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

DEPARTMENT OF FISHERIES AND FAUNA
MONTHLY SERVICE BULLETIN

MR. H.B. SHUGG PROMOTED TO
CHIEF WARDEN OF FAUNA

During the last session of Parliament amendments to existing fauna legislation provided among other things, that the position of Chief Warden of Fauna be separate to that of the Director of Fisheries and Fauna. It made provision for the appointment of the Western Australian Wild Life Authority with the Director its Chairman and the Chief Warden of Fauna its Deputy Chairman.

To meet these requirements the Public Service Commissioner has reclassified Mr. H.B. Shugg's item of Fauna Officer, to that of Chief Warden of Fauna, with a classification of C-II-8 as from March 1, 1968.



MR. H. B. Shugg.

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MINISTER VISITS PRAWNING CENTRES

The Minister for Fisheries and Fauna, Mr. G.C. MacKinnon, took a first hand look at the prawning industry as established at Learmonth, Roebourne and Carnarvon. During his familiarisation tour of these centres the Minister was accompanied by the Director, Mr. B.K. Bowen, the Administrative Officer, Mr. B.R. Saville, and by the Extension and Publicity Officer, Mr. A.C. Waldon. The party departed from Jandakot Airport on April 4, and returned on April 7.

INTERESTING BANDING RECORDS

In the March 1968 issue of "The Australian Bird Bander", there was recorded a number of banding recoveries that have proved to be highlights in the history of bird banding in Australia.

A Black-crowned Albatross (Diomedea melanophris) was banded on North Head, Macquarie Island on September 29, 1954. It was found dead near Eden, New South Wales on December 18, 1967, some 1250 miles and over 13 years and 2 months later. This is the longest elapsed time for any bird banded in the Australian Bird Banding Scheme.

There is also recorded the recovery of the remains of a Common Bronze-wing (Phaps chalcoptera) at St. Arnaund, Victoria, on November 24, 1967. This bird was banded at Eremphila Flat, South Australia, on September 19, 1964, a distance of 225 miles north-west. This is the longest recovery for this species.

A Fleshy-footed Shearwater (Puffinus carneipes) banded on Lord Howe Island on November 25, 1962, was found dying at Iwanaimachi, Furuu-gun, Japan, on June 27, 1967, some 5,300 miles N.N.W.

A Crested Tern (Sterna bergii) banded as a nestling at Penguin Island, Beachport, South Australia on December 21, 1966 was recovered near Yamba, N.S.W. on November 19, 1967. This recovery was 960 miles E.N.E. and represents a sea distance of about 1,200 miles. The longest Crested Tern recovery is 1,150 and a sea distance of about 1,700 miles.

The oldest record for the Silver Gull (Larus novaehollandiae) so far, was established by a nestling banded on Montague Island, on November 16, 1956. The same bird was found 170 miles N.N.E. on June 5, 1967, some 10½ years after banding.

A White Ibis (Threskiornis molucca) banded at Wilaura, Victoria, was recovered at Kalo, about 70 miles east of Port Moresby, T.P.N.G. in July 1967. This is about 1925 miles N.N.E. of the banding site.

Another record breaking bird proved to be a Black Duck (Anas superciliosa) that was "brought home by the cat" at Wentworth, N.S.W. on May 26, 1967. The bird was banded some 240 miles east on January 21, 1958, at Lake Wyangan near Griffith, N.S.W. This period of 9 years and 4 months is the oldest on record for this species.

AUSTRALIAN WEST COAST SEISMIC SURVEY MISFIRES

The Regional Controller, Department of Shipping and Transport, has issued the following substance as a warning notice to mariners and others. This notice was considered desirable as fishermen have reported sightings of misfires. Due to the use of a new type of detonator, the original warning notice has been amended to read as follows:-

"Mariners and others are warned of the following dangers due to possible misfires of explosive charges.

Occasionally a charge misfires and if unnoticed can be left suspended below the surface on a short length of line attached to a plastic inflated type coloured balloon. The balloon will normally lose its buoyancy after a period of time and the canister containing the explosive should sink to the sea-bed.

If this does not occur the detonator is designed to be rendered harmless after 1 hour in the water.

The canisters vary in colour from red to yellow, blue, green and grey and contain ammonium nitrate explosive.

If one of these objects is sighted, its position should be reported immediately through a Coast Radio Station to Regshiptram, Perth.

Do not handle or interfere with the object unless instructions are issued by the Regional Controller (Regshiptram) Perth."

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"Talent does what it can: genius does what it must".

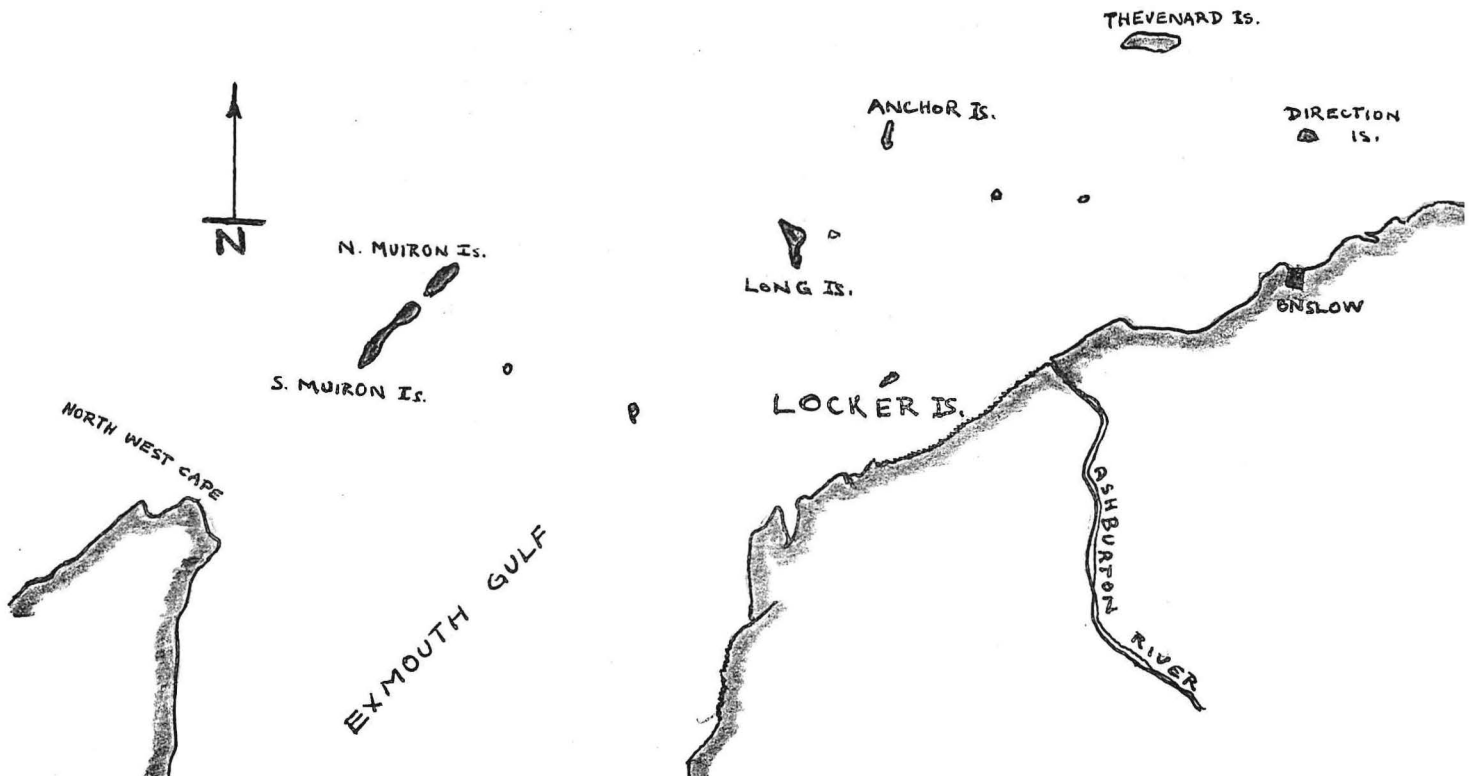
LOCKER ISLAND BECOMES A RESERVE FOR
CONSERVATION OF FLORA AND FAUNA

The Governor in Executive Council has approved the recommendation that Lyndon Location 64 (Locker Island) be set apart as a Class "A" reserve (No. 29011) for the purpose of "Conservation of Flora and Fauna". Locker Island has an area of 75 acres and is located some 24 miles south-west of Onslow. It is one of a very interesting group of islands off the north west coast of Western Australia.

This proposal originally emanated from a report received from the Government Entomologist, Mr. C.F.H. Jenkins, in his capacity as chairman of the Royal Society's Standing Committee on Conservation. This report suggested that it should be declared a sanctuary as it is one of the nesting islands of several sea birds and together with the other islands in the area, offers refuge to various types of flora and fauna which are disappearing from the mainland.

Quite frequently it is asked; Why are islands and their fauna so

Map showing Locker and other islands off Onslow.



important for scientists and their research programmes? The reason is that each island is a far more homogeneous universe than a rich continental mainland fauna. An island may demonstrate certain biological phenomena almost with the clarity of a test tube experiment; indeed, every island biota is an experiment of its own. Each island is characterized by a different set of physical characteristics (e.g. size, altitude,) and by a different composition of fauna and flora elements. It is as if nature had made a whole series of experiments and it was merely the scientists' task to analyse the results of such experiments.

DR. G.F. MEES VISITS WESTERN AUSTRALIA

We were delighted at the news that Dr. G.F. Mees, of the RijksMuseum van Natuurlijke Historie, Leiden, Holland, was making a study visit to Australia. Dr. Mees called on the Fauna Officer on March 26, and informed him that the main purpose of his visit was to extend his knowledge of the Western Australian birds. He also intends to collect some reptiles for his Museum. During his stay in Western Australia Dr. Mees will be collaborating with Dr. D.L. Serventy, and can be contacted at the C.S.I.R.O. Wildlife Research, Helena Valley.

Dr. Mees, who was Curator of Birds at the Western Australian Museum before he went overseas, will visit the Eastern States for a few weeks before returning to Holland at the end of the year.

HUGE COD CAUGHT AT KALBARRI

Honorary Warden of Fauna Mr. R.A.C. Glass of Kalbarri, reported in his Quarterly Report for March 1968, that a cod weighing 369 lbs. was caught on March 23, 1968. The fish caught on a handline was a record catch for Kalbarri.

PROGRESS REPORT ON AQUARIUM

A recent inspection of the Aquarium being built at Waterman showed that the buildings are taking shape. On present progress the centre should be completed towards the end of July 1968.

STAFF NOTES

In recent weeks a number of officers have been hospitalised, either through illness or injury. These were - Mr. J.P. Robins, Senior Research Officer (Development), Mr. J.E. Bramley, Supervising Inspector and Mr. C.R. Haynes, General Assistant. It is good to see them all back at work.

* * *

A number of officers have recently received promotion, these include Mr. B.J. Kerr and Mr. P.W. Smith, both to positions of clerk C-II-2 at Head Office. Mr. Smith came to us from the Chief Secretary's Department. Others promoted were Mr. D.E. Blackman and Mr. M.J. Brown both appointed as Inspectors Grade 2, G-II-I.

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The research vessel "Flinders" departed from Fremantle on April 2, for the Shark Bay area. This is the vessel's third voyage since it was launched in November 1967 and should take about six weeks until she returns. The regular crew of Mr. C.J. Seabrook, Mr. E.A. MacKenzie, Mr. B.J. Duckrill and Mr. E.T. Oldfield were joined at Carnarvon by Research Officer Mr. R.J. Slack-Smith and Technical Officer Mr. G. Clifford. While in Shark Bay the research team will conduct a prawn staining programme to further study the migration of prawns in the waters of Shark Bay.

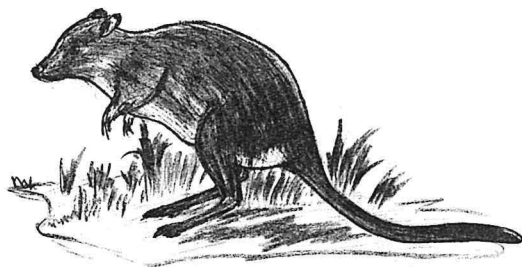
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RECORD BROWN TROUT CAUGHT AT THE CASCADES

In the first issue of the Bulletin published by a newly formed body "The West Australian Trout and Freshwater Angling Association Inc," there is a mention of a 6 lb. 4 ozs. Brown trout being caught. The fish caught in a pool above the Cascades, Pemberton, measured 25 inches long, with a $1\frac{3}{4}$ inch girth, and was a State record for Brown trout. Tackle used was a 6 foot rod with a D.A.M. Reel, a 9 lb. line and an artificial fish with a spinning type moth in front.

A STUDY OF THE BETTONG!

Mr. J. Sampson of the Zoology Department, University of Western Australia, has submitted his progress report for 1968 in the study of the Bettong conducted on the Tuttanning Reserve. His study includes field and laboratory work, but, this report refers only to his field work.



During the 14 visits made to Tuttanning, Mr. Sampson marked a total of 39 animals, 25 males and 14 females. It was established that at least 80% of the females have joeys in pouch at any one time. Joeys have been born every month of the year, suggesting that there is no clear breeding season. Length of pouch life is about 3 months. This has been confirmed by one animal having 4 joeys taken to term in the one year. A growth curve has been produced, and joeys can now be aged during pouched life.

The condition of the animals is very constant. Throughout the year all animals maintained weight with no seasonal fluctuations evident. It has become apparent that there is some seasonal movement within the habitat occupied by the animal. Some evidence supports contention that animals move to laterite ridges in winter, but more data is needed before firm conclusions can be drawn. The males appear to range over an area of 100 acres, whereas the females range over an area of only half of the males requirements.

A population of approximately 50 animals live in the study area comprising about 150 acres of whitegum box country.

OVERSEAS TRADE IN MARINE PRODUCE

In the report issued by the Statistics Section, Fisheries Branch, Department of Primary Industry, for the five months ended November, 1967 exports of marine produce were valued at \$9,160,000 an increase of 21.7% on the corresponding period in 1966. The export values of prawns, scallops, abalone and whale oil in particular were higher than they were for the same period in 1966. However, the export values of frozen craytails, whole crayfish and pearls were lower.

Crayfish

For the ten months ended October, 1967 the quantity of Australian crayfish imported by the U.S.A. was 9,883,00 lb, 5.0% higher than during the corresponding period in 1966.

Wholesale selling prices for Australian craytails on the New York market reached \$2.70 U.S. dollars per lb in the 8-10 oz grade during November, 1967. With the exception of South African craytails which have remained at a fairly constant price level of \$2.50 U.S. dollars per lb for the 8-9 and 9-10 $\frac{1}{2}$ oz grades during most of 1967, prices of craytails from other countries have increased. The outlook for the sale of Australian craytails in the U.S.A. seems bright as total availability of supplies there is very tight due to low domestic production, low stocks and a fall in imports from Canada and South Africa.

Prawns

For the five months ended November 1967 the quantity of frozen prawns exported from Australia was 1,661,000 lb worth \$1,591,000 representing increases of 24.1% and 31.0% respectively on the same period in 1966. Japan took the bulk of the exports.

Australian prawn exports to the U.S.A. are below the level they were in 1966. Domestic U.S.A. production has been high and stocks have been increasing. However prices continue to rise. The Chicago monthly average wholesale price for prawns in the large (26-30) count per lb brown 5 lb package reached 1.00 U.S. dollars per lb during November 1967 an increase of 6 U.S. cents per lb on the previous month but a decline of 11 U.S. cents per lb on November 1966. However, even with price increases there at present, the prospect of any significant rise in Australian exports of prawns to the U.S.A. appears only moderate because the market in Japan seems more attractive.

Abalone

For the five months ended November, 1967 the total quantity of frozen and canned abalone exported from Australia was 2,560,000 lb worth \$1,226,000, up 195.6% and 209.8% respectively on the same period in 1966.

IMPORTS

General

For the five months ended November, 1967, the value of imports of marine produce was \$12,284,000 a decline of 5.0% on the corresponding period in 1966. Increases occurred in the import values of whole fish, packaged fish in packs exceeding 1 lb, canned sardines, canned prawns, fish meal and fish, crustaceans and molluscs - otherwise prepared or processed i.e. either dried, smoked, slated, potted or concentrated. However, decreases occurred in the import values of packaged fish in packs not exceeding 1 lb, frozen prawns, canned

herrings and whale oil and were in total greater than the increases.

Packaged Fish

For the five months ended November, 1967 the quantity of packaged fish imported in packs exceeding, 1 lb was 11,394,000 lb worth \$2,162,000 up 37.7% and 50.9% respectively on the same period in 1966. The quantity of packaged fish imported in packs not exceeding 1 lb was 3,163,000 lb worth \$1,093,000 a decline of 44.3% and 48.9% on the same period in 1966.

THE PRICE OF FISH!

In the March, 1968 issue of "Fish Trades Review", published in Sydney, there is an up-to-date reference of the cost of fish and its comparative cost after processing.

The average shopkeeper who buys fresh fish at the market has not a clue what he loses in weight when he fillets, or processes his purchase, nor of his general marketing cost. In the mass hysteria of market auctions he pushes his prices up without a thought to the cost of the end product. Often he bids foolish prices merely to satisfy his own ego and to beat his opposition.

In compiling their charts "Fish Trades Review" has taken into account only the basic market charges of cleaning, wheeling and crate hire. The cost of the fillets does not include such vital overhead charges as transport, to shop, waiting time at market, wrapping, insurance, wages, rent and so on, and of course, the retailers' profit margin. Shopkeepers have found that at certain times of the year some varieties of fish give a better or worse return than at other times. The retail margin on fish varies according to the locality of the shop, its turnover, the type of fish sold and the shopkeeper himself. There is no such thing as a fixed retail margin on fish.

* * *

A note on human relations (or the difference between you and me).

When I criticise, I am constructive; when you do so you are carping. I stick up for my rights, thus showing strength of character; you do, and you are thinking only of yourself. If I hold to my opinions, I am firm; if you insist on contrary points of view, you are pig-headed: If I forget to seek your views, it is an oversight; if you forget to seek mine, you are rude. If I don't do a job, it is because I am so busy; if you don't you're lazy. If it takes me a long time, it is because I am painstaking; not slow, like you. If I do more than asked, I show initiative; if you do, you are being officious.

When I am friendly, well, I am friendly; if you are, you must have some ulterior motive.

* * *

WHAT IT COSTS TO PROCESS:Mullet

Mullet is a wasteful fish to process losing half its weight when turned into edible fillets. A 70lb box of mullet reduces to 54lb of cleaned fish with gills out, to 40lb of fillets with wings on and to only 33lb of fillets with wings off.

The cost chart (to the nearest cent) was prepared in conjunction with the Seafoods Preparation Association. It takes into account only the basic charges of \$1 a box for straight-gutting \$1.20 a box filleting charge, box hire 10c and wheeling charges 10c per box.

The big additional overhead costs, incidental to the retailing of fresh fish must be added to these basic charges before the selling price to the public is determined.

Remember, the shopkeeper is obliged by law to trade at a profit.

Mullet ranges throughout the temperate regions of the world and is highly prized for its value as a food fish.

<u>Wholefish</u> <u>Uncleaned</u>	<u>Cleaned</u> <u>with</u> <u>Gills out</u>	<u>Filletted</u> <u>with</u> <u>Wings on</u>	<u>Cleaned</u> <u>with</u> <u>Wings off</u>
5c	8c	12c	15c
6c	9c	14c	17c
7c	11c	16c	19c
8c	12c	17c	21c
9c	13c	19c	23c
10c	15c	21c	25c
11c	16c	22c	27c
12c	18c	24c	29c
13c	19c	26c	31c
14c	20c	28c	33c
15c	21c	30c	35c
16c	23c	31c	37c
17c	24c	33c	39c
18c	25c	35c	41c
19c	27c	37c	43c
20c	28c	38c	45c
21c	29c	40c	47c

(cont'd on pg. 11)

22c	30c	42c	49c
23c	31c	43c	51c
24c	33c	45c	53c
25c	34c	47c	55c
26c	35c	49c	57c
27c	37c	50c	58c
28c	38c	52c	60c
29c	39c	54c	62c
30c	40c	56c	64c

Snapper

The kingly snapper is one of our best display fish and is usually sold over the counter as wholefish.

Larger fish are sometimes filleted or butchered into cutlets for special orders and the catering trade.

In our test, a 76lb box of snapper reduced to 36lb of fillets.

<u>Whole Fish</u> <u>Gutted but unscaled</u>	<u>Cost of Fillet</u> <u>or cutlets</u>
15c	33c
16c	37c
17c	40c
18c	42c
19c	44c
20c	46c
22c	50c
25c	56c
27c	60c
30c	67c
35c	77c
40c	88c
45c	99c
50c	\$1.90
55c	\$1.20c
60c	\$1.31c

Trevally

The flesh of the trevally is tender, white and deliciously flavoured. It is a favourite with many professional cleaners who prefer it to John Dory.

Closely related to the kingfish, the trevally plays a small but important part in Sydney's fresh fish supply. In the past two years more than 400,000lb of trevally have been sold on the market floor.

Biggest quantities come from the Botany Bay fishermen around September, although they run from May onward.

Trevally is sold gutted, with the heads on, in the shops. Most shopkeepers will remove the heads and fillet or split the fish without extra charge, for customers. This is sound business.

Although not usually regarded as a cooking fish, the trevally is another standby for the fresh fish shop. It is as well to know its filleting cost against such an emergency.

A 60lb box of trevally reduces to 42lb headed and gutted, and to 32lb of fillets with the wings off.

<u>Whole Fish Uncleaned</u>	<u>Headed Gutted</u>	<u>Filletted Wings off</u>
5c	10c	14c
6c	11c	15c
7c	13c	17c
8c	14c	18c
9c	16c	19c
10c	17c	23c
11c	18c	25c
12c	19c	27c
13c	21c	29c
14c	22c	31c
15c	23c	33c
16c	25c	35c
17c	26c	37c
18c	27c	39c
19c	28c	40c
20c	31c	42c
25c	39c	51c
30c	43c	61c
35c	52c	70c
40c	60c	79c

Garfish

Garfish are exquisite table fish despite their many fine bones and bring high prices at the wholesale market, if their condition is good.

Usually the garfish is sold fresh over the counter, but in some locations, and depending on the reputation of the chef it is cooked and sold with the take-away chips.

Garfish are an important part of the fishing industry in New South Wales and about 250,000lb of them are sold annually through the Sydney market. April and May are the months of greatest production.

The cost chart for straight-gutting a box of garfish takes into account only basic market charges and cleaning fee.

A 70lb box of gars reduces to 60lb of cleaned fish.

<u>Whole Fish Uncleaned</u>	<u>Gutted & Cleaned cost per lb.</u>
10c	14c
11c	15c
12c	16c
13c	17c
14c	18c
15c	19c
20c	28c
25c	31c
30c	37c
35c	43c
40c	49c
45c	55c
50c	60c
55c	65c
60c	72c

Flathead

Trawled flathead loses 60 per cent in weight when processed into edible fillets for the cooking range.

From an 80lb box of trawled flathead the average weight of straight-gutted fish is 65lb. Processed into fillets, the return is 40lb of fillets, with wings on, and only 35lb of fillets with wings removed.

The cost chart, prepared by the New South Wales Master Fish Merchants Association in conjunction with the Seafoods Preparation Association, takes into account only the basic charges of 80c a box for straight-gutting, \$1.20 a box filleting charge, box hire 10c and wheeling charge 10c per box.

The big additional overhead costs, incidental to the retailing of fresh fish, must be added to these basic charges before the selling price to the public is determined.

Uncleaned whole-fish cents per lb	Straight Guttet cents per lb	Filletted, wings on cents per lb	Filletted, wings off cents per lb
10c	14c	23.5c	27c
11c	15c	25.5c	29c
12c	16c	27.5c	31.5c
13c	17.5c	29.5c	34c
14c	18.5c	31.5c	36c
15c	20c	33.5c	38.5c
16c	21c	35.5c	40c
17c	22.5c	37.5c	42c
18c	23.5c	39.5c	44.5c
19c	24.5c	41.5c	47c
20c	26c	43.5c	49.5c
21c	27c	45.5c	52c
22c	28.5c	47.5c	55c
23c	30c	49.5c	56.5c
24c	31c	51.5c	57.5c
25c	32c	53.5c	59.5c
26c	33.5c	55.5c	63c
27c	34.5c	57.5c	65c
28c	36c	59.5c	67.5c
29c	37c	61.5c	70c
30c	38.5c	63.5c	72c
31c	40c	65.5c	74.5c
32c	41c	67.5c	77c
33c	42c	69.5c	79c
34c	43c	71.5c	81c
35c	44.5c	73.5c	84c
36c	46c	75.5c	86c
37c	47c	77.5c	88.5c
38c	48c	79.5c	90c

(cont'd on pg. 15)

39c	50c	81.5c	93c
40c	51c	83.5c	95c
41c	52c	85.5c	97c
42c	53c	87.5c	99.5c
43c	54.5c	89.5c	\$1.02c
44c	55.5c	91.5c	\$1.04c
45c	57c	93.5c	\$1.07c
46c	58c	95.5c	\$1.09c
47c	59c	97.5c	\$1.11c
48c	60.5c	99.5c	\$1.14c
49c	62c	\$1.01c	\$1.16c
50c	63c	\$1.03c	\$1.18c

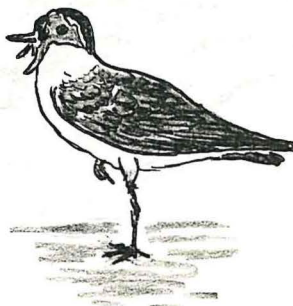
NEW FAUNA RESERVES SET ASIDE IN THE LAKES DISTRICT

The Governor in Executive Council has approved the setting aside of nine areas for the purpose of "Conservation of Flora and Fauna" in the Lake Grace Shire district. Notice to this effect was published in the Government Gazette on March 15, 1968.

The areas in question are:-

Roe Location	2601	becomes Reserve	No. 29018	-	4101	acres
-	2602	-	No. 29019	-	8211	-
-	2603	-	No. 29020	-	3774	-
-	2604	-	No. 29021	-	264	-
-	2606	-	No. 29022	-	150	-
-	2607	-	No. 29023	-	3777	-
-	2608	-	No. 29024	-	3901	-
-	2609	-	No. 29025	-	511	-
-	2814	-	No. 29024	-	79	-

Masked Plover (*Lobibyx miles*); ranges now in its distribution as far south as Perth. Until recently this north Australian species was known only from the Kimberley Division.



COOKING AT SEA - - - STUFFED SALMON LOAFIngredients.

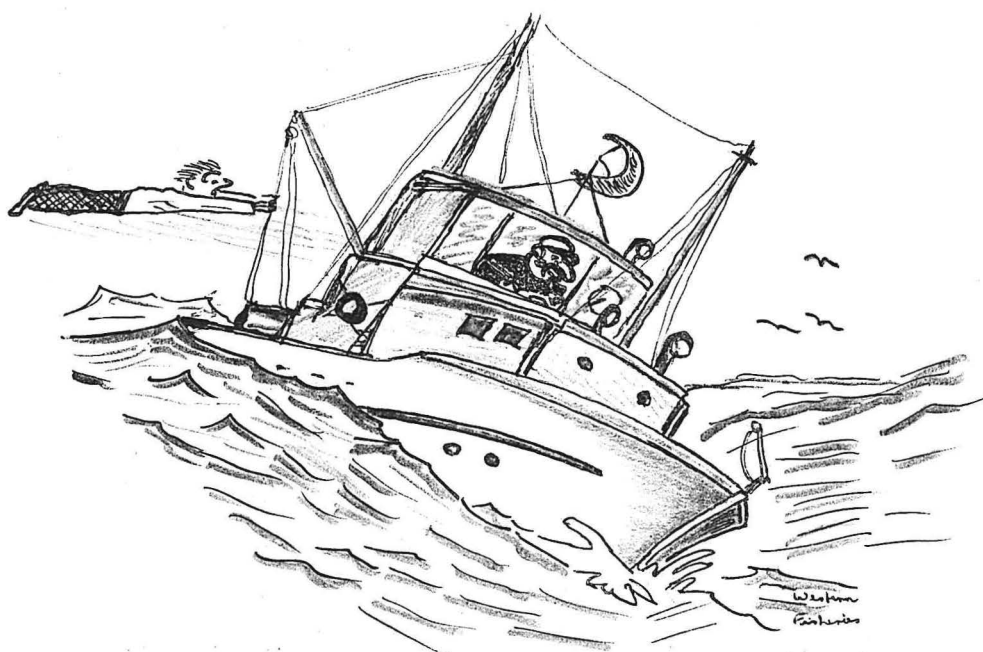
2 cans (15 ozs each) salmon
 1 cup chopped celery
 1 cup chopped onions
 $\frac{1}{4}$ cup butter or other fat
 2 tablespoons sliced olives
 2 cups soft bread crumbs
 Paprika

Dressing : Cook celery and onion in fat until tender (about 10 mins) .
 Add seasoning and olives. Toss with breadcrumbs.

Method.

Flake salmon and crush soft bones with a fork. Combine flaked salmon and salmon liquid. Place half the salmon in greased loaf pan (9"x 5" x 3" pyrex dish). Spread with dressing. Top with remaining salmon and sprinkle with paprika. Bake in moderately hot oven (400° F) for 30 minutes.

Happy Eating!



"Glass is fallin' ... better slip out and tie things down".