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DEPARTMENT OF PARKS AND WILDLIFE

SERVICE BULLETIN

- 8 AUG 1967

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AUGUST, 1967
VOL. XVI, No. 8

DEPARTMENT OF FISHERIES AND FAUNA
108 Adelaide Terrace, Perth, Western Australia

DEPARTMENT OF FISHERIES AND FAUNA

MONTHLY SERVICE BULLETIN

DEPARTMENTAL PUBLICATIONS TO BE CLEARED BY
EXTENSION AND PUBLICITY OFFICER

Following a recent meeting of Branch Heads, the Director has decided that all reports, bulletins or other publications issued by the Department are to be edited by the newly-appointed Extension and Publicity Officer (Mr. A.C. Waldon).

The procedure to be adopted is that when the author, from any section of the department, has prepared the final draft it is to be handed to Mr. Waldon. He will then be responsible for all details of publication, including proof reading and distribution of the material.

It is obvious, of course, that in many instances a great deal of co-operation will be required between the author and the Extension and Publicity Officer in order to produce a document capable of meeting all departmental requirements.

In many cases too it will be advantageous to both the author and Mr. Waldon if the matter of final publication, format and distribution is discussed fairly early in the preparation of the material.

P.V. VLAMING EQUIPPED WITH RADAR

P.V. "Vlaming" left Fremantle on July 18 for Shark Bay after she had been fitted out with radar.

Skipper Ron Smith brought the "Vlaming" to Fremantle some weeks ago for fitting and trials with the radar equipment which will be used for detection of vessels operating in closed waters.

The very obvious increase in effectiveness of the vessel through the use of radar was demonstrated during trials when the "Vlaming" was able to detect other vessels at a range of 28 miles.

Operating out of Shark Bay the "Vlaming" will, with radar, be much more efficient in patrolling the district.

P.V. "Dampier" is already equipped with radar and the two boats should provide better coverage of waters between Geraldton and Shark Bay than has been possible hitherto.

FIRST N.W. TUNA OPERATIONS

At Fremantle on July 6 the Minister for Fisheries and Fauna, Mr. MacKinnon, inspected the "Estelle Star", a tuna fishing boat under charter to the Department for six weeks.

Accompanied by senior officers of the department the inspection was made to obtain first hand knowledge of the operations and facilities of the boat.

The "Estelle Star" is an 85-foot wooden vessel based on Port Lincoln, South Australia, and had recently been engaged in tuna tagging work in the Albany region under charter to C.S.I.R.O. She has a brine freezing capacity of 47 tons and is capable of remaining at sea for seven days.

Under the control of the Senior Research Officer (Development) - Mr. J.P. Robins - seven aerial surveys have been made from Fremantle to as far north as Wyndham since December 5, 1966, to locate occurrences of tuna and bait fish.

Results so far indicate the presence of fairly extensive schools of tuna along the north-west coast with the greatest concentration around the Broome and Onslow areas. These concentrations have varied in size and density and one of the aims of the survey is to assess whether this is due to migratory habits, seasonal changes or as yet other unknown factors.

Having established the presence of tuna schools in the area the Department is now investigating the feeding habits of schools - which will determine the best method of catching, pole-fishing or purse seining - the size of possible daily catches and many other vital details necessary to assist in the evaluation of the extent and economics of a future tuna fishing industry.

Ken Tidswell, who is well known in the New South Wales and South Australian fishing industry, is the owner/skipper of the boat, which will carry a complement of seven.

Operations will be based at Broome and the average time spent on survey and catchery will be in stretches of 3-4 days.

The boat departed from Fremantle on July 12 and operations in the north west region commenced on July 17. A call for refuelling operations was made at Carnarvon on July 14.

TUNA AERIAL SURVEY

Survey VII was flown during the period June 9 to June 15.

Comments:

Water colour conditions were similar to those sighted in May but muddy conditions inshore were reduced. Close to the coast (about 15 miles) streaks and large patches of *Trichodesmium* were associated with faint current lines and in this region the water colour changed from light blue ("milky") to green. Good sightings of tuna were made in these areas.

Light winds allowed for favourable spotting conditions throughout most of the area surveyed. Light east to south-east winds prevailed close to the coast in the morning. The afternoons were calm.

As in previous surveys, most sightings were made in the areas north of Onslow and around Broome.

The size of the schools appeared to be smaller than those sighted during Survey VI, but the number of schools sighted increased by 322+.

The fish size structure of the schools was little changed from those sighted during Survey VI, i.e., smaller fish were sighted off Onslow and larger fish off Broome.

Opposite: Table I summarises the sightings of schools by size and area; Table II shows the analysis of the size composition of the schools sighted; Table III shows the number of bait school sightings.

BLACK SHOULDERED KITE AT PERTH DISTRICT OFFICE

Technical Assistant David Wright and Cadet Inspector Richard Silbert report having sighted two Black Shouldered Kites in a Poplar Tree at Perth District Office.

It seems that the birds were probably nesting in the vicinity. Black Shouldered Kites are rare visitors to the metropolitan area and this report was therefore received with much interest.

Table I.

Outward Flight (School Sightings)				
Area	Small	Medium	Large	Total
Fremantle-Carnarvon	-	-	-	-
Carnarvon-Onslow	17	-	-	17
Onslow-Pt. Hedland	214	24	10	248
Pt. Hedland-Broome	22	10	-	32
Broome-Derby	16	5	-	21
TOTAL	269	39	10	318+

Inward Flight (School Sightings)				
Small	Medium	Large	Total	Area
61	16	3	80	Derby-Broome
17	3	1	21	Broome-Pt. Hedland
45	6	0	51	Pt. Hedland-Onslow
29	1	1	31	Onslow-Carnarvon
-	-	-	-	Carnarvon-Geraldton
-	-	-	-	Geraldton-Fremantle
152	26	5	183+	Total

Table II

Fish Size*	School Size			
	Small	Medium	Large	Total
Small	31	225	3	259
Medium	55	145	7	217
Large	22	1	2	25
Total	108	371	12	501+

* Small 15 lbs.

* Medium 15 - 40 lbs.

* Large > 40 lbs.

Table III
(Bait Schools)

Small	40
Medium	17
Large	1
Total	58+

Above does not include many sightings of scattered tuna close to the schools shown in some areas.

FERRET SKULL RARE FIND

The skull of a ferret discovered by Honorary Fauna Warden H.L. Miller of Waroona has become a valuable addition to the Museum collection of the species Mustela putorius.

From the remains of the animal, which was discovered at Black Rock in the Yarloop area, a sketchy description was possible, the identification being made by Mr. J.L. Bannister, Curator of Mammals at the W.A. Museum.

Mr. Bannister said that the ferret was domesticated from the albino form of the European polecat probably because albinos are often more docile than the normal form. In Europe escaped ferrets have now interbred with wild polecats to such an extent that there are probably very few wild polecats left.

Ferrets were introduced fairly widely in Australia to help in reducing the rabbit population in the 1930's and Mr. Bannister believes that the specimen found at Black Rock could be a descendent of these.

EXCEPTIONAL WHITING SEASON

Large catches of sand whiting at Mandurah, Bunbury and, to a lesser extent, Augusta have ensured what is believed to be one of the best whiting seasons for many years.

Excellent catches of King George Whiting have also been made and well received at the Perth markets and fishermen are generally pleased with the prices they are receiving. Most are receiving up to 20c per lb. at the Perth market.

In one day 100 cases of whiting reached the market and sold well. This is much higher than the 15 to 20 cases per day considered to be good in recent years. Much of the whiting has been processed into 20 lb. frozen packs and is finding a ready market in the Eastern States.

Amateur fishermen are also having a good whiting season. Excellent catches are being made at both Mandurah and Bunbury.

FAUNA PATROL TO BERNIER & DORRE ISLAND

A party of shooters left Perth at the end of July to undertake a goat eradication programme on Bernier and Dorre Islands.

Destruction of vegetation on the islands by goats has been of concern to the Department for some time. The expedition consisted of Fauna Wardens C. Ostle, A. Pearce, A. Marshall and Fauna Cadet R. Emiliani. Research Officer J. Mott also accompanied the party which is under the control of Senior Warden S.W. Bowler.

FEEDING OF SHEEP AND KANGAROOS
IN SOUTH WESTERN QUEENSLAND

An informative report on research into the plants eaten by sheep and kangaroos grazing together in a paddock in south western Queensland has recently been published. It summarises work carried out by Mr. M. Griffiths and Mr. A. Barton of the Division of Wildlife Research, C.S.I.R.O., to try to find out the amount and type of plants eaten by kangaroos and sheep under the same conditions. This was the first step to be taken in a proposed assessment of the effect of kangaroos on sheep pastures in Queensland. The report was published in the December, 1966, issue of "C.S.I.R.O. Wildlife Research".

The location for the study was chosen near Cunnamulla in the semi-arid plains country of south-west Queensland. Samples of both kangaroos and sheep were taken through 1963-64 and their stomach contents analysed.

From this analysis it was found that, in good years, sheep and kangaroos form a complementary combination, with the kangaroo eating many plants not handled well by the sheep, thus giving better utilization of pasture and greater conversion of herbage into animal protein than if one species grazed alone.

However, on the debit side it was found that there were two factors counting against the kangaroos being completely accepted. One was that they shared the best food producers (flatleaved herbs rich in nitrogen) with the sheep, but, even here, both reds and greys were apparently content to feed largely on portulaca, which is not favoured by sheep. The other factor was that kangaroos seemed to obtain the best blades of grass even at the height of summer.

Thus it would seem that kangaroos in large numbers do have a detrimental effect on wool production. Nevertheless, since specific food preferences between the animals do exist, and there is no evidence that kangaroos, pound for pound body weight, eat more than sheep, the effect is not as great as some pastoralists have imagined. In fact, in the years of the study, which were good ones for south-west Queensland, largely because of the moderate numbers of kangaroos which were found in the area, it could be possible that the kangaroos were beneficial to wool production by keeping in check grasses of low protein content which could otherwise get out of hand and compete heavily with the nitrogen-rich herbs necessary for an optimum wool production.

It must be emphasized that these were the facts as they were found and reported from a part of Queensland. Only similar research here will prove if those results also apply in Western Australia.

PELSART PATROL TO ROTTNESST

The skipper of p.v. "Pelsart" (Inspector E.I. Forster) reported a number of bird sightings on a recent visit to Rottnest Island.

Four large Sea Eagles were observed 200 ft. above the Basin on the north side of the island. Also sighted about six miles from Fremantle was a pair of Mountain Ducks flying in a south-south-west direction. Australian Gannets are usually seen in this area in small flocks during the winter months but so far this year only occasional sightings of single birds and one small flock have been made.

The report also mentioned sightings of a flock of approximately 100 Small Black Cormorants fishing in the shallows of Preston Point Bank.

LOBSTERS THRIVE ON MAINE COASTARTIFICIAL REEF

An artificial reef constructed with rock - blasted and dredged from the site of a new U.S. Coast Guard station - has become a haven for lobsters at Boothbay Harbour, Maine, reports the Department of the Interior's Bureau of Commercial Fisheries.

The density of lobsters on the 5-month-old reef already exceeds half that which exists in adjacent natural habitat. The reef occupies about 10,000 square feet of ocean bottom in 50-80 feet of water. The Bureau is now studying the site to determine the best methods of constructing manmade lobster habitats.

PROHIBITION ON SNAPPER TRAPS LIFTED

The prohibition on the taking of snapper by means of fish traps in the whole of the Western Australian waters of the Indian Ocean expired on May 6, 1967.

The Department has decided not to renew the snapper trap prohibition.

All inspectors should take particular notice of the lifting of this restriction and ensure that fishermen are made aware of the position.

ENFORCEMENT ACTIVITIES
PROSECUTIONS JUNE - JULY, 1967.

Name	Offence	Place of Hearing	Date of Hearing	Fine
COLEMAN, T.	U/S crayfish	Fremantle	26.6.67.	\$100
FLETCHER, P.F.	Unlicensed professional fisherman.	do.	19.6.67.	\$ 50
JENKINS, G.A.	U/S crayfish	do.	26.6.67.	\$100
LARSEN, K.	Unlicensed professional fisherman.	do.	26.6.67.	Cautioned
MATHEWS, B.	Closed waters	do.	19.6.67.	\$200
REBELO, V.G.	U/S crayfish	do.	19.6.67.	\$100
SWEETMAN, T.	do.	do.	29.5.67.	\$100
TORRELLI, S.	Closed waters	do.	26.6.67.	\$ 20
TRIPI, F.	do.	do.	26.6.67.	\$ 20
WARD, G.A.	do.	do.	26.6.67.	\$ 15
WILLIAMS, R.	U/S crayfish	do.	26.6.67.	\$400
ROGERS, D.G.	Failure to submit return.	Mandurah	15.6.67.	\$ 40
TONKIN, W.G.	do.	do.	15.6.67.	\$ 40
ANDEROU, J.D.	Taking protected fauna.	Midland	5.7.67.	\$ 10
BAXTER, D.R.	do.	do.	5.7.67.	\$ 10
JENKINSON, I.	do.	do.	5.7.67.	\$ 10
JENKINSON, I.	Obstructing warden	do.	5.7.67.	\$ 10
MCLAUGHLAN, R.F.	Taking protected fauna.	do.	5.7.67.	\$ 10
MCLAUGHLAN, R.F.	Obstructing warden	do.	5.7.67.	\$ 10
TOLCHARD, E.A.	Taking protected fauna.	do.	5.7.67.	\$ 10
HODGES, S.	U/S crayfish	Perth	30.6.67.	\$100
SCHOFIELD, D.S.	No escape-gap in craypot.	do.	23.6.67.	\$100*
SCHOFIELD, D.S.	Excess number of craypots.	do.	23.6.67.	\$300*
VAN GELDER, J.	U/S crayfish	do.	30.6.67.	\$200
CLIFTON, P.A.	U/S marron	Pinjarra	27.6.67.	\$ 20
RAYMOND, L.	do.	do.	27.6.67.	\$ 20
POWELL, F.J.	do.	do.	27.6.67.	\$ 20

U/S = undersize

* Action taken under Commonwealth Fisheries Act.

PRAWN RESEARCH OFFICER IN MEXICO CITY

Mr. R.J. Slack-Smith has made a successful start to his overseas tour which began with the F.A.O. World Scientific Conference on the Biology and Culture of Shrimps and Prawns in Mexico City late in June.

Shrimp and prawn experts from all over the world received with enthusiasm the two papers presented by Mr. Slack-Smith.

These were :-

"The Prawning Industry in Shark Bay, Western Australia", by R.J. Slack-Smith.

"The Design, Analysis and Evaluation of Marine Resource Surveys", by R.J. Slack-Smith and A.E. Stark (C.S.I.R.O. Division of Mathematical Statistics).

As a result of the interest shown in these two papers Mr. Slack-Smith has been placed on the F.A.O.'s Indicative World Plan for Shrimp Committee, the F.A.O. Committee for Collection of Uniform Statistics and, provisionally, on the Committee of the I.P.F.C. Symposium on Trawling.

Many invitations were extended to Mr. Slack-Smith to visit other countries, amongst which were Thailand, West Indies, the United Kingdom and Central and Southern America.

Apart from attending the F.A.O. Conference, Mr. Slack-Smith visited main fishing areas and took part in a tour organised to Campeche and Merida by the Mexican Government. Here he inspected the fishing fleet, port facilities and processing works in the area. Mr. Slack-Smith also visited the Mexican Fisheries Department regional laboratory and Fisheries Training School at Campeche.

Whilst at Galveston, Texas, Mr. Slack-Smith spent six days at sea in a local prawn trawler.

BRITISH MUSEUM PLANS EXPEDITION TO AUSTRALIA

Major B.D. Booth, of the Natural History Branch of the British Museum, plans to lead an expedition to Australia early in 1968. This will be the fifth and last in the present series of expeditions to Australia.

While in Australia Major Booth hopes to bring the party to Western Australia where they will work in the northern areas of the State.

The expedition will be concerned principally with the areas surrounding the Fitzroy River, King Leopold Range and the Kimberleys towards the Ord River.

Major Booth will collaborate with Dr. W.D.L. Ride, of the W.A. Museum, and Dr. D.L. Serventy of C.S.I.R.O. Wildlife Division in the preparation of their itinerary and in overcoming field study problems.

The Department will also make its facilities available to the expedition during its stay in Western Australia.

RUSSIAN STERN TRAWLER SIGHTED OFF PORT HEDLAND

While on a recent tuna spotting survey Senior Research Officer (Development) J.P. Robins reported a Russian stern trawler working off the Western Australian coast.

The trawler was sighted approximately 58 miles north-west of Port Hedland and was subsequently identified as the 3,800 ton Russian research stern trawler "Akademikberg".

Owned by the Institute of Oceanography, Vladivostok, the vessel carries a crew of 86, including about 10 women. Eight of the crew are engineers and ten are scientific officers.

Although believed to be equipped only for bottom trawling at between 40-240 metres, the "Akademikberg" is, according to advices received from the Department of Primary Industry, Canberra, capable of trawling to a depth of 1000 metres. Since 1965 the vessel has been carrying out exploratory fishing off the Australian coast, mostly in the Great Australian Bight and Bass Strait areas, and is believed to be now working its way northwards towards Darwin.

In recent years there have been a number of Japanese fishing vessels sighted off our north-west coast but only on rare occasions have Russian vessels been observed.

Surveillance of foreign fishing and research vessels off the Australian coast has been a matter of concern to the various State fishing authorities throughout Australia in recent years.

It is expected that the whole matter of foreign fishing vessels will be an important item for consideration at the meeting of the Commonwealth-States Fisheries Conference to be held in Perth in September.

TAKING OF CORMORANTS DESTROYING FISHING NETS

Since May 1967 the Department, on application from the Mandurah Licensed Fishermen's Association, has allowed fishermen to destroy cormorants damaging nets or taking fish during a fishing operation.

The authority to take cormorants is limited to the time that fishermen are actually fishing and there is a proviso that it may be revoked at any time.

A follow-up has recently been conducted by Senior Inspector A.V. Green, who says that there is no evidence that the authority has caused more cormorants to be taken than previously. One reason for this is that most fishermen seldom carry a gun on their boats.

Inspector Green points out that fishermen find it difficult to destroy cormorants by shooting and the cost of cartridges relative to the number shot is prohibitive. The reason for this, says Inspector Green, is that as birds and boats are bobbing up and down particularly in "choppy" conditions, it is difficult to make shooting effective.

Cormorants appear to have become more plentiful over recent years and are eating large quantities of commercial fish as well as causing considerable damage to fishermen's nets.

As a result of Inspector Green's report it has been decided to extend the authority until the spring and summer months when more trouble is experienced from cormorants than during the winter.

WILD TURKEY SIGHTED EAST OF JERRAMUNGUP

Honorary Warden A.G. Powell of Jerramungup reports that on the 25th June he sighted seven Wild Turkeys on the main road near the 42 mile peg between Jerramungup and Ravensthorpe.

Mr. Powell said that identification was positive as the birds ignored his approach by vehicle until he was only a few yards away; they then flew in a short semi-circle and settled back on the roadway.

According to Mr. Powell who has spent almost all his life in the area wild turkeys are very rarely seen in the district, the last one being sighted several years ago.

STAFF NOTES

Senior Research Officer B.K. Bowen left on the first leg of his overseas trip during July and will be returning to Western Australia towards the end of November.

An outline of his itinerary was given in the July issue of this Bulletin.

* * * *

Research Officer R.J. Slack-Smith, who is also overseas at the moment, reports that Western Australia is now well on the map so far as the prawn fishing world is concerned. A full report on his activities to date appears on page 9 of this issue.

* * * *

Supervising Inspector J.E. Bramley is enjoying a relaxing four weeks of annual leave in the Eastern States. While there Mr. Bramley intends visiting as many of the major fisheries and fishing authorities as possible. A busman's holiday of a different variety, but still, one that should benefit the Department's Inspection Branch considerably.

* * * *

After a very successful induction period, which included a series of lectures, formal training sessions and practical work in the field, Fauna Wardens V.P. Nelson and R.F. Dear have taken up their district appointments. Both wardens will open new offices, Warden Nelson at Wyndham and Warden Dear at Wittenoom.

* * * *

The training programme in the Fisheries Inspection Branch has also been gaining momentum, the most recent session being held at Perth District Office.

Organised by Senior Inspector B.A. Carmichael, the programme took the form of a series of lectures. Those present included Inspectors from Perth and Fremantle District Offices and also included Inspectors from Jurien Bay and Lancelin.

Lectures were given by Fauna Officer H.B. Shugg, Fauna Research Officer T.L. Riggert, Fauna Research Officer J.J. Mott, Chief Clerk A.J. Mearns, Assistant Supervising Inspector J.E. Munro and Fisheries Research Officer R. Lenanton.

Mr. R.J. McKay, of the W.A. Museum, gave a talk on the anatomy and identification of fishes and the distribution of fishes.

TOURISM AND THE NOISY SCRUB BIRD

Since 1966 when an area of approximately 11,000 acres was set aside at Two People Bay for conservation of the Noisy Scrub Bird, there has been an upsurge of tourist interest in the area.

The Fauna Protection Advisory Committee, in which the reserve is vested, has been confronted with many problems in its control. Because of the popularity of the area the committee has found it necessary, in the interest of the Noisy Scrub Bird, to declare that :

- * The squatters' buildings erected without authority on the reserve be either removed or handed over to the Committee.
- * The entry of vehicles into the area used by the Noisy Scrub Bird be prohibited due to erosion and other problems already being encountered on the reserve.
- * The public will not be kept out of the reserve provided that the research facilities and the Noisy Scrub-bird and other fauna are not interfered with.
- * All excursions are to be made on foot.

Long term research work is being undertaken on the reserve to establish a definite management plan. However, it is already obvious that certain fire control measures must be taken and camping has been prohibited within the reserve.

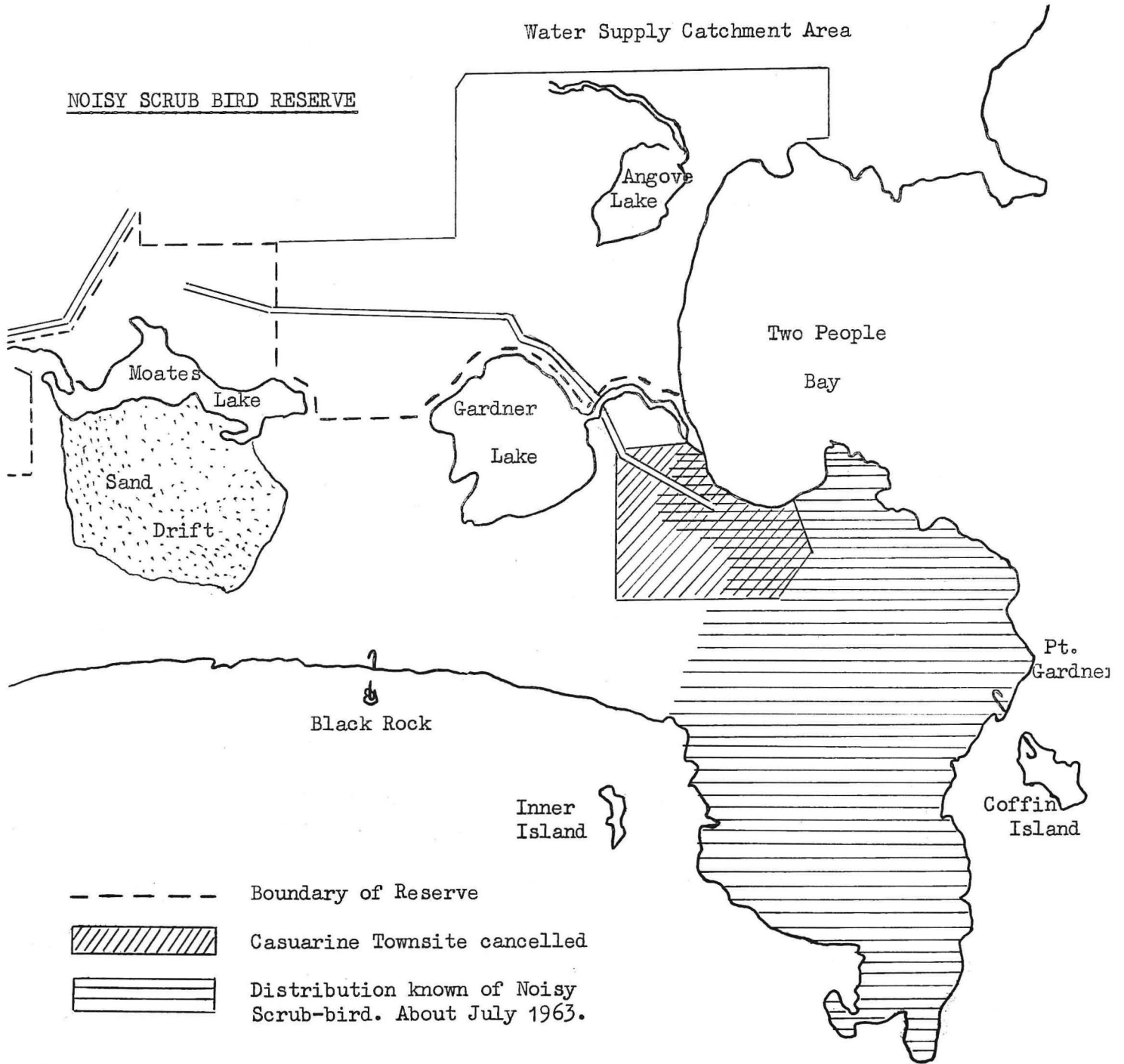
Despite the apparent conflict between conservation and tourism, the Department favours in principle the development of part of the area as a tourist site. The establishment of a scientific research station with tourist facilities and a permanent ranger would all play their part in the eventual development of the reserve.

For the present, however, the use of the reserve must be limited in order to ensure the eventual conservation of the Noisy Scrub-bird for public enjoyment.

LAKE WALYORMOURING VESTED IN FAUNA
PROTECTION ADVISORY COMMITTEE

The Governor in Executive Council has vested the Lake Walyormouring A class Reserve 17186 in the Fauna Protection Advisory Committee.

Lake Walyormouring, which is also known as Oak Park, is situated approximately 10 miles north-east of Goomalling. Covering an area of about 720 acres, it is a favourite duck shooting spot during the open season.



LOBSTER TAILS "SPINY" - PRIMARY WHOLESALE PRICES PER LB.NEW YORK, U.S.A. MARKET QUOTES WEEK ENDED 28TH JUNE, 1967.

Below are CURRENT WHOLESALE SELLING PRICES reported by primary receivers, (wholesalers, importers, brokers, etc.) located principally in the New York Metropolitan Area.

(Prices are U.S. Currency ex Warehouse).

(PRICES FOR CORRESPONDING WEEK IN 1966 SHOWN IN BRACKETS)

	GRADES - WEIGHT IN OUNCES		
	4 - 6	6 - 8	8 - 10
Australia	\$2.25 - \$2.30 (\$2.40 - \$2.45)	\$2.29 F.H. (\$2.35 - \$2.40)	\$2.25 - \$2.30 (\$2.35 - \$2.40)
New Zealand	\$2.22 - \$2.27 (\$2.35)	\$2.20 (\$2.32 - \$2.35)	\$2.25 - \$2.30 (\$2.30 - \$2.35)
Brazil	\$2.05 - \$2.10 (\$1.85 - \$1.95)	\$2.05 - \$2.10 (\$1.90 - \$2.00)	\$2.05 - \$2.10 (\$2.00 - \$2.05)
Other	\$1.50 - \$2.05	\$1.60 - \$2.15	\$2.05 - \$2.15

	GRADES - WEIGHT IN OUNCES		
	5 $\frac{1}{4}$ - 6 $\frac{1}{4}$	6 $\frac{1}{4}$ - 8	8 - 9
South Africa	\$2.40 (\$2.35 - \$2.40)	\$2.45 (\$2.40 - \$2.45)	\$2.50 (\$2.45 - \$2.50)

SOURCE: U.S. Fish & Wildlife Service-Commonwealth Fisheries Office

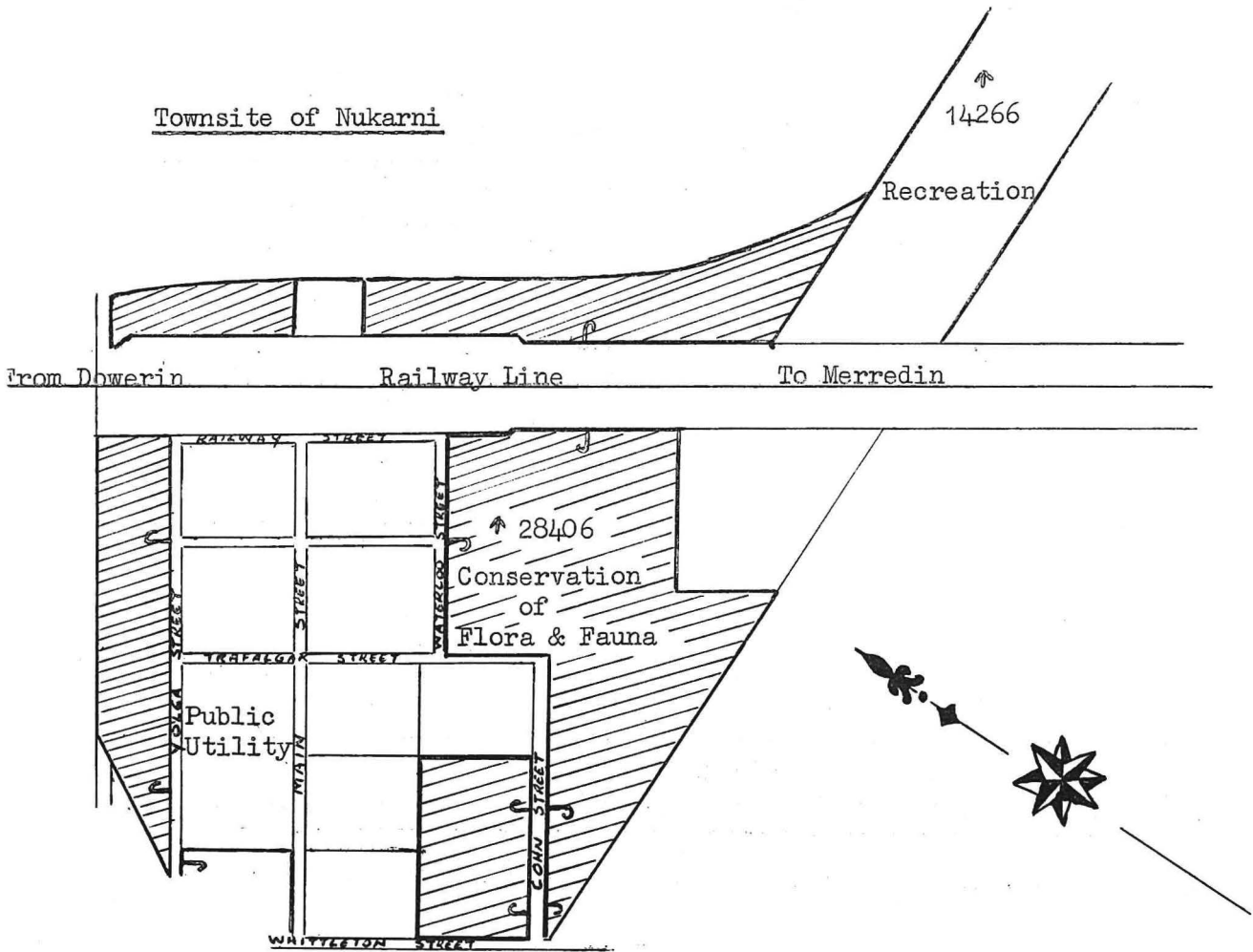
(Fish Market Bulletin

July, 1967).

NUKARNI RESERVE

Lot 83 which borders the town of Nukarni has been made a reserve for the purpose of Flora and Fauna Conservation.

The reserve is approximately 210 acres in area and is made up of several sections around the town as shown in the sketch.



PRESIDENT ISSUES FIRST REPORT
ON MARINE SCIENCE AFFAIRS

President Johnson has issued the first report to the Congress on marine resources and engineering development. Entitled "Marine Science Affairs - A Year of Transition," it is the work of the National Council of Marine Resources and Engineering Development, chaired by Vice President Humphrey.

The council, created in 1966, advises and assists the President in planning policy and co-ordinating the marine science programs of 11 Federal agencies.

The President states that the oceans' resources can help many of the challenges facing the nation and the world. He emphasizes these points :-

- * The vast food reserves of the sea must be developed to help end the tragic cycle of famine and despair.
- * To safeguard human health and protect the sea's resources, we must stop, and then undo, the continuing pollution and erosion of seashores, bays, estuaries, and the Great Lakes.
- * We must understand better the influence of oceans on the environment "to improve long-term forecasting of storms, weather, and sea conditions; protect life and property in coastal areas; and improve the prediction of rainfall in the interior."
- * We must take the wealth of the ocean floor to benefit mankind.
- * Finally, the seas must be used as pathways to improved international understanding and co-operation.

The U.S. has recognized the great potential of the seas, the President points out. Over the past 6 years, the U.S. has put more and more money into developing marine scientific and technical manpower, ships, and facilities. "The quality of our research fleet, deep sea vessels, and laboratories is unsurpassed," he notes. The number of highly trained specialists is growing, and this "provides a strong creative base for our marine science and technology."

The President acknowledges the contributions of the 89th Congress to meeting the challenge of the oceans. It enacted:

- * The Marine Resources and Engineering Development Act, which calls on the President to develop a long-range, comprehensive, and co-ordinated U.S. program in marine science - aided by the National Council on Marine Resources and Engineering Development, and an advisory Commission on Marine Science, Engineering, and Resources.

- * The Sea Grant College and Program Act. This will improve U.S. capabilities for training and research in marine science and engineering.

The National Council identifies the areas in which the U.S. should carry out these actions :

- * Begin a pilot program to help the world's protein-deficient nations increase their capacity to use the ocean's fish resources to feed their people.
- * "Implement the Sea Grant College and Program Act to strengthen oceanographic engineering, expand applied research, and improve technical information activities."
- * Speed studies to find ways of improving the "collection, storage, retrieval and dissemination of oceanographic data."
- * Enlarge the systems of ocean observation to improve nearshore weather prediction services. Study ways to increase the accuracy of long-range predictions of precipitation levels and drought conditions.
- * In Chesapeake Bay, determine the effects of estuarine pollution on shellfish, health, recreation, and beauty. Provide a plan to remedy the situation.
- * Explore the solid mineral deposits offshore.
- * Improve technology and engineering to make it possible to work at great ocean depths.
- * Equip a new Coast Guard vessel to carry out oceanographic research in sub-Arctic waters.

President Johnson also notes his recommendation to Congress for a 13-per cent increase - from \$409 to \$462 million - in funds to support marine science activities. The money will permit expansion of the current efforts to understand the sea and develop its enormous resources.

It will strengthen the capabilities of private industry, universities, and local government to participate in this undertaking. Also, it will help carry out the recommendations of the National Council.

The report states that significant progress was made in the marine sciences in the 1960's, but the total enterprise today, both public and private, is still small - only about 3 percent of the total U.S. technical effort.

PLAN FOR INDIAN OCEAN BODY

Establishment of a permanent Indian Ocean fishery organisation was recommended at the second session of the F.A.O. Committee on Fisheries held in Rome in April.

Its general objects would be to promote, assist and co-ordinate national programmes over the entire field of fishery development and conservation through international means, notably aid programmes, and to examine management problems, particularly with regard to off-shore resources.

The Director-General of F.A.O. will be asked to place the suggestion before the Council of F.A.O.

Fisheries leaders from 30 countries and observers and experts from many other countries and various international bodies concerned with fisheries, attended the meeting of the Committee on Fisheries.

Among chief subjects discussed were international co-operation in fisheries, proposals for a World Fishery Congress, the world appraisal of fishery resources, education and training of fishermen and persons concerned with fisheries.

(Australian Fisheries Newsletter

June, 1967).

FAUNA PATROL TO PALLINUP ESTUARY

Fauna Wardens A.R. Marshall, V.T. Nelson and Cadet Warden R. Emiliani visited the Pallinup Estuary at the end of June to follow up on a report of unidentified scratchings believed to be made by Dalgite and Bandicoots at Millers Point.

The scratchings were found in Ginlet thicket and covered a considerable area but positive identification was impossible due to recent heavy rains.

Animal traps were set but nothing was taken. An extensive search was made of the area for all animals but although numerous tracks and skats of Kangaroos, Brush Wallaby and Tamar were discovered, no animals were sighted.

Skats taken from the area have since been identified by the University Zoology Department as those of the Echidna. Because of this it is thought that the scratchings were made by Echidnas and not Dalgite and Bandicoots.

ABANDONMENT OF PERUVIAN FISH MEAL QUOTA SYSTEM

According to reports coming out of the Fishmeal Exporters Organization (F.E.O.) meeting during the week of April 9, the Peruvian fish meal "quota system" was abandoned. The concept of the quota system was reportedly misunderstood - the system was not set up to ration quantities of fish meal shipped or sold to world "zones" but rather served as a catalogue of sales projections assigning quantities of fish meal that Peruvians anticipated selling in the given areas. Recent poor sales abroad, however, have rendered the quota system more or less meaningless and the Peruvians will undoubtedly market fish meal at going prices wherever the demand exists, without special consideration to quotas.

("The Feed Bulletin"

Chicago

April 18, 1967).

JAPANESE TUNA FISHING CONDITIONS

Japanese fishing vessels operating in the Atlantic Ocean are making fairly good tuna catches, but fishing in the Pacific and Indian Oceans is reported to be generally slow. It is presumed that good catches being made in the Atlantic are due to the fact that the area extending from west Africa to 10°W. longitude between 5°S & 30°S. latitudes is a likely habitat for the tunas. Fishing conditions by ocean area are as follows :

Atlantic Ocean Fishing Conditions: In an area north-east of West Indies catch per operation averaging 2.6 - 3.0 metric tons, predominately yellowfin. Off Monrovia - Saint Helena Islands catch averaging 2.9 - 3.0 tons, primarily yellowfin. Off Capetown catch averaging 3.4 - 4.3 tons, primarily albacore. Off Cape Verdes Islands catch averaging 2.5 - 3.5 tons, primarily yellowfin.

Indian Ocean Fishing Conditions: In all areas, catch per operation averaging 2.0 - 2.8 tons, mostly yellowfin and big-eyed.

Off Australia Fishing Conditions: In the waters off Western Australia along 18°S. and 115°E., catches, mostly albacore, averaging 2.0 - 2.8 tons per operation.

("Katsuo-maguro Tsushin"

May 15, 1967).