

## 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.

At certain times of the year whales of various species appear off our 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 off Crowdy Head to south of Cape Everard and further off the east Tasmanian coast off Babel Island southwards to Storm Bay. Other demersal grounds are known to exist in the Great Australian Bight but as yet are not exploited. 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. Horse-mackerel is found in the eastern Tasmanian waters. Concentrations of other pelagic groups, including tuna and clupeoid species, are reported over the continental shelf at various points.

The pearl oyster inhabits the northern and western coastal waters from Cape York to Shark Bay. 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 found 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.

The whale appearances occur off the south of the continent, extending as far north as Southern Queensland in the east and to beyond Shark's Bay in the west.

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; the use of nets, chiefly of pursuing kind, for pelagic fisheries is only now being tested.

The boats for the on-shore fisheries are almost universally 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, while 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 at present are administered by State Departments implementing State laws. This administration includes licensing of men and boats, and restriction on fishing, by prohibitions against fishing at certain times and places and by certain methods. In some States the quantity, type and construction of gear is subject to limitations and legal minimum sizes are prescribed.

In June, 1943 the fisheries were the subject of overall control by the Controller of Fisheries in the Department of War Organization of Industry but were subsequently transferred to the Ministry of Post-war Reconstruction.

Special legislation exists for the pearl-shell and bêche-de-mer fisheries and for whaling.

## § 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 as a consequence of the results obtained from the exploratory work of the Federal Investigation ship *Endeavour*. The State enterprise failed, but the fishery was found very profitable by private enterprise, which had as many as sixteen steam trawlers operating at one time. In 1936 the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, being given an exceptional opportunity by the requisitioning of the steam trawlers by the Navy. Subsequently, practically all the Danish seine vessels were also requisitioned. There are strong signs that the stocks here were overfished and that the upper limit of economic production is about 14 million lb.

In about 1929-30 Queensland fishermen turned their attention to spanish mackerel, and this fishery rapidly developed, with Townsville as principal centre. Production in 1942 was in the region of 1 million lb.

At about the same time (1930) a fishery for snapper shark in southern waters began to expand. This fishery rapidly extended its area of operations and the catch increased from 23,131 lb. in 1930 to 3,150,000 lb. in 1942-43. Greater impetus was given to the fishery during war years by the demand for livers for fish oil production for medicinal purposes. This production has risen from 3,750 gallons in 1940-41 to 15,250 gallons in 1943-44.

The presence of stocks of tuna of various species in Australian waters is undoubted, but, despite extensive experiments, no ready practicable method of taking them has yet been found. However, it appears, following experimental work, that another pelagic species, the horse-mackerel of Tasmania, can be taken by purse seine nets and will be taken in appreciable quantities within the next few years.

(ii) *Production.* Production in the year 1943-44 was slightly lower than that for 1942-43. Though there was a considerable loss in production because of the requisitioning of all steam trawlers and most Danish seine trawlers, it was in some measure offset by a development of the shark fishery.

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. These have not been successful in Queensland, but in New South Wales there has been constant improvement in methods and the present technique in certain areas is highly efficient. Peak production of 44,723 bags was reached in 1938.

The cray fisheries have developed along with the other reef fisheries.

3. *Pearl-shell and Bêche-de-mer.*—Pearl-shelling is carried on in the tropical waters of Queensland, the Northern Territory and Western Australia. The pearl oyster inhabits the northern and western coastal waters from Cape York to Shark Bay, a length of shore of over 2,000 miles. The shells are marketed in considerable quantities, and pearls are obtained in Queensland, Western Australia and the Northern Territory. The fishing is generally conducted with the aid of diving apparatus in water varying from 4 to 20 fathoms in depth. In Queensland and the Northern Territory the bêche-de-mer industry is carried on, and tortoise-shell is obtained on the coasts. Experiments have been made in cultivating the pearl oyster on suitable banks. The value of trochus-shell of Australian origin exported during 1943-44 was £17,192.

### § 3. Marketing and Distribution.

1. *Marketing.*—The greater proportion of Australian fish is sold in metropolitan markets, but some is sold in metropolitan areas without passing through the market. The proportion of local and inland sales varies in different States, being estimated at about 50 per cent. in Queensland and about 10 per cent. in New South Wales; this proportion is dependent upon the degree of concentration of population and on facilities for efficient transport of fish. Marketing in Queensland is subject to a Marketing Act whereby marketing areas may be declared after which all fish caught and sold in the area must be sold at the Government market. There is some interstate trade in supplies; some fish from northern New South Wales passes to Queensland and some southern New South Wales fish passes to Victoria. New South Wales derives a small quantity of high grade fish from Queensland and barracouta and crayfish from Tasmania. Victoria receives fish from New South Wales, Tasmania and South Australia, the latter State supplying chiefly whiting.

2. *Consumption of Fish.*—Prior to the 1939-45 War Australians consumed annually the equivalent of about 145 million lb. of round fish, or 20.7 lb. per person. About 65 million lb. was produced locally and the remainder was imported; that is, the average Australian ate about 9.3 lb. of Australian fish a year and the equivalent of 11.4 lb. of overseas fish. The per capita consumption in the United Kingdom in 1937 was 49.8 lb., in New Zealand 23.8 lb. and in Japan 110 lb. During the 1939-45 War, however, the quantity of fish entering civilian consumption in Australia was reduced to approximately 4 lb. per person annually owing to the decline in local production, the steep drop in the imports of canned fish and the allocation of supplies for the Services and other priority needs.

The low consumption of fish in Australia is due partly to the abundance of food available from the soil, partly to climatic and transport problems of distribution, and in part to problems of production and the difficulties of expansion, which include strong seasonal fluctuations and the absence of certain special types of fish. The latter two factors operate to engender an instability of demand so that fish is regarded as an item of luxury or as a welcome change of diet rather than as a staple item of food.

3. **Processing, including Canning.**—The equipment for handling fish has been somewhat inadequate, but rapid advances are being made in the provision of this equipment, particularly of snap-freezing plant.

There is no considerable trade in smoking, salting or other light processing but plans are being laid for kippering Tasmanian horse-mackerel.

Apart from some establishments which may be engaged in the canning of fish as a subsidiary to that of meat and fruit, fish canneries have been established at various places in Australia with varying results. The industry has not developed, however, and the cause has been attributed to either faulty location, failure of supply or failure to ensure a sound market.

Canneries of southern New South Wales have temporarily ceased operation, due, in the main, to lack of raw material supplies. Some new canneries have been established or are planned.

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

#### § 4. Inquiries and Research.

1. **General.**—Australian fishing industries have been the subject of very numerous inquiries seeking explanation of the very slow rate of development, of the unfortunate conditions prevailing within the industry and of the paucity of supplies available to the public. To meet the situation revealed, various research programmes have been instituted.

2. **Conference 1927–1929.**—With the object of reviewing the potentialities of the fishing industry of Australia the Development and Migration Commission convened a meeting of State and Commonwealth representatives. The Conference, which was held in Melbourne during September, 1927, affirmed:—

- (1) The importance of establishing a Marine Biological Institution to study the scientific problems connected with Australian fisheries, and to collect and disseminate authoritative information and give advice on matters concerning the fisheries;
- (2) The desirability of establishing an experimental trawling unit to explore the fisheries resources of Australia.

Committees were formed to deal with important problems concerning the preservation, transportation, marketing and distribution of fish, the canning and curing of fish, the production of fish by-products, the factors of destruction in fisheries, the development of the oyster industry, etc. The reports prepared by these Committees were submitted to a further conference held in July, 1929, at which the Commonwealth and all State Governments were represented; it was then unanimously recommended that investigation work should be undertaken by the Commonwealth Government.

3. **Council for Scientific and Industrial Research, Division of Fisheries.**—Acting on the recommendation of the 1927–1929 Conference the Commonwealth Government entrusted to the Council for Scientific and Industrial Research the task indicated by the Conference. In its original plans the Council provided a sum of £80,000, spread over a period of five years, for the following purposes:—(i) to procure a vessel specially designed for the exploration of pelagic or surface-swimming fish, but which could also carry out

certain investigations of demersal or bottom-dwelling species; (ii) to undertake experiments in the canning of fish and the determination of the chemical composition of fish thought to be suitable for the manufacture of fish by-products; (iii) to determine, by tests, the best methods of curing and preserving fish, especially the more common varieties; and (iv) in co-operation with the State authorities, to undertake a study of the systems of distribution of fish in each State with a view to improving existing transport and marketing facilities. A research vessel constructed at a cost of £17,000 was commissioned in 1938 and a programme of work was laid down extending over a period of five years. During the first three years the investigation was confined to the south-eastern portion of the Australian coast; part of the work was extended later to the south-western portion of the Continent. Experimental cruises completed so far have revealed the presence of eleven kinds of tuna and other commercial species such as pilchard. A Fisheries Laboratory and Research Station has been erected at Port Hacking in New South Wales.

The results of the first five years work have led the Council to place this programme on a permanent basis, and the Division will continue its work of exploration and biological assay of the stocks.

**4. Tariff Board Inquiry.**—The Tariff Board, after an inquiry held in 1941, concluded that the development of a prosperous fishing industry would be an important contribution to the war effort, that the possibilities of commercial exploitation were established, and that the stage had now been reached when additional governmental assistance was desirable. It recommended that assistance to the Council for Scientific and Industrial Research be continued and that a Commonwealth Fisheries Development Authority be established with the necessary authority to carry out its functions.

**5. War-time Control.**—A conference between representatives of the Council for Scientific and Industrial Research and State Departments administering fisheries was held in October, 1941, for the purpose of inquiring into the constitution of the proposed Commonwealth Authority and other related matters.

No action arose from this Conference. In 1942 the Division of Fisheries, Council for Scientific and Industrial Research, prepared, on behalf of the Director-General of Man Power, a register of man-power in the industry and made suggestions for the rationalization of the industry under war-time conditions. As a result of these suggestions a Controller of Fisheries was appointed to co-ordinate and organize the industry. The programme of the Controller includes the setting of production goals, control of the allocation of man-power, fuel and equipment, organization of co-operatives within the industry, rationalization of marketing and distribution and general supervision of development.

**6. Pearl-shell Fishery Royal Commission.**—In accordance with the "White Australia" policy it was originally determined that the employment of Asiatic labour in the pearl-shelling industry should be restricted, and ultimately cease, and it was proposed that after 31st December, 1913, permits to bring in Asiatics for the pearling fleet should no longer be issued. In view, however, of the disorganization of the industry occasioned by the 1914-19 War, the time was extended to the 30th June, 1918, after which date permits to introduce Asiatic labour were to be granted only in cases where the diver and tender of a boat were Europeans. The Royal Commission appointed in March, 1912, presented its final report in 1916. The Commissioners stated that, though it might be practicable, they did not consider it advisable or profitable to attempt to transfer the industry from Asiatics to Europeans. They further stated that, while the labour employed is almost entirely Asiatic, they did not consider that the "White Australia" policy would be weakened or imperilled by allowing the industry to continue as then conducted.

**7. Pearl-shell Fishery Tariff Board Inquiry.**—Arising out of an application for the payment of a bounty on pearl-shell gathered by fishing vessels registered in Australia, the industry was the subject of an inquiry by the Tariff Board which presented its report in 1935. The Board did not approve the granting of a bounty but recommended some relief to the industry in the form of the remission of portage and customs duty.

§ 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, 1943-44.

State or Territory.	Boats Engaged.	Value of Boats and Equip-ment.	Men Engaged.	Total Take of—		Gross Value of Take—	
				Fish.	Spiny Lobster (Crayfish).	Fish.	Spiny Lobster (Crayfish).
	No.	£	No.	Cwt.	Doz.	£	£
New South Wales..	1,971	271,399	(a) 3,872	212,512	4,596	694,207	(b) 87,112
Victoria..	1,117	221,605	1,928	86,815	1,824	405,136	3,313
Queensland	1,688	158,056	3,190	67,360	(c) 13,402	306,714	(d) 27,003
South Australia(e)	1,217	152,100	1,803	40,950	17,200	250,500	22,725
Western Australia(e)(f)	423	64,438	(g) 816	22,284	39,223	155,988	(h) 17,288
Tasmania(i)	451	100,000	780	50,050	63,668	116,784	89,135
Northern Territory	(j)	(j)	(j)	(j)	(j)	(j)	(j)
Total	6,867	967,598	12,400	479,971	139,913	1,929,329	246,576

(a) Fishermen's licences issued. (b) Includes the value of prawns and crabs. (c) Crabs. (d) Includes £10,280, the value of 943 cwt. of prawns; and £1, the value of 19 turtles. (e) Year ended December, 1943. (f) Includes 303 boats licensed by part-time fishermen. (g) Includes 545 part-time operatives and others who have only a licence to net fish for own use. (h) Includes £4,723, the value of 442 cwt. of prawns and 1,720 dozen crabs. (i) Includes oyster fisheries. (j) Not available.

Returns for Australia for the years 1938-39 and 1940-41 to 1943-44 are given in the table below :—

GENERAL FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1940-41.	1941-42.	1942-43.	1943-44.
No. of boats engaged ..	5,462	6,229	5,530	6,156	6,867
No. of men engaged ..	9,081	9,806	9,526	10,106	12,400
Fish obtained—					
Quantity .. cwt.	612,735	576,928	534,339	467,547	479,971
Gross value .. £	1,385,281	1,448,952	1,679,284	1,920,293	1,929,329
Lobsters obtained—Gross value £	134,866	144,368	170,354	227,775	246,576

(ii) *Edible Oyster Fisheries.* Edible oyster fisheries are of small dimensions outside New South Wales and Queensland. During 1943-44 the available returns show the following takes :—New South Wales, 45,874 cwt., value £112,392; Queensland, 3,981 cwt., value £8,659. In Tasmania the scallop is far more important than the oyster. In 1943-44 the scallops taken in Tasmania were valued at £15,428.

Returns for Australia for the years 1938-39 and 1940-41 to 1943-44 are given in the following table :—

EDIBLE OYSTER FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1940-41.	1941-42.	1942-43.	1943-44.
Boats engaged .. No.	754	768	855	715	816
Men engaged .. "	850	1,021	837	728	790
Oysters obtained—					
Quantity .. cwt.	89,145	86,463	88,949	79,885	50,482
Gross value (a) .. £	132,201	136,150	139,142	171,754	137,698

(a) Includes scallops in Tasmania valued at £14,500 in 1938; £13,650 in 1939; £14,000 in 1940; £18,600 in 1941; £14,583 in 1942-43; and £15,428 in 1943-44.

(iii) *Pearls, Pearl-shell and Bêche-de-mer—States.* At the outbreak of war in the Pacific in December, 1941, the pearling industry ceased to operate. The latest available particulars of the equipment used and production are shown in the following table. As details for Western Australia for the year 1941 are available they are appended to the table :—

PEARL, PEARL-SHELL AND BÊCHE-DE-MER FISHERIES,<sup>A</sup>(a) 1940-41.

State or Territory.	Number of Boats Engaged.	Value of boats and Equip-ment.	Number of Men Engaged.	Pearl-shell.		Gross Value of Pearls obtained. (b)	Gross Value of Bêche-de-mer obtained.	Gross Value of Tortoise-shell obtained.
				Quantity obtained.	Gross Value.			
	No.	£	No.	Tons.	£	£	£	£
Queensland (c) ..	88	95,036	924	1,187	160,335	..	6,890	6
Western Australia (d) ..	65	55,981	536	700	73,903	1,584	24	15
Northern Territory (f) ..	9	5,000	80	131	11,434	..	..	..
Australia ..	162	156,017	1,540	2,018	245,672	1,584	6,914	21
Western Australia 1941 (g) ..	57	55,398	487	616	96,127	2,360	..	..

(a) No pearl-shell industry in New South Wales, Victoria, South Australia and Tasmania.  
 (b) Incomplete; as returned. (c) Also 276 tons of trochus-shell valued at £19,286. (d) Year ended December, 1940. (e) Also 3 cwt. trochus-shell valued at £10. (f) Year 1939-40.  
 (g) Queensland and Northern Territory not available for 1941-42.

(iv) *Australia.* The figures for tortoise-shell and trochus-shell are incomplete, as the necessary information is not collected in full detail. In the following summary of production during the five years ended 1940-41 figures of exports of Australian origin are inserted for both of these items :—

Details for later years are given in § 6. 3 hereafter.

PEARL, PEARL-SHELL AND BÊCHE-DE-MER FISHERIES : AUSTRALIA.

Particulars.		1936-37.	1937-38.	1938-39.	1939-40.	1940-41.
Boats engaged ..	No.	221	204	181	167	162
Men engaged ..	"	2,241	1,941	1,750	1,408	1,540
Pearl-shell obtained—						
Quantity ..	tons	2,780	2,854	2,543	2,149	2,018
Value ..	£	340,244	310,655	222,281	198,264	245,672
Value of—						
Pearls obtained (a) ..	£	5,495	4,111	3,397	2,620	1,584
Bêche-de-mer obtained	£	6,495	14,237	8,145	669	6,914
Tortoise-shell exported	£	367	380	151	205	138
Trochus-shell exported	£	51,209	32,147	34,166	37,704	6,791

(a) Incomplete; as returned.

2. *Value of Production—Gross and Local.*—(i) *General.* 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 their 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, 1943-44.**

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 ..	894,000	166,000	728,000	13,000	715,000
Victoria ..	409,143	63,387	345,756	(b)	(b)
Queensland ..	342,000	70,000	272,000	70,000	202,000
South Australia ..	273,750	33,403	240,347	(b)	(b)
Western Australia ..	173,276	13,188	160,088	23,265	136,823
Tasmania ..	221,350	..	221,350	(b)	(b)
Total (c) ..	2,313,519	345,978	1,967,541	(b)	(b)

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

(ii) States 1934-35 to 1943-44. In the following table the local value of fisheries production and the local value per head of population are given by States for the years 1934-35 to 1943-44. 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.	Qld.	S.A.	W. A.	Tas.	Total.
LOCAL VALUE.(a)							
	£	£	£	£	£	£	£
1934-35 ..	536,000	140,549	261,411	151,843	181,913	71,300	1,343,016
1935-36 ..	583,000	146,946	287,000	151,800	179,405	71,040	1,419,191
1936-37 ..	650,000	161,999	336,000	184,669	224,432	80,900	1,638,000
1937-38 ..	548,000	168,095	296,000	209,234	286,580	87,050	1,594,959
1938-39 ..	620,000	176,919	277,000	220,401	269,894	90,350	1,654,564
1939-40 ..	508,000	199,632	285,000	202,009	252,837	109,910	1,557,388
1940-41 ..	517,000	244,444	330,000	227,987	251,529	96,830	1,667,790
1941-42 ..	619,000	387,462	185,000	245,301	226,945	109,570	1,773,278
1942-43 ..	830,000	377,418	242,000	277,014	117,202	86,450	1,930,084
1943-44 ..	728,000	345,756	272,000	240,347	160,088	221,350	1,967,541

**LOCAL VALUE PER HEAD OF MEAN POPULATION.**

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1934-35 ..	4 1	1 6	5 5	5 2	8 3	6 3	4 0
1935-36 ..	4 5	1 7	5 11	5 2	8 0	6 2	4 3
1936-37 ..	4 9	1 9	6 10	6 3	9 11	7 0	4 10
1937-38 ..	4 0	1 10	5 11	7 1	12 6	7 5	4 8
1938-39 ..	4 6	1 11	5 6	7 5	11 8	7 8	4 9
1939-40 ..	3 8	2 1	5 7	6 9	10 10	9 2	4 5
1940-41 ..	3 9	2 7	6 4	7 7	10 8	8 0	4 9
1941-42 ..	4 5	4 0	3 7	8 1	9 8	9 2	5 0
1942-43 ..	5 11	3 10	4 8	9 0	4 11	7 2	5 4
1943-44 ..	5 1	3 6	5 2	7 9	6 8	18 2	5 5

(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, has continued to operate, and small quantities of fish have been canned from time to time.

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 indicated.

**PRODUCTION OF CANNED FISH : AUSTRALIA.**

Particulars.		1938-39.	1939-40.	1940-41.	1941-42.	1942-43.	1943-44.
Quantity	lb.	603,302	1,614,718	966,326	1,066,656	1,286,307	533,740
Value	£	13,700	46,425	31,068	50,029	65,912	43,856

Similar details according to varieties canned are not available. The varieties canned in the various States vary according to the catch available. In New South Wales salmon is the principal variety, while in South Australia the varieties are more varied and include mullet, salmon, garfish, etc. In Western Australia herrings, crayfish and mullet are included and in Tasmania salmon and crayfish.

4. **State Revenue from Fisheries.**—The revenue from fisheries in each State during the year 1943-44 is given hereunder :—

**FISHERIES : REVENUE, 1943-44.**

State or Territory.	Licences.	Leases.	Fines and Forfeitures.	Other Sources.	Total.
	£	£	£	£	£
New South Wales	4,663	11,804	214	129	16,810
Victoria .. .. .	1,923	74	332	17	2,346
Queensland .. .. .	4,200	1,792	436	19	6,447
South Australia (a)	2,066	..	44	135	2,245
Western Australia (a)	828	..	66	26	920
Tasmania .. .. .	620	..	..	330	950
Northern Territory (b)	..	..	..	..	..
<b>Total</b> .. .. .	<b>14,300</b>	<b>13,670</b>	<b>1,092</b>	<b>656</b>	<b>29,718</b>

(a) Year ended December, 1943.

(b) Not available.

Similar particulars for Australia for the years 1938-39 and 1940-41 to 1943-44 are given in the following table :—

**FISHERIES : REVENUE, AUSTRALIA.**

Particulars.		1938-39.	1940-41.	1941-42.	1942-43.	1943-44.
		£	£	£	£	£
Licences	.. .. .	15,563	12,254	11,855	10,587	14,300
Leases	.. .. .	12,446	11,480	10,281	13,217	13,670
Fines and Forfeitures	.. .. .	1,397	1,496	1,695	828	1,092
Other Sources	.. .. .	4,867	1,138	593	913	656
<b>Total</b> .. .. .		<b>34,273</b>	<b>26,368</b>	<b>24,424</b>	<b>25,545</b>	<b>29,718</b>

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

1. Imports of Fish.—The large importations of fish and fish products made each year give further evidence of the desirability of developing the fishing industry of Australia. Imports for the years 1940-41 to 1943-44 in comparison with 1938-39 are given below:—

#### FISH AND FISH PRODUCTS : IMPORTS INTO AUSTRALIA.

Classification.	1938-39.	1940-41.	1941-42.	1942-43.	1943-44.
QUANTITY.					
Fish—	cwt.	cwt.	cwt.	cwt.	cwt.
Fresh or preserved by cold process .. .. .	83,393	55,471	33,114	21,162	19,033
Potted or concentrated .. .. .	9,435	1,304	115	..	..
Preserved in Tins—					
Herrings .. .. .	38,917	9,677	5,572	6,453	49,894
Salmon .. .. .	166,695	117,429	29,214	45,188	36,098
Sardines .. .. .	29,372	15,595	181	..	12,455
Other .. .. .	14,306	6,442	3,684	43,786	17,196
Crustaceans .. .. .	6,829	461	459	150	65
Oysters .. .. .	1,939	2,060	1,587	862	581
Smoked or dried (not salted) .. .. .	8,122	2,111	2,069	..	17
Other .. .. .	7,987	1,522	487	1,149	1,339
Oysters in the shell .. .. .	635	315	245	400	117

#### VALUE IN AUSTRALIAN CURRENCY.

Fish—	£A.	£A.	£A.	£A.	£A.
Fresh or preserved by cold process .. .. .	273,289	213,328	154,120	112,801	108,211
Potted or concentrated .. .. .	122,250	16,316	1,179	1	..
Preserved in Tins—					
Herrings .. .. .	138,391	35,060	24,856	4,078	215,119
Salmon .. .. .	716,164	593,032	189,064	375,290	244,841
Sardines .. .. .	182,336	78,676	529	1	46,805
Other .. .. .	63,996	45,379	49,055	266,884	96,331
Crustaceans .. .. .	70,328	5,837	4,980	2,303	897
Oysters .. .. .	13,995	18,503	13,973	7,832	4,850
Smoked or dried (not salted) .. .. .	23,603	8,106	8,674	..	125
Other .. .. .	10,948	8,047	3,104	9,669	11,799
Oysters in the shell .. .. .	704	537	317	279	741
Total .. .. .	1,616,004	1,022,821	449,851	779,138	729,719

Canned fish constitutes by far the largest proportion of the imports; salmon from Canada and the United States of America, herrings from Canada and the United Kingdom and sardines from Norway were the chief varieties imported. The potted fish comes chiefly from the United Kingdom and New Zealand, which also supplied a considerable proportion of the fresh fish imported in 1943-44; the bulk of the remainder came from the Union of South Africa. The small import of oysters is supplied by New Zealand, which has also furnished the bulk of the crustaceans imported in recent years.

2. Exports of Fish.—The exports of fish are comparatively insignificant. During 1943-44 they were as follows:—Fresh or preserved by cold process, 100 cwt., £580; potted or concentrated, £1,360; preserved in tins, 53,269 cwt., £294,164; smoked or dried, 14 cwt., £179.

3. Exports of Pearl and other Shell.—The exports of pearl, tortoise and trochus-shell of Australian origin are given hereunder for the years 1938-39 and 1940-41 to 1943-44 :—

PEARL, TORTOISE AND TROCHUS-SHELL : EXPORTS FROM AUSTRALIA.

Article.		1938-39.	1940-41.	1941-42.	1942-43.	1943-44.
Pearl-shell	cwt.	52,532	37,024	36,846	645	51
	£	244,266	196,263	252,766	7,525	489
Tortoise-shell	cwt.	4	3	..	..	1
	£	151	138	..	..	97
Trochus-shell	cwt.	9,108	2,332	9,977	6,779	2,925
	£	34,166	6,791	36,807	33,558	17,192

All the trochus-shell exported during 1943-44 was consigned to the United States of America.