T, WESTERN AUSTRALIA

CE BULLETIN

Number 9 September, 1952.

STAFF NOTES

Mr. Brownfield will return from his visit to northern areas during the first week in September. The Supervising Inspector (Mr. Bramley) and the Fauna Warden (Mr. Traynor) will be leaving Broome by Land Rover for the return trip to Perth via the Murchison district.

Inspector A. V. Green has been transferred temporarily to Perth. His place at Bunbury has been taken by Assistant Inspector J. L. Gallop, of Mandurah. The Relieving Inspector (Mr. Melsom) on resuming duty after leave on September 1 will take over the Bunbury district pending Mr. Green's return.

Assistant Inspector L. C. Oliver, on his return from Albany after assisting Inspector Jeffery during the whaling season, was posted temporarily to Mandurah. He has now returned to Head Office.

Inspector F.A.L. Connell, skipper of the patrol vessel "Silver Gull", entered on annual leave on August 30.

Assistant Inspector O. Hello, who has been assisting at Geraldton during the Abrolhos crayfish season, will return to Perth during the first week in September.

Cadet Inspector B. Carmichael returned to Head Office from Pemberton on August 18.

The M.V. "Lancelin" will leave on her return trip from Broome about September 4. Messrs. K.Godfrey and R. George, of C.S.I.R.O. Fisheries Division, joined her at Port Hedland, and with our own staff (Captain Piesse, Inspector Bateman and Cadet Inspector McLaughlan)

will carry out extensive trawling operations for prawns between Onslow and Shark Bay. The trawls have been made available by the C.S.I.R.O. Fisheries Division, and the survey is a conjoint one organised by that Division and this Department.

Miss S. M. Norwood of Head Office is now on annual leave.

Inspector R. M. Crawford and Cadet Inspector Simpson, who have been patrolling the Abrolhos crayfisheries in M.V. "Garbo", are expected to return to Fremantle about mid-September.

Accompanied by Mr. L. G. Smith, Technical Officer, Mr. B. R. Saville, of Head Office, has been visiting the lower South-West. A day or two were spent at Augusta, and Mr. Saville addressed a meeting of the Kudardup Branch of the Farmers' Union in relation to the requirements of the Fauna Protection Act.

Inspector S. W. Bowler, of Geraldton, paid a flying visit to Perth during the last week in August.

Inspector J. S. Simpson, of Pemberton, accompanied by Mr. F. Shoobridge, Curator of the local trout hatcheries, visited the city during the week-end of August 30-31 to deliver 100,000 trout fry to applicants north of Perth.

PERSONAL ITEMS

Mr. Keith Sheard of C.S.I.R.O. Fisheries Division, has returned to Perth following a visit to Point Cloates with Mr. R. G. Chittleborough, of that Division.

Mr. K. Godfrey, of C.S.I.R.O. Fisheries Division, who left Perth early in June in company with Mr. W. B. Malcolm, of the same Division, on an overland trip to Sydney, has now returned to the West and rejoined "Lancelin" at Port Hedland. The purpose of Messrs. Malcolm and Godfrey's visit was to investigate the salmon resources of South Australia, Victoria and New South Wales. Fish were tagged at Ceduna and Port Lincoln, South Australia, and some time was spent on the new purse-seiner "Tacoma" in South Australian waters. Although two quite respectable hauls of Salmon were made by "Tacoma", the two investigators were unfortunate

insofar as not one salmon was taken in the purse-seine during the couple of weeks they remained aboard.

Mr. H. Jitts, Technical Officer, Hydrology Section, C.S.I.R.O. Fisheries Division, is at present visiting Cronulla on divisional business. While in Sydney he will attend the meetings of the Australian and New Zealand Association for the Advancement of Science.

Mr. T. M. Fitzgerald has severed his onnection with Geraldton Ice Works Ltd. After leaving the local Fishermen's Co-op. Mr. Fitzgerald became Manager of the Ice Works.

Dr. L. G. M. Baas Becking, Ph.D., D.Sc., has been appointed to a Senior Fellowship for a period of three years to assist the C.S.I.R.O. Division of Fisheries in its fish-farming project by acting as expert adviser in the hydrobiological aspects of the project and participating in the general programme. After spending some years on the staff of Stanford University (U.S.A.), Dr. Baas Becking was appointed Professor of General Botany at Leyden University (Holland) in 1931. From 1945 to 1949 he was Director of the Royal Botanic Gardens, Buitenzorg, Java, and in 1949 and 1950 he was Deputy Chairman and Director of Research, South Pacific Commission. In 1951 he joined the staff of the Department of Botany, University of Sydney.

Dr. Robert Carrick, who is joining the headquarters staff of the Wildlife Survey Section of C.S.I.R.O. at Canberra, arrived from Great Britain by the S.S. "Stratheden" on August 26 to spend a month in Western Australia. He visited various parts of the South-West to obtain a first-hand aquaintance with local wildlife problems and meeting local people. Dr.Carrick graduated from the Universities of Glasgow and Edinburgh, and until taking up his present appointment was senior lecturer in agricultural zoology at the University of Aberdeen. In Scotland he had been engaged in a detailed ecological investigation of the starling. In World War II he served in the Highland Light Infantry and attained the rank of Major.

Additions to the strength of the C.S.I.R.O. Wildlife Survey Section in Western Australia were made in August when Messrs. John H. Calaby and Don L. McIntosh were transferred to Perth from Canberra. Both of these officers had previously been with the Division of Ento-

mology before joining the Wildlife Section and had been associated with the myxomatosis campaign against rabbits since its inception in eastern Australia. The scientific staff of the Wildlife Survey Section in Western Australia has thus been built up to four officers, the others being Dr. D. L. Serventy(in charge of the local unit) and Mr. N. E. Stewart (formerly with the C.S.I.R.O. Fisheries Division and with the Fisheries Department as an inspector).

RUFF MAKES HISTORY

On April 21, 1952, Mr. L. G. Smith, Technical Officer, assisted by Inspector Jeffery, placed internal belly tags in nearly 700 ruff (sea herring) at Cheyne Beach. Of those tagged on that occasion only six had been re-captured - all at the point of release on May 18 - until August 12. On that date some fishermen had a shot at Whitford's Beach, just north of Fremantle, and included in the catch was a ruff, 11½" in length overall, in which was tag No. 4824. This was one of the tags used by Mr. Smith at Cheyne Beach on April 21. When liberated the fish was approximately 10½" overall, which means that during the four months of its liberty, during which time it has travelled just about 350 miles, it had added 1" to its length. This is the first authentic record in Western Australia of any great migration by sea herring.

TROUT IN PEMBERTON HATCHERY

Inspector Simpson reports that assisted by Cadet Inspector Carmichael he has examined some yearling and two-year-old rainbow trout reared in the local ponds. The following figures he has supplied show a remarkable growth for pond-held fish, and it is doubtful whether similar results have ever been obtained at any other hatchery in Australia. The figures are the average of 30 yearlings and 30 two-year-olds taken at random from the ponds.

i. Yearlings.

Average weight	... ...	4.55 oz.
" length	... ...	9.04 ins. (total length)
+Condition factor	... ...	51.

ii. Two-year-olds.

Average weight	...	...	13.96 oz.
" length	...	...	13.03 ins. (total length)
+Condition factor	...	...	63.8.

(+"Condition factor" is a number that describes the degree of robustness or well-being of fishes. It is a relative figure which is of use only in comparing one group of fish with another. It is of no value as an absolute measure of general condition. It is used, however, as a rough index of the state of sexual development, condition of nourishment and relative heaviness. The formula used is the following, where K = condition factor, W = weight and L = length:-

$$K = \frac{100{,}000\ W}{L^3}\ ).$$

WEEKLY ANGLING NOTES

With unfailing regularity the Department submits to newspapers and broadcasting stations each Friday a report containing the "good oil" for anglers for the coming week-end. These reports, we fondly believe, are avidly read or listened to by enthusiastic Isaak Waltons, who fortified with the knowledge we impart and armed with proper gear and abundant bait - not to mention a spot of lunch, both solid and liquid - and of course the angling notes, set off the following morning full of rosy dreams of the big ones which won't get away. They reach the spots we recommend, and if they are not already overcrowded with other Isaak Waltons, they come away at night-fall, tired but happy, with a bag of fish pressed down and running over. Or so we fondly hope.

On Monday morning, however, many of us are very diffident about walking along The Terrace, because every five yards we run across a friend with that lifted eyebrow., that "tut tut" look, which indicates all too clearly, that to save face with the family during the week-end he stopped on his way home from his fishing to put some business in the way of the local fishmonger. All of us whether we are stationed in Perth or some country centre, often have to take much good-natured banter from experienced anglers who lose no opportunity to deride our forecasts, and often accuse us of knowing even less

about sport fishing than we do about atomic fission!

But are all anglers to be judged by the few who decry our efforts to supply a public need? We think not. We know that among the angling fraternity are many who need no information from anyone, and have an even far better knowledge of angling than we ourselves. They fish constantly and are well equipped in all departments, and so do not need to depend upon information supplied by this Department or any other body.

But how about the majority of anglers, that tremendous army of people who fish enthusiastically, inexpertly and indifferently, and in some cases perpetually, without ever acquiring any great degree of efficiency? What are their feelings towards the angling notes? All inspectors would be surprised and gratified if they knew how faithfully many of such people follow our forecasts, and how great is their pleasure when success results from their angling efforts.

Our angling notes are well worth while, and certainly help to foster good relations between the Department and the public. No opportunity should therefore be lost of passing on to the public any information that may be helpful to their angling efforts.

W.A. SURF-CASTING AND ANGLING ASSOCIATION HOLDS FIELD DAY

This new body, which comprises a large number of keen young anglers, is one which the Department feels is worth-while to encourage. Meetings are held monthly and a mimeographed periodical, "Reel Talk," of which we regularly receive a copy, is put out from time to time.

A field day was held at Yanchep Beach on Sunday, July 13. Fishing was to commence at first light and all fish taken were to be returned to the weighing station by 4 pm. The July issue of "Reel Talk" describes the occasion in the following words -

"The winners of the competition were as follows:-

The point score was won by -

V. C. Davis with 48 points.
2nd ... G. R. Hume " 28 "
3rd ... F. Middleton White with 20 points.

The trophy for the heaviest fish caught on a spinner was a dead heat between V. Pocklington, F. Middleton White and G. R. Hume.

The trophy for the best effort was allotted to G. R. Hume for seven Tailer, 3 lb. weight, on a 6 lb. line.

The heaviest Shark went to D. Ferguson with a 4 lb. Spinous Pt. Jackson Shark, and the heaviest Fish went to V. C. Davis, 5½ lb. Silver Drummer.

The Competition started quite well and cars began to arrive from 7 o'clock the previous night to 7 o'clock that day. The Yanchep Ranger has since complained that if it ever happens to be a Field Day at Yanchep again please do not drive past his bungalow at 70 miles per hour as it often affects his sleeping.

By 7 o'clock fourteen Tailer were captured and things looked very promising, but at 8 o'clock, when three or four members were washed off the reef and were badly lacerated by the sharp rocks, things did not look quite so good. A special note of thanks must be given here to Mr. Frazer Middleton White who volunteered immediately at the cost of his own day's fishing to take Archie Whitworth to Perth as his leg required stitching.

Fish were very, very few that day and the President had to resort to such tactics as catching Buffalo Bream to further his points. Total fish captured for the day was:- 14 Tailer, 19 Silver Drummer, 2 Flathead, 1 Whiting, 1 Skipjack, 1 Shark, 1 Gurnard."

MAXIMUM PRICES OF FISH.

The Prices Control Commissioner has issued new Prices Control Order No. 748 covering all commercial lines. The Order was published in the Government Gazette on August 14, 1952, from which date the new prices take effect. The maximum prices specified in the Order apply only to sales in the metropolitan area (i.e., within a radius of 12 miles of the General Post Office, Perth.) Sales within the Albany, Bunbury, Busselton, Esperance, Geraldton and Mandurah areas (i.e., within a radius of three miles of the principal post office at each of those towns) are in all cases one penny less than the prices listed.

Over page is the new schedule -

SCHEDULE

Species and Description of Fish	Maximum Wholesale Price		Maximum Retail Price			
	Sales by a Fisherman	Sales by a Seller other than a Fisherman	Uncleaned Fish.	Cleaned Fish.	Cutlets of Fish	Fillets of Fish
	per lb. s. d.	per lb. s. d.	per lb. s. d.	per lb. s. d.	per lb. s. d.	per lb. s. d.
Barramundi (cleaned)	1. 8	1.10	...	2. 4	...	4. 3
Boar Fish or Deep Sea Bream ...	1. 4¼	1. 5¾	1.10½	2. 0½	...	4. 7
Bream, Black	1. 6	1. 7¾	2. 0½	2. 2½	...	3.11
Bream, Silver	1. 5	1. 6¾	1.11½	2. 1½	...	3. 9
Bream, Yellow Fin...	1. 4¼	1. 5¾	1.11	2. 1	...	3. 8
Butter Fish (North-West) ...	1. [illegible]	1. 4½	1. 9	1.11	...	3. 4
Carp, Sea (cleaned)	1. 5	1. 6¾	...	1.11½	...	...
Carp, Sea (uncleaned)	1. 3	1. 4½	1. 8½	...	...	...
Carp, Sea, with wings on ...	...	...	...	...	...	4. 0
Carp, Sea, wings off	...	...	...	...	...	4. 4
Cobbler (headed and gutted) ...	1. 1	1. 2¼	...	1. 7	...	2. 7
Cobbler (not headed or gutted)	0. 8	0. 9	0.11	...	...	...
Cod, Rock	1. 2	1. 3½	1. 7½	1. 9½	...	3. 2
Cod, other than Rock (cleaned)	1. 5	1. 6¾	...	1.11½	...	3. 3
Cod, other than Rock (uncleaned)	1. 3	1. 4½	1. 9	...	...	...
Eel (headed and gutted)... ...	1. 2	1. 3½	...	1. 8	...	3. 0
Eel (not headed or gutted) ...	0.10	0.11	1. 1½	...	...	...
Flathead	1. 4	1. 5½	1.10	2. 0	...	3. 6
Flounder	1. 9	1.11	2. 4½	2. 6½	...	4. 7
Garfish	1. 5	1. 6¾	1.11½	2. 1½	...	3. 9
Groper (cleaned)	1. 3	1. 4½	...	1. 9	...	3. 2
Groper (uncleaned)	1. 0	1. 1¼	1. 5	...	...	...
Gurnard	1. 4	1. 5½	1.10	2. 0	...	4. 2
Herring, Sea	1. 2	1. 3½	1. 8	1.10	...	3. 2
Herring, Perth	0. 6	0. 6½	0. 8½	...	...	...
Jackass or Queen Fish	1. 4	1. 5½	1.10	2. 0	...	4. 4
Jewfish (cleaned)...	2. 4	2. 6¾	...	3. 1½	...	5. 6
Jewfish (uncleaned)	1. 8	1.10	...	2. 3½	...	...
John Dory	1. 4	1. 5½	1.10	2. 0	...	3.11
Kingfish, Sea or River (cleaned)	1. 5	1. 6¾	...	1.11½	3. 0	3. 5
Kingfish, River or Sea(uncleaned)	1. 2	1. 3½	1. 8	...	...	...

continued on next page

SCHEDULE (continued)

	per lb	per lb	per lb	per lb	per lb	per lb
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Knife Jaw	1. 4	1. 5½	1.10	2. 0	...	4. 6
Leatherjacket (headed, gutted and skinned)	1. 8	1.10	...	2. 4	2. 9	3. 2
Leatherjacket (not headed, gutted and skinned)	1. 2	1. 3½	1. 8	...	...	...
Mackerel, Spanish (cleaned) ...	1. 8	1.10	...	2. 4	3. 5	4. 0
Mackerel, Spanish (uncleaned) ...	1. 3	1. 4½	1. 8½	...	...	...
Mackerel, other than Spanish ...	0.10	0.11	1. 1½	1. 3½	...	2. 2
Moonlighter or Silver Dory ...	1. 4	1. 5½	1.10	2. 0	...	3.11
Mullet, yellow eyed	1. 3	1. 4½	1. 9	1.11	...	3. 4
Mullet, other than yellow eyed...	1. 4	1. 5½	1.10	2. 0	...	3. 7
Nannygai or Red Snapper	1. 6	1. 7¾	2. 0½	2. 2½	...	4. 8
Pilchard, Sea	0.10	0.11	1. 1½	1. 3½	...	2. 2
Pike	1. 6	1. 7¾	2. 0½	2. 2½	3. 0	3. 3
Ruby Fish	1. 1	1. 2¼	1. 7	1. 9	...	3. 4
Salmon, North-West (cleaned) ...	1. 6	1. 7¾	...	2. 0½	...	3. 2
Salmon, North-West (uncleaned)...	1. 4	1. 5½	1.10	...	...	...
Salmon, Australian, 16" and over (headed and gutted)... ...	0.10	0.11	...	1. 1½	1. 7	1. 9
Salmon, Australian, 16" and over (not headed and gutted) ...	0. 8	0. 8¾	0.11½	...	...	...
Salmon, Australian, under 16" ...	1. 3	1. 4½	1. 8½	1.10½	...	3. 4
Shark, Tiger (headed and gutted)	0. 8	0. 8¾	...	0.11	1. 2	1. 5
Shark, other than Tiger (headed and gutted)	1. 5	1. 6¾	...	1.11½	2. 7	2. 9
Silverfish (Roach)...	0. 7	0. 7¾	0.10	0.11	...	...
Skipjack	1. 4	1. 5½	1.10	2. 0	...	3. 6
Snapper (cleaned)	1. 9	1.11	...	2. 5	4. 2	4. 8
Snapper (uncleaned)	1. 5	1. 6½	1.11	...	...	...
Snook....	1. 6	1. 7¾	2. 0	2. 2	...	3.10
Sweep	1. 2	1. 3½	1. 7½	1. 9½	...	3. 2
Tailor...	1. 4	1. 5½	1.10½	2. 0½	...	3. 7
Trout, Salmon	1. 3	1. 4½	1. 9	1.11	...	3. 4
Tuna	0.10	0.11	1. 1½	1. 3½	...	...
Whiting, King George	1. 9	1.11	2. 4½	2. 6½	...	4. 8
Whiting, other than King George	1. 7	1. 9	2. 1½	2. 3½	...	4. 2
White Fish	1. 4	1. 5½	1.10	2. 0	...	3. 6
Yellowtail	o. 7	o. 7¾	0.10	1. 0	...	...
Fish, not specified in this Schedule	0.10	0.11	1. 1½	1. 3½	...	2. 2

BRIEFS FOR PROSECUTIONS

Some Inspectors still do not seem to appreciate the need for extreme care in preparing reports of offences. There have been several cases recently in which we have been advised by the Crown Law Department that there is insufficient evidence on which to base a prosecution. In most of those cases we at Head Office knew more than actually appeared in the Inspectors' reports, but the prosecuting Solicitor was unaware of anything which was not in the report, and accordingly declined to proceed.

It has been stressed time and time again that there are certain essential particulars which must be furnished in prosecution briefs. These are -

1. Date, time and place of offence.(The time should say whether a.m. or p.m., and the place should be named as shown on an official map, and not as known locally. It should also be stated how far inside the boundary of closed waters the offence took place).
2. The name in full of the offender and his full address. (It is amazing to know that even now, after so many previous instructions, some inspectors, give initials or nicknames only. Street names and house numbers should be provided if possible).
3. The actual circumstances under which the offence occured or happenings during the seizure of any net, fish, etc., as well as any relevant statements made by the offender. (Any statements made should be reported in the third person - not "I said" - "we said", etc.).
4. A statement whether an inspector's identity or appointment has been made known to the offender.
5. The names in full of all witnesses who might be called for the prosecution in the event of proceedings being authorised.
6. Any extenuating or aggravating circumstances which might be known to the Inspector.
7. The number of the Section of the Act or the regulation of which a breach has occurred.
8. Particulars of the proclamation, notice, etc., of which a breach has occurred.
9. A recommendation whether proceedings should or

should not be taken.

It should be understood that enough evidence must be included in the report to convict the offender, otherwise prosecution action will not go forward. A very clear picture of the circumstances should therefore be painted for the guidance of the law officers.

Any interrogation of an offender should be done by the senior officer present. Junior inspectors, if in the company of senior inspectors, should remain silent unless specifically addressed.

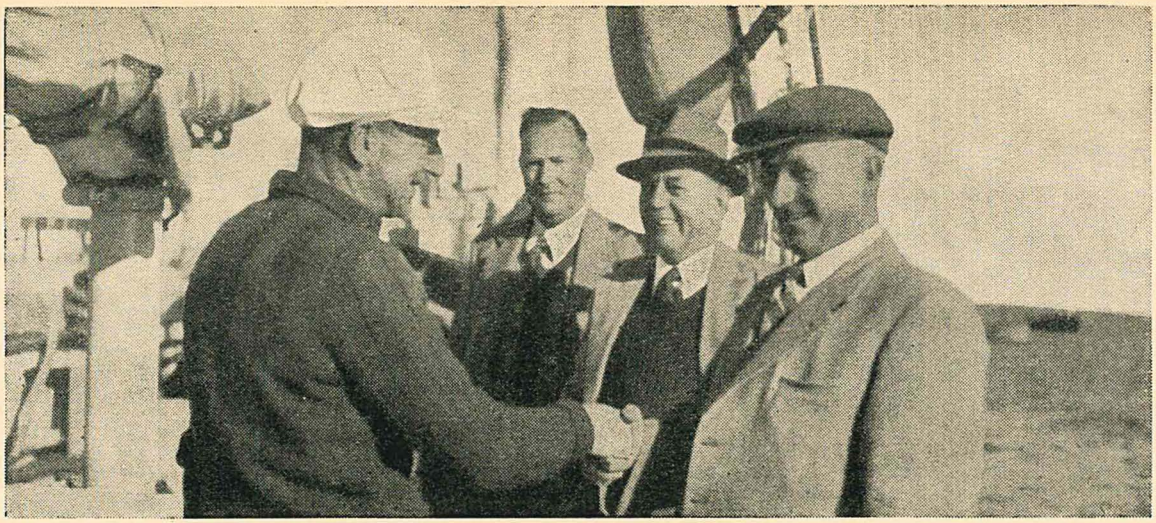
OUTSIZE IN PIKE

A very large sea pike was caught in Shark Bay recently by Mr. Sam Raftos, skipper of fishing-boat "Rosef". The pike was 4'8" in total length and weighed 32 lb. cleaned.

SHARK REPELLANT PUT TO NEW USE

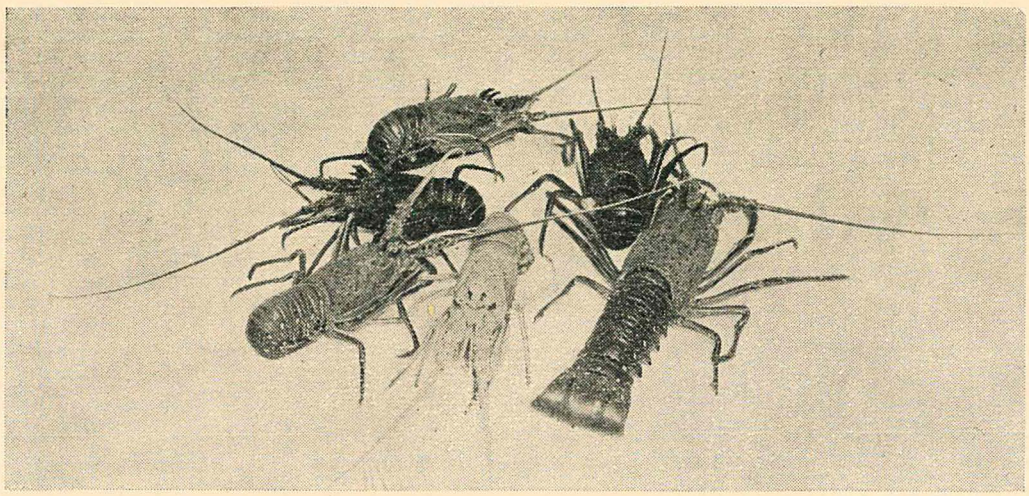
Ever since whaling operations started again at Point Cloates three or four years ago considerable losses have occurred as a result of the depredations of sharks. Many buoyed whales, not only at sea but also in the anchorage, had large portions eaten away, and the Nor' West Whaling Coy. was hard put to find a remedy. Last year the buoyed whales in the anchorage were ringed about with dead sharks, and this had the effect of reducing attacks. The Manager of the station mentioned the difficulty to the Superintendent when the latter visited the station in 1951. Mr. Fraser recalled the work which had been done during the war years to develop a shark repellant for use by members of the armed forces who found themselves in the sea as a result of enemy action. This Department had been very intimately associated with tests made at Shark Bay in 1944 with copper acetate, ex-inspector J. Goodlad having been in charge of fishing and boat operations. Mr Fraser suggested that a quantity of the repellant be procured and the results watched.

This year a repellant has been tried with considerable success, particularly in the anchorage, where attacks by sharks have been reduced to a minimum.



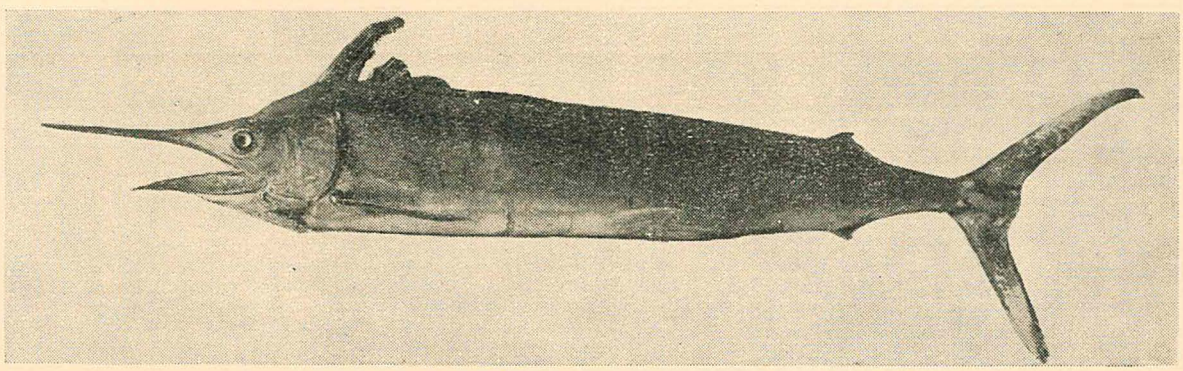
PARTY LEAVING P.V. "LANCELIN" AT GERALDTON AFTER A VISIT TO THE ABROLHOS

Left to right: Capt. H. C. W. Piesse (Skipper); Messrs. J. E. Bramley (Supervising Inspector) and A. J. Fraser (Superintendent); Hon. J. J. Dwyer, V.C., M.H.A., Minister for Fisheries for Tasmania.



WESTRALIAN CRAYFISH *(Panulirus longipes)*.

This group of crayfish shows clearly the colour variation in fish coming from the same region. These were caught at the Abrolhos.



BLACK MARLIN *(Istiompax australis)*.

This specimen was caught at South Passage, Shark Bay, during August, by Mr. H. Akerstrom, of Geraldton. It weighed 80lb.

THE CLEARING-HOUSE

(Interesting material culled from sundry publications.)

Pacific Island Fisheries

Selected modern methods of fishing that have proved successful in other parts of the world will be introduced to island territories of the South Pacific if the recommendations of the Fisheries Conference held at South Pacific Commission headquarters at Noumea are adopted. An expert will also be engaged by the Commission to study fisheries problems of the region, with a view to advising on ways and means of stimulating production of fish as a main source of food for Pacific island peoples.

The Conference considered that methods at present used in the processing, marketing and distribution of fish in the South Pacific were generally inadequate even at the present relatively low levels of consumption. It recommended the establishment where necessary of territorial fishing services to encourage development of the industry. It further recommended that Governments should promote the development of community fishing and aid fishermen to acquire modern equipment.

Storms in the Pacific. South Pacific islands have fared badly in the hurricane season now coming to an end. There were hurricanes in Fiji, New Hebrides and the British Solomons early in the year; and in April there was a waterspout and a tornado in Rarotonga, Cook Islands, and a cyclone in the Louisiade Archipelago, off Papua. One person was killed and six injured in the Rarotonga tornado and eight natives were killed in the Louisades. This was Papua's worst storm on record. Normally Papua is outside the cyclone (or hurricane) belt. Houses, gardens and plantations throughout the archipelago suffered severely.

(New Commonwealth, London, June 23, 1952).

Saldanha Bay Boat Nets Pilchard Shoals Located by Special Fish Finder

The Elac Fischlupe, an echo sounder designed specially as a fish finder, has now been introduced to the South African fishing industry. The first set has been installed on the Southern Sea Fishing Enterprises boat Statendam and in the early hours of the morning of Monday, June 23, small shoals of pilchards, spotted on the screen, were caught in Saldanha Bay.

Produced in Germany by Electroacustic G.m.b.H., the Fischlupe is handled and serviced in all countries, except Germany and Canada, by the Marconi International Marine Communication Co. Ltd. It is a new departure in echo-fishing and several sets have been installed in British fishing boats.

The basic principle is similar to that of the conventional echo sounder. Sound impulses are sent out and received after reflection from the sea bed or intervening fish shoals. However, instead of presenting the soundings on a paper record or by a light flash against a graduated scale, the Fischlupe employs a cathode ray tube similar to those used in radar or television.

The sound impulses sent out and returning to the boat are seen on a small screen as a vertical light trace. The screen can be adjusted so that the sea bottom is at its lower end and surface of the water would be the top of the screen. The depth of water is calibrated alongside the light trace. As long as there is no obstruction in the water between the boat and the sea bottom, the light impulse continues as a narrow vertical line.

But when a fish shoal intervenes this light trace breaks into horizontal lines on the screen at a position corresponding to the depth at which the fish are lying. It is at this stage that the Fischlupe justifies its name, which means fish lens. Once the presence of fish has been established the Fischlupe can be focussed on a horizontal stratum of water, ignoring the empty water above and below the shoal.

The echo soundings are thus magnified to such an extent that, with experience, the skipper can ascertain the type of fish and the size and density of the shoal.

The advantages are obvious. A fishing boat using a Fischlupe can go out at any time of the day or night, can find a shoal of fish and its skipper can determine from the screen whether the size of the shoal justifies throwing a net. From his Fischlupe he can also locate, in a large shoal, the most advantageous spot to fish.

Comm. Q. H. Bullard, head of Marconi South Africa Ltd., and Mr. P. J. Cooper of the same firm, went upto Saldanha Bay to test the first Fischlupe to be used on a South African boat. On the evening of Sunday, June 23, the Statendam left Saldanha for the fishing grounds in St. Helena Bay.

When the boat was in deep water the Fischlupe was switched on. A large shoal of maasbanker was soon located, but the weather was too rough for fishing so the boat returned to Saldanha. She fished in the bay until 4 a.m. and netted three small shoals located on the screen.

Once the skipper gets used to the Fischlupe the boat will do daylight fishing. A second Southern Sea boat has now been fitted with the fish finder and it may possibly be installed on South African trawlers.

(South African Shipping News and
Fishing Industry Review, Capetown
July, 1952.)

Pearl-Shell in Gulf of Carpentaria

The lugger operated by the Division of Fisheries station on Thursday Island is planning to visit Groote Eylandt in the Gulf of Carpentaria to investigate pearl-shell possibilities there.

The station on Thursday Island was established three years ago for the investigation of pearl-shell grounds, fished and unfished. It is also attempting to introduce Japanese methods of pearl-shell cultivation which do away with diving and to develop pearl culture generally.

In shell cultivation young oysters are set on wire cases suspended from rafts in favourable areas, usually in a tidal region with good food prospects. The

Japanese made a big commercial project of pearl culture. As many as five seeds were inserted in a shell, which secreted pearl substance around the irritation. It is considered that artificial cultivation at Thursday Island is almost certain to succeed.

(C.S.I.R.O. Digest of Current Activities, August 1952.)

Rainbow Trout

(To the Editor)

Sir, - Following on the announcement that we have taken a million rainbow trout ova this year and that there would be a surplus of over 500,000 for immediate distribution, we have been overwhelmed with enquiries from all parts of the State. While we are doing our best to reply to these, in the interim a general statement may assist in satisfying and anticipating some of the queries.

The main question seems to be whether this or that piece of water will carry trout. With some waters, such as the clean flowing stream or fresh water lakes and dams with weed and aquatic life, the answer is an easy affirmative. Similarly we can quickly rule out the muddy lifeless dams that get low and warm in the summer as wholly unfit for this fine fish. But between these two obvious extremes there are probably thousands of small creeks, water holes and private dams that are borderline conditions as far as trout are concerned.

When the establishment of trout was first mooted the official opinion was that they would do all right in the Pemberton streams and the Kalgan River at Albany. Later it was found that the Collie, Murray and Serpentine could carry trout. Such waters as the Blackwood River, with its high chemical impurity, was ruled out. Today some of our finest rainbows are found in the Blackwood River. Gingin proved that they were not too far north. This seemed to be the limit, but when Mr. Haddelton, of Katanning, established good trout in salty water of the inland, a new field of possibility was opened up. We also had good reports from Mr. Hobbs, of Shackleton, who planted fry in 1951 with good results. Some of the water quoted sounds foreign to the accepted conditions for trout, but whatever may be the scientific expectancy and overseas experience the final authority lies with the fish.

Frankly we do not know whether these marginal

waters will make good but we are very interested to try them out. Rainbow trout is the finest sporting fish in the world and is the most edible of fresh-water species.

One point we would like to make clear is that we are in doubt as to whether the rainbows will reproduce in lakes and dams. The accepted theory has been that rainbow will only spawn in permanent running water. This theory was upset recently when Mr. Simpson, of the Fisheries Department, who was sent East especially to gather information, saw rainbow trout spawning on the shore of the Great Lake.

If, at the worst, no reproduction develops it would mean restocking each three years with fry to maintain a fishable population. There are possibilities in these marginal waters but we would like their owners to know that we regard planting at this stage as experimental. We are prepared to help to the greatest extent possible and would like to make gifts to those who will try their waters out but we are faced with a financial problem. It is necessary for us to bridge a gap of £1,200 between Government grant and the hatchery running cost, by the sales of fish. We, therefore, sell our fry at £5 per 1000, hatchery door, but to this we add a bonus according to seasonal success. This year we are prepared to give at least 2000 for each 1000 purchased.

We cannot enter into the transport of fry, firstly because our hatchery staff is too involved in seasonal work and secondly because the cost of delivering small lots is impracticable. Purchasers must, therefore, pick their own fry up at the hatchery. If a ten gallon milk can is allowed for each 1000 to be transported, no difficulty will be experienced so long as the water is clean.

If there are sufficient inquiries from people within a reasonable distance of Perth the society is considering taking through a bulk consignment of 150,000 fry which could be redistributed.

We trust that the foregoing will encourage some of your readers to try their waters out as the opportunity to get cheap fry may not occur again. -
Yours, etc.,

A.R.Kelly,
President,
Pemberton Trout Society.

(Manjimup Warren Times - 23/7/1952.)

WESTERN AUSTRALIA

FAUNA PROTECTION ACT, 1950

Australia's birds and animals are unique and of considerable economic and scientific importance. Much harm has already been done by indiscriminate destruction, and in many cases the fauna is nearing extinction. In the hope that this trend may be halted, steps have been taken under the Fauna Protection Act to provide sanctuary to those birds and animals which are of economic, scientific or aesthetic value.

In addition in regard to fauna which to some extent are inimical to agricultural development, an endeavour has been made to maintain a reasonable balance between agricultural needs and the needs of conservation by the proclamation of open and close seasons.

Under the Act all birds, animals and reptiles are protected in all parts of the State with the exception of those which are specifically declared to be not protected.

The following have been declared to be not protected:—

Animals

Spotted Native Cat (Chudditch).
Wambenger.
Red Kangaroo (Marloo).
Hill Kangaroo (Euro or Biggada) except form occurring on Barrow Island.
Jungle Kangaroo (Sand Wallaby).
Rabbit.
Black Rat (Tree or Ship Rat).
Brown Rat.
Mouse.
Domestic Cat (gone wild).
Wild Dog (Dingo).
Fox.
Gould Flying Fox.
Little Flying Fox.
Pigmy Fruit Bat.

Birds

Indian Turtledove.
Senegal Turtledove.
Black Cormorant.
Goshawk.
Collared Sparrowhawk.
Wedge-tailed.
Little Falcon.
White-tailed Black Cockatoo.
Little Corella.
Galah.
Smoker.
King Parrot.
Port Lincoln Parrot (Twenty-eight).
Budgerygah.
Silvereye.
Raven.
Little Crow.
Crow.
Domestic Pigeon (gone wild).
Goldfinch.

Reptiles

All reptiles are unprotected excepting the following **which are fully protected throughout the State**:—

Rock Python.
Brown Rock Python.
Children Python.
Carpet Snake.
Black-headed Python.
Ramsay Python (Womo).
Goannas.
Bob-tailed Lizard.
Frilled Lizard.
Slender Snake Lizard.

Further particulars may be obtained from the Secretary, Fauna Protection Advisory Committee, Fisheries Department, 108 Adelaide Terrace, Perth.

A. J. FRASER,
Chief Warden of Fauna.

September, 1952.

58382/8/52—1m.

Dinner

MILL HALL SUPPER ROOM

SATURDAY, SEPTEMBER 6th, at 7.30 p.m.

★———★

TOASTS

THE QUEEN

☆

THE MINISTER FOR FISHERIES AND FISHERIES DEPARTMENT
Mr. A. R. Kelly.

☆

STATE COUNCIL OF SOCIETIES
Mr. A. L. Smith.

☆

FRIENDS AND HELPERS
Mr. N. Martin.

☆

PEMBERTON SOCIETY
Mr. N. Fletcher.

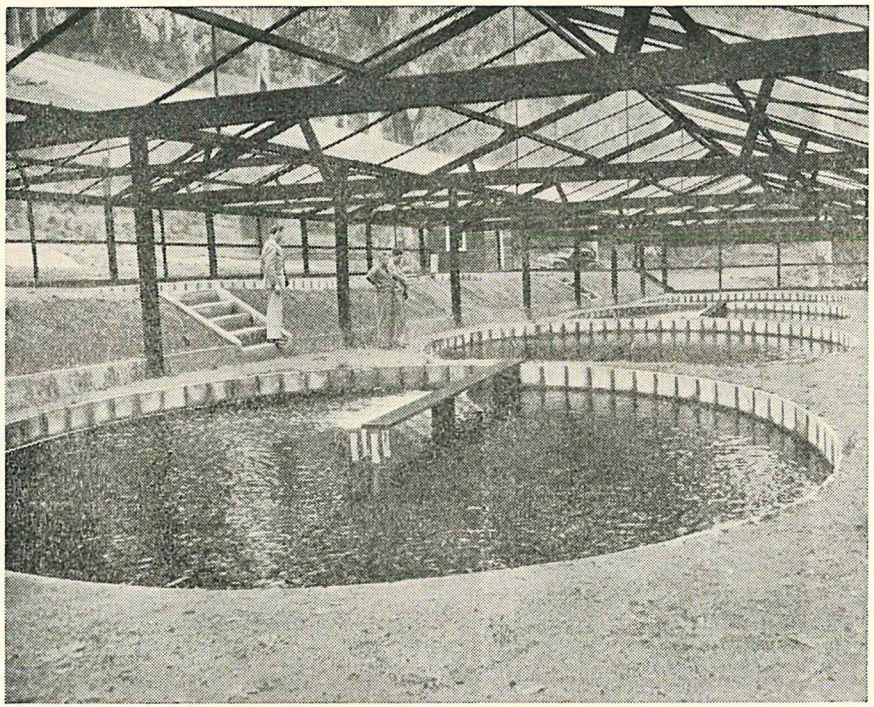
''Manjimup-Warren Times'' Print. Phone 55

PEMBERTON-WARREN TROUT ACCLIMATISATION SOCIETY

☆

OFFICIAL OPENING

OF



Bottom Tier of Eight New Rearing Ponds, National Park, Pemberton.

NEW REARING PONDS

SATURDAY, SEPTEMBER 6, 1952

BY

Minister for Fisheries, Mr. A. V. R. Abbott, M.L.A.

CONSTRUCTION OF REARING PONDS

——::——

As far back as 1940 the Pemberton Trout Society had to lay plans for a Hatchery that would serve the State as a source of young trout for stocking various waters. It appeared as if the hatching and distribution of large numbers of Fry while the streams were still virgin would be the most economical approach. However, with the widening of interest in Trout establishment and the formation of the State Council, the stocking policy turned towards the planting of larger trout. To put this into effect it was necessary to construct Rearing Ponds and an approach was made to the Government by the State Council for the necessary funds. As a result, the Public Works Department were instructed to proceed with the work. Later the Society received a severe shock when it was advised that the Department would not be able to undertake the work but that the Treasury was prepared to make £3500 available if the Society was prepared to undertake construction. This was in 1950, in the depth of labour and material shortages, and in the face of spiralling costs.

The original plan was to build the Rearing Ponds adjacent to the existing Hatchery but disquieting rumours of development on the Brook supplying the water, raised the question of whether it might not be wiser to break with the old site and look for a larger and more secure water supply. Fortunately, at the time, the Golf Club had surrendered its lease in National Park, and the S.E.C. also decided to abandon the Hydro Electric Scheme. This made available an excellent Site with the ample flow of the Lefroy Brook and the "head" created by the Power Dam. Much negotiation ensued in an endeavour to reconcile the views of the Hydraulic Branch of the P.W.D., the State Electricity Commission, the State Saw Mills and National Park Board. All these people had an interest in the site and all co-operated splendidly, but progress was too slow, and to bring the matter to a head, the Society purchased the Hydro Electric Pipe Line and building.

By this time the site had been surveyed and a contour plan prepared by Mr. R. Bevan. The original pond plan had to be scrapped and the Society had the task of determining its own levels, earthworks and layout. The problem was also one of labour, no regular employees being available. Tenders were called to do the work by contract, but no one would look at the undertaking for the money we could offer. It was therefore decided that the Society do its own contracting and get as far as possible. Gangs of week-end workers were mustered by Mr. R. Cave and the earthwork commenced on March 6th, 1951. Work went on right through the winter of 1951 with an occasional permanent employee during the week preparing for the major work of concreting or earthwork in the week-ends. Perhaps some idea of the labour difficulty can be gathered from the fact that there was a turnover of 43 men during the constructing period. This situation demanded close supervision but no permanent Supervisor was available. All plans, engineering, administration, and supervision has been done by the Society's Officer and Staff. With the exception of the pipe line, some advice by Main Road Board engineers and Mr. P. H. Pemberton, on foundation and drainage, and the preparation of the contour plan, the whole project has been carried through with amateur labour. The position improved towards the end, when it was possible to secure several semi-skilled employees who did a remarkable job.

Special tribute is due to Mr. F. Shoobridge, who, in addition to his duties at the Hatchery, undertook the immediate supervision, and to Mr. N. Martin who attended to the financial arrangements. As usual, the State Saw Mills were ever ready to help and the Forestry Department came to our rescue on several occasions.

There were some doubtful moments in financing the project. The original estimate of £3500 was taken out in 1949, and then, in respect of a limited proposition on the old site. The new set-up was more ambitious, and provision had to be made for possible further expansion. In the pipe line alone the original costing was for 6 chain of 6in. pipe whereas the new line required a quarter of a mile of 10in. pipe. It was determined that there would be no more of the difficulties that followed cheap constructions in the past, and the new Ponds have been built up to a standard and not down to a price. To do this a further Government Grant was successfully sought.

The following statement may convey an idea of the finance involved.

REVENUE		EXPENDITURE	
Government Grant:		Purchase of Hydro	
Original	£3,500	Scheme	£400
Supplementary	1,000	Pipe Line and Laying	800
Sales of Surplus		Material	2,134
Materials	200	Labour	1,756
Fix Deposits Trans.	400	Cartage and Freight	250
Propagation Acc.	240		
	£5,340		£5,340

The above figure does not take into account the honorary work by Society's Officers and Hatchery Staff in contracting and supervision.

INTERESTING FACTS REGARDING PONDS

The Site has been leased from the National Park Board and contains some five acres. It could contain 25 similar Ponds and all water supply, drains and levels have been laid as part of an ultimate plan.

The 10in. concrete supply line can delivery 1,000 gallons per minute under an average head of 10ft.

The Lefroy Brook system drains 30 square miles of reafforestation country and therefore unlikely to be impaired or polluted.

Each of the eight ponds will carry 100,000 Fry tapering off to 10,000 Yearlings as the season advanced.

The Circular Ponds have four times the capacity of the square types with straight through flow for half the water supply, owing to the circulation arrangement.

COUNCIL — 1951-52

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Vice-Presidents: J. GROSSER, L. GRAHAM.

Secretary: N. MARTIN.

Councillors:

S. L. EDWARDS, E. ROWE, F. G. LLOYD, R. CAVE, F. E. ANDERSON, W. McLEAN.