DEPARTMENT
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STAFF NOTES

The Director, Mr. A.J. Fraser, left Perth on June 28 for the Eastern States by air to interview applicants for the additional research officer's position recently created. Mr. Fraser will return by rail on July 6.

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The Supervising Inspector, Mr. J.E. Bramley, will visit Geraldton and Shark Bay next month. He will leave on July 3 and will spend a week or ten days in the north.

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After accompanying members of a scientific sub-committee to reserves west and east of Pingelly on June 20 and 21, the Fauna Protection Officer, Mr. H.B. Shugg, visited Dryandra State Forest with the Superintendent of Research, ForestsDepartment (Mr. G.E. Brockway), and later addressed a joint meeting of the Narrogin and Katanning Gun Clubs at Wagin. While in the Great Southern, he took the opportunity to inspect reserves in the Dongolocking andWickepin districts.

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At an informal ceremony at Lead Office on June 23, the Director presented to Technical Officer R.J. McKay and his bride-to-be, Miss Patricia Francis,

a utility set with the best wishes of the whole staff. The young couple were married the following day at St. Peter's Church, Victoria Park.

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A presentation is to be made to Cadet Inspector and Mrs. R.G. Emery (formerly Miss Flora van Hunnik) on their return from their honeymoon. They were married on June 3.

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Technical Officer J.S. Simpson will on July 3 recommence duty after 3 weeks' sick leave. Fauna Warden S.W. Bowler started work again on June 26 after one week's sick leave.

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Officers who will resume duty this month after annual leave include Technical Officer L.G. Smith, on July 3; Assistant Inspector D.P. Gordon, on July 5; and Inspector F.J. Campbell, on July 10.

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On the return to duty of Assistant Inspector L.R. Frizzell after annual leaveon June 29, Cadet Inspector P.C. Willey returned to the metropolitan area from Geraldton and has joined p.v. "Misty Isle" during the absence of Assistant Inspector G.J. Hanley, who commenced annual leave on June 30.

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Assistant Inspector N.K. Henry, who is assisting at Mandurah during the absence of Cadet Inspector R.G. Emery, will return to the metropolitan area early in July.

OBITUARIES

On June 3, at Albany, our old friend and ofttime pungent critic, retired professional fisherman and Emu Point identity William Hodge Swarbrick, passed peacefully away after a long illness. To his bereaved family we extend our very sincere condolences.

At Kudardup, on June 9, Sydney Eric Young, of Pemberton, died suddenly. The late Mr. Young was closely connected with the acclimatisation of trout in the Warren district, having served as secretary of the Pemberton-Warren Trout Acclimatisation Society for a number of years from its inception. To his bereaved family, also, we extend our deepest sympathy.

PERSONAL PARS

The Hon. C.F. Adermann, M.H.R., Minister for Primary Industry in the Commonwealth Government, visited Western Australia for several days early in June. The opportunity was taken by our own Minister (Mr. Hutchinson) to discuss with Mr. Adermann several matters relating to fisheries in which both were interested.

Dr. D.L. Serventy, Principal Research Officer, Wildlife Survey Section, C.S.I.R.O., Perth, a member of our Fauna Protection Advisory Committee, has received advice to the effect that he has been unanimously elected a corresponding member of the South African Ornithological Society. The definition of "corresponding member" in the Society's rules is "a distinguished ornithologist not resident in Southern Africa."

Our congratulations are extended to Dr. Serventy on the bestowal of this high honour.

Early in the month, Sir Alistair Hardy, Professor of Zoology at the University of Oxford, called on the Minister for Fisheries and also on the Director, and discussed aspects of Western Australia's fisheries. He was accompanied on his calls by his onetime pupil, Dr. W.D.L. Ride, Director of the Western Australian Museum. During his visit to the State, Professor Hardy, a world authority on plankton, delivered lectures at the University and at the Museum. Both were attended by a number of departmental officers. The Director (Mr. Fraser) presided at the Museum lecture.

Mr. and Mrs. C.D. George, who have come to Western Australia to engage in pearl culturing at Exmouth

Gulf, called on the Minister and Director before leaving for the scene of their operations. Mr. George has had considerable experience of culturing techniques both in Japan and northern Queensland, and Mrs. George, who is a Japanese, is a graduate of a Tokyo University and has worked for some time at the pearls research laboratory established in the Mio prefecture in Japan.

TRAINING PROGRAMME FOR FIELD STAFF

The Minister for Fisheries (Mr. Hutchinson) has approved the attendance of two officers from this Department at the inaugural training school for fisheries officers. Inspector E.A. Carmichael, of Albany, and Technical Officer R.J. McKay have been selected and we extend our congratulations to them.

The school, which is expected to start on September 4, will be held at the headquarters of the Division of Fisheries and Oceanography, C.S.I.R.O., Cronulla, near Sydney, New South Wales. It will be of two to three weeks' duration and will cover a wide range of subjects, including both practical and theoretical instruction in fishing practices and management techniques.

It was a result of discussions at the last two Commonwealth-States Fisheries Conferences that the decision to set up this school was taken. Originally, the matter was placed on the agenda by the W.A. representatives, who expressed the hope that the school would be an annual one, and that graduates would be able later to carry out extension activities in much the same way as extension services to farmers are provided as a regular feature by the various State departments of agriculture.

The Minister has directed that the participants submit a report of their appreciation of the work done on their return. If practicable, these reports will be condensed and published in this Bulletin.

WHALING

The 1961 humpback season opened in this State with the taking of two whales by the Cheynes Beach Whaling Company at Albany on June 5. Operations at the Nor'-West Whaling Company's station at Carnarvon were somewhat delayed, and the first whale was not taken there until June 29.

Advice was received some weeks ago that the Minister for Primary Industry (Mr. Adermann) had decided that the 1961 humpback whale quotas for west coast stations would be 450 for the Carnarvon station and 105 for Albany. This was a reduction of 300 and 45 in the quotas, granted for the 1960 season. Neither of these was filled.

The Nor'-West Whaling Co. has recently purchased another aircraft, a Piper Apache, which will be used for spotting. The company hopes that the new 'plane will assist in the location of additional humpback and sperm whales as it is larger than its other aircraft. It will consequently allow aerial observations to be made over a wider area. As there are no restrictions on the number of sperm whales which may be taken the company could, by exploiting them, offset to a large extent the effects of the reduced quota for humpbacks.

Whale Marking:

On page 93 is published a summary of the details pertinent to the whale marks recovered at Western Australian stations last year. The published details have been forwarded by the Division of Fisheries and Oceanography, C.S.I.R.O., which received them from Moscow.

To give a clearer picture, details of the marks recovered during 1959 are also included.

WATER SUPPLIES AT JURIEN BAY

In February of this year, the Managing Director of Ross International Fisheries (Mr. T.G. Kailis) approached the Minister (Mr. Hutchinson) seeking assistance from the Government in the sinking of a deep bore at Jurien Bay to obtain regular supplies of potable water. It was pointed out that there were 30 boats operating from this centre and that the company had built a village to cater for the industry. The only water now used is of very poor quality indeed, and the quantities available are totally inadequate for the growing needs of the settlement.

Representations were made immediately to the Minister for Works, who referred the question of the availability of underground supplies to the Government Geologist. Subsequently, in May, the Under Secretary for Works advised that the Government Geologist had reported that while no bores or wells

had been recorded in the coastal belt east of Jurien Bay the country was covered by sand dunes and coastal limestone. The thickness of the latter had been estimated to vary from 50 feet to 250 feet so that there was a distinct possibility that good supplies of water could be obtained either from the limestone or from the underlying Jurassic sediments. It was his opinion that exploratory drilling would be justified.

On the receipt of this advice a further request has been made to the Public Works Department that funds be sought to permit the sinking of a deep bore in the current financial year's programme.

SARDINES LANDED AT FREMANTLE

Extensive shoals of "Sardines" off our coast have been reported by Fremantle fisherman Frank Iannello, who has landed quite large quantities in the past fortnight. Operating in his boat "Dante", he and his crew caught 8,000 lb. in a single haul and landed them in Fremantle where they were subsequently salted down.

In a recent press report, Iannello suggested that a worthwhile fishery could be established. He said that the catch could be exported to the Eastern States and the near East, or sold locally as craybait. It is understood that there is local interest in establishing a processing plant to produce fish-flour and oil and developments will be closely followed and given whatever encouragement is possible. While the Department has no desire to encourage pipe-dreams, we do think that our seas are sadly undercropped and that if our fishermen do not reap the harvest in adjacent waters it will not be long before others do.

The Supervising Inspector (Mr. Bramley) accompanied Mr. Iannello on one occasion and secured samples for identification. Common Pilchard and blue mackerel comprised the bulk of the catch, although a few horse mackerel were landed.

TUNA SURVEY

It was announced last month by the Minister for Primary Industry, Mr. Adermann, that tenders would be called for a proven fishing vessel with an experienced crew to test the potential of the tuna fishery off the south coast of Western Australia.

Australian production of tuna is estimated at the present time to approximate 10,000,000 lb., about half of which is taken off New South Wales. The other half is caught off the South Australian coast, where the fishery is expanding rapidly. The presence of tuna in ocean waters off our south and south-west coasts has long been appreciated, but the commercial prospects have not been known.

The Commonwealth has agreed to finance the survey from the Fisheries Development Trust Account. Although the industry has increased tenfold since 1954/55, observers are convinced that there is still an expanding market for tuna in Australia.

Commenting on the Commonwealth decision, the Minister (Mr. Hutchinson) said that he hoped the survey would lead to increased development in the canning industry in the State. This would undoubtedly follow, he said, if the survey proved that there were adequate resources of tuna.

R.V. "LANCELIN" AND CRAYFISH RESEARCH

Research on crayfish in this State will be intensified with the appointment of a second research officer, which is now pending. The attack on the problem is to be three-pronged, with three research officers working on a completely co-ordinated and integrated programme. The officers concerned will be Mr. B.K. Bowen, of this Department; Dr. R.W. George, of the Western Australian Museum; and a research officer of the Division of Fisheries and Oceanography, C.S.I.R.O., yet to be appointed. Dr. George has been provided with funds from the Fisheries Development Trust Account to pay the salary of a full-time technical officer for a period of three years, and this Department has made available to him r.v. "Lancelin" to undertake all necessary observations and collections at sea. This phase of the programme has been in train for some time, and a report has just been received from Dr. George concerning an interesting cruise made by "Lancelin" towards the end of June.

Dr. George says that a large 2-metre square larval net, donated to the Western Australian Museum by Captain Ozawa of the Japanese research ship "Umitaka Maru", which was recently in Fremantle, was used for the first time on June 20, 1961, to collect crayfish larvae. "Lancelin"

was specially rigged for the job and 12 stations were maintained on a line due west of the west end of Rottnest Island. At each station the larval net was towed alternately at depths of 15 and 30 fathoms for 30 minutes. At the last station, 50 miles off Rottnest, the net was lowered to 50 fathoms and the vessel allowed to drift for 2 hours.

In all, 21 phyllosoma late-stage larvae (stages 7 to 10) of the W.A. crayfish were collected and these were taken at night stations (6.30 p.m. to 1 a.m.) more than 30 miles west of Rottnest. Previous collections by C.S.I.R.O. personnel had contained stages 8, 10, and 11 and "Lancelin" had caught earlier stages (1 and 2) during the summer.

Unfortunately the new net was torn and "Lancelin" slightly damaged by heavy seas at the final station, and comparative hauls at different times on the return cruise were not possible. The presentation net was christened most effectively and it is hoped that the intermediate stages (3, 4, 5 and 6) of the phyllosoma which so far have not been taken, will be caught by this net in future cruises.

OCEANOGRAPHIC SURVEYS

A frequent visitor to Fremantle in recent years, the naval frigate "Diamantina", returned to that port on June 12 after an 8,480-mile survey ranging through the waters of the Indian Ocean between Australia and Indonesia.

The "Diamantina", in addition to other oceanographic survey work, had paid particular attention to a 70,000 square mile patch of waters rich in minerals and marine life which she discovered during an earlier voyage. The rich grounds were caused by an up-welling of deep ocean water where the Java and equatorial currents mingled about 200 miles south of Java.

On her next trip, the "Diamantina" will have on board two German scientists who are interested in chemical research of a special kind.

BOAT LOSSES - A SURVEYOR REPORTS

Concerned at what he described as the "extraordinary casualties and losses of boats during the 1959/60 season," Fremantle ship and engineer surveyor W.G. Davies

recently published a report on the situation as he saw it and proposed remedies for the alleviation of what he described as "a matter of national importance."

Listing fifteen causes of casualties and nominating eight proposed remedies, the report was distributed to underwriters and brokers and received attention from the press. It advocates, among other things, the better training of crews and the formation of a group of private ship surveyors (to be recognised by the Harbour and Light Department) which would carry out surveys of boats, engines and moorings.

It has been reported that copies of the report may be made available to the owners of private boats and yacht clubs as well as to the principals of fishing vessels.

The Fisheries Department has no responsibility (except in relation to ships licensed under the Pearling Act) for ensuring the seaworthiness of fishing vessels, nor for that matter for the examination of skippers. At the same time it is naturally concerned at the increasing loss rate of boats engaged in fishing. A case cannot, however, be recalled where losses have occurred in recent times due to unseaworthiness of the craft or to navigation by unqualified men. Carelessness on the part of a qualified skipper seems to be the principal cause.

This Department believes the Harbour and Light Department, which administers the W.A. Marine Act, is the proper authority for the survey of vessels and examination of skippers. It has every confidence in, and respect for, the officers of that Department, all of whom are highly qualified.

BOAT AND GEAR LOSSES

The frequent loss of fishing craft off our coast continues. In May, Geraldton's only crayfisherwoman, Muriel Thomas, lost her boat, "Sea Urchin", near Olong Island in the Southern Group. A total loss, the 20-foot vessel was valued at £1,000. Also in that month Shark Bay professional fisherman T.H. Poland and his son suffered minor burns when their boat exploded while they were attempting to start it. Although it was not a total loss, damage estimated at £200 was caused to the boat which was not insured.

In June, Mr. M. Tolonen, of Wonthella, was crayfishing near Rat Island in the Abrolhos when his 20-foot boat was hit by a big breaker and sank. Mr. Tolonen was fortunate in that another vessel was nearby and he was hauled aboard within minutes. His boat was valued at £800.

Loss of a different nature was suffered by crayfisherman Mick Valenti, but the damage caused was in the region of £500. It appears that a kerosene refrigerator exploded in his two-roomed hut on Little Rat Island and set fire to and gutted the building and its contents. Inspectors R.M. Crawford and A.T. Pearce were steaming by the island on the p.v. "Dampier" when they saw the fire. They turned into the anchorage and hurried to the hut and succeeded in pulling clear of the fire a 12-gallon drum of kerosene and a number of cray-pots before being driven back by the heat. A 500-gallon tank of rainwater standing along side the hut was still boiling when Valenti later returned to what was left of his island home which had contained the possessions of five men.

Distress flares saved the crayboat "Enterprise" and its crew of two after her rudder had carried away in heavy seas, south of Geraldton, in the early afternoon of June 26. Fortunately the flares which were sent off after dark were noticed by the Geraldton lightkeeper, and the carrier boat "Falla" cleared the harbour in rough seas, driving wind and heavy rain squalls at 7.30 p.m. and took "Enterprise" in tow about two hours later. She and her crew, Jake Ritchie and Alex Strahan, reached Geraldton safely.

Two days later, in the Lancelin Island area, disaster befell five crayboats in high winds and heavy seas. Most had broken away from their moorings. One, the "Julianne," of 25-feet, skippered by Lionel Siggins, became a total loss. The "Mary Kathleen," of 31-feet (Bruce Duff), was washed on to the beach at Snag Island and the "Seafarer," of 26-feet (Ken Walton), received a bad buffeting as she lay on her side in the surf near Green Island. The "Maggie May," of 24'6" (G. Williams and N.Paton) and a 10-foot dinghy owned by Arnold McGhie, were also forced on to the beach at Lancelin.

LEGAL CHALLENGE DEFEATED

Lack of space last month caused us to omit reference to the decision of Mr. Justice Hale in the Supreme Court given on May 24 on the appeal by F. Iannello a ainst a conviction for having undersize crayfish in his possession.

The appeal was dismissed. It was claimed by Iannello's counsel, Dr. J.S. Marian, firstly, that the Fisheries Act of the State could have no a plication to fish taken outside Western Australian waters, and, secondly, that the fish concerned had been imported into the State for processing and exporting to the United States of America, and that this exempted them from the State Act.

In keeping with previous decisions on similar appeals in this State and in the Eastern States, the Court found that Section 24 of the Act applied to undersize fish irrespective of where they had been caught. In respect to the second ground for appeal, the Court considered that the claim of exemption had no substance whatever.

FISHING FROM BRIDGES BANNED

Arising from complaints that anglers' lines were fouling craft passing under bridges, the Harbour and Light Department has banned angling from bridges across the Swan River and from the footwalks of Canning Bridge. A recent press release says that police have been requested to take names and addresses of any persons found angling with a view to prosecution.

SOUTHERN TRAWLING COMPANY SALE

The Minister for Primary Industry (Mr. Adermann) announced recently that his Government had decided to invite offers from commercial interests for the trawl fishing enterprise based on Port Adelaide. He said that this decision was in line with his Government's policy.

The Southern Trawling Company, for the establishment of which the Commonwealth Government had provided substantial assistance from the Fisheries Development Trust Account, had done valuable work in testing the fishery resources of the Great Australian Bight, although it had met problems inevitable in a pioneering project, the Minister said.

The company's vessel is the "Southern Endeavour", a 160-foot, modern, diesel-powered boat, well-suited to Bight conditions.

CRAYFISH

Owing to the profitable export market in the United States of America, the Australian crayfishing industry has made rapid growth in recent years. Between 1955/56 and 1959/60, commercial production rose from 18.5 m. lb. to 28.0 m. lb., says "Monthly Summary of Australian Conditions", published by the National Bank of Australasia Ltd. (June 19, 1961.) During this period, the output from Western Australia increased by more than 85%. Production from South Australia, the second largest crayfishing State, has been declining in recent years and in 1959/60 contributed only 13% of total output whilst 18% was taken from the waters of Victoria, New South Wales and Tasmania.

The greater part of export earnings are derived from the shipment of crayfish tails, although boiled whole crayfish is also sent overseas. Almost the whole export trade in tails emanates from Western Australia, and is conducted with the United States of America, continues the report. In 1959/60, 7.7m lb. out of a total export of 7.8m. lb. were shipped to this market, earning about U.S. $8.5m., an increase of 20% when compared with the previous year. Four years earlier in 1955/56, exports of crayfish amounted to only 4.4m. lb. valued at £1.9m. As the demand from America has shown no signs of slackening and prices are so much better than elsewhere, it is difficult to interest suppliers in the development of alternative markets. However, there are indications that the American market may become more competitive in the future. The values of sales to Canada, although very small, trebled in the two years to 1959/60, when they reached £16,300.

The industry is being expanded in Western Australia, mainly with a view to taking greater advantage of the demand of the United States. The use of larger and more powerful boats, combined with a more extensive use of aircraft to transport crayfish to processing centres, should increase production in the coming years. The Government of Western Australia has taken steps to ensure that the fishing beds are not over-exploited, the statement concludes.

ABROLHOS CRAYFISHERY

As the table hereunder shows, the April, 1961, production of crayfish at Houtman Abrolhos was slightly less than in 1960, despite the increase in the number of men. However, it does not appear to be significant and the total production for the two months, March and April, 1961, is greater than for the same period last year.

AREA	April, 1960			April, 1961.		
	No. of Men	Total Catch	Catch-per-man	No. of men	Total Catch	Catch-per-man
		lb.	lb.		lb.	lb.
North Island	72	276,380	3,838	78	324,791	4,164
Wallabi Group	76	285,207	3,753	67	256,027	3,821
Easter Group	81	355,122	4,384	84	316,390	3,766
Pelsart Group	49	230,146	4,697	61	204,337	3,349
TOTALS	278	1,146,855	4,125	290	1,101,545	3,798

Totals for March - April 1957 - 1,778,483

1958 - 1,982,902

1959 - 2,097,126

1960 - 2,406,778

1961 - 2,660,475

W.A. FISH PRODUCTION, 1960.

Although the total production of fish and crustaceans in this State was less in 1960 than in the previous year, the 1960 production may be viewed as a consolidation of the increase in production over previous years. In 1958 it totalled 24½ million lb. and the following year's increase to over 30 million lb. represented a rise of 24%.

It will be seen from the table on the next page that the decrease was occasioned by the fall in production of the first five species - a fall which was only slightly offset by the increase in the production of the next six species.

CONVICTIONS, APRIL-JUNE, 1961

Date	Defendant	Court	Charge	Result
		Fisheries Act		
10.4.61	Camardo, Fedele	Fremantle	Brushed Spawners	Fined £25
"	Ivankovich Ivan	"	U/s Crayfish	" £10.13.0
15.5.61	Sgherza Leonardo	"	Brushed Spawners	" £25
"	La Rosa Vincent	"	U/s Crayfish	" £10
"	" " "	"	"	" £10
20.2.61	Rotondella G.	"	"	" £10
"	"	"	"	" £10
7.4.61	Gibson A.J.	Geraldton	"	" £30.7.0
"	Healey I.F.	"	"	" £5
18.4.61	Allia Anthony Sturniolo Franko	Perth	"	" £22.9.0
9.5.61	Miceli Mattea	"	Ulb.Box	" £10
"	" "	"	U/s Crayfish	" £10
"	Allia Anthony		"	
"	Robers R.W.	"	U.lb. Box	" £10
11.5.61	Abbott F.K.	"	U/s Crayfish	" £10
19.6.61	" "	"	U/s Craytails	" £10
"	Dillon K.F.	"	Non-submission of returns	" £10
"	Dillon E.J.	"	U/s Crayfish	" £10
"	Green R.P.	"	Non-submission of returns	" £5
"	Kroeber Ivan	"	U/S Crayfish	" £10
"	Hugill D.R.	"	"	" £10

W.A. FISHERIES PRODUCTION

Species	Production 1960 Round Weight lb.	Production 1959 Round Weight lb.
Crayfish	18,376,144	18,966,297
Salmon, Australian	2,550,054	3,943,679
Snapper	1,681,185	2,047,003
Ruff (Sea Herring)	1,084,077	1,338,374
Mullet	638,682	802,670
Mullet, Yellow-eye	543,290	435,110
Cobbler	503,426	336,243
Shark	496,382	475,995
Whiting, Sand	439,948	436,114
Jewfish, Westralian	367,374	317,477
Prawns	160,709	76,762
Tailor	144,929	147,896
Mackerel, Spanish	129,969	61,602
Herring, Perth	124,705	61,150
Trevally (Skipjack)	99,033	93,194
Garfish	88,476	49,863
Samson Fish (Sea Kingfish)	86,742	87,859
Oysters	75,151	15,071
Crabs	61,389	48,609
Whiting, King George	61,349	71,971
Bream, Yellow Fin	56,167	54,402
Leatherjacket (Silver Flounder)	53,465	66,644
Mackerel, Blue	46,049	37,103
Cuttlefish	43,841	53,917
Bream, Buffalo	30,840	11,857
Pike	24,054	61,150
Cod	22,641	20,909
Flathead	22,139	27,117
Groper	20,964	20,499
Bream, Black	15,712	11,857
Octopus	13,352	2,996
Squid	13,321	26,159
Whitebait	13,235	28,523
Pilchard	11,342	-
Sardines	10,721	23,548
Mulloway	10,286	17,848
Skate	10,040	12,450
Others	162,273	38,752
TOTALS	28,293,456	30,328,670

Date	Defendant	Court	Charge	Result
28.6.61	Starr G.	Perth	Obstruction	Fined £20
"	Starr R.F.	"	"	" £20

Fauna Protection Act.

25.5.61	Pinker M.W.)	Perth	Taking Pro-	Fined £5
	Dusenberg F.)		tected fauna	
20.6.61	Serafino C.	"	Shting. pro-	
			tected fauna	Cautioned

TRAVELLING ALLOWANCE

The Public Service Commissioner has advised that, following the six-monthly review of hotel tariffs, it has been agreed with the Civil Service Association of W.A. (Inc.), that the daily rates of reimbursement of travelling, transfer and relieving expenses will be increased on and from July 1, 1961.

From that date officers should claim 50/6 a day for travelling involving overnight absence from normal headquarters, and at a similar rate a day when on transfer or relieving duties for which payment of the allowance is authorised.

The rates applicable to sea-going, fixed camping and mobile camping have not altered.

IMPORTANT SERVICE PROTOCOL

All officers are reminded that there are clearly stated regulations in force relating to offical communications with the Department, the Minister and the Public Service Commissioner.

The first rule is that only the Director, as head of the Department, may communicate directly, whether verbally or in writing with the Minister or the Public Service Commissioner.

The second is all written communications on Service matters, irrespective of whether they are ad-

HUMPBACK WHALE MARKING

FIXING				RECOVERY			
Mark Number	Date Fixed	Lat. South	Long. East	Date	Lat. South	Long. East	Location of Station
719	2.2.59	63°47'	111°49'	29.6.59	35°02'	117°58'	Albany
720	2.2.59	63°07'		Both in one whale.			
771	2.2.59	63°14'	95°01'	?.9.60	Recovered in digester		Carnarvon
776	2.2.59	63°44'	112°54'	3.10.60	Found in grax tank		Carnarvon
1152	25.2.58	63°14'	95°20'	9.9.60	24°38'	112°53'	Carnarvon
1227	10.3.58	63°07'	95°01'	1.8.59	25°04'	113°17'	Carnarvon
1273	20.2.58	63°13'	94°56'	16.8.60	24°37'	112°53'	Carnarvon
1275	21.2.58	63°10'	95°06'	20.8.59	24°42'	112°47'	Carnarvon
1290	22.2.58	63°16'	95°23'	23.9.59	Recovered in cooker		Carnarvon
1388	8.3.58	63°14'	99°00'	13.7.60	35°05'	118°07'	Albany
1396	15.2.59	64°42'	128°20'	16.9.60	Recovered in digester		Carnarvon

dressed to the Minister or to the officer immediately in charge or to the Director or to the Public Service Commissioner shall be forwarded by an officer first to his section leader or other officer immediately in charge, who shall forward it to the next with or without his comments as the case may require.

In the event of the originating officer being dissatisfied with the reply to his communication, or if no reply is received, he may communicate his grievance to the next senior officer and, if still dissatisfied he should communicate with his departmental representative of the Civil Service Association.

The Association is the sole channel of communication between the Public Service as a whole and the Government, and all petitions, complaints or other communications from any organised body of public servants must be transmitted through the medium of the Association.

For the information of those staff members not previously aware of it, attention is drawn to their complete prohibition from seeking the influence or interest of any person in order to obtain any advantage whatsoever. Any officer who considers that his claim for promotion or other consideration has been overlooked may write a statement of his claims to his section leader who shall forward it without delay, but with any remarks he has to make, to the Director who, if necessary, shall transmit it to the Commissioner for consideration.

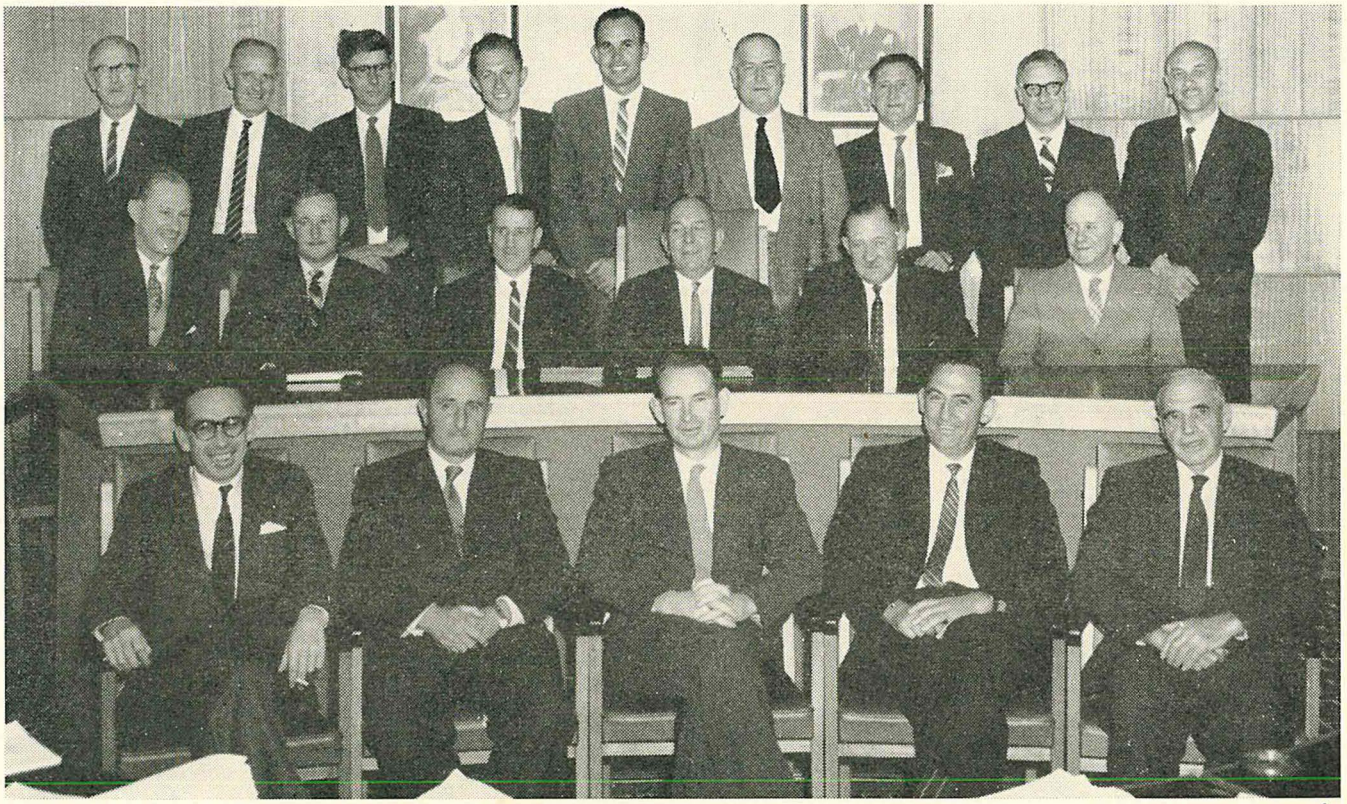
FISHING NETS TO BE LABELLED

In the Government Gazette of June 8, 1961, the Shire of Gnowangerup (previously known as the Gnowangerup Road Board) gazetted a new by-law. It requires any person to whom a license has been issued to affix and keep affixed to his fishing net a metal tag bearing the number of his license.

This by-law is interesting if only for the reason that it is the only regulation in force in this State which requires the owner of fishing gear to label his gear.

Delegates to Commonwealth — States Fisheries Conference

PERTH, MAY 29 – JUNE 1, 1961



Back row (l. to r.)—Messrs. N. V. Harris (N.S.W.); B. R. Saville (W.A.); G. Young (Dept. of Primary Industry, Canberra)—Secretary; J. S. Lake (N.S.W.); B. K. Bowen (W.A.); J. E. Bramley (W.A.); E. E. Andrews (Tas.); A. M. Olsen (C.S.I.R.O.); A. G. Bollen (Dept. of Primary Industry).

Middle row—Messrs. A. D. Butcher (Vic.); A. C. Bogg (S.A.); C. G. Setter (Dept. of Primary Industry); A. J. Fraser (W.A.)—Chairman; F. W. Hicks (Tas.); E. J. Coulter (Qld.).

Front row—Dr. G. L. Kesteven (C.S.I.R.O.); Messrs. L. A. St. Leger (Tas.); D. D. Lynch (Vic.); G. R. Williams (C.S.I.R.O.); Dr. A. G. Nicholls (C.S.I.R.O.).

CLEARING HOUSE

Crayfishing

It was fitting that visiting fisheries men from the Eastern States who visited Geraldton and the Abrolhos Islands last week should have paid tributes to the local crayfishing industry and those associated with it. While here the visitors had the opportunity of gaining first-hand knowledge of operations at the islands and they were amazed not only at the scope and importance of the industry in this locality, but also at the primitive conditions endured by the fishermen during the productive season.

This is a point that often is overlooked when references are made to crayfishing; indeed, it would not be exaggerating to say that a very substantial proportion of the residents of Geraldton - let alone other parts of the State - have little or no conception of conditions under which the cray-takers operate.

It is not uncommon to hear envious comments regarding the amount of money earned in crayfishing. True, many of those engaged in the industry are "doing very nicely, thank you", especially during the current season which has been marked by excellent catches in the main and the added advantage of remarkably high prices.

However, the rewards that are being reaped are not easily earned. The crayfisherman has no union to limit his hours of work; he is also subjected to many discomforts as well as an element of danger that is not to be ignored; during the island season he is either separated from his family for lengthy periods or must ask them to share the crudities of island living.

As one of the visitors remarked last week:-
"If he gets a few bob more than the average worker,
then good luck to him."

Leaving the individual aspect, the importance of the crayfishing industry to Geraldton cannot be over-emphasised. While criticism is sometimes levelled at certain aspects of local operations, one cannot avoid agreement with the oft-reiterated phrase concerning the sweetness of the "million dollar smell" - a figure, incidentally, that has greatly appreciated since the phrase was first coined.

At times it has been remarked that, unless certain things happened, Geraldton would be reduced to the status of "a mere fishing village." While nobody would wish to see any slackening of development in other directions, it must be admitted that it would be rather

a sizeable "village," even if the town were dependent wholly on its fishing industry.

The amount of money derived from this source is sufficient to support quite a substantial population and, at the present time at least, crayfishing must be regarded as Geraldton's most significant industrial activity.

The current happy picture, however, must not be allowed to lead those associated with the industry into a blind and uncaring complacence. Other countries have lost equally productive sources of revenue through the neglect of conservation precautions.

Fortunately the Fisheries Department has adopted a very realistic attitude in this connection and it is pleasing to note that only the "no-hopers" amongst the fishermen themselves have failed to welcome the more stringent application of new regulations designed to protect the continued breeding of crayfish.

Continued research into various aspects of crayfishing is essential. Some of this is carried out on a private basis but it is also necessary that the co-operation of the C.S.I.R.O. be enlisted to ensure a scientific approach to the matter. These points are elementary but they are also vital to the enduring success of the industry.

(The Geraldton Guardian Geraldton May 30, 1961)

Die-Back in Flood Gums

by C.F.H. Jenkins M.A.
Government Entomologist

The flood gum, sometimes known locally as the blue-gum, is one of our most attractive eucalyptus species. It grows mainly in low-lying or flooded areas and lines the banks of our South-West rivers and streams. Over a period of years however, this beautiful tree has declined alarmingly in many districts and landholders from the Avon Valley to the Blackwood have expressed their concern. One of the first districts to show die-back in these trees was the Harvey-Waroona irrigation areas and a change in the water table was suggested as the primary cause. In more recent years however, the trouble has been noticed far from the original centre and is causing increased concern.

The fact that dying trees are heavily infested with various types of insects does not necessarily mean that the insects are the primary cause of trouble. It must be remembered that the

flood gum is a native tree, and that it has been subjected to the attacks of native insects for generations. If therefore, the insects are now killing the trees, something must have upset the natural balance. The change in water level and land use in the irrigation areas could have been a contributing factor, and general clearing in other districts may also have had its effects.

Amongst the commonest insects to be found on flood gums, are the lerp insects or psyllids. These tiny sap-sucking creatures hide under a sugary covering or scale, and individual leaves may be smothered with these parasites. Many different species of psyllids affect our native trees, but generally speaking they are kept in check by wasp parasites and other natural enemies. Birds play an important role in controlling forest pests, and the decline in bird numbers, caused by clearing and agricultural development, could have an important bearing on the present problem.

Tiny leaf-haunting birds, like the pardalotes and the tree-tits feed, largely on the psyllids, but several parrots are known to help, including the King Parrot, and the lorikeet. When we remember that the scale-like covering of many psyllids consists of a sweet sugary material once much prized by the aborigines, its acceptance by parrots is perhaps not really surprising.

Several caterpillars also attack the foliage and among the commonest is the jarrah leaf miner. As the name suggests this insect is primarily a pest of jarrahs, and the tiny caterpillars tunnel in the leaf tissue. When full-fed, the creatures web together the upper and lower leaf surfaces to form a tiny oval cocoon, which then falls to the ground. Heavily attacked foliage may be peppered with holes, and in the distance the leaves often look just as if they have been scorched.

Sometimes the lerp insects appear to be the main destroyers and at other times the leaf miners predominate, but when heavy infestations of both coincide the results may be quite alarming. It is fortunate that in the case of the leaf miner only one generation occurs each year so that although the winter and spring foliage is often severely blemished the new summer growth is unharmed.

For a number of years now the flood gums in various parts of the South-West have been closely watched in an effort to understand the variations in health which occur from district to district and from season to season. Comparable insects can be found on eucalypts hundreds of miles apart and yet in one spot the trees may be thriving while in another they may be almost dead. As stated earlier the problem is a complex one and is probably associated with some overall change in the environment. Some farmers have asked for spray

treatments to protect their trees, while others have advocated wholesale aerial applications to deal with the matter. Unfortunately however, any benefits derived from such action would probably be very brief, and certainly very expensive. The insects may be the immediate cause of the trouble but their increase is associated with some less obvious but more fundamental factor, and only when this has been explained is a practical solution to the problem likely to be found.

(Journal of Agriculture Perth May, 1961)

Trawling - in New Dimensions and on New Horizons

A mouth 80' wide, and gaping vertically 90' can swallow a lot of fish, particularly if it can be fished at the horizon where the fish are found by the sounder.

This is trawling in new dimensions, and at horizons from the surface down. It is the mid-water trawl developed by the U.S. Bureau of Commercial Fisheries Gear Research Division at its Seattle laboratory, and is said to have a throat whose opening is four times as large as any mid-water trawl now being fished in the world.

Details of the construction, hydrofoil doors, "phantom" otter boards, adjustments and means by which the depth of fishing is controlled have not yet been disclosed.

Development of the net results from months of experimentation by teams of technologists from the Seattle Laboratory unit of the USBCF Branch of Exploratory Fishing and Gear Research, of which Dayton L. Alverson is chief and Richard McNeely is gear development specialist.

The mid-water trawl has approximately 1,500,000 meshes and is built entirely of nylon web. It is 314' in length from the rope to cod end and would cost about $5,000 on a commercial basis.

Operation of the net under water has been observed under varying conditions for months by teams of scuba divers, generally working from controllable "sleds" on which they can ride down to observe the net in action under water. There they have found that the optimum towing speed is 2.9 knots, a pace at which the net assumes almost circular section, with the meshes varying from 60-degree diamonds to 90-degrees squares.

Announcement of basic details of the mid-water trawl research were made late in April, immediately following the return of the John N. Cobb from the latest of the series of cruises on which the gear was tested.

Fish taken by the net include: King and Silver Salmon, smelt, anchovies, herring, sand rex, butter and Englist sole, flounder, lingcod, pompano, capelin, dogfish, tom cod, true cod, hake, ratfish, shrimp, whiting and rockfish.

(Pacific Fisherman Portland, Ore. May, 1961)

Four Fish Meals Each Week to Protect America's Good Heart

A new role for fish in the diet and health of America became the prime objective of the National Fisheries Institute at its 16th annual convention in Washington, D.C. late in April.

In effect, the N.F.I went on a diet. It went on a diet prescribed for the American people by one of the leading nutritional experts in the United States, Dr. Frederick J. Stare, Chairman, Department of Nutrition, Harvard University School of Medicine.

The prescription, which was written the day before his address at a meeting of the National Heart Institute Diet and Nutrition Committee, of which Dr. Stare is Chairman, was that a proper diet designed to safeguard the average American from one of the prime causes of heart disease, calls for the inclusion of fish in the diet at least four meals per week.

Here was a way of putting into every man's language and every man's understanding the scientist's warning about blood serum cholesterol, atherosclerosis, and other things even more difficult to understand. But Dr. Stare put the prescription into words which all could understand; and no one missed the point, from the Secretary of the Interior all the way down to the Editor of Pacific Fisherman.

On this basis of the special benefits of fish in the American diet, with its protective qualities based on utterly complete proteins and poly-unsaturated oils, the National Fisheries Institute based is immediate program.

Speaker after speaker - and dozens, yes, hundreds, of lobby talkers - emphasized the conviction that in science's modern findings that the poly-unsaturated oils of fish act as powerful preventives in heart disease; and that the peculiarly complete proteins inherent in fish are an invaluable asset in the sound and intelligent diet, lies the future growth and the brightest prospect for the American fishing industry.

(Pacific Fisherman Portland, Ore. May, 1961)

Do Fish See the Trawl?

A question that has puzzled fishermen for countless years is - do fish see the trawl? Recently, experiments have been carried out to obtain the answer, and in a BBC talk by J.H.S. Blaxter of the Marine Laboratory, Aberdeen, he gave an outline of the findings.

"In the spring of last year we were able to establish shoals of herring in some large disused oyster cleaning tanks near Stranraer," he reported. "The tanks were 50 ft. by 40 ft. with about 4 ft. of water, and it was possible to test the behaviour of herring when various types of obstacles were approaching them.

"We used a number of different devices - various types of trawl ropes, strings of seine-net floats or trawl floats, a string of underwater lights, a curtain of air bubbles produced by forcing compressed air through a polythene tube drilled with many small holes, and some netting and model trawls."

In daylight it was found that any device that could be seen easily would herd the herring quite effectively. The fish generally first reacted to the approaching obstacle when it was only four to five feet away and then swam about the same distance in front of it.

The best herding was obtained with obstacles at the same level as the fish. The speed of approach was also important. In most experiments it was between one and two knots and there was time for the fish to be herded. As speeds in excess of three knots the fish were quickly overtaken.

As a marked contrast, in darkness, we found that herring weren't herded by these moving obstacles. When they were pulled through the tank, the herring passed above or below or were struck by them. This held true even with the curtain of air bubbles and string of underwater lights.

"These contrasting observations between daylight and darkness suggest the importance of sight when herring react to obstacles," Mr. Blaxter pointed out.

"By doing repeated experiments at dusk as the light became reduced, it was possible to measure the minimum amount of light required for herding. In a later survey at sea we found that the light on the sea bed will very often be below this minimum even in broad daylight."

"This will occur either in fairly clear water at a good depth or in shallower depths where the water is very thick.

"This may mean there will be many times when sight will be ineffective in herding fish. Where sight is important, for instance, in clear or shallow water in daylight, these devices will have to be very effective to perform their function in the short time available at normal trawling speeds before the fish are overtaken," he went on.

"It is difficult to say at this stage how important other factors such as vibration or noise are. It is not possible to produce the same conditions in a tank as those resulting from the use of a trawl at sea."

He concluded: "We hope this year to start solving this problem by the use of recorded trawl noises and devices for producing vibrations and to see what effect these have."

(The Fishing News London May 26, 1961)

Presto's Shark Chaser and Dye Marker is Ready for Use

An effective Shark Repellent Chemical Mixture was developed during World War II by the American Cyanamid Company in co-operation with the Naval Research Laboratory, and is used as standard equipment by our Armed Services. Exclusive license was granted in 1960, to Presto Dyechem Co., Inc. for production and distribution to all commerical markets.

The Patented Shark Chaser is a combination of specially produced blue-black dye, which simulates the ink of an octapus, the only known thing that a shark fears, and an odorous chemical salt which is offensive to sharks. This salt was developed after observing that sharks avoided areas where dead, decomposing sharks were found in the water. After producing these two items the next problem was to - (1) combine the dye and the chemical into one compatible mixture and (2) control solubility and diffusion rate of this mixture in salt water. For this a sample, lightweight package which could be attached to life vests, and which would keep the chemical dry and intact until used, and which could be easily opened, diffused and saved for repeat use if necessary, was developed.

It is now being made available by Presto Deychem Co.Inc. to consumers through Marine Supply Stores, Sporting Goods Stores, Department Stores, etc.

Variations of the package for different needs were designed by Presto for protection of commercial fishing nets and others, and

the whole Shark Chaser line is now in increasing demand by skin-divers, boating and sailing enthusiats, fishermen, and others who have no desire to tangle with sharks.

Presto has also added the line of Dye Markers, which it produces for the Armed Services, to its commercial line, and same are now being made available along with the Shark Chasers.

Under this new program of making these items available for commercial uses, Presto has appointed LaPorte and Austin as its advertising agency, and a full large scale national advertising program is now in preparation. In addition all of these items were displayed for the first time at the National Motor Boat Show in the New York Coliseum in January, 1961, by Presto Dyechem Co., Inc. "The World's Largest Packagers of Ocean Colouring Dyes."

(Fishing Gazette New York February, 1961)

Tuna Comeback

Probably the most significant development in the domestic fishery industries in 1960 was the remarkable comeback of the California tuna fleet. As a result of the conversion of a large number of tuna clippers to purse seiners, the vessels were able to make trips in less than half the time required previously and were thus enabled to operate at prices that had not been profitable when the craft fished as clippers.

(Fishing Gazette New York Annual Review, 1961)

Artificial Reefs

A permanent lighted buoy marker was installed by the TGFC over the artificial fishing reef located about six miles east of Port Aransas. Cost for the marker and anchorage exceeded $6,000.

Similar artificial reefs were built during the year off Freeport and Port Isabel. Each area is covered with approximately 600 automobile bodies chained together in clusters of 10, or more, with heavy concrete anchorage attached. These clusters were scattered over ten acres of solid sea bottom where depths ranged from ten to fifteen fathoms. Barnacles and other marine growth quickly covered the metal surfaces and furnished food for small fish. Larger fish, feeding on the smaller ones, use the automobile debris for protection from still larger fish. The reefs are especially productive of good catches of scalefish.

(Fishing Gazette New York Annual Review, 1961)