



CALM LIBRARY ARCHIVE  
NOT FOR LOAN

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STAFF NOTES

The Minister for Fisheries, Mr Hutchinson, left Perth by air on August 31 for Canberra, where with other State and Commonwealth ministers responsible for fisheries, he will attend a meeting of what it is hoped will become the Australian Fisheries Council. The Director, Mr A.J. Fraser, flew to Canberra a few days earlier to participate in a meeting of chief fisheries officers. Mr Hutchinson and Mr Fraser will return to Perth on September 3.

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On September 6 the Director, accompanied by the Fauna Protection Officer, Mr H.B. Shugg, will go to Wongan Hills to discuss the future control of Lake Ninan with representatives of the Wongan-Ballidu Shire Council and the Lake Ninan Water Ski Club. After the discussions and an on-the-spot inspection of the lake, they will return to Perth on September 7. The Department has received requests that this fine body of water be reserved for duck-shooting.

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We welcome to the staff Miss Margaret A. Bartlett who commenced duty at Head Office on August 14, following the resignation of Miss Y.K. McKenna.

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Pearling Inspector R.J. Baird and Fauna Warden S.W. Bowler are on a protracted patrol of the Kimberley Land Division to police the open season for finches, to

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make enquiries in relation to other aspects of fauna conservation, and to carry out public relations work for the Department in respect of both fisheries and fauna.

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Congratulations are extended to Mr A.J. Buchanan, of Head Office, who has been recommended for promotion to a position in the Department of Industrial Development. The recommendation is subject to appeal.

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The Fleet Maintenance Officer, Mr A.J. Bateman, will commence long service leave on September 1. During his absence, Assistant Inspector D.P. Gordon will carry out the duties of the position.

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Inspector A.T. Pearce, of the p.v. "Dampier", commenced 12 days' sick leave on August 25.

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Officers proceeding on annual leave this month include Mr G.C. Ferguson, of Head Office, on September 11; Inspector J. Traynor, of Perth, on September 12, and Technical Officer J.S. Simpson on September 18.

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Assistant Inspector E.H. Barker will be the first of this Department's observers on the tuna fishing vessel "Estelle Star" which is due to arrive in Fremantle on September 1. Mr Barker will spend some weeks aboard the vessel before being replaced by the next selected officer. A photo of the vessel appears elsewhere in this issue.

#### MOVEMENT OF DEPARTMENTAL VESSELS

The research vessel "Peron", under the command of Captain H.C.W. Piesse, will visit the pearl culture centre at the Bay of Rest in Exmouth Gulf. She will then have completed her escort duties in connection with the transfer of the Harbour and Light Department's new lighter "Ashburton" to Onslow. "Peron" will also carry out some limited prawn trawling operations in the Gulf before returning south. She is expected in Fremantle on September 28.

TROUT ACCLIMATISATION TO BE REVIEWED

The future of the whole trout acclimatisation movement in this State will be reviewed at the forthcoming annual general meeting of the Trout Acclimatisation Council of Western Australia, to be held at Pemberton on Sunday, September 24. The Director, as Chairman of the Council, will attend and will be accompanied by Research Officers B.K. Bowen and R.J. Slack-Smith. Council members will be given an opportunity of studying beforehand the full report which has been prepared by Mr Bowen on the biological limitations of trout acclimatisation in farm dams.

CRAYFISHING

At folio 122 is a table setting out the production of crayfish at Houtman Abrolhos during June, 1961. For comparative purposes the June, 1960, figures have also been inserted.

While this year's production will be seen to be less than in the corresponding month last year, the progressive total of this year's catch for the four months ended June 30 has already exceeded the record set in the 1959 season by 38,000 lb. As six weeks' fishing time still remained after June 30, the total catch for the season is expected to be only a little under 4,000,000 lb.

For the first time in history all Geraldton waters are closed to crayfishing at the present time. The close season to protect crayfish during the period immediately before and after the commencement of the spawning season began on August 15 in all waters lying between the latitudes 26°S and 30°S. It is anticipated that a few of the larger boats will go to Dirk Hartog Island and other areas north of 26°, while a number of fishermen will turn to fishing for scale fish during the close season.

OVERTIME ALLOWANCES

Following negotiations between the Civil Service Association and the Public Service Commissioner, agreement has been reached on claims of inspectors and field officers of this Department for an overtime allowance. Advice to this effect has now been received from the Commissioner, who has agreed that the following allowances be applied with effect from January 1, 1961:-

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Supervising Inspector	£100	per	annum
Senior Inspectors	£100	"	"
Inspectors (Grade I)			
& Fauna Warden, G-11-2	£90	"	"
Inspectors (Grade II)			
& Fauna Warden, G-11-1	£85	"	"
Assistant Inspectors	£75	"	"
Cadet Inspectors	£50	"	"

It should be noted that the annual allowance hitherto paid to skippers of seagoing vessels of £72 has been reduced to £50. Commenting on this, the Commissioner pointed out that the allowance was fixed originally to cover overtime and responsibility. As the annual allowance for overtime for skippers will now be as indicated above, i.e., £85, they will receive a total allowance at the rate of £135 a year, a net increase of £63.

The Commissioner further advised that allowances had not been approved for Technical Officers. He agreed that they worked some overtime, but considered they were adequately compensated by way of an additional week's leave plus some time off in lieu.

The allowances quoted will not apply to the Fleet Maintenance Officer, the Pearlring Inspector, Broome, nor to officers employed on research vessels. The Commissioner considers their classifications cover the full incidence of their employment.

#### BASIC WAGE AND MARGINAL ALLOWANCE INCREASES

In an administrative instruction dated August 21, the Public Service Commissioner advised that, as a result of the recent quarterly declaration of the Court of Arbitration, the male adult basic wage would be increased by £3 a year in the metropolitan area and £4 a year to officers employed in the South-West Land Division. In other districts the increase would be £3 a year.

In addition, an increase in marginal allowances has been approved to apply from July 14, 1961. The increases range from £2 a year for Cadet Inspectors on the minimum of their salary range, to £23 a year for Assistant Inspectors on the maximum of their range, and £24 a year to all officers in receipt of a salary margin of £371 per annum and above.

UNUSUAL EXPORTS

Licenses have recently been issued under the Fauna Protection Act to allow salt-water crocodile skins and emu skins to be exported from the State on a trial basis. The crocodile skins were forwarded from Broome by a person licensed to hunt these reptiles for gain or reward. Emu skins were sent by one of Fremantle's well-known skin dealers as samples to satisfy an inquiry in the eastern States to investigate the possibilities of an overseas market. Both licenses were issued on a trial basis, free of fees and royalty.

PLATYPUS AND WHITE IBIS REPORTED IN SOUTH WEST

Fauna Warden N.E. McLaughlan caused a fluttering in the dovecotes when, on August 21, he reported having on the previous day seen a platypus in waters north of Perth. About midday he had waded approximately 60 ft. out from the bank of a small lake, or bayou, connected with the upper reaches of the Swan River system, and was standing motionless in about 3 ft. of water on the fringe of a dense paper-bark thicket, when he saw a small furred animal swimming on the surface towards him. He said that at first he thought it to be a water rat, but as it drew closer he realised that it was a platypus. He said that the animal continued to swim leisurely towards him till it was less than 3 ft. away, when upon a slight movement on the watcher's part it dived into a tangled mass of fallen tree limbs. Mr McLaughlan asserted that there was absolutely no possibility of mistaken identity, as he had the animal under observation for almost three minutes. He used binoculars first, but later they were not necessary as the animal came close enough for him to touch it.

While it is suspected that a number of attempts have been made to acclimatise these monotremes in Western Australia, the only actual record is that of a pair forwarded by Mr David Fleay, when he was at the Healsville Sanctuary in Victoria. They were airfreighted to Perth in March, 1951, and subsequently released, we believe, in Mahogany Creek in the John Forrest National Park, Swan View. Incredible as it may seem that the observation was factual, Mr McLaughlan is in no doubt about it and attempts to record further observations will be made in the near future.

In an earlier report, Mr McLaughlan said that during the afternoon of August 15, in the company of Fauna Warden S.W. Bowler, he observed a flock of six white ibis

(Threskiornis aethiopica) on the southern bank of Bibra Lake, a few miles south of Fremantle. He added that the identification was positive, as the officers walked to within two hundred feet of the birds and, with the aid of binoculars, had them under observation while they were feeding on the ground.

#### SEISMIC OPERATIONS IN EXMOUTH GULF

As indicated in the previous issue of this Bulletin, Technical Officer R.J. McKay flew to Learmonth on August 5 to watch the effect on fish of underwater explosions carried out by Seismograph Service Ltd., of London, in connection with the oil research at present being pursued by West Australian Petroleum Pty.Ltd.

Mr McKay now reports that the seismic survey commenced on July 15 and the Exmouth Gulf survey was completed by August 9. In this period 2,035 shots were fired, the majority being set off inside the Gulf. The shots in the shallow water were made with charges a little under 16 lb. in weight and, when these became unavailable, explosives of 20 lb. weight were used in deeper water, both being electrically detonated. The charges were exploded by the shooting vessel "Necede" at one-quarter mile intervals, and the shots were recorded by the barge "Tamona" whose position was accurately fixed by four radio direction stations positioned at North-West Cape, the Bay of Rest, Learmonth and between the North-West Cape and Learmonth.

Mr McKay says that during the period when he was on board the shooting vessel, over 120 shots were fired, all in water 90 fathoms and over, but no fish were sighted after these explosions. He also says that schools of sardines were very numerous outside the Gulf but none were seen near the survey area. The shooting operators, however, reported having seen small fish killed and stunned by the shots inside the Gulf, and said that clouds of mud had often been seen disturbed from the sea bed when explosions took place in waters of 10 fathoms or less.

Fishing inside Exmouth Gulf and at North-West Cape had been reported as poor following the survey, and popular opinion is that the fish have departed. The fishing boat "Bluefin" subsequently made two hauls inside Exmouth Gulf, but landed no prawns. Some trash fish were, however, caught. Fishing for Spanish mackerel is said to be poor, not only at North-West Cape but also at the Cape Farquhar and Cape Cuvier where the seismic work had not then been

carried out. Shooting operators told Mr McKay that on commencement of marine seismic work it was usual to kill and stun fish, but that after a few days they seemed to leave the area and it was unusual to see many floating fish after the work had progressed.

No seismic shots were fired within five miles of the pearl culture lease in the Bay of Rest.

#### PROGRESS IN PEARL CULTURE

While he was in Exmouth Gulf area as reported above, Technical Officer R.J. McKay spent a day at the new pearl culture station in the Bay of Rest, established by Messrs A.C. Morgan and C.B. George. Mr McKay reached the station via a rough track in a Wapet-loaned Land Rover. He was told by Mr George that the Bay of Rest provided a good beach and camp site, a safe anchorage in most weathers, and a good clean bottom. The Giralia site had proved unsuitable as its anchorage was poor, the waters were shallow and extensive mud flats made access to the raft and boats difficult. In addition, the muddy waters contained many polychaet worms which infested the oysters there.

Mr McKay was also told that investigations were being carried out to determine the growth-rate of shell in the Bay as the depository rate appeared rather low. Efforts were also being made to identify the polychaet or annelid worms (which burrow into the lower shell plate), and to determine the breeding season, as the gonad development of the oysters appeared to be somewhat haphazard. An evaluation of the quantity of plankton available in the area throughout the season would also be made. As Mr George was having difficulty procuring a suitable type of plankton net, Mr McKay agreed to make one up from the specifications given.

Despite the difficulties so far encountered, the principals are understood to be quite pleased with the progress made to date.

#### "JON JIM" GEAR SALVAGED

Copper and brass fittings, and the engines and other valuable equipment, were salvaged last month from the 56-ft. freezer boat "Jon Jim", which went aground on a reef at the southern tip of Pelsart Island in Houtman Abrolhos about July 16. The hull was stripped and the remains deliberately set on fire to allow the fittings to be

salvaged and to prevent larger pieces of the wreck from becoming a menace to shipping. The salvage work was carried out by the Mangrove Island Syndicate.

#### FURTHER BOATS LOST OR DAMAGED

On August 2, the 60-ft. freezer boat "Eureka" was holed on a "lump" near the mouth of the Murchison River. Although she was able to return to Fremantle under her own power, it is understood that the cost of repairing the damage will be rather severe. On August 4, the 22-ft. fishing boat "Kimberley" owned by Mr E.A. Davies was damaged on a reef in Houtman Abrolhos. It was reported that she was later beached, but the extent of the damage she suffered is not known. The same night the 35-ft. fishing boat "Pam", skippered by Mr Lloyd Jones, was wrecked on a reef at Wedge Island, near Lancelin. The crew of the "Pam", who had been fishing for jew fish at the time, were taken on board the l.f.b. "Yvonne" and had only just been rescued when the "Pam" sank in deep water. It is understood that she was a total write-off.

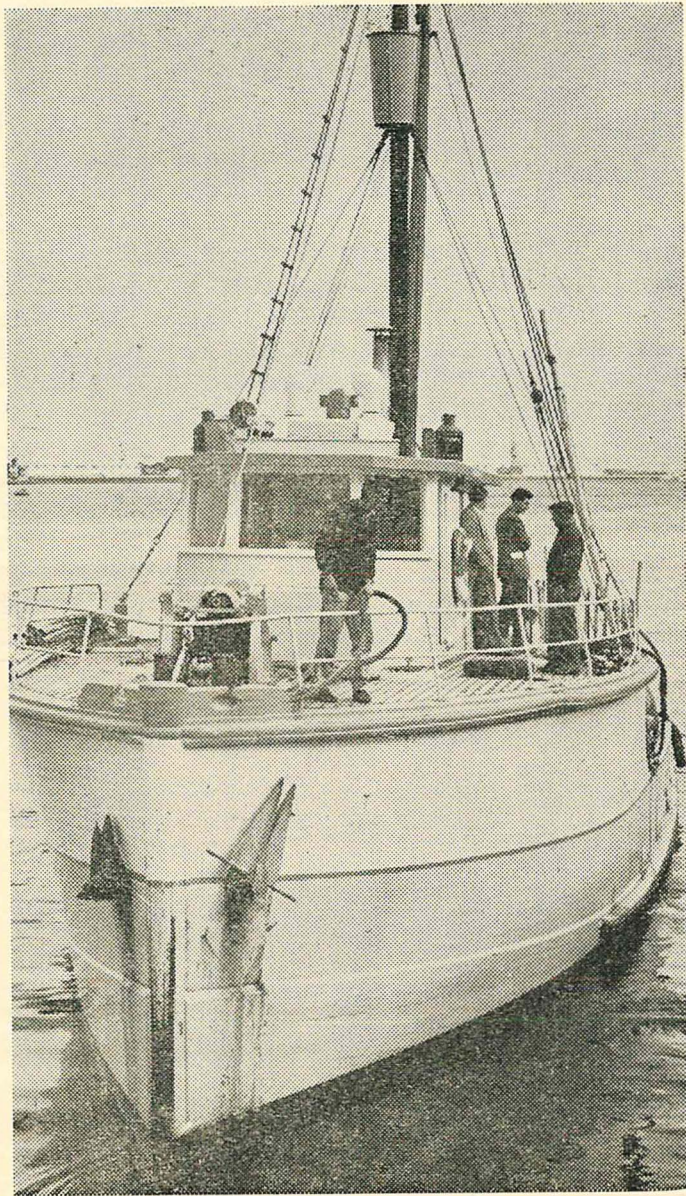
#### SEALING IN THE SOUTHERN OCEAN

Seals are taken for their blubber and other products at some of the islands in the Southern Ocean. Similar exploitation once took place on Heard and Macquarie Islands and also in the islands of the Recherche Archipelago (off Esperance), but wasteful methods resulted in periodic devastation of the seal herds. Although the revival of sealing is prohibited on all these islands, which are now sanctuaries, interest in the future of the populations has stimulated a C.S.I.R.O. study of the seal communities on Heard and Macquarie Islands to provide a basis for the conservation of the various breeding stocks.

Since 1951, over 5,000 elephant seal pups have been branded in the Antarctic with combinations of letters which enable the future history of individual seals to be followed. Some female seals have their first pup when four years old - and others not until their fifth, sixth, or even later years. The male elephant seals, which grow to 20 feet in length and four tons in weight, do not possess harems until they are about 15 years old.

The heavy natural mortality among first-year seals reduces their numbers to about one-third of the pups weaned, and only one-quarter survive into their sixth year.





*The "Estelle Star"*

Block by courtesy "The West Australian"

The seal population at Macquarie Island is estimated at about 110,000 and there are about 85,000 at Heard Island.

#### OPEN SEASON FOR FINCHES

The usual open season for finches in the Kimberley Land Division has been proclaimed to start on September 1. It will close on December 31. Any person desiring to trap finches for gain or reward must hold a license. On fulfilment of certain conditions and payment of the \$2 fee, licenses may be obtained from this Office. The activities of trappers in the Kimberley Land Division are again being kept under surveillance by Pearling Inspector R.J. Baird and Fauna Warden S.W. Bowler, who towards the end of August were to leave Mr Baird's headquarters at Broome by Land Rover for Wyndham.

It is expected that the almost total ban on the export of Australian fauna, which was imposed by the Commonwealth Government a couple of years ago, will again automatically limit the number of trappers to operate this season. As was the case last year, only sufficient birds will be taken to meet the demand of the Australian home market.

#### ABROLHOS CRAYFISHERY

AREA	June, 1960			June, 1961		
	No. of men	Total Catch	Catch per man	No. of men	Total Catch	Catch per man
		lb.	lb.		lb.	lb.
North Island	50	57,481	1,149	39	34,719	890
Wallabi Group	60	82,008	1,366	68	72,317	1,063
Easter Group	66	88,736	1,344	67	64,160	958
Pelsart Group	46	57,092	1,241	41	38,774	945
<b>TOTAL</b>	<b>222</b>	<b>285,317</b>	<b>1,285</b>	<b>215</b>	<b>209,970</b>	<b>976</b>

Total for four months - March-June

1957 -	2,521,536	Season opened	March	15
1958 -	2,886,110	"	"	15
1959 -	3,181,049	"	"	15
1960 -	3,265,374	"	"	1
1961 -	3,599,819	"	"	1

## CLEARING HOUSE

### Japanese Develop New Aromatic Salmon Bait

Japanese scientists have developed a new bait which enable fishermen to attract whole schools of fish to their hooks or nets for about a dollar.

Called Marinesol, the new bait comprises aluminum containers of anywhere from a few ounces to half-a-ton. They are filled with a scientifically-prepared colloidal solution of chemicals which swiftly dissolves in water, spreading an appetizing fish-food aroma which attracts fish from long distances.

(Western Fisheries                      Vancouver, B.C.                      May, 1961)

### New Theory Suggests Salmon "Home" By Observing Stars

Salmon may find their way to their spawning streams from the Gulf of Alaska and other ocean areas by some primitive means of celestial navigation. A group of scientists at the Nanaimo Biological Station specializing in salmon behavior developed this theory over the past year during exhaustive experiments with salmon in controlled environments.

Station director Dr Alfred Needler told a public meeting of the Canadian Section of the International North Pacific Fisheries Commission this month that the new theory has created considerable excitement in scientific circles. Dr Needler was addressing a group of fishing industry people on latest developments in Canadian participation in the Norpac Commission, and on Canada's role at the November meeting of the Commission in Vancouver.

He touched on the celestial navigation theory in relation to studies of the Pacific Oceanographic Group. "We have not found recognizable differences in salmon distribution on the basis of temperature or salinity. Temperature gradients or differences are too vague and spread over too great an area to have any affect on salmon at sea. We know that something else must determine migration patterns".

"There is a strong hint," Dr Needler continued, "that salmon are influenced by the sky the same as birds. Probably the most influence is the length of day.

"Birds can migrate by observing the sky. Scientists

have proven this possibility. In our salmon smolt experiments we have seen that as long as salmon can see clear sky they can find their way to their destination.

"We now believe that same form of celestial navigation is used."

This basic research at the Nanaimo station is being carried on under the direction of Dr Roly Brett. The scientist who has worked extensively on the celestial navigation theory is Mr van der Groot.

This new theory opens many fields of study, Dr Needler pointed out. "If salmon's whereabouts are governed by light of day, we may be able to closely plot their positions at sea at any given time. Oceanographic conditions, such as amount of feed available and temperature, salinity, etc., will now have a great significance. For whether the conditions are good or bad for the salmon it may be that he will be in a certain area regardless, because the light conditions direct him there."

In other words, feeding and other oceanographic conditions may have no bearing on salmon's whereabouts in the ocean. If daylight is the major factor in his migrations, he will have to take whatever the ocean has to offer in that particular place at that time.

Dr Needler said that because of the work of the Pacific Oceanographic Group the North Pacific is becoming one of the best known ocean areas in the world. "We have several 'firsts', of which the most important is the plotting of circulation of currents by use of barometric pressure readings," he said.

(Western Fisheries Vancouver, B.C. May, 1961)

#### West Germany Seeking New Fisheries - Limit Conference

West Germany is seeking a new world-wide conference to settle the chaotic fisheries limit situation.

Herbert Fornell, president of the German Fisheries Association, told a Seattle newspaper this month that he has found support for his campaign for a new Territorial Limits Conference in Washington, D.C., where he recently conferred with government officials.

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The Law of the Sea Conference, held in Geneva last year under U.N. sponsorship, ended in failure when a Canadian proposal was defeated by one vote. The Canadians, supported by the U.S. and Britain, had proposed a 6-plus-6 formula.

Fornell told the Seattle Times that "we cannot be 100 percent certain that success would be achieved at a new conference, but it should be tried again."

He said West Germany is solidly behind the "status quo". Some of the fishing nations have taken unilateral action since the Geneva conference, much to Germany's dismay. "Great Britain, behind our backs, made agreements with Iceland and Norway to accept a 12-mile limit," Fornell said. "In return, Britain has been granted historic rights within the 12-mile limits of both countries for 12 years. Now Britain is talking about a 12-mile boundary of its own. And Denmark may be next."

The German fisheries leader said that his country has asked for historic fishing rights from Iceland and Norway after learning about the British move, but "nothing has come of it yet."

Fornell is managing director of the huge Nordsee German Deep Sea Fishing Co. in Bremerhaven, which has about 8,000 employees.

#### MONO-FIL OUT-FISHES MULTI-NYLON 225:2

Evidence accumulates that mono-filament nylon nets are several times as effective in gillnetting tuna at sea as are nets made of conventional multi-filament twine.

For example: recently the research vessel "Charles H. Gilbert" of the Honolulu Biological Laboratory fleet made an experimental set of her gillnet around a school of oceanic Skipjack which had been chummed and fished with live bait. Half of the net consisted of conventional multi-filament nylon and the other half of mono-filament nylon.

The catch in the mono-filament section was 225 Skipjack; vs. 2 Skipjack in the conventional gillnet.

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In the previous instance when the fishing was interfered with by fouling the net on the "Gilbert's" wheel, the ratio was less, but still impressive - 60:3.

In yet another instance the ratio was 34:0.

In all this experimental fishing it thus far appears that chumming is necessary in connection with the gillnet; and that merely setting the nets in areas where Skipjack are seen is not economically effective.

(Pacific Fisherman                      Portland, Ore.                      July, 1961)

Pollution overtakes North Trout Farm

£50,000 disaster at Withern

Nearly a quarter of a million fish - worth possibly £50,000 - have been killed at Withern, near Louth in Lincolnshire, in one of the worst disasters to hit a trout farm in Britain.

Early this week Lincolnshire River Board pollution officials were taking samples of water from the ponds and the river which feeds them, the Great Eau.

Each week about half a ton of trout are taken from the farm to London hotels and ocean liners.

"This is the first year we have had any quantity of sizable fish," said Mr S.E.W. Hallam, of London, whose company bought the farm four years ago. "They were good healthy stock."

He found the two ponds furthest from the river were first affected. "We concluded the fish died from lack of oxygen and as it was restricted to the two ponds, weather conditions were thought responsible."

But the damage quickly mounted. Soon the ponds were thick with dead fish.

"The whole farm is virtually wiped out," said Mr Hallam. "River Board officials have taken tests and we have had the fish analysed. I am awaiting the results."

Effluence

"I walked the three-mile length of the river between Withern and Aby Mills, and found effluence in the river. There were hundreds of dead fish of all varieties. I even saw ducks distressed."

Entire breeding stock has been annihilated, the yearling stock has been reduced to about 15,000 and there was a heavy loss of baby trout.

"It is too early to say yet," concluded Mr Hallam, "but I expect we shall clean this up and put a completely modern installation here."

(The Fishing News

London

July 14, 1961)

Trusting tuna

More news about fishery research.

Tokio University's fishery department and the Japanese Fishing Agency have been taking undersea recordings of fish noises and amplifying the sounds.

So far, they have taped warning cries and mating calls. Reports indicate the latter might well be used to lure trusting tuna into a waiting net, like North Americans hunting moose.

(The Fishing News

London

July 14, 1961)

Row over Big Catches of Part-Timers

'Their fish flood market'

Complaining about what they call unfair competition from part-time fishermen, a petition circulating from the Lizard to Land's End is being signed by professional fishermen who operate in Mount's Bay to be sent Mr Grenville Howard, M.P. for St. Ives, Cornwall.

It states that the part-timers are landing commercial catches of mackerel and depressing the market. More than 100 Newlyn fishermen have already signed the petition.

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"We do not object to anybody earning a £1 or 30s.", said Mr Sam Harry, of the fishing boat Star of Scilly, "but when it comes to landing 20 or 30 stone of fish at a time it is a totally different matter.

#### 200 Stone

"There are sometimes as much as 200 stone landed by these part-timers. This brings down the price of fish, sometimes to 2s. or 3s. a stone."

Said Mr Graham Tonking, also of the Star of Scilly: "There are 40 or 50 of these part-time boats in Newlyn owned by shore workers of all classes.

"Their fish are left on the market overnight so that when we get in early in the morning we find the market already glutted.

#### Sold First

"By getting in first they get their fish in the best places on the market and often it is sold first at top prices while the bona fide fishermen have to stand by and wait."

The professionals point out that by being allowed to register their boats as fishing smacks, though they are "no bigger than bath tubs," the part-timers are able to claim the professional fishermen's privileges of Government subsidy on their catches, cheap petrol, and the right to sell their fish on the market.

"Why should men already earning be allowed to take away our living?" asked Mr F.P. Howis and Mr L.G. Washer, joint owners of the Silver Dawn.

#### Closed in

Mr Washer complained that the other night, when the Silver Dawn ran into a school of mackerel, 18 part-timers at once closed in so tight there was not enough room to manoeuvre to catch fish.

"It seems anybody can get a boat registered at Newlyn and have fishermen's privileges," said Mr Tonking, "yet it cannot be done at Plymouth."