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AUSTRALIA

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MONTHLY SERVICE BULLETIN

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May, 1959

CHANGE OF MINISTERS



Hon. Ross Hutchinson, M.L.A.

On April 2, 1959, the Hon. Ross Hutchinson, M.L.A., was sworn in as Minister for Fisheries. Mr. Hutchinson, now a married man with two children, was born 44 years ago at Worsley in the Harvey district. Educated at Wesley College, he trained as a teacher and served a brief period in the country. Later, in 1940, he was appointed to the staff of Claremont High School. In 1942 he enlisted in the R.A.A.F. and saw service as a Bomber Command pilot in the Middle East, India and England, where as a Flight Lieutenant, he completed 38 operational flights and won an immediate award of the D.F.C. He was elected to Parliament as member for Cottesloe on March 25, 1950, and has represented that electorate continuously since then. In the sporting field Mr. Hutchinson won

honours as a player and as captain-coach of three league football teams - East Fremantle, West Perth and South Fremantle - and was captain-coach of the State team which defeated the visiting Victorian side in 1939.

HON. L.F. KELLY SAYS AU REVOIR

Former Fisheries Minister L.F. Kelly has sent the following farewell message and asked that it be published for the information of each member of the staff -

"One of my main regrets in relinquishing ministerial office after six pleasant and progressive years was the severance of my association with the Fisheries Department.



Hon. L. F. Kelly, M.L.A.

"Early in 1953, when I first took office, I realised that this Department comprised a quietly efficient, albeit small body of enthusiasts under the capable control of its Superintendent, Mr. A.J. Fraser, and its senior field officer, Mr. J.E. Bramley.

"The work involved in the supervision and control of the fisheries is anything but congenial, and success depends largely on the tact, efficiency and general knowledge of the members of the inspectorial staff and their assistants. Enthusiasm and a firm belief in the soundness of the Department's conservational measures are most important in making a successful officer, and a good sense of humour is essential. All these attributes emerge in generous measure from the Department.

"There is a never-ending opportunity for development of the industry, and the pioneering spirit of the operatives generally, combined with a forward-looking departmental policy, have combined to lift what was a comparatively small industry not many years ago to one of considerable value and great potential.

"Research must play a very important part in future development and expansion. I feel that the tempo of scientific and investigational work must be increased if the industry is to keep pace with its known potential, and to supply some of the additional food required by a rapidly growing State like ours. The Research Officer, Mr. B.K. Bowen, and his technical staff, will need all the help possible.

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"A factor which now plays, and will undoubtedly continue to play, a very big part in the development of the fishing industry is the rapid replacement of outmoded equipment with better gear and faster and more up-to-date vessels. By the introduction of modern techniques the industry is making steady progress, and not only those engaged in exploiting the fishery resources, but also those in the Department who are responsible for surveying, developing and protecting those resources, must experience a great deal of satisfaction that their mutual efforts are achieving worthwhile results.

"May I express in this farewell message my best thanks to the entire Department for a job well done, and also express my appreciation of the many considerations extended to me during my term of office."

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STAFF NOTES

The Supervising Inspector, Mr. J.E. Bramley, and the Fauna Protection Officer, Mr. H.B. Shugg, resumed duty after long service leave on April 6 and 14 respectively. Other officers to complete leave during the month were Inspector A.K. Melsom and Cadet Inspector D.H. Smith, who resumed on April 22, and Inspector T.B. Baines of Bunbury, who re-commenced duty on April 28.

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Cadet Inspector G.J. Hanley will proceed on annual leave on May 11.

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Inspector G.H. Lyon resigned on April 17 to enter employment outside the service.

Cadet Inspector E. Barker will act as whaling inspector at Carnarvon from May 18. Cadet Inspector D.H. Smith will be transferred to assist Inspector R.M. Crawford at Geraldton, on May 11, during Mr. Barker's absence.

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Cadet Inspector J.T. Kelly will go to Pemberton this month to assist at the trout hatcheries during the hatching season.

O B I T U A R Y

We record with regret the death of Mr. Jack Michelis, who passed away at Bunbury on April 17. The late Mr. Michelis, who for over 40 years conducted the South-West Fish Supply at Bunbury, was well known and respected in fishing circles in the South-west. He was a good friend of the Department and was held in high esteem by all who knew him.

P E R S O N A L P A R A G R A P H S

The Director of the Fisheries Division of the Department of Primary Industry (Mr. F.F. Anderson) paid a business visit to the State during the month. During his stay Mr. Anderson lunched with the Minister for Fisheries (Mr. Hutchinson) and Mr. Fraser.

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Dr. Donald S. Farner, Professor of Zoophysiology at the Washington State College, Pullman, Washington, U.S.A., will sail for Europe on the "Oceania" on May 18. He will be accompanied by his wife and family who came with him to Perth on June 25. last year. Professor Farner has been studying, under a Guggenheim Grant, the breeding habits of trans-equatorial migratory birds and also of some desert species. During his stay, he has been working in close collaboration with Dr. D.L. Serventy, Principal Research Officer, Wildlife Survey Section, C.S.I.R.O. Professor Farner intends to spend about eight weeks in Europe, including four weeks at the University of Marburg, West Germany, before returning to the U.S.A.

INSTRUCTION TO INSPECTORS.

Unless special permission is granted, no inspector patrolling estuarine waters by boat shall be accompanied by any person who is not an officer of the Department, an honorary inspector or a police officer. Special permission to be accompanied by other persons may be granted on application to head office when circumstances warrant it. This instruction is issued to avoid the Department being held responsible for damages, or otherwise embarrassed, by untoward events which might easily occur.

UNUSUAL CATCH AT BROOKTON.

In a pool on the southern branch of the Avon River a Brookton farmer, Mr. Len McGrath, made a surprise catch on April 5. The fish, which was 15 inches long and weighed 2 lbs. 2 oz., was considered by those who saw it to have been a mullet. It is understood that this identification was confirmed by Mr. McGrath on reference to an encyclopaedia. The pool in which the catch was made was 30 yards long, 10 yards wide and had only an average depth of 9".

SURVEY OF PEARL BEDS.

Replying to a question in the House of Representatives recently, the Minister for Primary Industry, Mr. Adermann, stated that a survey of pearling grounds had been commenced in Queensland on April 15. He added that it would move to the eastern sector of the grounds off the Northern Territory and then to the north-western zone of the beds off Western Australia. Later, the survey would continue in the unsurveyed beds of the Northern Territory.

FISHERMEN CONVICTED.

A fine of £10 each on two of four charges of having stolen craypots was imposed on fisherman George Maraldi in the Gingin Police Court on April 16; on a third charge Maraldi was fined a further £5 and, on the fourth, was placed on bond for a year.

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On March 7, at Moora, Anthony Placanica pleaded guilty to a charge of stealing eight crayfish pots and thirty-two floats, valued at £83. He was fined £10 with £9.10.6 costs.

On May 1, Antonio de Iudicibus, skipper of the crayfish boat "Aries", was convicted of having stolen equipment from the fishing boat "Sabrina" (owned by William Valli, of Osborne Park) and was sentenced to two years' imprisonment. The equipment, said to be worth about £500, consisted of crayfish pots, floats and rope.

FISHING BOAT WRECKED.

On April 7, the 38-foot crayfishing boat "Anna" owned by Mr. K. Abbott, of Two Rocks, was found to have run aground on the beach north of Yanchep. It is believed that she dragged her moorings during the hours of darkness when no person was about. When inspected afterwards by Surveyor W.G. Davies, the "Anna" was lying on her starboard side with her deck facing seaward. Half of her wheelhouse had been washed away. During the next day or two efforts were made to drag the boat ashore using a six-wheel-drive mobile crane which had been driven to the site, not without difficulty. Early efforts ended abruptly when two 1½-inch wires snapped under the combined weight of the water and sand-logged boat. At this stage her condition was quite good although heavy seas had opened caulking in the seams. A later attempt using 3-inch wire rope was successful and salvage operations were started. A few days later, however, heavy seas washed her back into the ocean. After a further severe pounding, the remaining half of her wheelhouse was torn away, and half the decking with it, and she eventually became a total loss. It is understood that only her engine, a 100 H.P. Barracouta, was saved.

FISHING LAUNCH EXPLODES.

Three men were injured when the fishing launch "Corsair" exploded on April 21. At the time of the explosion she was lying at her moorings in the estuary of the Gascoyne River (Carnarvon) where her sunken, burnt-out wreck still lies. "Corsair" was purchased four months ago by a group known as the Brookton Investment Syndicate from a well known Perth businessman and yachtsman. It is understood that the explosion in the "Corsair" occurred when she was about to leave on a fishing trip.

NEW LARGE FREEZER BOAT.

The Navy's former refrigerated lighter "Laakanuki" has been purchased and converted to enable it to fillet and snap freeze and hold large quantities of fish. Mr. R. Saunier, a part-owner, announced last month that the 260-ton vessel would operate in the waters of Shark Bay during the coming snapper season. In previous seasons, Shark Bay snapper has been caught and frozen whole after gutting; it was then transported to Fremantle where it was thawed out for filletting and re-frozen. This thawing and re-freezing of the snapper, as with all fish, broke down the cell structure and spoilt the flavour. Experimental vessels, such as the English trawler "Fairtry", have proved that a ship which can process its catch ready for sale direct to the public, turns out a product which is more attractive to the consuming public by virtue of its "sea-fresh" flavour and appearance.

After the snapper season the "Laakanuki" will operate as a freezer-boat and mother ship in the crayfishing industry. Because of her shallow draft, she will be able to follow the catcher boats close to their anchorages, and her big freezer capacity will lessen the likelihood of crayfish having to be dumped should catches temporarily exceed processing capacity as they did last year.

GERALDTON SHIPS GRAYS DIRECT.

After five years of negotiation, the Geraldton crayfish processing companies have succeeded in arranging a large shipment of crayfish tails from the local port. The freighter "Ellen Baake" sailed from Penang to Geraldton to load the shipment of 10,000 cases of tails consigned direct to the west coast of the United States. Although a few shipments of frozen tails have left from Geraldton previously, they had only been in small lots for sale on the Singapore market.

To ensure the success of the large shipment, the five Geraldton companies, waterside officials and others all co-operated. The wharf itself was swept clean to lessen any possibility of contamination of the cases during their transfer from the refrigerated railway vans to the ship's freezers. The direct shipment should save the heavy costs usually incurred in freighting the tails to Fremantle and holding them in cold storage at Robbs Jetty until a suitable ship is available.

AUSTRALIAN WATERFOWL COMMITTEE.

Ministerial approval has been received for this State's participation in the founding of a nation-wide committee on waterfowl. Proposals for the establishment of such a committee were first raised at the Australian fauna authorities' conference in Perth, in 1955, and final details were agreed to by delegates at the conference held in Sydney last November. The committee will function as a clearing-house of ideas and will provide a forum for discussion of the technical and biological problems encountered in waterfowl research in Australia. It will also plan and co-ordinate research activities of a national nature and act as an advisory body to formulate recommendations on policy for decisions by the States, either severally or at the biennial conference. This State's delegate on the committee will be the Research Officer, Mr. B.K. Bowen.

SEASONS CLOSE.

Despite a request from the Council of Gun Clubs of W.A. to extend the season to May 31, it was decided to stand by a previous decision that the duck shooting season end on April 30 - a month earlier than usual. Consequently, from May 1, until the season re-opens - probably the week-end before Christmas - all species of wild duck will be protected in the South-West and Eucla Land Divisions. In all other parts of the State (the Eastern Goldfields, North-West and Kimberley areas) the season will remain open for a further four years.

Winners of the cases of cartridges under I.C.I's. Lucky Band Scheme will be announced in the press by that organisation during the month.

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Inspectors are reminded that the marron open season ended on April 30. Until December 1, the taking of this freshwater crustacean by any means of capture whatsoever is entirely prohibited.

INDONESIAN PRAUS AT CAPE LEVEQUE.

The news reached Broome, on April 16, that two Indonesian fishing vessels had called at Cape Leveque to obtain food and water. In view of the incident towards the end of 1957, the Sub-Collector of Customs at Broome, Mr. B.M. Miller, flew to Cape Leveque to investigate. On his return to Broome he was interviewed by Mr. R.J. Baird, this Department's Pearling Inspector, who writes that the Sub-Collector was satisfied that the Indonesians had not been catching fish or taking mother-of-pearl or trochus shell in our waters.

The crews of the vessels consisted of two families, including their wives and children. They had been fishing off the coast of Sumba, which lies west-nor'-west of Timor, when they were caught in a blow and, after spending six weeks at sea, finally made landfall at Cape Leveque. They were physically affected by their privations and were suffering from various skin troubles.

Mr. Miller took 10 bags of rice with him from Broome, as ship's stores for use on their return journey, which they were able to undertake once a clearance to leave Australian waters had been issued.

ABROLHOS CRAYFISHING.

Overpage is a table setting out details of the Abrolhos production during the opening weeks of the 1959 crayfish season. In the April issue of this Bulletin, it was estimated that 210 boats would be crayfishing this year. As the underneath figure shows, there were only 131 boats actually working.

Due mainly to the increased intensity of fishing, production for March is a record. The average catch-per-man is not much less than in the previous year. In fact it is a mere 15 lb. less than in 1957, when 25 fewer men were operating.

It is also of interest to note that the opening, for the first time for some years, of the western reefs in the Southern Group, appears to have had a marked effect on the average catch-per-man in that area, despite an increase in the number of men there. Elsewhere the group catch-per-man has reflected the fishing intensity.

AREA	MARCH 1958			MARCH 1959		
	No. of men	Total Catch lb.	Catch per man lb.	No. of men	Total Catch lb.	Catch per man lb.
North Island	25	100,690	4,027	35	123,690	3,534
Wallabi Island	63	257,754	3,091	58	183,791	3,169
Easter Group	61	278,458	4,564	73	291,868	3,176
Pelsart Group	41	99,158	2,418	46	174,876	3,802
TOTALS:	190	736,060	3,873	212	774,225	3,652

RECOVERY OF RUSSIAN WHALE MARKS.

In September last year, four Russian whale marking darts were recovered at the Nor'West Whaling Company's Station at Carnarvon.

We have now been advised by Dr. G.F. Humphrey, Chief of the Division of Fisheries and Oceanography, C.S.I.R.O., Cronulla, N.S.W., that three of the marks (Nos. 1007, 1027 and 1030) were fired into humpback whales on February 10, 1958, at 63° 05'S, 95° 09' E. The fourth, No. 1165, was fired on February 25, 1958, at 63° 14'S, 95° 20' E. Both areas are roughly 2,000 miles south-west of the point of capture of the whales.

"COMPLETED STAFF WORK"

A PROTECTION FROM HALF-BAKED IDEAS

It is believed that the following memorandum was prepared by and for the American Army. It is reprinted as a guide to our own staff -

SUBJECT: Completed Staff work.

1. The doctrine of "completed staff work" is a doctrine of this office.

2. "Completed Staff Work" is the study of a problem, and presentation of a solution, by a staff officer, in such form that all that remains to be done on the part of the head of the staff division, or the commander, is to indicate his approval or disapproval of the completed action. The words "completed action" are emphasized because the more difficult the problem is, the more the tendency is to present the problem to the chief in piece-meal fashion. It is your duty as a staff officer to work out the details. You should not consult your chief in the determination of these details, no matter how perplexing they may be. You may and should consult other staff officers. The product, whether it involves the pronouncement of a new policy or affects an established one, should, when presented to the chief for approval or disapproval, be worked out in finished form.
3. The impulse which often comes to the inexperienced staff officer to ask the chief what to do, recurs more often when the problem is difficult. It is accompanied by a feeling of mental frustration. It is so easy to ask the chief what to do, and it appears so easy for him to answer. Resist the impulse. You will succumb to it only if you do not know your job. It is your job to advise your chief what he ought to do, not to ask him what you ought to do. He needs answers, not questions. Your job is to study, write, restudy, and rewrite until you have evolved a single proposed action - the best one of all you have considered. Your chief merely approves or disapproves.
4. Do not worry your chief with long explanations and memoranda. Writing a memorandum to your chief does not constitute completed staff work, but writing a memorandum for your chief to send to someone else does. Your views should be placed before him in finished form so that he can make them his views simply by signing his name. In most instances, completed staff work results in a single document prepared for the signature of the chief, without accompanying comment. If the proper result is reached, the chief will usually recognize it at once. If he wants comment or explanation, he will ask for it.

5. The theory of completed staff work does not preclude a "rough draft" but the rough draft must not be a half-baked idea. It must be complete in every respect except that it lacks the requisite number of copies and need not be neat. But a rough draft must not be used as an excuse for shifting to the chief the burden of formulating the action.
6. The "completed staff work" theory may result in more work for the staff officer, but it results in more freedom for the chief. This is as it should be. Further it accomplishes two things:
 - (a) The Chief is protected from half-baked ideas, voluminous memoranda, and immature oral presentations.
 - (b) The staff officer who has a real idea to sell is enabled more readily to find a market.
7. When you have finished your "completed staff work", the final test is this:

IF YOU WERE THE CHIEF WOULD YOU BE WILLING TO SIGN THE PAPER YOU HAVE PREPARED, AND STAKE YOUR PROFESSIONAL REPUTATION ON ITS BEING RIGHT?

If the answer is in the negative, take it back and work it over because it is not yet "completed staff work".

WATCH OUT ! ! !

All inspectors are requested to keep a particularly sharp look out for banded giant petrels this year. Each marked bird will be carrying two bands - one of aluminium and one of yellow plastic - and any sightings and observations should be recorded and sent to this office either as a separate report or in the weekly diary. Should it be possible to obtain the number on the aluminium band that too should be recorded. Bands should not be removed unless the bird is dead.

The Falkland Islands Dependencies Scientific Bureau, which has been carrying out its investigations on the movements and habits of giant petrels for some years has banded almost two thousand nestlings this season in the South Orkneys. It is expected that they will be arriving in Western Australian waters fairly soon.

Last year the plastic bands were all coloured red but it is most unlikely that any birds with red bands will be seen now. It is believed that only one banded petrel has ever been found in the second year after banding.

BASIC WAGE INCREASE.

As a result of the recent determination by the Arbitration Court, an increase in the basic rate payable to officers will apply on and from April 27, 1959.

In the metropolitan area officers over the age of 21 years will receive a gross salary increase of approximately 4/- per fortnight, while those in the South-West Land Division will receive an increase of approximately 2/6 per fortnight.

PRAWNS MEAN REAL MONEY.

According to a press report, youths just out of school were earning as much as £100 per week while working as unskilled deckhands on prawn boats operating from Evans Head in New South Wales.

In this booming industry, the port's 41 prawn boats last year were said to have sold catches worth £250,000 through their local co-operative. It was added that the value of a typical boat's catch would have been £13,000 of which at least £8,000 would have been clear profit.

MANAGER SEES CHANCE FOR DEVELOPMENT.

On his return from a two months' world tour the General Manager of the Fremantle Fisheries Co-operative (Mr. McGowan) was reported to have been surprised by the potential of markets in America for octopus, cuttlefish and snapper. He was reported as having said that these promising new markets could save Western Australia's fleet from the effects of any price drop in cray tails which might follow an American recession.

The report continued that, in Honolulu, octopus was much sought after by Asiatics and bookings would be made for as much as we could send, while cuttlefish and snapper would find a more than ready market on the west coast of the United States and Canada.

Looking forward with confidence, Mr. McGowan was said to expect a record sale of Western Australian craytails this year, due to the steady demand for this product of ours in the United States.

TROUT TRANSPORT.

Technical Officer L.G. Smith will be in charge of the transport of trout fingerlings this year. He will be assisted by Technical Officers J.S. Simpson and R.J. McKay. The first load of 3,000 will be delivered to the Blackwood Trout Acclimatisation Society on May 4. Subsequent deliveries will be made to the Harvey, Murray and Serpentine-Jarrahdale Societies, which will receive 5,000, 3,000 and 2,000 fish, respectively.

Last year, fingerling trout were transported in plastic bags for the first time. The bags proved so successful that they will be used again this year. Mr. Smith can load 20 bags into his Holden van and trailer and carry 3,000 fingerlings per trip.

The fish delivered to the Serpentine-Jarrahdale Society will have one of their fins clipped before being released into the streams. This will allow the Society to determine whether the fish remain in one stream or move into others.

CLEARING HOUSE.

The Tasmanian Scallop Season, 1958.

("Service", Hobart.
January, 1959)

By the Senior Inspector of Fisheries,
Mr. E.E. Andrews.

The scallop fishery shows a pattern of fluctuation over the years, probably brought about by the seasonal affect of spawning and settling of spat. The tests prior to the season indicated that scallops were in good condition and reasonably good catches could be expected.

At the outset 65 boats were working in the Channel areas, where very good catches were made. The greater part of the catch from the older beds in the mid-channel consisted of scallops that had grown to size since the previous season's fishing.

In Great Taylor Bay, where heavy concentrations of young scallops were present during the preceding season, the shell was of better size, but roe not quite as advanced. This ground provided a large part of the total season's catch.

Towards the end of May, 85 boats were engaged in all areas, with 70 operating in the Channel, 12 in Norfolk Bay and three in Coles Bay on the East Coast.

As catches fell off, owing to the intensive fishing, several boats returned to crayfishing during June, and some moved to the East Coast scallop grounds and explored for new beds.

Norfolk Bay, which in 1956-57 maintained the greater part of the fleet, this year maintained about 10 boats daily, with moderate catches. The stocks worked over the past three years in this area have been practically all mature fish, with very limited amounts of young scallops, and it was not expected that the high catch rate of 1956 could be maintained.

The "Commercial" scallop is the most commonly known scallop in Tasmanian waters, and under the Fisheries' Regulations provision is made whereby this scallop must be over $3\frac{1}{2}$ inches (in its widest diameter) before it is caught.

Good Spawning.

Fortunately, many signs of young scallops have now been observed on all Norfolk Bay beds, indicating a good spawning in 1957. but it could be from four to five years before this young stock grows to market size.

The mainstay of the scallop industry, the D'Entrecasteaux Channel, cannot be expected to maintain the heavy concentration of boats that has taken place in recent years, but the grounds are by no means depleted, as many millions of young scallops in various age groups are present on the greater part of the worked beds.

An important development, which is encouraging for future years, has taken place on the East Coast, where some good patches were located and worked, during the last month of the season.

For the first time, good catches of very large scallops were taken at Maria Island. These were the largest scallops handled for many years. In some cases scallop meat taken from this ground weighed up to four ounces per scallop, cleaned weight.

The Coles Bay grounds were extended and good catches were made in from 12 to 14 fathoms. The usual depth at which scallops are taken is from seven to ten fathoms.

New Type Dredge.

During the season an English type of scallop dredge was used and although it proved to have distinct advantages, many fishermen consider it has increased the destruction of scallops which is incidental to the fishing, especially where a heavy concentration of boats are operating. The English type dredge has an adjustable steel plate on top of the dredge; this plate ensures that dredge is kept on the bottom, regardless of depth or nature of the bottom.

Officers of the Fisheries Division and members of the Fisherman's Association tested the new dredge prior to the opening of the season. It appeared that catching effect of this new type of dredge proved to be 50 per cent. better in some localities.

It was particularly noticed that it was a decided advantage for deeper water and apparently on the more uneven bottoms of the Coastal strips. It also allows faster towing than the normal dredge.

Before the season ended many of the boats had adopted this new type of dredge.

Scallop catches for the past 14 years are:

1945,	251 tons	1952,	145 tons
1946,	442 "	1953,	332 "
1947,	396 "	1954,	373 "
1948,	376 "	1955,	511 "
1949,	298 "	1956,	516 "
1950,	210 "	1957,	429 "
1951,	160 "	1958,	in excess of 367 tons (estimate).

Australian Tuna Boom in United States tipped.

("West Australian"
April 20, 1959.)

A fish-canning industry leader returned from the United States tonight confident that Australia could build up a million-dollar frozen tuna export trade to America.

He is Mr. F.V. Cuffe, chairman of a Sydney canning firm.

If satisfactory prices could be negotiated, the U.S. would buy as much tuna as Australia could send, he said.

The trade could be developed in three years.

He said a 35 per cent import duty on canned tuna in the U.S. would prevent Australia from developing a canned tuna market.

However, despite Japanese competition, it was possible for the Australian frozen tuna to sell successfully on a small profit margin.

There was also a good indication that prices would improve over the next five years. Fish consumption in the U.S. was increasing at the rate of 5 per cent a year.

During the past ten years, sales of canned tuna in the U.S. had doubled from 8,000,000 cases to 16,000,000 cases.

Tuna was the most popular canned fish in America, being well ahead of salmon - and Australian tuna was regarded there as the best.

Park Vandal Jailed.

("Field and Stream" New York, N.Y. by Harold Titus, Editor.
March, 1959)

When Federal Judge Albert A. Ridge sentenced a Missouri vandal to thirty days in the pokey for destroying and littering government property, he established a target for other magistrates to shoot at. This miscreant was one of a party who misused a recreation area on the Mark Twain National Forest - tore shingles from a shelter house to start a fire, damaged a water fountain and scattered litter all over the landscape. Apprehended and pleading guilty, he drew the jail term and probation for two years.

Up to now there's been altogether too much indignation voiced against such offenders and not enough action. With our parks problems what they are, it's time that courts, both high and low, stopped treating such cases with undue tolerance. And with a Federal judge getting truly tough there are grounds for hope that others may follow his precedent.

75-year-old Smack 'as good as new'.

("The Fishing News", London.
March 20, 1959)

Built at Hull 75 years ago the Sjorbogin, a little Faroese auxiliary smack, was praised by her master, Capt. Viggo Dam, when she put into her port of origin last week (see Fishing News, March 13 issue).

"She is still a very fine sea ship," her master, Capt. Viggo Dam, declared.

The vessel, which still possesses her original oaken hull, came from the Hull shipyard of W. and J. McCann, the principal of which was the late Mr. John McCann, former chairman of Pickering and Haldane's, predecessors of Hull's Lord Line. John McCann, himself the husband of a smack owner's daughter, held numerous offices in the Hull fishing industry, receiving the OBE in 1916 and was awarded the Order of the Knight Cross of Iceland Falcon eleven years later.

Sjorbogin returned to Hull as a carrier but this 83-ton vessel, which is 76 ft. long and has a 20ft. 4 in. beam, has been engaged in hand-line fishing off Iceland and Greenland.

A new engine was installed two years ago and the vessel is equipped with sound and fishing finding apparatus.

"There are a lot of new things in the ship but the old things they take out may be better," Capt. Dam commented.

The vessel spent many years trawling in the North Sea before the Faroese acquired her. She has changed ownership and name several times but estimation of her by the crew of seven is unaltered.

"She is still as good as new," is the verdict of Einar Olsen, the second engineer.

From a Naturalist's Notebook

One of the Most Important Fishes - But Hard
to Define

("The Fishing News", London.
March 20, 1959)

by Eric Hardy F.Z.S.

It is no doubt true, as a leading member of the Plymouth Marine Biological Station pointed out when recently reviewing in a scientific journal a popular little book on sea-fishes, that there is still no adequate and up-to-date guide-book on British sea-fishes (or freshwater fishes).

But "The Fishes of the British Isles," by the late Dr. J. Travis Jenkins, has since 1925 been the most widely available and has served as the standard reference book.

The death in January of Dr. Jenkins, at the age of 82, removed one of the best-known modern historians of our fishes. He will be remembered longest for his books ("The Herring and the Herring Fisheries" in 1927 was a classic work, and "The Sea Fisheries" in 1920 was for long the best summary of its subject), although for 42 years, until the end of the last German war, he was superintendent of the Lancashire and Western Sea Fisheries, with legal and academic qualifications.

Survey in Bengal.

Early in the century he presided at the International Fisheries Congress in Vienna and conducted a fisheries survey in the Bay of Bengal. My own correspondence with him before his retirement always found him helpful and informative. He could remember counting over fifty fishing boats between the Liverpool Bar and North-West Lightships, and knew it was a sight which would never return to this area.

Sardine Biology.

The sardine is one of the world's three most important fishes - if you can safely define what is a sardine.

In September this year it will come into its own share of importance when a world scientific conference on the biology of the sardine meets at F.A.O. headquarters in Rome. In Britain, of course, we keep the term for a young pilchard, but in many parts of America and Norway it may be a young herring, in other countries a sprat, and in many native catches anything small and silvery.

The conference will be engaged more with the relation of the sardine to its environment - ecology they call it - and the effect of commercial fisheries on sardine stocks, the natural causes of the fluctuations in their numbers, and how far these can be forecast by international co-operation.

For instance, America's famous Maine sardines are herring, and Danish sardines are sprats. Many countries, like Australia, West Africa and the Mediterranean lands, find their sardines in various species of *Sardinella*; that of the Mediterranean (*aurita*), is known by the gold stripe along its sides when fresh. It appears to be the same species as caught in the Gulf of Mexico and off Venezuela, according to Danois' "Fishes of the World," though I don't see it listed in the U.S. monograph on the marine life of the Gulf of Mexico.

Harenglas, or sprats, are also fished as sardines in the Mediterranean. In the Pacific a species of the rather larger *Sardinops* (*sagax*) forms the sardine fisheries of California, Chile and in the Atlantic off South Africa, while other species of *Sardinops* are fished in Australian waters.

Obviously the term sardine has extended so universally from its French origin that the conference has little hope of limiting its identity; but many feel that in Europe, at least, it should be confined to the young pilchard, distinguished amongst other features by its striated operculum or gill-cover, for the row of black spots does not always show on its dark blue back.

Its scales are arranged in 30 to 40 rows, and are rather few in number. Our British pilchard ranges from West Africa to the North Sea, but it is chiefly a southern fish so far as Britain is concerned, and it is fished on its migrations over regions from Portugal to south-west Britain.

It is now called *Sardina pilchardus*, and has its dorsal fin slightly nearer the snout than in the case of the herring or the sprat. Another species of *Sardina*, called *melanostricta*, forms the lucrative Japanese sardine-fishery, and although the Japanese fish it to the tune of a million and a half tons a year, its stocks seem to be in no danger of extinction.

Distinct Races.

Several fishery biologists have been eminent in the study of the true sardine. Travis Jenkins studied the herring rather than the pilchard. By studying the number of vertebrae, or backbones, the mark of distinction between most fish varieties, Furnistin divided the common pilchard into different races for the north and South Atlantic, for Morocco (Mediterranean) and Mauretanian or north-west African waters. In other words the pilchards of these regions do not normally inter-breed or inter-migrate.

Otherwise their migrations are lengthy, moving southwards to warmer water when young, and northwards again to spawn when adult. And, as might be expected, the northernmost of the four races of pilchard, the North Atlantic race, to which ours belong, is slightly the largest, for in most, if not all, species in the northern hemisphere, the largest races are in the coldest and most northern waters of the species distribution. Thus the Mauretanian race is the smallest.

Though caught near shore (where ring-nets should prove better than drift-nets), the pilchard goes out to deeper water to spawn, in summer and autumn in the English Channel, some even in the North Sea. The eggs float and drift with the currents.

But the fish have several other spawning places, and they can be spawning in some part of south-western Europe at all times of the year.

Water temperatures probably limit the northern range of the pilchard to Scotland. Unlike many adult fishes (anchovies are another example) they feed much upon plankton, chiefly microscopic plants.

Chlorinated Sea Water For Cleaning
Fish Holds

("The Fishing News", London.
March 20, 1959)

Chlorinated sea water has been used in America to clean and sanitize the fish hold of a trawler, previously washed only with harbour water.

The eviscerated fish were also rinsed in the treated sea water and found to be cleaner, with a considerable amount of blood and slime removed during washing.

The successful experiments made by Boston (Massachusetts) research workers have been followed by further tests aboard a commercial vessel during two scheduled trips, says Mr. Joseph W. Slavin, of the North Atlantic Research station at Boston, writing in the Fishing Gazette.

On this vessel the unit was used to chlorinate the sea waters used for washing the hold in port, and for washing the gutted fish and the deck of the vessel at sea. During each trip the vessel remained at sea for ten days, the unit being in continuous operation.

Chlorinating Unit.

The chlorinating unit consists of a metering pump, belt-driven by a $\frac{1}{8}$ h.p. electric motor and a 30 gallon drum for storing the sodium hypochlorite. A suction hose from the pump is inserted into the drum; the discharge hose from the pump is coupled to the vessel's wash water line using a special mixing tee.

A 14 per cent solution of commercial sodium hypochlorite is used full strength to utilise the limited storage space aboard a fishing vessel. During a normal trip of ten days, about 30 gallons of sodium hypochlorite is consumed during almost continuous operation of the unit. The solution is delivered to the boat in five-gallon glass carboys, costing 50 cents (about 4s. 2d.) a gallon.

The owners and crew of the vessel declared that the maintenance of good sanitary conditions on the vessel alone resulted in better quality fish than when chlorinated sea water was not used, says Mr. Slavin.

After the initial experiment the catch was unloaded and the hold washed down with sea water containing 50 to 60 parts per million of free chlorine. This somewhat deodorised the hold which was found to have less slime and to be cleaner than when washed with ordinary sea water.

"Restricted Entry" -

Becomes the Prime Subject for Academic
Conference and Legislative Controversy.

("Pacific Fisherman", Portland 5, Ore., U.S.A.
March 1959)

"Restricted entry", an economist's term for regulating the number of fishermen who can harvest a public resource in order that the crop may be taken without economic waste and biologic disaster, was the central theme of a University of Washington conference just after the middle of February.

And just as the Conference on Biological and Economic Aspects of Fisheries management came to a close there fluttered into the Washington state legislature a bill designed to apply "restricted entry" to the fisheries of that state.

It created a furore - more than had the conference.

The bill was proposed to the legislature by International Longshoremen's & Warehousemen's Union, Local 4, which is the bargaining representative of fishermen who man the purse seine vessels fishing in the State of Washington. Secretary-Treasurer of the local is Joseph F. Jurich, who for years has contended that control on the amount of gear operated in a fishery is essential if the fishing industry is to be saved from economic disaster and the resource from biological depletion.

The bill declares:

"It has proven impossible properly to regulate catching and taking of salmon without restrictions on the number of units of gear used. . . . It is therefore necessary to limit the number of licenses which may be issued."

The bill directs that the Washington director of fisheries shall license not more than 531 trollers, 393 gill-netters, 5 lamparas or round haulers, 203 purse, reel or drum seines, and 79 reef nets in the state.

He shall not be restricted in issuing less than these numbers whenever he deems it necessary for propagation, protection, conservation, management and preservation of the salmon.

Qualifications for license require experience, sound vessel and gear, adequate insurance, and a reasonably good record of law observance. In addition, the director may add such qualifications as he deems necessary.

While the salmon industry generally was ready to recognize that some method of limiting intensity of fishing might be desirable, at presstime it did not appear prepared to "buy" the ILWU bill.

Questions being asked included:

How did they arrive at the figures for ceilings on license numbers?

How is it going to be possible to catch 50% of the Sockeye and Pinks which may be taken with such a fixed ceiling on gear, while the Canadians have no such limit?

How is the director going to turn down qualified applicants after the quota has been filled?

Attacks on Fishery Officers in Canada

("The Fishing News", London.
December 12, 1958)

Strict action is to be taken against lobster poachers by the Canadian Fisheries Department, warned Fisheries Minister Mr. J. Angus MacLean, following repeated violation of the regulations. Reports are of flagrant poaching in some areas of the Maritimes and there have been instances of violence to fishery protection officers, "Such attempts to obstruct or intimidate law enforcement officers show no regard for life and property and will not be tolerated", said the Minister.

Biggest Item

The lobster fishery, worth £4 million a year, is the biggest item in the fishermen's income. It almost triples the value of cod as an income producer. The fishermen have also asked the Department to consider a larger size limit and very severe penalties for both the fishermen and buyers of illegal lobsters.

Mr. MacLean said that in cases where it is warranted, he will not hesitate to cancel or refuse fishing licences to those few who show contempt for the regulations.

"Rapture of the Depths" -

Attack for Scientist

("The Fishing News", London.
March 27, 1959)

While diving in the Millbay Pit, Plymouth Sound, last week, Dr. David B. Carlisle, a member of the staff of the Marine Biological Laboratory, Plymouth, had an attack of nitrogen narcosis - known to the French as "rapture of the depths" - the effect of which is something like drunkenness. He managed to climb the diving boat's anchor line to safety.

Dr. Carlisle said afterwards it was the first time he had had such an experience, and added that it was probably due to his recently having had a cold and wearing ill-fitting aqualung diving gear.

He had done about 20 dives in the pit. He was exploring it wearing an aqualung, and the attack started when he was about 155 ft. down. He said: "I felt dizzy and tried for a minute or two to keep quite still while holding an anchor line from the diving boat.

"Everything started going round. I closed my eyes and tried to breathe deeply. This improved things for a bit. I went up the line about 20 ft. Then it started to get worse again.

"I was getting a lot of water in my breathing tubes. I had to swallow it. I signalled and went up the anchor line swallowing water all the way. When I got to the surface I was sick and must have brought up about half a gallon of water."

He said the narcosis had caused him to lose control of his face muscles and he was unable to keep his lips closed over the mouthpiece.

During the dive Dr. Carlisle was accompanied by Mr. David Scarratt, a research student at the marine laboratory.

Shortly after being helped into the diving boat, Dr. Carlisle, on recovering, was back in the water and again diving down into the pit.

Better Meals Build Better Families

("Market News Service", U.S.A.
February 18, 1959)

Mr. Fish Merchandiser--mark September 13-26, 1959, on your promotion calendar. During this period, the Bureau of Advertising of the American Newspaper Publishers Association will stage a nationwide food promotion around the central theme: "Better Meals Build Better Families."

This promotion, reported to be the most powerful single promotion ever made available to food advertisers, is reported to have the support of about 80 per cent of the daily newspapers in the United States. It is claimed that the "Better Families" message will reach over 100 million newspapers readers a day during this promotional period.

The promotion is reported to have the full support of 24 of the top supermarket chains in the United States and the 8 leading co-operative food groups in the United States and Canada.

The Bureau of Advertising, along with the American Association of Newspaper Representatives, has already begun contacting some 289 grocery product manufacturers to gain their support of this promotion.

The Newspapers participating in this ambitious undertaking will support the two-week campaign with ads which are expected to run into thousands of pages and hundreds of thousands of lines of advertising copy. Added to this will be the potent point-of-purchase support of the retail food industry, the advertising and merchandising support of food manufacturers, and the promotional activities of food wholesalers and brokers.

The fishery trade can cash-in on this big promotional effort by building its advertising for September 1959 around the theme : "Better Meals Build Better families."

Fish Bone Detection Device Shows
Promise.

("Market News Service", U.S.A.
March 9, 1959)

An automatic detector-rejector device which will "spot" bone-bearing fish fillets and eject them from the conveyor line is now a probability, the U.S. Department of Interior reported on February 20, 1959. The device is being perfected by a Fitchburg, Mass., laboratory under a contract with the U.S. Bureau of Commercial Fisheries.

The detector part of the system has already been devised. Future work contemplates a method of adapting the weak electrical signal sent when a bone is detected to activate a mechanical device which will automatically reject fillets containing bones.

The detector system is somewhat similar to that of a closed TV circuit. An X-ray image of the fillet is picked up by a special X-ray tube in place of the standard TV camera. The image is transmitted by wire to a receiving set some distance from the X-ray machine. There it is converted into a visual image by a special monitor. This gives inspectors an opportunity to view the cod and haddock or other fillets and yet be away from the dangers of excessive X-ray exposure.

A truly bone-free fishery product would be much more attractive to the consumer and result in a greater utilization of fish, processors believe. At present a small percentage of bone-containing fillets get past even the most rigid inspection. It is hoped that the Bureau experiments will make it possible for the industry to detect every bone in the early stages of processing.

Previous research had resulted in laboratory use of the fluoroscope to discover fillets containing bones. To protect the worker under this system a reflector was used and the actual inspection of the fluoroscopic image was made in the mirror.

Shetland Seiner Has An Unusual
Catch.

("The Fishing News", London.
March 20, 1959)

A very unusual crab caught in the seine-net of the Shetland boat Press On has been identified by the Marine Laboratory at Torry.

The crab, which measured $6\frac{1}{4}$ inches across the body, and 35 inches from nipper to nipper, has no common name. A *Paramola Cuviera* (Risso), it is a native of the Mediterranean, and the waters of Spain and Portugal. There are only three previously recorded cases of it being caught in Scottish waters.