FISHERIES DEPARTMENT, WESTERN AUSTRALIA

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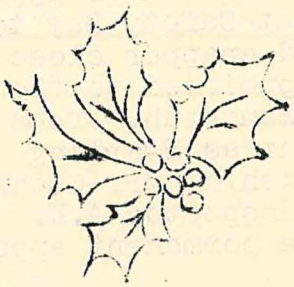

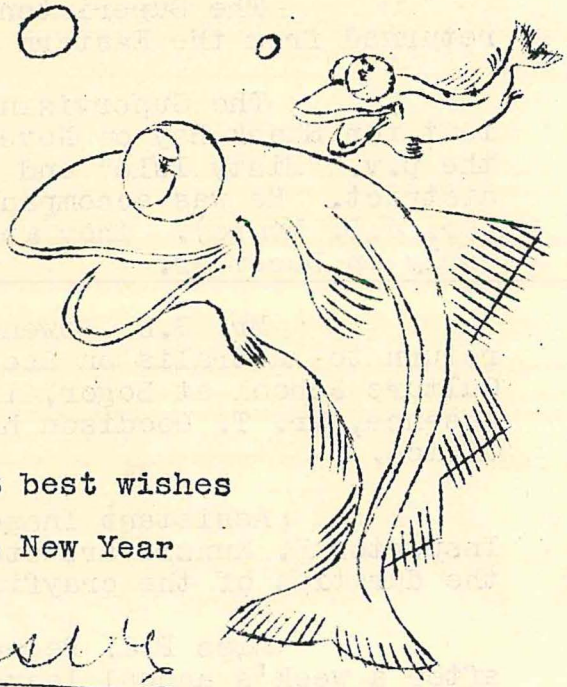

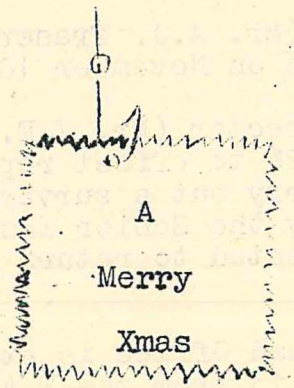

There is no catch, just best wishes

for Christmas and the New Year

Superintendent

STAFF NOTES

Mr. M. Goodlad, Pearling Inspector, Broome, will retire from the service on December 1. Born in the Shetland Islands, Mr. Goodlad as a young man was engaged in fishing with his father and brothers. He later served many years at sea, retiring with the rank of quartermaster. On his arrival in Western Australia, Mr. Goodlad spent some time in the Goldfields before going to Bunbury, where he was engaged in commercial fishing activities and became one of the State's leading handline fishermen. In 1938 Mr. Goodlad was appointed as whaling inspector on the factory-ship "Frango", and kept a watchful eye on the whaling fleet at Shark Bay. At the end of that season he was appointed a temporary inspector and stationed at Safety Bay to ensure that the then newly instituted snapper close season was observed. He was later appointed to the permanent staff and served at Bunbury, Mandurah, Fremantle and Perth before his final appointment as Pearling Inspector, Broome. We all join in wishing Mr. Goodlad many, many happy years of leisure. Inspector A.K. Melsom is relieving at Broome until a permanent appointment is made.

The Superintendent (Mr. A.J. Fraser) returned from the Eastern States on November 10.

The Supervising Inspector (Mr. J.E. Bramley) left for Shark Bay on November 26 to effect repairs to the p.v. "Misty Isle" and to carry out a survey of the district. He was accompanied by the Senior Inspector (Mr. J.E. Munro). They are expected to return to Perth early in December.

Mr. B.K. Bowen of Head Office is expected to return to Australia on December 13 from the F.A.O. Fish Culture School at Bogor, Indonesia. During Mr. Bowen's absence, Mr. T. Goodison has been assisting at Head Office.

Assistant Inspector R.J. Baird and Cadet Inspector K. Kunzli are stationed at Lancelin Island for the duration of the crayfish season.

Miss P.J. Pegrum of Head Office resumed after a week's annual leave on November 28. Miss V.T.

Hogan will commence seven days' leave on December 8.

Assistant Inspector B.A. Carmichael commenced annual leave on November 28 and during his absence Inspector R.M. Crawford will be in charge of the Geraldton district.

Inspector A.V. Green resumed duty at Albany on November 28 after three weeks' annual leave and one week's sick leave.

The Clerk in Charge (Mr. B.R. Saville) and the Senior Clerk (Mr. H.B. Shugg) will both proceed on annual leave in the latter part of this month. Technical Officer J.S. Simpson is also due to commence annual leave on December 22.

Technical Officer J. Traynor is expected to resume duty after long service leave on December 21.

CHRISTMAS AND NEW YEAR HOLIDAYS

In a recent "Government Gazette" it was notified that December 26 and 27 and January 2 and 3 have been proclaimed as public service holidays throughout the State.

FISH FOR RESEARCH PURPOSES

One or two complaints, not really very serious, have been received concerning the use by the Department's technical officers of fish taken from fishermen's catches for the study of gonad development and the like. In all cases in which fish are used, of course, the approval of the fisherman concerned is always first sought, and it is only on very rare occasions that his consent is withheld.

The vast majority of fishermen appreciate the value to the industry of the Department's estuarine research programme, and recognise that by providing a few fish for sampling, they are making a contribution to the study of our fishes.

The Department would be groteful if inspectors generally, in addition to rendering as much assistance as they can to the technical staff, would bring this point of view strongly before fishermen if any adverse comments are made to them at any time. It is not anticipated that many such comments will be made.

One fact we must all bear in mind is that each member of the staff, regardless of what duties are assigned to him, is a link in the departmental chain, and without him that chain would be useless. Each man is doing an important job, and it is most unseemly for any one officer to decry the duties undertaken (by direction of the Superintendent) by any other officer. This is purely and simply disloyalty, not only to the officer concerned but also to the Chief and to the Department. In all circumstances, therefore, criticism levelled at the Department, or any officer, must be repelled with all the force at our command. It all boils down to this, really, that if we attended full time to our own business, we would have no time left to concern ourselves with the business of other staff members.

Superintendent.

KANGAROO SEASON ENDS

The open season for grey kangaroos in Gingin, Upper Blackwood, Manjimup, Tambellup and Plantagenet terminated on November 30. As from December 1 grey kangaroos can be taken within the reserve area only by the holder of a license, except in the Moora, Dumbleyung, and Wagin vermin districts where they have been declared "vermin".

IMPROVED CRAYFISH CATCH AT PORT DENISON

Assistant Inspector B.A. Carmichael reported last month that the 1955 September production

figures for the above area showed an amazing increase. The figures for the last five years for the month of September are as follows :-

Period	No. of boats	No. of men	Production lb.
September, 1951	6	8	3,660
" 1952	5	7	2,295
" 1953	3	4	3,029
" 1954	4	5	2,724
" 1955	12	25	29,413

Inspector Carmichael said that the increase was due to a number of factors, the basic one being that there was an abundance of fish to be caught. Weather conditions largely followed the pattern of previous years, although they may have been a little more favourable this year. Another factor, he continued, was that 25 to 35 pots per boat were used compared with 15 to 20 pots in previous years. The boats also were faster, being powered by larger engines, which allowed double the number of pots to be worked in the same period of time. The boats also operated farther out and some worked grounds which had never been touched before.

The Department agrees with the suggestion by Inspector Carmichael that some of the credit for the increased catch must be due to the constant and close supervision made in years past by Inspector S.W. Bowler, during his oversight of the district. Fishermen have realised that the Department's supervision is entirely for their own and the industry's good and their co-operation in observing conservation measures has made the increased catch possible.

The catch fell away in October and November, but it is expected to increase again when the "white" crayfish run commences.

"WHITE" CRAYFISH

Reports from centres between Fremantle and Geraldton reveal that the eagerly awaited run is much later this year than last.

Although the season officially opened on November 15, only a few bags of "white" crays have so far been received in Fremantle from Lancelin and Yanchep.

F.A.O. FISH CULTURE SCHOOL, BOGOR, INDONESIA

Mr. B.K. Bowen of this Department who is one of Australia's two nominees attending the school of fish culture currently being held by F.A.O. at Bogor and elsewhere in Java - the other Australian is Mr. John Lake, of the N.S.W. Fisheries Department - has written a most interesting interim report of the activities of the school.

The Director of the school is Mr. W.H. Schuster, biologist, Food and Agriculture Organisation of the United Nations, and formerly fishery consultant in the Inland Fishery Laboratory, Bogor. The teaching staff includes men like Frey, Beckman and Goodsell, all Americans, who are really first-class in their field.

The first fortnight was spent in lectures on all sorts of topics from limnology, (i.e., the study of small organisms inhabiting freshwater) to the economics of resource utilisation. Included in the lectures were such matters as (1) the importance of knowing temperature range of water and how this can be established; (2) the importance of knowing the oxygen and carbon dioxide contents of water and how they may be determined; (3) the importance of pH tests (i.e., of determining acidity or alkalinity of waters) and how they are carried out; (4) the importance of dissolved inorganic substances; (5) the importance of knowing the type and density of zooplankton (minute animal organisms) and phytoplankton (minute vegetable organisms) and the methods of determination; (6) the dynamics of oxygen utilisation and the effects of too much vegetation, etc. (7) the importance of understanding fully the biology of the fishes to be used for culturing and stocking and their ecological requirements (i.e., the type of environment essential to their well-being); and finally (8) general policy regarding exotic (introduced) species, the laws of fishery management and the economics of fish farming. Mr. Bowen comments that the lectures have on the whole been really excellent.

The third week was occupied with field trips in Eastern and Central Java. Although they were largely directed to a study of the fish in the area, they proved interesting, useful and instructive. The students were taken to one of the lakes and in a practical way went through the techniques referred to earlier by the lecturers. They have also seen the catching and rearing of prawns. During the following week the students were to be taken to Bandoeng for a few days to inspect fish culture methods in rice fields. Every available type of water in Indonesia, Mr. Bowen says, is used. One method commonly used is the breeding of common carp in bamboo cages in the sewers.

Mr. Bowen will reach Darwin on his return on December 13, and should reach Perth a few days later. As soon as possible after he submits a complete report on his experiences, etc., copies will be made available to the staff generally.

OPEN SEASON FOR MARRON

From December 1 until April 30, any person may take marron from the waters of all rivers, lakes and streams in the South-West, provided legal means of capture are used. Commercial exploitation of this freshwater crustacean is totally prohibited and any person selling them is liable to prosecution. Unattended traps are strictly prohibited throughout the year.

COMMONWEALTH FISHERIES ACT

A note from the Director of the Commonwealth Fisheries Office (Mr. F.F. Anderson) informs us that it is not yet possible to allow Commonwealth fisheries licenses to be issued in December in respect to the licensing year commencing on January 1 following. It is understood however, that an amendment will be introduced into the Commonwealth Parliament in the new year to permit the early issue of licenses in future years.

BUFFALO BREAM IN PEEL INLET

Inspector S.W. Bowler reports that, on November 22, Mr. Sam Renfrey caught a 4 lb. buffalo bream in a 3" cobbler net while fishing near Boggy Bay in the Peel Inlet.

Inspector Bowler comments that this was a most unusual occurrence, as buffalo bream are a sea fish and have not been taken in these waters previously, as far as he knows.

COMMITTEE MEETINGS

The Fauna Protection Advisory Committee will meet on December 1 to decide what recommendation it will make to the Minister regarding the opening of the coming duck shooting season. Representatives of shooters will address the Committee and present their points of view.

The Fishermen's Advisory Committee will meet in Geraldton on December 7 and 8 to take evidence regarding the Geraldton - Abrolhos crayfish fishery.

Both meetings, will be attended by the Superintendent (Mr. A.J. Fraser) and Mr. H.B. Shugg (of Head Office), as Chairman and Secretary respectively, of the two Committees.

VACANCY AT BROOME

In the "Government Gazette" of November 25 applications are called for the position of Inspector (Broome), classification G.II.2. Applications close with the Public Service Commissioner on December 10, and should be made on the prescribed form. All applications must be forwarded to Head Office for endorsement by the Superintendent prior to transmission to the Commissioner.

OPEN SEASON FOR WILD DUCKS

The Minister administering the Fauna Protection Act (Mr. Kelly) announced yesterday that the open season for wild ducks will commence as follows :-

(a) at 6 p.m. on the evening of Saturday December 17, in the Harvey, Bunbury, Capel, Dardanup, Collie, Preston, Busselton, Augusta-Margaret River, Nannup, Balingup, Greenbushes, Bridgetown and Manjimup Road Districts;

(b) at 5 a.m. on the morning of Sunday December 18, in all the rest of the State.

The open season would not apply in any of the following areas which have been set aside as sanctuaries :-

(a) The whole of the area within a radius of twenty miles of the General Post Office, Perth.

(b) All municipalities and townsites in the South-West Land Division.

(c) The whole of the Rockingham Road District.

(d) The whole of the waters of Lake Leschenaultia, Yealering and Soppings, and Bambun, Wagin, Nambung, Mungala, Nannerup and Wardering Lakes, and all land within twenty chains of their shores.

(e) The whole of the waters of Leschenault, Wonnerup and Vasse Estuaries and all land within twenty chains of their shores.

(f) The whole of the waters of the Vasse, King and Kalgan Rivers, and all land within twenty chains of their shores.

(g) All that portion of the Capel River between the Capel and Stirling Bridges and all land within twenty chains of the river bank.

(h) The whole of the waters of Oyster Harbour and Princess Royal Harbour and all land within a radius of twenty chains of their shores.

(i) The whole of the area of the Yanchep Caves Reserve.

(j) The whole of the Harvey Catchment area.

(k) The whole of the area within a radius of two miles of the Post Office at Mandurah.

(l) The whole of the area within a radius of two miles of the Post Office at Boyup Brook.

(m) All that portion of the Avon River from Dumbarton Bridge to the Railway Bridge, north of Toodyay and all land within twenty chains of the river banks.

(n) All that portion of the Serpentine River from Road 8629 at the southern end of Goegrup (Willies) Lake to Peel Inlet near the Old Mill and all that land within twenty chains of the river banks.

(o) All State Forests and Timber Reserves.

Mr. Kelly said that very serious consideration had been given to a suggestion received from a number of quarters that the opening should be delayed to protect the immature birds which would still be about on opening day. However, it was decided that the amount of water available would tend to keep the ducks scattered and would provide sufficient cover for the young birds.

Mr. Kelly also said that the bag limit will remain at 15 ducks per day, and pointed out that it is illegal for any person to use traps or decoy-traps for the capture of wild ducks. The use of spotlights and beaters as shooting aids is also prohibited.

Shooters' scorecards will again be issued and the co-operation of the shooting public in keeping a record of the ducks they shoot is earnestly requested. All persons are also requested to ensure that any bands recovered from ducks are sent in immediately to the Department with the details of the taking, that is the species, date and place of recovery and any other information, such as the condition of the bird.

THE CLEARING HOUSE

Ocean Fishing License Advocated

Francis W. Sargent, Director of the Division of Marine Fisheries of the Massachusetts Department of Natural Resources, discloses that now at the peak of the summer vacation season he is being deluged with conflicting demands for restrictive regulations regarding every phase of the coastal fishery - demands to halt all trawling and seining in coastal waters - demands to permit trawling and seining in restricted waters - demands to halt the sale of striped bass - demands to prohibit catching fish and lobsters with underwater diving apparatus, etc.

"All too often", Sargent stated, "pressure groups have caused regulations to be adopted hastily without basic knowledge of the species to be regulated, without any planned course of determining accurately whether or not that regulation is actually accomplishing the desired purpose - either for the regulated species or other species which might likewise be affected by restrictive measures.

"In the last analysis", Sargent commented, "to be able to catch more fish without damaging the resource for the future is the desire both of the angler and the commercial fisherman whose livelihood is dependent upon harvesting the sea.

"Yet, to manage any fishery so as to permit maximum yield on a long-term basis requires a fund of accurate knowledge - knowledge," Sargent explained, "which unfortunately is lacking even concerning the most common salt water fishes of both commercial and recreational importance.

"Basic knowledge is vital - Are the fish migratory? Do they spawn locally? What is the desirable size for capture? How many fishermen, either recreational or commercial, are engaged in the fishery? What are the annual landings? These are but a few of the basic questions which need answers before sound regulations can be adopted.

"To acquire answers to these questions," Sargent states, "requires painstaking study, often expensive equipment and highly specialised technical personnel to undertake scientific investigation in the unexplored world under the ocean surface."

Sargent declared "To adopt sound regulations based on accurate knowledge, then to enforce those regulations, and finally to assay the effects of the regulations, costs money. Substantial revenue earmarked for those purposes is required to do a real job.

"Each year more and more people from all walks of life are thronging to coastal communities to enjoy salt water fishing. The recreational benefits are obvious - the economic importance of this asset in terms of increased tourist trade to coastal states is rapidly becoming recognised.

"No one enjoys being taxed", he stated, "nor does anyone enjoy the bother or expense of a license. Nevertheless, the question requires serious consideration - the general taxpayer can hardly be expected to provide substantially increased funds for this.

"Bearing in mind these thoughts," Sargent disclosed, "I feel that I must recommend that all persons engaged in our ocean fishery, whether earning their livelihood, by this means, or enjoying the recreational benefits thereof, be licensed and through modest fees, specifically earmarked for the purpose, support a forward-looking programme to increase, yet protect, the harvest of the sea."

("Fishing Gazette" New York August, 1955)

Fishery Technology is Taught at This American University

In the United States, one of the best and most extensive schools for the scientific study of fish is located in the Pacific port city of Seattle, in the State of Washington. The University of Washington operates a School of Fisheries to which students come from all over the world.

These students prepare for positions in fishery research and technology, requiring a highly specialised knowledge of the various fish species, conservation methods, fish culture, and diseases of fish. Students are graduated with a Bachelor of Science degree, and advanced study programmes are offered leading to the Master's and Doctor's degrees.

Its graduates have been employed in lands all around the shores of the Pacific Ocean. Others take assignments in practical fisheries problems as well as technological and scientific management of fisheries in Latin America, Europe, South Asia and Africa.

This school specialises in marine or salt-water fisheries training, and the Pacific salmon is the fish it is best situated by geography to study. Numerous other American institutions provide courses in fresh-water fisheries, aquatic biology and specialised fisheries research. Among schools providing some courses in the fisheries curriculum are Alabama Polytechnic Institute, Cornell University, Amherst College, the State universities of Michigan and Wisconsin, and the agricultural and mechanical colleges of Texas and Oklahoma.

Canal

The School of Fisheries of the University of Washington is located on a canal connecting ten-mile-long Lake Washington and the vast Puget Sound, penetrating the State more than 60 miles, which contains one of the Pacific coast's largest fishing fleets. The Puget Sound region has ample facilities for both salt-water and fresh-water fishing.

Students at the school not only use extensive laboratories in the sciences of fish study but also have access to the facilities of the Department of Oceanography of the University of Washington, the Fisheries Research Institute (organised by the salmon-fishing industry), and the International Fisheries Commission (established by a Canadian-United States treaty to promote the conservation of the Pacific halibut fish).

The School of Fisheries maintains offices within its modern building for certain Federal and State agencies: the Washington State Fisheries Department and the U.S. Fish and Wildlife Service. Still another special facility quartered in the school is the Applied Fisheries Laboratory, supported by the U.S. Atomic Energy Commission.

In many parts of the world the fishing industry is seeking economically valuable fish and more efficient methods of preparing them for food. Some graduates from the School of Fisheries do research on the migration and propagation of fish.

The students use a 50-foot diesel-engine boat (called the Oncorhyncus, the technical name of the North Pacific salmon) with cabin laboratory for research in Lake Washington and Puget Sound. The vessel has equipment for trawling, trolling, seining, and various oceanographic operations. Fish are collected on trips made in the boat, and some specimens are often added to the school's collection used for instruction and research.

The school collects and trades fish - like collecting and trading postage stamps - and there are many thousands of unusual specimens.

Students have the use of an experimental fish hatchery and salt-water aquaria. There is also a series of concrete ponds through which trout fish and salmon pass their entire life cycles under student observation.

A number of distinguished guest speakers visit the school each year to lecture on recent developments in the many specialised areas of fisheries work.

("South African Shipping News and Fishing Industry Review" Cape Town October, 1955)

How Does your Gear Look to Fish Beneath the Sea?

That five bright pink synthetic fibre gillnets were seen recently on the net rack at Steveston reminds us that much experimentation in web

coloration has been going on in B.C. down through the years. From the dawn of salmon fishery here white linen thread was the standard. About thirty years ago we began to oil the web, which gave it a green tinge and it was discovered that such a net fished better, although the original aim was to add to the life of the twine.

Water greatly magnifies the size of the threads below the sea to advertise its presence to on-coming schools, that is why the ancient Egyptians kept to fine Nile Delta hemp threads for fishery. That fish are able to distinguish colors is suggested by the fact that tuna fishermen discovered that such fish are attracted by certain color combinations on the lure. So we become interested in the vision of a fish.

While the eyes of a fish appear to be much the same as ours, actually the fish is much more short-sighted. The fish view things somewhat like this. The surface of the sea is its sky or ceiling. Such to the fish resembles something like a large mirror reflecting the ocean bottom when it is in fairly shallow water. Except for this ceiling, which appears as a small hole above when the fish is down deep, the fish sees nothing of this outside world of ours. It sees the river bed below reflected above in its natural color: green when there is a reflection of vegetation growing on the bottom.

Objects directly overhead appear in normal shape to the fish, but objects seen through its ceiling at any angle at all appear to be dwarfed and distorted. It is only through the skylight above that the eye of the fish may see fishermen above. If a fisherman's net is in the water the fish sees only the submerged web, or fishing lines, but nothing of the gear floating above on the surface of the water. The fish, however, do see the web below and that is why we endeavour to make it less conspicuous to the vision of the fish.

Tuna fishermen have established that fish are able to distinguish between colours for lures of certain colour combinations would be found to have more teeth marks. Could it be that fish are colour-blind to certain colours?

The fish are able to see more down in their world than we are able to see down below the surface, but up in our world it is comparatively blind, such as when salmon break surface. They do so blindly.

Who knows! We may yet develop a gillnet of many colours, such as the camouflage developed during the war to conceal ships and guns so as to resemble shrubbery.

("Western Fisheries" Vancouver B.C. September'55)

Fairtry Home Again

Diverted to Hull because no berth was available for her at Immingham, the Leith factory trawler Fairtry was held up for several hours at the port because there was no labour to unload her record catch.

The Fairtry is hoping for a quick turn round so that she could be off again by September 17 and back again in Hull for Christmas or the New Year.

She has been on an 82-day trip to Greenland and Newfoundland and docked in Hull shortly before midnight Friday, September 9.

Work had not begun on her by midday the following day, but was started shortly afterwards, and hopes are high that her delay will not be too long. The task of unloading her 662 tons of frozen fillets and 122 tons of fish meal is expected to take five or six days.

Holds Packed Tight

The Fairtry's storage space is packed to the last square inch with haddock, halibut, cod, flounder and one small shark.

Fine weather played a big part in this, her fifth record breaking trip. There was not a single day on which fishing was not possible.

The Fairtry is owned by the whaling firm of Chr. Salvesen and Co., of Leith, Scotland, and was skippered by Mr. L. Romyn, of Bridlington.

Six of her crew of 80 come from Hull, 38 from Scotland and the remainder from Grimsby and other fishing ports.

The winches will pull up 25,000 lb. at a heave in good weather. If there is too much fish in the haul they cut a hole and let some of the catch swim free.

She has also 350 gallons of liver oil and just over 100 tons of fish meal.

("The Fishing News" London September 16, 1955.)

Peru Grants Permission to Four U.S. Vessels to Fish Within 200-mile Territorial Waters Claim

The Peruvian Government has given authorisation to a Peruvian firm to allow four United States flag fishing vessels to operate within the Peruvian 200-mile territorial waters claimed by them. The government newspaper La Nacion claims: "Peru's 200-mile limit has again been confirmed and its basis on sound jurisprudence ratified."

The Peruvian newspaper continues: "Within this limit it is not permissible to fish, hunt whales, nor carry on any industry based on fish without obtaining previous permission - such as this corporation has done - under penalty of fine, requisitioning of the fish illegally taken, or capture of the ships, as happened during the latter part of the year in the case of the Onassis fleet and, more recently in the case of ships belonging to North American industry.

The authorisation provides that "the fish caught by these vessels will be considered nationalised (Peruvian) and there will be paid an export tax of eight dollars per ton of fish.

The authorisation is valid for a period of one year.

("Fishing Gazette" New York August, 1955)

An Early Whaling Station

An almost complete set of equipment belonging to a Russian whaling station, dating back to about 1700, was found by archaeologists in Spitsbergen this summer. Traces of a British and Dutch whaling station were also discovered. The expedition also found a number of flint implements thought to date from the Stone Age.

("The Fishing News" London September 16, 1955)

Trout Goes 100 Miles

A rainbow trout, tagged and released on the Manistee River in Michigan last spring, was recently captured near Homestead Dam, about 100 miles from the point of release, the Michigan Conservation Department reported.

When tagged the fish weighed 42 ounces and was 19 inches long. When recaptured it weighed 60 ounces and measured 22 inches long.

("Fishing Gazette" New York August, 1955)

Asia

Continental Shelf Claim

The President of India has proclaimed the country's full and exclusive sovereign right over the sea bed and sub-soil of the continental shelf adjoining Indian territory and beyond its territorial waters.

Announcing this in a press note the Ministry of External Affairs said valuable natural resources were known to exist on the sea-bed and sub-soil of the continental shelf and the utilisation of such resources was being made practicable by modern technology.

("World Fishing" London October, 1955)

the Ministry of Agriculture and Fisheries. This depth is far below that of any possible trawling operations. It is one of these trips that has recently been mentioned in the newspapers.

In all cases the cargo is accompanied by a responsible officer from the Atomic Energy Research Establishment, Harwell, who certifies to the Ministry of Agriculture and Fisheries the total tonnage dumped and that all containers sank. He also supplies an extract from the ship's log giving the area of dumping.

The level of radio-activity handled in these disposals, having regard to the nature of the operations and the location, is such that there can be no conceivable health hazard as a result either through fish or in any other way.

("World Fishing" London March, 1955)

Better Method for Killing Crabs

A more humane method of killing crabs - by piercing the brain - has been found by experiments carried out at the Marine Biological Laboratory, Plymouth, by Dr. John R. Baker, of the Department of Zoology, Oxford University.

Various methods tried to make crabs insensible before boiling included immersion in strong salt solution, and in tap water, with gradual increase of the temperature to boiling.

Best method proved to be to pierce the brain and ventral nerve mass with an awl. It is said that the technique can be taught in 15 minutes to any ordinary person accustomed to handling crabs.

The experiments are reported fully in the February issue of the Journal of the Marine Biological Association, published by Cambridge University Press, which says that it is fortunate that this awl method, which seems best from the point of view of animal welfare, should also commend itself to fishmongers and canners.

("The Fishing News" London March 18, 1955.)

New Coelacanth Find

A female coelacanth - the prehistoric "fish with hands," carrying more than 60 eggs, has been caught off the island of Anjouan in the Indian Ocean, says Reuter from Madagascar.

The body of the fish, the fifth to be caught in the region, is in perfect condition and scientists expect to gain considerable information on the coelacanth's reproductive system.

Before the recent discoveries, scientists believed the coelacanth, which lived in the sea in large numbers 50 million years ago, to be virtually extinct.

("The Fishing News" London March 25, 1955)

Other Countries Fall Into Line with Peru Claims

Peru has again acted in defence of the rights which she, like Chile and Ecuador, claims over fishing and whaling within 200 miles of her coast.

Reports indicate that two U.S. craft have lately been fined 5,000 dollars (about £3,000) each for fishing in the area without permits. Peru has refused a U.S. invitation to discuss the problem unless Chile and Ecuador are also represented.

The U.S. has told Peru that she does not accept any territorial limit at sea beyond the usual three miles, but Peru has pointed out that El Salvador has for some time claimed a 200-mile limit, that President Rhee of South Korea has claimed 60 miles and that varying limits are claimed by the coastal states of the U.S. herself.

("The Fishing News" London March 18, 1955)