FISHERIES DEPARTMENT
WESTERN AUSTRALIA.
MONTHLY SERVICE BULLETIN

Vol. VII, No. 1. January, 1958

STAFF NOTES

Our congratulations are extended to Mr. John Mitchell, of Head Office, on the announcement of his engagement to Miss Sheila Mitchell, of Perth, Scotland.

Technical Officer J. Traynor, who has been on the sick list in recent weeks, is expected to return to duty on January 6.

Officers on leave at the present time include Mr. B.R. Saville, Clerk-in-Charge; Mr. H.B. Shugg, Fauna Protection Officer; Mr. J.E. Munro, Senior Inspector; Mr. S.W. Bowler, Fauna Warden; Mr. B.A. Carmichael, Inspector, Albany; Mr. D. Wright, Assistant Inspector, Geraldton; Mr. S. LaRoche, Assistant Inspector, Mandurah; and Mr. G.C. Ferguson, Head Office. Mr. Ferguson on the conclusion of his annual leave will enter Swanbourne Camp for three months' national service training. During his absence his place will be filled by Mr. Brian Guinan.

The Public Service Commissioner has approved of Mr. A.J. Bateman, inspector-in-charge, m.v. "Silver Gull", being seconded from his present duties to assume, for a trial period of twelve months, the position of officer in charge of general boat maintenance. This new position has been necessitated by the increase in the number and range of our sea-going and river craft, and the desirability of placing all repair and maintenance jobs under unified control.

All available members of the staff foregathered at the annual Christmas party held at noon on December 24. Several visitors, including Mr. E.C. Harris, President of the W.A. League of Professional Fishermen's Associations, Mr. K. Godfrey, of the Division of Fisheries and Oceanography, C.S.I.R.O., Mr. E.J. Brownfield, formerly Clerk-in-Charge, Mr. A.R. Tomlinson, Chief Vermin Control Officer, Department of Agriculture, Mr. B. Gorey, Secretary, Agriculture Protection Board, and Mr. L. Harrison, of the Vermin Branch of the Department of Agriculture, were welcomed by the Superintendent (Mr. Fraser) who presided. A welcome was also extended to officers who had joined the Department since the beginning of the year, viz., Messrs W.K.H. Cherrington, S. Stokoe, K.L. Brooks, E.I. Forster, Eric Barker and R.G. Emery. As usual the ladies of the staff, Mrs. Valma Priest and Miss Pamela Pegrum, arranged the repast, the latter once more baking a Christmas cake for the occasion.

Congratulations and good wishes are offered to Inspector R.M. Crawford, of Geraldton, and Mrs. Crawford, on the birth of a daughter (Susan) on December 9.

PERSONAL PARS

The Minister for Fisheries (Hon. L.F. Kelly M.L.A.), in the reorganisation of ministerial duties necessitated by the appointment of Hon. E.K. Hoar as Agent-General, has now relinquished the portfolios of Mines and Industrial Development. We are more than pleased that he retains the Fisheries portfolio. In addition he has taken over the offices of Minister for Lands and Minister for Agriculture.

A caller at Head Office during December was Dr. Ferris Neave, of the Fisheries Research Board of Canada. Dr. Neave, who had been attending a meeting of the Pacific Science Congress in Bangkok, came to Perth to stay a few days with his brother at Cannington. He was also present at a meeting of the Rottnest Biological Station Committee. Dr. Neave is an authority on the Pacific salmon, and has published a number of papers on the biological and physico-oceanographical aspects of the subject.

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Our warmest congratulations and heartiest good wishes are extended to Mr. J.M. Thomson, of the Division of Fisheries and Oceanography, Cronulla, N.S.W., for having fulfilled all requirements for the degree of Doctor of Philosophy of the University of Western Australia. Dr. Thomson graduated B.Sc. and M.Sc. at the same University, and his new honour is in recognition of his work on the mullet species in Australia.

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Mr. R.W. George, Research Officer of the Division of Fisheries and Oceanography, C.S.I.R.O., who is at present on study leave at the University of W.A., has received the appointment of Assistant Curator at the Western Australian Museum. Mr. George is very well-known to officers of the Department and to fishermen generally for his work on crayfish. We give him our very best wishes for future success.

ISSUE OF LICENSES

Licensing officers are reminded of an earlier instruction that relevant fishing-boat numbers be entered on the butts of professional fishermen's licenses. The full residential address of each licensee must be written on both license and butt. This applies equally to professional fishermen's, fishing-boat and amateur net-fishermen's licenses.

COMPARATIVE WHALING STRENGTH

The particularly strong position occupied by Nor'-West Whaling Co. Ltd. - the operators of the Babbage Island whaling station at Carnarvon - is obvious from a comparison of results of Whale Industries Ltd., which through a subsidiary operates the Tangalooma station on Moreton Island (Queensland).

The following figures are taken from the latest balance sheets of both concerns -

	N.W. Whaling	Whale Industries
Paid capital	£270,000	£535,000
Reserves	511,726	487,211
Net profit	274,266	172,000
Income tax	189,500	117,000
Dividend	30%	20%
Current assets	223,434	696,890
Current liabilities	215,591	231,606
Fixed assets	1,088,726	424,227
Annual whale quota	1,000	600

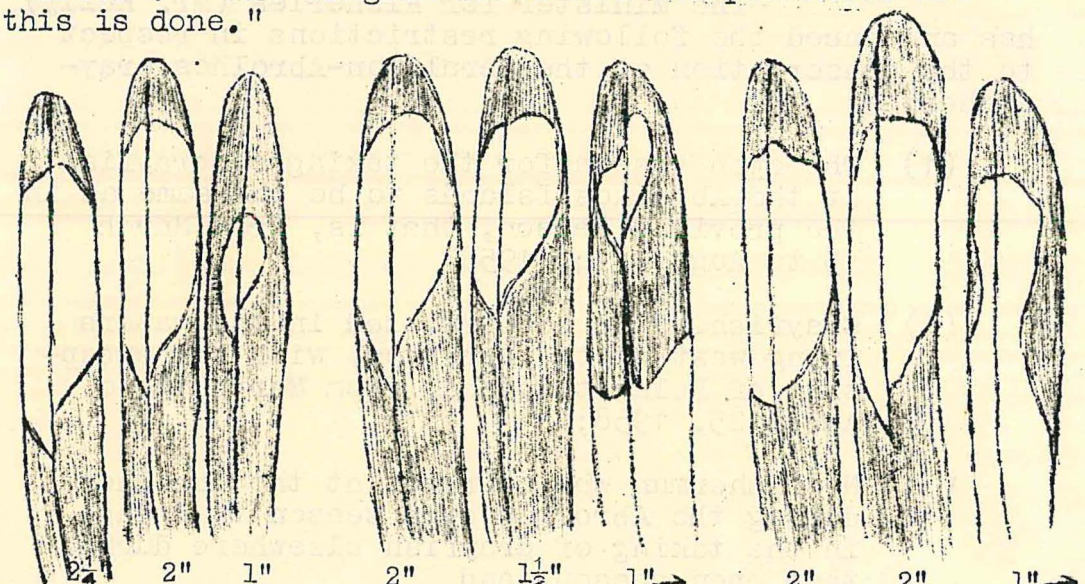
THE SILVER GULL IN AUSTRALIA

Dr. R. Carrick, Principal Research Officer of the Wildlife Survey Section, C.S.I.R.O., Canberra, has given us some notes on the characters of regional races of the silver gull in Australia. His Section is anxious to secure the wings of dead silver gulls so that the characteristic white "mirrors" in the black terminal areas of the three longest wing primary feathers may be studied.

Dr. Carrick says in relation to the "mirrors" -

"These white 'mirrors' are supposed to reach their highest development in the Tasmanian breeding birds, and to decrease in number and size along the coast northward to Queensland and possibly also westward to Western Australia. In Tasmania, the 'mirror' on the third longest primary opens into the white area of the basal part of the feather. At the other extreme, the third longest primary may have no white 'mirror' at all. The right and left wings of the same bird may not be quite similar, and it has been found in New South Wales that the same breeding colony may contain a wide range of these feather types. Therefore, these three longest wing primaries from both wings should be collected from breeding adults during the breeding season wherever possible so that a really large sample of birds breeding at each locality may be obtained. Most colonies provide some natural casualties.

"If adult gulls are being captured for banding, the extent of the 'mirrors' should be noted in a simple formula. Estimate the length of each 'mirror' to the nearest quarter of an inch, list the three in order beginning with the largest feather, and if the 'mirror' on the third largest feather opens into the white basal part of the wing indicate this by an arrow after the figure giving the length of the 'mirror'. The diagram below and example shows how this is done."



L.n. novae-hollandiae L.n. gunni.

(Smaller than natural size)

Dr. Carrick also gives the following information in relation to length of bill -

"This character has to be related to sex, so it is only of value when a fresh specimen can be dissected. The bill of the male is longer than the female on the average in the same population, and there is a decrease in size of both from north to south."

We have with regret had to advise Dr. Carrick that any collecting undertaken by departmental officers could only be incidental to other duties. At the same time we have promised to assist whenever possible by asking our staff to collect dead gulls and terns if they happen to come across them in the course of their normal work. Any wings so collected should, if in reasonably good condition, be sent to Head Office with appropriate details. No live birds may be taken for this purpose.

GERALDTON-ABROLHOS CRAYFISHERY

The Minister for Fisheries (Mr. Kelly) has announced the following restrictions in respect to the conservation of the Geraldton-Abrolhos crayfishery -

(1) The open season for the taking of crayfish at the Abrolhos Islands to be the same as in the previous season, that is, from March 15 to August 14, 1958;

(2) Crayfishing to be permitted in the waters lying west of the Abrolhos, with the exception of Pelsart Island, from March 15 to April 25, 1958;

(3) No fisherman who operates at the Abrolhos during the Abrolhos open season to engage in the taking of crayfish elsewhere during that open season; and

(4) Unbaited pots may be set at any time for the purpose of "curing", but any fisherman baiting his pots before the opening day shall be liable to prosecution and to have his pots confiscated.

CASUALTIES AT BROOME

One of Messrs M.&.W. Scott's pearlshell divers at Broome, Cheong King Chan, died at sea on December 4 following an attack of diver's paralysis (the "bends"). Cheong, who was 39 years of age, had been working in King Sound in 23 fathoms.

On December 11 the Japanese tuna boat Satsuma Maru II, with a crew of 28, put into Broome to land an injured seaman, Toshio Kano. Kano was bringing aboard a white marlin when the spear penetrated his body. It was fortunate that no vital organ had been harmed, and after spending four days in hospital Kano was discharged. The Satsuma II sailed from Broome on December 15.

SURVEY OF SHARK BAY

The Department's research vessel "Lancelin", under the command of Captain H.C.W. Piesse, returned to Fremantle last November after a seven-month survey of the scallop and prawn resources of Shark Bay.

The principal gear used throughout the survey was the otter-trawl. However, during the latter months, experiments were carried out with a scallop net of 5-inch mesh with a 3-inch mesh cod end. Samples were also collected by means of a small try net and a plankton net. The try net is used from a dinghy while passing over shallow banks to sample the marine life on those banks, while the plankton net is either towed on the surface from an outrigger boom when the vessel is trawling or else streamed in the same manner in a tideway when the vessel is at anchor.

For clarity of reference, the Shark Bay area was divided into blocks of 100 square miles. The blocks containing trawlable ground were sampled systematically and data concerning the catch was recorded, together with surface water temperatures, weather and tide conditions, pelagic fish and bird observations. In all, 245 trawls were made in depths ranging from 2 to 15 fathoms.

The most interesting outcome of the survey was the fact that saucer scallops were located over an area of approximately 400 square miles between Dirk Hartog Island and Peron Peninsula. The scallops are different from the famed Tasmanian scallops. In fact by some connoisseurs they are held to be their superior in texture and flavour.

Tiger and king prawns were located in quantity off Carnarvon. However, the pink (or banana) prawn, which was abundant during the earlier Exmouth Gulf survey, has not yet been recorded in Shark Bay.

Blue manna crabs, squid and cuttlefish were landed in moderate numbers, and on occasions flounders and soles were caught.

The main purpose of the survey was to gain some idea of the limits of the prawn and scallop populations. At the same time encouraging results from a commercial viewpoint were obtained. On May 21, three hauls realised 2,600 lb. of scallops in 100 minutes of trawling time. On another trial run six hauls resulted in 1,380 lb. of scallops. The trawling time on this occasion was 105 minutes. On May 7, a 30-minute trawl netted 95 lb. of tiger prawns and 10 lb. of king prawns, while on a number of other occasions hauls of 50 to 60 lb. were recorded.

Incidental to the main programme was the assistance rendered to the University of W.A. and the Division of Fisheries and Oceanography, C.S.I.R.O. Messrs R.W. George and B. Logan, who are studying at the University, joined the "Lancelin" at Fremantle on March 5 for the passage north to Carnarvon. During the trip plankton tows were made, water temperatures recorded and water and bottom samples collected.

Mr. K. Godfrey, C.S.I.R.O., joined the "Lancelin" at Carnarvon on September 10, to participate in a two-week whale-marking programme. On other occasions the "Lancelin" crew marked a number of whales incidentally to the trawling programme.

The survey of Shark Bay will be continued this year with a slightly different emphasis. Whereas many weeks were spent locating suitable trawling grounds and prospecting last year, this year the areas known to support populations of prawns and scallops will be worked in an endeavour to gain a more complete picture of population limits and migrations.

CONVICTIONS RECORDED

October 1 to December 31, 1957

Date	Defendant	Court	Charge	Result
9.12.57	Kendle, T.H.	Bunbury	Net in closed waters.	Fined £5
26.11.57	Wheeler, R.	Car'von	Unlawful net	" £5
22.10.57	Merendino, T.	Ger'ton	U/size c/fish	" £2
do.	Travia, F.	do.	do.	" £2
do.	Davis, C.(Jnr.)	do.	do.	" £10
do.	Gregory, J.C.J.	do.	do.	" £4
15.10.57	Bennett, A.R.	Perth	U/size fish	" £3
6.11.57	Panegyres, M.	do.	U/size c/fish	" £3
6.11.57	Rogers, D.G.	Pin-jarra	Undersize fish	" £2
		Game Act		
1.10.57	Indrisie, P.F.	Midland Junction	Taking protected fauna	" £2

OPENING OF DUCK SEASON

The Fauna Peotection Officer (Mr. H.B. Shugg), Research Officer B.K. Bowen, Fauna Warden S.W. Bowler and Mr. Cherrington, of Head Office, visited Gundaring Lake, near Wagin, on the opening day of the duck shooting season. They were accompanied by Mr. N.E. Stewart, of the Wildlife Survey Section, C.S.I.R.O. The purpose of the visit was to witness the opening and obtain information on the ducks shot.

Approximately 150 sportsmen were assembled at the lake for the opening, which from a shooter's point of view was not spectacular. Very few shooters obtained the bag limit of 15 ducks, the average being between six and seven.

The research party examined 132 ducks, most of which were weighed, sexed and aged into mature or immature birds. The birds examined represented about 15% of the total number shot. Of those examined, 64% were grey teal, 15% mountain duck, and 14% pink-eared duck. The remaining 7% consisted of black duck, wood duck, freckled duck and blue winged shovelers. As the ducks examined were selected at random, it is probable that these percentages closely approximated the percentages of each species in the total take.

The practice of weighing, sexing and ageing ducks shot will be continued as the opportunity arises, as eventually it will assist in identifying changes in the population structure.

TROUT DELIVERIES

Last month Technical Officer L.G. Smith transported 82 bags of fingerling trout to four trout societies. Twenty bags were delivered to Harvey, Bridgetown and Bibra Lake and 22 bags to Jarrahdale. All the deliveries were made at night, with the exception of the short run to Bridgetown. As on previous occasions when deliveries of this kind have been made in plastic bags, no losses were recorded.

THE CLEARING HOUSE

The Fishing Gear Congress

This month we are devoting the whole of our comment to some reflections on the International Fishing Gear Congress, which took place in Hamburg from October 7-12, and which, despite the scoffers, is undoubtedly the most important single thing which has happened in commercial fishing for several years. We say this because the pace of fisheries development is accelerating at a rate which is remarkable for such a conservative industry, and because an international get-together of this type allows the industry to take stock of itself and its methods and pool the mass of information which is thus made available.

Having listened to the discussions, read the papers, and talked to many of the 450 or so delegates, we feel bound to say that FAO's achievement, both in concept and organisation, was an extremely impressive one, and no one should detract from it. Criticisms of certain aspects of the Congress were expressed, however, and since unqualified approval is not a constructive way of planning for future, similar events, we do feel bound to record them and associate ourselves with them. They are as follows :

(1) Not nearly enough fishermen attended the Congress. (As far as we could ascertain some 5 per cent of the delegates were fishermen.)

(2) There were too many papers, with the result that some of the "rapporteurs" or reviewers of groups of papers, were so befogged with the mass of material with which they had to contend, that they either spoke for far too long, thus cutting down discussion time, or else missed the main points completely. (There were honourable exceptions to this, of course.)

(3) Too many of the papers were advertising puffs.

(4) Similarly, several manufacturers' representatives who took part in the discussions used the microphone solely to get across a commercial plug for their products.

(5) A lot of delegates appeared to think that some fishing gear was to be shown in conjunction with the Congress. Yet not a trawl, nor seine, nor any other type of net was to be seen.

(6) The discussions were, frankly, disappointing, and were couched too often at an academic level. Some practical men, particularly the two British skippers there, had their say, but there were not enough of them. (See point one.)

Reverting again to the credit side, the Congress brought a lot of people together from all parts of the world who might otherwise never have met, and who through casual and informal discussion after sessions were able to exchange a lot of mutually valuable information. Further, several of the papers were really excellent, and the documentary film session, in which films on various aspects of fishing in Japan, Russia, Germany, Yugoslavia, Canada and the United States were shown, was both interesting and useful.

Although we disagree with it, it is only fair to record a point of view which we have also heard expressed: namely, that the Congress was not basically designed for fishermen, and that the interchange of knowledge on the scientific level which took place will be handed on to the industry over the next few years in any case.

It seems to us that one of the big tasks in fishing which FAO is uniquely qualified to undertake, is to integrate the knowledge of the biologist, the technologist, the economist and the fisherman, so that all may speak a common language.. As we have said before, it isn't only the fisherman who needs to be educated. This Congress provided a start to this task, and if the criticisms we have made are noted then some good will undoubtedly have been done. (We make this statement without arrogance.)

Perhaps we may finish with some personal reflections. The extreme efficiency of the interpreters took care of most of the language difficulties, although it was a pity we heard so little from the Japanese delegates, who omitted to bring a fluent European language interpreter with them. It did occur to us that many of the biologists who spoke were interested mainly in expounding their own theories at too great a length. Words like "rationalisation" of fishing gear and "comparative" fishing, may have a place in a scientist's vocabulary, but the fisherman, quite rightly, is apt to condemn them as sheer meaningless jargon. We could have done with a little more discussion on fishing methods such as purse seining, and a little less on trawling, and we were surprised to observe how little was said on winches and winch drives. One thing came across very strongly: the tremendous thirst for knowledge that exists in the industry, and which the Congress went some of the way towards satisfying.

It is our job to bring the Congress findings and papers to the industry in the clearest possible way, and we propose to do it as follows: we intend to publish next month a short, greatly condensed report of the discussions, and from time to time over the next few months we shall publish those papers which seem to us to be of most interest to fishermen and owners.

("World Fishing" London November, 1957)

WHO will fish WHERE?

Geneva Talks on Sea Law May Decide This for Generations

The future of ocean fisheries for years - perhaps forever - will be shaped at an international diplomatic conference opening at Geneva, Switzerland, Feb. 24, 1958.

The conference is scheduled to last for nine weeks, and out of it will come a codification of the international law of the sea. Basis for the work

of the conference will be the report of the International Law Commission, received by the Assembly of the United Nations about a year ago.

Primary points of the code affecting the fisheries will be its provisions touching such points as:

1. The width of the territorial sea - whether it shall be three miles or more, nine or 12, or 200.

2. Special rights of the coastal state - whether it may exercise jurisdiction over fisheries beyond the limits where freedom of the seas is recognised for purposes of navigation, in order that its nationals may enjoy special rights in the fisheries off its coasts, or other nationals may be licensed to engage in them.

3. The principle of abstention - by which nations which have not previously engaged in fully exploited fisheries which are under scientific study and conservation control in line with that study may be expected to abstain from entering those fisheries even though they may lie beyond territorial waters.

All this may seem far apart from the everyday problems of fishing and trying to make it pay, but the results of the decisions can have enormous influence on who can fish where on the seas of the world.

Of particular and specific interest to North American fishermen is the 1956 Canadian declaration that it would seek approval for jurisdiction of the coastal state over fisheries to a width of 12 miles, with the specific understanding that the narrow - three-mile - territorial seas would continue to apply in all matters involving security and navigation.

Delegation representing the United States at this Geneva conference had not been announced at presstime; but there was reason to believe that the American fisheries would have several advisors accredited to the United States delegates.

Policies and position of the American fishing industry have been under development for a number of months, with several conferences held throughout the country. The latest of these took place in San Diego, Sept. 16 and 17.

("Pacific Fisherman" Portland, Ore. October, 1957)

Malaya Opens Fish Culture Station

Malaya has opened an £800,000 fish culture research station at Batu Berendam, five miles from Malacca town.

The station has been financed by the Colonial Development and Welfare Fund for the development of marine fisheries along the lines of stations established in Africa and Hong Kong and for fresh water fisheries in Uganda and the Central African Federation.

There are now about a million acres of ponds in the Far East, producing an estimated annual yield of 500,000 tons of fish.

The object of the station in Malacca is to make carefully-controlled experiments to gain the knowledge needed before scientific control can replace age-old practices. The results of experiments will be disseminated to Far East territories.

("The Fishing News" London October 18, 1957.)

Canners are not Harmed

The Minister for Trade, Mr. McEwen, claimed in Federal Parliament this month that the Japanese trade treaty had not had any appreciable effect on Australian fish canneries.

Mr. McEwen said that before the treaty was signed there was no licensing limitation against the importation of canned fish from Japan.

Japan had been the overwhelming supplier of canned fish to Australia for years.

Mr. McEwen admitted that the pact had reduced the import duty and primage on a ½lb. can of fish by 3d.

This had not, however, appreciably increased imports.

Reason for Crisis

The reasons for the crisis in the Australian fish canning industry were:

* There was an undoubted preference by Australian housewives for high quality canned Japanese salmon.

* Substantial relaxation on importation of frozen, fresh and smoked fish had resulted in a swing away from canned fish by consumers.

Earlier, Mr. L.H. Barnard (Lab. Tas.) had referred to a statement by the general manager of Tasmanian Fish Canners (Mr. Jack O'Donahoo) that disaster faced the industry unless the Japanese trade treaty was changed.

Mr. O'Donahoo had stated that two canneries had closed and many employees had been dismissed with further retrenchments likely.

Mr. Barnard asked Mr. McEwen to arrange for a representative of the Department of Trade to examine the position with industry representatives as soon as possible.

Later in supplementing his statement, Mr. McEwen said that about a month ago, at the suggestion of the Department of Trade, the Tasmanian cannery appointed a panel and had consultations with the department on its problems.

Notwithstanding that, the panel had not asked to have its case referred to the Government's advisory authority on Japanese trade, Mr. M.E. McCarthy.

("Fish Trades Review" Sydney, N.S.W. November, 1957)

Dutch Instruments to Record Trawl and Net Behaviour

How underwater instruments, invented by Dutch scientists, show accurately the behaviour of fishing nets on the bottom and the reaction of fish to the net, is described in a paper by Mr. P.A. de Boer, of the Netherlands Inspection of Fisheries, read at the International Fishing Gear Congress in Hamburg.

Underwater filming, though effective, does not solve all the problems, says Mr. de Boer. "To improve fishing gear, it is also necessary to take the measurements of the gear in action, and to know what dimensions prevail in the different parts of the gear."

His department has developed several underwater instruments in the last four years. They are attached to the otterboards and the net, and record the behvaiour of the gear during the entire haul.

Five Instruments

Experiments made in a Netherlands fisheries research vessel have led to many improvements in the design of these instruments. They are suitable only for work in the Southern North Sea - made to withstand pressures up to a depth of 100 metres.

Five instruments have been used with success and can be read to an accuracy of one centimetre (a fraction of an inch), half a degree, or one kilogram (just over 2 lb.).

They consist of A SPREAD METER, to record the distance between the after ends of the otterboards, or, if the otterboards are attached to the wings of the net (without legs) the horizontal opening of the net; A CLINOMETER, to record the tilt of the otterboard sideways as well as fore and aft; a paravane with a differential MANOMETER towed above the centre of the headline to record the vertical opening of the net - actually the vertical distance between the highest point of the headline and the bottom. This instrument can also be used to measure the height of a kite above the bottom up to a height of 10 metres (about 10 yards); an

ATTACK-ANGLE METER to record the angle of attack of the otterboard; and a hydraulic DYNAMOMETER to record the pull in the legs between the otterboard and the net. This instrument can be used also to record the pull in the warps on board ship.

Otterboards Tilt

To get the best results it is essential to use the instruments only on an even ground with a wind force of not more than 3-4, even with a bigger ship than that used for the trials.

Experiments have shown that, by lengthening the warps, the spread will increase, the otterboards will tilt from outwards to inwards, becoming more unstable and the angle of attack decreases; and that the height of the net decreases with increase in warp length.

The instruments have no influence on the operations of the otterboards. Even the strain in the wire of the spreadmeter, stretched between the aft parts of the otterboards, had no influence on the angle of attack and the tilt of the otterboards.

Constant Tension

The dynamometer has only been used submerged between the otterboards and the net, and only a limited number of hauls made. The instrument showed that during six consecutive hauls in very calm weather the pull in the legs decreased from 250 to 130 kilos. In earlier and later trials a fairly constant tension was recorded.

As to the possibility of the dynamometer indicating the rate of catch, it is considered the strain in the legs should be the same with or without any catch, especially if most of the fish are swimming with the net. Mr. de Boer suggested it might be possible to determine the rate of catch by a decrease in the tension on the warps or the legs.

("The Fishing News" London November 8, 1957)