



CALM LIBRARY ARCHIVE
NOT FOR LOAN

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STAFF NOTES

Officers who commenced annual leave last month included Inspector G.C. Jeffrey (Mandurah) on June 3; Assistant Inspector P.C. Willey (Fremantle) on June 15; Inspector T.B. Baines (Roving Patrol) on June 22; and Mr. C.E. Casselton (Head Office) on June 29.

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Our congratulations are extended to Inspector and Mrs. T.B. Baines on the occasion of the birth of their son, Scott Barrington, at St. John of God Hospital, Subiaco, on June 27.

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Cadet Inspector P.M. Lambert has gone to Pemberton to assist at the hatchery during the annual trout stripping programme.

PERSONAL PARS

Those members of the staff who knew him will be interested to learn that our one time Honorary Warden, Mr. Douglas Walter Gordon, of Moora, has commenced duty with the Animal Industry Branch of the Northern Territory Administration at Darwin. He has been appointed as ranger for the Coburg Peninsula, and is an inspector of wildlife under the recently-introduced ordinance for wildlife conservation and control.

BUMPER HERRING SEASON

Senior Inspector J.E. Munro reports that in local coastal waters, this year's sea herring (tommy ruff) season

was the best for some years. On the other hand the quantity of fish being caught in the Swan and Canning rivers had reached an all-time low.

HIGH RIVER LEVELS

A further comment from Mr. Munro was that the water in the Swan and Canning rivers last month rose to the highest level he had ever seen them without being supplemented by floodwaters.

Gale force winds which blew for several days in mid-June, in association with a deep depression, banked up coastal waters to the extent that minor flooding occurred in some localities.

POOR QUALITY FISH BEING MARKETED

Mr. Munro has also commented on the condition of fish arriving in the Perth markets from Mandurah. He says that lately up to 80% of fish coming from that locality were marketed in such poor condition as to force prices to a very low level to the detriment of fishermen from all areas. Even though weather conditions were cool, many fish arrived in a dried-out condition. Some were marketed in malodorous boxes, and little attention had been paid to packing. Others were arriving in a dirty and descaled condition. In some cases weed and other rubbish was still attached to the fish.

This somewhat unwholesome fish is sold by the box rather than by the pound, and because of its low price it is eagerly sought after by some retailers who do not have much regard for quality. A recent price quoted for mullet, 8d. to 2/2d., per lb. amply illustrates the variation in quality of fish being sold in the Perth market. Inspectors generally could perhaps give some attention to this matter and point out to fishermen the desirability of presenting their product in as wholesome and attractive manner as possible.

INSPECTORS ANNUAL CONFERENCE

The attention of the staff, particularly all field officers, is drawn to the forthcoming annual conference which will be held in Perth on July 22, 23 and 24. All officers are required to be in attendance at Head Office at 9 a.m. on July 22. The Minister for Fisheries, Mr. Hutchinson, has graciously consented to open the conference at 10 a.m.

AVAILABILITY OF FISHERMAN'S LICENSE

A question has been asked by an inspector (a new appointee) as to whether a current fisherman's license issued in one area is available elsewhere in the State. The answer, of course, is that any such license is, during the term of its currency, valid in any part of Western Australia, subject, of course, to any restrictive conditions which may have been endorsed in pursuance of section 17 of the Fisheries Act. This question and answer are published for the information of newer members of the staff.

UNDERSIZE SPERM WHALES

It will be remembered that in the May issue of this Bulletin it was mentioned that the Minister for Primary Industry, Canberra, had approved of the taking for scientific purposes of five undersize sperm whales each month by the Cheynes Beach Whaling Company during the 1964 season.

A recent application by Dr. G.L. Kesteven, Assistant Chief (Fisheries) of the Division of Fisheries and Oceanography, C.S.I.R.O., to have the total number of undersize sperm whales increased to 140 has now been approved by the Acting Minister for Primary Industry. The permit issued on March 10 last has now been revoked and a new permit has been issued authorizing the same company to take a maximum of 25 undersize whales each month in the five-month period beginning June 1, 1964.

PROSPECTS OF A GOOD PRAWN SEASON

Following an inspection of the Carnarvon and Shark Bay fisheries between May 18 and 28, Supervising Inspector, J.E. Bramley has reported that the present prawn season gives every indication of being very good despite the incidence of mechanical breakdowns being experienced by a number of trawlers, and despite also strong southerly winds which blew for several days in mid-May. This bad weather brought trawling to a halt.

Very little lost time was being experienced by Nor' West Whaling Company trawlers by reason of breakdowns. When repairs were required to any units of their fleet they were speedily carried out in the company's own workshop at Carnarvon. This is in contrast to the repair facilities available for independently operated trawlers and those operating for Planet

Fisheries from Monkey Mia. Although Planet Fisheries has a workshop at Denham, considerable delay is being experienced in transporting mechanics and parts the 17 miles to and from Denham. On the other hand independently operated trawlers lose still more time, as they must have repairs carried out in Perth.

Some trawler skippers have expressed concern over the wastage of small prawns being caught. Small king and tiger prawns as well as the more common greasy-back prawns are not acceptable by the processing works. Consequently grading is carried out on board at sea and small prawns are thrown back dead into the water. It is said that of one lot of 60 lb. of prawns taken, 40 lb. were thrown back into the sea.

The prawns are being processed in two ways. The factories are processing and packing green prawns, while the independent vessels are cooking their entire catch whole. It is claimed by independent operators that besides receiving a better price for cooked prawns, the cost of production is less.

LIGHT BUOYS USED TO DELIMIT CLOSED WATERS

The main purpose of Mr. Bramley's visit north was to try out a scheme for delimiting, during the hours of darkness, the closed waters on the Shark Bay - Carnarvon prawn grounds. As trawling is carried out at night and largely outside the sight of land, it had been found that boat skippers were not able to accurately fix their positions. Consequently, when trawling close to the limits of the open waters, they were unable to ascertain whether they were inside or outside the boundaries. Likewise extreme difficulty was experienced by our own inspectors in determining whether a vessel was fishing in closed waters. As an experiment, three light buoys each having a visibility of two miles were laid to provide a visible plot line of over eight miles in length. The buoys were laid during a period of heavy weather and strong tides, and although conditions were such that trawlers were unable to work, the light operated satisfactorily.

The light buoys used were of a type in which a cell, very sensitive to light, activates a mercury switch which in turn switches on the light as the natural light fades in the evening. As the light increases after dawn the light is automatically switched off. When the buoys are stowed in an inverted position the lights will not operate.

TOURISM ON THE INCREASE

Denham is not the sleepy hollow it used to be, says Mr. Bramley. The town is rapidly growing and is fast becoming the most popular holiday resort in the north. Monkey Mia is also fast becoming a popular tourist resort. The additional activities created by the prawn fleet and professional scale fishermen operating from the new jetty at the latter place is fast developing the settlement. Mr. Bramley was informed that over 6,000 visitors passed through Denham alone in three months this year. Many others would have visited Monkey Mia and Eagle Bluff during the same period.

The increasing number of tourists, predominantly amateur fishermen, is placing an increasingly heavy burden on the inspector in this district. For at least seven months of the year he is kept very busy with tourists alone.

Mr. Bramley also reports that wild turkeys are more plentiful in the Shark Bay area than they have been for some years. Kangaroos in the Wooramel- Gladstone - Hamelin Pool area are almost in plague proportions.

CONVICTIONS

APRIL - JUNE, 1964

Date	Defendant	Court	Charge	Result
<u>FISHERIES ACT</u>				<u>Fined</u>
18.5.64	STOKES, Arthur Melville	Albany	Netting closed waters	£7. 0. 0
4.6.64	TAYLOR, Leonard	Bunbury	" "	5. 0. 0
4.6.64	TAYLOR, Norman	Bunbury	" "	5. 0. 0
24.2.64	RIGGS, Edward G.	Fremantle	U/S Crayfish	30.15. 0
6.4.64	COLICA, Salvatore	"	" "	13. 7. 6
6.4.64	IVANKOVICH, Tugonin	"	" "	18.10. 0
6.4.64	KATNICH, Frederick Robert	"	" "	13.17. 6
6.4.64	MINERVINI, Dominico	"	" "	32.12. 6
6.4.64	OTERI, Santo	"	Brushed Spawners	25. 0. 0 & license suspended for 3 mths.

CONVICTIONS (Cont'd)

Date	Defendant	Court	Charge	Result
				<u>Fined</u>
6.4.64	PAPARELLA, Luigi	Fremantle	U/S Crayfish	£28.12. 6
6.4.64	TURTUR, Leonardo	"	" "	27.10. 0
6.4.64	VESAGGO, Sergio	"	" "	11.10. 0
6.4.64	AMATO, Angelo	"	Brushed Spawners	25. 0. 0 & license suspended for 3 mths
6.4.64	BREGGIO, Cosmo	"	"	" "
6.4.64	CICCERELLO, Nino	"	"	" "
6.4.64	CAMPOREALE, Luigi	"	"	" "
6.4.64	MINERVINI, Damiano	"	"	" "
6.4.64	PAPARELLO, Cosimo	"	"	" "
6.4.64	SICLARI, Giovanni	"	"	" "
6.4.64	LOCANTRO, Gaetano	"	U/S Crayfish	14. 8. 4
6.4.64	LOCANTRO, Bartolo	"	" "	14. 8. 4
6.4.64	MARSEGAGLIA, Pietro	"	" "	14. 8. 4
13.4.64	TAGLIAFERRI, Oswald	"	" "	45.10. 0
13.4.64	PITTORINI, Joe	"	" "	22. 2. 6
20.4.64	BILICH, Vinko	"	Brushed Spawners	£25.0.0 & license suspended for 3 mths
20.4.64	MASTROPASQUA, Giulio	"	"	" "
20.4.64	MICALIZZE, Gaetano	"	Illegal Processing	10. 0. 0
20.4.64	MICALIZZE, Phillip	"	U/W Craytails	14. 7. 0
20.4.64	VILLARI, Pietro	"	" "	14. 7. 0
20.4.64	MICALIZZE, Gaetano	"	" "	14. 7. 0
20.4.64	MICALIZZE, Gaetano	"	U/S Crayfish	13. 1. 0
20.4.64	MICALIZZE, Phillip	"	" "	13. 1. 0
20.4.64	VILLARI, Pietro	"	" "	13. 1. 0
20.4.64	PENSABENE, Severio	"	Brushed Spawners	25. 0. 0 & license suspended for 3 mths
20.4.64	SKELTON, Walter John	"	Brushed Spawners	25.0.0 & license suspended for 3 mths
20.4.64	VENERIS, Kosmos Constantine	"	U/S Crayfish	15.17. 6
20.4.64	VILLARI, Pietro	"	Illegal Processing	10. 0. 0

CONVICTIONS (Cont'd)

Date	Defendant	Court	Charge	Result
				<u>Fined</u>
4.5.64	EAST WIND Pty.Ltd.	Fremantle	U/W Craytails	22.12. 6
11.5.64	BORICH, Vaselko	"	Netting	
			Closed waters	5. 0. 0
11.5.64	FORTI, Anthony	"	U/S Crayfish	11.15. 0
11.5.64	CAPURSO, Giacoma	"	" "	11.15. 0
11.5.64	FAZIO, Amando Philip	"	U/W Craytails	27. 5. 0
11.5.64	FAZIO, Amando Philip	"	Illegal	
			Processing	15. 0. 0
11.5.64	ROTONDELLA, Mick	"	U/S Crayfish	16.10. 0
25.5.64	CAPPA, Carmelo	"	U/W Craytails	46.10. 0
25.5.64	CAPPA, Carmelo	"	U/S Crayfish	33. 0. 0
25.5.64	CAPPA, Carmelo	"	Illegal	
			Processing	10. 0. 0
8.6.64	MERCIADRI, Aldo	"	U/S Crayfish	27. 5. 0
8.6.64	MERCIADRI, Aldo	"	U/S Crayfish	27.5.0
8.6.64	GAVRONICH, Nikola	"	U/S Crayfish	12. 5. 0
22.6.64	BEFUMO, Philip	"	Brushed	25. 0. 0
			Spawners	& license suspended for 3 mths
29.6.64	PITTORINO, Anthony	"	U/S Crayfish	30. 2. 6
29.6.64	FAZIO, Philip	"	" "	39. 2. 6
29.6.64	PAINO, Victor Anthony	"	" "	117.10. 0
29.6.64	PAINO, Victor Anthony	"	U/W Craytails	135. 0. 0
19.3.64	MARSDEN, John Thomas	Geraldton	U/S Crayfish	13. 4. 0
19.3.64	PRIOLO, Guiseppe	Geraldton	" "	36. 6. 0
19.3.64	ONOFRIADIS, Efstratios	"	" "	22. 4. 0
19.3.64	PACCHINI, Lorezio	"	" "	36. 6. 0
14.5.64	HONEY, Norman T.	"	" "	10.14. 0
14.5.64	KIJENIA, Michael	"	Unbranded	
			Pot Floats	10. 0. 0
14.5.64	SCOTT, Colin James	"	" "	10. 0. 0
14.5.64	SMITH, Herbert Henry	"	U/S Crayfish	11. 0. 0
18.6.64	GLASSON, Allan Bruce	"	" "	10.12. 0
18.6.64	FILGATE, William John	"	" "	10. 9. 0
18.6.64	HEALEY, Irwin, F.	"	" "	} 31. 3. 0
18.6.64	HEALEY, Ivy Maud	"	" "	
18.6.64	MATUSEVITCH, Victor	"	" "	10.17. 0
18.6.64	BURTON, Neil Curthbert	"	" "	11. 5. 0
18.6.64	WILLOCK, Clive	"	" "	12.13. 6
18.6.64	McAULJAY, Mestyn	"	Unbranded	
			Pot Floats	10. 0. 0

CONVICTIONS (Cont'd.)

Date	Devendant	Court	Charge	Result
				<u>Fined</u>
18.6.64	OMEROD, Thomas Edward	Geraldton	U/S Crayfish	10.17. 0
18.6.64	RIOLI, Antonio	"	U/W Craytails	13.12. 0
18.6.64	RIOLI, Antonio	"	Illegal Processing	10. 0. 0
18.6.64	BRADLEY, Terence David	"	U/S Crayfish	13. 7. 0
18.6.64	WEST, Arthur, Ernest	"	" "	11. 5. 0
18.6.64	WEST, Arthur Ernest	"	" "	13.17. 0
18.6.64	MAGARELLI, Angelo	"	" "	12.13. 0
18.6.64	CHRISTIE, Edward W.J.	"	" "	10. 9. 0
18.6.64	VALLENTI, A. & P.M.	"	" "	16.15. 0
2.4.64	KONGRAS, Margaret Rose	Perth	" "	22. 5. 0
2.4.64	Kongras, Margaret Rose	"	U/W Craytails	10.11. 0
2.4.64	POZZI, Guido John	Perth	U/S Crayfish	13. 8. 0
2.4.64	WILLIAMS, Ralph	"	" "	22.13. 0
2.4.64	BUTLER, Leslie W.J.	"	" "	26. 2. 0
2.4.64	BAYER, Theo	"	" "	25.10. 0
2.4.64	PAYNE, Laurie R.	"	" "	10.16. 0
2.4.64	CHITTY, Rex Maitland	"	" "	10.10. 0
8.4.64	KATNICH, Fredrick R.	"	" "	21. 4. 0
8.4.64	KATNICH, Federick R.	"	" "	18.17. 0
8.4.64	KATNICH, Federick R.	"	" "	10. 7. 0
8.4.64	McDOUGALL, John Nicol	"	" "	11.13. 0
16.4.64	PIPPAN, Guido	"	Brushed Spawners	\$25. 0. 0 & license suspended for 3 mth.
30.4.64	DEACON, Trevor	"	U/S Crayfish	10. 8. 0
22.5.64	CHRISTMAS, Leonard J.	"	" "	26.10.0
28.5.64	POZZI, Guido John	"	Fishing in closed waters	10. 0. 0
28.5.64	POZZI, Raymond	"	Fishing in closed waters	10. 0. 0
28.5.64	POZZI, Raymond	"	U/S Crayfish	14. 2. 6
28.5.64	FERRO, Vencenzio	"	" "	42. 5. 0
28.5.64	SLATTER, William J.E.	"	" "	22.12. 6
28.5.64	NATIONAL FISHERIES	"	" "	90.15. 0
28.5.64	McCLUMPHA, Ian A.W.	"	Netting closed waters	7.10. 0
28.5.64	McCLUMPHA, Allen W.	"	" "	7.10. 0
28.5.64	BERGHAM, Sydney C.	"	U/S Crayfish	20. 5. 0
2.6.64	WADE, Arthur	"	" "	71.11. 0

CONVICTIONS (Cont'd.)

Date	Defendant	Court	Charge	Result
				<u>Fined</u>
2.6.64	ROBERTSON, Gilbert W.	Perth	Obstruction	£10. 0. 0
2.6.64	PETERS, Nicholas	"	Illegal	} 10. 0. 0
2.6.64	PETERS, Susan Polly	"	Possession of Craymeat)	
18.6.64	GWILLIAM, George Ernest	"	No identification nos. on boat	4. 0. 0
26.6.64	ASHBY, Roy	"	U/S Crayfish	10.13. 0
26.6.64	BRAGG, Alfred E.W.	"	" "	10. 8. 0
26.6.64	COOPER, Joe	"	" "	10. 7. 0
26.6.64	KENNEDY, William John	"	Obstruction	10. 0. 0
26.6.64	KENNEDY, William John	"	U/S Crayfish	20.17. 0
26.6.64	WEYMOUTH, William	"	U/S Crayfish	12.18. 0
26.6.64	CHAPMAN, Peter	"	U/S Crayfish	25. 4. 0
30.6.64	KONGRAS, Anthony	"	" "	38. 2. 0
1.4.64	BUTLER, James H.W.	Midland Junction	U/S Crayfish	17. 9. 0
24.4.64	BRIGGS, William Thomas	"	" "	18.15. 0
3.6.64	O'DEA, Francis John	"	" "	100. 0. 0
18.6.64	O'DEA, Francis John	Northam	" "	70. 5. 0

SHARK BAY PRAWN LICENSES

The Minister for Fisheries, Mr. Ross Hutchinson, has rejected several recent applications for licenses to trawl for prawns in the Shark Bay - Carnarvon area.

Thirty boats have so far been licensed to trawl for prawns in this area. However he has announced that no additional applications for licenses will be considered before the end of the 1965 season. In November, 1962, the number of licenses to prawn in the Shark Bay - Carnarvon area was restricted to 25 after a comparison had been made between the average abundance (catch/hours trawling by the research vessel) and the trawlable area with established overseas prawn fisheries. In January, 1964, having regard to several economic factors and to ensure continuity of production in processing works at Denham, the Minister agreed to increase the number of licenses

to 30. On latest advices, only 25 of the vessels licensed were operating.

In view of the large number of firms and individual fishermen interested in the Shark Bay - Carnarvon prawn fishery, granting of future licenses will be dependant upon the results of research and investigational work now being carried out.

COCKBURN SOUND TRAWLING RESTRICTIONS

An application by the W.A. Fishing Fleet Masters' Association to have the closed waters in Cockburn Sound opened to trawling from June 1 to July 31, Mondays to Fridays only, has been rejected by the Minister after careful consideration.

The whole question of trawling in Cockburn Sound was considered two years ago and the then existing closure was extended on the recommendation of the Fishermen's Advisory Committee after they had considered evidence submitted by professional and amateur fishermen and representatives of local authorities. It was shown that trawl-nets were inflicting damage on the weed-beds in the Sound, and by doing so were interfering with the habitat of fishes sought after by the angling community.

In support of their application, the Secretary of the Association drew attention, among other things, to the increased demand, as an item of food, for cuttle fish and squid by new Australians. It was claimed that reports received from some members who were engaged in prawn trawling in Shark Bay had indicated that the bottom growth was different from last year. It was much heavier and whereas last year, trawling shots were, in some areas, of $\frac{1}{2}$ hour duration, this year $\frac{1}{4}$ hour was the limit because of the heavy bottom growth and, most important of all, prawns were being caught in greater quantities. The association therefore considered that the spoiling of grounds by trawling was a debatable question.

Prawns are certainly being caught in greater quantities this season on the Shark Bay - Carnarvon grounds. However the quantity of prawns available in any year would depend on many environmental factors rather than the abundance of weed on the bottom. Under the circumstances trawling for cuttle fish and squid in Cockburn Sound could not be considered in the same light as the prawn industry in Shark Bay.

The Minister considered that it would not be reasonable to suggest that after such a short lapse of time conditions would have changed to such an extent as to warrant the lifting of restrictions on trawling in Cockburn Sound, even though it would involve only two months each year.

DEPARTMENTAL OFFICERS AID SALMON RESEARCH

The assistance provided by the Department in the recent salmon tagging and sampling programme carried out at Albany jointly by the C.S.I.R.O. and this Department has been acknowledged in a letter received by the Director, Mr. A.J. Fraser.

Dr. A.G. Nicholls, Division of Fisheries and Oceanography, C.S.I.R.O., Camberwell, Victoria, has extended his organization's thanks to the Department, particularly to those officers who took an active part in the project.

Dr. Nicholls' letter reads as follows:

"It gives me great pleasure to express our very sincere thanks for the co-operation extended by your Department to our Division during the Salmon season which has recently been completed.

The provision of an assistant to accompany our Technical Officer throughout his tagging operations in Western Australia greatly facilitated his work, which it is expected will produce some interesting results.

The assistance rendered by Mr. B. Carmichael and his Cadet Inspector, in conducting regular sampling at Messrs. Hunts Cannery has provided a good cover of the season and will contribute very considerably to the success of our analysis of the fishery in 1964. His assistance in collecting tags, and returning them to us with the relevant information has ensured a high degree of reliability and greatly aided our research.

I should be glad if you would convey to all your officers concerned, our sincere thanks for their help during this season."

PROPOSALS TO PRESERVE CRAYFISH INDUSTRY

The Fremantle Fishermen's Co-operative Society Limited which is keenly aware of the necessity to preserve and perpetuate

the crayfish industry, passed several pertinent resolutions at a general meeting held early in May.

The unanimous opinions of the members, which were conveyed to the Minister for Fisheries, the Department and the Honorary Royal Commission on the crayfishing industry, were that activities in the trafficking of undersize crayfish were jeopardizing the future of the industry. A stricter control and the imposition of heavier penalties were advocated.

The Society considered that the fixation of production quotas on processors would be detrimental to the fishermen because they would be compelled to deliver their catches to either inefficient or unscrupulous operators. However the Society resolved that heavier penalties should be inflicted on processors who processed or dealt in under-size crayfish.

The formation of a Crayfish Board was not considered necessary, as members of the Society had over a period of some 17 years invested a considerable amount of their own money in the industry and with financial assistance they had created assets along the coast exceeding a quarter of a million pounds. Organized overseas marketing of crayfish had enabled the Society to obtain a high price for their product, to the extent that their competitors were said to fix their prices to fishermen on the basis of the price the Society paid to its members.

A further resolution passed by members concerned the safety of fishing boats. They were of the firm opinion that one of the major hazards in fishing was caused by the lack of lights and marking buoys at passages in various crayfish centres.

The Minister has advised the Society that in general he was in accord with all their resolutions, although further consideration would have to be given to the provision of still heavier penalties for breaches under the Fisheries Act. He was closely interested in the problem of lights and buoys, and he had been advised by the Minister controlling the Harbour and Light Department that a priority list for the progressive installation of leading lights at various boat anchorages had been prepared. Correspondence with the Commonwealth Government had also been entered into concerning the provisions of these facilities.

CULTIVATION OF CRAYFISH PROPOSED

An attempt to breed and artificially cultivate fish, particularly crayfish, in Western Australia is being considered by private enterprise.

A proposal recently submitted to the Department concerned the construction of a fish farm on the coast. It was proposed to excavate a pool to a depth of up to 30 feet and consolidate the retaining walls with stone. Ledges and caves would be constructed in the pool at varying depths so that crayfish could select their own habitat within its limits. Other suitable forms of marine life would be added. The supply of water to the pool would be maintained by circulating sea water from the nearby sea through a large pipe by artificial means.

Although it is considered by Departmental research officers that great difficulty would be experienced in inducing crayfish to spawn in an artificial pond, it is not improbable that any young crayfish released therein would live and grow provided they were sustained by hand feeding. Hand feeding would be essential as the pool would not be sufficient to sustain natural feed. Should the project eventuate, the Department would certainly watch with interest the results achieved, although doubt exists as to the success of the venture.

Although prawn farming using artificial propagation procedures has been successfully achieved in Japan, this happy position has been achieved only after many years of persistent scientific research and much hard work.

THE SWAN RIVER WHALER

A recent visit to Perth, and the examination of a Swan River shark, by New Zealand shark expert Dr. J.A.F. Garrick has dispelled the general belief that the small sharks which inhabit the Swan and Canning Rivers are of a harmless variety.

Over the years the "Swan River Whaler", as it has become affectionately known, has been reported more frequently. Specimens have been caught in nets, on set lines and on hand lines, and occasionally others have been washed ashore.

Dr. Garrick assures us that the river sharks are simply baby sharks of the whaler family, and that the mothers give birth either close to the river mouth or in the river

itself, the offspring spending their early lives in the safe and sheltered river waters. He estimated that there are about 15 species of whaler shark common to Western Australian waters, some growing up to 12 feet in length.

This report is indeed interesting, when it might be remembered that another authority on sharks, the late David G. Stead, who studied sharks and their habits for 50 years, attributed the major shark attacks on human beings in Australian waters to the whaler sharks and not to grey nurse or tiger sharks as is sometimes reported.

POSSUMS IN THE GERALDTON DISTRICT

Inspector A.V. Green, lately of Geraldton, has passed on a report he has had from an employee of the Main Roads Department on the occurrence of fair numbers of Brush-tailed Possums (Trichosurus vulpecula) along the Greenough River just above the Geraldton highway bridge. Mr. Green was also told that there were a few along the Bowes River on the road into Horrocks Beach. About six months ago, when a tree was bulldozed, a possum had been found in it with a young one clinging to it.

In recent years possums appear to have increased from the near-extinction of the early fifties, but very few reports are received of their occurrence north of Bullsbrook.

BLACK SWANS AND DUCKS PLENTIFUL AT ONSLOW

Mr. P. Ahmat, the Fisheries Inspector at Onslow, reported recently that after the passing of cyclone "Katie" at the end of March, he had observed a large number of black swans and several thousand ducks, mostly teal, on a swamp flat approximately 20 miles out from Onslow on the main north road. He also observed a large number of ducks on the Ashburton River.

Mr. Ahmat commented that he had never seen such a large number of swans in the area before, and duck had not been so plentiful, to his knowledge, for at least 30 years.

CLEARING HOUSE

FISH LOSS SPEEDS PESTICIDE PROBE

By Neal Stanford

Washington

This has not been a "silent spring" in Washington. The Congress, the administration, and the general public are becoming increasingly aroused over the danger of pesticides and the need for tighter federal controls of these farming aids.

There have been hearings this week in Congress and by the administration to find out just what the effects of the uses of such long-lasting pesticides as aldrin, dieldrin, and endrin are. They are to inquire into whether the pesticide endrin was the cause of the loss of some 10,000,000 Mississippi River fish over the last three years.

A bill is in Congress that would give the Agriculture Department power to prohibit sale of pesticides believed to be hazardous. Its sponsor Sen. Abraham A. Ribicoff (D) of Connecticut, former secretary of health, education and welfare, has stressed the "new urgency" for such legislation in light of the massive Mississippi River fish loss attributed to endrin.

Curb Favoured

Its passage in amended form is generally expected. The hearings before the Senate government-operations subcommittee, with Secretary of the Interior Stewart L. Udall as star witness, were highly critical of the loose regulations governing these hazardous pesticides.

Mr. Udall came out emphatically for stopping the use of such pesticides as DDT, endrin, dieldrin, aldrin, and lindane. The destructive after-effects of these pesticides can be carried hundreds of miles from their source of use.

He gave an unequivocal "no" to his rhetorical question: "Can we afford to use these persistent toxic chemicals if we cannot control the movement of their residues after use?" What is needed, he concluded, is a government co-ordinating group that would have decision making authority over the use of pesticides.

He cited instance after instance that to him "demonstrated conclusively" that what has been considered routine and harmless use of pesticides can result in harmful accumulations of the toxic chemicals in fish and wildlife.

Effect Noted

It has been the Department of Agriculture that until recently has been complacent about the possible harmful use of pesticides to fish and wildlife. But the Mississippi River fish loss, and the mounting impact of Rachel Carson's "Silent Spring", are having effect.

It now is holding hearings in the Freer Art Gallery to get all the pertinent information it can on the uses of aldrin, dieldrin and endrin and the cause of the fish kill before determining what "corrective measures, if any" should be taken. After two days of hearings in Washington others are to be held in Memphis and Baton Rouge, La.

The opening day found a public health service official, Leon W. Weinberger, testifying that laboratory studies indicate that the pesticide endrin is the likely killer of the Mississippi River fish. This was emphatically contested by a spokesman for a manufacturer of endrin, Bernard Lorant of Velsicol Chemical Company, who insisted that the symptoms attributed to loss of the fish were not those of endrin poisoning.

Testimony Contested

An issue that these hearings may settle is the source of the apparent contamination, whether it comes from regular agricultural usage, as is generally believed, or not. Dr. Weinberger, director of the Agriculture Department's water supply and pollution control division, indicated endrin contamination could come from farmland drainage, misapplication, accidental spillage, or water from manufacturing plants. One plant manufacturing endrin is located at West Memphis on the Mississippi.

This whole subject of pesticide danger and control is currently being threshed out. Spokesmen for agricultural groups are generally defending the use of endrin, dieldrin, and aldrin as "necessary tools" for abundant farm production. Public health and fish and wildlife spokesmen are demanding an outright ban on this use or more strict federal controls.

A panel of the President's Science Advisory Committee has urged that the use of pesticides be controlled and reduced. But it is split as to whether restrictive legislation is necessary.

(The Christian Science Monitor Boston April 14, 1964)

UDALL DEMANDS PESTICIDE BAN

A ban on pesticides has been advocated by the U.S. Secretary of the Interior Stewart Udall. The significance behind the news is Udall's high rank in the U.S. cabinet. It represents powerful support for fisheries and other interests who have maintained that many pesticides now in use are killing fish and wildlife.

There is now, for example, strong evidence that a spray used to kill insects in sugar plantations has been seeping into the Mississippi River and has been killing fish not only in the river but also in the Gulf of Mexico.

The trouble with these pesticides is that they are man-made members of the chlorinated hydrocarbon family. Unlike many compounds they are not broken down to harmless components by time or nature. Once applied, their toxic properties last indefinitely.

(Western Fisheries Vancouver April, 1964)

PESTICIDES AND WILD LIFE

The Nature Conservancy has issued the following statement on pesticides, defined as substances used to control any animal or plant regarded as a pest; the term includes herbicides, fungicides, insecticides, and rodenticides used in agriculture, horticulture and food storage.

The Conservancy have always appreciated that chemical control of certain plant and animal species is often desirable in the interests of agriculture. There is evidence to show, however, that certain pesticides can present long-term ecological hazards to wild life. Most herbicides used today are relatively non-toxic to birds and mammals. Of the insecticides, the organophosphorous substances are relatively non-persistent, although some, which are highly toxic, have on occasion caused severe

local mortality. At present, however, certain highly persistent organo-chlorine insecticides appear to provide the main hazard to wild life. Since limitations were agreed on aldrin, dieldrin, and heptachlor used as spring cereal seed dressings, these insecticides probably do not now cause much direct poisoning. On the other hand, there is evidence to suggest that if these substances were to be continually absorbed in small amounts in food they could have important effects on reproduction. The sub-lethal effects of the persistent chemicals on reproduction may well prove to be much more serious than their direct effects. Until more is known about these effects produced by ingestion through food chains the Conservancy will continue to press that their use should be greatly curtailed.

(Oryx)

London

April, 1964))

HOVERCRAFT FOR FISHERY PROTECTION?

At a meeting of the Southern Sea Fisheries District at Bournemouth, the chief fishery officer, Major M.H. Benton, suggested that hovercraft might be the means of exercising control in limited areas. On the extension of fishing limits, Major Benton said agreement had been reached in the minimum space of time with 12 other countries to increase fishing limits absolutely by three miles, an increase of 100 per cent in the first instance, and no mean achievement in itself.

Furthermore, control, temporary or permanent, could be exercised over fishing out to a further six miles, thus extending the powers over fishing by the countries concerned to 12 miles. Immediate effect was that this country's three mile limit was extended to 12 miles to those whose methods of fishing caused all the heat in the first place - the Russian and Polish trawling fleets with their mother and factory ships.

But the Government's achievements to date would go for naught unless an appreciably bigger and more mobile Fishery Protection effort was introduced. In that respect aircraft, whether fixed-wing or helicopter, much faster boats, and possibly hovercraft, would be needed to cover the increased area efficiently.

(Fishing News

London

April 24, 1964)

INDIA'S PRAWN PROCESSORS
MAINTAIN HIGH STANDARDS

The standard of hygiene in prawn processing plants in India is way ahead of methods used by most Australian prawn processors says Mr. Johnny Miller. Mr. Miller, the managing director of A.J. Arena Pty. Ltd., returned to Sydney this month after a flying visit to India and South-East Asia in search of prawns for Australia's domestic market. A.J. Arena Pty. Ltd. is the largest distributor of prawns in Australia. Mr. Miller said the urgency of the prawn shortage in Australia was the reason he was obliged to seek supplies overseas. "We have only five prawn processing plants on the eastern seaboard of Australia and their combined output for local consumption is not sufficient to supply our firm along. Processors are exporting their best prawns at fabulous prices," he said.

Public Starved

"We could do with 20 processing plants on the east coast but even then, I doubt if they could supply the enormous demand for prawns by the Australian public," he added. Mr. Miller said until fishermen were prepared to put the Australian public first, distributors had to look abroad for prawns to bridge the big gap between supply and demand.

India had the greatest potential, he believed. "There are plenty of prawns in India and the standard of hygiene in processing factories there is better than anything I have seen in Australia. "India's factories are larger, use more modern machinery and are better supervised than here. Most of the factories have their own laboratories and every shipment of prawns leaving the plant is tested for bacteria count. American buyers who take the bulk of India's prawns, insist on clean bills of health for every shipment - that's why the standard of hygiene is so high. In Australia, I know of no prawn processing plant with a testing laboratory," he said.

Mr. Miller said it was very hard to buy prawns in Australia and the recently introduced duty on Indian and Japanese prawns was "ridiculous". "The duty only pushes the price up to the public - it won't stop prawns coming into the country and could lead to a reprisal duty on Australian fish and prawns by other nations". Mr. Miller claimed that Australian fishermen were getting record prices for prawns and had never been better off in their lives.

"If fishermen would try to satisfy the domestic market first, distributors would not have to look overseas for prawns", he said.

Although Mr. Miller was given the V.I.P. treatment wherever he went in India, he decided to do a spot of private investigation on his own into the crayfishing industry over there. At Quilon, a fishing port on the west coast, near Cochin, he went to sea in a big canoe and was taken diving for craypots.

Fishermen set their pots miles offshore, take a bearing on the land, then return next day and dive for the pots with a hook at the end of a long rope. The pots are hauled to the surface emptied then baited and reset. An athletic young man (he's an Olympian and a member of the Australian ice hockey team) Mr. Miller enjoyed the experience of diving with the fishermen who guided him to the ocean floor.

When India's fishing industry becomes mechanised, Mr. Miller believes production will reach huge figures.

(Fish Trades Review

Sydney

May, 1964)

WEATHER MACHINE

Some of the drudgery experienced daily by the weather forecasters, and perhaps some of the vilification, may be reduced in the near future by the use of a machine, called the learning machine, which can be fed and taught to recognize geometric patterns found in weather formations.

The machine is called ADALINE (short for adaptive linear neuron) and learns its own mathematical procedures for processing meteorological data fed to it in training on weather patterns. Developed by M.J.C. Hu at Stanford University, the machine is now trained on some 200 weather patterns taken from weather records over the past five years and has been amazingly accurate in its predictions.

(Sea Secrets

Miami

April, 1964)