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16(7) Jul 1967

DEPARTMENT OF PARKS AND WILDLIFE

**SERVICE BULLETIN**

-7 JUL 1967

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JULY, 1967  
VOL. XVI, No. 7

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

DEPARTMENT OF FISHERIES AND FAUNA

MONTHLY SERVICE BULLETIN

TUNA BOATS FREQUENT FREMANTLE

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WESTERN AUSTRALIA.

Japanese tuna boats which operate in the tuna grounds off the north west coast of Australia are becoming more frequent users of the port of Fremantle.

Since October 1966, 174 separate visits by Japanese tuna boats have been made to the port to take on provisions and fuel.

Apart from routine visits to take on ships' supplies and fuel the tuna boats have also made emergency calls to land injured and sick crew members.

TUNA AERIAL SURVEY

Survey VI was flown during the period May 6 to May 14.

Comments:

Water colour conditions were further improved in the survey area except for the region north and north-east of Derby where muddy conditions prevailed inshore and the water was "milky" looking seaward to the extremity of the area surveyed. No fish or bird sightings were made in this area.

In the remainder of the survey area the following water colour conditions were noted and differed from those seen during survey V. - (i) the water was less "milky" in appearance, (ii) the run-off from the land had diminished to almost negligible proportions and mud areas were noted only close to river and creek mouths and (iii) the tongue-like intrusions of offshore blue water into the green coloured inshore water had disappeared and a clearly defined border between the blue and green water was noted. Lines and patches of *Trichodesmium* (a type of plant plankton) occurred along this border. Most of the sightings showed that the tuna were close to this border but in the green water.

Sightings of birds have increased and the birds were aggregated on or adjacent to outlying islands. The birds were mainly black gannets and terns.

Weather conditions on this survey were the best experienced to date. Calm conditions existed south of North-West Cape, but sightings, except in the Shark Bay region, remained low as in previous surveys. Fish school sightings increased by 118 when compared with the numbers sighted during survey V.

The fish schools were, on the average, much larger in size and the areas of greatest concentration were (i) off Onslow where medium-size fish were present and (ii) off Broome where the larger fish predominated.

Current lines were not so outstanding as in previous surveys.

The charts show the tracks flown and the numbers of fish schools sighted.

Table I summarises the number of sightings of schools by size and area and Table II shows the analysis of the size composition of the schools sighted.

Mr. C. Gibson, a leading Eastern States tuna boat operator, accompanied departmental officers on this flight.

TABLE I.

Area	Outward Flight School Sightings			Total
	Small	Medium	Large	
Fremantle -Carnarvon	6	3	1	10
Carnarvon -Onslow	11	7	8	26
Onslow -Pt. Hedland	8	15	12	35
Pt. Hedland-Broome	2	9	3	14
Broome -Derby	-	-	10	10
Derby -Wyndham	-	-	-	-
TOTAL	27	34	34	95

Inward Flight School Sightings			Area	Total
Small	Medium	Large		
7	26	21	Wyndham -Broome	54
-	-	-	Broome -Pt. Hedland	-
10	4	1	Pt. Hedland-Onslow	15
8	7	-	Onslow -Carnarvon	15
-	-	-	Carnarvon -Geraldton	-
-	-	-	Geraldton -Fremantle	-
25	37	22	Total	84

TABLE II.

Fish Size*	School Size			Total
	Small	Medium	Large	
Small	9	2	2	13
Medium	36	37	19	92
Large	8	38	28	74
Total	53	77	49**	179

\* Small - 15 lbs.

\* Medium - 15-40 lbs.

\* Large - 40 lbs.

\*\* Includes five very large schools up to  $\frac{1}{2}$  mile in diameter.  
No. of Bait Schools sighted = 433+

FROZEN TUNA EXPORT PRICES ARE DROPPING

Suisan Tsushin for February and March, 1967 reports a sharp decline in Japanese frozen tuna export prices. Good yellowfin catches by California tuna fishermen and the slowdown in canned tuna sales in the U.S. have depressed sales of Japanese frozen tuna to U.S. packers to the lowest level in recent years. The early February price offered by U.S. packers for gilled-and-gutted yellowfin for direct export was US\$430 a short ton (2,000 lb.) c.i.f. Prices for direct albacore exports to the U.S. also are expected to decline below \$500 a ton c.i.f. heretofore maintained.

In the Atlantic, where most of the Japanese tuna fleet continues to concentrate on albacore, export prices are expected to weaken further. Current prices of Atlantic caught albacore are not known because virtually no new sales to U.S. packers have been made since mid-January. Then the price was \$440 a ton f.o.b. Atlantic transshipment port. Prices may have fallen below \$420 a ton.

Japanese Watch Market Changes

In the Indian Ocean, Japanese vessel operators now fishing mainly for yellowfin are greatly concerned about recent market developments, especially dropping California yellowfin prices. The \$320 a ton recently offered by California packers for domestic yellowfin landings is comparable to the Japanese export price of \$410 a ton c.i.f. If the U.S. ex-vessel price drops to \$300 a ton, the Japanese export price may drop to below \$400 a ton. The Japanese also are concerned over growing tuna operations in the Indian Ocean by Formosa and other countries. They fear this may further disrupt prices.

Another problem facing the tuna industry is Italy's reduced tuna imports from Japan in recent months. Italy has provided a good market to which Japanese Atlantic and Indian Ocean-caught yellowfin could be diverted when U.S. market conditions were unfavourable.

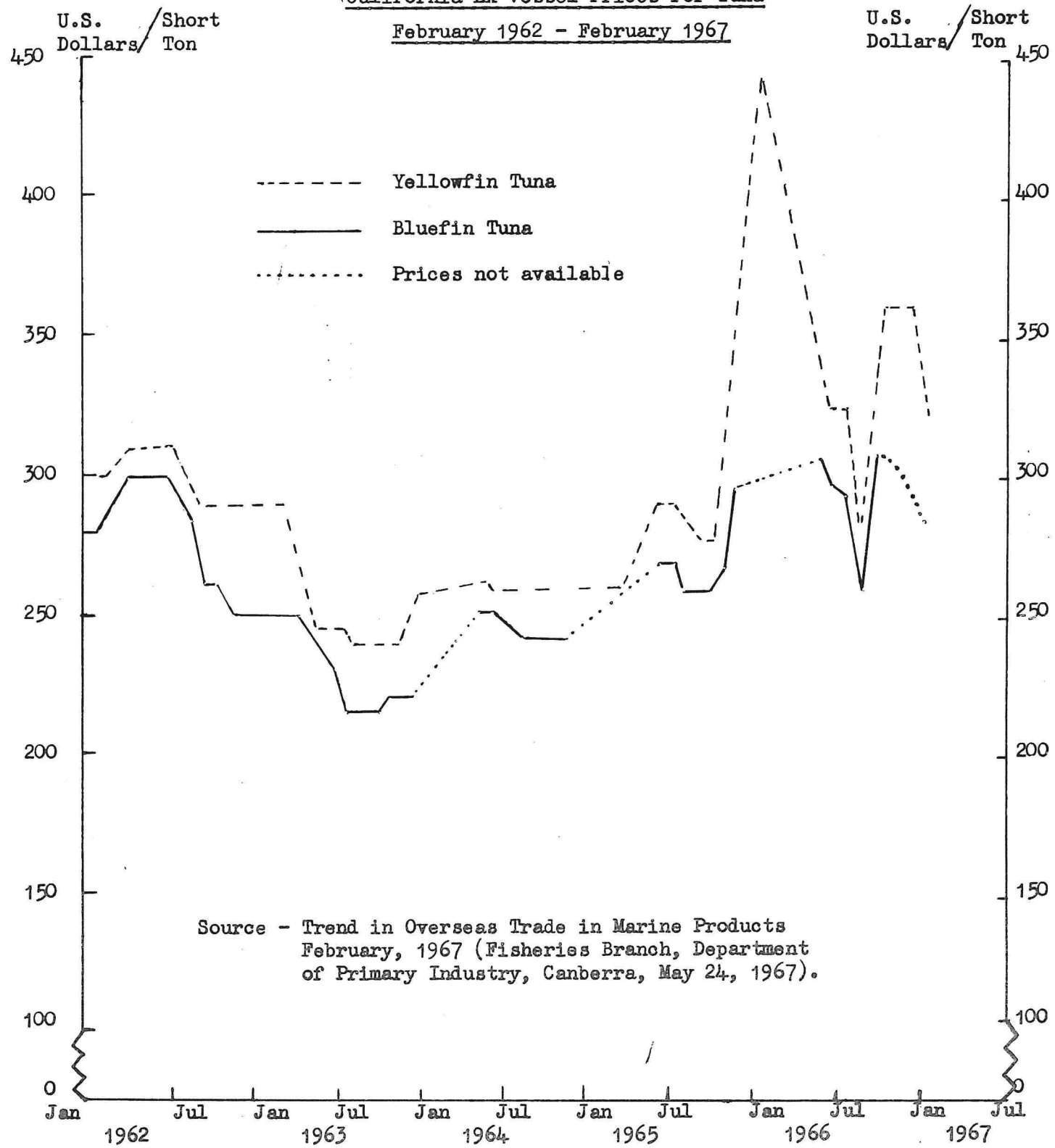
Australia exported 760,284 lb. of tuna valued at \$134,103 during March. All of this went to Italy.

BIG TUNA CAUGHT IN SOUTH AUSTRALIA

A 304 lb. tuna, said to be the heaviest caught in South Australian waters, was landed during April by professional fisherman Ivan Sutic, of Rocky Island, near Port Lincoln.

Fish Trades Digest reports that the catch was made from the 75 ft. tuna clipper, New Dolphin, with a single pole, but help was needed to land it. Big tuna are normally caught by using two or three poles. The previous record tuna catch by a professional fisherman in South Australia was made from the tuna boat Jadrin, off Port Lincoln.

California Ex Vessel Prices for Tuna  
February 1962 - February 1967



EXTENSION AND PUBLICITY OFFICER APPOINTED

Mr. Colin Waldron has been appointed to the new position of Extension and Publicity Officer and will take up duties with the Department early in July.

Mr. Waldron, who has extensive experience in the publicity field, has been the Government Tourist Bureau's Publicity Officer for the past 5 years.

Preparation of brochures, bulletins and pamphlets to inform the fishing industry of developments within Australia and elsewhere will be an important part of Mr. Waldron's duties. They will also include promotional activities associated with the Department's development programme and the publication and dissemination of results of departmental research investigations.

Mr. Waldron will also be responsible for the organisation of training courses, field days, lectures and seminars to bring fishermen up to date with current developments in the fishing industry.

DEPARTMENT OF PRIMARY INDUSTRY TO APPOINT  
FISHERIES EDUCATION OFFICER

The Department of Primary Industry, Canberra, has called applications for the position of Education Officer to develop, plan and organise training courses for all sectors of the fishing industry and Government officers concerned with fisheries.

Preparation of text and audio-visual material for the courses will also be part of his duties.

The Education Officer will be located at the C.S.I.R.O. Division of Fisheries and Oceanography, Cronulla, N.S.W. Commencing salary is subject to negotiation but is expected to be in the range of \$5,000 to \$6,000 p.a. and will be dependent on qualifications and experience.

The Education Committee of the Commonwealth/States Fisheries Conference has been the prime mover in the creation of the post and the activities of the Education Officer will be under the general direction of the committee.

The committee was forced to cancel the 1967 Course for Field Officers usually held at Cronulla, N.S.W. because it had not been possible at the time to proceed with the appointment of an Education Officer.

MINISTER FOR FISHERIES AND FAUNA VISITS PRAWN FISHERY

The Minister for Fisheries and Fauna (Mr. MacKinnon), accompanied by the Director, made a brief visit to Shark Bay, Carnarvon and Exmouth Gulf in June.

This was the first opportunity that the Minister had had to visit the Shark Bay prawn fishery. Meetings with fishermen were held at each of the three centres visited.

PLAINS TURKEY SURVEY

We have been asked to publish the following letter -

"Fisheries and Wildlife Department

605 Flinders Street Extension,  
Melbourne C.3 Vic.

May 18, 1967.

Dear Mr. Fraser,

It would be appreciated if, in the columns of your Department's Monthly Service Bulletin, you could make reference to the outstanding response to the request for information on the plains turkey in Western Australia.

Considerable valuable information has been obtained from the many reports sent in by honorary wardens, officers of the Agricultural Protection Board and interested persons all over the State.

At the present time this information is being examined together with the little data available from other parts of Australia. It is obvious that through the special co-operation of your Department and those persons working with it, the information received from Western Australia greatly exceeds that from any other part of Australia, and I wish to record my appreciation.

Yours sincerely,

A. Dunbavin Butcher,  
Director of Fisheries and Wildlife"

AIR TRAVEL INSURANCE INCREASED

The Under Treasurer has notified the Department that Personal Accident Insurance cover for representatives of the Government or Government Employees travelling on official business overseas, interstate or intrastate by air has been reviewed.

The Premier has now approved that the present coverage of \$20,000 be increased to \$30,000.

The new cover came into operation on May 11.

STAFF MOVEMENTS

Inspectors at Cervantes, Cape Leschenault and Ledge Point have been recalled to Perth as the crayfishing season begins to taper off. Cervantes will be patrolled from Jurien Bay. Cape Leschenault and Ledge Point will be patrolled from Lancelin until the end of the season.

Inspector Steicke has been transferred to Geraldton and will take over as skipper of the p.v. "Dampier". Assistant Inspector McCarthy has also been transferred to the "Dampier" as crew member.

Assistant Inspector M.J. Brown has been transferred to Fremantle to take up duties as crew member on the p.v. "Misty Isle".

Lack of office space at Perth District Office has forced the Department to transfer Inspector Crawford to Fremantle District Office.

Assistant Inspector I.W. Burns has taken up duties at Albany to assist Inspector Gordon.

Technical Officer P. Yewers spent three weeks at Shark Bay in June working on the whiting research programme.

Technical Officer P. Woods also spent some time in the north collecting research data on the current prawn fishing season at both Carnarvon and Exmouth Gulf.

\* \* \* \*

Research Officer R.J. Slack-Smith left Perth on June 6 to attend the World Scientific Conference on the Biology and Culture of Shrimps and Prawns at Mexico City.

A report of Mr. Slack-Smith's itinerary appeared in the March issue of the Monthly Service Bulletin.

\* \* \* \*

The seventh in the current series of tuna surveys got under way in the second week of June. Senior Research Officer (Development) Mr. J. Robins accompanied Technical Officer, K. Godfrey on this occasion.

Mr. Robins is also doing preliminary work on the development of the prawn fishery at Nickol Bay and surveyed this area during the flight.



WORK METHODS ARE IMPORTANT

The following is an abridged version of an In-Service training document produced by the Public Service Commissioner and is rather thought provoking. How do you measure up?

REASON FOR EFFICIENCY:

There are two principal reasons why Public Servants must perform their duties efficiently and to the best of their ability. Firstly, it is the duty of all Public Servants to do their jobs efficiently. Secondly, to obtain promotion in the Service it is necessary to display efficiency.

HOW TO GAIN EFFICIENCY:

Academic study and Performance on the Job are complementary in developing efficiency.

Academic Study:

The pursuit of academic qualifications is something the individual must decide for himself but the obtaining of formal qualifications is not the only way to increase knowledge. Wide reference reading in your chosen field is also very important.

Performance on the Job:

Covers -

- (1) Attitude
- (2) Understanding and going about your job
- (3) Method of performing duties, including -  
performing difficult tasks;  
decisiveness;  
work simplification.

Attitude:

When attending to the needs of the public there is a need to maintain a high standard of public relations. It is just as important to display the same qualities in dealings with your fellow workers.

Cultivate a pleasant outlook towards others. Be courteous and co-operative at all times. Show tact in your dealings with "difficult" people - you will gain a feeling of satisfaction in winning them over.

Learn to control your temper. If you lose your composure you will lose command of the situation.

Develop tidy habits - be fresh and clean in dress.

Ensure that your behaviour is acceptable and not offensive to others. If you fit happily into a work situation and develop the correct attitude, work will become a pleasure.

#### Understanding and Going about your Job

Get to know the other members of your section, what they are doing and where your job fits into the pattern.

Ask questions about your job (but keep notes and make sure you do not have to ask the same question again).

Take an interest in your job; develop an enquiring, analytical and critical mind. Know what is expected of you, how to go about it, why it is done and when it is to be done.

#### Method of Performing Duties

Survey your work each day. Check the priority of work to be done and deal with urgent matters first.

Arrange work tidily on your table - have before you only the task with which you are dealing.

Keep your work moving as quickly as possible, but not to the detriment of thoroughness. Arrive at a balance between speed and accuracy. Some jobs, such as checking rate notices, need speed, others, such as examining applications for the transfer of land, require the emphasis on accuracy. Ensure that you have covered every aspect thoroughly to avoid having to go over the same ground.

#### Performing difficult tasks

Do not postpone difficult tasks. Normally jobs become harder in time rather than easier and, apart from that, knowing that you have a difficult file in your inward tray can affect your other work. If you postpone hard tasks, you will lose the confidence of your superiors - you may even lose confidence in yourself. Weigh up the "pros and cons" and if you do not feel competent to do the job, seek the advice of others.

#### Decisiveness

Think over a problem, covering every aspect; deliberate carefully, but make up your mind promptly, impartially and decisively. If a decision involves the establishment of a policy by someone higher than yourself, submit the matter to the person concerned supplying him with sufficient detail to make a decision. However, do not make enquiries at an unnecessarily high level and do not waste the time of your superiors with routine matters.

#### Work Simplification

You should constantly seek ways to improve the methods by which your job is carried out and not leave it to your superior or to other people.

Before attempting to simplify your job, it is essential that you completely know and understand it. Analyse each process and determine its necessity. Seek a simpler or quicker way of doing it effectively.

The steps in work simplification are :-

1. List the details of the present method of doing the job.
2. Question each one of these details - ask whether it is necessary whether it can be eliminated or replaced or moved to a different place in the process or modified or combined with other steps. Challenge traditional and long established practices which may have out-lived their usefulness.
3. Develop the new method by eliminating, re-arranging or combining detail. Discuss the proposed new method with your superior - he may see pitfalls which you have overlooked or of which you may have no knowledge. Never put a new system into practice or discontinue a process which you consider to be superfluous, without your supervisor's approval.
4. Apply the new method. You can thus increase your efficiency not through working harder or faster, but through simplified, easier, less wasteful work.

#### A BRIEF OUTLINE OF THE FISHERIES OF WESTERN AUSTRALIA

Many enquiries are received by the Department for information about the Western Australian fishing industry, particularly from school children doing project work.

The demand for this material has caused the Department to produce a descriptive document outlining briefly the major fisheries. It is now freely available.

Crayfishing, salmon, prawning, whaling and pearling are the main fisheries discussed, while a general outline of the smaller commercial fisheries is given. It is considered that this small booklet will provide adequate information as an introduction to the Western Australian fishing industry not only for the school children but for others interested in our commercial fisheries.

BINDOON AND CHITTERING LAKES

The Shire of Chittering has requested the department to support a move to have the Bindoon and Chittering Lakes declared a Bird Sanctuary.

Indiscriminate shooting of waterfowl and bird life at the lakes has disturbed local property owners and the Shire.

Duck shooting at these lakes is traditional and the Department is investigating the proposal to determine whether or not the lakes should be closed for conservational reasons.

DUMBLEYUNG LAKE - RESERVE FOR FLORA & FAUNA

Reserve 5999 situated just south of Dumbleyung Lake has been set aside by the Lands Department for the Conservation of Flora and Fauna.

The Reserve will be vested in the Fauna Protection Advisory Committee.

This reserve is particularly valuable to wildlife, particularly as a wetland habitat. Swans, hoary-headed and little grebes, coot, teal, black duck, pink-eared duck and blue-billed ducks and other bird life are known to abound in the area.

CADET MORRISON IN VIETNAM

Fauna Cadet K.D. Morrison, better known these days as Private Morrison, has written to us from Vietnam asking to be kept up to date with developments in regard to both fisheries and fauna matters.

Kevin will be kept supplied with literature published by the Department and other items of news. We look forward to receiving news from Kevin occasionally, although we rather suspect that the field observations he is making now are far removed from the type of observations he used to make on fauna patrols.

Anyone wishing to drop a line to Kevin could so by forwarding letters to :-

Private K.D. Morrison,  
5714564,  
8 Platoon, C Company,  
Australian F.T.O. 4,  
G.P.O. Box,  
SYDNEY      N.S.W.

SCHOOL FOR FAUNA WARDENS

The first school conducted by the Department for new wardens was completed during the second week of June.

The addition of several new wardens to the staff over recent weeks enabled the Department to arrange a group training exercise not possible in the past because of the small number of wardens on the staff.

A full week of lectures and practical training was organised by Senior Warden S.W. Bowler. The programme for the week is listed below :-

Monday June 12.

Office administration  
by Chief Clerk A.J. Mearns.  
Responsibilities and duties of fauna wardens  
by Fauna Officer H.B. Shugg.  
Reserve management  
by Dr. A.R. Main.

Tuesday June 13.

Full day at the W.A. Museum conducted by Dr. G.M. Storr.  
Identification, range and habitat of birds, snakes and lizards.

Wednesday June 14.

Liaison between Fisheries and Fauna Branches  
by Supervising Inspector J.E. Bramley.  
Vermin control  
by Messrs. Marshall and Walton of the Agriculture Protection Board.  
Fisheries Research - C.S.I.R.O. State Co-operation  
by Senior Research Officer B.K. Bowen.

Thursday June 15.

Grey Kangaroo research  
by Fauna Research Officer J. Mott.  
Visit South Perth Zoo where Mr. T. Spence, Superintendent of the Zoo, conducted lectures on marsupial, bird and snake recognition and habitats.

Friday June 16.

Inspection of short-necked tortoise reserve near Bullsbrook, conducted by Mr. A. Burbidge, of the W.A. University.

Further training will be given when lecturers are available. They will include :-

Waterfowl Research

Fire Control

Prosecution Procedures.

ENFORCEMENT ACTIVITIES  
PROSECUTIONS, MAY 1 - JUNE 30, 1967.

Name	Offence	Place of Hearing	Date of Hearing	Fine
KENNEDY, T.W.	Overlength net	Albany	2.5.67.	\$ 10
AVERY, P.J.	Closed Season	Busselton	13.6.67.	\$ 10
AVERY, I.	Closed Season	Busselton	13.6.67.	\$ 10
	Marron			
LYMBERY, K.	U/S marron	Collie	23.5.67.	\$ 20
SAGGERS, R.G.	U/S marron	Collie	23.5.67.	\$ 20
BRIGUGLIO, M.	Excess number of craypots.	Fremantle	1.5.67.	\$ 50
BRIGUGLIO, G.	Excess number of craypots.	Fremantle	1.5.67.	\$ 50
BRIGUGLIO, G.	Excess number of craypots(2nd offence).	Fremantle	1.5.67.	\$ 50
REBELO, V.G.	U/S crayfish	Fremantle	19.5.67.	\$100
BURTON, N.J.	Unnumbered boat	Geraldton	19.5.67.	\$ 10
HEWITT, K.J.	Unnumbered boat	Geraldton	19.5.67.	\$ 10
LANG, J.L.	No registration numbers visible.	Geraldton	19.5.67.	\$ 10
MILANKO, S.	U/S crayfish	Geraldton	19.5.67.	\$100
PHILLIPOUS, A.	U/S crayfish	Geraldton	19.5.67.	\$100
ROWE, D.F.	U/S crayfish	Geraldton	19.5.67.	\$100
RUBERY, W.	U/S crayfish	Geraldton	19.5.67.	\$ 40
PIGGOT, R.B.	U/S marron	Harvey	24.5.67.	\$ 20
HAMEISTER, D.G.	U/S crayfish	Perth	12.5.67.	\$100
JARRETT, W.H.	Netting in close waters.	Perth	10.5.67.	\$ 20
KENWORTHY, H.	Carrying net on close waters.	Perth	10.5.67.	\$ 40
STAMELOS, J.	U/S crayfish	Perth	10.5.67.	\$100
WADDELL, J.W.	No name or address on "J" form.	Perth	3.2.67.	Caution
NIEWWENHUIS, F.	U/S crayfish	Perth	13.6.67.	\$100
HOLLIDAY, R.	U/S crayfish	Perth	13.6.67.	\$100
CASTLE, C.F.	U/S crayfish	Perth	13.6.67.	\$100

AUSTRALIAN ANIMAL TECHNICIANS ASSOCIATION

The Western Australian branch of the Australian Animal Technicians Association has released its syllabus for a new animal technicians course which will begin at Leederville Technical School in 1968.

There are no academic pre-requisites required to enrol for this course. However, the student must be a member of the A.A.T.A. normally engaged in the care of animals. Laboratory workers, veterinary assistants, animal hospital technicians, zoological animal attendants, livestock and poultry farm technicians, are among those already enrolled. People concerned with the care of indigenous fauna are also encouraged to participate.

The syllabus for the new course is set out below:

1. Mathematics: Relevant to laboratory calculations, e.g. weights, measures and volumes (metric system).
2. Elementary Biology:
3. Elementary Bacteriology (botany): Diseases transmitted from animal to man and animal to animal. Safety precautions.
4. Anatomy: Mammalian, avian and marsupial (Elementary histological structure of organs).
5. Physiology (1): Mammalian, avian and marsupial reproduction, gestation periods and oestrus cycle.
6. Physiology (2): Vascular system and structure of function of blood.
7. Physiology (3): Excretion and respiration.
8. Physiology (4): Digestive systems (herbivore - omnivore, carnivore - ruminants).
9. Nutrition: Function of carbohydrates, fats, proteins, vitamins, minerals.
10. Elementary Entomology: Fleas, lice, ticks, mite, cockroaches, mosquitoes, flies.
11. Disinfectants and Antiseptics: Phenols, cresols, alcohols, formaldehyde, detergents.
12. The Law and the laboratory animal.
13. Housing, cages and ancillary equipment.
14. Sexing and identification; handling.

15. Temperature and humidity, food storage, infestation.
16. Anaesthesia and Euthanasia.
17. Cleaning, sterilizing, autoclaving, hygiene and discipline.

The certificate issued by the A.A.T.A. at the completion of the course will be recognised throughout Australia, United States of America and the United Kingdom.

The Association is conducting a short introductory course this year and prospective students are still welcome to enrol. Successful examinees will be awarded a certificate by the National Council of the Australian Animal Technicians Association, which will be recognised throughout Australia.

Enquiries concerning either the introductory course or the 1968 certificate course should be directed to :-

Mr. L. Pridmore,  
Hon. Secretary,  
Australian Animal Technicians  
Association,  
C/o Public Health Laboratories,  
Sir Charles Gairdner Hospital,  
HOLLYWOOD W.A.

OR

Mr. J.A. Sanders,  
Assistant Hon. Secretary,  
Australian Animal Technicians  
Association,  
C/o Department Physiology,  
University of W.A.,  
NEDLANDS W.A.

#### OFFICE AND QUARTERS, CERVANTES

The Under Secretary for Lands has approved a request for an area to be set apart as a reserve for the purpose of office and quarters for the Fisheries and Fauna Department at Cervantes.

The reserve is located at Lot 3, Cataloni Street, Cervantes, which is right opposite the track into Cervantes from Jurien Bay. Supervising Inspector J.E. Bramley states that the block is suitable for parking of caravans and is situated only a few hundred yards from the processing factories at Cervantes.

Applications are still before the Under Secretary for Lands for blocks at Ledge Point and Cape Leschenault.



WESTERN SHRIKE-TITS SIGHTED IN WANDERING SHIRE

Fauna Wardens T. Evans and A. Marshall reported sighting a pair of Western Shrike-Tits, only 60 miles from Perth, during a recent patrol of Gleneagle Forest area. The birds were observed in wandoo country approximately 5 miles along Wearne Road east of Albany Highway.

The sighting of these birds is of interest because of the restricted distribution of the species in this area.

Serventy and Whittell - "Birds of Western Australia" - describe the distribution of the Western Shrike-Tit (Falcunculus frontatus) - "Found in the South West to Morawa, Moora, Kellerberrin and Norseman, favouring the lighter timbered wandoo, salmon gum and jam country, but not venturing far into the heavy jarrah forest areas."

Occasionally birds appear in the western coastal strip. There is also some penetration along the south coast corridor and S.W. Jackson recorded the species in the vicinity of Irwin's Inlet on numerous occasions in the summer of 1912-13".

Other birds sighted in the immediate area by Wardens Evans and Marshall included Western Shrike-Thrush, Black-Capped Sittilla and Rufous Tree-Creeper.

MUSEUMS ENDANGER WILDLIFE

The January issue of Habitat, journal of the Council for Nature, draws attention to the danger that increased collecting of specimens for museums will damage local populations of animals and plants. Already one long-term piece of ecological research has been ruined after years of effort because of thoughtless collecting for this purpose. It is suggested that museums should pay more attention to securing casualties and specimens necessarily killed for control or other reasons. The Council has also drawn the Museums Association's attention to a recent case of commercialised killing of bats and birds to meet museums' needs for cabinet skins and mounted specimens, and suggested that such activity should be discouraged.

\* From Kingfisher v2(7) March 1967 p 5.

SENIOR RESEARCH OFFICER TO MAKE OVERSEAS TOUR

Senior Research Officer Mr. B.K. Bowen will leave Perth on July 17 to study fisheries administration, management, and technology in selected overseas countries. While overseas, Mr. Bowen will have discussions with fisheries administrators and management officers associated with the management of exploited populations. He will also have discussions with senior research personnel during the course of his tour. Inspection of selected fisheries including catching methods, processing and marketing are also included in his itinerary. The main areas to be visited by Mr. Bowen are :-

Tokyo, Japan	-	1 week
Washington State, U.S.A.	-	2 weeks
California, U.S.A.	-	2 weeks
Florida, U.S.A.	-	1 week
Ottawa, St. Johs - Canada	-	2 weeks
United Kingdom	-	2 weeks
Cape Town, Durban-South Africa	-	2 weeks

Visits will also be made to Hawaii, Vancouver, Washington D.C., New York, Montreal, Paris and Rome.

In addition, Mr. Bowen will also be attending the F.A.O. Conference on Fish Behaviour in relation to Fishing Techniques and Tactics, which will be held at Bergen, Norway from October 19 to 27.

It is expected that Mr. Bowen will return to Perth towards the end of November.

PESTICIDE NEWS

Two private citizens of New York State have recently brought a case before the state courts to bar the Suffolk County Mosquito Control Commission from spraying DDT on the grounds that "the potential ecological magnification of the effects and concentration of such chlorinated hydrocarbon pesticides will adversely affect the people of Suffolk County in this generation, the coming generation and generations yet unborn, either personally or through the destruction of the natural resources of the County of Suffolk, particularly the fish and wildlife thereof." The judge has announced that he is already satisfied that the scientific evidence presented is an overwhelming indictment of DDT as a serious environmental poison and that he himself, as a gentleman farmer, would stop using DDT on his own lands. He is now studying the constitutional implications of the case.

(Audubon Conservation Guide).

REPORT ON FISH MEAL INDUSTRY

The Peruvian fish meal industry is in economic difficulty partly because of an industry-wide strike, November 1 - December 14, 1966, and the continuing lower world price. Although this price strengthened during the strike, it is still much below recent years and even below the break-even point for many plants. There is little optimism that the price will rise much this season.

The prolonged strike reduced Peruvian fish meal stocks, which were substantial shortly after the fishing season began September 1, 1966. However, the strike put many plants in serious difficulties because they could not meet payrolls or other expenses. Also, the increases won by the strikers place a greater burden on companies already in the red.

Further, the crews of almost 2,000 purse seiners and 150 plants, roughly 40,000 workers, were unproductive during the 3-month closed season that ended September 1, and during the strike. The strikers have gone back to work for 30 days, pending acceptance of their demands.

Peru requires Export License

This key industry's troubles impelled the Government to require, effective January 1, 1967, fish-meal export licenses, and fish meal to be sold abroad on quota system and allocation of markets by the National Fisheries Association.

In 1966, Peru produced 1,470,478 metric tons of fish meal; in 1965, 1,282,011; in 1964, 1,552,214; in 1963, 1,159,233 tons. Almost all fish meal is exported. Peru uses only about 20,000 tons; this is expected to increase somewhat this year.

Semirefined fish-oil exports, virtually total production because Peru uses little, in June-October 1966 were 56,052 tons.

Prices: Due to, and during the strike, the price rose from about US\$120 a ton for meal f.o.b. Calloa to \$130 a ton. On December 21, the price was down to about \$128 a ton for meal; on January 3, 1967, it was the same. Crude fish oil on December 6 was \$154 c.i.f. Europe, and semirefined about \$160 a ton -- up about \$14 in 6 weeks. On December 21, semirefined oil was \$175 a ton, crude oil \$160.

Fish meal prices are not expected to rise above \$135 a ton f.o.b. Calloa during the next few months -- which will not bring many companies a profit.

1967 Closed Season: The closing date of the current fishing season has not been announced. It is expected that the Government will set a season limit between 7.5 million and 8 million metric tons of anchovy. Because the strike was long, the closed season (usually June, July and August) may be reduced.

Plants. As of November 15, 1966, there were 150 idle fishmeal plants. During 1966, only 2 plants produced over 40,000 tons of meal each; one produced over 30,000 tons; 15 plants over 20,000 tons each and 103 plants each under 10,000 tons. The industry still has many small producers.

Twenty-three plants were closed for non-strike reasons; they had no fishing fleet, no money to operate, had been foreclosed, or were too deteriorated.

Locations: The 150 plants are in 23 localities along the coast. However, 83 of the plants are in 4 places (Chimbote, Callao, Supe and Tambo de Mora) and produced 59 percent of the fish meal so far this calendar year.

Destination: Over 50 percent of Peru's fish meal exports goes to 3 countries: West Germany (20.9 percent), the U.S. (19.9 percent), and Holland (10.7 percent).

The Strike: The fishermen's union (Federacion de Pescadores del Peru) struck for the following increases: 35.00 Soles (US\$1.30) per ton of anchovy caught for the crew, plus 6.30 Soles (US\$0.24) per ton for fishermen's benefit fund (Caja de Beneficios del Pescador), plus 1.95 Soles (US\$0.07) for social assistance fund (Fondo de Asistencia y Prevision) -- a total increase of 43.25 Soles (US\$1.61) per ton.

On November 25, 1966, the Government granted a 22.00 Soles (US\$0.82) per ton increase -- both sides rejected it.

On December 13, 1966, the union lifted the strike for 30 days until the Government could study its demands further. The fishermen won an increase of 22 Soles (US\$0.82) per ton of catch, in food allowances for ship's crew, in wages of ship's engineer -- a total of about 31.50 Soles (US\$1.18) a ton for fish caught or US\$7.00 a ton for fish meal produced.

The producers claim they cannot afford any increase. They are seeking Government assistance through tax deductions (there is a direct tax of US\$8.00 plus an indirect tax on exported meal). However, the Government needs all its revenue.

Government Regulations: The Government, on December 8, 1966, undertook to regulate production and marketing of fish meal. A decree designates Marketing Committee of National Fisheries Association to work with Ministry of Agriculture, Industrial Bank, and fisheries associations to adopt a system of agreements on marketing fish meal. This will include setting marketing price and quotas for buyers.

Current Fishing Season: The current fishing season is the finest on record, but the industry still is plagued by a relatively low market price of near US\$130, metric ton for fish meal f.o.b. Callao (on January 13, 1967), and mounting stocks. Stocks on hand on December 15, 1966, were 279,000 metric tons. By year end, 59,000 tons were shipped, but roughly 180,000 tons were produced in that same period, bringing stocks near 400,000 tons.

In January 1967, about 80,000 tons are expected to be shipped. But production will exceed 300,000 tons, increasing inventory to about 600,000 tons.

The Instituto del Mar will recommend cessation of fishing from February 15 to March 30, 1967, to permit growth of immature fish -- and continuation of fishing into June, possibly later, with maximum allowable catch of 8 million metric tons of anchovy for the season. The Institute also may recommend a 5-day week for fishing fleets.

The prospect for companies in heavy debt is bleak. Reliable sources continue to forecast a major industry shakedown. An industry leader said 40 per cent of production is foreign owned - and will increase if the Government does not aid the fish meal industry.

(U.S. Embassy, Lima, January 7 and 19, 1967).

(Commercial Fisheries Review

March, 1967.)

#### SPRUNG PLASTIC LEAK STOPPER

Captain Trygve Henriksen of the Royal Norwegian Navy has invented and patented a device for preventing the ingress of water into holed vessels.

The leak stopper is a kind of plastic umbrella which can be pushed through a hole from inside a boat and opened on the outside. It has a spring around its circumference and a lug in the centre to which a rope can be attached for holding in position when a boat moves through the water.

Tests with the device have proved so successful that all Norwegian naval vessels are to be equipped with it. The tests showed that leaks through holes up to 32 in. diameter could be prevented. According to the inventor, it would be effective for stopping leaks through larger holes, but at present the only sizes being produced are between six and 32 in. diameter.

Captain Henriksen believes that the device will prove useful not only for leak stopping but for reducing maintenance costs. Plastic 'umbrellas' of suitable size could be placed over a vessel's underwater valves by skin divers and the valves could be removed for repair without the vessel being dry-docked.

He considers that it will pay to carry several different sizes of his leak stoppers, the cost of which is minimal, in merchant and fishing vessels.

(Fishing News International

April, 1967)