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LY SERVICE BULLETIN

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STAFF NOTES

The Minister for Fisheries (Mr. Ross Hutchinson), accompanied by the Director, Mr. Fraser, will depart from Perth by air on April 23, for Sydney. They will leave Australia the following day on a fact-finding tour in relation to the fishing industries; particularly the tuna industry, in some Far Eastern countries. Their itinerary includes the Philippines, Hong Kong, Korea, Japan and Singapore. It is expected that Messrs. Hutchinson and Fraser will return to Perth about May 25.

* * *

Senior Research Officer B.K. Bowen and Technical Officer R.J. McKay visited Geraldton from March 23 to 27 to obtain length frequency data by measuring tagged crayfish recently recovered by fishermen in the Abrolhos area. The crayfish were some of those recently tagged under the current research programme and had been consigned to Geraldton by our own staff stationed at the Abrolhos.

* * *

We welcome to the Head Office staff Miss V. Woods and Miss B. Powell, who commenced duty with us on March 16 and 23 respectively. Miss Woods occupies the position of librarian formerly held by Miss G. Scanlon, who resigned from the service on March 19. Miss Powell, who is a new appointee to the public service, is engaged processing fishermen's monthly returns for statistical purposes.

* * *

We regret to announce that Technical Officer R.J. McKay has tendered his resignation from the Department as from close of business on April 3. Mr. McKay is leaving to take an appointment on the staff of the Perth

Museum. In his new post he will be concerned chiefly with fish taxonomy, for which he has quite a flair, and we wish him every success.

* * *

Officers who commenced annual leave last month include Administrative Officer B.R. Saville, on March 18; Mr. G. Dixon of Head Office, on March 16; Senior Inspector A.K. Melsom (Fremantle), on March 30; Inspector D.P. Gordon (Bunbury), on March 23, and Assistant Inspectors P.C. Willey (Fremantle) and G.C. Hanley (Mandurah), on March 3. Inspector R.G. Emery is relieving at Bunbury. Inspector R.M. Crawford is relieving at Fremantle.

Officers who will commence leave this month include Senior Inspector J.E. Munro (Perth) and Inspector D.H. Smith (Dongara), both on April 6.

* * *

We regret to advise that Assistant Inspector I.L. Cardon of Albany, became seriously ill with tetanus last month. Shortly after his admission to Albany Regional Hospital on March 11, Mr. Cardon was transferred by ambulance to Royal Perth Hospital. Fortunately the patient made rapid progress and he was discharged from hospital on March 29. He expects to return to duty in a week or two.

* * *

The r.v. "Peron" under the command of Captain J.W. White, returned to Fremantle from Carnarvon on March 18, after having been engaged on trawling ground survey work north of Bernier Island.

* * *

We congratulate Mr. P.G. Yewers, of Head Office, on his recent success against 135 competitors in the Denmark Easter Spearfishing competition held on March 28. Besides winning the Boyd Bellion perpetual trophy for the open event, he won four other trophies. Mr. Yewers gained 338 points in the open event, finishing well ahead of his nearest rival who gained only 165 points.

Inspector Joseph Traynor retired from the Public Service on March 17. Mr. Traynor joined the Department as a Fisheries Inspector on May 21, 1945, and except for a few years while employed as fauna warden, he continued in the position of Inspector until his retirement. As fauna warden he banded many thousands of wild ducks in many out-of-the-way places. As inspector he relieved in most districts, although most of the time he was stationed in Perth. We wish Mr. Traynor good health in a long and happy retirement.

Mr. J. Traynor

PERSONAL PARS

Mr. S.J. Holt, Chief, Fisheries Biology Branch, F.A.O., Rome, visited Western Australia on March 4 and 5 in company with Dr. G.L. Kesteven, Assistant Chief (Fisheries), Division of Fisheries and Oceanography, C.S.I.R.O. The purpose of the visit was to enable fisheries research officers to discuss their research problems with Mr. Holt, especially in relation to the analysis of data. The discussions were held in the laboratory at Head office and were largely in the nature of a workshop. Those who took part were Dr. R.G. Chittleborough, of the Division of Fisheries and Oceanography, C.S.I.R.O., Dr. R.W. George of the Western Australian Museum, as well as Messrs. B.K. Bowen, Senior Research Officer, R.J. Slack-Smith, Research Officer, and R.C.J. Lenanton, Cadet Research officer, of our own Department.

The group discussed methods of analysing crayfish data with a view to gaining a better understanding of the state of the fishery. Data relating to Pelsart and Easter Groups, Houtman Abrolhos, were used on a first attempt to estimate the population, in pounds weight, on the grounds at the beginning of each season. Data on the Shark Bay prawn fishery were also analysed to obtain a first estimate of the size of the population.

Mr. Holt spoke to the group on recent advances in the field of exploited fish population dynamics. While in Perth he also gave a talk to a meeting of the Western Australian branch of the Australian Marine Sciences Association, entitled "The International Biological Programme".

Having a fishery scientist of Mr. Holt's calibre with us even if it was for just two days, was a most refreshing experience. We are most grateful that he was able to include Western Australia in his itinerary, and also to Dr. Kesteven for making his visit possible.

PUBLIC SERVICE PROVIDENT FUND

The Public Service Commissioner has advised that a review of the use made of the Public Service Provident Fund by new appointees in recent years has determined that the continued operation of the Fund is no longer necessary.

The Fund will be closed to new subscribers as from April 1, 1964. From that date new eligible employees may contribute to the Superannuation Provident Account. However, officers who are subscribing to the Fund may continue to do so, or alternatively transfer the balance of their account and their subscriptions to the Superannuation Provident Account.

FAUNA NOTES

Long Association of Two Grey Teal

The recent return by a hunter of two duck bands proved to be of more than usual interest.

Numbered 4194 and 4197, the bands had been placed on two grey teal at Gundaring Lake, 8 miles east of Wagin, on December 9, 1956, by Inspector J. Traynor. The birds were shot a little over 7 years later by Mr. R. Olden, of Boulder. He wrote that they were taken on the same day (January 11, 1964) at the same place (5 miles out of Boulder) which was about 290 miles from their banding site.

Although there are other records of apparent long-term associations, it is generally held that most ducks in the wild pair only for one season. Some waterfowl -

swans, geese and shelducks - and hawks and owls, are believed to mate for life, but most ducks are believed to be polygamous. Unfortunately, we do not know the sex of the two teal so we cannot assume that they were a true pair. We cannot be certain that the two teal associated continually in the interval between banding and recovery, but, in view of the nomadic habits of the species, it certainly appears probable.

Recovery of Duck Banded in New Zealand

An interesting report appeared in the June, 1963, edition of the Bird Bander, the journal of the Bird Banders Association of Australia, concerning the recovery of banded ducks far from their original place of banding.

A Mallard (Anas platyrhynchus), with band number NZ17-12678 attached, was shot on March 8, 1963, at Narring Narrows, near Murray Mouth, South Australia. This duck had been banded 2 years previously by the Wildlife Research Section, Department of Internal Affairs, Wellington, at Lake Tuakitoto, 40 miles West of Dunedin, in the South Island of New Zealand. It was shot 2,400 miles from where it was banded and was only the third New Zealand duck to be recovered in Australia. The other two were Black Duck (A. superciliosa). One of these was banded at Wairu Lagoon, near Blenheim, South Island, on February 16, 1952, and was shot at Menindee, New South Wales, on December 28, 1957. The other was banded at Lake Whangapi, 60 miles south of Auckland (North Island), on March 8, 1957, and was shot at Newcastle, New South Wales, on January 26, 1960.

One duck banded in Australia has been recovered in New Zealand. This was a Grey Teal (A. gibberifrons) which was banded at Lara, near Geelong, Victoria, by the Victorian Fish and Wildlife Department. It was shot at Te Kauwhata, 60 miles south of Auckland.

Local Sightings

Fleet Maintenance Officer A.J. Bateman reports two interesting observations during the month. The first was the sighting of a lone gannet on March 7 near Rottnest. Mr. Bateman thinks the bird was an old one, for it was almost black. A week later he sighted the

same bird near the North Mole, Fremantle. Gannets are of some interest to fisheries biologists. They are considered to be useful indicators of the presence of schools of surface fish.

Mr. Bateman's second report was of the occurrence on March 16 of a flock of white cockatoos at the foot of Petra Street, East Fremantle. He said that about 15 to 20 were seen on a dead gum tree near the East Fremantle Yacht Club. They were being harassed by a number of magpies. A flock of Long-Billed Corellas has been reported off and on for a considerable number of years in the Claremont-Cottesloe district. It is thought that this may be the same group. Mr. Bateman was not close enough to see whether they were the long- or short-billed variety.

Wood-duck on Taylor's Inlet

Inspector B.A. Carmichael last month reported having seen about 400 ducks, predominately black duck and teal, and also 30-odd wood duck (maned geese) on Taylor's Inlet, Nannerup. He said it was the first time he had seen wood-duck in that area.

Reports indicate that there are more of this species about in the southern part of the State than in past years. However, they have not previously been reported as occurring so close to the sea.

Death of Wood Duck

A report received by the Agriculture Protection Board from the Plantagenet Shire Council last month pointed out that a number of Wood duck (maned geese) had been found dead in the vicinity of the Kalgan River at Woogenellup.

It was thought by the Shire that the birds had succumbed to 1080 rabbit poison. In fact, a poisoning programme involving the distribution of poisoned grain had been carried out in the district. It was feared that poisoned birds might be shot and human beings affected by the poison after eating the flesh.

The Shire Council has been advised that there was no direct proof that the birds had been killed by 1080. At this time of the year, when dams are drying up, botulism is always a possibility. The birds in question had been found dead near dams, hence botulism as the cause of death could not be ruled out. Indeed it was more than likely. Rabbit poisoning has been carried out for some time in areas where maned geese have been present, but no previous deaths have been reported.

Endeavours are being made to obtain a freshly poisoned bird to establish whether it was killed by poison or not.

CONVICTIONS

JANUARY - MARCH, 1964

Date	Defendant	Court	Charge	Result
		FISHERIES ACT		
				Fined
10.3.64	Collins, Ronald W.	Albany	Netting)	£10. 0.0.
			Close)	Nets con-
			Waters)	fiscated
10.3.64	Ridley, Ronald	"	")	but defendants
10.3.64	Hardie, Walter M.	"	")	to be given
			)	opportunity
			)	to repurchase.
10.3.64	North, Frederick	"	"	£10. 0.0.
20.1.64	Ricciardi, Natole	Fremantle	U/S	
			Crayfish	58.15.0.
20.1.64	Ricciardi, Guiseppe	"	"	30. 0.0.
20.1.64	Scaffidi, Guiseppe	"	"	13. 0.0.
6.10.63	Rotondella, Guiseppe	"	Brushed Spawners	25. 0.0. and license suspended for 3 months.
6.10.63	Rotondella, Guiseppe	"	U/S Crayfish	36.17.6.
6.10.63	Rotondella, Guiseppe	"	"	10. 0.0.
3.2.64	Greco, Guiseppe	"	"	11.17.6.
3.2.64	Percich, Ivan	"	"	11. 0.0.
3.2.64	Zitko, Andy	"	"	15.17.6.
3.2.64	Lever, Robert S.	"	"	12.15.0.

CONVICTIONS (Cont'd)

Date	Defendant	Court	Charge	Result
				Fined
3.2.64	Rapley, R nald S.	Fremantle	U/S Crayfish	30. 2.6.
3.2.64	Pittorino, Guiseppe	"	"	22.12.6.
3.2.64	Caputi, Gennaro	"	"	15.17 6.
3.2.64	Cappa, Carmelo	"	"	27.10.0.
3.2.64	Camporeale, Nicola	"	"	22. 0.0.
3.2.64	Mazzeo, Francesco	"	"	19. 2.0.
10.2.64	Anicich, George	"	"	12. 5.0.
10.2.64	Cappelluti, Modesta	"	"	11. 5.0.
10.2.64	Oteri, Francesca	"	"	13. 7.6.
10.2.64	Zoronich, Simon	"	"	18.15.0.
17.2.64	Amato, Angelo	"	"	47. 7.6.
17.2.64	Waters, Jospeh B.	"	"	14.10.0.
17.2.64	Paparella, Luigi	"	"	19. 0.0.
17.2.64	Palmiotti, Guiseppe	"	"	29. 5.0.
17.2.64	Palmiotti, Corrado	"	"	40.17.6.
17.2.64	Camporeale Luigi	"	"	45. 5.0.
17.2.64	Camporeale, Luigi	"	"	64. 0.0.
17.2.64	Camporeale, Luigi	"	"	26. 5.0.
17.2.64	Camporeale, Luigi	"	"	59. 5.0.
17.2.64	Camporeale, Luigi	"	"	32. 2.6.
17.2.64	Marino, Dominic	"	"	36. 5.0.
17.2.64	Minervini, Giovanni	"	"	41.17.6.
17.2.64	Amato, Francesco	"	"	27.12.6.
17.2.64	Miragliotta, S.	"	"	32.12.6.
17.2.64	Miragliotta, S.	"	"	26.15.0.
17.2.64	Brown, Frank C.	"	"	14. 7.6.
24.2.64	Beningheli, Tindaro	"	"	11. 0.0.
24.2.64	Heffele, Egan	"	"	13. 7.6.
24.2.64	Ivankovich, Tugomir	"	"	29.15.0.
24.2.64	Ivankovich, Tugomir	"	"	20.12.6.
24.2.64	Ivankovich, Tugomir	"	"	12. 0.0.
24.2.64	Klingberg, Axel	"	"	41. 7.6.
24.2.64	Minervini, Dominico	"	"	14. 5.0.
24.2.64	Parker, Norman A.	"	"	22.17.6.
24.2.64	Pappagallo, Lorenzo	"	"	32.17.6.
24.2.64	Pryer, Raymond	"	"	27. 2.6.
24.2.64	Siclari, Giovanni	"	"	27.17.6.
24.2.64	Morey, Brian	"	"	33.15.0.
24.2.64	Morey, Brian	"	Fishing Close Waters	10. 0.0.
17.2.64	Miragliotta, S.	"	U/S Crayfish	21.10.0.

CONVICTIONS (Cont'd)

Date	Defendant	Court	Charge	Result
				Fined
9.3.64	Merendino, Claud	Fremantle	U/S Crayfish	10. 0.0.
9.3.64	Macchia, Antoni	"	"	10. 0.0.
9.3.64	Caranna, Guiseppe	"	"	10. 0.0.
9.3.64	Barresi, Carmelo	"	"	10. 0.0.
9.3.64	Amato, Nicholas	"	"	12. 0.0.
9.3.64	Amato, Nicholas	"	U/S Craytails	12. 5.0.
9.3.64	Venturis, Peter T.	"	U/S Crayfish)	11. 0.0.
9.3.64	Artelaris, Tony	"	")	
9.3.64	Camporeale, Nicola	"	Brushed Spawners	25. 0.0. and license suspended for 3 months.
16.3.64	Breglia, Cosima	"	U/S Crayfish	76.17.6.
16.3.64	Brysse, Henry A.	"	"	14.10.0.
16.3.64	Cicerello, Nino	"	"	22.12.6.
16.3.64	Camarda, Fidele B.	"	"	16.12.6.
16.3.64	Schofield, Douglas S.	"	"	12.17.6.
23.3.64	Oteri, Francesco	"	Brushed Spawners	25. 0.0. license suspended for 3 months.
23.3.64	Frenis, Antonio	"	Brushed Spawners	25. 0.0. license suspended for 3 months.
23.3.64	Pittorino, Joe	"	U/S Crayfish	16. 0.0.
23.3.64	Pittorino, Tony	"	"	10.12.6
23.3.64	Pittorino, Tony	"	Brushed Spawners	25. 0.0. license suspended for 3 months.
23.3.64	Vinci, Antonio	"	U/S Crayfish	11. 0.0.
23.3.64	Crifo, Luigio	"	"	13.12.6.
23.3.64	De Ceglie, Guiseppe	"	"	29.15.0.
23.3.64	De Ceglie, Guiseppe	"	"	29.10.0.
23.3.64	Katnic, Ivan (Jnr)	"	"	28.10.0.

CONVICTIONS (Cont'd)

Date	Defendant	Court	Charge	Result
				Fined
23.3.64	Dimario, Guiseppe	Fremantle	U/S Crayfish	10.12.6.
23.3.64	Dimario, Guiseppe	"	"	13.15.0.
16.1.64	Dacey, Desmond J.	Geraldton	"	10.10.0.
16.1.64	Leech, Kenneth G.	"	"	10. 0.0.
16.1.64	Mauricio, Julio G.	"	"	12. 2.0.
16.1.64	Mauricio, Julio G.	"	"	20. 4.0.
16.1.64	Kent, Peter R.	"	"	11. 6.0.
16.1.64	Ralph, Alan	"	"	12.11.0.
16.1.64	Dalgleish, Keith A.	"	")	11.13.0
16.1.64	Dalgleish, Edward	"	")	
16.1.64	Hellman, Viljo F.	"	"	11.16.0.
16.1.64	Bresser, Peter W.	"	"	10.18.0.
16.1.64	McDonald, Donald	"	"	13. 3.0.
20.2.64	Chidzey, Shirley F.	"	"	10. 7.0.
20.2.64	Ficcco, Antonio	"	"	11. 3.0.
20.2.64	Fitzgerald, Neville J.	"	")	10.10.0.
20.2.64	Fitzgerald, Janice F.	"	")	
20.2.64	Petersen, Andrew J.	"	"	12.11.0.
20.2.64	Kyenia, Michael	"	"	13. 2.0.
20.2.64	Davenport, T.	"	"	10.18.0.
20.2.64	Gavranich, Peter	"	")	10. 0.0.
20.2.64	Gavranich, Vera	"	")	
20.2.64	Rioli, Antonio	"	"	10. 4.0.
20.2.64	Herbert, John D.	"	")	10.17.0.
20.2.64	Herbert, Elizabeth M.	"	")	
20.2.64	Scott, Colin J.	"	"	12. 9.0.
17.1.64	Paino, Anthony	Perth	"	21. 1.0.
21.1.64	Howard, Charles R.	"	"	11. 5.0.
21.1.64	Heap, Donald L.	"	"	11.12.0.
21.1.64	Heap, Donald L.	"	Unlawful Possession	5. 0.0.
4.2.64	Wares, Donald H.	"	U/S Crayfish	13.18.0.
4.2.64	Taylor, John	"	"	13. 4.0.
4.2.64	Opicak, Ivan	"	"	11. 8.0.
4.2.64	Ferro, Vencenzio	"	"	42. 0.0.
4.2.64	Dudney, Ross	"	"	14.14.0.
4.2.64	Cousins, Cecil J.	"	"	11. 2.0.
4.2.64	Cooper, Kevin J.	"	"	26.10.0.
4.2.64	Campiotto, Vittorio	"	"	11.16.0.
4.2.64	Butler, James H.	"	"	10.12.0.

CONVICTIONS (Cont'd)

Date	Defendant	Court	Charge	Result
				Fined
12.2.64	Allen, Frederick R.	Perth	U/S Crayfish	12. 8.0.
12.2.64	Bayer, Theo	"	"	10.12.0.
12.2.64	Campiotto, Vriginio	"	"	14. 2.0.
12.2.64	Dray, Leonard E.P.	"	"	10. 9.0.
12.2.64	Prior, Raymond	"	"	10. 7.0.
12.2.64	Stokke, Erik A.	"	"	10. 9.0.
12.2.64	Taylor, Thomas W.G.	"	"	37.18.0.
12.2.64	Torelli, Savino	"	"	11.12.0.
25.2.64	De Ogio, Guiseppe	"	"	19.18.0.
25.2.64	Williams, Ralph	"	"	25. 8.0.
25.2.64	Garcius, Manuel S.	"	"	35.18.0.
25.2.64	Lynch, Raymond G.	"	"	12. 1.0
25.2.64	Arangio, Guiseppe	"	"	31. 5.0.
25.2.64	Paparella, Luigi	"	"	14.15.0.
5.3.64	Bowers, Wallace H.	"	Obstructing Inspector	10. 0.0.
5.3.64	Anderton, Reginald L.	"	U/S Crayfish	14. 0.0.
5.3.64	Avens, Auserlis	"	"	13.16.0.
5.3.64	Manganaro, Antonio	"	"	26. 8.0.
5.3.64	Williams, Ralph	"	"	26.16.0.
5.3.64	Howson, Athley	"	"	14.19.0.
5.3.64	Howson, Athley	"	Giving false name and address	3. 0.0.
13.3.64	Sloan, Keith	"	Processing while not registered	5. 0.0.
17.3.64	Farrell, John P.	"	U/S Crayfish	10. 5.0.
17.3.64	Halfweeg, Simon	"	"	10.13.0.
17.3.64	Miragliotta, Salvatore	"	"	12.11.0.
17.3.64	Manganaro, Antonio	"	Brushed Spawners	25. 0.0. license suspended for 3 months.
17.3.64	Parker, Norman A.	"	U/S Crayfish	12. 0.0.
17.3.64	Ruljancich, Luke	"	"	25.14.0.
17.3.64	Ruljancich, Luke	"	"	30.15.0.

CONVICTIONS (Cont'd)

Date	Defedant	Court	Charge	Result
				Fined
17.3.64	Campiotto, Vriginio	Perth	U/S Crayfish	10.13.0.
18.3.64	Bradley, Raymond J.	"	"	32.16.0.
18.3.64	Garcius, Manuel S.	"	"	58. 0.0.
18.3.64	Rathjen, Ernest F.	"	"	12. 0.0.
18.3.64	Sully, Peter J.	"	"	23.16.0.
	FAUNA PROTECTION ACT			
15.1.64	Taylor, Robert C.L.	Midland	Taking Protected Fauna	10. 0.0.
21.1.64	Seaton, Stafford	Perth	Unlicensed Birds	5. 0.0.
17.1.64	Maraldi, George	"	Taking Protected Fauna	10. 0.0. and shot-gun forfeited to Crown.
24.2.64	Higgins, Herbert C.	Bunbury	Using Illegal Device	1. 0.0.
24.2.64	Holmes, Leslie S.	"	"	1. 0.0.
24.2.64	Williams, Colin G.	"	"	1. 0.0.
24.2.64	Eaton, Beverley A.	"	"	1. 0.0.
24.2.64	Jackson, Gregory R.	"	"	1. 0.0.
24.2.64	Fleay, Malcolm	"	"	1. 0.0.
24.2.64	Williams, Donald H.	"	"	1. 0.0.
24.2.64	Fowler, Thomas M.	"	"	1. 0.0.
24.2.64	Hutton, Horace H.	"	"	1. 0.0.
24.2.64	Rose, John C.	"	"	1. 0.0.
24.2.64	Rickwood, Charles	"	"	1. 0.0.

CLEARING HOUSE

FISH KNOW THEIR STARS

Dr. Martynas Ycas believes fish are very good astronomers. He also believes that beetles have some knowledge of the stars, but that they do not know as much as fish.

Dr. Ycas (pronounced E--chas) is Associate Professor of Microbiology at the State University of New York.

He gave the first of six lectures to the Nuclear Research Foundation's Summer Science School at the University of Sydney this month.

Dr. Ycas explained that recent experiments by Professor A. Hassler, of the University of Wisconsin, had revealed the ability of fish as astronomers.

A fish trained to swim north had been placed in a circular tank with several gates around the sides through which the sun shone.

If the fish wanted to swim north at noon it would swim toward the sun.

Followed sun

If it wanted to swim north at 2 p.m. it would allow for the fact that the sun had moved 30 degrees west, and follow a bearing 30 degrees east of the sun.

Even at night, when an artificial light was used to simulate the sun, the fish seemed to realise the sun was "moving" below the horizon at a rate of 15 degrees an hour.

"The fish has a concept of the sun moving around the earth," Dr. Ycas said.

(Before 1543, when Copernicus advanced his theory, men believed the sun rotated around the earth.)

Dr. Ycas said beetles also had an "inbuilt clock," which told them the sun moved at 15 degrees an hour.

However, they became confused at night.

Beetles seemed to think the sun moved from east to west, then became invisible and moved back to the east ready to start its journey again next morning.

(Fish Trades Review Sydney January, 1964)

FREMANTLE FISH CO-OP TO SPEND £250,000

The Fremantle Fishermen's Co-operative Society Ltd. will start a £250,000 building project at South Fremantle this year.

The society plans to move its processing plant to South Fremantle and use the existing Fremantle premises for cold storage.

Manager J.P. Pupazzoni said that the society had bought 6½ acres of land opposite the South Fremantle power station.

The project would be in four stages.

* Processing works would be built first.

* Second stage is a garage for the co-op's 37 vehicles.

* Stage three would be an engineering workshop for servicing marine engines.

* The final stage, providing facilities for the processing of food other than crayfish - probably poultry and fruit - would follow in four or five years.

The society would no longer need to rent cold storage when the new works were completed.

(Fish Trades Review Sydney January, 1964)

WORLD TUNA CATCH

A record world catch of 2,380,000 metric tons of tuna, bonito, mackerel and other tuna-type fishes was made during 1962, according to figures published last month in the Yearbook of Fisheries Statistics of the Food and Agriculture Organisation.

The Yearbook shows that the 1962 catch of tuna was 150,000 tons above the previous world high of 2,230,000 tons, caught in 1961.

Tunas, bonitos, and mackerels represented 5.3 per cent of the 1962 world fish catch of 44.72 million metric tons, itself a new high over the old record of 41.83 million tons caught in 1961.

First among the nations in this category was Japan, with a 1962 catch of 1,167,800, just under one-half of the world total. Japan improved on her own previous record of 1,036,700 tons, set in 1961.

Second in catching tunas and tuna-like fishes was the United States with a 1962 catch of 169,700 tons. This was a drop of 9,300 tons from the 179,000 tons caught in 1961.

Peru came third with a catch of 151,500 tons. This topped Peru's previous high of 146,500 tons, caught in 1961. Spain was fourth with 72,300 tons, 29,400 tons above her 1961 catch, but still slightly below her record tuna catch of 73,500 tons in 1958.

The only other nations to catch 50,000 or more tons of tuna or tuna-type fishes were China (Taiwan), with 65,700 tons, and India, with 62,900 tons.

According to the Yearbook, the four nations of South America's western seaboard - Chile, Colombia, Ecuador and Peru - in 1962 turned in a record fish catch of 7,524,500 metric tons.

The major share of this 1962 South American Pacific catch was caught by Peru, for several years now the world's second fishing nation. Peru's 1962 catch was 6,830,000 metric tons, just 300,000 less than the Japanese 1962 catch, and more than one million tons above the 5.24 million the Peruvians caught in 1961.

Chile reported the second largest catch among the four nations. In 1962 Chilean fishermen caught 638,600 tons, an increase of more than 208,800 tons over her 1961 catch of 429,800 tons. Chile's 1962 catch lifted the nation for the first time into the handful of countries that annually catch more than 500,000 metric tons.

(The South African Shipping News and Fishing Industry Review) January, 1964)

ANTI-FOULING

If you have ever been frustrated by weather conditions when you have slipped or stranded your boat for a scrape and a coat or two of anti-fouling, you'll welcome some news released by International Paints. This is to the effect that if you have previously coated the bottom with hard racing copper anti-fouling, you can slap a new coat over the old one even if your boat's bottom is wet and there is little hope of it drying out. You can even, it is claimed, apply new hard racing copper over old while your boat is still in the water if you don't mind the finish being somewhat rough and the fact that it will take longer to harden than if it were applied to a dry hull ashore.

At present you cannot apply standard hard racing copper to wet bare wood, metallic pink priming or other types of anti-fouling but once you've put a coat of it on in dry conditions you'll be able to put others over it without being forced to wait for the hull to dry out.

(Fishing News London January, 1964)

PORPOISES AND FISH FINDERS

The friendly porpoise is getting more respect than he used to. Dr. John Lilly in Florida has made tests that seem to put the porpoises' intelligence on a par with man's. Dr. Lilly points out that porpoises learn more rapidly than man, that porpoises have a proportionately larger brain than man. And also that this brain is highly convoluted or full of wrinkles and folds; a quality which physiological psychologists say is related to intelligence.

Another thing that Dr. Lilly has noticed is that porpoises seem to talk to each other. Every fisherman knows how playful the porpoise is; how he is always surrounded by a number of his buddies.

If you were to go skin diving among porpoises you would hear a collection of odd squeals, burps and clicks. This brings us to fish finding and the connection between porpoises and electronic fish finders.

How a Fish Finder Works

First let's have a review of how an ordinary fish finder works. This machine sends out a sudden short burst of noise, then it clams up to wait for the echoes. If there are any fish within its range these fish bounce back a small fraction of the noise burst to the machine. The feeble echo is picked up, amplified, and it makes a chart mark, flashes a light, deflects a scope, or beeps a loud speaker depending on the type of machine. Once the indication is made the machine repeats itself in a kind of rat-tat-tat-tat fashion as long as the fisherman keeps it going. Because it uses short bursts or pulses of sound power it is called a pulse type fishfinder. The speed with which one pulse follows the other is called the repetition rate. The longer the range of the fish finder the slower the rep rate. This is because it takes longer for the sound pulse to travel out and back to a distant fish than to a nearby fish.

The Voice of the Porpoise

Dr. William Schevill of Woods Hole Oceanographic Institute has studied the voice of the porpoise as intensively as any man. He has made hundreds of recordings of porpoise sounds and analized them in many ways. One of his most interesting discoveries is the way a porpoise finds fish by sound waves. When a porpoise is fishing he sends out a series of clocks separated by a second or two. The instant the porpoise detects a fish his clock rate increases and as the porpoise closes in on his hapless supper his rep rate speeds up in inverse proportion to the distance between himself and his prey. Just before the porpoise clamps his jaws on the fish his sonar signal reaches the pitch of a high buzz - almost a squeak.

The Porpoise's Sonar

According to Dr. Schevill the porpoise's sonar

has remarkably accurate directional qualities. He theorizes that the porpoise generates his probing sound pulses deep inside his head and that the sound is led by a sort of cartilage wave guide to a dish shaped bone in the upper part of the porpoise's head. The dish shaped bone acts like a reflector and the fatty covering tissue called the melon acts like a lens for sound waves directing and focusing them in a sharp beam towards the target. The ears of a porpoise are widely separated and this binaural hearing greatly improves his directional sense. In this respect the porpoise has got it way over the average mechanical fish finder.

Variable Rep Rate

Another advantage the porpoise has is his variable rep rate. When he's near his target he sounds on it more rapidly and thus gets more precise information about it. There is some reason to believe that the fish detecting machine of the porpoise is so perfected that its entire operation is automatic, that each returning echo triggers the next outgoing noise burst, and that the porpoise is virtually unaware of it happening - much as the iris of your eye adjusts itself to cope with different strengths of light.

It is surprising indeed how closely man has imitated the porpoise in his modern fish finders without realizing that the porpoise had beat him by millions of years.

(Fishing Gazette New York January, 1964)

NEW TAGGING TECHNIQUE

The Grimsby-based M.A.F.F. research trawler "Ernest Holt" has employed a new technique for "tagging" fish during a cruise in the Barents Sea. To keep track of the wanderings of fish, scientists on the vessel have injected hormones into 640 cod and then released them.

The hormones will cause certain changes in the cod and thus enable their ready identification. When they are caught again it will be possible to check their movements.

(World Fishing London January, 1964)