SERVICE BULLETIN

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DEPARTMENT OF FISHERIES AND FAUNA
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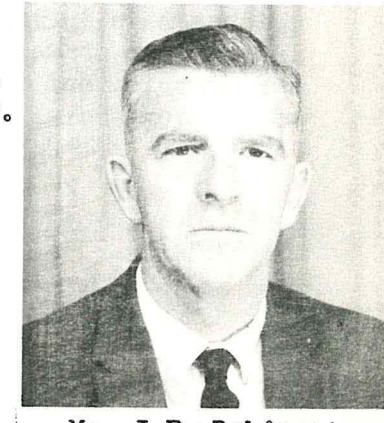
DEPARTMENT OF FISHERIES AND FAUNA

MONTHLY SERVICE BULLETIN

A PRELIMINARY REPORT ON THE SURVEY FOR PRAWNS IN THE NORTH OF WESTERN AUSTRALIA



Mr. J.P. Robins

Since February 17 this year, chartered vessels have been conducting surveys for prawns in the Admiralty Gulf. Vansittart Bay, Napier Broome Bay and in the Joseph Bonaparte Gulf (Medusa Banks). The first three areas have been investigated continuously since mid-February and the Medusa Banks area was investigated for two days only during early March whilst a vessel was on passage to and from port.

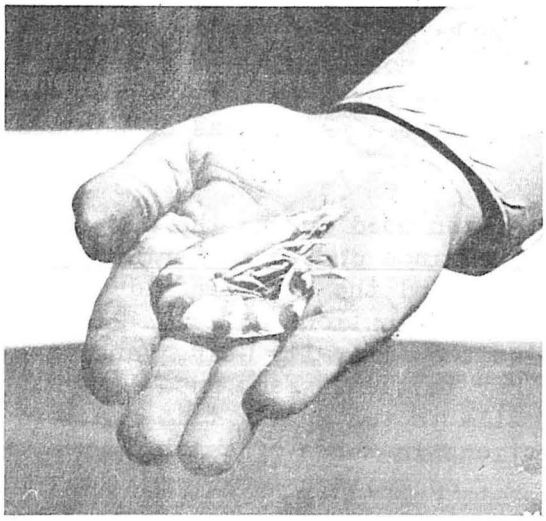
Three vessels have been used during the survey. Two of these vessels have since come off charter - one at the end of February and the other in mid-March. The third vessel commenced operations on March 21 and is continuing to examine the Admiralty Gulf, Vansittart Bay and Napier Broome Bay in turn. Each area is examined for a full tidal phase (i.e. from top spring tide to top spring tide - a period of 14 days). Brief radio reports of operations in terms of catch/hour by species are forwarded to the Department's Head Office twice a week from the vessel.

The commercially acceptable prawn species occurring in these three areas are brown tiger, green tiger, bananas, red-spot king and endeavour. Tigers and bananas are by far the most abundant. Of the two species of tiger prawn, the brown tiger is dominant.

Most hauls have produced prawns but not in large quantities as yet. Hauls of about 100 lbs/per hour are considered to be of commercial significance. To date maximum catch rate for tiger prawns has been 50-60 lbs per/hour, and maximum catch rate for bananas has been 120 lbs per/hour. 80% of the prawns taken to date have been greater in length than $3\frac{1}{2}$" - a commercially acceptable size.

Water temperatures in these areas are still very high 29°-30°C or about 86°F. The difference in temperature between surface and bottom in most depths sampled is about $\frac{1}{2}^{\circ}$C only. Temperatures during May, June and July should drop from the present 86°F to about 78°F because of this, there may be a change in prawn behaviour during this period.

Mr. J.P. Robins, the officer in charge of this development project, has said in his preliminary report to the Minister for Fisheries and Fauna, that at this stage no definite statement can be made regarding the prawn potential of the area. However, the consistent occurrence of tigers and bananas in the three areas being examined is encouraging. Comparison of results of prawn catches made during this period of the year (February to April) with those in the Gulf of Carpentaria during the period when research investigations were carried out there, are favourable, and it was not until May that catches of any commercial significance were first made.



A rainbow prawn from the Admiralty Gulf area.

Commercial prawning operations at Exmouth Gulf.

HYDROGRAPHIC DATA ACQUISITION BUOY

Mr. Ian G. Nicholls in his latest situation report on the Data Acquisition Buoy project says that the temperature sensors are on their way from Cronulla. The depth sensors are working in the laboratory and the salinity sensor is due for completion later this year.

Some problems have arisen over where the prototype telementry section will be built. This may now be built here in Western Australia. The design and specifications have been finalised. Work is proceeding on the programme using a small computer at the Computing Centre. Preliminary testings can begin when the first of the temperature sensors arrive.

The project once completed, will have involved the development of a sonic buoy to collect marine data. A series of such sonic buoys would permit synoptic presentation of hydrological data in a selected area. The suggestion for the development of such a sonic buoy arose from studies in Shark Bay, where geologists studying sedimentation and fisheries scientists studying prawns and whiting require information on water circulation and of the ecological significance of the salinity gradient.

When the Western Fisheries Research committee recommended that a buoy of this nature be developed for this purpose, the Committee emphasized that this equipment could well be used widely in other bays and gulfs in conjunction with surveys of fishing potential.

BRITISH EXPEDITION TO COLLECT BIRDS IN WESTERN AUSTRALIA

The Department has issued a scientific license to members of the 5th Harold Hall Expedition of the British Museum (Natural History). This is the last in a series of expeditions to Australia. Under the terms of the license, the expedition is authorised to take protected fauna for bonafide research and other scientific purposes but not for aviculture or sale. The expedition, led by Major B.D. McDonald Booth, will work in the northern areas of Western Australia and the Northern Territory, these being areas not covered by previous expeditions. Other members of the party are Messrs. D. Freeman, H. Butler, C. Frith, R. Whistler and A. Hillier. Permission has also been granted, by the Minister for Native Welfare, to enter and remain on the Kimberley, the Kalumburu and the Forest River Native Reserves.

This permit was granted on the condition that the expedition has neither contact nor dealings with aborigines unless specifically authorised, nor to interfere in any way with aboriginal art, or artifacts, sacred areas or water resources, nor take any photographs of aborigines or anything to do with aborigines.

Assurance has been given by the leader of the expedition that it will confine activities to the collection of ornithological specimens in accordance with the conditions of the license issued by this Department. In the conditions applicable to the scientific license the Department has ensured that only limited collecting of specimens take place. Species listed as rare and endangered are excluded from material that may be collected. Under the license no fauna is permitted to be taken from any sanctuary nor is fauna to be exported, without the specific written approval of the Chief Warden of Fauna. Members of the expedition must also comply in all respects with the provisions of the Fauna Protection Act and Regulations.

TUNA SURVEY

The twelfth and thirteenth Tuna Observation Flight, in a series of fish spotting surveys were flown between December 8 to December 13, 1967, and February 20 to February 22, 1968 respectively. This now concludes the first series of flights.

Comments

(a) Survey 12 (Fremantle - Lacepede Islands and return)

No sightings of tuna schools were made throughout this survey.
Thirty one small-sized bait schools were sighted between Port Hedland and Geographe Shoals.

Although surface conditions were poor in some areas it is considered that if tuna had been in the area covered then some schools would have been sighted.

The areas covered were almost devoid of marine or bird life usually seen in close association with tuna.

Water colour conditions however were similar to those observed on previous surveys.

In contrast to the widespread occurrence of the phytoplankter, Trichodesmium, in December 1966, the blooms of Trichodesmium in December 1967 were few in number.

Air temperatures at 1500 feet, over the whole sea area searched, were much lower (approx. 15°F) than in December 1966.

Numerous schools of 10-12 lb northern bluefin tuna were reported to have occurred off Onslow during the latter part of November 1967 but had disappeared in early December.

(b) Survey 13 (Fremantle to Nickol Bay and return)

During this survey only 4 small schools of tuna (one off Cape Inscription and three about 20 miles east of Barrow Island) were sighted.

Spotting conditions were again poor due to adverse winds and low cloud associated with the "Inversion" layer.

Five medium-sized schools were sighted close to the reef near Point Cloates.

Again the number of observations on birds, turtles, sea snakes etc., were few.

Water colour conditions were changed considerably from those observed during the previous flight in that no typically blue oceanic water was observed. For the most part the close inshore waters in areas near river mouths were muddy and the colour graded into blue-green and then green-blue offshore.

Very few current lines were observed and those seen were poorly developed.

Trichodesmium sightings were also very few in number.

MORE ON THE BETTONG!

In the May 1968 issue of this Bulletin, there appeared on Page 7, an article on the Bettong, describing the study conducted by Mr. J. Sampson of the Zoology Department, University of Western Australia.

Mr. Sampson would appreciate any information on the present distribution and abundance of bettongs elsewhere in the State. Very few reports on their occurrence and numbers are received so that we do not have a clear picture of their present range and status. They are known also as kangaroo-rats or rat-kangaroos and were once quite common in the South-West. Pockets of them are known to survive in un-cleared land and forest country but further specific information is needed.

PRELIMINARY REPORT ON THE CONDITION OF THE SHARK BAY WHITING FISHERY

Tagging Whiting

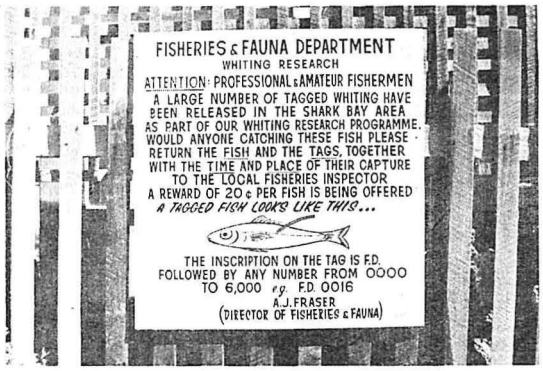
Since the Shark Bay whiting industry commenced in 1941, the number of men and boats engaged therein, and consequently the catch have risen steadily. The catch reached a peak of approximately 460,000 lbs in 1962.

The increase in the number of men and boats from the late 1959's onwards, was mainly due to the influx of Mandurah fishermen into Shark Bay (some permanently - some temporarily i.e. for the winter whiting season only). The decrease in the catch rate experienced from 1962 onward has resulted in them all returning permanently to Mandurah. In 1966 only two permanent and two temporary Mandurah fishermen worked in Shark Bay. By 1967 only one permanent Mandurah fisherman remained. He returned to Mandurah during October 1967.

At the same time one of the leading local fishermen ceased operations permanently. The number of men and boats has now dropped to a level similar to that of 1958 - 1959.

The initial increase in effort (i.e. number of boats fishing on days) resulted mainly from the increase in the number of boats fishing. In recent years, an additional factor which has helped maintain a high level of effort is an increase in the actual time spent at sea by each boat.

In 1966 both the catch and effort decreased. The effort decreased more than the catch resulting in an increase in the catch/effort.



Sign telling fishermen of research project

Collecting data from recaptured tagged fish

Presumably as a result of the influx of Mandurah fishermen the catch/effort fell to a reasonable stable level from 1958-1963. It is suspected that the fall to a lower level from 1964-1967 is a result of the Salt Works closing off valuable nursery areas in early 1963.

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Another substantial nursery area was closed off in August 1967. This may further deplete the fishable stock.

Set-netting or trapping does occur during the early summer months, schools of large fish move along the shallow banks to spawn. Normally these small schools would not be caught but the fact that they are allowed to accumulate in a set net, with little effort expended by the fishermen makes trapping an attractive proposition.

MARRON IN FARM DAMS

The Department is anxious to contact farmers of the South-West who have had success in breeding marron in their farm dams.

A study of Marron is already being undertaken in certain selected dams in a line between Pemberton and Merredin by Departmental research officers. These dams were stocked in early 1967 and while some dams have failed to maintain the stocks others have been more successful and marron have already bred this summer and grown well.

Prior to 1967 many farmers obtained young stocks from the Pemberton Trout Board and it is this group in which the Departmental research officers are most interested.

Farmers who have had success in cultivating marron are asked to forward their names and address to Dr. N. Morrissy, Department of Fisheries and Fauna, 108 Adelaide Terrace, Perth. A research officer will then contact them for further details and perhaps follow up at a later date with an inspection of the dam.

It is hoped that the results of the surveys and future research will aid in determining the conditions responsible for the success or failure of marron planted in farm dams.

The area from which the information is sought comprises all of the South-west of the State from approximately 100 miles north of Perth to east of Merredin and south to Esperance.

* * *

"A man is badly in need of advice when he has many advisers".

- Publilius Syrus.

ROYAL SPOONBILLS SEEN ON WANDERING LAKE

Royal Spoonbill

Honorary Warden of Fauna, Mr. L. Bell, reported to an officer of this Department that he observed four Royal Spoonbills on Wandering Lake. The observation was made during the period April 7 to April 13, 1968.

The Royal Spoonbill (Platalea regia) in its distribution ranges pretty well throughout Western Australia, except in the south-eastern parts of the State. There is however, no definite record of its breeding within the area of Western Australia. This bird is also known as the Black-billed Spoonbill because of its black legs and beak. Otherwise the bird is entirely white. The beak is large and expanded at the end into a wide spoon-shape. Serventy and Whittell in their handbook "Birds of Western Australia" state that these birds feed with a sideways swishing of the bill in shallow water. It stalks its food in swampy areas, and is mainly made up from small fish, aquatic insects and molluscs.

PERSONAL ACCIDENT INSURANCE-FLYING RISK ONLY

The State Government Insurance Office has informed this Department that the full capital sum has been increased to $30,000 for injury or death suffered whilst flying on Departmental business. This applies if disablement or death results within three months of the accident. The full capital sum is paid for either death, permanent total loss of sight of both eyes, loss of two limbs, permanent total loss of sight of one eye and loss of one limb, or permanent total disablement. On total loss of sight of one eye or loss of one limb, half the capital sum is compensated.

* * *

"A mere madness, to live like a wretch and die rich"

R. Burton.

* * *

SACRED KINGFISHER

Mr. D.M. Purchase of the C.S.I.R.O. Division of Wildlife Research Laboratory, Canberra, has recorded a very interesting banding record of the Sacred Kingfisher. The bird was banded as a fledgling on December 31, 1964, near Chain of Ponds in South Australia, by a Mr. M.H. Waterman. It was found alive at Tuart Hill on March 16, 1968, but died two days later. Dr. D.L. Serventy's interpretation of this is, that the bird had gone northwards on its migration and, on its return, either in the first year or last year, had mingled with Western Australian birds and made the southern passage with them.

The Sacred Kingfisher (Halcyon sancto) occurs all over the State, except in the far inland portion. In the south it is found inland to Tammin, Lake Grace, and Norseman, while in the North-West it penetrates along the rivers to their upper reaches frequenting the eucalypt belts.

In the southern portion of the state the Sacred Kingfisher is a migrant, arriving during the first half of September when it insistently reveals its presence by its "ki-ki-ki" note - one of the characteristic sounds of the spring and summer bushlands. In their handbook "Birds of Western Australia", Serventy and Whittell also say that the majority of birds leave again in early March and most have gone by the first week in April, but a few individuals continue to remain behind for the winter; these however, are usually silent. Some of our birds migrate to Timor and adjoining islands of Indonesia.

AUSTRALIAN FAUNA TO BE SHOWN IN FILMS

The Commonwealth Film Unit is at present in the initial stages of research for a series of films on Australian Wildlife. The films will be in colour and will be given a wide distribution at mainly an interested lay audience. Mr. John Shaw, Film Director of the Commonwealth Film Unit has been nominated as Director of the films. Mr. Ronald Strahan, Director of the Taronga Park Zoo, Sydney, has offered his services on general scientific liaision for the films. Before each film is commenced a vast amount of research will be made and the film unit will rely upon specialist knowledge within the field of its coverage. Dr. Tom Spence, Director of the Zoological Gardens, South Perth, has indicated that he would assist in the location of animals and sites suitable for filming.

It is hoped that these films would help the public to a better understanding of our unique fauna and what is actually required to maintain the species still surviving on as wide a distribution pattern as possible.

This could include areas of study on ecological research, survey research, survey research management, habitat, manipulation and reserve management.

Initially the accent will be on mammals, and will include the following species found in Western Australia; the Banded Anteater or Numbat, Bilby or Rabit-eared Bandicoot, Northern Native Cat, Western Native Cat, Scaly - tailed Possum, Central Jerboa Marsupial, Honey Possum and Pigmy Possum.

IT'S A SNAPPER

Whatever you do, don't be snobbish and label snapper by the German variant of "Schnapper". Its correct English name is snapper because it snaps at its food.

First record of snapper in Australia is in Captain Cook's log. He caught them off Cooktown (Qld) and spelled the name correctly in his records.

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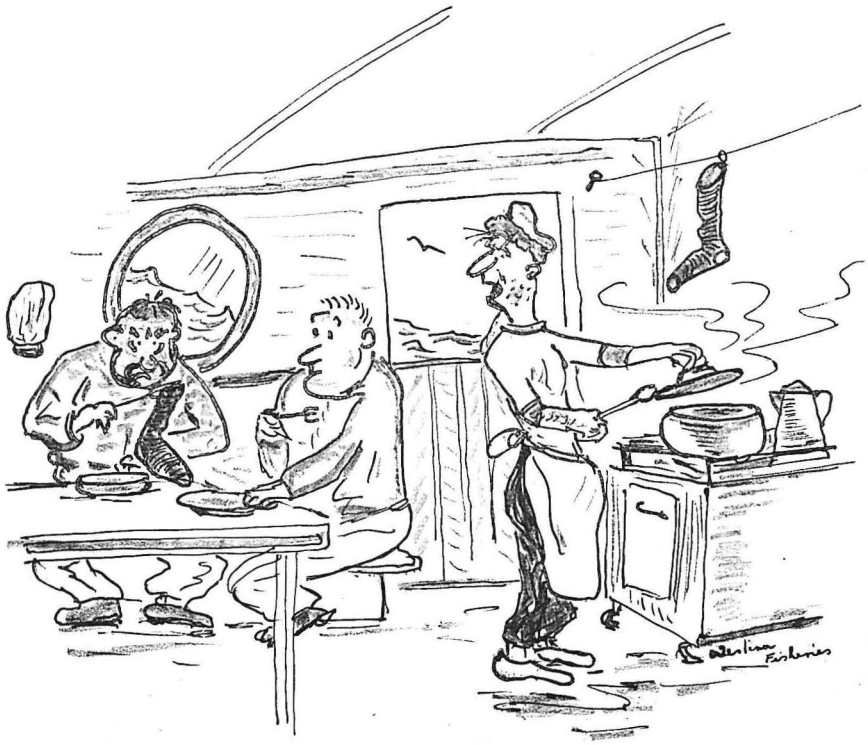

"So that's where me other sock got to!"

PRAWN FISHING ON THE NORTH COAST OF AUSTRALIA

The Minister for Fisheries and Fauna, Mr. G.C. MacKinnon, recently announced that he had received information from the Minister for Primary Industry, Mr. J.D. Anthony, concerning the development of prawn fisheries on the northern coast.

Points which had been elucidated were:

1. Can a fishing boat licensed in Western Australia and by the Commonwealth move into Commonwealth waters off the Northern Territory Coast, i.e. outside the 3 mile limit?

The Commonwealth advised that, in general, the policy would be to avoid restrictions on the activities of vessels solely engaged in fishing. A fishing vessel with valid Western Australian and Commonwealth licenses would thus be able to fish in any area of Commonwealth waters. This, of course, would still be capable of modification in the interests of conservation or if, for any other reason, a particular area was restricted.

2. If it can, is the fishing boat permitted to bring any prawns it may catch back into Western Australia for processing?

The answer to this question was "yes".

3. In respect to 1. and 2. is there any difference if the boat fishes 3 to 12 miles offshore or more than 12 miles offshore?

The Commonwealth advised that the declared fishing zone was introduced to control foreign fishing vessels. This area is not of significance in respect of Australian fishing vessels.

4. Can a mothership move into Commonwealth waters off the Northern Territory either 3 to 12 miles offshore or more than 12 miles offshore? (A mothership being a ship which has catcher boats supplying it.)

The answer to this question is "no, unless licenses were obtained from both States concerned". Motherships would therefore be restricted in area of operation to the proclaimed waters of the State or States for which they had valid licenses.

5. Can processing vessels from the Northern Territory area working under the joint venture, move into waters either 3 to 12 miles off Western Australia or more than 12 miles off the Western Australian coast?

No. The Commonwealth policy is to support the authority of the State over the fishing industry in the interests of good fisheries management and to avoid excessive pressure on the limited facilities available in more remote areas. The Commonwealth is also very anxious to develop a uniform policy in these respects to avoid the difficulties which may otherwise arise near inter-state boundaries.

The Minister added that both the Federal authorities and the Department of Fisheries and Fauna wish to stress that the situation is fluid and that changes in policy cannot be discounted. Local conditions and changing situations might necessitate this.

FISH & WILDLIFE RESEARCHERS ARE UNIQUE!

The Fish and Wildlife researcher has a tough row to hoe. He stands unique among his counterparts in other scientific fields in that his qualifications are not accepted by those he serves - the thousands of fishermen and shooters who are already experts in fish and wildlife management by virtue of the experience they have accumulated with rod and gun.

What fisherman or sportsman, particularly those of Old Timer vintage, doesn't rate himself an expert? He usually has all the answers, or most of them. He's been around for more years than he can remember, he's solved just about every problem and he knows what he's talking about.

His conclusions are pretty well firmed up and no college upstart with specialized training is going to tell him what's right and what's wrong.

A chemist, for example, can make any number of mistakes in his search for a better product. A series of failures is accepted in the trial-and-error process of finding an unknown. He enjoys the privilege of being the sole expert among laymen observers.

Not so the fish and game researcher. His audience is composed of self-styled experts who allow no room for error and who use the slightest miscue as a springboard for denouncing the role of research in fish and wildlife management.

It is important for fishermen and sportsmen to remember first that fish and wildlife management is a science, not a job that any license holder can qualify for or carry out. Secondly, it is important to realize that research biologists are trained specialists in their field. Finally, and perhaps most important, biologists are entitled to make mistakes, as other researchers are, as you and I are.

DO YOU WISH TO IMPROVE YOUR REPORT WRITING?

If you do, then read on.

An attempt has been made to try to keep it as brief as clarity permits.

A few things that can be excluded from your writing include:-

Jargon is the slang terminology within a line of business, unfamiliar to outsiders.

Cliches are hackneyed or overworked phrases "many and varied", each and every one of us".

Archaisma are quaint words and phrases from ancient times. "Whilst awaiting", "Behoves".

Verbiage too many words for efficiency.

Irritants words which irritate the reader and therefore reduce the efficiency of the report.

Formulae in reports, are stock expressions considered part of report writing tradition.

e.g.	Formulated	Natural
	attached hereto	attached
	enclosed herewith	enclosed
	letter under date of	letter of
	letter with regard to	letter about
	cheque in the amount of	cheque for
	during the course of	during
	in the event that	if
	in reference to	about

Cont'd p . 14.

Let's avoid stale expressions!

This will be sufficient to start off with. Other areas of your report writing that will receive attention in future "M.S.B." will include:-

Stereotype expressions
Legal sounding
Obsolete words and phrases
Filler phrases
Impersonal and personal
High pressure expressions
Report layout
"Your" attitude
Tone control.

Basically, it must be remembered, a report is a communication about conditions. It may go outside the Department to other Departments, or clients. Within the Department it will move upward to superiors or downward to subordinates: Horizontally to collegues of the other branches.

INTERSTATE TUNA RECOVERIES

In the Fisheries Field Bulletins No. 70, 71 and 72, issued by the C.S.I.R.O. Division of Fisheries and Oceanography, there are recorded a number of tuna recoveries in waters off New South Wales which were tagged off Albany, Western Australia.

Details available are as follows:

RELEASE				RECOVERY		
Tag No.	Date	Position	LCF CM	Date	Position	LCF CM
2651-2652	22.6.64	Albany	62	13.10.67	40°46's,94°12'E	75
x 10615	13.6.65	"	61	25.12.67	NSW	104
31347	9.6.67	"	68	2.1.68	NSW	74
x 11725	21.6.65	"	62	13. 1.68	6302 (NSW)	96
31878	9.6.67	"	60	21.1.68	7200 (NSW)	71
32190	10.6.67	"	56	21.1.68	G699 (Vic)	74
32371	11.6.67	"	61	30.1.68	C041 (S.A)	71

ENFORCEMENT ACTIVITIES

PROSECUTIONS NOVEMBER 1967-APRIL 1968

NAME	OFFENCE	PLACE OF HEARING	DATE OF HEARING	FINE
Andrich A.	Excess Pots	Fremantle	11.3.68	$50
Annandale H.	U/S Marron	Collie	26.3.68	$20
Bevan C.	Possession U/S fish	Harvey	24.4.68	$25
Cullen T.	Taking Marron out of season	Collie	26.3.68	$50
Elsden M.	Netting-Closed Waters	Perth	16.2.68	$20
Halden C.	Taking U/S Marron	Collie	26.3.68	$20
Magill L.	U/S Marron	Collie	26.3.68	$20
Mitchell G.	No Number on boat	Albany	1.2.68	$20
McMahon J.	Possession-Cray Flesh	Perth	8.12.67	$250
Parkinson R.	Taking Protected fauna	Midland	3.4.68	$9
Payne H.	" " "	Northam	22.1.68	$10
Puccio P.	Poss - U/S fish	Harvey	24.4.68	$25
Sambell N.	U/S Marron	Collie	26.3.68	$20
Sims A.	Taking Protected fauna	Busselton	26.3.68	$5
Sowry J.	U/S Marron	Collie	26.3.68	$20
Towns R.	Poss-U/S Fish	Harvey	24.4.68	$25
Watson R.	Taking Marron out of season	Collie	26.3.68	$20
Zappia R.	Poss- U/S Fish	Harvey	24.4.68	$25

U/S = Undersize

FAO's SOMBRE WARNING

With its broad view of the world's commercial fishing activities, the Department of Fisheries of FAO is well placed to assess the effect on stocks of the effort which has raised the global catch from 20 million tons in 1948 to close on 60 million tons last year. It did this last October in a special chapter of the FAO review, The State of Food and Agriculture 1967; and delegates from 115 countries to the Conference of the Organization in November had before them the sombre warning that unless we discover ways of harvesting new types of marine resources - such as the krill of the Antarctic - the "present rate of expansion of world fish production cannot be maintained indefinitely, possibly for not more than ten or fifteen years".

A technical breakthrough in catching, or some drastic speed-up in the progress towards marine farming might give us the fish we need without depleting known stocks, but we cannot rely on these remote possibilities. Already many stocks are in serious danger of being overfished, and there are areas where catches are being maintained only by spending more and more on vessels, and on search and catching gear. "Exhaustion" when we talk of a fish stock is relative. We may not succeed in killing off all the creatures of the sea, but we run the risk of thinning them out sufficiently to make the catching of them uneconomic.

For this reason there is sound business as well as biological sense in the call by FAO for the proper international management of some of the most overworked stocks. Experience in fisheries when catching has been interrupted by war or other causes has shown that the process of depletion is reversible. It is possible by firm and adequate management to keep a stock at a level where it can be fished economically and well.

Unfortunately we have little to guide us towards the best form of international management. Apart from a few bodies with limited scope or confined to a single species, there is no international organization applying what the FAO regards as essential to adequate management of stocks - a rationing of effort and a limit on the catch.

When a number of countries is engaged in a particular fishery, the question of control sets problems which, so far, have seemed insoluble. We have witnessed the glacial progress in ICNAF and the NEAFC towards the minor controls applied by these commissions. Yet there are industries in the member countries who are already working too hard and paying too much to catch their fish. Giving one example, the FAO points out that the present haul of cod from the north-east Atlantic could, under proper international management, probably be taken at half the present cost.

This will not be achieved without "some fundamentally new approaches to exploitation." The question is do we start considering these new approaches now, or do we wait until some looming crisis forces us to consider them - or stop fishing?.

"Fishing News International" February, 1968.

WHAT IT MAY COST TO FISH IN ARGENTINE WATERS

Nearly a year after claiming a 200 mile fishing limit, the Argentine has published, in Decree No 8,802, the conditions under which foreign vessels may work the rich fish stocks within this zone.

In Foreign Fisheries Leaflet No. 15, issued last month, the U.S. Bureau of Commercial Fisheries gives the translation in English, of this decree, which was promulgated on November 24, 1967.

Within two months of that date foreign vessels "exploring live marine resources within Argentine jurisdictional waters", were required to register their activity. On doing this, permission to fish beyond 12 miles from the coast and inside 200 miles would be conditional on the ship obtaining both a license and a permit.

The cost of this license is 500 US dollars and it is valid for one year. The permit is valid for only 120 days at a cost of US $10 per net registered ton of the ship. But when the ship is a "factory or cold storage vessel" the license and permit fees are doubled.

Presumably this definition includes a freezer or factory trawler and, as most of the vessels fishing off the south-east coast of South America will be of this type, we made a quick calculation of what it might cost to operate there without risking arrest by an Argentine naval vessel, possible detention in an Argentine port, and the prospect of being fined anything from 5,000 to 100,000 dollars.

On net tonnage given in Lloyd's Register, a Soviet Tropik class factory trawler would (in addition to the 1,000 dollars for a yearly license) pay about 20,000 dollars for a three-month permit; a small Spanish Mar Austral class freezer would pay 8,400 dollars; and the average modern Japanese freezer would pay between 18,000 and 20,000 dollars.

If the British decided to send a freezer similar to the Kirkella to Argentine waters, her permit would cost about 14,000 dollars and the West Germans would have to pay 16,000 to 20,000 dollars for one of their factory trawlers.

Conditions

The decree also sets out conditions under which these licensed and permit-carrying ships will be allowed to fish. They will have to have an agent or some other representative ashore legally responsible for any breach of the Argentine law which the vessel may commit.

They will have to observe local gear regulations, and controls of fishing methods, protected species and closed areas.

To make sure they obey these rules, Argentine authorities may order them to carry - at vessel's expense - any person designated to carry out an inspection or to exercise technical or statistical control.

Daily position reports are required and so is notice of entry into or exit from Argentine waters. During the term of the permit a vessel may make use of port facilities for repairs or supplies, but it may not sell its fish.

When catches are transhipped at sea the vessels have to inform the local maritime authority of their intention with sufficient advance notice "to facilitate the appropriate control". Later they have to report on the items and quantities transhipped.

"Fishing News International" February 1968.

STAFF NOTES

Dr. N.M. Morrissy enjoyed two weeks' Annual Leave during May, and no will be surprised to learn that he went fishing. Dr. Morrissy, since coming to Western Australia in May 1967, has injected new interests into trout fishing, with his enthusiastic approach. What is more, his keenness has been rewarded by catching trout that have amazed local anglers.

During his recent leave Dr. Morrissy journyed to the Abrolhos Islands, loaded with plenty of fishing gear. But this time it was not the usual trout angler's fly casting gear, it was heavy fishing gear designed to catch the most elusive swordfish, a game fish hunted by many deep-sea sports fishermen. The outcome of Dr. Morrissy's expedition is as yet not known, but we feel confident that it will have had positive results.

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The skipper and the crew of the R.V. "Flinders" watched, whilst the vessel was at anchor in Harold Bight on the Peron Peninsula, two killer whales apparently playing with a porpoise. This little incident was observed during the vessel's recent six weeks prawn survey trip to the Shark Bay area.

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Cont'd p.19.

There has been a number of new appointments to the Department's Inspection Staff and a warm welcome is extended to Mr. P.M. Lambert who rejoins us after an absence of twelve months. We also welcome Messrs. M.T. Mill, W.A. Gibb and R.E.P. Kendrick.

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THE EDITOR'S DILEMMA

Getting out a journal is no picnic.
If we print a joke, people say we are silly.
If we don't, they say we are too serious.
If we clip things from other magazines, we are too lazy to write them ourselves.
If we don't, we are stuck on our own stuff.
If we don't print every word of all contributions we don't appreciate genius.
If we print them the columns are filled with junk.
If we make a change in the other fellow's article we are too critical.
If we don't we are blamed for poor editing.
Now, like as not, someone will say
We swiped THIS from some other source; we DID.

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