

Vol. IX, No. 7

July, 1960.

STAFF NOTES.

The Director, Mr. A. J. Fraser, returned from Broome and Kuri Bay on June 18.

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The Research Officer, Mr. B. K. Bowen, assisted by Technical Officer L. G. Smith, carried out length-frequency tests of yellow-eye mullet at Mandurah last month. The fish were caught in a 2" mesh set net in the southern end of the Harvey Estuary. Fauna Wardens S. W. Bowler and N. E. McLaughlan also assisted and combined this work with fauna patrols in the Mandurah district and south to Myalup.

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Miss Wendy Rowland, of Head Office, resumed duty after sick leave on June 13.

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The Supervising Inspector, Mr. J. E. Bramley, will carry out patrols of coastal fishing centres north to Carnarvon this month. He intends to leave Perth on July 11 and among other centres will call at Dongara, Geraldton, Port Gregory and Denham.

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The Fleet Maintenance Officer, Mr. A. J. Bateman, spent a few days in Geraldton from June 21, carrying out maintenance on p.v. "Kooruldhoo".

Technical Officer, R. J. McKay, transferred temporarily from the "Peron" to the Australian Pearling Company's vessel "Nanango" during June. He spent some time on the vessel which made some very encouraging catches of king and tiger prawns.

MOVEMENT OF DEPARTMENTAL VESSELS.

The r.v. "Peron", under command of Captain H. C. W. Piesse, is anchored in Carnarvon with gear-box trouble. She is likely to be there for some time while replacement parts are obtained.

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The r.v. "Lancelin", under command of her master, Mr. C. J. Seabrook, with Mr. C. R. C. Haynes, mate, and Cadet Inspector R. G. Emery, deck hand, is also in Carnarvon waters. The Research Officer, Mr. Bowen, will join her later this month to direct tests to investigate the claims of the Shark Bay Fishermen's Association that fish traps are catching undersize snapper and endangering the future of the snapper fishery.

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The p.v. "Kooruldhoo" was recently slipped at Geraldton for maintenance and inspection. As a result, the Harbour and Lights Department has advised that, from the end of the current year, a certificate in respect of "Kooruldhoo" will not be issued except for her use on short trips from Fremantle Harbour.

Approaches are being made to the Treasury for the diversion of £10,000 (which was placed on the preliminary Loan estimates for the provision of a new patrol vessel at Shark Bay) to the construction of a vessel to replace "Kooruldhoo". It will be remembered that a governmental undertaking was given some months ago that a patrol vessel would be permanently stationed at Geraldton.

"Kooruldhoo" has served the Department faithfully and well. She was built at Fremantle in the year 1912.

PERSONAL PARS.

Dr. G. F. Humphrey, Chief, Division of Fisheries and Oceanography, C.S.I.R.O., accompanied by his Assistant Chief, Dr. G. L. Kesteven, visited Perth early in June. During their stay they spent

some time discussing with the Director and Mr. Bowen, the future of fisheries research in this State. Drs. Humphrey and Kesteven were received by the Minister (Mr. Hutchinson) while in Western Australia. Dr. Kesteven flew to London later in the month as scientific advisor to the Australian delegation to the International Whaling Commission. He spent a few days renewing contacts with his former colleagues in F.A.O., Rome, before returning to Sydney.

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Dr. J. M. Thomson, Principal Research Officer, Division of Fisheries and Oceanography, C.S.I.R.O., left last month for North America. Most of his time will be spent at the Universities of Toronto and Wisconsin with shorter visits to Honolulu, San Francisco and Los Angeles. Altogether, he will spend six months studying the tolerances, behaviour and orientation of fishes.

Dr. Thomson's father, Mr. John Thomson, one-time General Manager of Westralian Farmers Co-operative Limited, died recently. Our sincere sympathy is extended to all his bereaved family.

VISIT OF VICTORIAN STATE DEVELOPMENT COMMITTEE.

The six members of this Committee, accompanied by its Secretary (Mr. W. H. Craig) and a senior research officer of the Victorian Department of Fisheries and Wildlife (Mr. D. D. Lynch), arrived in Perth for an 11-day visit to study the fishing industry of this State. The members of the Committee are Messrs. N. Barclay, M.L.A. (Chairman), J. F. Rossiter, M.L.A. (Vice-Chairman), J. C. M. Balfour, M.L.A., G. R. Schintler, M.L.A., Buckley Machin, M.L.C. and A. R. Mansell, M.L.C.

The terms of reference of the enquiry now being held by the Committee, which is a statutory body, are the following:-

The State Development Committee to inquire into the following matters and submit its report to the Governor-in-Council as early as possible in accordance with the provisions of the State Development Acts:-

The question of the possibility of -

- (i) increasing the supply of fresh fish from Victorian sources;

- (ii) popularising the common varieties of fish, such as Australian salmon, barracouta, English perch (fresh-water), which could be caught and marketed in greater quantities if they became more acceptable to the public;
- (iii) developing fisheries for the purpose of the canning industry.

The Committee spent a whole afternoon in the office of the Director enquiring generally into the administration of both the Department and the fishing industry. It was particularly interested in the setup of the Fishermen's Advisory Committee, and the method employed in gathering evidence from the operatives in the industry. An early morning call was made at the Metropolitan Fish Market, West Perth, in company with the Director, and a full day was spent with him at Fremantle inspecting the premises of, and discussing policies with executives of, the Fishermen's Co-operative and other processing establishments. The plans for the extended fishermen's harbour at Fremantle were explained by the Manager of the Harbour and Lights Department (Mr. K. G. Forsyth).

A 4-day visit was paid to Dongara and Geraldton. The Director and the Manager of the Harbour and Lights Department accompanied the Committee. At Dongara the fleet at Port Denison and the new fishermen's jetty were inspected. At Geraldton, in addition to discussions with the Co-operative and other processors' directors and an inspection of their plants, the plans for the new fishing-boat harbour and ancillary works were carefully examined. Through the courtesy of fisherman Tom Rollands, an inspection tour of the harbour and adjoining areas was made in the fishing-boat "Gloria".

Civic receptions were extended to the party by the Lord Mayor of Perth, the Fremantle City Council, the Irwin Road Board and the Geraldton Municipal Council.

Towards the end of the Committee's stay, the Chairman (Mr. Barclay) made the following statement -

"The Committee is greatly impressed with the safe anchorages which the Government is providing at Fremantle and Geraldton.
"We were told that the anchorage at Geraldton would be finished by Christmas and would hold 700 fishing vessels.

"The Fishermen's Co-operatives at Fremantle and Geraldton have adopted a more realistic approach to the marketing of fish than we know in Victoria. There is no doubt that this form of marketing is tremendously popular with the public here. Prices of fish are generally lower in Western Australia than in Victoria. The auction system at the Perth markets seems a good and fair system to producer and consumer, better than the Victorian markets."

Mr. Barclay also said his Committee was most interested in the safety precautions adopted in this State to protect fishermen and their craft.

The party will leave for Adelaide by rail on July 2.

PEARLERS ADAMANT.

At a meeting of the Broome Shellers' Association in Broome on June 8, the members told the Minister and the Director, who were present, that they were still most emphatic that they did not want foreign pearling fleets in Western Australian waters. The pearlery also said they were not entirely happy with the Commonwealth Government's efforts on behalf of the industry.

These comments were made when Mr. Hutchinson mentioned he had represented a sound case to Canberra in regard to Japanese pearlery in Western Australian waters, and had received an assurance that no foreign fleets would be allowed in this year.

OPEN SEASON FOR GREY KANGAROOS.

The open season for Grey Kangaroos has been curtailed in three Road Districts in the lower South-West. This was announced on June 20 by the Minister (Mr. Ross Hutchinson), who explained that a recommendation to this effect by the Fauna Protection Advisory Committee had been accepted.

The open season continues in the following Road Districts until May 31, 1962 -

Albany, Augusta-Margaret River, Balingup, Bridgetown, Busselton, Capel, Collie, Dardanup, Denmark, Gingin, Kojonup, Nannup, Plantagenet, Preston, West Arthur and Upper Blackwood.

Additionally, the open season applies in the Northcliffe Ward of the Manjimup Road District and in all that part of the Woodanilling Road District west of the Great Southern Railway.

The areas which were previously included in the open season but were closed from June 1 include all the Manjimup Road District outside the Northcliffe ward, and the whole of the Cranbrook and Greenbushes Road Districts.

In reaching its recommendation, the Committee had taken into account advice received from departmental officers, honorary wardens, local authorities and other interested persons, said the Minister. Although it had to be admitted that kangaroos did cause damage in parts of the districts to be closed, the effects of commercial exploitation of these marsupials for the pet food trade had to be watched very closely and were causing some local concern.

The status of kangaroos and the damage they caused in the closed districts were still under review, Mr. Hutchinson continued. He added that it might be decided later to include some of them or parts of them in the open season area. He wished to make it clear, however, that farmers whose properties were being damaged could take out licenses to authorise them to destroy as many kangaroos as they considered necessary to protect their properties.

"It must be clearly understood that all persons taking kangaroos for profit must be licensed and that professional hunters must not operate in areas where the open season does not apply", concluded the Minister. "I would like to issue a warning that these restrictions will be enforced strictly to ensure that kangaroos are only reduced in numbers and not exterminated."

ADDITIONAL FAUNA SANCTUARIES.

Four additional reserves, two east of Pingelly and two in Flinders Bay, have been created and their control vested in the Fauna Protection Advisory Committee. The reserves at East Pingelly include Woyerling Well which has historic significance from its use by the collector Shortridge about the turn of the century. It will serve now as headquarters for officers and scientists working in the adjacent reserve No. 25555 which probably contains the best representation of native mammals of any reserve in the State. The two reserves in Flinders Bay include Seal and St. Alouarn Islands, nesting sites

of various sea-birds.

The setting aside of these four new reserved areas brings the total number of reserves for the conservation of fauna to 96. Ranging in size from four to almost one million acres, the reserves protect over four thousand square miles of wildlife habitat.

CRAYFISH RECEIVED INTO COLD STORAGE.

The table overpage sets out the weight of crayfish tails, in their graded categories, received into metropolitan cold storage establishments. It does not show the total weight of crayfish processed in Western Australia. Despite that, however, it probably represents, fairly accurately, the trend in the fishery as a whole. While the figures invite an analysis of the effect of crayfishing on the stocks during the last 5 years, it would be dangerous to extrapolate apparent trends from them to actual events in the fishery. However, it would seem reasonable to assume that the increasing importance of the "midget" catch, which is demonstrated in the table, does apply to the fishery as a whole.

It will be seen that in 1955, the tail gradings, "medium", "large" and "jumbo", represented almost 50% of the total weight. In 1959, however, these gradings represented only 42% of the total weight. It is also of interest to note that the percentage of "smalls" has fallen only from 34% to 29%. It would be interesting to compare the catches in the different categories of "white" crayfish over the same period. As the "white" crayfish are substantially immature fish, they must constitute a large proportion of the lighter gradings.

When reviewing the figures in the table, it should also be kept in mind that the percentages represent the ratio between the weights of tails in the appropriate categories. If the actual numbers of crayfish caught to make up those weights were recorded, the percentages in the lower grades, particularly of "midgets", would naturally be much higher.

WHALING.

At the Cheynes Beach Whaling Company Station, the humpback season got under way with the taking of two humpbacks on May 29. In the following week only one humpback was taken, but in the next week

CRAYFISH RECEIVED INTO COLD STORAGE.

Weight in 000's lbs. and percentage by weight.

	MIDGET	SMALL	MEDIUM	LARGE	JUMBO	TOTALS	REMARKS
1955 Weight %	536.3 15.8	1169.5 34.4	1061.5 31.2	479.4 14.1	145.7 4.3	3392.4	
1956 Weight %	741.7 22.8	902.9 27.7	912.7 28.0	483.9 14.8	215.7 6.6	3256.9	
1957 Weight %	1222.7 26.5	1405.7 30.5	1107.6 24.0	630.7 13.7	245.8 5.3	4612.5	
1958 Weight %	1471.2 30.07	1449.3 29.62	1024.4 20.93	687.2 14.04	260.6 5.33	4892.7	In addition, 202.600 lbs. crayfish whole cooked.
1959 Weight %	1762.5 28.92	1767.9 29.10	1225.1 20.10	1014.8 16.65	323.9 5.32	6094.2	In addition 113.080 lbs. crayfish whole cooked.

week seven humpbacks and two blue whales were captured. Both the latter were females, measuring 67 feet 9 inches and 68 feet 8 inches, respectively. Nineteen humpbacks were taken during the week ended June 25, bringing the total for the season, including the two blue whales, to thirty-one. In the previous year, forty-two whales had been taken by June 25, including six blue whales.

The Company continued sperm-whaling until June 11. The taking of 25 in the first two weeks of June brought the total for the season to 92.

At Carnarvon, the Nor'-West Whaling Company commenced operations on June 20 with the taking of the season's first humpback, a female measuring 43 feet 3 inches. Writing on June 28, Assistant Inspector D. H. Smith, who is acting as Whaling Inspector, said that no alterations had been made to the structure of the Company's plant. He added that it had only received minor damage during the recent cyclone, when parts of Carnarvon were devastated. The plant was completely overhauled for the 1960 season, however, and Mr. Smith reported that all pipes and machines were running freely although only two cookers were being used at that time. Sixty-seven men were then employed at the plant.

With only three of the Company's five catchers working, twelve whales had been taken within a week of commencing operations. They were in very good condition with thick blubber, averaging 7½" on the back and 5½" on the belly. Except for one, all were females and three of them were immature. Mr. Smith said that a twin-engined Miles Gemini aircraft was being used for spotting. Due to its low-wing construction and the inexperience of the pilot and spotter, some difficulties were being experienced. Mr. Smith concluded with a comment that the weather had been fine with occasional clouds. The prevailing wind was a southerly with a morning easterly. The seas were running a short chop, occasionally flattening out to a long swell. Captains of the chasers reported that the atmosphere was rather hazy.

ABROLHOS CRAYFISH CATCH.

Overpage is a table setting out the catch of crayfish taken from the Abrolhos Islands area during May, 1960. It will be remembered that the April, 1960, catch was less than that of 1959, and it will be seen that this year's May production was also less than in the same month last year. A considerable drop in the catch-per-man is also evident

and is no doubt the major cause of the reduced number of men fishing. The progressive total of crayfish caught, however, is still slightly greater than it was by the end of May, 1959.

ABROLHOS CRAYFISHERY.

AREA.	MAY 1959			MAY 1960		
	No. of Men	Total Catch	Catch per Man	No. of Men	Total Catch	Catch per Man
		lb.	lb.		lb.	lb.
North Island	46	154,076	3,349	49	124,826	2,547
Wallabi Group	77	249,923	3,246	66	155,772	2,360
Easter Group	72	263,034	3,653	74	161,892	2,187
Pelsart Group	51	168,171	3,269	52	130,789	2,515
TOTALS:	246	835,204	3,395	241	573,279	2,379

Total for three months (March, April and May)

1956	-	1,917,161	-	season commenced	March 15
1957	-	2,390,157	"	"	" "
1958	-	2,677,048	"	"	" "
1959	-	2,931,643	"	"	" "
1960	-	2,980,057	"	"	March 1

DEPARTMENTAL PROSECUTIONS.

April 1 to June 30, 1960.

Date	Defendant.	Court.	Charge.	Result.
<u>Fisheries Act.</u>				
23.6.60	Fremantle Fish Supply	Albany	U/s crayfish	Fined £4
11.4.60	Stokke E. A.	Fremantle	"	" £2
"	Mastropasqua G.	"	"	" £2
"	Eastwood C.	"	"	" £2
"	Parker N. A.	"	Unlicensed boat	" £2
"	" N. A.	"	No fisherman's license.	" £2
2.5.60	Yama Pty. Ltd.	"	U/s crayfish	" £5
11.4.60	Palmietti G.	"	"	" £2
23.5.60	Allegretta M.	"	"	" £5
"	" M.	"	"	" £5
"	" M.	"	"	" £5
"	Turtur C.	"	"	" £3
"	" C.	"	"	" £5
"	Russell C.	"	"	" £5
26.5.60	Mastropasqua G.	"	"	" £2
30.5.60	Cavalei A.	"	Spawning c/fish	" £20
"	" A.	"	Processing c/fish at sea.	" £2
"	Merciadre A.	"	Spawning c/fish	" £5
"	Pittorino G.	"	" "	" £5
"	Parker R.	"	U/s crayfish	" £3
13.6.60	Rudelforth C. E.	"	" "	" £3
"	Camporale L.	"	" "	" £3
"	" L.	"	" "	" £3

Date.	Defendant.	Court.	Charge.	Result.
13.6.60	Caputi G.	Fremantle	Spawning c/fish	Fined £3
"	Bornardi C.	"	U/s crayfish	" £3
"	Abelha A.	"	"	" £3
"	" A.	"	"	" £3
"	Peppan G.	"	"	" £3
"	" G.	"	"	" £3
12.4.60	Parker R. A.	Perth	"	" £5
13.4.60	Coubrough J.	"	"	" £8
13.4.60	Barrington E. W.	"	"	" £8
"	Coubrough J.	"	"	" £5
12.4.60	Forbes A. W.	"	"	" £5
"	Forbes J. W.	"	"	" £5
13.4.60	Hubbard K. A.	"	"	" £5
"	Smith D. J.	"	"	" £5
"	Valli W.	"	"	" £5
"	Ballard N. H.	"	"	" £5
"	Casserley P.	"	"	" £5
"	Sharp B. A.	"	"	" £5
14.4.60	Macey L.	"	"	" £5
"	" L.	"	"	" £5
"	Fedele G.	"	"	" £5
"	Bive L.	"	"	" £10
"	D'Andreis J.	"	"	" £5
"	Frenis A.	"	"	" £20
"	Marchise S.	"	"	" £5
"	Hiscox P.	"	"	" £3
"	Dowling M.	"	"	" £5

Date.	Defendant.	Court.	Charge.	Result.
14.4.60	Butler L. W.	Perth	U/s crayfish	Fined £5
13.4.60	Macey L.	"	"	" £5
"	Green R. P.	"	"	" £15
4.5.60	Boon J. K.)	"	"	" £4.18.
"	Thomas A. D.)	"	"	"
"	Bonini F.)	"	No fishermen's or boat licence.	" £3
"	Viccaro S)	"	"	"
26.4.60	Delacy N.	"	U/s crayfish	" £10
18.5.60	Siggins L. E.	"	"	" £20
"	Hill F.	"	U/s c/fish tails	" £8
"	Holland N.	"	Processing tails at sea.	" £10
"	" N.)	"	"	" £5
"	Hill F.)	"	"	"
31.5.60	Wedge J. M.	"	U/s crayfish	" £2
8.6.60	Meagher T.	"	U/s sea mullet	" £6
"	Pell J. A.	"	U/s crayfish	" £15
"	Siggins L.	"	"	" £20
15.6.60	Ogston A.	"	"	" £5
"	Williams R.	"	"	" £5
"	Connor D.	"	Processing tails at sea	" £10
"	" D.	"	"	" £3
"	" D.	"	"	" £3
30.6.60	Coubrough J.	"	U/s crayfish	" £5
"	Mitchell W. A.	"	Netting close waters.	" £15
"	Parker R. A.	"	U/s crayfish	" £15
"	Ayre D. S.	"	"	" £15
28.4.60	Morris G. A.	Pinjarra	Netting close waters	" £10

Date	Defendant.	Court.	Charge.	Result.
<u>Fauna Protection Act.</u>				
21.4.60	Grigson P.	Perth	Poor caging	Fined £2
"	" P.	"	Taking purpose of Sale.	" £5
"	Boans Ltd.	"	Poor caging	" £3
"	" "	"	"	" £3
"	Bradbury W.	"	"	" £2
"	" W.	"	Illegal Sale	" £5
9.5.60	Watkins J.) Hicks J.) Mitchell J.)	Midland Junction	Illegal Shooting	" £5
"	Hancock T. E.) " A. J.) Rice R.)	"	Illegal Shooting	" £5
"	Rice R.	"	Obstructing Officer	" £2
"	Hancock T. E.	"	"	" £2
13.6.60	Buxton Mrs. E. & E	Northam	U/lic. Dealer.	" £2
"	Harris T.	"	" "	" £2

GRAYFISHING AND SHIPPING.

A conference to discuss the setting of crayfish pots in shipping lanes was called by the Marine Branch of the Commonwealth Light Houses and Navigation Service last month. It was held in Fremantle, on June 27, and representatives from the Australian Steamship Owners' Federation, the State Shipping Service, the Fremantle Fishermen's Co-operative Society Limited, the Confederation of Licensed Fishermen of Western Australia, Incorporated, and the Harbour and Lights Department were present. In the absence of the Director, the Chief Clerk (Mr. B. R. Saville) represented this Department.

After considerable discussion in which reference was made to the fact that approximately 200,000 craypots were used on the coast, it was agreed that the Commonwealth Department of Shipping and Transport, through its Notice to Mariners, should warn all ships of the likelihood of encountering craypots in shipping lanes. It was also considered desirable to ask fishermen to try to avoid setting their pots in shipping lanes. It will be appreciated if Inspectors at Fremantle and Geraldton will mention this to fishermen as opportunity offers.

ADDITIONAL RUSSIAN WHALE MARKS.

The details of the finding and recovery of three additional Russian whale marks have been received from Dr. G. F. Humphrey, Chief of the Division of Fisheries and Oceanography, C.S.I.R.O. They were numbers 1227, 1275 and 1290. They had been fired into humpbacks in February and March, 1958, about two thousand miles south of Albany. They were recovered in Carnarvon waters in August and September last year.

It will be remembered that, in the previous issue, reference was made to the Russian marks 719 and 720, which had been fired into humpbacks in February, 1959, in approximately the same area. These recoveries reaffirm the previously established fact that the Cheynes Beach and the Nor'-West Whaling Companies are operating on the same Antarctic humpback stock.

BAT-BANDING.

The Wildlife Survey Section, C.S.I.R.C., has decided to extend its facilities for bat-banding to approved applicants outside C.S.I.R.O. Mr. H. J. Frith, who was recently appointed Officer-in-Charge of the Australian Bird-Banding Scheme, advises that the bat-banding programme has grown from what was originally a hobby project.

Initially, standard bird bands will be used, but special bat-bands might be made available within 12 months.

On the recommendation of the Fauna Protection Advisory Committee, this Department has agreed to co-operate in the scheme. Any officers interested in obtaining approval to band bats should contact the Fauna Protection Officer.

OBITUARY.

At Pinjarra, on June 19, Mr. H. E. (Tod) Birmingham, of Dwellingup, passed away. Mr. Birmingham was closely associated with this Department for many years. He was a foundation member of the Murray Trout Acclimatisation Society, of which he was President at the time of his death, and always maintained a keen interest in the Society's activities.

To his wife and other members of the bereaved family, we extend our sincere sympathy.

CONDITIONS OF SERVICE IN THE NORTH-WEST.

In the February, 1960, issue of this Bulletin, the Government's decision to improve conditions of service in the North-West was published.

Approval has recently been signified for the payment to Inspector R. J. Baird, of Broome, of an amount of £100 a year from January 1, and for the payment of £50 a year to Inspector H. D. Kavanagh, of Shark Bay, from February 1, as child allowances.

Officers should note that the payments relate only to children of school age who are actually residing in the North. Each officer concerned is bound to notify the Department when a child passes out of the school age group or ceases to reside in the North.

ANNUAL CONFERENCE.

The annual staff conference will be held at this office on September 5, 6 and 7. All inspectors will participate. Details will be furnished later.

Officers in charge of districts and vessels must ensure that their reports are completed and forwarded to the Chief Clerk by the end of August. Section leaders should also have ready reports on the work of their sections and an outline of their projected activities during the coming year.

Production statistics and reports generally should cover the twelve months ended June 30.

CLEARING HOUSE.

Do You Have Filleting Problems?

The new, sensational "Baader 157" filleting machine for ocean perch (redfish), lake perch, and similar species is the latest development of Nordischer Maschinenbau Rud. Baader, Luebeck, one of the world's leading manufacturers of a complete line of fish processing equipment. At the present time there are close to 275 various "Baader" machines operating most successfully in the States and Canada, and they have become real money makers for the industry. They have virtually revolutionized the rather antiquated methods of processing operations.

The "Baader 157" is a further development of the previous "Baader 150" Redfish Filleting Machine, which the German manufacturer introduced with great success in Europe, especially Scandinavia, Iceland, Germany and on board of many German, British and Russian factory ships. The "Baader 150" processes fish measuring from about 12 to about 22 inches (measured from the tip of the nose to the end of the tail); it requires two feeders who can process up to 6,000 fillets per hour.

This machine, when undergoing tests in Nova Scotia and the New England area about one and a half years ago, did not prove to be practical for the smaller sized redfish landed on the East Coast of the U. S. The plant, therefore, developed a new machine with particular view to the specific requirements of the American market. This new machine, the "Baader 157", processes redfish measuring from about 7 to about 14 inches (measured from the tip of the nose to the end of the tail) head-on; it requires two feeders and at an average speed of about 78 fish per minute it can process up to 9,360 fillets per hour.

Extensive tests with this machine, which were made in Gloucester and subsequently in Portland, where the first machine is presently operating in the plant of Maine Fisheries Corporation, have shown that, depending on the size of the fish, the machine can handle a daily volume of about 7,600 lbs. of fish or about 2,500 lbs. of fillets (for the smallest fish of its range) up to about 40,000 lbs. of fish or about 13,000 lbs. of fillets (for the largest fish of its range) during an eight hour working day. The considerable wage savings and the impressive savings due to the superior yield which this machine has in comparison with hand labor, are so substantial that they should easily enable a given plant to recover its investment for this machine within one season.

(1)

The machine was also successfully tested in the Great Lakes region on lake perch, and a description of such tests appeared in Vol. 22, No. 1 of the Commercial Fisheries Review of January, 1960, published by the Fish and Wildlife Service, United States Department of the Interior, Washington. The report follows:

"The feeding line consists of an endless belt of nylon gutters into which the fish are placed head forward and back to the left. The head is cut off with a circular stainless steel knife while the fish are held in the before-mentioned gutter. The fish are then carried to the filleting part, and are dropped head forward, back up into a gutter. The fish are carried forward principally by means of two rubber belts, one on each side. The first operation of filleting is slitting the belly from head end to tail by means of a vertical circular knife. The entrails are pulled out by means of a stainless steel tooth-edged circular pulley. The fish are then carried forward to a flat inverted "V" which spreads the fish and pressure is applied to the belly walls from on top. Two circular knives cut the fillets while the fish is held on this distance piece. The frame drops below the knives to a belt which carries heads and frames away. The fillets are carried by a second belt to the packaging table. The machine is very well built and should be satisfactory for filleting Great Lakes yellow perch."

There is no doubt that this new machine will revolutionize the redfish industry in New England, and the coming months should see more machines in successful operation in this area.

(Fishing Gazette

New York

April, 1960)

Need for Planned Expansion of the Industry.

Three of the outstanding problems in world fisheries today are concerned with the extent and potentiality of fish stocks, fishing intensity and the development of fish husbandry, according to Dr. Geoffrey Leighton Kesteven, newly appointed Director of Fisheries Research in the Commonwealth Scientific, and Industrial Research Organization of Australia.

Dr. Kesteven expanded on these subjects in Rome before leaving for Australia to take up his new appointment.

For the past 12½ years he has been an official of FAO, first as Fisheries Officer in Asia and, during the past six years, as Chief of

the Fisheries Biology Branch of Fisheries Division, FAO.

Utmost Importance.

"With the rapid expansion in fish production in recent years and in view of the pressing need to catch increasing quantities of fish, it is of the utmost importance that we should continue and develop our investigations so that we can decide on what should be the quantities, sizes, ages and sexual conditions of the fish we take from the seas," said Dr. Kesteven.

"We must be able to determine the extent of the world's fishery resources and the optimum catch we can take without impairing the viability of the stocks, otherwise we shall make, perhaps, serious blunders." Dr. Kesteven pointed out that the size of the world's sustained catch yield must be determined if the industry is to remain profitable.

Must be Sure.

"To maintain the profitability and productivity of fishing operations," he said, "we must be sure that we do not reduce the fish stocks to a level where we damage them and ourselves. I don't suggest we would ever extinguish any fishery resource as, for example, we killed off the whale stocks in the Northern Hemisphere but we could, perhaps, reduce the yield to a level which would lead to the bankruptcy of the fishing industry and a serious loss of protein-rich food for human consumption."

Vital Role.

"There is a good deal of evidence of a general awakening of the world to its responsibilities concerning the fishery resources," went on Dr. Kesteven. "For example, the recent Conference at Geneva on fisheries limits was, in part, related to this new sense of responsibility. Indeed, since the end of the second world war a number of international commissions and other bodies have been established to help Governments reach agreement on how they will use fisheries resources. All such developments as these," he continued, "are moves in the direction of husbandry. Of course, we are a long way from being able to introduce husbandry, if ever we can. Perhaps we may find an answer to this problem if we discover how to control the growth of phytoplankton. If we could do this we could, in effect, control the grass crop in the sea on which the fish and other organisms browse, just as we control

the grass crops on land on which cattle browse."

Dr. Kesteven concluded by stating that the fishery research institutes throughout the world had a vital role to play in the coming years. It was through research that governments and the fishing industry would receive accurate information on fish stocks which would enable them to plan the orderly, rational development.

By Electricity.

On the problem of fishing intensity, Dr. Kesteven pointed out, this has been steadily growing for a long time, particularly during the last ten years or so.

"We now have, for example, very large factory ships with tremendous fishing power," said Dr. Kesteven. "These, and the rapid expansion of fishing efforts in a great number of countries, have combined to increase fishing intensity in all the known fisheries, and this intensity is likely to be increased by new technological advances. For instance, not long ago the idea of using electricity for fishing in the sea was regarded as rather far-fetched, but it now seems that electrical fishing is likely to be practicable in the near future.

(The Fishing News

London

6 May, 1960)

Duck Farm.

Here's some pleasant news for Pacific-flyway duck hunters. For three years the U. S. Soil Conservation Service has been trying out methods of "farming" tracts to produce waterfowl food in several western locations. The aim is to hold birds on sites for longer periods, thus reducing depredations to crops on adjacent lands. In addition, acres that are marginal for agriculture can be put to productive use.

The pilot plantings have been highly successful, and occupants of over 6,000 acres of farmland in California and Oregon have participated so far. The first demonstration was worked out on property of the Progressive Sports Club near Lancaster, California; the next was on the Gerald Faulk farm at Harrisburg, Oregon. The Service seeks to interest clubs, of which eight hundred in California control about 200,000 acres, and to encourage such planting on farmlands, where the

shooting may be leased to groups or opened to individuals on a daily fee basis.

Plantings to attract ducks have been tried in the past, but many have resulted in complete failure. Working with the Fish and Wildlife Service, the Soil Conservation Service has worked out regional management patterns that seem to get results. Initial development costs may run to \$95 an acre; maintenance charges, including amortization of the investment, will crowd \$30 annually. However, California lands leased for waterfowl hunting bring in up to \$100 per acre per year; so such an outlay does not seem prohibitive.

Pilot developments have been set up in Utah and Arizona; others are scheduled for Nevada and Idaho. This spread is necessary because of regional differences in soil and climate. Investigating the nearest looks like a fine bet, but don't write here for more information. Go to your own Soil Conservation District.

(Field & Stream

New York

March, 1960)

Another New Giant Whaler for the U.S.S.R.

Last year, the Soviet Union launched its biggest floating factory - the whaling ship "Soviet Ukraine". This is now nearing the end of its first season off the shores of Antarctica, and in the meanwhile, a new ship is being built at the same yard - the Nosenko Shipyard, Nikolayev, Black Sea.

This one is to be a large-displacement ocean-going three-decker, with dressing platforms and an aft whale-hoisting slip. It will be 475 ft. long, 45,000 tons, powered by two 75,000 h.p. engines, giving it a speed of 16 knots. Its cruising range will be about 9,100 miles.

This ship will have many innovations not found on her predecessor, including a passive stabilising tank which will reduce the ship's rolling and pitching by almost half. There will be special equipment enabling this ship to process several thousands of whales per season, and her blubber mills will utilise 96 per cent of the raw material handled. Among the equipment to be found aboard will be 950 electric motors having a total capacity of about 15,000 kW. Accommodation is for 500 men, with mess rooms, library, cinema and recreation rooms. The refrigerator and deep-freeze plant will be of the latest design, and there will be every aid to navigation and control. A helicopter

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will be carried for spotting. The experience gained in the building of the "Soviet Ukraine" will enable the builders to improve on the scheduled time with this second ship. It was planned to be completed in the last quarter of 1961, but the 200 undertakings which will be supplying parts have all been asked to step up delivery ahead of time, to enable the ship's completion several months ahead of time.

The name of the new whaler is to be "Soviet Russia" (Sovetskaya Rossiya).

(World Fishing

London

May, 1960)

Synthetic Fibres Pay in a British Trawler Fleet.

It has often been said in the past that the British Fishing Industry is too conservative, and that its deep roots in the past make progress towards new techniques and methods much too slow. It does occasionally happen, however, that various sections of the industry co-operate to further a new project - and then the progress made may be remarkable.

A case in point concerns the advent of synthetic fibres, which have been used successfully abroad for many years. British trawler owners have resisted their introduction, however, on the premise that a Granton trawl made of one of the new materials, while costing twice or three times as much as one made from manila, would be just as likely to be lost on a fastener the first time it was used.

Fortunately for the industry, a firm which, up to three years ago, had only a tenuous link with fishing through the manufacture of horse hair snoods for long lining, decided to invest capital in producing polythene extrusions - not as a sideline, but especially for the industry.

The Slack Sales Company, of Drighlington, Yorks, designed their own plant, gave their monofil the name "Drylene" - and then started to try to interest the fisherman.

Many Advantages.

Polythene twine has many advantages over manila. It is lighter, having a specific gravity of 0.95: it has a high tensile strength, does not absorb water, and is completely resistant to bacteria. With

these sales points, the manufacturers managed to persuade some inshore fishermen to try their product, and some experimental trawl cod ends were also made. But still no trawler owner would consider making a complete Granton trawl of synthetics. The argument of unnecessary expense was still too strong.

It was then that Synthetic Ropes & Cordage, Ltd., approached Slack Sales, Ltd. regarding the supply of Drylene for trawl twines. Synthetic Ropes & Cordage, Ltd. had for a considerable time been carrying out experiments with a plaited twine, and had found that this type of twine was far superior to the normal twisted twine, there being no knot slippage and much better resistance to abrasion. The special construction of plaited trawl twine ensures each and every thread taking equal strain.

Synthetic Ropes & Cordage, Ltd., together with Slack Sales, Ltd., then approached the manager of Industrial & Maritime Riggers, Ltd., of Hull. Jointly they offered to provide, free, sufficient "Drylene" plaited twine to make two complete trawls, if I.M.R. would make the trawls and arrange to have them fished.

Industrial & Maritime Riggers, Ltd., is a company which was started only six years ago, primarily to rig the ships belonging to the St. Andrews Steam Fishing Co., Ltd., and its associates. In those six years Mr. Grundy, the firm's manager, has built up a business which has so far doubled its turnover each year - with 60 per cent of their work being done outside the firms it was formed to service. This growth has not been achieved without hard work and the ability to seize opportunities.

Here was an opportunity; Mr. Grundy took it, manufactured the two trawls of "Drylene" and put them aboard the "William Wilberforce" when she sailed on her maiden voyage last year.

The "William Wilberforce" was thus the first British Trawler ever to be equipped with all-synthetic nets. Results exceeded all expectations. The trawler's skipper, Mr. Ernie Hall, has become top skipper of his company because he can catch fish - but he is not renowned for being kind to his gear, nor for being loth to take chances. (At the end of the last war, for example, he was severely reprimanded by the Admiralty for consistently fishing within charted mine-fields.) So that when he put the synthetic trawl over the side for the first time, it was of no use to him unless it behaved like any other trawl.

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In fact, he found that it behaved far better than any net he had ever fished with before. It was easier to tow, and so much lighter to handle that one man could drop the baitings and belly once the cod end was inboard, thus releasing three men for other work. Because of this, Skipper Hall calculates that he can save at least five minutes every time he hauls.

Even more important, he found that there was far less mending on board. When the headlines part on a manila trawl, the net will tear right down to the wings of its own volition. With the polythene trawl, however, there is no run, the mesh tearing only where it actually catches on a snag. Because of this saving of time with hauling and mending, the Skipper believes that, on good fishing, the ship could earn up to an extra £400 per day.

At the end of her eighth trip, I went down into the net room of the "William Wilberforce" and examined the net - the same one which had been put aboard for her maiden voyage. It was still damp from the sea, but that did not matter, because synthetics do not rot. It had had a new belly shot in at some point in its life, and it had been mended here and there. But shore repairs had cost only about £150; added to its prime cost (without cod ends) of about £250, this made £400 for the eight trips.

Total Cost.

Against this, the cost of a manila trawl (without cod ends) is about £110, and Skipper Hall used on an average one and a half of these per trip before he turned over to synthetics. The total cost of manila over eight trips would therefore have been £1,320 and so the saving was in the region of £900, or over £100 per trip.

The other "Drylene" net, together with the manila trawls put on board when the vessel was new, were still stacked away in the net locker, untouched by sea water.

After his sixth trip, Skipper Hall made a report to his owners of which this is the summary:

"This trawl has now completed 6 trips, representing 1,257 hours towing time, and is still in good working condition. The gross tonnage of fish caught by it is 10,329 ten-stone kits. It is much easier to handle, and deck crew prefer it because of the lack of mending required. Should the trawl come fast, repairs needed are not so severe as in

normal manila trawls, and when working in Arctic conditions, it has not the same tendency to freeze. Hauling and shooting are easier and much quicker."

Trawl Wanted.

News of the success of this venture spread quickly, and I.M.R. have been inundated with requests for "Drylene" trawls. Already three more Humber ships have been equipped with them. "The Vanguard," "Prince Charles" and "Boston Fury" - and as soon as sufficient nets have been manufactured, they are to be supplied to the whole of Boston's fleet and to those of its associated companies.

(World Fishing

London

May, 1960)

Research Boats Test Rock Lobster Traps.

Research vessels of the South West Africa Administration are conducting tests on a new type of rock lobster trap which has been designed and developed in South West Africa for use on the Union and South West African coasts.

Results.

Although the final report on the traps is not yet available, the results of two tests already carried out were as follows:

1. One trap was lowered to the bottom for 30 minutes in 25 fathoms of water and in a thinly populated area. Upon hauling it up, it was found to contain 15 fairly large rock lobster.
2. Thirty rock lobster were caught and left submerged in the trap for 15 hours. When the trap was hauled up the rock lobster were still in the trap, although there was every indication that they were exhausted.

These results emphasise two of the claims made for the new traps, namely that they are successful in attracting rock lobster, and that once in the trap they have little chance of escape.

Metal Framework.

The trap is constructed in the form of a metal framework of

truncated pyramid shaped with a hexagonal base. The sides slope upwards and inwards to a long opening sufficiently large to allow the rock lobster to enter the trap. Inside the framework is a wire mesh bait basket of triangular shape.

In use, the rock lobster crawl up the side of the trap to reach the bait in the basket. They cannot take the bait without actually entering the trap, and, once they are inside, the possibility of escape is remote, as shown by Test No. 2.

The trap illustrated measures 42 inches across the base and is nine inches high. It weighs less than ten pounds and is estimated to hold between forty and fifty average-sized rock lobster. For storage purposes, the traps collapse to a thickness of one inch, enabling boats to carry large numbers in a limited space. It is expected that dinghies will be able to carry more than eight traps.

As the rock lobster cannot remove bait from the traps, bait expenditure is expected to be considerably reduced. The traps have also been constructed so as not to hook on the sea bottom. They will be manufactured in South West Africa under Union patent.

(S. A. Shipping News. Cape Town. April, 1960)

13-Mile Fisheries Limit claimed for Scotland.

A claim that Scotland has a 13-mile sea fisheries limit will be made in a book to be published soon. It is "Tartan Tapestry" by Capt. John Hay, of Hayfield, Shetland, and Delgatie Castle.

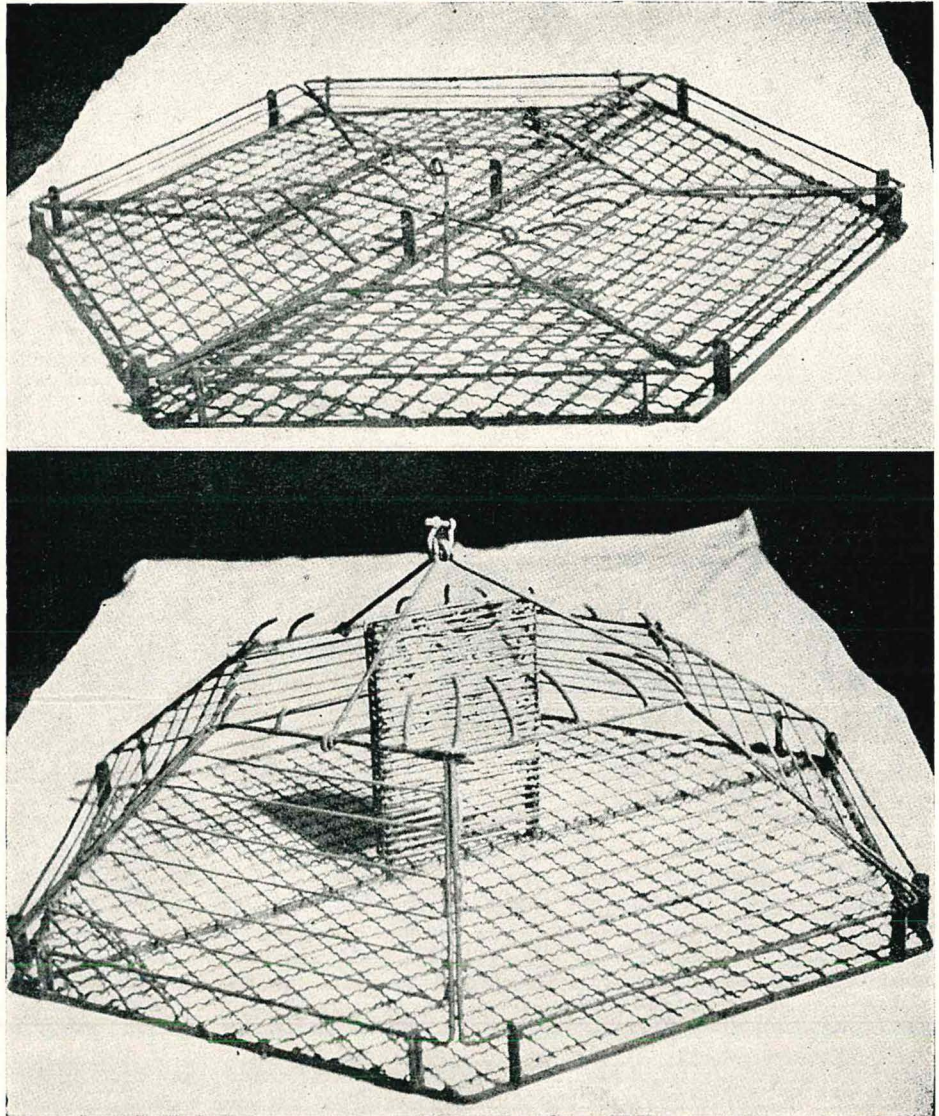
The book is mainly concerned with odd bits of Scottish lore that are in danger of being lost in the flood of English and American customs.

Capt. Hay bases his 13-mile limit claim on old Scots law, in force before the Union of the Crowns, and quoted on various occasions since - the last time being in the Scottish Sea Fisheries Act of 1895. According to Capt. Hay, the old idea was that the English limit was as far as a gun could shoot; whereas in Scotland it was as far as one could see. He declares that 13 miles is the fisheries limit, but within that there is a specially restricted area of six miles - roughly the agreement which was being sought at the recent Geneva Conference which ended in failure.

(The Fishing News

London

13 May, 1960)



These two photographs show the rock lobster traps (top) collapsed for storage purposes and (bottom) ready for use. The trap is 42 inches across the base, and when erected is nine inches high. In later models, the bait basket in the centre is triangular, so that it can be collapsed to form an integral part of the structure.

(Reproduced by Courtesy "South African Shipping News," Capetown, South Africa.)

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Should Sea be Used as Atomic Rubbish Dump?.

The problem of disposing of radio-active wastes cannot be solved unilaterally by a single nation. This was an important conclusion of a recent conference in Monaco, convened jointly by the International Atomic Energy Agency and Unesco and attended by more than three hundred scientists from 32 countries. The meeting took on its liveliest aspects when waste disposal into the sea was discussed.

The Russians, for instance, said that no radioactive waste should be put into the ocean, while the British held they knew how to put it there safely. Oceanographers said that very little was known about the great ocean depths, certainly not enough to use the deep trenches as atomic rubbish dumps indiscriminately. On this point scientific disagreement was rather marked. Some delegates maintained that water from great depth takes from 500 to 1,500 years to move to the surface - while others stated that the period was only 50 years, adding that marine organisms such as fish and plankton can transport radioactivity through the various layers of the sea.

Burial into the ground appeared to be the safest way of getting rid of unwanted fission products, but it was a method available on a large scale only to big countries usually rich in natural resources. Huge "Waste farms", for example, are not practical on densely-populated islands where atomic energy is often badly needed. The postulate that atomic energy is a power source which can be used universally, seemed to be considerably restricted by the limitations raised at Monaco. No one can build a nuclear power plant just anywhere. Careful studies of geological formations are needed if the waste is to be buried underground. Equally careful research into marine life, currents, the geology of the bed of the sea and even the eating habits of human beings has to be carried out before waste can be disposed of into the sea.

(S. A. Shipping News

Cape Town.

May, 1960.)

Peru's Fishing Boom Expected to Level Off.

Commercial Secretary's Comments.

The boom in Peru's fisheries and fish products last year, and the big demand by Peruvian fishermen for new boats filling the local ship-

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yards, has caused some fishing firms there to order boats abroad. Several boats have been built in France in spite of heavy freight costs, say Mr. W. J. Jenkins, assistant Commercial Secretary at Lima.

Writing in Foreign Trade, Mr. Jenkins expects the boom in Peruvian fishing to level off. Some of her fish-meal plants have sprung up on uneconomic sites and under inexperienced management. Many of the plants are not at water's edge, and operators are faced with the cost of transporting the fish to their plants.

"The recent 30 per cent drop in the world price of fishmeal may force some of the uneconomic producers to shut down, or at least reduce the incentive for new operators to enter the field," he goes on. "Taking all these factors into account the Peruvian fishing industry probably will not continue to expand in the coming year at a rate similar to that during 1959.

Competition.

However, speaking at a Virginia fishermen's convention, Mr. George R. Wallace, president of Wallace Fisheries Inc., said that Peru's fish-meal production, about 150,000 tons two years ago, may hit 400,000 tons this year. He pointed out that small anchovies abounded in shoals off the coast of Peru whose shoreline is equal to that of California, Oregon and Washington combined. "There is no question but that Peru can out-produce us, and competition will continue to increase," he added.

Mr. James R. Townsend, a San Francisco fishery consultant, and a founder of the Peruvian reduction industry, attributed the sudden growth of fish-meal production in that country to the introduction of synthetic nets which lowered catching costs. To help combat this competition Mr. W. M. Waller, a New York City broker, advised plant operators to raise quality and lower profits.

(Fishing News

London

20 May, 1960.)

The Long View.

By the century's end the country will need forty times the acreage now set aside for national parks and scenic areas. So says Winthrop Rockefeller, board chairman of Colonial Williamsburg and an authority on recreational facilities.

(Field & Stream

New York

March, 1960.)