

20
150870
NAL
020056-13.08

17 AUG 1964



MONTHLY SERVICE BULLETIN
WESTERN AUSTRALIA. FISHERIES

DEPARTMENT, WESTERN AUSTRALIA
SERVICE BULLETIN

August 1964
DEPARTMENT OF PARKS AND WILDLIFE

CALM LIBRARY ARCHIVE
NOT FOR LOAN

Vol. XIII, No. 8

August, 1964

STAFF NOTES

To carry out further crayfish tagging at the Easter Group of the Abrolhos Islands, r.v. "Lancelin", under command of Captain C.J. Seabrook, left Fremantle on July 30 for Geraldton. Also on board were Mr. B.J. Duckrell, who was recently appointed to the position of mate and whom we welcome to the staff, Technical Officer J.S. Simpson and Cadet Inspector K.P. Enright. The latter two were making the trip to carry out the tagging programme. However, on arrival at Geraldton on July 31, Mr. Simpson, who had suffered great discomfort during the last few hours of the voyage from Fremantle, was admitted to St. John of God Hospital with severe enteritis. Later advices indicate that although he will be discharged from hospital within a few days, he will be unfit for work for approximately two weeks. All members of the staff wish him a speedy recovery from his illness.

* * *

Research Officer R.J. Slack-Smith and Technical Officer E.H. Barker both commenced one week's annual leave on July 31. Mr. Slack-Smith will subsequently return to Shark Bay to continue the Department's prawn research programme. Senior Inspector A.K. Melsom (Fremantle) will take three months' long service leave from August 3. Officers who will start annual leave this month include Inspectors F.J. Campbell (Shark Bay), on August 3 and A.V. Green (Perth), B.J. Carmichael (Geraldton) and E.R. Hammond (Bunbury) on August 24. Inspector R.G. Emery will relieve Inspector Campbell, Inspector T.B. Baines will relieve Inspector Hammond and Inspector R.M. Crawford will relieve Senior Inspector Melsom from August 3 to August 21, and Inspector Carmichael from August 24.

ALLOWANCES INCREASE

Following a review of hotel tariffs, and following and agreement reached with the Civil Service Association,

the Public Service Commissioner has advised that the daily rate of reimbursement for travelling, transfer and relieving expenses have been increased from 54/- to 58/6 per day as from July 1, 1964.

1964 STAFF CONFERENCE

The 1964 staff conference was held from July 22 to 24 in the laboratory of the Research Section at the Department's headquarters in Perth. Most members of the staff attended one or more sessions, and almost all were present when the Director called on the Minister for Fisheries, Mr. Ross Hutchinson, to declare the conference open. The following is a transcript of the Minister's remarks:-

"Mr. Fraser, Mr. Saville, Ladies and Gentlemen -

"I am pleased to be here again to open this field officers' conference. I have noted over the years, even before I became Minister for Fisheries, how the Department's establishment has grown, particularly in the fisheries section.

"The Department discharges a very important responsibility, that is, the management, development and conservation of the fisheries around the coastline of Western Australia. The crayfisheries perhaps have assumed the greatest importance, because they comprise the richest and most productive unit fishery in Australia. The production reaches something like 9,000 tons a year valued at some £4,000,000 to the fishermen. So upon the Department, and upon you as the work force, devolves the great responsibility of ensuring that this particular fishery, and all the others as well, are maintained properly.

"I know there is much intolerance on the part of fishermen who are engaged in the industry, and a great lack of public appreciation of the role that is played by the men in the Fisheries Department. This is unfortunate. It is rather incongruous to me, and must also be incongruous to you, that you, the very people who are trying to bring about the proper management of the fisheries, who are trying to assist in the conservation of a fishery so that it will continue over a long number of years, who in fact are doing all you can to help the fishermen, should be looked upon by some fishermen, and by other groups of people, as the enemies of the fishermen.

"There are, of course, very many good fishermen who are alive to their responsibility to maintain the industry in perpetuity, but there is a proportion who are so endowed with qualities of greed that they try to find loopholes in every new fisheries law that is passed and thus make our task very difficult.

"As you all know an inquiry into the crayfishing industry is going on by what was originally a Select Committee of the Legislative Council but was later appointed a Royal Commission. It will be interesting to see what sort of report this Royal Commission brings down. No Department works perfectly, of course: no person ever works perfectly. At the same time, I believe the Department has done its level best to face up to and overcome the many problems associated with the supervision and management of the fisheries. All I expect the Department to do is to play the game and for each individual member to do his job. I know this has been done.

"I have been rather serious this morning, But I think occasionally there is a time for serious thinking. I think this conference can be a very valuable experience. Each one of you must meet with a great number of problems during the course of your work. This is the place where you can air your difficulties and seek advice. This is the place where your problems can be tossed around in discussion. There is no problem to which a solution cannot be found by airing it in the presence of sympathetic listeners.

"I know that your numbers are increasing and it was with great pleasure that we were able to appoint five additional inspectors last year. To all new members of the staff I, as your Minister, give a very warm welcome. To those of you who have been in the job for many years I offer my thanks for loyal service in the interests of the fishing industry generally. I do hope that at the conclusion of the conference you will have learned something of value to you in your work.

"I have very much pleasure in declaring the meeting open." (Applause)

On behalf of the staff, Mr. H.B. Shugg, Fauna Officer, moved a vote of thanks to the Minister. He said -

"It is indeed a pleasure and privilege for me to thank the Minister on behalf of all of us for coming here today to open our conference. In doing this I must say how much we appreciate the interest that the Minister has

always shown in all facets of the Department's work. As the officer in charge of the Fauna Branch, I primarily appreciate his rare insight into and sympathy for the needs of fauna conservation. We have all been impressed with his ability to keep astride of the many developments of all the different phases of departmental administration. Perhaps we appreciate most of all the sympathy that he has displayed to us in our more difficult moments, and his grasp of the ramifications of the sometimes conflicting operations of the State and Commonwealth Acts. We certainly hope, Mr. Hutchinson, that you will be here to open many more conferences.

"Gentlemen, join with me in thanking the Minister in the usual manner." (Applause)

A highlight of the conference was an address by Mr. H. Ende, a management consultant of the Perth Technical College, who spoke last year as well. Although unused to modern conference techniques, the field staff co-operated wholeheartedly with Mr. Ende when he divided the conference into four groups and asked of each one of the following questions:

1. How can the administration of the Department be improved?
2. How can we improve these conferences?
3. What are the main problems hindering the Department?
4. How could the Department's public relations programme be improved?

The response Mr. Ende obtained from the groups was most objective and stimulating. The answers given will be very closely considered at the next meeting of branch heads and subsequently those that seem practicable will be passed to the branches for implementation. The Director feels that a lot of time and effort will be wasted unless the suggestions are acted upon or, failing this, are brought back to the next staff conference for review. Whatever happens, they will certainly not be forgotten.

Other features of the conference included an address by the recently appointed Research Officer (Wildlife), Mr. T.L. Riggert, who illustrated his talk, "A Biologist in Antarctica", with some excellent slides. Dr. Graham

Chittleborough (C.S.I.R.O.) gave an informative talk on the estimation of fish populations, and each of the branch heads outlined the requirements, activities and demands of his branch.

The Director, before thanking all members for their participation and officially closing the conference, gave an informative exposition of the organisation, structure and functioning of the Department and its subsidiary bodies. He also outlined the liaison between and the relative roles of the State and Commonwealth Departments in matters relating to fisheries and fishing.

We feel that this conference was even more worthwhile than its predecessors in that areas where the administration and functioning of the department could be improved were clearly highlighted. We also learnt a lot on how we might try to improve future conferences and obtain more value from them. Improvements so far suggested include -

- * More suitable venue.
- * Use of experts to organize and prepare agenda.
- * Preparation of background notes for agenda items and re-organization of their discussion.
- * Greater use of groups to solve problems.
- * Field Officers' Association meeting to be held on the first evening.

We feel that many officers benefited immensely by being able to participate in constructive criticism of the organization and functioning of the department. Perhaps some made "a little merry with the hatchet" when the opportunity arose, there was nevertheless much merit in considered statements. It is desirable, however, to point out that the following weaknesses were clearly demonstrated by a number of participants:-

1. Absenteeism for private business. All staff must realise that staff conferences cost a great deal of money. Officers are not brought to the metropolitan area to conduct private business or to have a holiday. This is one time when work comes first by day or by night.

2. Late arrivals and early departures. On not a few occasions singular lack of courtesy was displayed towards speakers by late arrivals and early departures. We must have you at the conference - not your apologies.
3. Over-dependency. We received the impression that some officers seemed to consider that everything should be done for them. It is probably more true of today's world than that of any other time, that the man who receives the best assistance is the man who helps himself. We will get only as much out of these conferences as we each put into them. They represent our opportunity to do something constructive to improve our jobs in which we spend at least half of each of our working days.

We can all look forward to the next Conference with genuine interest and anticipation. Don't worry, there will still be a lot to do!

ISSUE OF LICENSES

It is of some importance that the correct name of the licensee be inserted in all licenses issued. This is particularly true in relation to fishing boat licenses, because of the need to know exactly who is the licensee if a ministerial directive concerning the use of any such vessel in certain waters is being disregarded.

It is essential, in the case of companies licensing boats, that the correct name of the company be inserted. For example, if the company's name is "South Seas Fisheries Pty. Ltd." the name "South Seas Fishing Co." would be insufficient on which to base a prosecution because there is no such company. This sort of thing has happened frequently in the past, but in future licensing officers must make sure that they obtain the full name of any such company and insert it at full length in the license.

Similarly, if Thomas George Smith is licensing a boat, it is insufficient to write in "T.G. Smith". Or if the license is issued to a partnership consisting of John Brown, Edward Arthur Jones and James Frederick Robinson, it will not be enough to write "Brown, Jones and Robinson". The full names of all partners must be written in the appropriate blank in the license.

In regard to craypot licenses, it is observed that some licensing officers have written the number of pots 20 (20). This is wrong. It should be written in words as well as figures, e.g., twenty (20). Furthermore the name of the licensee must be written in full e.g., Arthur William Johnson, not "A.W. Johnson" or "Bill Johnson" as has happened. This instruction applies equally to fisherman's licenses.

Inspectors in charge of districts must make sure that junior staff entrusted with the issue of licenses are fully aware of this instruction.

RESPONSIBILITY FOR STORES

All field staff are reminded that when relieving or assuming a new position all stores must be thoroughly checked prior to signing the usual handing over inventory.

Recently a pair of binoculars which had been signed for by an officer taking up his new position was found by him to be out of working order on a closer inspection at a later date.

The condition of any items which are found to be damaged or unserviceable must be stated on the inventory prior to it being forwarded to Head Office. The Officer signing for goods without drawing attention to damaged articles on the inventory will in future be held responsible for any stores for which he has signed and are subsequently found to be damaged:

RECIPROCAL RESTRICTION ON PRAWN TRAWLERS

The Minister for Fisheries (Mr. Ross Hutchinson) has recently given thought to representations made to him concerning prawn trawling in Exmouth Gulf. Among the facts placed before the Minister, it was shown that at the time trawling began in earnest in the Shark Bay area, the issue of licenses for prawning was severely restricted. This was done on two main grounds, firstly, the possibility of depletion of the stocks of prawns and, secondly, to afford some form of protection to established land-based processing works during the formative years of the industry.

Similar provisions, it has now been argued, should apply to Exmouth Gulf, where a land-based processing works is also established.

Viewing the matter in its broadest light, the Minister feels he cannot but agree that a concern which has virtually pioneered modern methods of prawn processing and built a factory for that purpose at the Gulf, is equally entitled to protection during its early years. Furthermore, similar fears to those expressed regarding the Shark Bay prawn stocks may reasonably be entertained in relation to the ability of the Gulf's prawn resources to withstand undue exploitation.

Mr. Hutchinson has therefore issued a direction that for a period of three years from August 1, 1964, the licenses granted to the 30 vessels granted permits to engage in trawling in the waters of the Indian Ocean and Shark Bay lying between the parallels 24°30' and 27°00' of south latitude and east of 112°50' of east longitude be endorsed with the following new condition:-

"It is a further condition of this license that the boat licensed hereby shall not enter or use for the taking of prawns by means of trawling, any of the waters of Fremantle Gulf lying south of a line drawn from the northern point of Bundegi Reef to the eastern foreshore of the said Gulf in the vicinity of Tubridge Point."

This condition, which is imposed in pursuance of section 17 of the Fisheries Act, 1905-1962, is deemed to be endorsed on the licenses issued in respect of boats permitted to trawl for prawns in Shark Bay.

NETTING RESTRICTION IN FREMANTLE HARBOUR TO BE EASED

Following requests by representatives of all sections of the angling community, the Department has agreed to amend the existing regulations prohibiting the use of fishing nets in the lower reaches of the Swan River, and permit instead the use of 20-ft. hauling-nets and 12-ft. prawn-nets for taking bait fish and prawns respectively.

Local anglers are to a very large extent dependent for their bait upon "white bait" and "mulies" caught in the inner harbour in hand scoop nets by some professional fishermen licensed to fish therein by the Fremantle Harbour Trust. The anglers have long thought that this method of fishing is inadequate to meet the demand for bait, but the Department took the view that before the ban on net fishing could be

lifted it was proper that the Harbour Trust first be approached.

The General Manager of the Trust is fundamentally opposed to the anglers' proposals. However, he says that the public demand for bait fish, which apparently are difficult to catch except in the confined waters of the Inner Harbour, has recently resulted in reconsideration of their earlier views. Now, subject to certain conditions, a limited number of licensed fishermen were temporarily permitted to fish by scoop net from below wharf deck level at North Wharf.

In view of the circumstances outlined by the Department the Trust was now prepared to permit these same licensed professional fishermen, for a trial period of six months, and subject to the regulations of the Fisheries Department and conditions laid down by the Trust, to use the nets already specified in the following areas:-

1. In the corner of the Inner Harbour between Berths 10 and 10A.
2. Along North Mole westward of the security fence at the end of No. 1 Berth.

The Trust reserves to itself the right to cancel any or all of the permits at any time it is found that fishing operations interfere in any way with the efficient operation of the Port.

TROUT EGGS FROM PEMBERTON TO IDAHO

An enquiry was received by the Department from the Snake River Trout Company, Buhl, Idaho, U.S.A., in April, 1963, for the supply of at least 100,000 and possibly as many as 500,000 eyed rainbow trout eggs. The enquiry was passed on to the Pemberton Hatchery Board.

The Snake River trout "ranch" is claimed to be the largest in the world. To help maintain stocks, it had been found that rainbow eggs from countries in the Southern Hemisphere worked in very well with their hatchery programme as they were available at the opposite time of the year from those obtained in North America.

However, owing to prior commitments within Australia, the Board was unable to supply the ova last year. This year a limited number of rainbow eggs were available and a trial consignment of 80,000 was sent by air on July 3,

To initiate the project Technical Officers, J.S. Simpson and N.E. McLaughlan took delivery of the eggs in a pre-cooled insulated box at Pemberton Hatchery at 10 a.m. on the day of despatch. The eggs were delivered at Perth Airport the same day and arrived at their destination in the American "Rockies" two or three days later.

The container in which the eggs were despatched was made of plywood in the form of a small ice box insulated with two inches of glass wool. Inside were six trays of plastic foam which had been fitted with wire mesh bottoms. The top tray was packed with crushed ice. The remaining five trays contained the eggs. They were laid out in and covered with cheesecloth and then covered again with "burlap" (hessian). The purpose of the ice and cloth was to keep the eggs cool and moist.

A letter has now been received from the Hatchery Biologist, who said that he was away at the time the eggs arrived. When he returned to work on July 9, they were beginning to hatch. The "pick-off" of "deads" during the first week was 12,000 i.e., a mortality rate of 15% which was within the hatchery's margin of acceptability when receiving eggs from commercial producers. At the same time it was slightly higher than average.

The hatchery's egg man was impressed with the design and construction of the egg box which was made by T.O. Simpson.

PALLINUP ESTUARY FISH IN GOOD CONDITION

Allegations were recently made by a professional fisherman at Albany that fish in the Pallinup Estuary were being attacked by a disease causing ulcers. He thought this was the result of increased salinity of the estuary waters caused by low rainfall. The Minister was asked to recommend to the Shire of Gnowangerup, which controls the waters in question, that in order to avoid a recurrence of the high mortality which occurred in the estuary some years ago in somewhat similar circumstances, the waters be opened to professional fishermen to remove the fish before they succumbed to the disease.

Several ulcerated mullet and bream said to have been caught in the estuary were handed to the Department's inspector at Albany, and as a result he visited Pallingup to check the condition of other fish. Although some 150 lb. of mullet, yellow-eye mullet and bream were netted none were found to be diseased. On the contrary, reports Assistant Inspector Cardon, they were in excellent condition. The ulcerated fish had, he says, apparently been caught in the upper reaches of the Pallinup River, which had become quite saline following the extended dry period experienced in the area. The good condition of the fish in the estuary was later confirmed by the Shire Clerk. He said that mullet and bream he had seen caught carried no sign of ulceration, and local anglers had reported that fish in the estuary had never been in better condition. Recent heavy rains had caused the river to flow and any tendency to ulceration, if it did exist, would be eliminated by the fresh water.

The Shire Clerk also mentioned that the Council had issued 230 licenses to fish with nets in the waters of Pallinup and Beaufort Inlets. The licenses were issued to persons resident in numerous districts of the Great Southern, the metropolitan area and Albany.

CONTINENTAL SHELF SOVEREIGNTY

The Convention on the Continental Shelf which was drawn up at the 1958 Law of the Sea Conference was signed by Australia on May 14, 1963. The Convention required 22 instruments of ratification or accession before entering into force, and it was not until June 10, 1964 that it became effective after the United Kingdom deposited the 22nd instrument with the Secretary General of the United Nations on May 11, 1964.

The Convention deals with sovereign rights exercised by States (i.e., nations) over the continental shelf for the purpose of exploring it and exploiting its natural resources. Article I of the Convention defines the shelf as follows:-

"The term continental shelf is used as referring (a) to the seabed and subsoil of the submarine area adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent

waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands."

To ensure that the Convention in no way interferes with Western Australian sovereignty over the fisheries within the 3-mile limit, legal opinion, which is as follows, was obtained from the Crown Law Department -

"The Convention deals only with rights and liabilities concerning the 'Continental Shelf'. The definition of this term in Article I refers to seabed and subsoil 'outside the area of the territorial sea'. Therefore, there is nothing in the Convention which affects or abridges the jurisdiction of the State Parliament to legislate in relation to the fisheries of the seabed and subsoil of the submarine areas within the area of the territorial sea."

SEA SNAKES

An article in the March edition of "Sea Secrets", published by the International Oceanographic Foundation, Miami, Florida, says that sea snakes are very venomous. Close relations of cobras and coral snakes, they have a powerful poison which acts upon the nervous system. However, because of the small size of their fangs, sea snakes must obtain a good grip and chew to inject the poison. Sea snakes are not generally aggressive and are not normally considered a serious danger, as is the case with their relatives the cobras.

There are several species of sea snakes distributed in the tropical parts of the Indian and Pacific Oceans, as far east as the Galapagos Islands and the Pacific coast from Mexico to Ecuador. All but one of the species is completely aquatic.

CLEARING HOUSE

SOUTH AUSTRALIA SHOWS THE WAY

SAFCOL (South Australian Fishermen's Co-operative Society Ltd.) set the pace for local producers this month when it boldly marched into Victoria and announced plans to enter N.S.W. later this year.

The huge Government-backed co-operative joined forces with a distributing firm (to which it is closely tied) to take over a cannery in Melbourne. It also acquired one of the largest wholesaling agencies in the Melbourne Fish Market. Following the Victorian moves, it was announced that SAFCOL would also establish its own depot at Eden during the N.S.W. tuna season. Already the biggest handlers of tuna in Australia, the newest moves could mean that SAFCOL will become stronger and will play a bigger part in the development of the industry. It is expected that the South Australians may show up in Tasmania when the assets of the ailing Eastern Tasmanian Fishermen's Co-operative Society Ltd. are offered for sale later this year.

Viewed from a national angle, the expansion of SAFCOL is a great thing for Australia. It shows that the local fishing industry - if capably managed - can do a creditable job. Looking at it from the individual States' point of view, the growth of SAFCOL is alarming. It means that the profits from fishing in States now spending big sums on port and transport facilities will go to South Australia.

Six years ago, Victorian professionals warned that South Australia would move into their state unless the Victorian government introduced a plan to help the industry. Victoria set up a Commercial Fisheries Council which has talked while the South Aussies acted. In N.S.W. the Government booted private enterprise out of marketing but has starved fishermen's co-ops of finance to develop processing.

(Fish Trades Review

Sydney

June, 1964)

MARINE BIOACOUSTIC RESEARCH MAY AID COMMERCIAL FISHERIES

Fish and other marine organisms "talk" to each other, according to a scientist who predicts that knowledge of the sounds made by them will be used to track

and locate schools of commercially-valuable fish. This is the conviction of the Director of the world's largest underwater bioacoustic library at the University of Rhode Island Graduate School of Oceanography after more than 17 years of continuous research.

Noting that the U.S. Navy had already developed listening devices for tracking enemy submarines, the acoustic biologist suggested that a series of fixed, unmanned, underwater listening posts be established. Underwater sounds could then be intercepted and rebroadcast to cruising fishermen. The scientist also believes that it may be possible to attract fish by broadcasting underwater man-made sounds. Sounds that frighten some marine creatures have already been developed. They might prove beneficial in herding fish or containing them in a chosen area.

Also noting that the noises produced by underwater creatures are usually associated with "colony life" the scientist said that if one fish of a school is captured, a characteristic sound is produced by certain species, and the entire group flees. Underwater biological noises are also associated with such activities as breeding and competitive feeding. In addition, it was explained that certain nocturnal fish have well-developed sound-producing systems.

After a thorough study of the sounds made by white whales held in captivity, the scientist and an associate at the University of Rhode Island, said in the Sears Foundation's Journal of Marine Research that their work "confirms previous evidence of a wide repertoire of recognizably different types of sound that used singly or in combination, have specific meaning".

Working under the oldest continuous biological contract with the Office of Naval Research, the Director of the bioacoustic library accumulates hundreds of miles of audio tape each year. When a new sound is discovered and thoroughly analyzed, it becomes part of the "Reference File of Biological Sounds" maintained since 1954 at the request of the U.S. Navy. Although this contains sounds recorded from researchers all over the world, an estimated 98 percent of the material was developed by the library's director and associates.

To date, about 400 of the sound-producing organisms in the Western North Atlantic have been auditioned by the scientist, ranging from shrimp and crab to porpoise, whales,

sea lions, sea cows, and other sorts of fish. Every marine animal, it was discovered, has a characteristic sound "signature".

(Commercial Fisheries Review Washington April, 1964)

EAT MORE FISH AND GROW SLIM

The sales slogan of the German fishing industry - EAT FISH, LOSE WEIGHT - has been endorsed by one of that nation's leading nutritionists in Dr. Rausch-Strooman, of the Eppendorf University Hospital, Hamburg. Dr. Rausch-Strooman believes that fish is ideal for people who want to diet.

He has made a close examination of the influence of fish on human health in numerous scientific studies. With the help of one of the most modern instruments to be found in the Hamburg hospital, the Eppendorf flamephotometer, codfish and perch, salmon, flounder, haddock, halibut, turbot, sole and many other types of sea fish were examined for their sodium content. Sodium is a most necessary factor in the inorganic metabolism of the body.

Results surprise

Dr. Rausch-Strooman came up with some surprising results:

1. Boiled beef contains more sodium than all the tested fish with the exception of sole.
2. Raw veal contains even three times as much sodium as raw codfish and mackerel.
3. Cooked pork contains twice as much sodium as cooked haddock or halibut.

Dr. Rausch-Strooman proved that the body eliminates considerably more salt after a fish meal than was actually gained through the meal. Fish rich in protein obviously act as "eliminators" of superfluous amounts of salt in the body. Liquid is needed to flush the sodium out of the system and this explains why people are usually thirsty after eating fish.

According to these latest scientific tests, it seems that fish really is the best reducing food available.

The favourable influence of fish on the human organism is twofold: its abundant protein content hinders fat formation, and it extracts sodium and superfluous liquids from the body. Here is a point Australian fishermen could use to advantage should ever they get round to promoting their product.

(Fish Trades Review

Sydney

June, 1964)

PHENOMENON IN TASMANIA

A curious natural phenomenon which has been noted in Tasmania may result in new developments in the fishing industry. A prominent Tasmanian marine scientist, Mr. A.M. Olsen, reported that the waters round Tasmania were becoming warmer and had had the effect of attracting many varieties of marine life previously unknown in the area.

He said that the temperature of the water had risen about 2 deg. C. since 1945. The long-term effect could be important because the water temperature round an island was perhaps the biggest single factor in determining its weather. Mr. Olsen took temperature readings at a depth of just over 150ft. east of Maria Island, on the south-east coast, which enabled him to form a picture of temperature ranges unaffected by local currents and also the marked fluctuations which occurred nearer the surface between cloudy and sunny days.

The warmer water had attracted new fish to Tasmanian waters. These had stayed to multiply. Green lobsters, turtles (almost unheard of in the usually chilly Tasmanian waters) and spotted yellow-tailed sea snakes were marine visitors observed in recent years in the waters.

(Fishing News

London

June 19, 1964)

SINISTER SEA-SNAILS

Investigations carried on at Queensland Univeristy, Australia, into the toxicity of the Conidae, a family of marine snails, have shown wide variation in the virulence of the poison manufactured by their highly developed poison apparatus.

The venom of a large number of species of this family was studied in an attempt to correlate them with

with the effects on their normal prey. The venom of the worm-eating Conus had some effect on other gastropods, leading to the belief that it could be used for defense. The venom of the mollusc-eating Conus paralyzed other snails and killed molluscs, but had no effect on vertebrates. However, the venom of the fish-eating species, Conus geographicus, C. catus, and C. tulipa has the power to paralyze the voluntary muscles of the test animals, including the respiratory muscles, whereby they die of suffocation. After sublethal doses of the venom the test animals recover with no apparent ill-effect. Thus it is believed that only the fish-eating species of Conus are dangerous to man, and that artificial respiration might play an important part in the treatment of cases of poisoning by the Conidae.

(Sea Secrets

Miami

May, 1964)

WASHINGTON BULLETIN

The death of millions of fish in the Mississippi estuary at New Orleans and in rivers elsewhere, due to the pesticide chemical endrin, has figured in testimony before the Government Operations Subcommittee, headed by Senator Abraham Ribicoff (D.-Conn.), who is striving to put "teeth" into existing pesticides legislation.

James M. Hundley, assistant Surgeon General of the U.S. told the subcommittee that while millions of fish have been killed in the Mississippi, and elsewhere, due ostensibly to endrin, that he nevertheless would not hesitate to eat a shrimp cocktail in New Orleans, even if the shrimp came from the endangered waters. There is no evidence, as yet, that fish caught in such areas will affect human consumers adversely, Mr. Hundley said. He added that he would not make a steady diet of catfish from the Mississippi, however, principally because he is not a devotee of catfish.

Senator Ribicoff pointed out, however, that there undoubtedly were many individuals who do virtually live off seafood along the Mississippi and that while he does not wish to cause alarm, he thinks it is dangerous to continue to allow endrin to build up in the nation's waters. "I don't think we can afford to lose the fish; we certainly don't want to lose human beings," he declared. "We may wind up destroying not only the birds and the bees, but ourselves."

Other witnesses, including Secretary of the Interior Stewart Udall and Secretary of Agriculture Orville Freeman, agreed with Senator Ribicoff that stronger laws are needed to control the use of pesticides.

(Fishing Gazette

New York

May, 1964)

NEW KP SMOKE GENERATOR PROVIDES
UNIFORM SMOKING AT REDUCED COSTS

The new SG-9 Smoke Generator, manufactured by The Kartridg Pak Company, Mt. Prospect, Illinois, is now available to the smoked fish processing industry. Successfully used for years by meat processors, the SG-9 has many features which can result in cost and performance benefits to fish plants, regardless of size of operation.

The two prime advantages of the KP Smoke Generator are exclusive use of dry sawdust (the savings in sawdust can pay for the machine), and the machine's simplicity in design which assures continuous, efficient operations.

Additional features are: Timed smoke intervals through the use of a pre-set timer for more uniform smoking; Fully enclosed construction eliminates fires - helps lower insurance rates; Automatic temperature control of optimum flavor; Constant suction to eliminate smokehouse aisle smoke; Variable speed motor for complete smokehouse flexibility; Temperature indicator; Automatic feed shut-down prevents off flavors from high and low temperature; Complete char of sawdust - with built-in char discharge; Ease of maintenance; Fully protable with adjustable legs for even height.

(Fishing Gazette

New York

May, 1964)

PLASTIC FISH BOXES

A Sydney plastics company this month made a survey of Australian fish markets with a view to introducing plastic boxes for fish and prawns.

It is understood that plastic boxes are more expensive than the wooden one most commonly used in N.S.W. but the manufactures claim they would work out cheaper in the long run because they can be re-used over and over again.

(Fish Trades Review

Sydney

June, 1964)