

## CHAPTER XXIII.

## FISHERIES.

## § 1. General.

1. **Fish Stocks.**—Australia possesses a varied native fauna of freshwater and marine fish, including tropical and temperate species. In addition, certain exotic species have become acclimatized in the freshwater streams. The commercial fisheries exploit on-shore, demersal (bottom) and pelagic (surface) stocks. The on-shore stocks are at present of greatest importance.

The Australian marine fauna includes also a number of mollusca (oysters, scallops) and crustacea (crabs, prawns, crayfish) groups which are commercially exploited.

In winter whales of various species, of which the humpback is the most common, appear off the western and eastern coasts.

2. **Fishing Areas.**—The principal fishing areas at present are the coastal lakes, streams, estuaries and beaches, from Cairns in Queensland to Ceduna in South Australia, and from Esperance to Geraldton in Western Australia. There are interruptions of variable size; for the most part, these fishing grounds are associated with the coastal streams. The demersal grounds fall into two classes—(a) the reefs from which cod and other tropical species are taken in tropical waters, and snapper in temperate waters; and (b) the grounds from which flathead, morwong, etc., are taken. The reefs extend intermittently from northern Queensland around the southern part of the continent to Shark's Bay in Western Australia. The flathead grounds lie on the continental shelf off south-east Australia, chiefly from Crowdy Head to south of Cape Everard and further off the east Tasmanian coast from Babel Island southwards to Storm Bay. Other demersal grounds exist in the Great Australian Bight but would require large modern trawlers for commercial exploitation. The demersal shark grounds lie principally in Bass Strait and on the continental shelf off eastern South Australia. Other grounds have been located off southern Western Australia.

The grounds of existing pelagic fisheries include that for the Spanish mackerel off the north-eastern coast from about Coff's Harbour to Cairns and that for barracouta in Bass Strait and off eastern Tasmania. Jack mackerel is found in the waters of eastern Tasmania, the south-east coast of New South Wales, and Western Australia. Tuna is now being taken in commercial quantities on the New South Wales and South Australian coasts.

Pearlshell is fished from Cooktown in Northern Queensland (and from Thursday Island) round the north coast of Australia to Exmouth Gulf in Western Australia. Trochus shell is obtained from Mackay in Queensland round the north coast to King Sound in Western Australia.

Edible oysters are found in the temperate waters of Queensland, New South Wales and Victoria. Some cropping of natural resources takes place in Queensland, but the principal cultivation grounds are found in New South Wales. The scallop is taken commercially only in Tasmanian waters.

Crabs of various species are found in practically all coastal waters. Prawns are taken in the temperate waters of Queensland and New South Wales. Crayfish are taken on reefs of the continental shelf in the waters of all southern States, the fishery extending (with a major interruption in the Bight) from Port Macquarie in New South Wales to Geraldton in Western Australia. Considerable development has taken place in the crayfish fisheries, particularly in South Australian and Western Australian waters, owing to the opening up of markets in the United States of America for frozen crayfish tails.

Whales emigrating from Antarctic waters to their breeding grounds in the warmer waters of low latitudes pass up both the western and eastern coasts of Australia, returning to the Antarctic in the spring. Three whaling stations operate in Western Australia (Pt. Cloates, Babbage Island adjoining Carnarvon, and near Albany) and one in Queensland (Moreton Bay).

3. **Fishing Boats and Equipment.**—The fishing equipment includes almost every possible type of gear, and appropriate boats are employed. The on-shore equipment includes mesh-nets, trawl-nets, and traps of various types. The demersal reef-fishery

is worked with traps, hand lines and other long lines. The demersal flathead-fishery is worked by both otter trawl (with V.-D. gear) and Danish seine; in addition some hand-lining is carried out. The demersal shark fishery is worked by long lines. The pelagic mackerel-fishery employs trolling gear with lures of various types, while the pelagic barracouta fishery employs principally barbless jigs. Tuna is taken by trolling and, more recently, by pole fishing with live bait, and jack mackerel and pilchards are taken with purse-seine and lampara nets.

The boats for the on-shore fisheries are almost invariably small vessels fitted with low-power petrol engines. The vessels working the reefs are larger (up to 50 feet) and have more power. The otter trawl vessels are steam trawlers, and the Danish seine vessels are 40 to 70 feet in length with diesel engines. The shark boats have diesel power and range from 35 to 50 feet in length.

4. **Administration.**—The fisheries are administered by State Departments implementing State laws. This administration includes licensing of men and boats, and restrictions of fishing by prohibitions against fishing at certain times and places and by certain methods. The States also prescribe the gear that may be used and for some fishes the legal minimum size at which they may be landed.

In October, 1946 the Commonwealth Government appointed a Director of Fisheries and established the Commonwealth Fisheries Office as a division of the Department of Commerce and Agriculture to co-ordinate fisheries administration and develop the fisheries of Australia.

In July, 1952, a conference of fisheries and legal officers of the Commonwealth and all States, except Western Australia, agreed on procedure for implementing through the States the Fisheries Act 1952, and the Pearling Act 1952, which had been passed by the Commonwealth Parliament at the end of February. These Acts were passed to enable the Commonwealth to conserve and develop fisheries in Australian waters outside the States' 3-mile territorial limit. As a first result of the July conference the conservation of the school shark and tiger flathead fisheries was taken in hand by the Commonwealth in co-operation with the States concerned.

The Commonwealth Scientific and Industrial Research Organization, through its Fisheries Division, is responsible for fishery research (*see* § 4, par. 2 hereafter).

## § 2. Development and Present Condition of the Fishery.

1. **Fisheries Proper.**—(i) *General.* The earliest Australian fishery was on-shore. To this was soon added the demersal reef fishery using lines. At each centre of population this sequence has almost invariably been followed, and expansion of the industry up to about the year 1900 consisted chiefly of the extension of these operations into hitherto unworked areas. The taking of barracouta in Tasmanian waters was begun at least by 1880, if not earlier, but the main development of this fishery occurred between 1915 and 1925.

The first major development of the fishery came with the institution of trawling operations off the New South Wales coast in 1918 by the New South Wales Government. The State enterprise failed, but the fishery was found very profitable by private enterprise. In 1936 the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, and in 1946 (after the return of vessels requisitioned in war-time) a peak was reached and thirteen steam trawlers and 120 Danish seine vessels were licensed. The total catch of trawled fish in 1946-47 was 16,000,000 lb. However, by the end of 1947 many of these vessels found that the fish stocks, particularly of flathead, appeared to be seriously depleted. Of the species taken by the trawl fishery, tiger flathead, morwong and nannygai are the most important, and of these flathead may be regarded as the prime fish and commands a higher price. Since 1947 the composition of the catch has changed, because of depletion of the flathead stocks, and the lower priced fish have become a larger proportion of the catch. In 1951-52 ten steam trawlers (all based at Sydney but fishing right down the coast to Bass Strait) and thirty-nine Danish seine vessels in New South Wales, with a few more in Victoria, were engaged in the trawl fishery.

In Queensland waters the Spanish mackerel is taken by line fishermen, operating in off-shore waters out to the Barrier Reef between Gladstone and Cairns, with Townsville as the centre. This fishery started in 1930 and by 1942 production had risen to about 1,000,000 lb. The catch decreased considerably during the war and post-war period, but by 1949-50 it had increased again to the 1942 level of approximately 1,000,000 lb.

In 1930 fishing for snapper shark was started in south-eastern waters, particularly off the Victorian and Tasmanian coasts. This fishery extended rapidly its area of operations, particularly in the Bass Strait area and the south-east coast of South Australia, and the catch increased from 23,000 lb. in 1930 to a steady 3,000,000 lb. catch in each year since 1942. Great impetus was given to the fishery during war years by the demand for livers for fish oil production for medicinal purposes. This demand has eased with the return of cod-liver oil, and the production overseas of synthetic vitamin "A". However shark is still fished for the flesh, which is sold as "flake", mainly in the Melbourne Fish Market.

Pilchards occur in the southern waters of Australia from Port Stephens to the south-west of Western Australia. Commercial catches have been made with lampara nets and to a less extent with purse seines at Jervis Bay on the New South Wales coast, in Port Phillip Bay in Victoria, at Coffin Bay in South Australia and at Albany in Western Australia. Anchovies in Port Phillip Bay and sprats in Tasmanian waters are caught in payable quantities, though there is usually some difficulty in finding a market for them. Jack mackerel have been caught in commercial quantities off the east coast of Tasmania and off Eden in New South Wales.

The tuna fishery was established on the New South Wales coast during the second half of 1949, when fishermen, using improvised trolling gear, caught 1,000 tons of southern blue-fin tuna. The catch was canned at Narooma and Eden, and samples of both canned and frozen fresh tuna were sent to California, where it met with approval. Owing to adverse marine conditions, subsequent years have been disappointing. The American-owned tuna clipper *Senibua*, whose operations were subsidized by the Commonwealth, proved that Australian tuna could be caught by pole fishing with live bait. As tuna come close to the coast, ice can be used instead of refrigeration to preserve the catch to the landing port. This means that smaller and less expensive vessels can be used.

(ii) *Production.* The total recorded catch of fresh fish during 1951-52 amounted to 65,000,000 lb., compared with 64,000,000 lb. in the previous year. This is a considerable decline on the peak production of 76,000,000 lb. reached in 1947-48.

Production for the years 1938-39 and 1947-48 to 1951-52 is shown by States in the following table:—

**RECORDED PRODUCTION OF FRESH FISH.**  
( '000 lb.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	(a) 29,382	32,813	29,506	27,985	24,206	25,473
Victoria ..	12,840	9,745	9,907	9,722	10,741	10,133
Queensland ..	9,182	10,508	10,129	10,125	8,897	9,020
South Australia ..	(a) 8,960	(a) 4,750	(a) 5,264	(a) 5,799	(a) 6,502	6,950
Western Australia(a) ..	5,841	6,953	9,254	8,911	7,659	8,089
Tasmania ..	(a) 2,393	11,288	11,302	7,376	5,934	5,224
Northern Territory ..	28	112	52	52	56	62
<b>Total ..</b>	<b>68,626</b>	<b>76,169</b>	<b>75,414</b>	<b>69,970</b>	<b>63,995</b>	<b>64,951</b>

(a) Year ended previous December.

2. **Oysters and Shell Fisheries.**—Initially the Australian oyster fisheries depended solely upon the harvesting of naturally grown stock in littoral and submarine areas. However, the stocks soon deteriorated and attention was turned to methods of cultivation. This is carried on mainly in New South Wales where there has been constant improvement in methods and the present technique in certain areas is highly efficient. The production for Australia in 1951-52 was 8,209,000 lb. Scallops are taken by dredge in the D'Entrecasteaux Channel in Tasmania.

Cray fisheries have developed greatly in recent years and the development has been such as to permit an export trade of crayfish tails to America to meet the off-season demand for frozen tails. Details of production by States for the years 1938-39 and 1947-48 to 1951-52 are shown in the following table:—

**RECORDED PRODUCTION OF CRAYFISH.**  
(’000 lb.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	420	406	687	595	487	688
Victoria ..	201	82	461	820	426	623
South Australia ..	(a) 686	(a) 941	(a) 870	(a) 1,671	(a) 2,089	2,750
Western Australia(a) ..	1,754	3,037	3,646	6,657	8,515	7,795
Tasmania ..	2,048	3,613	4,213	3,116	2,196	1,879
<b>Australia ..</b>	<b>5,109</b>	<b>8,079</b>	<b>9,877</b>	<b>12,859</b>	<b>13,713</b>	<b>13,735</b>

(a) Year ended previous December.

3. **Pearl-shell and Trochus.**—The industry, which ceased operations on Japan's entry into the war in December, 1941, did not resume on a commercial basis at Queensland centres until late in 1945, and at Western Australian centres until 1946, while operations off the Northern Territory coast were not resumed until 1948.

Before the war a large proportion of the key men were Japanese; the others included Malays, Chinese, Koepangers, Filipinos, Papuans and Torres Straits Islanders. On the resumption of operations without the Japanese, the labour available was, with few exceptions, inefficient. Queensland with a more ready source of labour from the Torres Strait Islands and mainland was able to expand its fishing more rapidly, and in the 1949 season, achieved its second highest pearl shell production on record. The expansion of the industry at Darwin has been retarded by the fact that the key men lack the local knowledge acquired by the Japanese. Western Australian centres also suffered from lack of skilled labour. In 1953 the Commonwealth permitted the employment at Broome, under certain conditions, of 35 Japanese divers, tenders and engine-drivers.

Tables showing the principal statistics relating to pearl-shell and trochus are shown in § 5, para. 1 (iii) hereafter.

Reference to inquiries into the pearl-shell fishing industry by a Royal Commission in 1912, and by the Tariff Board in 1935, appears on page 1031 of Official Year Book No. 37.

### § 3. Marketing and Distribution.

1. **Marketing.**—The greater portion of Australian fish is sold in metropolitan markets. In Queensland, fish marketing is under the control of a Fish Board, which has representatives of producers, wholesalers, consumers, and a Government nominee as chairman. A central market is located in Brisbane and there are branch markets or depots at 14 centres along the coast. The organization ensures that all fish is marketed through the correct channels, and the board has encouraged to a very marked extent the steadily increasing annual fish production of the State. The fish marketing methods in this

State have proved most successful. In New South Wales the central market in Sydney is conducted by the Chief Secretary's Department, and the port depots in various centres along the coast by fishermen's co-operatives. These co-operatives distribute some of their fish to local centres and to inland country districts, and send the balance to the central market in Sydney. In Victoria, South Australia, and Western Australia fish is sold in central markets by agents. The greater part of the catch of fish in Tasmania is either processed in canneries in that State or exported to the mainland. There is some interstate movement of fish from the northern rivers of New South Wales to Queensland, from Tasmania to New South Wales and Victoria, and from South Australia to Victoria.

2. **Consumption of Fish.**—Prior to the 1939-45 War, Australians consumed annually the fresh and canned equivalent of about 131 million lb. of round fish, or 19.0 lb. per person. About 70 million lb. was produced locally and the remainder was imported. Total consumption (including canned and cured) during 1951-52 is estimated at 89.0 million lb. edible weight (10.5 lb. per head) as compared with 84.5 million lb. edible weight (10.2 lb. per head) in the previous year. This is equivalent to approximately 167.7 million lb. fresh round weight (19.6 lb. per head) and 157.6 million lb. fresh round weight (19.0 lb. per head) respectively. Fish is not, as in many countries, a staple item in the diet of Australians and, away from the sea board, is still regarded rather as a luxury.

3. **Processing, including Canning.**—The equipment for handling fish has in the past been rather inadequate, but in most States since the war cold storage facilities have been improved and increased. In Queensland and New South Wales particularly, the depots which have been established at fishing ports have been equipped with cold storage space. In several States there has been a development of establishments equipped for snap freezing of fish, in particular the freezing of crayfish tails for export. A number of vessels have been equipped with freezing plants to process crayfish at sea.

In all States there has been a development of facilities for light processing of fish.

Reference to the production of processed fish and number of factories operating will be found in § 5, par. 3 hereafter. Considerable expansion has taken place in the industry, particularly since 1945-46. In 1938-39, three factories processed 603,302 lb. of fish valued at £13,700, whereas in 1951-52 seventeen factories processed 6,754,943 lb., valued at £884,697.

4. **By-Products.**—Processing of offal for fish-meals, etc., has been established in certain States. The processing of livers for vitamin-rich oils has been undertaken in several States and oil-production has been favourably developed.

## § 4. Inquiries and Research.

1. **General.**—The Australian fishing industry has been the subject of a number of official inquiries seeking an explanation of the very slow rate of development and the unfortunate conditions prevailing within the industry as well as the paucity of supplies available to the public. Details of the inquiries undertaken, the recommendations arising from them and subsequent developments will be found in Official Year Book No. 38, page 1082.

2. **Commonwealth Scientific and Industrial Research Organization, Division of Fisheries.**—Details of the establishment, organization and functions of the Division of Fisheries of the Commonwealth Scientific and Industrial Research Organization will be found in Official Year Book No. 38, page 1083.

Since its inception, the work of the Division has extended, and there are field stations at Melbourne, Perth, Hobart, Dunwich (Queensland) and Thursday Island. The Division has two research vessels, F.R.V. *Derwent Hunter*, working in South Australian waters and a ketch F.R.V. *Gahleu* working as a pearling lugger in the Thursday Island area.

As a result of the exploratory investigations and the research of the Division, together with the collaboration of commercial fishermen, it has been shown that important species of pelagic fish can be taken in commercial quantities in Australia. It has been shown, too, that crayfish, mullet, shark, whitebait and New South Wales trawl fish stocks need the protection of regulations to preserve them. In all but the last mentioned, restrictions have been imposed by the administrative departments to preserve the stocks.

Research on oysters has been aimed at cultivation methods, including the fertilization of mud to increase the output. It has been determined that the Pacific oyster from Japan can be established and grown satisfactorily in Tasmanian waters. Experiments are being carried out with Australian species of pearl-shell in the Thursday Island area to determine whether the cultivation methods used in Japan can be established.

**3. Commonwealth Fisheries Authority.**—The Commonwealth Fisheries Office, a section of the Department of Commerce and Agriculture, was established as a result of a recommendation in 1941 by the Tariff Board, after a public inquiry into the fishing industry, that a Commonwealth developmental authority should be established. Details of the establishment, organization and functions of the Authority will be found in Official Year Book No. 38, page 1084.

In accordance with the Tariff Board report, scientific research, as distinct from developmental and administrative functions, was left to the Commonwealth Scientific and Industrial Research Organization which had established a Division of Fisheries for this purpose in 1937.

After the revocation of the Commonwealth war-time powers, the Commonwealth and State spheres were fixed at an interstate conference in February, 1947. The Commonwealth is responsible for extra-territorial waters, whaling, pearling, rehabilitation of ex-servicemen in the fishing industry, fishery training schools, commercial development of fisheries, promotion of uniform conditions governing catches of various species of fish, statistics, information and publications.

**4. North Australia Development Committee.**—In 1946 the North Australia Development Committee gave considerable attention to the fisheries resources of North Australia and recommended that a hydrological and oceanographical survey should be made of the area. It also suggested that a biological survey should be made of pearl shell with particular reference to the possibility of instituting pearl shell culture. It recommended that all information regarding the area should be compiled and made available for scientific workers. It also recommended that an economic survey of the fisheries resources should be made, comparing them particularly with those of the Netherlands East Indies.

**5. Whaling.**—The Commonwealth Fisheries Office carried out extensive investigational and preparatory work for the establishment of an Australian whaling industry. A commission of three members was established in 1949, and a station was built at Babbage Island in Western Australia. Operations did not begin until the 1950 season, when 40 whales were processed and in 1952, with three catcher boats, this station obtained its quota of 600 whales. A second station in Western Australia at Pt. Cloates, which began operating in 1949, in 1952 took 536 whales of its 600 quota, and a smaller station near Albany took 51 of a quota of 75. A new station at Moreton Island (Queensland) in its first season (1952), took its full quota of 600 whales.

The Director of Fisheries represents Australia on the International Whaling Commission, which controls whaling throughout the world.

## § 5. The Fishing Industry.

1. Boats and Men Engaged, and Take.—(i) *General Fisheries.* The returns have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts are shown in the following tables.

## GENERAL FISHERIES, 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	N.T.	Aust.
No. of boats engaged ..	2,142	693	3,408	1,400	531	911	10	9,095
Value of boats and equipment .. £'000	1,503	622	922	475	686	400	5	4,613
No. of men engaged ..	(b)2,598	974	6,963	3,992	925	1,134	16	16,602
Total take of—								
Fish .. '000 lb.	25,473	10,133	9,020	6,950	8,089	5,224	62	64,951
£'000	1,385	760	519	550	290	261	5	3,770
Crayfish .. '000 lb.	688	623	..	2,750	7,795	1,879	..	13,735
£'000	106	62	..	242	585	141	..	1,136
Prawns .. '000 lb.	1,792	..	375	..	24	..	..	2,191
£'000	358	..	47	..	5	..	..	410
Crabs .. '000 lb.	52	..	313	..	40	..	..	405
£'000	3	..	29	..	4	..	..	36

(a) Year ended December, 1951. (b) Fishermen's licences issued; licences are issued only to persons deriving a substantial proportion of their income from personal exertion from the capture and sale of fish.

Figures for Australia for the years 1938-39 and 1947-48 to 1951-52 are shown in the table below:—

## GENERAL FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
No. of boats engaged	5,462	11,059	10,160	9,329	8,628	9,095
Value of boats and equipment .. £'000	649	4,222	3,668	4,104	4,149	4,613
No. of men engaged(a)	9,081	18,378	17,440	15,637	14,870	16,602
Fish obtained—						
Quantity .. '000 lb.	68,626	76,169	75,414	69,970	63,995	64,951
Gross value .. £'000	1,385	2,827	3,160	2,877	3,555	3,770
Crustaceans obtained—						
Gross value .. £'000	135	457	664	914	725	1,582

(a) Includes Fishermen's licences issued for New South Wales; see note (b) above.

(ii) *Edible Oyster Fisheries.* Edible oyster fisheries are of small dimensions outside New South Wales and Queensland. The available returns show the following takes during 1951-52 in these States:—New South Wales, 7.6 million lb., value £380,144; Queensland, 482,000 lb., value £15,050. In Tasmania the scallop is far more important than the oyster, and in 1951-52 the take was valued at £38,650.

Figures for Australia for the years 1938-39 and 1947-48 to 1951-52 are shown in the following table :—

## EDIBLE OYSTER FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
No. of boats engaged	754	815	833	1,132	1,020	1,114
No. of men engaged ..	850	626	768	878	664	901
Oysters obtained—						
Quantity (a) '000 lb.	9,984	8,115	7,063	9,307	7,245	8,535
Gross value (b) £	132,201	295,763	291,470	425,745	398,995	435,513

(a) Includes scallops in Tasmania, 7,470 cwt. in 1947-48; 5,969 cwt. in 1948-49; 4,211 cwt. in 1949-50; 3,219 cwt. in 1950-51; and 2,908 cwt. in 1951-52; 1938-39 weight not available. (b) Includes scallops in Tasmania, valued at £14,500 in 1938-39; £33,115 in 1947-48; £26,460 in 1948-49; £23,580 in 1949-50; £31,540 in 1950-51; and £38,650 in 1951-52.

(iii) *Pearl and Pearl-shell Fisheries.* (a) *States.* The following table shows particulars of equipment used in the pearling industry, men engaged and production for the year 1951-52 :—

## PEARL AND PEARL-SHELL FISHERIES, 1951-52.

State or Territory.	Boats Engaged.	Value of Boats and Equipment.	Men Engaged.	Pearl-shell.		Gross Value of Pearls obtained. (c)	Tortoise-shell.		Trochus-shell.	
				Quantity obtained.	Gross Value.		Quantity obtained.	Gross Value.	Quantity obtained.	Gross Value.
	No.	£	No.	Tons.	£	£	Tons.	£	Tons.	£
Queensland ..	103	395,250	41,250	446	253,420	..	..	..	1,159	232,932
W. Australia(b) ..	24	102,600	215	321	174,432	1,490	2	150	17	1,400
Nor. Territory ..	5	25,000	51	86	31,000	..	..	..	..	..
Australia ..	132	522,850	1,516	853	458,852	1,490	2	150	1,176	234,332

(a) Includes Torres Strait Islanders and Australian aborigines. (b) Year ended December, 1951. (c) Incomplete; as returned.

(b) *Australia.* A summary of the principal statistics relating to pearl and pearl-shell fisheries is given in the following table for the years 1938-39 and 1947-48 to 1951-52.

## PEARL AND PEARL-SHELL FISHERIES : AUSTRALIA.

Particulars.		1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Boats engaged	No.	181	123	141	126	154	132
Value of boats and equipment	£	168,133	247,150	387,550	404,139	557,990	522,850
Men engaged	No.	1,750	1,245	1,417	1,383	1,621	1,516
Pearl-shell obtained—							
Quantity ..	tons	2,543	723	1,346	1,542	1,091	853
Value ..	£	222,281	415,325	573,785	551,715	508,230	458,852
Value of—							
Pearls obtained(a) £		3,397	1,294	1,930	1,040	3,635	1,490
Trochus-shell obtained—							
Quantity ..	tons	321	272	414	577	1,287	1,176
Value ..	£	23,823	18,729	28,170	51,682	228,325	234,332

(a) Incomplete; as returned.



2. Value of Production.—(i) *Gross and Local Values, 1951-52.* Although statistics of the value of production of the fishing industry have been on an established basis for some years, attention is drawn to the fact that the actual collection of statistics of the quantity of fish taken presents many difficulties and consequently any defects which may occur in the collection must necessarily be reflected in the value of production. Particulars of the value of other materials used in the process of production are not available for all States, so the values can only be stated at the point of production and not on a net basis as has been done with other industries. Variations in the relative proportions of marketing costs to gross production suggest that complete uniformity in method has not yet been attained.

GROSS AND LOCAL VALUE OF FISHERIES PRODUCTION, 1951-52.  
(£'000.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.	Value of other Materials used in Process of Production.	Net Value of Production.(a)
New South Wales .. ..	2,233	412	1,821	156	1,665
Victoria .. ..	824	118	706	(b)	(b)
Queensland .. ..	1,095	260	835	225	610
South Australia .. ..	792	91	701	(b)	(b)
Western Australia .. ..	1,253	28	1,225	167	1,058
Tasmania .. ..	441	(b)	441	(b)	(b)
Total (c) .. ..	6,638	909	5,729	(b)	(b)

(a) No deduction has been made for depreciation and maintenance. (b) Not available.  
(c) Excludes production in the Northern Territory.

(ii) *Local Values, 1934-35 to 1938-39 (Average) and 1947-48 to 1951-52.* In the following table the local value of fisheries production and the local value per head of population are shown by States for the average of years 1934-35 to 1938-39 and each of the years 1947-48 to 1951-52. Local value is gross value less marketing costs and is the value at the place of production. The value of materials used in the course of production is not available for all States and consequently production is valued at that point. These values therefore overstate the net values by the extent of these costs.

LOCAL VALUE OF FISHERIES PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL VALUE.(a)							
(£'000.)							
Average, 1934-35 to 1938-39 ..	588	159	292	182	229	80	1,530
1947-48 ..	1,224	450	561	214	564	490	3,593
1948-49 ..	1,479	522	704	232	679	558	4,174
1949-50 ..	1,449	615	760	287	697	426	4,234
1950-51 ..	1,730	700	812	404	812	411	4,869
1951-52 ..	1,821	706	835	701	1,225	441	5,729

(a) No deduction has been made for depreciation and maintenance.

LOCAL VALUE OF FISHERIES PRODUCTION—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL VALUE PER HEAD OF POPULATION.							
(s. d.)							
Average, 1934-35 to 1938-39 ..	4 5	1 9	5 11	6 3	10 0	6 11	4 6
1947-48 ..	8 2	4 4	10 1	6 7	22 2	37 5	9 3
1948-49 ..	9 8	4 11	12 5	7 0	26 0	41 7	10 9
1949-50 ..	9 2	5 8	13 1	8 4	25 6	30 9	10 7
1950-51 ..	10 7	6 3	13 7	11 4	28 5	28 7	11 9
1951-52 ..	10 10	6 2	13 8	19 3	41 5	29 6	13 6

(a) No deduction has been made for depreciation and maintenance.

3. **Fish Preserving.**—The attempt to establish the fish preserving industry at the commencement of this century met with little success although a bounty was paid to encourage production. The industry, however, continued to operate, but there was no marked development until about 1945-46 when the production of canned fish amounted to 1,700,000 lb. After that year production increased considerably and reached a peak of 10,900,000 lb. in 1948-49, but by 1951-52 it had declined to 6,800,000 lb.

In addition to the canning of fish, other fish products are produced. The quantities produced during 1951-52 were 319,000 lb. of smoked fish and 1,099,000 lb. of fish paste.

In 1939 New South Wales and Tasmania were the only producing States, but by 1941 the industry had been extended to South Australia and Western Australia. Details of production are given in the following table for the years 1938-39 and 1947-48 to 1951-52.

## PRODUCTION OF CANNED FISH : AUSTRALIA.

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories operating(a) ..	3	16	16	15	18	17
Quantity .. lb.	603,302	9,731,702	10,886,254	7,442,521	7,000,365	6,754,943
Value .. £	13,700	727,660	973,027	676,812	701,141	884,697

(a) Including factories engaged in the canning of fish loaf.

The varieties canned in the several States differ according to the catch available, but separate details for each variety are not collected. In New South Wales salmon is the principal variety. In South Australia the canned pack includes mullet, salmon, garfish, etc., in Western Australia herrings, crayfish and mullet, and in Tasmania, salmon and crayfish.

4. **State Revenue from Fisheries.**—The revenue from fisheries during the year 1951-52 was £59,769 compared with £48,866 in 1950-51 and £34,273 in 1938-39. Of the total of £59,769 in 1951-52 New South Wales collected £29,004, Victoria £4,164, Queensland £11,124, South Australia £3,839, Western Australia (year ended December, 1951) £7,325, Tasmania £4,238 and Northern Territory £75.

### § 6. Oversea Trade in Fishery Products.

NOTE.—Values of Australian oversea trade shown in this section are expressed in £A. f.o.b., Port of Shipment.

1. Imports of Fish.—The equivalent, in the round, of imported fish consumed in Australia in 1951-52, was 46 per cent. of the total consumption. Particulars of the imports of fish are shown below for the years 1947-48 to 1951-52 in comparison with 1938-39.

#### FISH (INCLUDING SHELL FISH): IMPORTS INTO AUSTRALIA. (Cwt.)

Classification.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Fresh or preserved by cold process .. ..	84,028	73,060	100,902	59,152	103,926	150,972
Potted or concentrated .. ..	9,435	12,909	3,012	1,908	1,959	1,766
Preserved in Tins—						
Fish—						
Herrings .. ..	38,917	47,236	95,994	81,569	95,227	88,149
Pilchards .. ..	(a)	36,329	3,740	735	930	4,041
Salmon .. ..	166,695	12,031	2,544	14,848	14,923	20,387
Sardines (including Sild)	29,372	58,733	61,962	50,253	80,645	70,334
Other .. ..	14,306	24,432	8,682	5,974	4,535	15,455
Shell Fish—						
Crustaceans .. ..	6,829	4,627	1,623	2,386	6,194	3,397
Oysters .. ..	1,939	1	29	59	121	198
Other .. ..	(a)	297	100	201	74	224
Smoked or Dried (not salted)	8,122	26,090	32,331	70,524	64,099	56,235
N.E.I. (including salted) ..	7,987	3,202	3,319	8,577	8,655	11,911

(a) Not recorded separately.

The value of fish and fish products imported during 1951-52 amounted to £4,983,000 as compared with £1,470,854 in 1938-39.

Canned fish (total imports of which in 1951-52 were valued at £3,320,390) constituted the largest proportion of the imports; salmon from the Soviet Union, herrings from the United Kingdom and Norway, pilchards from the Union of South Africa and sardines from Norway were the chief varieties imported. A considerable proportion of the fresh fish imported in 1951-52 came from the United Kingdom and New Zealand, and the potted fish came chiefly from the United Kingdom; the bulk of the remainder came from the United Kingdom and Spain. The small import of oysters was supplied by New Zealand, whilst the bulk of the crustaceans was supplied by the Union of South Africa and the Soviet Union.

2. Exports of Fish.—During 1951-52 the exports of fish of Australian origin were as follows:—oysters in shell, 895 cwt., £6,590; other fresh or preserved by cold process, 30,046 cwt., £1,069,048; potted or concentrated, 297 cwt., £13,705; fish, preserved in tins, 5,240 cwt., £94,600; shell fish in tins, 1,335 cwt., £33,607; smoked or dried, 189 cwt., £3,797; and other fish, 16 cwt., £210.

3. Exports of Pearl and other Shell.—The exports of pearl, tortoise and trochus-shell of Australian origin are shown hereunder for the years 1938-39 and 1947-48 to 1951-52.

## PEARL, TROCHUS AND OTHER SHELL : EXPORTS FROM AUSTRALIA.

Article.			1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Pearl-shell	..	cwt.	52,532	15,915	27,885	33,840	22,877	14,473
		£	244,266	408,681	606,767	624,517	485,685	370,096
Trochus-shell	..	cwt.	9,108	10,096	15,547	10,765	27,460	33,731
		£	34,166	49,888	73,012	49,170	231,580	424,692
Other shell	..	cwt.	4	269	157	1,239	621	2,332
		£	151	1,710	1,599	16,225	6,517	33,199