

April, 1963

STAFF NOTES

Inspector T.B. Baines, of Shark Bay, will commence 3 months' long-service leave on April 1. During his absence Inspector D.P. Gordon will be in charge of the district.

Cadet Inspector I.L. Cardon, on March 27, left for Jurien Bay to assist Assistant Inspector C.W. Ostle.

Senior Inspector A.K. Melsom, of Fremantle, will commence annual leave on April 1. Relieving Inspector R.M. Crawford will be in charge of the Fremantle district during Mr Melsom's absence.

Other officers to commence leave this month include Assistant Inspector D.H. Smith, of Albany, also on April 1, and Inspector E.H. Barker, of Bunbury, on April 29.

Mr Crawford will be in charge of the Bunbury district during Mr Barker's absence.

Congratulations are extended to Assistant Inspector and Mrs D.H. Smith on the birth of their son on March 21.

Research Officer R.J. Slack-Smith flew to Shark Bay on March 9 to continue his prawn research programme and to set up a laboratory and holding tanks in the Department's building and yard. The laboratory will be used continuously this year for the study of the developmental stages of local commercial prawns. Captain F. Galbraith, of the research vessel "Peron", left with Fauna Warden N.E. McLaughlan for Carnarvon by road on March 26. They joined Mr Slack-Smith at that centre where a sampling stage of the research programme will be commenced. Captain Galbraith hopes to go out on

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some of the commercial prawning boats to familiarise himself with local waters and the channels and grounds involved in the prawn fishery.

Mr N.E. McLaughlan, for personal reasons, has decided to withdraw his application for promotion to Item 3874/62, Technical Officer, Grade II. Although he will continue in his permanent job, he will assist in the prawn research programme for the time being. Applications for appointment to the position will be called again in the second week of this month. Officers who wish to apply may therefore delay completing an application form until the staff conference to be held from April 22 to 24.

The r.v. "Lancelin", under command of her master, Capt. C.J. Seabrook, left Fremantle for Busselton on March 26. She will be joined at that centre by Mr I.S.R. Munro, Principal Research Officer, and his technical assistant, Mr R.A. Favelle, of the Division of Fisheries and Oceanography, C.S.I.R.O. An endeavour will be made to take salmon eggs in the "Lancelin's" plankton nets.

Technical Officer J.S. Simpson left on March 25 for Albany where for 14 days he will participate in the salmon marking programme which, as reported in last month's issue, has been organised by Dr J.M. Thomson.

Fauna Protection Officer H.B. Shugg will visit a number of centres in the South-West and Great Southern later this month. At Katanning he will discuss with local farmers a proposal to establish sanctuaries on private land, and at Cranbrook will address a meeting of the local branch of the Farmers' Union on the conservation of the grey kangaroo. At Badgebup he will inspect land which the owner wishes to donate to the Department to extend an existing waterfowl reserve at Casuarina Lake. At Williams he will inspect some plastron and carapace shells from an unidentified tortoise found at Windich Springs on the Canning stock-route.

Assistant Inspector G.J. Hanley, of Mandurah, and Cadet Inspector P. Willey will be stationed at Lancelin for the remainder of this crayfish season.

PERSONAL PARS

On March 16 the well-known naturalist, Mr Armand Denis, who was on a brief visit to this State, was entertained to luncheon at the King's Park restaurant. The luncheon, which was attended by representatives of all Departments interested in conservation and by representatives of governmental, semi-governmental and private agencies with similar interests, was financed by the distributors of a new wildlife magazine of which Mr Denis is the editor-in-chief. The Director, Mr A.J. Fraser, was unable to accept the invitation to attend as he was absent from the State, but the Department was represented by Mr H.B. Shugg.

Mr J.M. Forshaw, a technical assistant employed by the Division of Wildlife Research, C.S.I.R.O., Canberra, called at Head Office last month. Mr Forshaw, who was on leave from his Division, was engaged in a private taxonomic review of Australian parrots. He is working in collaboration with leading American research workers and was issued with a scientific license to authorise his collection of a very limited number of local species.

We hear that Mr A.M. Olsen, Senior Research Officer, Division of Fisheries and Oceanography, C.S.I.R.O., who has been engaged for some time in crayfish research in Tasmania, has resigned from the Division. We understand that he will take up work on agar with a private firm.

SALARY INCREASES

A circular from the Public Service Commissioner advises that a new agreement covering the salaries of all officers employed under the Public Service Act has been entered into with the Civil Service Association of W.A. Salary increases provided under the new agreement will be paid on a date to be agreed upon, and will be retroactive to January 1, 1963. The agreement provides for increases ranging from £7 a year in the case of

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juniors to over £200 a year for officers on the maximum of the justiciable salary range. Typical increases to be enjoyed by our staff are set out in the table below:-

<u>CATEGORY</u>	<u>AGE, OR YEAR OF SERVICE</u>	<u>OLD SALARY</u>	<u>NEW SALARY</u>	<u>IN- CREASE</u>
Cadets and Assistant Inspectors	17 years	583	596	13
	18 "	689	705	16
	19 "	821	838	17
	20 "	917	936	19
	21 or 1st Yr. of Service	984	1004	20
	22 " 2nd " " "	1022	1044	22
	23 " 3rd " " "	1060	1084	24
	24 " 4th " " "	1098	1124	26
Inspectors Grade II, etc. Class G-II-1	Minimum	1248	1306	58
	Maximum	1284	1356	72
Inspectors Grade I, etc. Class G-II-2	Minimum	1320	1406	58
	Maximum	1356	1456	100
Senior Inspectors, etc. Class G-II-3	Minimum	1410	1516	106
	Maximum	1464	1576	112
Class G-II-4	Minimum	1518	1636	118
	Maximum	1572	1696	124
Class G-II-5	Minimum	1626	1756	130
	Maximum	1680	1816	136
Class G-II-6	Minimum	1734	1876	142
	Maximum	1788	1936	148

It will be noticed that grade increases of £50 apply in the classified positions up to the maximum of G-II-2. Above that classification, however, the grade increases are based on £60 intervals.

W.A. TAKES FIRST PLACE!

Largely because of the high value of our crayfish catch, Western Australia now leads all other Australian States in the estimated gross value to fishermen of the catch of edible fishes. The table at page 72

reveals that our crayfishery is not only the largest by weight of any single fishery in Australia, but also by far the most valuable. Although the total weight of edible fish products landed in New South Wales is much greater than that landed in this State, the estimated value of our catch is £700,000 more. In fact, the W.A. catch is 30% of the Australian total.

As we also maintain oversight of the whaling, pearling and pearl culture industries, it can be seen that Western Australia is easily the foremost State, by both landed weight and value of all marine products.

While our production is substantial by Australian standards, it is infinitesimal by world standards. The whole of the Australian catch of edible fish in 1961-62 approximated 66,000 metric tons. The world catch, on the other hand, totalled 41,000,000 metric tons in 1961.

SYNTHETIC NET FIBRES

An interesting comment on the use of synthetic fibres in fishing nets comes from Mr W.A. Wilkinson, a fisheries officer in the Ministry of Forest Development, Kenya. Mr Wilkinson's comment was contained in a reply to a query from the Director who had written following the publication of a reference to synthetic nets by that officer in the February, 1963, issue of the British commercial fisheries publication "World Fishing".

It appears that fishermen in Kenya are much further advanced than ours in the transition to the use of nets of synthetic fibres. Mr Wilkinson commented that he was surprised to hear that the evolution has been so gradual here. In Kenya, he said, the transition was practically completed. Actually, he said, a second stage had been reached and an entirely new type of synthetic called "isotactic polypropylene" will soon oust nylon in the manufacture of gillnets and seines. Mr Wilkinson said that nets of this twine had been tested by his Division and had been found to be superior with a very low specific gravity and a higher wet strength than ordinary nylon. Polypropylene has a fairly low stretch under normal fishing conditions but a high one when subjected to occasional fishing loads.

FAUNA ADVISORY COMMITTEE APPOINTMENTS

Dr W.D.L. Ride, Director of the Western Australian Museum, has been appointed by His Excellency the

AUSTRALIAN EDIBLE FISH PRODUCTION, 1961-62

Estimated live weight and gross value of catch

STATE	FISH (b)		CRUSTACEAN		MOLLUSCS		TOTAL	
	Pro- duction	Value	Pro- duction	Value	Pro- duction	Value	Pro- duction	Value
	'000 lb	£'000	'000 lb	£'000	'000 lb	£'000	'000 lb	£'000
Western Australia	11,656	666	19,536	3,879	24	2	31,216	4,547
New South Wales	28,963	2,016	5,266	837	(a) 12,204	(d) 992	46,433	3,845
Victoria (a)	16,224	1,575	1,680	406	964	35	18,868	2,016
South Australia	15,640	870	4,025	720	-	-	19,665	1,590
Queensland	9,471	670	5,083	678	840	41	15,394	1,389
Tasmania (a)	6,259	255	3,426	711	4,773	181	14,458	1,147
Northern Territory	247	23	2	(c)	10	1	259	24
TOTAL	88,460	6,075	39,018	7,231	18,815	1,252	146,293	14,558

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- (a) Catch by Victorian fishermen in Tasmanian waters included in Victoria.
- (b) Includes value of shark livers for oil extraction.
- (c) Less than £500.
- (d) Excludes pipis, particulars of which are not available for publication.

Source: Commonwealth Bureau of Census and Statistics.

Governor-in-Council to be a member of the Fauna Protection Advisory Committee of Western Australia from March 7 until June 30, 1964. Dr Ride replaces the late Ludwig Glauert, who died on February 1. Dr Ride was previously Mr Glauert's deputy on the committee.

Dr Glen M. Storr, Assistant Curator of Vertebrates in the Western Australian Museum, has been appointed by the Minister for Fisheries, Mr Ross Hutchinson, to be Dr Ride's deputy on the committee. Under the provisions of the Fauna Protection Act the term of office of both men is limited to Mr Glauert's incompleeted term.

UNUSUAL USE OF DIRECTIVE POWERS

The Minister for Fisheries, Mr Ross Hutchinson, has directed that the license of J.C.J. Gregory be endorsed to restrict Gregory's crayfishing activities to waters lying south of the 30th parallel of south latitude. The Minister reached his decision after receiving representations from the Geraldton Licensed Fishermen's Association and from Mr Gregory's solicitors. It might be remembered that Mr Gregory was convicted in the Geraldton Court of Session on February 8 on a charge of having stolen 2 craypots, ropes and floats, at the Abrolhos Islands. He was convicted and fined £50. Inspector A.T. Pearce served the Minister's directive on Mr Gregory on March 3 while he was fishing at the Wallabi Group. As instructed Mr Gregory ceased fishing that day and his gear was brought in by carrier boat a few days later. It is understood that he moved from Geraldton about the middle of March and commenced fishing at Jurien Bay.

NOTES FROM THE NEWS

Fauna conservation and fisheries interests were to the fore in the news during last month's visit of Her Majesty Queen Elizabeth and His Royal Highness the Duke of Edinburgh.

At Broome, which still claims to be the world's biggest pearling centre, the Royal couple partook of refreshment from what was claimed to be, "undoubtedly the world's original crockery ... pearlshell." The report said that the crockery had been prepared by Mr T.B. Ellies and described it as being fit for a Queen. Prince Philip's profound interest in and knowledge of wildlife was again evinced on this visit. As

well as paying an unscheduled call at Pelsart Island, in Houtman's Abrolhos, where he saw the famous tern and shearwater nesting grounds, His Royal Highness also paid an unscheduled early morning visit to Pelican Point. Fauna Protection Advisory Committee member, Dr D.L. Serventy, was summoned to the Duke's private suite on board H.M.Y. "Britannia" the previous afternoon to discuss the identification of the birds observed on Pelsart. It was during that visit that Dr Serventy recommended Pelican Point as a good bird-watching site on the Swan River. Dr Serventy's description of the area must have been convincing for Prince Philip set off from the yacht at 6 a.m. next morning. By an arrangement made the previous midnight, the Prince was joined at the Point by well-known local ornithologist and National Parks Board member, Mr C.F.H. Jenkins. It is understood that Prince Philip also had further discussions regarding the conservation of the Noisy Scrub-bird with the Premier, Mr Brand, the Minister for Fisheries, Mr Hutchinson, and the Minister for Lands, Mr Bovell.

Fears that the kangaroo would "inevitably be destroyed to make way for agriculture" were expressed by the well-known naturalist Mr Armand Denis in an interview last month. Mr Denis was quoted as saying, "You have to be realistic about it; in the future there will be only a few kangaroos left in Australia."

Of course we do not altogether agree with Mr Denis and presume that he must have been caught on the hop himself. Naturally we applauded his recommendation that additional sanctuaries be established, but his reputed desire that African animals in danger of extinction be brought to Australia was, we hope, a misreporting, or a momentary aberration on his part.

Mrs J.V. O'Sullivan, of Mount Hawthorn, landed an unusual catch at The Chimneys near Mandurah recently. It was a 3-pound specimen of the Mangrove crab (Scylla serrata) a species which is normally found only in tropical waters. This fellow was well out of his normal territory and it is of interest to note that apart from an isolated patch in Leschenault Inlet in Bunbury, the southernmost range of mangroves in this State is the Abrolhos.

JUDGMENT ON CRAYTAIL APPEALS RESERVED

At the conclusion of the hearing of two appeals by the Geraldton Fishermen's Co-operative Ltd., on March 20, the State Full Court reserved judgment. The company had been convicted in the Fremantle Police Court on September 10, 1962, on charges of having had control of underweight crayfish tails in February and March of last year. The company had been fined £10 on each of the two charges and had been ordered to pay penalties for each alleged underweight tail, together with costs totalling £34.

BOAT MISHAPS

The 24-ft. fishing boat "Rosy Morn" sank in 85 feet of water 4 miles off Dongara on March 17. The vessel was being worked by its owner, Mr Norman Money, when it capsized in a rough sea. Mr Money clung to it for an hour before being rescued by Mr R. Bunney in his 30-ft. catamaran "Catfish". Valued at £3,000, "Rosy Morn" was salvaged the following day.

The 65-ft. carrier boat "Emmalou", skippered by Mr Frank Bombara of Geraldton, was in danger for a period during a run from the Wallabi Group to Geraldton on March 25. "Emmalou" dipped her bows into a heavy sea a half-hour out from the Wallabis with a load of 477 bags of crayfish. The forward compartment was flooded and the crew was forced to jettison an expensive out-board motor, gas bottles, empty fuel drums and a number of bags of crayfish, when things took a turn for the better. The vessel's twin-bilge pumps had begun to make an impression on the 10 feet of water which had been flooding the galley and the bows began slowly to lift. The crew had been set to jettison 90 fathoms of heavy chain before the pumps began making obvious headway. It was reported that the forward hatch of "Emmalou" was jammed open when crayfish bags shifted allowing the sea to pour in. The ship limped back into port at 3.30 a.m. the following day. The fact that "Emmalou" had 477 bags of crayfish on board was proof that the season had taken a turn for the better following an unusually late moulting run of the Abrolhos crayfish this season.

CONFUSION FORESEEN

A note in the February, 1963, issue of the

Local Government Journal of W.A. indicates that the Cottesloe Town Council has adopted new by-laws to control poultry and pigeon keepers. The by-laws, which are reported to be aimed at assisting in combating fly and vermin breeding, require that keepers of these birds must register their premises at a 5/- registration fee. Poultry keepers may keep no more than 20 fowls in clean, properly constructed enclosures, at least 30 feet from a house. Pigeon keepers will be limited to numbers ranging from 20 to 75.

Regulation 12A made under the Fauna Protection Act requires any person to be licensed who has more than 9 unprotected birds or any other fauna whatsoever in captivity. It is anticipated that the new by-laws, the adoption of which other local authorities are said to be considering, will inevitably be confused with the Fauna Protection Act Regulation. Whether domestic pigeons in captivity are fauna within the meaning of our Act is not clear and a legal opinion will be sought on this point and on the interaction of the regulation and the by-laws.

SEASONS CLOSE

The attention of all inspectors is drawn to the impending closure of the season for wild ducks and marron. Both will terminate on April 30. The duck season will probably re-open in December of this year, but the next open season for marron will not commence until January 1, 1964. The long close seasons must be enforced rigidly to conserve the stocks during their breeding seasons.

BOAT LICENSES

All licensing officers are asked to note carefully that original boat licenses are to be issued in all cases except those in which the same boat is being re-licensed by the same person. Some officers have mistakenly issued renewals when a previously licensed boat has changed hands. If a fishing boat was not licensed at December 31 of the previous year, or if it has changed hands since it was previously licensed, a new license and not a renewal is required.

WHALING RECOMMENCES

The Cheynes Beach Whaling Company resumed sperm

whaling operations on March 10 when the first whale for the season was taken. Despite unsatisfactory weather the Company's chasers operated successfully and by the end of the month had procured 64 sperms as compared with 50 at the same date last year. It is reported that the Company's replacement chasers and its new plant are operating successfully and functioning efficiently. The chasers and the plant were described in our January, 1963, issue.

COMMONWEALTH ESTABLISHING GEAR RESEARCH UNIT

One of the recommendations of the Commonwealth-States Fisheries Officers' Conference held in Canberra last September, was that the Division of Fisheries and Oceanography, C.S.I.R.O., and the Fisheries Division, Department of Primary Industry, give urgent consideration to the setting up of a gear research unit to obtain and test fishing gear, boats, and other equipment, and to collaborate with fisheries biologists in the study and analysis of fish/gear relations, fishing power, selectivity, efficiency and so on. It was envisaged that the unit would contribute to the development and management of Australian fisheries by those activities which lead to increased efficiency of fishing operations, or to the maintenance of efficiency. It might also demonstrate whether restraints were needed upon over-efficient gear, such as the monofilament nets, the use of which in limited fisheries could conceivably be detrimental.

It is understood that the formation of the unit has been approved in principle by the Commonwealth Government and that the Commonwealth Fisheries office is now in process of establishing the unit. Work in the various States will not commence until the unit is a going concern.

CORRECTION - THE RUSSIANS STILL HAVE IT!

On page 295 (re-numbered 39) of the February, 1963, issue of this bulletin we reproduced a report that one of the Royal Navy's survey ships, HMS Cook, had discovered the world's deepest oceanic trench. The report said that Cook's instruments had given a corrected sounding of 6,297 fathoms. A recent press release advises, however, that a fault has been found in Cook's echosounding machine, which had caused the depth of the trench to have been overestimated. The record, therefore, still stands to the credit of the Russian research

ship, Vitiaz, which recorded a depth of 6,034 fathoms in the Marianas Trench in 1961.

PUBLIC SERVICE HOLIDAYS

The following holidays will apply throughout the public service -

Friday, April 12	} - Easter;
Saturday, April 13	
Monday, April 14	
Tuesday, April 16	
Thursday, April 25	- Anzac Day.

CONVICTIONS

JANUARY-MARCH, 1963.

Date	Defendant	Court	Charge	Result
<u>FISHERIES ACT</u>				
21.1.63	BROWN, Russell	Fremantle	U/s cray-fish	Fined £27.4s.
"	CARBONARO, Vinci	"	"	£33.19s.
"	CARBONARO, Vinci	"	"	£38.16s.
"	CARBONARO, Vinci	"	"	£32.17s.
18.2.63	VINCENT, Richard B.	"	"	£10.
"	VINCENT, Richard B.	"	"	£14.4s.
"	KATNICK, Roko	"	"	£13.12s.
"	KATNICK, Ivan (Jnr.)	"	"	£10.14s.
"	DAVISON, John Selby	"	"	£19.1s.
"	DAVISON, John Selby	"	"	£10.
"	GARCIUS, Manuel Silva	"	"	£15.18s.
"	LEPPINUS, Lester	"	"	£14.7s.
"	FRASER, Jack	"	"	£13.8s.
25.2.63	PAPARELLO, Carrado	"	"	£21.
"	REBELO, Antonio G.	"	"	£24.11s.
"	AMATO, Angelo	"	"	£13.6s.
"	KRIEGZOE, Voldemaro	"	"	£10.
"	KRIEGZOE, Voldemaro	"	"	£33.19s.
"	PALMIOTTI, Guiseppe	"	"	£15.1s.
"	PALMIOTTI, Guiseppe	"	"	£40.2.6.
"	POLAND, Richard Thomas	"	Ob- struction	£10.
11.3.63	GAVIANIC, Niko	"	U/s cray-fish	£8.2.6.

CONVICTIONS
(continued)

Date	Defendant	Court	Charge	Result
11.3.63	IVANKOVICH, C.	Fremantle	U/s crayfish	Fined £34.10s.
"	PITTORINO, Umberto	"	"	£92.12.6.
"	RADICH, Luka	"	"	£28.7.6.
"	BROSKIO, Nikolas	"	"	£6.17.6.
1.4.63	VEN-GELDER, Johannes	"	"	£12.17.6.
"	TROPICAL TRADERS	"	"	£27.
"	BREGLIA, Cosima	"	"	£30.
"	ANDREWS, Ray Stanton	"	"	£13.12.6.
"	WALLIS, Barry	"	"	£13.17.6.
"	VAN-GELDER, Johannes	"	"	£22.12.6.
"	VAN-GELDER, Johannes	"	"	£10.
22.1.63	CONNELL, Fredrick A.	Geraldton	"	£21.4s.
"	HEWITT, John T.	"	"	£10.9s.
"	WHITE, Thomas Samuel	"	"	£10.5s.
"	WHITE, Thomas Samuel	"	Unlicensed fishing	£5.
"	CROOKS, Ronald B.	"	U/s crayfish	£10.17s.
"	FRANCISCO, Manuel	"	"	£13.6s.
"	GRIFFIN, James Barry	"	"	£10.14s.
19.2.63	HORN, Andrew, J.	"	"	£11.8s.
"	HORN, Robin D.	"	"	£12.1s.
"	HORN, David J.	"	"	£12.3s.
"	HEWITT, John T.	"	"	£10.13s.
"	WILLIAMS, Trevor R.	"	"	£11.
17.1.63	MADALINI, Allan	Perth	Netting in closed waters	£3.
"	ELEY, Lawrence George	"	Unlicensed fishing	£5.
25.1.63	MATICH, John Arthur	"	U/s crayfish	£11.4s.
"	LAGALLA, Nicola	"	"	£13.18s.
"	FLETCHER, Harry G.	"	"	£12.6s.
"	BLAKEY, Jack Hedley	"	"	£12.14s.
"	McKENZIE, Francis K.	"	"	£23.
"	WATSON, John Henry	"	"	
8.3.63	BRADLEY, Raymond J.	"	"	£12.8s.
"	MACKIE, Franklin H.	"	"	£25.10s.
18.3.63	PASKOV, John	"	"	£12.5s.
"	KLINGBERG, Axel	"	"	£35.17.6.
"	KERNS, Egors	"	"	£14.2.6.
22.2.63	BASS, Clive James	"	"	£16.12s.

CONVICTIONS
(continued)

Date	Defendant	Court	Charge	Result
22.2.63	GARCIUS, Manuel Silva	Perth	U/s cray-fish	Fined £26.16s.
* 16.4.62	LOMBARDO, Vince	"	Ob-	£10
* "	LOMBARDO, Michael	"	struction	£10
	* Late Reports			
<u>FAUNA PROTECTION ACT</u>				
16.1.63	COOK, Phillip F.	Toodyay	Taking protected fauna	£5.
"	WATSON, Peter Gerald	"	" " "	£2.
"	WATSON, Vincent S.	"	" " "	£5.
28.2.63	DAWE, Ivan John	Pinjarra	" " ")	£5.
"	DAWE, Lennard Stanley	"	" " ")	£5.
18.3.63	HUGHES, Gerald F.	Perth	" " "	£30.
"	ROBINS, Lyall Cyril	"	" " "	£30.

ADVISORY COMMITTEE MEMBER'S ABSENCE

Mr Roland C. Smith, member of the Fishermen's Advisory Committee representing non-professional fishermen, was a patient in St. John of God Hospital, Subiaco, for two or three weeks in the early part of March. He is now almost fully recovered, and will sail for Britain in the Oronsay on April 9 for a five-months holiday. Mr Smith, who will be accompanied by his wife, has been a member of the Advisory Committee ever since its creation.

CLEARING HOUSE

1961 World Catch Rose to 41.2 Million Tons

The world fish catch for 1961 was 41.2 million metric tons, an increase of 8 per cent. over 1960. FAO's Yearbook of Fishery Statistics (Vol. XIV) also show that Japan continued to lead the field among the world's great fishing nations, catching 6.7 million tons, half a million more than in 1960. Almost one out of every four tons caught throughout the globe was used for reduction to fish-meal or oil.

The 1961 statistics show Peru, with a catch of 5.2 million tons, as the number two fishing nation. Mainland China was third, although computation of its catch - five million tons - was based on estimates. Russia and the United States, with catches of 3.2 and 2.9 million tons respectively, are fourth and fifth among fishing powers.

Other countries whose 1961 catch totalled 500,000 or more tons were Norway, 1,500,000; Canada, 1,020,800; Spain 1,014,500; South Africa and South West Africa, 1,010,300; India 961,000; United Kingdom, 897,000; Denmark and Faroe Islands, 758,000; Indonesia, 734,000; Iceland, 703,000; German Federal Republic, 619,000; France, 568,000.

Chief species taken during the 1961 fisheries harvest were the herrings, sardines and anchovy-type fishes. Those made up 12.6 million tons or almost one-third of the world catch. The cods, hakes and haddocks came second with 5.1 million tons. Freshwater fishes accounted for 4.4 million tons, about the same as in 1960.

Four million tons of mullets, jacks and sea basses were taken and 3.2 million tons of molluscs and crustaceans.

The catch of tunas, bonitos and mackerels rose from two million tons in 1960 to 2.1 million for 1961. Flounders, soles, halibuts and other flat fishes caught rose from 1.2 million tons in 1960 to 1.3 million in 1961. The salmon, smelts and trouts were up from 600,000 to 800,000 tons.

(Fishing News International, London, January-March, 1963)

Botulism

In the article the authors refer to a case of

botulism by fish in the U.S.A. This incident of food poisoning, which resulted in two deaths, was caused by a smoked lake trout packaged in a film of some kind.

Although no data were available as to how or at what temperature the fish had been kept, it was shown that the type of botulism was that which is coming to be associated more and more with fish and fishery products, viz. Clostridium botulinum type E. Recent data from Sweden is leading to the belief that this organism may be indigenous in sea muds, particularly near shore.

The whole problem requires urgent investigation and Torry Research Station hopes to begin work on this soon.

The main points so far as prepackaging is concerned are -

- (1) this organism (Clostridium botulinum type E), grows well under the anaerobic conditions produced by vacuum packaging, and
- (2) that it can grow, albeit slowly, at temperatures usually reckoned quite safe for all other types of food poisoning, viz. 3.5°C. to 4°C.
- (3) For most types of prepackaged fish which are subsequently cooked the danger of botulism is almost nil because the toxin is destroyed by heat. If the fish, e.g., smoked salmon, were eaten raw then, of course, the toxin would not be destroyed.

(Fishing News International, London, January-March, 1963)

Shrimps

Recent studies of brown and white shrimps by the Galveston Biological Laboratory, Texas, U.S.A., found a large percentage of ripe and recently spent females in 25 fathoms. The movement of shrimps, stained on their gills for study, was at random, and more than 92 per cent. were recovered less than 20 miles away. None travelled more than 15 miles at one marking experiment, but at another location one made a record journey for a single shrimp of 68 miles. The shrimps also avoided salinities above 35 parts per thousand, and brown shrimps tolerated considerable changes in temperature and salinity, even when the changes were made quickly. As many as 95 per cent. survived such tests, showing

that they do not need gradually acclimatizing to the changes like salmon going downriver to sea.

(Fishing News International, London, January-March, 1963)

In Quest of Containers

Practically all fishing countries are searching for satisfactory substitutes for wooden boxes. A huge market awaits the ideal material when it is found.

This container problem as it relates to the Indo-Pacific area has been surveyed in a 40-page report by the Technical Committee of the Indo-Pacific Fisheries Council. In E. Asia something like 16 million tons of fish are caught annually and some 8-10 million tons eaten in the fresh state thus requiring an incredible number of many different types of containers. Types include: baskets, boxes, casks, barrels, sacks, cartons, etc., made variously of bamboo, coconut matting, wood, jute, metal, paper and plastics.

A point made concerning Japanese practice is that, "a recently popularized steel container" is superior to the traditional wooden container for these reasons: preserves freshness better because of better conduction characteristics; cleaner with less bacterial contamination; more reliable in supply; lighter in weight; less breakage and deterioration of fish and, when stacked, no foul water percolates below to do damage.

Korea is trying to meet the fish container problem by using salvaged rubber tyres. Her annual consumption of wooden boxes is placed at from 10-12 million. This is more than the country's timber resources will stand and efforts to find alternatives in aluminium, brush and plastic are underway. Unit and knock down makes have been tried with aluminium but the cost is heavy.

A Secul company has now evolved a knock down assembly box from old tyres with reputedly certain advantages. The dimensions in millimetres: 595 long, 370 wide, 91 deep, to hold 10 kg. of fish. Its own weight is 2 kg. Tests show these advantages: (1) Much less susceptible to germ contamination than wood; (2) Moisture resistant and therefore constant in weight; (3) Its elasticity provides a buffer against shock and jolt in transit thereby minimising damage to fish; (4) Very

cheap to construct. The company rents the boxes to users.
(Fishing News International, London, January-March, 1963)

How To Avoid Heart Disease

Eat Fish Five Times A Week

Six hundred men, all members of the New York City Health Department's ANTI-CORONARY CLUB, who are following a diet to avoid the risk of heart attacks, have been advised to eat fish at least five meals a week.

The men are all volunteers in a mass experiment, started five years ago, aimed at cutting down the death roll from coronary heart disease and strokes.

Heart disease is the biggest killer in U.S.A. and despite an intense attack since the end of World War II by medical researchers there is still no certain cure or guaranteed preventative.

Australia too

Australia and New Zealand (both well-fed countries) rank close to America in the incidence of deaths from coronary occlusions and strokes.

Among the many unanswered questions surrounding heart disease, one is now being asked with increasing frequency: Is there a significant connection between heart attacks and diet?

The question is prompted by a waxy, yellow substance in the blood called cholesterol. A growing number of researchers believe excessive amounts of cholesterol in the blood lead to atherosclerosis, the artery-clogging disease which underlies heart attacks and strokes.

A revolution

They already know that the amount of cholesterol circulating through the arteries can be controlled, at least in part, by the kind of foods people eat: A diet rich in polyunsaturated (mostly vegetable) fats and low in saturated (mostly animal) fats makes blood cholesterol levels fall.

If, as the researchers believe, changing the dominant type of fats in the diet from saturated to polyunsaturated will actually prevent heart attacks, the

next decade may produce a violent revolution in American eating habits.

To an extent, the revolution has already begun.

The existing evidence against saturated fats has prompted the American Heart Association to state: "The reduction of fat consumption under medical supervision, with reasonable substitution of polyunsaturated fats, is recommended as a possible means of decreasing the risk of heart attacks and strokes."

The American Medical Association, in a somewhat milder echo recently, took its first official stand in the matter. The A.M.A.'s council on foods and nutrition told the nation's doctors "it appears logical to attempt to reduce high concentrations of cholesterol ... as an experimental therapeutic procedure."

Even before these warnings were issued, great numbers of Americans had shown a new awareness of the U.S. death toll from coronary heart disease (500,000 annually) and strokes (200,000) and the possibility that they could do something about it in their kitchens. Housewives these days carefully select corn and other vegetable cooking oils from their grocer's shelves.

The use of corn oil in making margarine has zoomed from "negligible" in 1957 to 90 million pounds in 1961. Safflower, a thistle-like, oil-producing plant, has turned into a booming Western crop.

Main reason: Safflower oil, once used mainly in the U.S. as a paint base, is 25 per cent richer in polyunsaturates than corn oil.

The first experiment to show whether dietary changes would reduce the risk of heart attacks began in New York five years ago when the city Health Department's Board of Nutrition organised an Anti-Coronary Club. The club now has 600 all-male members who follow a "prudent" diet formulated by the late Dr Norman Jolliffe.

Butter, ice-cream, and most pastries are ruled out. Whole milk is permitted as a replacement for cream in coffee, but otherwise members are advised to drink skim-milk or buttermilk.

Calories down

Consumption of fat-rich beef, pork, and lamb - with visible fat trimmed away - is held to a bare

pound a week.

On the other hand, the volunteers are urged to eat fish (rich in polyunsaturated oils) at least five meals a week, as well as veal, chicken and turkey.

The total fat content of this diet is 33 per cent. of calories which is moderately less than the average diet of 45 per cent.

The question has now been asked: Should coronary-conscious Americans modify their diets right now to be on the safe side?

Dr Stare of Harvard warns that "tinkering with fats in the diet is still completely experimental and should be left to the physician."

Switch advised

But other heart specialists believe a switch to unsaturated is prudent, even for the healthy.

"True, the final proof isn't at hand", said Dr Jeremiah Stamler of the Chicago Board of Health's heart-disease control programme. "But if you want to know what I tell my friends, I tell them to keep their cholesterol down."

(Fish Trades Review Sydney February, 1963)

Good Public Relations Pays Off

(by Shan Hoskyns & Associates)

How many members of the Association realise it pays to have good public relations?

No doubt many of you accept this fact but there are some who don't.

For instance, not long ago a public servant said to us: "What does it matter how we behave towards the public? They have to deal with us anyway".

This person possibly didn't realise it but, in effect, he was echoing the thoughts of an American millionaire who once said: "The public be damned".

The practice of public relations is the deliberate attempt to earn goodwill from others - any account-

ant will tell you goodwill has a value.

This is evident even when you sell a ham and beef shop and receive quite a large sum for goodwill.

Personal reasons

But why should the public servant try to be well thought of?

Why should he act in accordance with good public relations?

He can't sell his department.

The reasons are both personal. Firstly, good public relations pays off in your own character. Good reputation is something that must be earned. Its ingredients include integrity, a sense of moral responsibility, a desire for continuing self improvement and a recognition that conditions of society are not static but constantly changing. Good public relations means producing a good product and giving a good service.

Secondly, good public relations generally pays off economically, too.

No institution, group of people or individual can in the long run, prosper in a climate of bad opinion.

If the public servant, as a group and as an individual, earns a good reputation by providing good service and by behaving well towards the public, he will undoubtedly have a much better chance of gaining his economic aims.

The reason is simply that he will then have public opinion behind him.

It was Abraham Lincoln who once said that without public support nothing can succeed, but with it, everything can succeed.

(Public Service South Australia Jan.-Feb., 1963)

CONSERVATION FOR WHOM ???

by William C. Gibson M.D., Vancouver, B.C.

THE CONSERVATION OF NATURE'S beauty spots has been pursued in the past as an end in itself. More recently, it

has become very clear to mental health experts that the conservation of natural beauty is one of our most important agencies for promoting mental health and happiness. But when, during the bitter controversy about the preservation of 62 acres of golf links in the geographical centre of Vancouver, it was suggested by the medical profession that the preservation of green areas is good preventive psychiatry, we were regarded as if we had just arrived from Mars!

THE PREOCCUPATION which many people in positions of public authority have with "turning an honest dollar" appears to many medical authorities to be very shortsighted. The small-minded in our society may be obsessed with counting and recounting public monies, as if the sheer enumeration of these monies was a great national service.

For some, the chief value of money is that it can be counted.

Everything in their tidy lives must be measured.

MANY CITIZENS with such an obsessive-compulsive neurosis never come to know anything about the best medicine of all for their complaint. At one time it lay all about us in the form of great natural beauty, but today we must go greater and greater distances to seek for it. Mature cities like New York and London have had to bring it back and create it artificially in the centre of the land they have transformed out of all recognition. It is exactly one hundred years ago that Central Park in New York had to be reassembled at a cost of five million dollars by a man named Olmstead. It was the same man who saved Mount Royal, that great park in the centre of Montreal, for the perpetual enjoyment of the people.

WHEN WE ASK "CONSERVATION FOR WHOM ???" we are really talking about conservation for all of posterity, and it would appear that this is going to be a very large group of people!

The present population explosion should urge us to redouble our efforts to set aside green pastures and natural areas in perpetuity now. Otherwise, the very size of the population that requires them will be the very reason why it will be impossible to get them.

THESE SHOULD BE THE GREAT DAYS, the planning days of the conservation pioneers and not the days of the counters of money. Conservation for recreation should be the watchword of all thinking citizens. The spending of money today will mean the saving of great sums eventually. We have no time to waste; we must act now!