



THE PEARLSHELL INDUSTRY IN WESTERN AUSTRALIA

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Early attempts to harvest the wealth of pearl-shell in our northern waters were by naked or swimming diving by both white and aboriginal divers. Operations were confined to shallow water and diving periods were necessarily of short duration - shell being plentiful and handy. By the 1870's pearlshelling had reached the status of an industry with an annual output value of nearly £100,000 per annum. As operations were extended into deeper water with consequent increased risks and worsened living conditions, diving became a job entirely for Asiatics.

An exception to the foregoing was the Shark Bay pearlshell fishery which being confined to the shallow banks of Shark Bay, employed the dry-shelling and hand-dredging methods. This fishery will be described later.

While the most important centre of pearling in Western Australia is, and always has been, Broome, operations were in the past also conducted from Cossack, Port Hedland and Onslow. The latter port's fleet has now dwindled to one solitary lugger and no pearling is now based on either Cossack or Port Hedland.

Pearling in deeper waters (10-20 fathoms) introduced the orthodox pearling of the day. This was a sailing vessel, large enough to remain at sea for months at a time. One diver was employed and hand pumps provided him with air necessary for his underwater work.

The introduction of engine power was revolutionary. In the 1930's all vessels were motor propelled (although sails too were retained) and the mechanical pumping of air enabled the employment of two divers on each vessel. This improvement and the mobility afforded by motors brought an amazing increase in the average production per boat. Whereas in 1912, a total of 328 boats averaged 3.5 tons per boat, in 1936, a total of 51 boats averaged 12 tons per boat.

The depression years of the 1930's saw this industry struggling to exist. An all-time "low" in price (£92 per ton) was reached in 1939 and without the financial assistance provided by the Government during these years, it is probable that operations would have ceased.

The industry experienced a tremendous and disastrous setback in 1935 when a cyclone destroyed twenty luggers with a loss of 142 lives. Recovery from this misfortune had not been made when in 1936/37 a fleet of 100 Japanese pearling vessels operated off Darwin and depressed the price for pearlshell with their huge output. The following year the Japanese fleet increased by almost 100% and the low price of £92 per ton received for Broome shell in 1939 is a reflection of the result of this foreign incursion. The condition of the Australian pearlshell industry as a whole led to an enquiry in 1935 by the Commonwealth Tariff Board and as a result grants were made to each Darwin, Queensland and Western Australia. This State received £2,500 and a special grant of £5,000 was made Broome pearlers by the W.A. Government in alleviation of the loss sustained through the 1935 cyclone. Further grants of £5,300 from each the Commonwealth and W.A. Governments were made Broome pearlers in 1938-39. Since 1934 the W.A. Government had been advancing monies seasonally to pearlers to enable them to prepare for each subsequent season. Interest was charged at 5½%. This policy was adopted also by the Commonwealth Government in 1938/39 for the purposes of -

- (a) meeting difference between production costs and overseas prices;
- (b) paying of crews for 1938;
- (c) preparing luggers for 1939.

The total Commonwealth advance was £64,000.

The effect of this unfortunate period was such that the Broome pearling fleet was depleted to about 50 vessels and remained at this total up to the cessation of pearling through the outbreak of war in the Pacific in 1941.

War with Japan caused a complete cessation of pearling and a scattering of the pearling fleet. Some luggers were destroyed in North-West ports, the more serviceable were taken over by the Navy and of these many passed in post-war years to other than pearlers. The

export of pearlshell was prohibited and stocks in Australia were requisitioned for the manufacture of prismatic compass dials for supply to the Australian and Canadian armies. Gold tipped pearlshell was used as currency by the forces in New Guinea.

Labour has always been one, if not the major, problem of this industry. The employment of Asiatics brought Japanese, Chinese, Malays and Koepangers into the industry but the more energetic and more reliable Japanese gradually dominated the scene as their numbers grew to comprise 60% of the most important category - the divers. All these Asiatics were periodically recruited, entered Australia under Customs permit and were signed on with master pearlers for a specified period during which the master pearler was responsible for his men's wages and maintenance. He was required also to enter into a bond that he would hold himself responsible for his men during their stay in Australia and would guarantee their repatriation at his own cost on the expiration of their term of indenture. This system of labour recruitment functioned through intermediaries or agents domiciled in Singapore and Koepang who secured the required numbers having regard to their experience, age and physique.

The increasing control of practical operations by Japanese was the subject of a Police report in 1910 and this aroused the interest of the Commonwealth Government to the extent that in January 1911 that Government decided to discontinue permits for the indenture of foreign labour on December 31, 1912. Strong protests by the Western Australian Government were lodged together with a request for a Royal Commission to examine the industry as a whole. The Broome Pearlers' Association had meanwhile prepared a scheme for the introduction of white divers and this, following some amendment, was approved by the Commonwealth Government. Nine divers and three divers' tenders were recruited and arrived in Western Australia in February 1912 under the provisions of the Contract Immigrants Act, 1905. They were contracted to various pearlers for a period of 12 months. Remuneration was guaranteed them as follows:-

Divers	£156 per annum plus keep - Bonus £40 per ton over 2½ tons plus 2½% on pearls.
Tenders	£6 per month plus keep - Bonus £3 per ton on all shell fished by diver tendered plus 5% on pearls.

They were all ex-navy men selected by reputable submarine engineering firms (Messrs. Siebley & Co. and Messrs. C. E. Heinke & Co.) and were under the charge of William Webbor, a man with diving experience in many parts of the world. It is claimed that these men introduced at Broome what is known as "staging". Their employment during the one season they worked (1912) resulted as follows:-

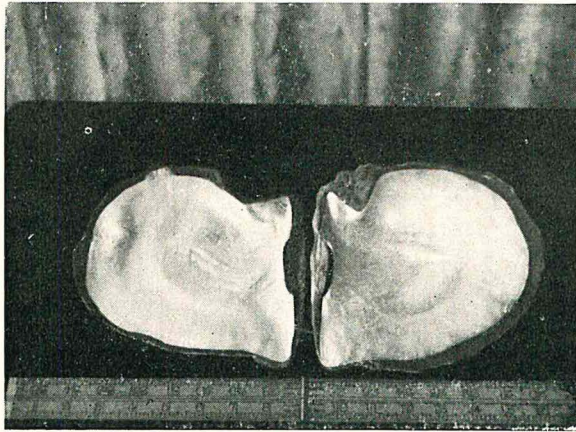
- 1 permanently paralysed
- 3 temporarily paralysed but recovered
- 1 paralysed and died (Webbor)
- 1 paralysed and died (February 1913)

None were left in the industry after 1912, the men not being attracted to the work and the pearlers being dissatisfied with results.

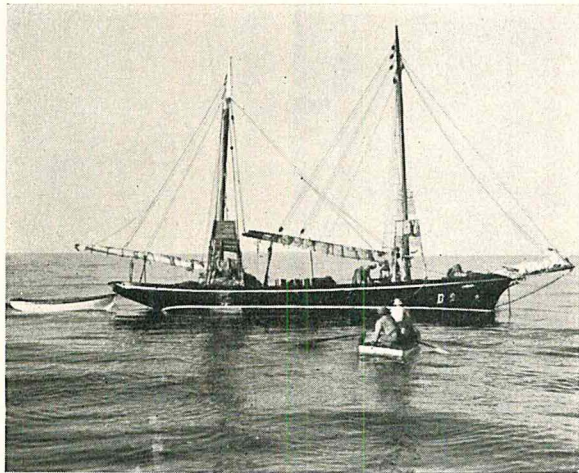
The Commonwealth Government approved an extension to 31/12/1914 of the import of coloured labour and set up in 1913 a Royal Commission to enquire into -

- (1) The class of labour engaged;
- (2) The reasons white labour had not been more generally employed;
- (3) The practicability of white labour being introduced;
- (4) The means to be adopted to encourage white labour
  - (a) wholly,
  - (b) partially.

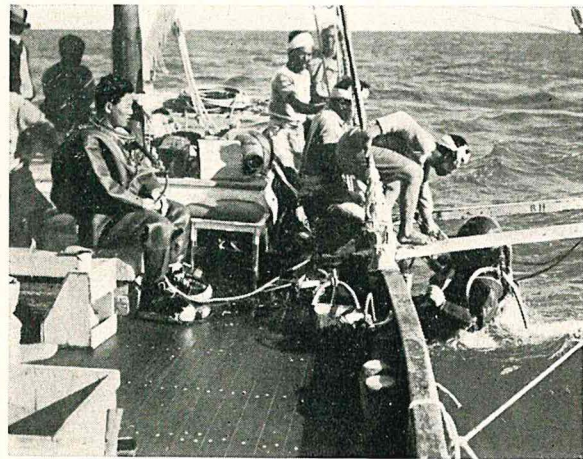
The Commission took evidence in 1913 at Sydney, Melbourne and Thursday Island and in 1916 in Western Australia after considerable delay owing to the outbreak of war. In its interim report presented in 1913 the Commission viewed as desirable a transition from coloured to white labour on national as well as industrial grounds but completely reversed its view in its final report in September 1916. The Commission then observed that "Your Commissioners have decided that diving for shell is not an occupation which our workers should be encouraged to undertake. The life is not a desirable one and the risks are great as proved by the abnormal death rate amongst divers and trial divers. The work is arduous, the hours long, the remuneration quite inadequate, living space is cramped, the food wholly



Pearlshell—Broome, W.A.



Pearling Lugger, Broome



Pearl Divers return to Lugger

preserved of its different kinds and the life incompatible with what a European is entitled to live. Social life is impossible and enjoyment out of the question".

These findings were concurred with by the Tariff Board which sat in Broome in 1935.

The consequence was that no change in labour or the methods of its recruitment have yet been made, although efforts in 1945 to re-establish the industry after World War II revived the question of the use of Asiatics. The Commonwealth Government again intimated that approval would not be given to a return to the indenture system but under pressure from W.A. approved of a further 5 year term. However in 1952 the Broome pearlery submitted a case for the import of a limited number of trained Japanese divers and finally the admission to Western Australia of 35 such men was approved. They had not arrived at the time this history was prepared.

The economics of the pearlshell fishery are naturally affected considerably by the cost of production. A carefully prepared and documented statement of production costs was submitted in 1935 by the Broome Pearlery Association to the Commonwealth Tariff Board which investigated the question of the payment of a bounty on pearlshell. It was revealed that at that time production cost per ton of shell was approximately £124/10/- whereas from 1923/24 to 1933/34 the sale price of shell averaged only £144 per ton. Between 1936 and 1941 considerable fluctuation in shell value occurred but average value for the period was only £122 per ton, and Government assistance prevented the industry collapsing. Since labour cost was shown to comprise approximately 24% of total cost it is evident that any radical change in this direction would seriously affect the margin between production cost and market price. Although today the value of pearlshell has risen very considerably compared with pre-war values, costs have increased enormously including wages cost.

The pooling of all pearlshell produced by Australia was mooted many years ago and The Pearlshell Overseas Marketing Act, 1927, was designed to stabilise the marketing of shell and to protect Australian producers' interests. The Act was to have become effective upon a majority of producers voting in favour

of the measure but apparently a poll was never taken. Subsequently in 1931 an endeavour was made to arrange production quotas for Broome, Darwin and Thursday Island but negotiations fell through as unanimity could not be achieved by the several representatives.

No successful alternative to the present method of gathering pearlshell has yet been evolved. It is probable therefore that any departure from present methods can be only of a minor character, would have little or no bearing on the conditions under which crews live and work. Thus the remarks of the Royal Commission of 1916 in this regard are very largely still applicable.

Legislation governing the pearlshell fishery originated with The Pearl Shell Fishery Regulation Act, 1873. Subsequently, amending Acts were passed in 1875, 1883, 1886 and 1889. The whole were repealed with the passing of the Pearling Act, 1912, which with some amendment is still law. This final piece of legislation embodies provisions governing the Shark Bay pearlshell fishery and repeals The Shark Bay Pearl Shell Fishery Act, 1892.

An interesting amendment to the present Act was No. 36 of 1949 which repealed section 113. This section had prohibited the sale, possession, production or dealing in cultured pearls and had been law since 1922.

### THE SHARK BAY FISHERY

#### Historical

Early in the latter half of last century the gathering of pearlshell commenced in the shallow waters of Shark Bay. Based on Freshwater Camp or Denham as the township is now known, the industry employed both aboriginal and asiatic labour, the latter comprising Chinese, Japanese, Malays and Manila men.

The most prolific area of production was Useless Inlet but operations extended throughout the shallows of all parts of Denham Sound and along the eastern shore of Peron Peninsula. Shark Bay is noted for its extensive sandy shallows which reach out into the Bay, in some places for 3 or 4 miles. During low tides a great part of these shallows are laid completely bare. The gathering of shell was therefore an easy task and when water covered the banks a hand dredge



PEARLS AND PEARLSHELL PRODUCTION - WESTERN AUSTRALIA

YEAR	BROOME					SHARK BAY					COSSACK					ONSLow							
	Boats no.	Men no.	Production			Boats no.	Men no.	Production			Boats no.	Men no.	Production			Boats no.	Men no.	Production					
			Shell tons	£	Pearls £			Shell tons	£	Pearls £			Shell tons	£	Pearls £			Shell tons	£	Pearls £	Shell tons	£	Pearls £
1900	149	1,042	541	68,580	12,009	30	80	139	993	1,482	2	33	5	590	50	15	100	58	6,950	770			
1901	178	1,326	643	88,298	26,570	31	72	131	940	1,689	16	113	47	5,612	1,470	4	23	7	300	860			
1902	227	1,551	767	133,580	40,789	23	70	151	772	2,109	13	86	43	6,983	1,932	3	18	8	1,280	250			
1903	292	2,096	790	116,049	37,974	22	54	125	634	1,736	-	-	-	-	-	22	151	77	11,406	2,538			
1904	349	2,406	1,051	116,815	33,511	21	45	164	21	2,016	7	49	30	2,705	1,103	24	180	94	9,484	4,500			
1905	302	2,140	1,067	119,188	39,853	17	43	86	518	1,821	-	-	-	-	-	-	-	-	-	-			
1906	302	2,107	1,029	120,486	49,522	25	59	110	779	2,791	8	52	22	2,260	1,155	28	178	85	8,523	5,881			
1934 <sup>31</sup>	94	669	628	75,505	3,957	18	28	91	1,463	2,317	4	24	30	3,000	100	6	45	46	5,104	150			
1935 <sup>6</sup>	81	586	567	61,618	2,888	21	41	135	2,263	3,526	4	25	36	3,000	100	6	42	68	6,800	200			
1935 <sup>9</sup>	53	419	299	37,398	843	23	37	67	1,035	1,798	4	23	38	3,241	100	6	42	31	3,388	75			
1936	62	507	622	90,055	3,367	16	25	89	699	1,713	5	32	51	5,125	100	6	42	50	5,500	20			
1937	61	536	757	112,473	2,155	10	17	50	774	1,211	5	38	50	5,000	100	6	42	60	7,200	50			
1938	61	552	873	81,767	2,407	6	9	37	518	567	5	37	50	3,022	100	6	44	51	5,100	100			
1939	60	488	687	62,738	1,952	3	6	18	183	160	3	22	45	2,470	40	6	42	57	5,000	50			
1940	60	498	643	69,197	1,454	-	-	-	-	-	2	18	32	1,901	50	2	14	25	2,805	80			
1941	55	473	589	92,795	2,257	-	-	-	-	-	-	-	-	-	-	2	14	26	3,332	102			
1946	9	86	87	52,332	-											4	31	15	6,275	410			
1947	21	218	267	167,346	775											6	43	53	28,810	519			
1948	20	198	284	145,236	1,745											8	48	51	22,720	185			
1949	19	183	264	94,536	590											6	41	48	14,600	450			
1950	24	206	334	155,365	1,635											1	10	18	9,125	-			
1951	22	201	308	167,932	1,440											1	8	13	6,500	50			
1952	19	175	292	170,382	400											1	9	10	6,500	100			

N I L

N I L

<sup>31</sup> Twelve months ended June 30, 1934  
<sup>6</sup> Twelve months ended June 30, 1935  
<sup>9</sup> Six months ended December 31, 1935

operated from a sailing vessel made the work only slightly more arduous. Dredging rarely took place in water over two fathoms.

Labour was employed on a weekly basis and operated largely without supervision. The fishery itself was not regulated by legislation until 1892 and thus the absence of official and private supervision finally resulted in disaster.

### Pearls

Pearls were the main objective in this industry until the shell itself ultimately became of such value as to supersede pearls. In contrast to the pearlshell (Pinctada margaritifera) fished by Broome luggers that of Shark Bay (Pinctada sugillata) yields pearls frequently. The pearlshell of Shark Bay is very much smaller than the Broome shell, being approximately four and a half to five inches across in the larger specimens. Thus the pearls too are small and range from mere pinhead size to about one-eighth of an inch in diameter. While the value was accordingly low compared with pearls from other places, their abundance made them a worthwhile objective. Tables of production provided herein show the relative values of shell and pearls as compared with totals of production and reveal the change of objective in later years as shell became more valuable.

The process followed in the recovery of pearls was primitive and most unhygienic. Boats delivered to base their take of shell unopened, whereupon the employer supervised the opening of the shells and the placing of the oysters in large drums called pogie pots. Herein the oysters stayed until they had so rotted that the drum contents were reduced almost to liquid and this naturally gave off an odour which became notorious. After the contents were poured away the pearls were recovered from the bottom of the pot.

### Legislation and Administration

The factors mainly responsible for the parlous state of of the industry in the 1890's when it experienced its first serious decline, were the negligible value of whell, and the absence of regulating legislation. Given such conditions and with operations in the hands of labour of the types mentioned, it could only be

expected that an all-out scramble for pearls and a total disregard of the industry's future would ensue. So depleted of shell were the banks at the end of 1891 that in March 1892 the industry was closed down by a proclamation under the recently proclaimed Shark Bay Pearl Shell Fishery Act, 1892. This proclamation forbade the gathering of shell from the main pearlshelling areas.

The appointment of John Brockman as temporary Inspector of Pearl Shell Fisheries appeared in the Government Gazette of April 6, 1892. He took up duty immediately, assisted by two boatmen named Adams and King. Early in 1893 Mr. W. Saville-Kent, an eminent naturalist visited Shark Bay at the request of the Government and investigated conditions in relation to pearling. He found the industry at a complete standstill and that many pearlery were really destitute. He observed also that the whole pearling area had been fished indiscriminately and as pearls were the main objective of the fishery, shell of any size or age had been gathered, opened and thrown aside. Only during the period 1890-92 had any attempt to market shell been initiated in an endeavour to offset overhead expenses in face of rapidly falling returns. Pearls however remained the chief objective and with the type of labour employed, illegal trafficking was rife. Indicative of the state of affairs at the time are the following remarks by Saville-Kent who said that the main pearling areas were "depleted almost to the verge of annihilation". John Brockman remarked that "Egg Island Bay, previously the best producer of the best type of shell, had been ruined by dredging".

The Act of 1892 had made provision only for the issue of a General License which permitted the holder to work anywhere in Shark Bay and to use any method. Regulations promulgated in April, 1892, prohibited the removal or possession of immature shell and enabled the Inspector to prevent collection of shell during the spawning season. Following Saville-Kent's preliminary investigation, regulations gazetted on June 8, 1893 provided for the issue of Exclusive Licenses in respect of certain areas except Useless Inlet and the banks in Hopeless Reach, these being described as "abnormally prolific areas". The use of dredges in these two areas was forbidden and the Inspector was further empowered to forbid dredging in any area whether held under Exclusive License or not, if he considered

the use of dredges detrimental to the fishery. Similarly he could forbid any work on any area for the same reason.

Most important of all perhaps was the power taken at this time to create Reserves for the purpose of maintaining stocks for re-planting denuded areas.

Following gazettal of the above provisions in June 1893 further powers were taken by regulations of 13/12/1893 and 19/6/1896 in respect of use of diving gear, calling of tenders for Exclusive Licenses and the seizing of illegal shell. All of these regulations followed recommendations by Saville-Kent which briefly summarised, were -

1. Specified areas to be set aside as Reserves
2. Subdivision of much of the area into blocks or holdings. These to be leased for a term of 14 years on condition that lessees cultivated them by protecting and planting shell.
3. The Inspector be clothed with managerial powers.

Alleviation of the dire financial position of the pearlers was recommended and approved, enabling them to operate on the Cape Banks (area No. 3) for 4 months. Only "pick-up" shelling was permitted in shallow water, dredges being confined to the deeper waters. At the expiration of the above period in October 1893, Useless Inlet was opened to "pick-up" operations only until December. Subsequently Area No. 4 (Hopeless Reach and Monkey Mia) were opened for a period of 3 months. These operations in alternate areas between 1/7/1893 and 30/9/1894 included also the replanting of shell, and really constituted a gradual re-establishment of the industry. Close supervision was exercised by the Inspector. Early in 1894 some Exclusive Licenses were granted and it is evident that the measures taken and the supervision provided, enabled the industry to thrive once more.

Thus out of the abovementioned investigation arose the system of Exclusive License which has prevailed ever since. Undoubtedly for many years the leases were worked intelligently and with concern for the future, particularly as practically the whole of the known shell-bearing area was subsequently brought

under the Exclusive License system. Until the late 1920's the industry was fairly sound but the depression of the 1930's struck it a severe blow and from then forward no effort was made to conserve stocks or in any way cultivate the leases. These were denuded of shell almost completely while continuous dredging swept them clean of all holding material until finally the banks were reduced to the same condition as had met the eye of Saville-Kent 50 years before.

Post war enquiries from persons considering the prospects of pearling in Shark Bay led to a Departmental investigation in 1947 and again in 1948. It was found that little if any recovery had occurred, and that only a systematic re-stocking of the main areas would enable the banks to regain their former condition. A few minor attempts at gathering and marketing shell were made without success, the shell being small and the colour unacceptable to any market offering.

NOTE: Since the foregoing was written two parties of Japanese operatives have arrived in Broome by air to engage in pearling. Fifteen reached Broome on March 23, 1953, and twenty on March 25. All these men had worked in Australia in pre-war years, the majority in Broome, and a number of them were interned in Australia during the war years.