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[MONTHLY SERVICE BULLETIN
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8(12) Dec 1959

DEPARTMENT OF PARKS AND WILDLIFE

DEPARTMENT
AUSTRALIA

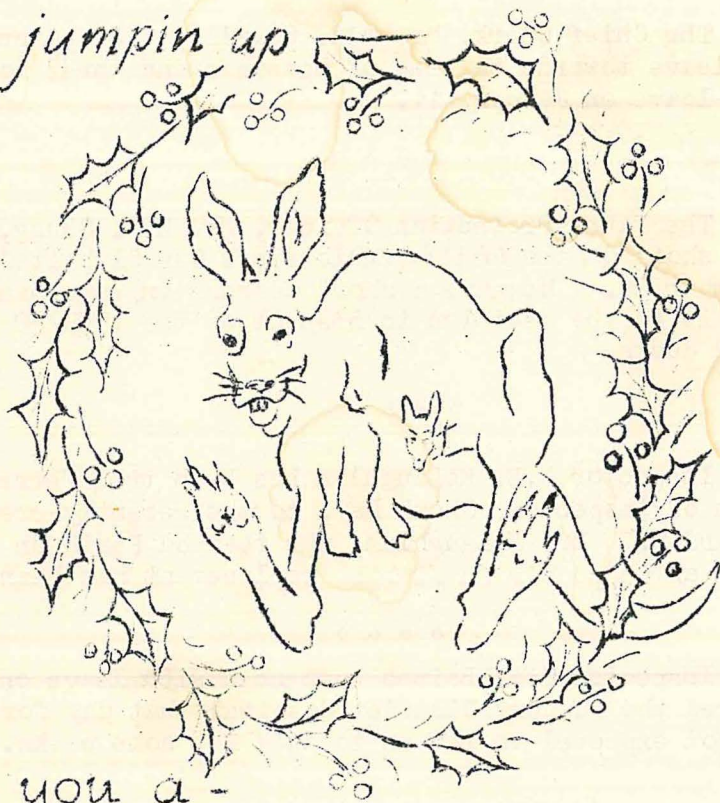
MONTHLY SERVICE BULLETIN



Vol. VIII, No. 12.

December, 1959.

"We're jumpin' up"



To wish you a -
Merry Xmas
and a
HOPPY NEW YEAR

FROM THE DIRECTOR AND STAFF FISHERIES + WILDLIFE PERTH W.A.

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STAFF NOTES.

The Director, Mr. A.J. Fraser, left Perth for Hobart, on November 26, to attend the annual Commonwealth-State Fisheries Conference. He spent three days in South Australia en route, and is expected to return to Perth on December 7.

* * * *

The Chief Clerk, Mr. B.R. Saville, will commence one week's annual leave towards the end of December and three months' long service leave on January 11.

* * * *

The Fauna Protection Officer, Mr. H.B. Shugg, attended the closing shoot of the Northam & Districts Gun Club at Grass Valley on November 29. He gave a short address on game management and related it to the decision in respect of the 1959/60 open season for wild ducks.

* * * *

Inspector N.E. McLaughlan has been transferred from the position of Inspector, Shark Bay, to the recently-created item of Fauna Warden. Mr. McLaughlan, who reached Perth on November 16, will act as inspector until his replacement has been appointed.

* * * *

Inspector T.B. Baines commenced sick leave on November 10. He entered the Bunbury District Hospital that day for an operation and is not expected to return to duty for some weeks. Inspector

* * * *

J. Traynor is in charge of the Bunbury district during Mr. Baine's absence.

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Technical Officer L.G. Smith completed his tour of duty on the survey ship "Bluefin" on November 27, and has returned to normal duties in Perth.

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Miss P.J. Pegrum, of Head Office, has tendered her resignation from the service from December 24. She will sail for England on the s.s. "Orcades" on December 28.

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Assistant Inspector E.H. Barker resumed duty at Geraldton on November 2 after annual leave.

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Assistant Inspector D.H. Smith, who has been assisting Inspector Crawford at Geraldton, returned to Perth during November and will be in charge of the Lancelin district during the crayfish season.

* * * *

Inspector R.M. Crawford, of Geraldton, will commence annual leave on December 14. During the period of his absence, Inspector B.A. Carmichael, of Albany, will be in charge of that district.

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Mr. W.K. Cherrington, of Head Office, will commence annual leave on December 29.

* * * *

Inspector A.V. Green will commence three months' long service leave on January 5. Relieving Inspector G.C. Jeffery will take control of the Mandurah district during that period. Mr. Jeffery has now returned to Perth from Albany following the resumption of duty of Inspector B.A. Carmichael, who completed his annual leave on November 27.

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Mr. G. Ferguson, of Head Office, returned to duty on November 17 after annual leave. Mr. J. Mitchell, also of Head Office, will resume duty on December 14 after leave.

PERSONAL PARAGRAPHS

Congratulations are extended to Inspector and Mrs. R.M. Crawford, of Geraldton, on the occasion of the birth of their second daughter, Jennifer Doreen.

* * * *

Mr. D.F. Smith, the Chief Fisheries Officer of the Kenya Government, called on the Director on November 11. Mr. Smith, who is on overseas leave, visited Fremantle with the Director and had a look at aspects of our fishing industry. Mr. Smith intends to visit fishery authorities in other States before returning to Kenya.

CRAYFISH SEASON - STAFF DISPOSITION

The following ministerial statement which was released to the Press just prior to the opening of the crayfishing season in southern latitudes, is published for the information of the staff :-

Fisheries Inspectors To Have Busy Time

Fisheries inspectors will have a busy time on the coast for a few months after the crayfish season opens south of 30° on November 15. More fishermen, bigger boats, improved roads, and the completion of an air strip near Green Head for flying crays to Perth, will all add to the burden of the Fisheries Department's field staff.

So said Minister for Fisheries Ross Hutchinson yesterday when questioned on the outlook for the coming season. Far too many men, who were merely living on the fringe of the industry, were more interested in catching immature crays than in conserving the fishery, he said. This despicable practice, which was abhorred by all right thinking fishermen, could quickly destroy what was now a highly productive and exceptionally lucrative industry. If this happened, it would spell ruination to many hundreds of hard-working men who had invested their life savings in expensive boats and equipment. It would also

seriously affect the economy of the State, which now exported some £2,500,000 worth of craytails annually.

The Fisheries Department would this year have three vessels - including the recently-launched 'Dampier' - continually on patrol in coastal waters between the 30th parallel and Safety Bay. 'Flying squads' of inspectors would be moving up and down the coastal roads and tracks to enforce the law. Any person found in possession of undersize crays, or in any other way infringing the regulations, would be prosecuted with the utmost rigor of the law, concluded the Minister."

Reporting to the Director early last month, Supervising Inspector J.E. Bramley advised that patrolling of the coast during the coming season was expected to be even more difficult than in other years. Licensed fishing boats would be operating, he said, from Whitford's Beach, Quinn's Rocks, Yanchev Beach, Wreck Point, Dewar's Well and Cape Leschenault. Established centres at Ledge Point, Lancelin, Wedge Island and Green Islets would again be worked. The numbers of boats based at Jurien Bay, Green Head and Snag Island were expected to increase sharply and would require inspection.

In order that the whole coast might be controlled, it has been divided into sections to which groups of inspectors have been allotted. Senior Inspector J. E. Munro and Cadet Inspector K. Enright will patrol from Rockingham to Dewar's Well, just north of Wreck Point. While the immediate Fremantle district would not be included in their area, Messrs Munro and Enright would also check the airport and shops, hotels, processing works and freezers in the metropolitan area.

Assistant Inspector D. H. Smith will be in charge of the Lancelin district where camps and boarding houses are already reported to be booked out and a record number of visitors are expected over the holiday season. A mobile patrol, with Inspector N.E. McLaughlan in charge and Cadet Inspector G. Hanley assisting, will operate from Green Islets to Snag Island. Officers to be stationed at established district centres are as follows:-

- Albany - Inspector B. A. Carmichael (until December 14);
- Bunbury - Inspector T. B. Baines (Inspector J. Traynor relieving during Inspector Baines' absence on sick leave);
- Mandurah - Inspector A. V. Green, assisted by Cadet Inspector R. G. Emery (who was transferred to that centre on November 23);

Fremantle - Senior Inspector A. K. Melsom, assisted by Cadet Inspector J. T. Kelly;

Geraldton - Inspector R. M. Crawford, assisted by Assistant Inspector E. H. Barker.

The inspectorship at Shark Bay remains vacant pending an appointment of a successor to Inspector McLaughlan.

The p.v. "Dampier" will be under command of Inspector C. J. Seabrook, assisted by Assistant Inspector N.K. Henry. She will be stationed at Jurien Bay until the middle of February when she will leave for patrols at Houtman's Abrolhos.

The p. v. "Kooruldhoo", commanded by Inspector E. I. Forster, assisted by Assistant Inspector D. P. Gordon, will be stationed at Lancelin Island until the "Dampier" leaves for the Abrolhos, after which the "Kooruldhoo" will patrol as far north as Beagle Island until the end of March. It is intended that she will then transfer to the Abrolhos to assist the supervision of that area.

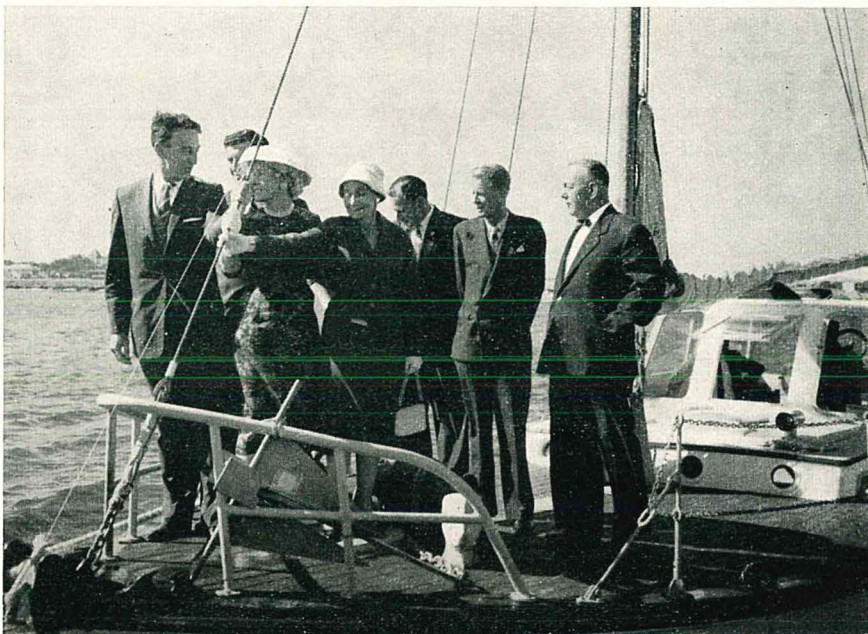
Inspector H. D. Kavanagh, assisted by Assistant Inspector G. D. Houston, is in command of the p.v. "Misty Isle" which will be stationed at Fremantle.

LAUNCHING OF "DAMPIER".

With the age-old formula "I name this ship 'Dampier' and may God bless her and all who sail in her," and the crashing of the traditional bottle of champagne over her bows, Mrs. Ross Hutchinson, wife of the Minister for Fisheries, launched the new patrol vessel recently built for this Department. The ceremony took place on November 4 at the Department's boatshed at Victoria Park.

The Director (Mr. Fraser) presided at the function, at which many officers were present in company with their wives. He welcomed the official guests, who included the Minister for Fisheries and Mrs. Hutchinson; the Under Secretary, Chief Secretary's Department (Mr. J. J. Devereux); the Manager (Mr. K. G. Forsyth) and foreman shipwright (Mr. G. Beale) of the Harbour and Light Department, which built the hull, and Messrs. A. G. Perman, G. M. Downs and M. Hortin, of the Fremantle Harbour Trust, which was responsible for the installation of the engines and machinery. Mr. Fraser said he hoped this ceremony was the forerunner of several similar ones. This was the first vessel built for and to the specifications of the Department since the old "Kooruldhoo", which was still giving good service, was commissioned in 1912. In the meantime, of course, several vessels had been pur-

"DAMPIER" LAUNCHING



Top: Mrs. Ross Hutchinson christens "Dampier"

Bottom: The official party on board

"DAMPIER" LAUNCHING



Top: Leaving for short cruise

Centre: "Dampier" with official party aboard

Bottom: Profile view of "Dampier"

chased second-hand, but they, like the "Kooruldhoo", had seen their best years and were almost due for replacement. Two more vessels were on the drawing boards, but their construction would have to await the provision of funds. In our developing fishery, he concluded, there was great need of the best vessels obtainable, and it was his hope that the Treasury would soon be able to see its way to make the necessary moneys available.

The Minister (Mr. Ross Hutchinson) said the development of the fishing industry in this State had been little short of spectacular. The crayfish industry alone was worth £2¹/₂ million annually and it was essential that we take very good care of it. He thanked those men who had been associated with the building and fitting out of the new craft, which was one of which the Fisheries Department could be truly proud. He said the man whose name she would bear was the first Englishman to set foot on the shores of Western Australia. Although something of a buccaneer, he was nevertheless a true man of the sea - he was courageous; he was resourceful; he knew his way around. That was the sort of man the inspectors must be who would take command of this new ship. They would have to put to sea in all weathers and in all seasons; they had a job which needed both courage and resourcefulness. If they displayed these qualities, and assisted in some degree the productivity of the crayfisheries by abolishing some of the illegal practices we all knew were now being carried out, they would deserve the thanks, not only of the Department and the fishermen, but also of the people of Western Australia as a whole.

"Dampier" is 45 feet in length, with a beam of 12 feet 6 inches and draught of 4 feet 3 inches. Her planking is jarrah, and she is powered with a 90 h.p. G.M. diesel motor with a 10 h.p. Petters diesel auxiliary. She is fitted with refrigeration and a hydraulic winch, and has accommodation for four people. She will be employed principally in patrolling the crayfisheries - in the Abrolhos and northern waters in winter and south of 30° in summer. Her first skipper is Inspector C. J. Seabrook, and her mate Assistant Inspector N. K. Henry.

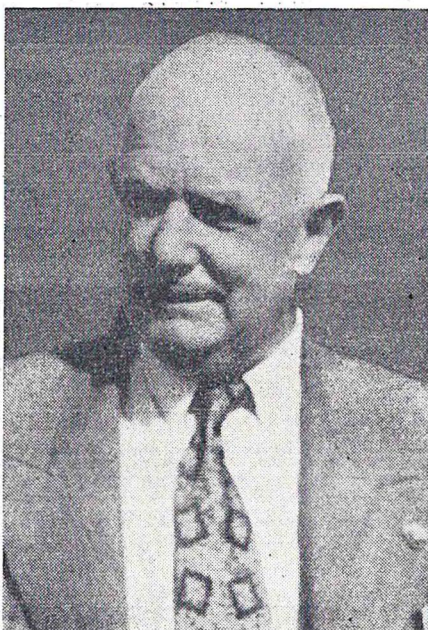
KINGFISH LANDED.

A 4' 10" mulloway weighing 62 lb was landed by a Northampton angler last month. Fishing in the evening at Halfway (which is north from Port Gregory between Lucky Bay and Sandalwood Bay), Mr. Charles Cripps landed the big fish on a 31 lb. breaking strain line baited with mullet on three ganged hooks. The report says that the fish took 170 yards of line before being turned.

COMMONWEALTH FISHERIES CHIEF RETIRES.

On November 9 Mr. F. F. Anderson, Director of the Fisheries Division of the Department of Primary Industry, Canberra, commenced long-service leave prior to retirement.

After a varied career, principally in the public service, Mr. Anderson was appointed to his present position on September 16, 1946, on the creation of the new Division, at that time attached to the Department of Commerce and Agriculture. The scope of his appointment, as defined by the Government of the day, included the development of the fishing industry generally, the marketing and distribution of fish, the whaling and pearl-fishing industries, and the organisation and training of ex-servicemen as fishermen. The terms of his appointment required him to confer with State Governments when matters affecting the fishing industry were under consideration.



Mr. Anderson was born in Victoria 65 years ago and came to Western Australia when only 3 years of age. He was educated at Christian Brothers' College, Fremantle, and his official career commenced when shortly after leaving school he joined the Metropolitan Water Supply and Sewerage Department as junior clerk.

Mr. F. F. Anderson

In 1923 he was appointed Town Clerk of Bunbury, and five years later became secretary to the Metropolitan Market Trust. Mr. Anderson in 1942 was seconded to the Commonwealth Government as Deputy Director of Rationing upon the introduction of wartime controls on food, clothing and the like. From this position he progressed to that from which he now retires.

In World War I, Mr. Anderson, as a member of the R.A.N.V.R., was called up for active naval duty as early as 1914. He was discharged in 1919 with the rank of sub-lieutenant. In 1939 he was recalled to the Navy with the rank of lieutenant-commander, but in 1940 he was released to his civil avocation and placed on the retired list.

In the capacity of Commonwealth Director of Fisheries, Mr. Anderson made many visits overseas. He was a member of the International Whaling Commission, and attended meetings in Washington, Oslo, London (three times), Tokyo and The Hague. He was vice-chairman of the International Technical Conference on the Conservation of the Living Resources of the Sea held in Rome in 1955, and represented the Federal Government at meetings of the Indo-Pacific Fisheries Council in Sydney and Bangkok. Recently he was appointed to the directorate of the Southern Trawling Co., Ltd., the Commonwealth-sponsored fishing venture financed from the Fisheries Development Trust Account.

We extend to Mr. Anderson thanks for many courtesies and our deep appreciation of his co-operation since transferring to Commonwealth Fisheries. He has our best wishes for the years of his retirement in Sydney.

GERALDTON AND FREMANTLE FISHING HARBOURS.

The Minister for the North West (Mr. C. W. Court), who controls the Harbour and Light Department, and the Minister for Fisheries (Mr. Ross Hutchinson) have jointly been examining the harbour requirements of the fishing fleets at both Fremantle and Geraldton.

The conclusion has been reached that with the expansion of the industry and the ever increasing number of fishing boats needing harbour facilities for loading, unloading, servicing and mooring, the present harbour accommodation is totally inadequate.

The Ministers have before them a plan for the Geraldton harbour involving approximately £55,000 for dredging, wharves and an access road at the western end of the harbour. This does not include any provision for moving slipways from their present location at this stage. The advantages of slipways and boat building and repair facilities in the new location have not been overlooked.

Of the cost involved in the Geraldton project, approximately £17,000 will be needed for dredging. As an early decision had to be made to retain the services of the dredge "Throsby" which would otherwise leave the State, approval has been given for the dredging expenditure. This will ensure that this essential part of the Geraldton work is undertaken early in the New Year and without the risk of a major hold-up because of the absence of a suitable dredge.

The two Ministers are giving consideration to the balance of the Geraldton requirements.

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They also have under consideration a major fishing fleet harbour scheme for Fremantle which will involve expenditure of approximately £300,000 to complete. A start will be made on the fishing harbour improvement during the current financial year. The sum of £51,000 has been allocated for this financial year for preliminary work on the new breakwater.

The major Fremantle scheme is one that can be done in stages. It is hoped to reach an early decision on the overall plan, although it will take some little time to complete the harbour. There are stages of the work that can be completed progressively with advantage to the fishing fleet without awaiting the full scheme.

FISHERIES DEVELOPMENT TRUST ACCOUNT REPORT.

A copy of the third annual report of the operation of the Fishing Industry Act, 1956, during the year ended June 30, 1959, has been received. The report, which was published over the signature of Mr. C.F. Adermann, Commonwealth Minister for Primary Industry, briefly reviews the activities conducted under the fund and concludes with a short financial statement.

Dealing with the first of the four programmes financed by the Fund, the report stated that additional grounds had been surveyed by the chartered l.f.b. "Challenge" while continuing her exploratory trawling off the east coast of Queensland between Yeppoon and Wide Bay. Special gear had been constructed to work down to 150 fathoms in the deeper waters off Victoria and New South Wales.

Progress made in the programme to establish a Company to undertake exploratory commercial trawling in the waters of the Great Australian Bight were briefly outlined. Reference was also made to the crayfish survey in southern waters by the chartered vessel "Bluefin".

Concluding the report was a financial statement which revealed that expenditure exceeded income by £44,809. As a consequence, the balance of the Trust Account (which was constituted from the sale of the Western Australian based whaling station at Carnarvon) fell to £550,673.

A detailed statement relating to the fourth item - the provision of a new barracouta boat financed by the Fund - follows immediately.

Barracouta Boat.

"Barracouta fishing in Bass Strait is an uncertain business", Dr. F. W. G. White, Chairman of C.S.I.R.O., said recently. "The numbers taken by fishermen have varied very much in recent seasons. It is hoped that this new vessel will enable us to learn a lot more about the barracouta, its migratory habits, its spawning habits, and the food it eats. A more complete understanding of the barracouta's movements should be of great assistance to fishermen", he added.

Dr. White was speaking at South Wharf, Melbourne, where a new C.S.I.R.O. fisheries research vessel lay at moorings. The occasion was a ceremony at which the craft was named "Thyrsites" by Mrs. White. "Thyrsites" is the scientific name of the barracouta. The new all-steel, 42-foot diesel craft was financed from the Fisheries Development Trust Fund, and was built by Acro Steel Works, Melbourne. She will make eight cruises a year in Bass Strait, each of one month's duration. She will carry a crew of two men, plus one or two scientists.

With the new vessel, research workers in the C.S.I.R.O. Division of Fisheries and Oceanography hope to find out -

- *What causes large fluctuations in the seasonal barracouta catch.
- *What food is preferred by barracouta and what water temperature.
- *Where barracouta may be found when they are scarce in Bass Strait.
- *Where the barracouta spawn.

Attempts will be made to trace the seasonal migration of the fish by tagging them. The vessel is equipped with a special echoing device, and attempts will be made to locate and identify barracouta with it.

AIR LIFT OF CRAYFISH.

The construction of an aerodrome, suitable for DC3 and smaller craft, for International Fisheries, has introduced a new phase in crayfish transportation. Daily (or less frequent) flights have been arranged by MacRobertson Miller Airlines Ltd. to bring consignments ranging from 6,000-10,000 lb. of crayfish to processing works in the metropolitan area.

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The airstrip, which is less than a mile from the coast at Greenhead, north of Jurien Bay, was completed by a Perth construction company last month, and is 5,200 ft. long and 300 ft. wide. The strip was prepared merely by grading and levelling the coastal sandplain. In previous years, fish had been transported from this area by truck, and the mortality rate had been high; on rare occasions reaching 50%.

CULTURED PEARLS SELL WELL.

Proof of the high quality of the Kuri Bay cultured pearls came in a recent press report from New York. A choker made of them was sold for \$100,000, (about £A 44,500). Writing in the American magazine "This Week", John Wulp described the Kuri Bay pearls as being more expensive than natural pearls, normally prized above cultured gems.

The article featured pictures of the pearls, which were about $\frac{1}{2}$ " in diameter. The venture had been started, Wulp wrote, by an American business man who wanted to see if he could produce pearls any bigger than those already coming forward from Japan. The waters of Kuri Bay had proved ideal and the first harvest had been made last year. Wulp said that the oysters had grown to enormous size - and so had the pearls.

CRAYFISH BOATS BEACHED.

The "Stella Maris", a 55ft, 23-ton three-masted schooner, and the "Vagabond," a 25ft. fishing boat, both owned by Perth businessman Norman Parker, were blown on to the beach south of Safety Bay on November 1. Mr. Parker said that when strong northwesterly winds came up on Sunday afternoon, he and a member of the crew tried to reach the "Stella Maris" but were driven back. A terrific gust of wind estimated at 75 m.p.h. pushed the "Stella Maris" onto the beach. The "Vagabond" was blown onshore about 60 yards south of the "Stella Maris" a few minutes later. The schooner suffered little damage, the rudder being bumped off in shallow water. The "Vagabond" was not damaged.

Perth businessman Roy Green's 25ft. crayboat "Juanita" went ashore at Ledge Point, south of Lancelin Island, and was holed on a rocky ledge during the height of the blow on the same Sunday. A mobile crane had to be brought from Perth to lift her from the ledge into the water.

OPEN SEASON FOR WILD DUCK.

The Minister for Fisheries, Mr. Hutchinson, announced recently that he had accepted a recommendation from the Fauna Protection Advisory Committee to open the 1959/60 season for wild ducks on the traditional week-end before Christmas. It will close on April 30, the same day as last year.

Details of the opening given by the Minister were as follows:-

- (a) at 6 p.m. in the evening of Saturday, December 19, in the Augusta-Margaret River, Balingup, Bridgetown, Busselton, Capel, Collie-Coalfields, Dardanup, Greenbushes, Harvey, Manjimup, Nannup and Preston road districts;
- (b) at 5 a.m. on the morning of Sunday, December 20, in the remainder of the South-West and Eucla Land Divisions not included in the road districts mentioned above.

Duck shooting will be unlawful 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 Lakes Leschenaultia, Yealering and Seppings, 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 the Vasse, King and Kalgan Rivers and all land within twenty chains of their shores.
- (f) The whole of the waters of Vasse and Wonnerup Estuaries and all land within twenty chains of their shores.
- (g) All the waters of the Leschenault Inlet extending southwards from a line drawn south-east from Waterloo Head (Belvedere) on the west foreshore to a point on the opposite foreshore.
- (h) All that portion of the Capel River between the Capel and Stirling Bridges and all land within twenty chains of the river's banks.
- (i) The whole of the waters of Oyster Harbour and Princess Royal Harbour and all land within a radius of twenty chains of their shores.
- (j) The whole of the area of the Yanchep Caves reserve.

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- (k) The whole of the Harvey catchment area.
- (l) The whole of the area within a radius of two miles of the Post Office at Mandurah.
- (m) The whole of the area within a radius of two miles of the Post Office at Boyup Brook.
- (n) The whole of the area within a radius of $1\frac{1}{2}$ miles of the Post Office at Balingup.
- (o) All that portion of the Avon River in the Toodyay road district between the northern boundary of Avon Location 3 and a point opposite road 2069, and all land within twenty chains of the river's banks.
- (p) 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's banks.
- (q) All that portion of the Serpentine River from road 8269 at the southern end of Goegrup (Willies) Lake to Peel Inlet near the Old Mill, and all land within twenty chains of the river's banks.
- (r) All State forests, timber reserves, town reservoirs and other areas where shooting is prohibited under the provisions of any other Act, Regulation or By-Law.

"A questionnaire distributed among shooters and honorary wardens revealed the extent to which opinion was divided as to the best opening date and time," the Minister said. "Replies indicated that while there was fairly solid support for the suggested State-wide opening on Saturday afternoon, a slight majority wanted the usual opening times continued. Many other suggestions in respect of the time and the date were made. In all twentysix different openings were recommended, which gave a fair indication of the range of opinion on this contentious question. Under the circumstances, there was little alternative but to maintain the status quo", Mr. Hutchinson said.

"Opinion in respect of the closing date was more united. While various dates between March 15 and June 15 were suggested, over 70% of those proffering an opinion preferred the season to close by April 30. This majority recommendation has been accepted.

"The response to the questionnaire, including the detached and careful thought given by most correspondents, was very much appreciated," Mr. Hutchinson continued. "However, all have had the opportunity of expressing their opinions which, in turn, have been carefully considered. It now behoves shooters to accept the decision and to abide by the regulations in the highest tradition of the sport," the Minister said. "After all, the regulations have been designed to continue and organise the sport in the best interests of all concerned, not forgetting the ducks,"

Emphasising that the close season extended right up to the week-end before Christmas throughout the whole of the South-West and Eucla Land Divisions, Mr. Hutchinson made a direct plea to all shooters not to try to beat the gun as there were still many young ducks about in the flapper stage. Any person apprehended while shooting in the close season, or in any of the prohibited areas listed, could expect to have his firearm seized and be prosecuted, the Minister warned. He concluded by drawing attention to the following restrictions:-

- * The use of traps is entirely prohibited throughout the State.
- * Spotlights are an illegal device.
- * The sale of wild ducks is forbidden.
- * A person shall not keep wild ducks in captivity.

MANDURAH FISHERY.

Towards the end of October, Sir Ross McLarty, M.L.A., introduced to the Minister for Fisheries (Mr. Ross Hutchinson) a deputation from the Mandurah Chamber of Commerce. The Minister was told that the Chamber was concerned with what it described as the deteriorating condition of the fishing industry in Mandurah. It was said that fishing was the chief attraction of tourists to the area and should be safeguarded for the well-being of the whole community.

The opinion was expressed that the main causes of the reported decline of the fishery were, firstly, poaching in waters closed to **protect** the fish during certain growth stages and, secondly, the deterioration of the feeding grounds. These factors were said to have caused the third factor which disturbed the Chamber - an alleged decline in angling species, particularly whiting. In view of the importance of tourism to the State, the Minister was requested to take

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whatever action he considered necessary to enforce fishing restrictions and to conserve the feeding grounds to ascertain whether they might be rehabilitated.

In a considered reply last month, the Minister dealt with the three main points raised by the deputation concerning the policing of closed waters. After emphasising the increase during recent years of the Department's field staff, he said that, although two men were stationed in the Mandurah district, they could not be in all places at once. Notwithstanding flying visits made by inspectors from Perth, unlawful fishing practices continued. There was little that could be done, he said, to abate them further, unless local residents were prepared to help. He suggested that they might adopt a practice used extensively in N.S.W. - the formation of vigilance committees which were recognised by law and the members of which were given some of the powers of inspectors. He said he would be prepared to introduce legislation to provide a similar scheme here if there were sufficient support for it.

Commenting upon the reported deterioration of the feeding grounds, the Minister wrote:-

In the sea and in the waters of estuaries, rivers and lakes, there are good and bad seasons just as there are on land. On land bad seasons are brought about principally by poor rainfall, whereas in the sea (and other waters) a fall in fish production results very largely from reduced chemical activity. The reasons for this are not yet fully understood, but it is well established that a falling off of chemical activity results in a reduction in the number of diatoms produced. The diatom is a lowly form of vegetable life which needs chemical nutrients for its sustenance. Moreover, in the final analysis it forms the basis of all food in the sea.

The smallest animal organisms prey on the diatoms, and they in turn are preyed on by slightly larger organisms, and so on. If, therefore, chemical activity is less, the production of diatoms is less, and food for the animal organisms on which fish depend for their sustenance is less, and fish, in the absence of sufficient food, either perish or move on to other areas where food is more abundant. When that occurs anglers and professional fishermen alike make poor catches.

In the rivers some at least of the chemical nutrients come from the land, being washed in by heavy rains. When rivers are dammed, as is now being done in the Serpentine, the runoff is greatly restricted, and the intake of nutrients reduced. This sort of process is probably now occurring in the Mandurah estuary, and it is possible that its productivity in relation to fish will be progressively reduced as the dam-construction programme advances.

I am afraid there is little the Department will be able to do to arrest the downward trend in productivity, if ever it does occur.

The reputed deterioration of angling could not be substantiated, the Minister said. While figures of fish production show violent year-to-year fluctuations, the catch at Mandurah has been reasonably stable. The principal angling species, whiting, represented only 2% of the professional fishermen's catch and it seemed that they were not doing any great harm to amateur fishermen, Mr. Hutchinson said. Indeed, recent press reports, he concluded, indicated that whiting were now present in great abundance.

IN APPRECIATION.

Dr. Mary Gillham, Lecturer in Botany at the University of Exeter, England, wrote a note of appreciation to the Director before returning to Melbourne recently. She expressed her thanks for all the assistance and courtesies extended to her during what she described as her all too short stay in Perth. "Thank you very much indeed", she wrote. "Your officers have been most helpful in every way."

ANOTHER RARE WHALE FOUND.

Following on the report in the previous issue of the recovery at Point Peron of a beaked whale of the genus Mesoplodon, it is of interest to read of the recovery of another beaked whale in the same area.

The Director of the Western Australian Museum, Dr. W. D. L. Ride, and his assistants conducted a post-mortem on a whale at Palm Beach on November 21. Although the identification was not yet positive, Dr. Ride said, it could be a specimen of the extremely rare Cuvier's Beaked Whale (*Ziphius cavirostris*). If it were, it would be only the twentyfirst record of the species anywhere since 1913, Dr. Ride said. He believed that the whale had been sick for some time and had not been feeding, although cuttlefish beaks in its stomach gave an idea of what it normally ate. From one kidney, parasites weighing $1\frac{1}{2}$ lb had been recovered.

The colouring of the whale has been described as unusual, the top being white and the underneath parts dark. The head had been brought back to the Museum where the skull will be examined. Crayfishermen quickly availed themselves of free craybait after the whale had been dismembered.

Cuvier's beaked whale is in the same family (*Ziphiidae*) as the *Mesoplodon* found at Point Peron on October 8.

MARRON.

Longer Closed Season.

The open season for the taking of marron will not commence until January 1. Announcing this recently, the Minister for Fisheries (Mr. Hutchinson) said the decision had been reached reluctantly. After dealing with the causes of the marron's decline (increased fishing pressure and alterations to the ecology of the streams and rivers of the South-West and the need to protect the fish through the whole of its breeding season), Mr. Hutchinson said - "The crux of the matter is this - if we want marron in the future, we will have to do without them for Christmas."

North Dandalup River Closed.

Inspectors should note that the whole of the waters of the North Dandalup River, its streams and tributaries, have been closed to the taking of marron by any means of capture whatsoever.

CLEARING HOUSE.

The Food Fish Eat.

The abundance or scarcity of the food which forms its staple diet determines, in the long run, the quantity and quality of the fish we catch. In this interesting series of articles, Burns Singer discusses the eating habits of some of the commercial species fished in this country. Here he deals with the halibut.

The size of any animal is of great importance when we come to study the food it eats. True, there are freaks, like the biggest of all animals, the blue whale, which lives on the tiny crustacea which the Norwegians call krill. The largest sharks, too, are plankton feeders. But these immense animals have all developed specialised organs which enable them to comb through vast quantities of water in order to extract the small animals which float in it. Where no such special organs exist, the size of a fish determines very roughly the size of the species which will serve it as a staple diet.

In order to illustrate this elementary fact it is only necessary to consider the changes that take place in the diet of some fish as it grows from larvae to its full size. And, naturally, a big fish is better for this purpose than a small one if only because it changes through a greater size range. I have therefore chosen the halibut, partly because it makes the point beautifully and partly because it has recently been studied in considerable detail by Mr. A. D. McIntyre of the Marine Laboratory in Aberdeen.

Selective Feeding:

The baby halibut live in the nursery grounds around the Faroes and in Iceland's Faxa Bay. There they find a large variety of suitable food, varying from shrimps to small fish, like the sand eel. They continue to grow on this mixed diet for 2 years or so when they begin to migrate into deeper waters. There the supply of shrimps quickly gives out and they are forced to tackle larger crustaceans, like hermit crabs, larger fish, like the haddock, and a few squids and octopods. With the Faroe halibut this intermediate diet continues indefinitely, the size of individuals in the stomach continually increasing but the proportions between the various species remaining roughly constant.

The Icelandic and Greenland halibut are very different however. As they grow they become ever more selective in their feeding until, when they are over 90 centimetres in length they are limited almost exclusively to a single food species - the redfish, or Norwegian haddock, (Sebastes marinus). This, as most fishermen are aware, is a fair-sized mouthful, since it grows up to 18 in. in length and is almost as deep as it is long.

It has been suggested by several authors that we don't make enough use of our stocks of this fish as food for humans; and it is certain that the redfish is very rich in vitamin A, the active element in halibut liver oil. Indeed it has been observed that the larger halibut grow and the more exclusively they feed on redfish, the higher becomes the concentration of vitamin A in their livers. Where does the redfish derive its vitamin A? That is a question to which we can give no answer since the stomachs of redfish are usually everted by pressure from the air bladder by the time they are hauled aboard. All that is known for certain is that redfish is not a bottom living animal and that the halibut must therefore hunt for it at some distance from the bottom.

Not that it forsakes the bottom altogether. These large halibut, for example, are all caught by great line vessels which means that they are attracted to ground bait. And the chief supplementary food of the halibut is the giant, spiky stone crab - Lithodes - which is undoubtedly a bottom living animal. Just how these huge spiny lifeless-looking masses are digested remains somewhat of a mystery, but they are quite frequently found crouching comfortably in the stomach of large halibut.

Ideal simplicity.

We can thus observe a cycle in the feeding habits of halibut. Beginning with small crustaceans and tiny fish, it gradually learns to consume larger animals in both groups, as well as cephalopods. Once, however, it has attained its full size, it concentrates almost exclusively on the one species of fish, and that a fish which would make a good meal for even the largest human. Then it spawns, and its eggs are carried back, probably at some depth, to the nursery grounds around the Faroes or in Faxe Bay. And there the small halibut begin feeding on small crustacea once again. If everything in the sea were as simple and clear cut as this cycle, the job of the fishery biologist would be much easier than it is. But, as we shall see next month when we study the food of the haddock, this ideal simplicity is far from being always maintained.

Nylon Purse Seines Are Popular In Norwegian Fisheries

About 50 British nylon purse seines were fished off Norway last season and it is expected that the total number in use during the coming season will exceed 100. Many others will be in use in other fisheries.

Very rapid progress has been made since the first of these nets were introduced in 1957. They are said to have proved outstandingly successful, and despite the higher initial cost of nylon purse seine it has many economic advantages. Its great strength and energy absorption enable it to hold substantially greater weights of fish than cotton nets. It lasts longer, weighs less, is rot-proof and so requires less maintenance.

Bigger Catches.

The British nylon yarn from which the purse seines are made is 210 denier with a minimum tenacity of 7 grams per denier. It is stronger than any other fibre which can be used for the purpose, a double-knotted net made from six-fold, 210 denier nylon having a wet mesh strength nearly three times as great as that of a single-knotted cotton net made from 32/9 or 36/9. Its shock strength is at least double.

This enables a greater weight of fish to be held with safety when exceptionally large catches are made. Boats equipped with nylon nets averaged 9,800 hectolitres last season, while the average for the fleet as a whole was only 3,400 hectolitres. Despite its strength, however, a nylon purse seine weighs less than its cotton equivalent. The difference in the dry weight of the actual netting is relatively small, an average figure being 2,500 lb. for nylon compared with 3,000 lb. for 32/9 cotton. The difference when wet is very much greater, however, since cotton roughly doubles its weight while nylon generally increases by only about 60 per cent.

Easier Handling.

Thus wet nylon netting weighs only about two-thirds as much as comparable wet cotton netting and further weight savings can be made by using man-made fibre for the rigging ropes. This enables the net to be handled more easily and more quickly, so that there is a considerably better chance of getting in a second shot if the first fails.

Lightness in weight is also valuable in enabling the net to be handled more easily when it is ashore. Since nylon is completely

rot-proof it does not require any preservative treatment so the monthly tanning process which most cotton purse seines undergo is not necessary. Many nylon purse seines are, however, treated with a coal tar preparation to give them the required stiffness, and it has been found that once a year is quite sufficient for this treatment.

A further interesting aspect of the saving in weight - and bulk - is the effect it may ultimately have on the size of nets. At the present time a depth of 45 fathoms is generally reckoned as about the most that can be coped with on a 180 fathom net. The use of nylon may eventually enable this depth to be increased and thus go part way towards overcoming one of the most serious limitations of the purse seine.

Longer Life.

At the present time it is not possible to make any accurate assessment of how the life of a nylon purse seine compared with that of a comparable cotton net, but at a conservative estimate it is likely to be at least double. The original British nylon purse seines first fished off Norway three seasons ago are still in use and their general condition is much better than that of cotton nets after the same length of time. They have required considerably less repair work.

At an average cost of around £7,500 fully rigged a nylon purse seine is about twice as expensive as its cotton equivalent but there is growing belief that the greater capital outlay is worthwhile.

(World Fishing

London

October 1959).

Scientists Advancing On Secrets Of Salmon's Homing Instincts

Fisheries scientists have long suspected that one of the major factors responsible for the Pacific salmon's uncanny homing instinct is an acutely developed sense of smell.

Now a Scottish biologist has stated that salmon are quite definitely guided by a combined sense of taste and smell.

Dr. C.E. Lucas, director of the Marine Laboratory at Aberdeen, Scotland, said in an address to the International Oceanographic Congress in New York early this month that there is evidence that salmon can follow trails made by extremely dilute

chemical traces that drift downstream from the spawning area to the ocean. The chemicals are present in concentrations of a few parts per million or less.

Experiments in Scotland with Pacific Salmon show that they can be guided along these faint chemical trails by a combined sense of taste and smell. Fish that had their nostrils plugged for the experiment had greater than normal difficulty in finding their way.

Apparently, according to Dr. Lucas, the fish becomes conditioned in its early life to the presence of certain traces of organic chemicals that are characteristic of the locality. Later, when the fish is ready for spawning, it detects these traces, and follows the trail to the home stream.

The evidence might have practical commercial implications, Dr. Lucas indicated, but experiments are not advanced enough at the present time to predict what these may be. The specific nature of the traces that the fish appear to follow is so far unknown.

(Western Fisheries Vancouver, B.C. September 1959.)

African Offer On Bight Fishing

An offer by a South African fishing company to assist in the development of the Great Australian Bight fisheries has not been accepted by the Commonwealth Government.

Mr. Lawrence Leask, managing director of Irvin and Johnson, of Capetown, said this in Sydney this month.

Mr. Leask said his firm had offered to co-operate with the Government in exploiting the Bight fisheries.

The offer included the use of one of its big deep-sea trawlers.

Top Level

Discussions had been held at Government-level but nothing had come of them.

Irvin and Johnson is the largest fishing concern in South Africa.

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Since 1954 it has added eight steam trawlers (each 500-600 tons) and six 75ft. diesels to its fleet.

The firm has three subsidiary companies in Australia and last year supplied 49 per cent of imported fish.

In Sydney this month, the Southern Trawling Company Ltd. advertised for a master, mate, and a chief and second engineer to man a modern diesel trawler early in 1960.

Qualifications for the positions require previous experience in trawlers or similar vessels over 500 tons.

Salary, basket money and conditions of employment will be not less than those prescribed in the Trawlers, Masters, etc., State Award of N.S.W.

New Company.

The Southern Trawling Company was registered in Adelaide last November by the Commonwealth Government to investigate the possibility of establishing a profitable trawl fishing industry in the Bight.

When this is proved the Government has promised to invite private enterprise to take over.

The company was established with a capital of £260,000 from the Fisheries Development Trust Fund which came from the sale of the Government's whaling station in Western Australia.

Trawling is expected to begin next year and will, it is hoped, significantly increase the supply of fresh fish to Adelaide, Melbourne and Sydney.

(Fish Trades Review

Sydney,
N.S.W.

October 1959.)

Small Prawns Here To Stay

The N.S.W. Government has refused a request by fishermen to reimpose a minimum legal size for prawns.

The request was rejected because it had been made solely for marketing purposes.

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From May 1 this year the former minimum legal length of $3\frac{1}{2}$ inch for prawns was rescinded but the minimum mesh size of prawn nets was increased from $1\frac{1}{4}$ to $1\frac{1}{2}$ inches.

Fishermen wanted the mesh size retained but asked for a legal length of 3 inches.

New South Wales Superintendent of Fisheries, Noel Harris, said fishermen had made their request solely for marketing purposes.

Not Policy

This was contrary to fisheries management policy since the legal lengths of fish were imposed for conservation or biological purposes and not for marketing.

Mr. Harris said that even if a 3 inch legal length was imposed, a large percentage of the prawns would still be undersized.

The department would have to meet the cost of enforcing a law which was not soundly based.

Its inspectors would be faced with the task of trying to detect undersized prawns in the possession of fishermen and in shops.

Fishermen should grade their prawns at the point of catch when they were green and easy to sort, he said.

No Value

Mr. Harris said a legal length of 3 inches would have no conservation value because school prawns did not spawn until they were 4 to $4\frac{1}{2}$ inches.

For king prawns the length would have to be 6 to 8 inches and for tiger prawns 9 to 11 inches, which would be absurd.

Mr. Harris said that stricter enforcement of the mesh size should prevent the capture of small prawns.

If it was found that fishermen were not prepared to control the capture of undersized prawns the department would have to "seriously consider" closing waters which were nurseries for very immature prawns, he warned.

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"Make Oyster Catcher Protected Bird Again."

The Westmorland County Council wants the oyster catcher to be a protected bird again in view, the council says, of "the number of other birds of protected species taken or killed as a result of the measures adopted for the control of the oyster catcher."

The council sought information from the Ministry of Agriculture, Fisheries and Food about the action taken by people authorised to take or kill the birds under the Wild Birds (Oyster Catchers) Order, 1956, says a report of the General Purposes Committee.

The report adds: "The Council had been advised that, under the authority of the Order, the Lancashire and Western Sea Fisheries Joint Committee had carried out fly-netting operations during the winters of 1956-57 and 1957-58 for the purpose of taking and killing oyster catchers.

"In the course of these operations, however, considerable numbers of other birds of protected species had been killed and netting had been suspended on legal advice that the incidental netting of so many protected birds by fly-netting was contrary to the provisions of the Protection of Birds Act, 1954.

"The Ministry had received no reports direct from fishermen about the damage caused by oyster catchers, but the Joint Committee's Fishery Officers had reported that substantial losses on cockle fisheries were still being caused by these birds."

The council is making "strong representations" to the Home Secretary and to the Minister of Agriculture for the 1956 Order to be revoked, says a resolution approved by the council.

(Fishing News

London

October 1959.)

No Dog Nuisance

Stray dogs provide no problem in South Korea especially during the dog soup season. Dog soup - thick soup made of dog meat - is commonly known as summer elixir and South Korean men, from porters to Cabinet Ministers, flock to restaurants specialising in this dish. Usually the supply of dogs bought legitimately cannot meet the demand and professional dog thieves do brisk business in summer time. It is estimated that at least 50,000 dogs are eaten every summer in Seoul alone.

(Western Australian Municipal
and Road Board Gazette

Perth

November 1959.)