted during the day and through the following night until 12 midnight and again at 6 a.m. and 9 a.m. A total of eight rabbits were captured and infected with Glenfield strain Myxomatosis.

No rabbits were caught during the first daylight hours; most were caught at dusk, during the night, and at dawn.

The rabbits were spread throughout the island and burrows could be found anywhere where there was enough soil. A fair amount of erosion had taken place due to the burrowing.

Myxomatosis would seem to be the only practicable way of controlling the rabbit population on the island since poisoning methods would harm the indigenous fauna. The situation is aggravated by the presence of two species of burrowing birds, the fairy penguin and the wedge-tailed shearwater.

A squatter's shack on the island had been rebuilt since the last visit. It was destroyed, the wood burned and the metal dropped out to sea. Cooking fires had been lit and snares were found on the island.

New Tuna Vessel

The first boat designed and built in Western Australia for tuna fishing was launched at Fremantle in December.

The 60ft. steel, diesel-power boat was built by Van Giels Ship Builders Pty. Ltd., of Rockingham, for Poole Fisheries.

It cost about \$100,000.

Brothers Wilf and Bill Poole will use the boat for tuna pole fishing, operating from Albany initially.

Bait will be kept alive in tanks and the boat will hold between 35 and 40 tons of tuna.

The boat can be adapted for purse seine nets and for prawn and fish trawling.

The Poole brothers were among the pioneers of prawning in W.A. and landed commercial quantities of tuna from their last boat, the Bluefin.

* * * * *

Car Breakdown Causes

The American Automobile Association reports that during 1967 battery, starter and ignition system failures increased 20% as a cause of car breakdowns. Such failures represented 43% of the total 71,547,000 motoring troubles in the United States last year.

Motorists experienced 14 million flat tyres last year. While ranking No. 2 on the list of car troubles - and 20% of the total - the number of flat tyres decreased 5.9% from 1966.

Third in the line of auto problems, but down by 28.6%, were the 11.5 million cars that were either stuck in snow or mud, or had breakdowns so serious that they had to be towed to a garage.

* * * * *

THE FLYING FISH'S EYE

How flying fish are able to see during their long glides across the surface of the water has long been an interesting problem to students of vision. That they can see has been confirmed by observations of airborne fish, which seem to select landing sites, usually floating patches of sargassum weed. However, a fish, or indeed any higher animal, can see only when light is focussed on its retina. This is partially affected by its lens, and a lens will only focus - that is, bend light - when suspended in a medium with essentially different optical properties from itself. The lens of a fish in air will bend light too sharply, and vision will be impaired; the lens of a man in water will not bend light sharply enough, with the same result.

The flying fish, however, makes the best of both worlds. Its cornea is not spherical, as in other fish, but is shaped like a three-sided pyramid. The optical properties of the cornea are the same as those of water; when submerged it does not bend light and the fish sees normally with its water-adapted lens. In air this cornea is able to correct for the thinner medium; the flying fish views the world through flat windows - forwards, downwards and rearwards.

* * * * *

BAG LIMIT - WILD DUCKS

The active assistance of wardens and inspectors in enforcing the bag limit regulation on Wild Ducks would be appreciated. Breaches by any person, regardless of his employment or status, will be prosecuted if sufficient evidence can be obtained.

It should be remembered, however, that mere possession of more than 15 ducks may not in itself constitute sufficient evidence that a breach has been committed. Close attention will need to be paid to extracting admissions or other evidence that more than 15 ducks were actually taken in any one day by one or more persons.

* * * * *

CRESTED GREBES OBSERVED

About 30 to 40 rare Crested Grebes were sighted on Mr. W.R. Wedge's property, Wooka Wooka, Dandaragan, twelve miles west of Caro Swamps by Mr. H.J. Horton. This is about as far north as they have been seen.

Set out below is an extract from *Birds of Western Australia* by Serventy and Whittell:

CRESTED GREBE

(*Podiceps cristatus*)

Native names: Ka-lee, Kali (Perth)

Upper brown, with a white band in the short wing; under parts a gleaming white. Around the head is a striking adornment, consisting of elongated feathers, chestnut at the base and black at the tip, forming an erect ruff or "tippet". Iris, red; beak, dark horn colour; legs, dark olive-green, with pale yellow soles to the feet. Length, 20 in. Weight 1 lb.

Distribution: This grebe is confined to the South-West corner, from Gingin to Bremer Bay. It has been reported at Lake Matilda.

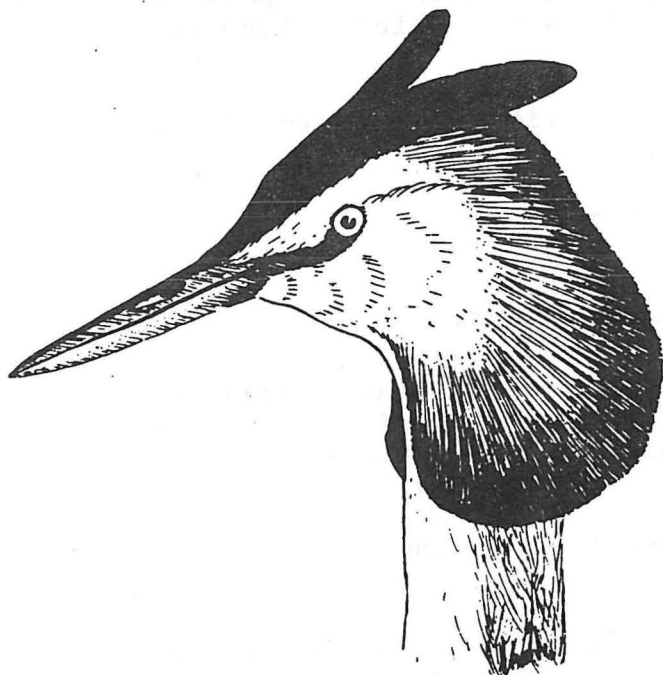


Fig. 18.—Crested Grebe.

Nesting: A nest at Lake Jandakot in December 1941 (K.G. Buller) was approximately 50 yards from the edge of the lake, and was a platform of rushes and other aquatic plants interlaced one over the other. A quantity of mud assisted to stabilise the nest. At the back of the nest was a depression, intended, presumably, for one of the birds to rest on when not engaged in incubation. The nest was about 4 feet in circumference and was entirely independent of standing rushes, but pieces of broken rushes and other

debris formed a link with the standing rushes and prevented its drifting away. In it were 5, nest-stained, incubated eggs. The eggs are actually a glossy greenish-white but that colour is obscured by a dull white limy coating which soon becomes stained and dark in colour as incubation proceeds. Size, 50-52 x 34-36 mm. As with other members of the genus, the eggs are elliptical in shape.

The Crested Glebe is definitely an uncommon species, but individuals appear from time to time on reservoirs and larger bodies of water, including brackish estuaries. At Wilson's Inlet, Denmark, we have seen them more regularly than anywhere else. In diving, the bird remains submerged from 22 to 28 seconds (Cooloongup Lake, Rockingham).

* * * * *

NOTICE TO FIELD STAFF

All Fauna Wardens are reminded that if they visit Perth for any reason other than approved leave they must report to the Senior Warden on arrival.

Similar conditions apply to inspectorial staff who must report to the Supervising Inspector.

In the absence of the Senior Warden or the Supervising Inspector, officers are to report to the Chief Warden or the Chief Inspector.

Failure to report will be considered as leave without pay.

* * * * *

MORE ROOM FOR FISHING

Anglers who use the Mandurah traffic bridge will get more elbow room as a result of an improvement scheme to be carried out by the Mandurah Shire Council with financial help from the Tourist Development Authority.

The council plans to extend the fishing platforms beneath the bridge at a cost of \$4,010.

The T.D.A. will contribute \$2,763 towards the cost.

* * * * *

**** SPECIAL LIFT-OUT SUPPLEMENT ****

*(Extract from Western Australian Industrial
Gazette of 17th April, 1968)*

**State Public Service.
PUBLIC SERVICE ALLOWANCES (MOTOR CAR
HIRE) AGREEMENT, 1968.**

Agreement No. 4 of 1968.

THIS agreement, made pursuant to the provisions of the Public Service Arbitration Act, 1966, of Western Australia this 1st day of April, 1968, between the Civil Service Association of Western Australia Incorporated (hereinafter referred to as the Association) of the one part and the Public Service Commissioner (hereinafter referred to as the Commissioner) of the other part, witnesseth that the parties hereto mutually covenant and agree the one with the other as follows:—

1.—Title.

This agreement shall be known as the Public Service Allowances (Motor Car Hire) Agreement, No. 4 of 1968.

2.—Scope.

This agreement shall apply to all officers and temporary employees employed under the provisions of the Public Service Act, 1904-1967, whose offices are not included in the Special Division of the Public Service.

3.—Arrangement.

1. Title.
2. Scope.
3. Arrangement.
4. Definitions.
5. Payment of Hire for Use of Officer's Own Vehicle.
6. Special Conditions.
7. Copies of Agreement.
8. Term of Agreement.

4.—Definitions.

In this agreement the following expressions shall, unless the contrary intention appears, have the meaning hereby respectively applied to them, namely:—

“Metropolitan Area” means that area within a radius of thirty (30) miles from the Perth Railway Station.

“South-West Land Division” means the South-West Land Division as defined by section 28 of the Land Act, 1933-1965, excluding the area contained within the metropolitan area.

“Other Areas” means that area of the State of Western Australia south of 26 degrees south latitude, excluding the metropolitan area and the South-West Land Division.

5.—Payment of Hire for Use of Officer's Own Vehicle.

(a) An officer who is required to maintain a motor car for use when travelling on official business and who is not in receipt of an allowance provided under subclause (b) shall, for journeys approved by the permanent head, be paid hire for such vehicle to cover all expenses in connection therewith, in accordance with the rates set out in the schedule hereto.

(b) The Commissioner may authorise a computed amount for the hire of motor vehicles or any other conveyance belonging to an officer.

(c) Where an officer in the course of a journey travels through two or more of the separate areas, payment of hire at the rates prescribed by sub-clause (a) shall be made at the appropriate rate applicable to each of the separate areas traversed.

(d) The Commissioner may increase the rates prescribed by this clause in any case in which he is satisfied that they are inadequate.

(e) A year for the purpose of this clause shall commence on the first day of July and end on the thirtieth day of June next following.

Schedule.

RATES OF HIRE FOR USE OF OFFICER'S OWN VEHICLE ON OFFICIAL BUSINESS.

Cents per Mile.

1. South of 26 Degrees South Latitude.

Area and Details.	Engine Displacement (in cubic centimetres)	
	Over 1,600cc.	1,600cc. and under
Mileage travelled each year on official business:		
Metropolitan Area—		
1-5,000 miles	10.5	8.7
over 5,000 miles	6.5	5.3
S.W. Land Division—		
1-5,000 miles	11.7	9.7
over 5,000 miles	7.9	6.4
Other Areas—		
1-5,000 miles	12.5	10.5
over 5,000 miles	8.7	7.0

2. North of 26 Degrees South Latitude.

Mileage travelled each year on official business:	Between 26° and 22°	North of 22°
	1-5,000 miles	13.0
over 5,000 miles	9.2	11.3

6.—Special Conditions.

An officer, who in accordance with the preceding clause is entitled to receive a rate of hire applicable to motor cars of 1,600cc. and under, but on the date immediately prior to the coming into operation of this Agreement maintained a motor car for which he was in receipt of a rate prescribed by Clause 15 of the Public Service Allowances Agreement, 1961 for motor vehicles of over 12 h.p., shall continue to be reimbursed the rates payable under the aforesaid Clause 15 until the 31st December, 1968 in respect of such motor car, or the date on which he ceases to use the motor car on official business if prior to the 31st December, 1968.

7.—Copies of Agreement.

Every officer shall be entitled to have access to a copy of this Agreement. Sufficient copies shall be available in each Department for this purpose.

8.—Term of Agreement.

This agreement shall operate as from and including the 1st April, 1968 and shall remain in force for a period of three years from that date, provided that either of the parties may after the 1st April, 1969, negotiate with the other party to amend or add to this agreement or approach the Arbitrator for an amendment to this agreement.

ance shall be deemed to be a dispute or disagreement within the meaning of section 11 (1) (f) of the Public Service Arbitration Act, 1966.

(c) Where a Relieving Officer classified above the automatic range acts in an office classified one class higher than his own for a continuous period exceeding four weeks, he shall be paid higher duties allowance as prescribed in subclause (a) for all that part of such period in excess of four weeks.

(d) Where a Relieving Officer classified above the automatic range acts in an office classified two or more classes higher than his own, he shall be paid higher duties allowances as prescribed in subclause (a).

(e) Where an incremental range of salaries is allocated to an office, an officer acting in that office shall in due time be entitled to receive an increase in higher duties allowance equivalent to the annual increment he would have received had he been permanently appointed to such higher office.

(f) Where an officer who has been paid an increased higher duties allowance in accordance with the preceding subclause is further required to act in the same office within a period of twelve months from the date he last acted therein, he shall be paid an allowance at the rate received when last acting in that office.

(g) Where an officer who has qualified for payment of higher duties allowance under this clause is required to act in another office or other offices classified higher than his own for periods of less than two weeks duration and without any break occurring in acting service, he shall be paid higher duties allowance in respect of such further period or periods of so acting: Provided that payment shall be made at the highest rate the officer has been paid during his term of continuous acting or at the rate applicable to the office in which he is currently acting—whichever is the less.

(h) Where an officer who is directed to act in an office classified one class higher than his own has during the preceding eighteen months completed an aggregate of twelve months acting service with allowances as prescribed by this clause in offices of the same classification as or higher classification than the office in which he is so directed to act, the allowance payable shall be increased by the increment that would be paid to a permanent appointee of that office in his second year of service therein.

(i) Where an officer who has been in receipt of an allowance granted under this clause for a continuous period of twelve months or more proceeds on—

(i) a period of normal annual leave, or

(ii) a period of any other approved leave of absence of not more than three weeks duration—

he shall continue to receive such allowance if he resumes after such leave in the office in respect of which he was paid such allowance: Provided that this subclause shall apply to an officer who has been in receipt of an allowance for a period of less than twelve months if, during his absence, no other officer acts in the higher office.

(j) Where an officer who is in receipt of an allowance granted under this clause proceeds on—

(i) a period of annual leave in excess of the normal, or

(ii) a period of any other approved leave of absence of more than three weeks duration—

he shall not be entitled to receive payment of such allowance for the whole or any part of the period of such leave.

(k) No officer under the age of 21 years shall be permitted to relieve or act in an office classified higher than his own without the prior approval of the Commissioner.

5.—Copies of Award.

Every officer shall be entitled to have access to a copy of this award. Sufficient copies shall be available in each Department for this purpose.

6.—Term of Award.

This award shall operate as from and including the eleventh day of March, 1968 and shall remain in force for a period of three years from that date, provided that either of the parties may after the tenth day of March, 1969, make application in accordance with the provisions of the Public Service Arbitration Act, 1966, for variation of this award.

Dated at Perth this eleventh day of March, 1968.

[L.S.]

(Sgd) H. G. SMITH,
Public Service Arbitrator.

In witness whereof the parties hereunto set their hands and seals the day and year first before written,

Signed by the Public Service
Commissioner of Western
Australia in the presence
of—

J. B. CROOKS.

R. H. DOIG.

The Common Seal of the
Civil Service Association of
Western Australia Incorporated
was hereunto
affixed in the presence of—

J. R. FLETCHER,
Trustee.

B. E. CORBOY,
Trustee.

B. J. COLLIER,
General Secretary.

[L.S.]

Western Australia.

PUBLIC SERVICE ARBITRATION ACT, 1966.
Proceedings Before the Public Service Arbitrator.
No. 4 of 1967.

IN the matter of Government Officers who are public service officers or temporary employees under and within the meaning of the Public Service Act, 1904-1967, and the Public Service Commissioner, and in the matter of a claim made by The Civil Service Association of Western Australia Incorporated concerning higher duties allowance to be paid to Government Officers in addition to salary and the circumstances in which such higher duties allowance shall be payable.

Having heard and considered the above claim and having determined the same in accordance with Section 15 (4) of the Public Service Arbitration Act, the Public Service Arbitrator, pursuant to Section 24 of the said Act, hereby makes the following Award:—

PUBLIC SERVICE ALLOWANCES (HIGHER DUTIES) AWARD, 1968, Award No. 5.

1.—Title.

This award shall be known as the Public Service Allowances (Higher Duties) Award, 1968, Award No 5.

2.—Scope.

This award shall apply to all officers and temporary employees employed under the provisions of the Public Service Act, 1904-1967, whose offices are not included in the Special Division of the Public Service.

3.—Arrangement.

- (1). Title.
- (2). Scope.
- (3). Arrangement.
- (4). Higher Duties Allowance.
- (5). Copies of Award.
- (6). Term of Award.

4.—Higher Duties Allowance.

(a) An officer other than one classified as a Relieving Officer above the automatic range, who is directed by the permanent head or duly authorised senior officer to act in an office which is classified higher than his own and who performs the full duties and accepts the full responsibility of the higher office for a continuous period of two weeks or more, shall, subject to the provisions of the award, be paid an allowance equal to the difference between his own salary and the salary he would receive if he were permanently appointed to the office in which he is so directed to act.

(b) Where the full duties of a higher office are temporarily performed by two or more officers they shall each be paid an allowance as determined by the Commissioner: Provided that a dispute or disagreement as to the amount of any such allow-

FISHING NET RESTRICTIONS

[Extract from Government Gazette (No. 58) of
3rd July, 1964.]

Fisheries Act, 1905-1962.

PROCLAMATION

WESTERN AUSTRALIA, } By His Excellency The Honourable Sir John
TO WIT, } Patrick Dwyer, Knight Commander of the Most
JOHN PATRICK DWYER, } Distinguished Order of Saint Michael and
Lieutenant-Governor. } Saint George, Lieutenant-Governor in and over
[L.S.] } the State of Western Australia and its De-
} pendencies in the Commonwealth of Australia.

File No. 202/46, Ex. Co. No. 1268.

IN pursuance of the provisions of section 10 of the Fisheries Act, 1905-1962, I, the Lieutenant-Governor of the State of Western Australia, by and with the advice and consent of the Executive Council, do hereby prohibit all persons from taking any fish whatsoever by means of fishing nets in any of the portions of Western Australian waters specified in the first schedule hereto for a term of five years from the 1st July, 1964, and from any portions of Western Australian waters specified in the second schedule hereto from 1st August, 1964, to 31st December, 1964, and from 1st January to 30th April and 1st August to 31st December in each of the years 1965, 1966, 1967 and 1968 and from 1st January to 30th April, 1969, all dates inclusive.

Schedule 1.

That portion of the Indian Ocean, including Parakeet, Geordie, Longreach and Thompson Bays bounded by lines starting from North Point on Rottnest Island, and extending north 40 chains; thence east 153 chains; thence south-east 135 chains; thence south-west about 40 chains to Phillip Point, and thence generally north-westerly and westerly along the high water mark of the said island to the starting point.

Schedule 2.

That portion of the Indian Ocean within the sea limits of half a mile of the foreshore of Rottnest Island bounded by lines starting from Phillip Point and extending east 40 chains; thence south-west, north-west, west, south-west, west, north; thence in a north-easterly direction to a point 40 chains north of North Point and thence south to the foreshore at North Point.

Given under my hand and the Public Seal of the said State at Perth, this 19th day of June, 1964.

By His Excellency's Command,

ROSS HUTCHINSON,
Minister for Fisheries.

GOD SAVE THE QUEEN ! ! !

CRAYFISH GEAR RESTRICTIONS

FISHERIES ACT, 1905.

REGULATIONS

Taking of Crayfish in the Waters Surrounding Rottnest Island.

14C. No person shall—

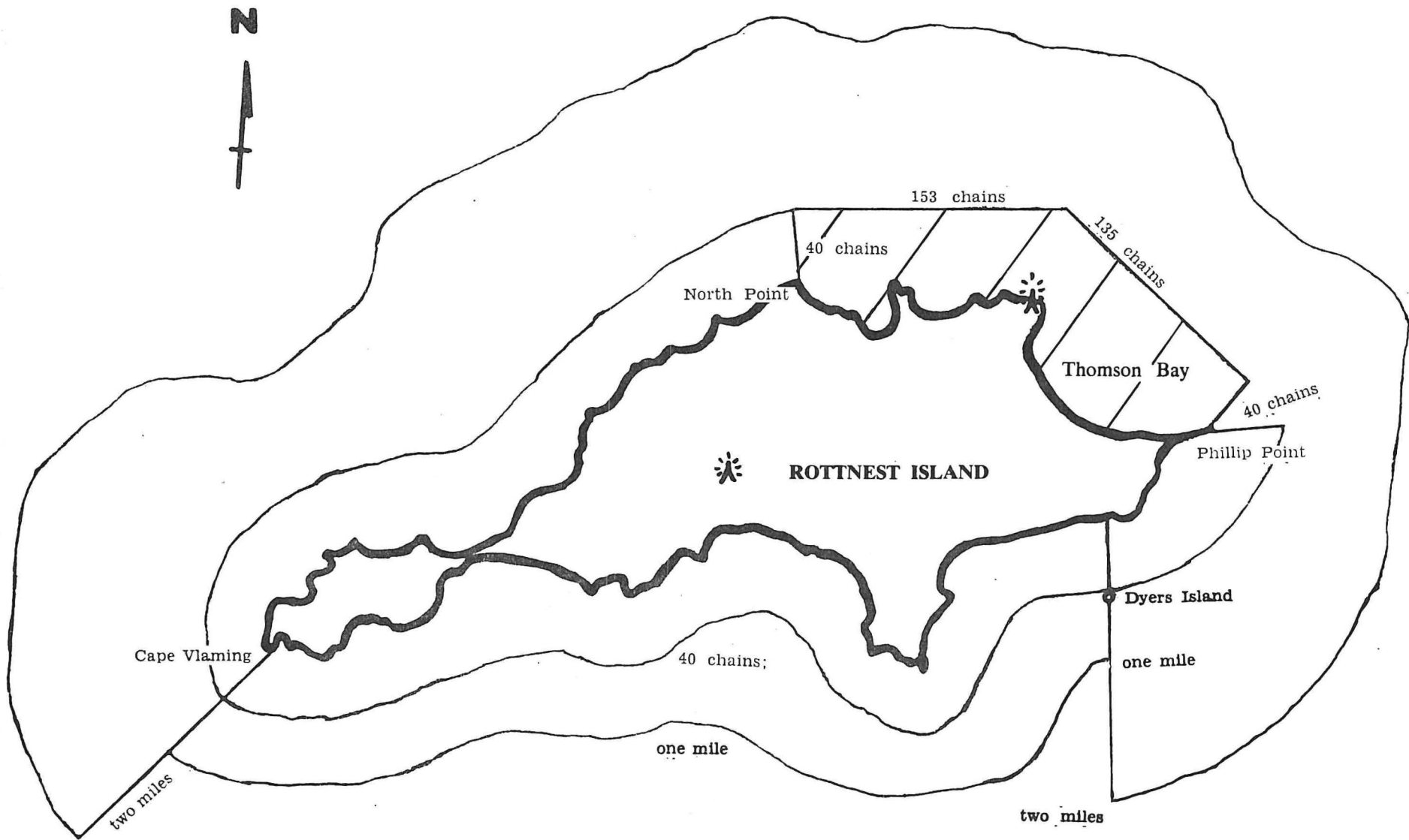
- (i) use; or
- (ii) have or permit to be carried in any boat, whatever the number of persons are in that boat, more than two craypots, or two cribs, or two hoop nets for the taking of crayfish in the waters surrounding Rottnest Island described in the Schedule to this regulation.

Schedule.

(a) All that portion of the Indian Ocean bounded by lines starting from the foreshore of Rottnest Island at Cape Vlaming, the western extremity of that island, and extending south-west two miles; thence generally north-easterly, generally easterly, generally south-easterly and generally south-westerly parallel to and two miles from the northern and eastern foreshore of Rottnest Island aforesaid to a point situate south of the centre of Dyers Island; thence north to the foreshore of Rottnest Island aforesaid; and thence generally north-easterly, generally north-westerly, generally westerly and generally south-westerly along that eastern and northern foreshore to the starting point.

(b) All that portion of the Indian Ocean bounded by lines starting from a point on the foreshore of Rottnest Island situate north of the centre of Dyers Island and extending south one mile; thence generally westerly parallel to and one mile from the southern foreshore of Rottnest Island aforesaid to a point situate south-west from the foreshore at Cape Vlaming; thence north-east to that foreshore; and thence generally easterly along that southern foreshore to the starting point.

(Public Plan Rottnest Island.)



WITTENOOM FAUNA REPORT

Warden Dear has reported in his diary on the 28th January last, he observed 28 Maned Geese on the Hooley River via Wittenoorn.

Also reported on the same date 18 Bustards, on the Fortescue River Flats.

A White-eyed Duck was found by a Miss Ugallini, of Wittenoorn, on the 26th January, and was later released by Warden Dear.

* * * * *

DESTRUCTION OF MAGPIES

Until further notice all wardens are advised NOT to destroy or otherwise "take" magpies or other protected fauna unless they are in possession of a current license which authorizes them to do so.

The Crown Law Department has given an opinion that the Fauna Conservation Act and Regulations do not appear to authorize the past practice of wardens destroying magpies attacking young children.

Until the legal position is amended, therefore, all wardens are hereby relieved of any responsibility for protecting the public from attack by protected fauna.

Inquirers must be advised that magpies are protected and that no one is authorized to destroy them.

* * * * *

Staff Notes

Head Office can now boast of having two Ammerers. Miss Marlene Clayton married Mr. Kurt Ammerer on January 24. Congratulations and best wishes to both Marlene and Kurt.

WRITTEN COMMUNICATIONS

Written communications include memos, prosecution recommendations, investigation reports that have been asked for, requests for equipment, reports on vehicles, general field reports, etc.

They can be communications with other persons in the department either higher, equal, or lower in status than yourself. In a department such as ours with staff spread all over the State, communications are the vital element that make the wheels go round. To be successful a written communication must :-

- (1) arouse the interest of the reader and make it easy for him to absorb the content of your message;
- (2) concentrate on one topic only and provide all the information relevant to that topic but nothing else;
- (3) contain only statements and explanations which you have carefully considered as being important to what you want to say;
- (4) present your recommendation or request in definite terms and feature it in such a way that your reader will not have to guess your purpose;
- (5) use language which is clear and simple and uncluttered by flowery expressions;
- (6) make the reader want to take action.

What Can Go Wrong with Written Communications?

Three main faults :-

- (1) Faults of aim - "I shot an arrow in the air it fell to earth I know not where" - you must have an objective or target.
- (2) Faults of contents - put yourself in reader's place - what do you want him to do for you - make important features stand out.
- (3) Faults of language - ten or twelve years of

formal education have made you all competent in this direction - but simple statements and short sentences are best.

The Features of a Good Written Communication

- (1) Aim - 1.1 Address
 - 1.2 Attention line
 - 1.3 File number
 - 1.4 Subject or topic
 - 1.5 Open with your request or recommendation.
- (2) Content - 2.1 Discussion and conclusion
 - 2.2 Win the interest and co-operation of the reader. Make it easy for him to do something for you.
 - 2.3 Include all important facts, details and reasons.
 - 2.4 Written communication is a tool of administration.
 - 2.5 A good written communication means economic use of time.
 - 2.6 Good written communications lead to good decisions.

Your Approach to Writing

- (1) In your job good written communication is essential.
- (2) Writing well takes no more time and effort than writing badly.
- (3) Communication by writing gives you an opportunity to analyse your own work and find out where you can improve.
- (4) Now you know the technique you can welcome the fact that you are required to communicate on paper and relax and enjoy it.

An Example :-

Department of Hotels and
Wine Saloons,
Kalgoorlie

File 111/68.
December 1, 1968.

The Director,
Department of Hotels and Wine Saloons,
Perth

Attention Chief Inspector
Port and Burgundy Wine Saloon

I recommend that the owner of this saloon be told to have the bar-room floors swept four times a day.

I inspected the premises of the Port and Burgundy Wine Saloon on April 1. There were twenty-nine customers present. The floors were covered in cigarette butts, papers, vomit and spilled wine.

The saloon was filthy.

John Smith.

INSPECTOR

Staff Notes

Four resignations have been accepted by the Department this month. -

Miss Denise Whicker, typist, returned home to Adelaide to marry Mr. Ken Bradley from the Crown Law Department. We wish Denise much happiness for the future.

Telephonist, Miss Mary Jolob, is now travelling the Eastern States on a working holiday.

Fauna Clerk, Mr. Terry Brinkhuis, resigned to take up full time study at the W.A. University. Terry will be taking the Engineering course.

Trevor Nelson, former Fauna Warden, of Wyndham, had to resign to help out in his wife's store.

OFFENCES UNDER FISHERIES ACT AND FAUNA PROTECTION ACT

OFFENDER	D.O.O.	D.O.H.	COURT	OFFENCE	FINE
Allan J.G.	14.9.68	5.2.69	Midland	Taking F.C/S	\$15
Crane D.H.	5.10.68	28.1.69	Pinjarra	Taking F.C/S	\$25
Farmer C.R.	5.10.68	28.1.69	Pinjarra	Taking F.C/S	\$25
La Pegna C.	18.7.68	11.12.68	Perth	U/S Crays	\$100 + \$86
Lovett N.S.	14.9.68			Fauna	With- drawn
Longbottom R.	1.7.68	27.11.68	Bridgetown	U/Sale Fauna	\$20
Magatelli G.	23.8.68	5.12.68	Perth	U/Sale Fauna	\$20
Morton F.H.	25.5.68	5.12.68	Perth	U/Sale Fauna	\$20
Reid D.J.	20.7.68	26.11.68	Busselton	U/Sale Fauna	\$40
Taylor M.	14.9.68			Fauna	With- drawn

Taking F.C/S = Taking Fauna During Closed Season

U/Sale = Unlicensed Sale



Staff Notes

Geoff Hanley will be transferring to Wyndham to fill the vacancy created by the resignation of Trevor Nelson. The Wongan Hills item has been advertised but not yet filled.

Jon Blackman has transferred from the "Flinders" to be a Cadet Inspector.

LIBRARY ACCESSIONS

ADVANCES IN
MARINE BIOLOGY:

Vol. 6, edited by Sir Frederick S. Russell and Sir C.M. Gorge. London and New York Academic Press. 1968.

- (1) Management of fishery resources, by J.A. Gulland and J.E. Carros.
- (2) A general account of the fauna and flora of mangrove swamps and forests in the Indo-Pacific region, by William Macnae.
- (3) Some aspects of the biology of the Chaetognaths, by Elvezio Ghiradelli.

COMMONWEALTH
GOVERNMENT
PRINTER:

Style Manual - for authors and printers of Australian Government publications Canberra. Commonwealth Government Printing Office 1966, 256p. appendices. bibl. figs. glossary pls. (Publicity & Extension Officer).

CUSHING, D.H.

Fisheries biology. A study in population dynamics. Madison, Milwaukee, and London: University of Wisconsin Pr. 1968. 200p.

- Appendix 1. List of symbols and their definitions
Appendix 2. Glossary. figs. graphs refs.

FEDERAL WATER
POLLUTION CONTROL
ADMINISTRATION:

Water quality criteria. Report of the National Technical Advisory Committee to the Secretary of the Interior.

- Section 1. Recreation and Aesthetics
Section 2. Public Water Supplies
Section 3. Fish, Other aquatic life, and wildlife.
Section 4. Agricultural Uses.
Section 5. Industry
Summary and Key Criteria. Washington, D.C. 1968, 234p. figs. refs. tabs.

GARNET, J. Ros.
ed.:

Venomous Australian animals dangerous to man.
Parkville, Victoria, Commonwealth Serum Laboratories 1968, 86p. Chart (classification of Phylum Reptilia).

- HEINROTH, Oskar and Katherina: The birds (English Edition prepared by Michael Cullen)
London Faber 1959. 175p. figs.
- RIDPATH, Paule: Possum Moods. New York. Taplinger Pub. Co. 1966. 72p. photographs.
- RUTGERS, A.: The Care and Breeding of Budgerigars.
London. Blandford Press. 1958. Translated by V. de Made. 22lp. figs. pls (colour tabs.)
- SCOTT, Brian W.: Long-range Planning in American Industry.
U.S.A. American Management Association
288p. appendices. bibl. notes to text.
- POPE, Clifford H.: The reptile world. A natural history of the snakes, lizards, turtles and crocodilians. London. Routledge & Kegan Paul 1956.
- SIMRAD: "Pop" Technique. The echo sounder. Oslo Norway. Simonsen Radio AS. 1967. 28p. ills. (Note: Principles of echo sounding written at popular level. Free on request from publishers)
- TURNER, Rufus P.: Technical report writing. New York, Chicago, San Francisco, Toronto, London. Holt, Rinehart and Winston. 1965. 210p. bibl. ills.
- Appendix 1. Specimen Memorandum Report
Appendix 2. Specimen student report
"Operation of semiconductor diode as a variator" by Guy Dexter, Jr.
- Appendix 3. Specimen Letter Report
Appendix 4. Specimen professional report
"Dynamics environment of the S-IV and S-IVB Saturn Vehicles" by Douglas Missile and Space Systems Division.
- UNITED STATES DEPARTMENT OF AGRICULTURE: Outdoors U.S.A. The Year Book of Agriculture 1967. 90th Congress, 1st Session House Document No. 29. U.S. Government Printing Office. 1967
408p. photos. sketches.

Crayfish Culture

A valuable species of crayfish with big pincers has been saved from extinction by Lithuanian biologists. They have developed an industrial method of crayfish breeding which has already been adopted by several specialised hatcheries.

Fertilised eggs are removed from the female and placed in incubators. From each female up to 90 crayfish are obtained, many more than in natural conditions when the bulk of the eggs perish. In 6 to 10 days the young are released into ponds. This is done late in the spring when the water temperature is 10-15 deg. C.

Specialised hatcheries set up in East Lithuania will release about half a million artificially bred crayfish into rivers and lakes this year.

It is believed that this method of crayfish breeding could be used in all inland reservoirs in Western and Eastern Europe.

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