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DEPARTMENT OF PARKS AND WILDLIFE

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STAFF NOTES

The Senior Research Officer, Mr. B.K. Bowen, will commence one week's annual leave on May 11.

Two of our Head Office staff commenced annual leave during the month. They were Mr. H.B. Byleveld, on April 6, and Mr. P.G. Yewers, on April 27.

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We welcome to Head Office staff Miss M.P. Eadie who commenced duty on April 28. Miss Eadie occupies the position of senior typiste, formerly held by Miss J.M. Reid who resigned from the service on April 24.

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Several staff movements will take place during the month. They include the transfer of Inspector A.V. Green from Geraldton to Perth, Inspector B.A. Carmichael from Albany to Geraldton and Inspector D.P. Gordon from Bunbury to Albany. The appointment of an inspector to the Bunbury district, vice Inspector Gordon, will be made shortly. Inspector L.R. Frizzel will leave Perth on May 12, for Shark Bay where he will assist Inspector F.J. Campbell during the prawning season.

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After about 8 years of service as mate of the r.v. "Lancelin", Mr. C.R.C. Haynes has been posted ashore owing to ill health. His title and classification have been amended from Mate, Research Vessel, G-II-1, to General Assistant, G-VII-3. His transfer was effective from April 1, 1964.

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The new office and quarters for the Dongara inspector which are being built at Port Denison are nearing completion. It is anticipated that Inspector D.H. Smith will occupy them later this month.

The r.v. "Lancelin" under the command of her master Mr. C.J. Seabrook, returned to Fremantle from Geraldton on April 10. Since mid-January she has been engaged in the current crayfish research programme in the Abrolhos.

SOUTH COAST TOWNSITES COMMITTEE

For some time the south-coast salmon fishery and its associated canning industry had been threatened by proposals to locate townsites adjacent to recognised salmon netting beaches. As a consequence of different Ministerial representations, Cabinet decided last March to set up a special Committee to investigate the situation and make recommendations in relation to

- (a) the conservation and protection of the fishery and the canning industry,
- (b) the conservation of the Noisy-Scrub-bird,
- (c) what townsites were required, and where they should be located.

The representatives appointed to the committee were: Mr. H.B. Shugg (Fisheries Department) Chairman; Mr. W.A. Hassell (Albany Shire Council); Mr. C.E. Curtis (Albany Town Council); Mr. M.J. Hockley (Denmark Shire Council); Mr. D.K. House (Gnowangerup Shire Council); Mr. R.H. Miller (Tourist Development Authority); Mr. E. Sabin, Mr. R. Taylor (Town Planning Department); Mr. P. Nelligan (Lands Department); Mr. N.K. Swarbrick (South Coast Fishermen); and Mr. R. Hunt (Canning Industry). Mr. B.F. West was seconded from another department as secretary to the committee. Dr. D.L. Serventy, of the Division of Wildlife Research, C.S.I.R.O., and Mr. H.O. Webster, the rediscoverer of the Noisy-scrub bird gave evidence to the committee on the rare fauna of the Two-People Bay area and its conservational needs.

The committee met first in Albany on the morning of April 6. That afternoon and the following day they were led by Inspector B.A. Carmichael, Albany, first to Parry's Inlet and to Cosy Corner and Mutton Bird in Torbay, and then, on April 7, to Hassell (Cheynes) Beach, Waychinicup, Betty's Bay and Two People Bay. The third day was spent in a formal meeting and the adoption of resolutions.

Mr. Shugg commented later that he had been most pleased by the co-operative spirit and constructive attitude displayed by all members. With one minor exception, he said, unanimous recommendations were reached on all the contentious issues involved. He was also pleased to acknowledge, he added, the assistance which Mr. Carmichael rendered before and during the

meetings and during the field inspections. The Committee's resolutions have been submitted to the Minister for Fisheries for consideration.

VISIT BY MR. JAN-OLAF TRAUNG



Mr. Jan-Olaf Traung

Mr. Jan-Olaf Traung, Chief of the Fishing Boat Section of the Fisheries Division, F.A.O., Rome, visited Western Australia from April 2, to April 9. He was accompanied by Mr. A.C. Bogg, Director of Fisheries and Game, Adelaide, who as Chairman of the Fishing Vessel Design Sub-Committee was the prime organiser behind Mr. Traung's visit. Mr. Bogg also attended meetings of the Western Fisheries Research Committee which were held in Perth between April 7 and April 9.

A naval architect since 1940, Mr. Traung has been with F.A.O. since 1950 and has supervised that organisations technical assistance projects in boat, harbour and fisheries engineering fields in many countries of the world. As part of F.A.O.'s continual endeavour to raise nutrition levels and living standards throughout the world, Mr. Traung's main technical activities have been directed towards improving the efficiency of hull shape in an effort to solve the problems of fishing vessels of different sizes which employ varying techniques. He is now directing work to use a digital computer to solve design problems for small boats.



Mr. A. C. Bogg

Mr. Traung's Australian visit was subsidised by a grant from the Fisheries Development Trust Fund following a recommendation to that end by the 1962 Commonwealth-State Fisheries Conference. During his visit to Western Australia, Mr. Traung

was tendered civic receptions at Fremantle and Geraldton where he addressed meetings and inspected sections of the fishing fleet and departmental vessels.

DISTRICT ALLOWANCES REVIEWED

Following a review of district allowances payable under the provisions of the Public Service Allowances Agreement, the district allowance for a married officer residing at Broome has been increased to £225 per annum. Half the appropriate rate is payable in respect of a single officer. The new rate is to apply on and from May 1st, 1963.

The district allowance for the Shark Bay area remains unaltered at £52 per annum.

ANNUAL LEAVE FOR FIELD STAFF

The Public Service Commissioner has agreed that those field officers of this Department who, prior to the recent amendment of the Public Service Act 1904 - 1956 were entitled to three weeks' annual leave, will now be entitled to four weeks' annual leave as from January 1, 1963. The additional week's leave for 1963 must be taken during 1964.

TRAVEL CONCESSIONS NORTH OF 26°

The Public Service Commissioner has determined that as from January 1, 1963 the following uniform travel concessions will apply to officers stationed north of the 26° parallel and who proceed south to either Perth or Geraldton on annual leave.

Mode of Travel to be allowed	Concessions	Travelling Time
(a) Air-officer and family travelling together	Free passes for the whole family	One day each way

Mode of travel to be allowed	Concessions	Travelling Time
(b) Sea-officer and family travelling together	Free passes for the whole family	Actual travelling time
(c) Road-officer and family travelling together by car	Half mileage rates but reimbursement not to exceed return fare for cheapest mode of alternative travel for the whole family	Two days each way
(d) Air and Road-officer travelling by car and the remainder of the family by air	Reimbursement of the actual cost of petrol and oil for car trip by the officer. Free passes for air travel for the remainder of the family	Two days each way
(e) Sea and road-officer travelling by car and the remainder of the family by sea	Reimbursement of the actual cost of petrol and oil for car trip by the officer. Free passes for sea travel for the remainder of family	Two days each way
(f) Sea and Air-officer travelling by air and remainder of the family by sea	Free passes for the whole family	One day each way

The mode of travel selected by an employee must be approved by Head Office before arrangements are finalized.

WESTERN FISHERIES RESEARCH COMMITTEE

The Minister for Fisheries (Hon. Ross Hutchinson, D.F.C., M.L.A.) attended the opening of the fourth meeting of this interstate committee. It was held in Perth on April 7, and 8; under the chairmanship of the Director, Mr. A.J. Fraser. Other members present were Dr. G.L. Kesteven, Assistant Chief (Fisheries) of the Division of Fisheries and Oceanography, C.S.I.R.O., Cronulla, N.S.W; Dr. R.G. Chittleborough of the Division of Fisheries and Oceanography, C.S.I.R.O. (project leader); Dr. A.R. Main, of the Department of Zoology, University of Western Australia; Dr. W.D.L. Ride, Director, Western Australian Museum; Mr. A.C. Bogg, Director of Fisheries and Game, Adelaide; and Mr. C.G. Setter, Assistant Secretary (Fisheries) Department of Primary Industry, Canberra. This Department's Administrative Officer, Mr. B.R. Saville, was Secretary to the committee. Also in attendance as consultants or observers were Dr. G.F. Humphrey, Chief, and Messrs. G.R. Williams and J. Bannister, of the Division of Fisheries and Oceanography, C.S.I.R.O. Cronulla; Dr. R.W. George, of the Western Australian Museum; and Dr. B.W. Logan of the Department of Geology, University of Western Australia. Our Research Branch was represented by Messrs. B.K. Bowen, Senior Research Officer; R.J. Slack-Smith, Research Officer; Captain J.W. White, master of the r.v. "Peron", and Mr. E.H. Barker, Technical Officer.

During the technical sessions, situation reports and papers concerning the following items came before the committee:

Crayfish:

Dr. R.G. Chittleborough presented a report on crayfish in their juvenile stages, outlining the sampling programme carried out from on board H.M.A.S. "Diamantina", between January 28 and February 18, and of the sampling of juvenile crayfish in shallow water near Lancelin and Garden Islands.

A report on stridulating ridge counts and age determination was presented by Dr. R.W. George. Mr. B.K. Bowen presented situation reports on length frequencies and growth rate studies; population and recruitment estimates; survey of Bunbury grounds, and effectiveness of escape gaps in crayfish pots.

A report by Mr. R.M. Taylor on an economic survey of the Western Australian crayfish industry was presented by Mr. C.G. Setter.



MEMBERS OF THE WESTERN FISHERIES RESEARCH COMMITTEE

(L. TO R.) Mr. A. C. Bogg, Director of Fisheries and Game, Adelaide, S.A ; Dr. G. L. Kesteven, Assistant Chief (Fisheries), Division of Fisheries and Oceanography, C.S.I.R.O. Cronulla (N.S.W.) ; Dr. R. G. Chittleborough, Division of Fisheries and Oceanography, C.S.I.R.O., Perth (Project Leader) ; Mr. A. J. Fraser, Director of Fisheries, Perth (Chairman) ; Mr. C. G. Setter, Assistant Secretary (Fisheries), Department of Primary Industry, Canberra, A.C.T ; Dr. W. D. L. Ride, Director, Western Australian Museum, Perth ; Dr. A. R. Main, Department of Zoology, University of Western Australia, Perth ; Mr. B. R. Saville, Administrative Officer, Fisheries Department, Perth (Secretary).

Prawns

Mr. Slack-Smith presented his report on the prawn research programme. It featured population estimates; density and distribution of prawns on the fishing grounds; fishing power estimates; grade category data, and proposed future research.

Australian Salmon

A report by Drs. A.G. Nicholls and W.B. Malcolm on this species in western waters was submitted by Dr. Chittleborough.

Sperm Whales

In his situation report, Dr. Chittleborough said that he had attended a meeting of the Scientific Sub-Committee of the International Whaling Commission held in Seattle, U.S.A. from November 18 to 22, 1963. It had been hoped that scientists from all countries engaged in sperm whaling would have pooled their data. However, no official representatives of Japan, Norway or the U.S.S.R. were present and only limited data was available from operations in other countries. After reviewing the data available, the committee concluded that while it was not yet possible to separate the various stocks of sperm whales and to define their geographic limits, the annual catch should be controlled under quota systems. Dr. Chittleborough also reported on commercial operations in Australia, catch and effort statistics, age determination and aerial surveys.

Mr. C.G. Setter referred to the recent implementation of quotas on sperm whales in Australian waters.

Tuna

A report on tuna tagging by Mr. J.S. Hynd and Dr. D. Vaux, of his division of C.S.I.R.O., was elaborated by Mr. G.R. Williams.

Geological Studies in Shark Bay

A situation report by Dr. B.W. Logan, G.R. Davies and W.E. Cebulski on recent geological studies carried out in Shark Bay was presented by Dr. Logan.

Other

Other papers presented to the committee included marine aquarium studies by Dr. Chittleborough and a background paper by Mr. Bowen on a recent visit by Mr. S.J. Holt.

BUNBURY EFFLUENT NEUTRALIZED

Concern has been expressed in some quarters over the alleged pollution of Bunbury waters by effluent being discharged into the sea at Bunbury from the local titanium works. Fishermen, particularly, were concerned over the possible effect on marine life and the possibility that the effluent would be drawn into the Leschenault Inlet during the winter months. However, although the water is deeply discoloured, the detrimental effect on marine life, is apparently not as serious as was first feared.

Recent tests of the water by officers of the Government Chemical Laboratories, disclosed that the acid effluent containing iron sulphate in solution was completely neutralized by the sea water within a few hundred yards of the discharge pipe. Commenting on the results of the tests, the Director of the Laboratories (Dr. L.W. Samuel) said that neutralization caused precipitation of the iron and most of that substance settled within a short distance of discharge. Within that limited area, he explained, conditions would be unsuitable to marine life. Outside it, however, there was a greater area of water that was visibly discoloured by a small amount of precipitated iron kept in suspension by wind and wave action. It was most unlikely Dr. Samuel concluded, that the small amount of suspended material would be detrimental to marine life.

UNDERSIZE SPERM WHALES

The Minister for Primary Industry, Canberra, has approved of the taking for scientific purposes, of five undersize sperm whales each month by the Cheynes Beach Whaling Company during the 1964 season. The permit for the capture of these whales provides that there can be no carry over of uncaught numbers from month to month and representatives of C.S.I.R.O. must be allowed access to each whale and to remove any biological specimens necessary. The Cheynes Beach Whaling Company will be the sole owner of the products of the whales taken under permit.

CLEARING HOUSE

AUSTRALIANS EATING MORE FISH

Australians are eating more fish than they did a year ago, according to the latest statistics released by the Minister for Primary Industry, Mr. Adermann.

Consumption, per head, for the year ended June 30, 1963, rose to 11 lb. This was about half-a-pound per head more than in 1962 but was still not equal to the 1961 per head consumption of 11.7 lb.

Mr. Adermann also revealed that Australia's total fish catch in 1963 was a record 153.8 million lb. (about 76,900 round tons). He said that in the last eight years the Australian catch had risen from 104.4 million lb. to 153.8 million lb. - an increase of 47 per cent. Shark production in 1962-63 rose to 10.5 million lb. - an increase of 17 per cent over 1961-62. Mr. Adermann said Australian exports of fish in the last eight years had increased by 150 per cent.

Review by Bank

In a recent review by the National Bank of Australia the comparatively small quantity of fish consumed in Australia was the subject of special attention. The bank said that with a greater migrant population and the removal of important restrictions in early 1960, consumption of Australian produced fish - comprising fresh, frozen and canned - had remained remarkably steady over the past seven years.

Imports Rising

Consumption of imports, on the other hand, had fluctuated considerably, but around a rising trend.

The bank said that before 1959-60, about two-fifths of fresh and frozen fish and over two-thirds of canned fish, consumed in Australia was imported. However, more recently, almost one-half of fresh and frozen, and about three-quarters of canned fish, have been supplied through imports. Together with crayfish, prawns, oysters and scallops, which are mostly Australian in origin, total consumption per head in Australia of fisheries products for the past six years is shown in the following table.

<u>Year</u>	<u>Fresh and Frozen</u>	<u>Cured</u>	<u>Canned</u>	<u>Total</u>
(Edible weight in lb per head)				
1956-57	6.0	0.5	2.5	9.0
1957-58	6.0	1.3	2.5	9.8
1958-59	6.2	0.8	2.5	9.5
1959-60	7.4	1.1	2.8	11.3
1960-61	7.3	1.1	3.3	11.7
1961-62	6.9	1.0	2.8	10.7

The Australian fish catch has expanded quite substantially over the past three years, larger catches of tuna, flathead and barracouta being most significant in this trend.

Estimated live weight of fish production was 88.5m lb. in 1961-62, compared with 74.4m lb. in 1958-59. But the strongest and steadiest expansion has occurred within the field of crustaceans and molluscs (i.e. crayfish, prawns, oysters, etc.), most predominantly from crayfish production in which Western Australia is the major producing State.

Estimated gross weight of crayfish for 1961-62 was 28.8 m lb, an increase of more than 50 per cent when compared with the 1956-57 season. Crayfish tails comprised 93 per cent of the value of our exports of the fishing industry during 1962-63, causing a 90 per cent drop in export receipts, although a similar quantity was exported.

While the United States remains the major outlet for Australian crayfish tails, a growing European market, apparent during the past two or three years, may help stabilise prices in the future, the bank said.

An almost tenfold increase in the export of prawns during the 1962-63 year has been announced recently, and this has almost offset the decline in receipts occasioned by the fall in crayfish prices.

Production of Australian canned fish has been steadily growing, but a rise of 51.7 per cent between 1957-58 and 1961-62 was mainly the result of a 45.4 per cent rise during the last year.

The strongest element in this trend has been the consistent increase in tuna canning, which, in 1961-62, was 179 per cent greater in weight than it was in 1957-58.

The major expansionary movement in the foreseeable future will probably be centred on crustaceans and molluscs, owing to the difficulty of expanding the fish catch in Australia very much further, with the possible exception of tuna.

(Fish Trades Review

Sydney

March, 1964)

LONG LINING WOULD NOT PAY

It would not be economical for Australian fishermen to undertake deep sea tuna long-lining on a year-round basis, according to the Minister for Interior, Mr. J.D. Anthony. He said that a recent three-man team from Australia investigated long-lining methods in Japan and the Hawaiian Islands. It had advised against its introduction at present.

The experts believed that the cost-price relationship of the Australian tuna fishing industry would not support the introduction of long-lining methods. There was no doubt that deep sea tuna fishing off the east coast of Australia was a profitable business for Japanese fishermen. However, investigations had shown that it would be impossible for Australian fishermen to operate boats and crews at the low cost operated by their Japanese counterparts.

Mr. Anthony said that the Japanese also received much higher prices for their catches landed. They received about £125 a short ton compared with about £50 a short ton in Australia.

He said that the investigating team had recommended that consideration should be given in Australia towards assisting the development of modified long-line gear and methods suitable for part-time use by Australian fishing vessels.

(Fish Trades Review

Sydney

March, 1964)

MARKET FOR ABALONE

South Australian Fishermen's Co-operative Ltd. (SAFCOL) is looking for skin divers to supply it with abalone following claims that a successful export market exists for this seafood.

The general manager of SAFCOL, Mr. R. Fowler, said a worthwhile new fishing industry could be built up around abalone, a shellfish which abounded around the S.A. coast. Following earlier catches of abalone by skin divers, SAFCOL had developed an overseas market and was in a position to accept any quantity. Skin diving clubs could build up funds by organising parties to collect abalone.

In Colonies

Inquiries should be addressed to Mr. Fowler.

Abalone, also called mutton fish, live in colonies along rocky shores. The Australian coast has one of the greatest concentration of abalone in the world and S.A. is the home of some of the largest species. Abalone steaks are prized as a delicacy in many countries of the world. The managing director of Geosurveys of Australia Ltd. (Mr. R.C. Sprigg) said there were "tons" of abalone to be found off rocky headlands along the Southern Ocean coastline. Abalone had to be prised with a heavy knife from the rocks to which they clung. Any amount of abalone 5 to 9 in. in diameter could be collected by skin divers in 15 to 20 feet of water.

(Fish Trades Review

Sydney

March, 1964)

FISHING IN TROPICAL WATERS

British scientists have concluded that the fishing potential in tropical waters has been overrated. Some 80 per cent of the world's fishing production comes from temperate and cold seas and while tropical fisheries are still under-developed, they have distinct limitations caused by the narrowness of most tropical ocean shelves and a scarcity of feed. Notwithstanding, scientists believe that certain tropical fisheries could be developed to bring spectacular results if properly developed. Biggest tropical fishery at present is tuna but there are signs that this resource is already being over-fished.

(Western Fisheries

Vancouver

February, 1964)

DINKUM GEN ON SNAKEBITE TREATMENT

Thanks to the co-operation of the Commissioner of Public Health, the following notes have been made available for the information of all field staff. The notes originally appeared in the Transactions of the Royal Society of Tropical Medicine and Hygiene, 1962, Volume 56, pages 93-4.

"For many years conflicting recommendations have been made for the first-aid treatment of snake-bite and the subject has been further complicated by contradictory reports from research laboratories on more elaborate methods of treatment.

"Early in 1961, the British Red Cross Society asked the Royal Society of Tropical Medicine and Hygiene for advice on the first-aid treatment of snake-bite in the United Kingdom and overseas. A committee was appointed by the Council to sift the available evidence and draw up simple and precise recommendations for the teaching of first-aid and for the guidance of doctors inexperienced in the treatment of snake-bite.

"The following recommendations have the support of the full Council of the Royal Society of Tropical Medicine and Hygiene.

A. First-Aid for Snake-Bite by Untrained Persons Anywhere in the World

- (1) Kill the snake and handle the dead snake only by the tail. Keep it.
- (2) The commonest symptoms are fright and fear of death. Convincing reassurance is vital at all stages. Death from snake-bite is rare.
- (3) Keep the patient at rest.
- (4) Apply a lightly constricting ligature (use a handkerchief or piece of cloth to occlude veins and lymphatics draining the bitten area - but not the arteries). This must be released for one minute in every thirty.
- (5) Wash the bitten surface with plain water without rubbing.
- (6) Immobilize the bitten part as for a fracture, and if possible keep it in a dependent position.
- (7) Administer analgesics (e.g. aspirin) but not morphia.
- (8) Call a doctor or transfer to hospital (with the dead snake, if available).

B. Medical Treatment

In Areas where Highly Venomous Snakes Exist

The following recommendations are made on the basis that the bite is assumed to have been inflicted by a snake of a venomous species, and that basic medical facilities are available.

By persons who have had some training but are not medically qualified:

In addition to the measures already recommended under "A":-

- (1) Administer 10-30 ml. of specific or polyvalent antivenom by the subcutaneous route, using one or more sites for injection. 1 ml. of 1:1,000 adrenaline should be injected intramuscularly at the same time to lessen the risk of anaphylaxis, and half the dose of adrenaline should be repeated 15 minutes later. The dose of antivenom may be repeated after 4 hours.

Ideally a subcutaneous trial dose of 0.2 ml. antivenom should be given and the patient observed for signs of anaphylaxis for 30 minutes before the therapeutic dose is injected. In practice the time lapse between the bite and the availability of specific treatment is usually so great that the urgency for treatment must override the dangers of anaphylaxis.

When the antivenom is given more than 8 hours after the bite, a trial dose should always be given first, since at this stage the therapeutic value of antivenom is questionable, and it would therefore not be justifiable to run the risk of an anaphylactic reaction.

- (2) Give 30 mg. of prednisolone by mouth or inject 100 mg. hydrocortisone intramuscularly.
- (3) Apply ice bags to the bitten part, but do not immerse the part in ice or ice-cold water.
- (4) Maintain immobilization of the bitten part for up to 3 days.
- (5) Administer an antibiotic, preferably penicillin in large doses, e.g., 1-2 mega units."
