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LY SERVICE BULLETIN



Vol. XIII, No. 3.

March, 1964

STAFF NOTES

The Director, Mr. A.J. Fraser, returned from annual leave on February 24.

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Relieving Inspector R.M. Crawford also had annual leave last month. He commenced on February 3 and returned on February 27.

* * *

Research Officer R.J. Slack-Smith, who returned from annual leave on February 17, left Perth for Shark Bay on February 25, accompanied by Technical Officer E.H. Barker and Cadet Research Officer R.C.J. Lenanton. Mr. Slack-Smith's stay in Shark Bay will be, initially, for about a week, to recommence work on the prawn research programme. Mr. Lenanton will be returning to Perth with Mr. Slack-Smith so that he may continue his University course. Mr. Barker will be staying for approximately three weeks to carry out sampling in the prawn nursery areas besides interviewing fishermen and distributing log books.

* * *

Mr. B. Goldman has been engaged as temporary assistant to assist Mr. Otto Augustine with the co-operative salmon tagging programme at Albany. Mr. Augustine, who arrived in Perth on February 16, is a technical assistant attached to the C.S.I.R.O. Division of Fisheries and Oceanography.

* * *

PERSONAL PARS

Two visitors from South Australia called during the month. They were Mr. J. Brommell, who was seconded from the Division of Wildlife Research, C.S.I.R.O., to act as scientific adviser to the South Australian Vermin Control Advisory Committee, and Mr. R. Harvey, a prominent representative of that State's farmers' organizations. Having spent about a fortnight with the Agriculture Protection Board, they called to discuss with the Fauna Officer, Mr. H.B. Shugg, aspects of vermin control work in relation to fauna protection and conservation.

* * *

Another visitor during the month was Mr. Chin Phui Kong, Fisheries Officer, Sabah, Malaysia. Mr. Chin arrived in Perth on February 21, after having attended the FAO/IPFC seminar on fisheries development, planning and administration at the Australian National University, Canberra. He left for home on February 26. During his stay in Western Australia he inspected the fisheries at Fremantle as well as those at Bunbury and Mandurah.

ALLOWANCES INCREASE

Following a review of hotel tariffs and agreement with the Civil Service Association, the Public Service Commissioner has advised that the daily rates of reimbursement for travelling, transfer and relieving expenses have been increased from 53/- to 54/- per day on and from January 1, 1964.

LONG SERVICE LEAVE

The Public Service Commissioner has advised that several amendments to long service leave regulations have been proclaimed as from December 24, 1963. The details are set out hereunder for general information:

(1) Initial Entitlements

Where an officer was, immediately prior to being employed in the Public Service, in full-time employment in any other Western Australian State Service or Authority and that employment was continuous with

his service under the Public Service Act, the officer is entitled to three months' long service leave on full pay on either -

- (a) the date on which he would have become entitled to long service leave had he remained employed in the other State Service or Authority;
or
- (b) the date determined in accordance with the Public Service Act,

whichever date is the earlier.

(2) Accumulation of Entitlements

An officer may, with the approval of the Public Service Commissioner, accumulate his long service leave entitlement up to six months or nine months.

In cases where an officer had accumulated at least six months' long service leave on the 5th March, 1948, or had accumulated at least six months' long service leave between the 5th March, 1948 and the 5th March, 1953, the Public Service Commissioner may approve the accumulation of the officer's entitlement, including the long service leave already accumulated, up to a maximum of twelve months.

It is further provided that if an officer reduces his approved accumulated entitlement by taking not less than three months' long service leave, he may again qualify for long service leave up to the approved accumulated entitlement. It should be noted that requests to accumulate long service leave entitlements will be approved only in special circumstances and will be subject to the interests of the Service and the recommendation of the departmental permanent head.

(3) Lump Sum Payments on Death of an Officer

A lump sum payment equivalent to the monetary value of any accrued or pro rata long service leave may be made, in the case of death of an officer, to his estate, unless he is survived by a widow legally dependent on him or other person legally so dependent who is approved by the Treasurer for the purpose.

FAO/IPFC SEMINAR ON FISHERIES DEVELOPMENT
PLANNING AND ADMINISTRATION

The Director (Mr. Fraser) visited Canberra from January 28 to February 14 to participate in this seminar. Besides representatives of Australian Commonwealth instrumentalities, such as C.S.I.R.O. Division of Fisheries and Oceanography and the Fisheries Division of the Department of Primary Industry, the six States as well as the Territory of Papua and New Guinea were with one exception represented by their respective Chief Fisheries Officer (N.S.W. sent along the Senior Biologist).

The other participants came from Ceylon (1 officer), French Polynesia (1), India (3), Japan (1), Korea (2), Malaysia (2), Pakistan (2), The Philippines (2), New Zealand (2), Thailand (1), Hong Kong (1), Guam (2), Samoa (1) and Vietnam (2). The South Pacific Commission was represented too. Mr. A.G. Bollen, Assistant Director, Fisheries Division, Department of Primary Industry, Canberra, was director of the seminar, and Mr. W.F. Doucet, a Food and Agriculture Organization (FAO) field officer in economics at present stationed in Peru, was associate director. FAO was further represented by Mr. Colin Beever, Acting Chief of the Economics Branch of the Fisheries Division, Rome. Mr. J.A. Tubb, Secretary of the Indo-Pacific Fisheries Council (IPFC), Bangkok, Thailand, was also in attendance. Messrs. Beever and Doucet between them presented the bulk of the papers which initiated the discussions.

The seminar, which was held in Bruce Hall, Australian National University, was officially opened by the Minister for Primary Industry (Mr. Adermann). In the course of his remarks the Minister said -

"The enthusiasm shown by Australians in the preparation of this meeting reflects the sincere desire of the Australian people to co-operate closely with South-East Asian countries."

"In respect of fisheries, Australia is proud of its record with the Indo-Pacific Fisheries Council. Australia is a foundation member of the Council. We have sent delegations to all its meetings and acted as hosts on two previous occasions. Furthermore, over the years two Australians, Dr. Kesteven

and Mr. Tubb, who are present today, have been secretaries of the Council and have worked as regional officers in the IPFC area.

"We fully support the aims of the Council in encouraging research and development projects for the better utilization of fisheries resources, and I give you an assurance that Australia will continue fully to support the future activities of the Council."

Each of the two week-ends which fell during the seminar were occupied with field trips. The first was to inspect the Gaden Trout Hatchery at Jindabyne, conducted by the N.S.W. Fisheries Department, and part of the Snowy Mountains Scheme. The other was a visit to Ulladulla, on the N S W coast, to inspect the local fishermen's co-operative. On each occasion the participants were taken by tourist bus.

The seminar's programme included the following subjects, all of which provoked full and free discussion -

A. Survey and Appraisal of Fishing Situations -

- (1) The Nature of Fishery Situations
- (2) The Resources Aspect
- (3) Technological Aspects
- (4) Economic Aspects

B. Objectives of Government Fishery Policies

C. Identification of Opportunities of Fishery Development.

D. Fishery Development Planning

E. Role of Government in Fishery Development

F. Organization of Government Services to Fishing Industries

G. Organization and Management of Research -

- (1) Resources research
- (2) Technological research
- (3) Economics research

H. Selected Government Fishery Activities -

- (1) Improvement of Fishing
- (2) Fishery credit
- (3) Fish marketing
- (4) Fishery co-operatives

I. Examination of Fishery Situations in Participating Countries.

ADDITION TO THE FLEET

An addition to the Department's fleet is "Penaeus", a trailer-mounted 14-foot de Havilland metal boat, powered by a 28 h.p. Johnson outboard motor.

As the name implies, "Penaeus" has been purchased for use in prawn research.

AERIAL PATROL OF ABROLHOS

Last month, for the first time, an aircraft was chartered by the Department to patrol the Abrolhos cray-fishing grounds which are at present closed to fishing.

At a meeting of the Fishermen's Advisory Committee held in Geraldton, in October last, it was resolved to recommend that to police the close season in the Abrolhos Island area, aerial patrols be carried out. As a result of that recommendation, and having regard to recent complaints received by the Department of poaching in the area, the sweep over the Abrolhos was made.

Before sun-up on February 8, a twin-engined plane, with Supervising Inspector J.E. Bramley and Fauna Officer H.B. Shugg aboard, left Perth and flew over the whole of the Abrolhos area. It returned to Perth in under five hours.

During the flight the opportunity was taken to observe coastal waters for possible breaches of the one-mile limit.

Commenting on the patrol, the Minister for Fisheries, Mr. Ross Hutchinson, said -

"Although no one was apprehended on this occasion, we were able to prove that air patrols are an effective method of dealing with the type of poacher reported. They are quick and effective and relatively cheap considering the area that can be covered."

The Abrolhos Island area will open to crayfishing on March 15.

TAGGED CRAYFISH WORTH 5/- LB.

To promote the success of the current crayfish research programme in the Easter and Pelsart Groups of Houtman Abrolhos, fishermen are to be paid 5/- lb. for legal size crayfish recovered with tags attached to their tails. The purpose of the research programme is to obtain information on growth rates and to assess the catch rates.

Two types of tags have been used in the research programme. One, which is inserted between the second and third tail-segments, has a barbed plastic shank with an attached orange coloured plastic streamer, about 1 or 2 inches long, bearing the serial number. The second tag is simply a piece of plastic covered wire which has been wound around the antennae (feelers) of the crayfish. Female crayfish have been tagged with white plastic and male crayfish with blue.

Senior Research Officer, Mr. B.K. Bowen, emphasizes that the whole tail-tagged crayfish, when caught, should be handed to an officer of the Research Section. This is essential as the carapace must be accurately measured to determine what growth has occurred. Fishermen will be paid by cheque, approximately monthly, for tail-tagged crayfish of legal size.

Crayfish recovered with the antennal tags attached are not required by the Department. However, the tags should be removed from the fish and handed to Research Section staff who will be stationed at the Easter and Pelsart Groups for the first few weeks of the season to receive both tail-tagged crayfish and antennal tags. The research vessel "Iancelin" will be stationed in the Easter Group while Technical Officer J.S. Simpson will stay at Basile Island in the Pelsart Group.

Recoveries of tail-tagged crayfish and antennal tags which may be made after the research staff have left the area, should be handed by the fishermen to the skippers of carrier boats who will deliver them to the Geraldton Fishermen's Co-operative where they will be frozen and ultimately collected by research staff.

PEARLSHELL PRODUCTION DECREASING

The production of pearlshell in Western Australia continues to decline. The uncertain overseas market and the high operating costs involved, are having a marked effect on the industry.

The production figures over the last five years, and the number of men and boats engaged in the industry, are on page 41.

SALMON SIGHTED AT HOPETOUN

Assistant Inspector I.L. Cardon, during a recent patrol of the Esperance-Hopetoun area, sighted a school of salmon off the 12-mile beach at Hopetoun. He estimated the weight of the school at fifteen tons and said that it was the largest school of salmon seen in the area for years.

Hopetoun, which has one of the best netting beaches along the south coast, at one time boasted a large salmon fishery with a nearby cannery. However, for some as yet unexplained reason, the salmon schools have for many years avoided the area and, as a result, the cannery closed down. Mr. Cardon's sighting is encouraging for it could be the forerunner of others.

METROPOLITAN NOTES

Crabs

Senior Inspector J.E. Munro reports that crabs have not yet appeared in the Swan River and considers that they are unlikely to do so this season. He attributes their scarcity to the freshness of the water following the floodings caused by late winter rains. Crabs are highly intolerant of fresh water. On the other hand, large crabs are plentiful in both Mandurah and Bunbury waters.

PEARLING STATISTICS

NATIONALITIES ENGAGED

<u>Asiatics:</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
Chinese	76	55	13	6	6
Japanese	128	134	74	68	45
Malays	54	64	56	48	42
Koepangers	15	9	6	4	2
Okinawans	1	-	2	-	-
Ryukuans	3	2	-	-	-
Sub Total	277	264	151	126	95
<u>Other:</u>					
White	17	13	9	10	6
Half Caste	12	11	9	10	2
Aborigines	46	53	18	25	17
TOTAL	352	341	187	171	120

AVERAGE TAKE

	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
Average take per boat (tons)	15.40	18.20	21.05	21.81	18.61
Average take per man (tons)	1.44	1.66	1.91	2.04	2.01

PRODUCTION VALUE

Year	Pearl Shell			Men		Boats
	Production tons	Increase or Decrease %	Value £	No.	Increase or Decrease %	No.
1959	508	- 28.8	286,704	352	- 2.6	33
1960	567	+ 11.6	269,786	341	- 3.1	31
1961	358	- 36.8	155,680	187	- 45.1	17
1962	349	- 2.5	156,074	171	- 8.4	16
1963	242	- 30.6	111,850	120	- 29.8	13

Prawns

As a result of recent hot weather, prawns are now being caught in the Swan in greater quantities, says Mr. Munro. He adds that, besides being more plentiful, they have rapidly increased in size.

Mullet Scarce

A report on the scarcity of "small" fish in the Perth Market has also been made by Mr. Munro. He says that in earlier years, at about this time, it was not unusual to see a hundred boxes of mullet in the market. Latterly, however, six boxes was the maximum he had seen on any one day. Lower temperatures of seawaters, he said, could be a major cause of the shortage.

A FAIR CATCH

An unusual accident was reported recently by a professional fisherman who had commenced netting between Salter's Point and Canning Bridge one evening around 7 30 p.m.

Although his net floats were said to be quite large and plainly visible, a speed boat with a woman water skier in tow crossed his net line. The boat broke clear but the skier fouled the net and the skier became enmeshed. The more she struggled, the more she became entangled, and it was only the fishermen's quick action in unmeshing her that averted a possible tragedy.

NOTES FROM THE NEWS

Pelicans Nest in Peel Inlet

In the last issue of this Bulletin we reported a record of successful nesting of pelicans on a small cay off the southern shores of Peel Inlet and added that a detailed account would appear in this issue.

As this record is of particular ornithological interest, it has since been decided that it should be published in a more widely circulating journal. An illustrated report will, therefore, be submitted for publication in an early issue of the Western Australian Naturalist.

CLEARING HOUSE

ANTIBIOTIC BOOSTS PEARL PRODUCTION

Modern science has come to the aid of Japan's 500-year-old cultured pearl industry - and the result is healthier oysters and bigger and better pearls. Key to increased pearl production is a new technique utilizing the antibiotic Aureomycin chlortetracycline.

Writing in the Japanese journal, Fishery Science Monthly, a scientist on the staff of the Fisheries School of Mie Prefecture in south central Japan described tests extending over four years in which the antibiotic boosted production of top quality pearls by as much as 30 per cent. These are the brilliant "hanadama" or "moon tear" pearls, perfect in shape and without a stain, and which over the past 70 years have been hardly 5 per cent of the total yield, states the author, Mr. Tetsuo Miyauchi.

The special Aureomycin formulation developed by Cyanamid International also led to an important increase in total pearl yield, a decrease in the percentage of valueless blemished pearls, and lowered the "death rate" among weak pearl oysters.

The traditional pearl culture technique begins when the oysters are impregnated with a nucleus resembling a mother-of-pearl bead. A section of membrane from the shell lining - called the mantle piece - is then inserted to prompt the oyster to form a pearl bag to protect the nucleus.

In the new technique, both the oysters and the instruments used to insert the nucleus are dipped in a solution composed of 10 parts Aureomycin to one million parts of sea water. The mantle piece is dyed with 2 per cent mercurochrome solution which has been diluted by sea water containing 20 parts per million of the antibiotic.

Mr. Miyauchi attributed the improved rate of pearl production and the higher quality of pearls harvested from treated oysters to the broad-spectrum action of Aureomycin against bacteria. He decided that bacteria which enter the oyster at the time of impregnation with the nucleus and mantle piece adversely affect pearl formation.

(Fishing News International, London

Oct.- Dec., 1963)

"DICTATING" PRAWN PRICES

The Australian prawning industry is seeking protection by a duty on prawn imports, but a member of the Tariff Council, giving evidence at a recent inquiry, said this request implied an attempt to obtain excessive prices from Australian consumers for inferior grades of prawns.

The witness, Mr. B.H. Evans, said "Statistics indicate bountiful developments of the export market, particularly to Japan and the United States. The prices at which prawns are being exported in uncooked form, though auguring well for the prawn fishing and processing interests in Australia, can do little but suggest a continuing shortage of prawn meat at reasonable prices on the Australian market. In fact, what the industry's request implies is that there should be a continuation of a calculated shortage on the market so that the less acceptable grades may attract excessive prices from the consuming public."

It would appear, writes a Fishing News correspondent, that the request is based on the fact that "Bay" prawners, limited to operation within the Moreton Bay area of New South Wales, are in danger of suffering serious losses because of imports, as they are limited in the size and type of prawn which they can catch. It is apparent, indeed, that difficulties in the industry do not lie with king and tiger prawns but with smaller sizes of bay and school prawns, for the cost of handling, cooking, etc. has five times the weight in the end for small prawns.

An importer, Mr. C.G. Locke, said local prawns, instead of being made immediately available were stored by speculators and sold at times of shortage at inflated prices. "The system of distribution," he said, "is vested in the hands of minor groups who are, and always have been, in a position to dictate prices. Tariff protection will benefit only these minor groups."

(Fishing News

London

December 27, 1963)

FISH ARE NOW MADE TO MEASURE

Rivalry between the United States and the Soviet Union is by no means confined to space research for in the realm of fish technology also they are in keen competition.

Two groups of fisheries experts working completely independently for the two countries have but one aim, the improvement of native fish and the production of types most suitable for consumption.

In the Lerner Marine Laboratory in the Bahamas, professor Howard A. Rusk has been successful in producing a new fish, the salmonides, by crossing salmon and trout. His primary aim was simple, to produce a fish of the dimensions of a salmon but with the much greater production rate of the trout, and after literally thousands of abortive experiments he has at last succeeded.

At the same time, Russian scientists based on the island of Sakhalin were attempting to create a hybrid salmon from two species, the small but very prolific Mesu salmon which is found chiefly in the Indian Ocean, and the much larger fish of lower fecundity caught in the Pacific.

During 18 months attempts to mix these breeds were unsuccessful for, like mules and most hybrids in nature, the resulting fish were sterile. However their attempts were at last successful and by carefully selecting the fish they were able to produce young which, in their turn, were capable of reproducing themselves and still retain the two essential qualities of size and birth-rate.

The flesh of the new salmon is said to be excellent. It attains an average size of 8-10 lb., that is to say nearly three times the size of the small Indian salmon.

(Fishing News

London

December 27, 1963)

CATHODE RAY TUBE IN NEW BAROMETER

A barometer designed on novel principle is being produced by Mechanism Ltd. of Croydon, England, and is being marketed by Vickers Instruments Ltd. It depends on a cathode ray tube instead of mercury to indicate atmospheric pressure.

The barometer is portable and robust, but its main advantage, compared with mercury barometer is its high accuracy, which is such that it is being used to check the accuracy of mercury barometers.

A further advantage is its greater resistance to temperature changes, which makes it suitable for use in a wide variety of climatic conditions. To facilitate its use in extreme and very variable temperatures, a temperature correction graph is provided with each instrument.

The diaphragm capsule is designed to provide a high degree of stability over long periods.

The movement of the diaphragm in relation to the atmospheric pressure is detected by a micrometer and is indicated by a miniature cathode ray tuning indicator operated by small dry batteries. The micrometer spindle is connected through a precision gearbox to a five-figure digital counter to indicate the atmospheric pressure.

It is possible to detect pressure changes under stable conditions of as little as 0.02 millibars. The range is 800 to 1,050 millibars, calibrated to give an accuracy at room temperature (20 degrees Centigrade - 68 degrees Fahrenheit) of plus or minus 0.4 millibars.

(Shipping News 2nd Capetown December, 1963)
Fishing Industry Review)

TUNA RECORD

The eight-man fishing crew of the Degei made a record catch of tuna off Eden one day last month.

In five hours, the crew caught 80 tons of tuna worth above £4,500. The previous Australian record was 55 tons, taken two seasons ago by the Estelle Star.

(Fish Trades Review Sydney January, 1964)

PRAWN EXPORTS

Australia is shipping prawns to Japan again after a break of several months.

New price is 8/8 lb f.o.b. compared to 11/- lb f.o.b. which was paid previously.

(Fish Trades Review Sydney January, 1964)