

Western Australia

1925

An Official
Handbook

WESTERN AUSTRALIA

An Official Handbook

for

**The Information of Commercial Men,
Migrants, and Tourists**



**Compiled under the Authority of
The Government of Western Australia**



Perth:

By Authority: Fred. Wm. Simpson, Government Printer

1925



HIS EXCELLENCY THE GOVERNOR
COLONEL SIR WILLIAM ROBERT CAMPION,
K.C.M.G., D.S.O



SIR ROBERT FURSE McMILLAN, K.C.M.G.
Chief Justice and Lieut.-Governor.



HON. W. C. ANGWIN, M.L.A.,
Minister for Lands.



HON. M. F. TROY, M.L.A.,
Minister for Mines.



HON. J. C. WILLCOCK, M.L.A.,
Minister for Justice.



HON. A. MCCALLUM, M.L.A.,
Minister for Works.



HON. P. COLLIER, M.L.A.,
Premier and Treasurer.



HON. J. M. DREW, M.L.C.,
Minister for Education.



HON. S. W. MUNSIE, M.L.A.,
Honorary Minister.



HON. J. CUNNINGHAM, M.L.A.,
Honorary Minister.



HON. J. W. HICKEY, M.L.C.,
Honorary Minister.

The Ministry of Western Australia

CONTENTS.

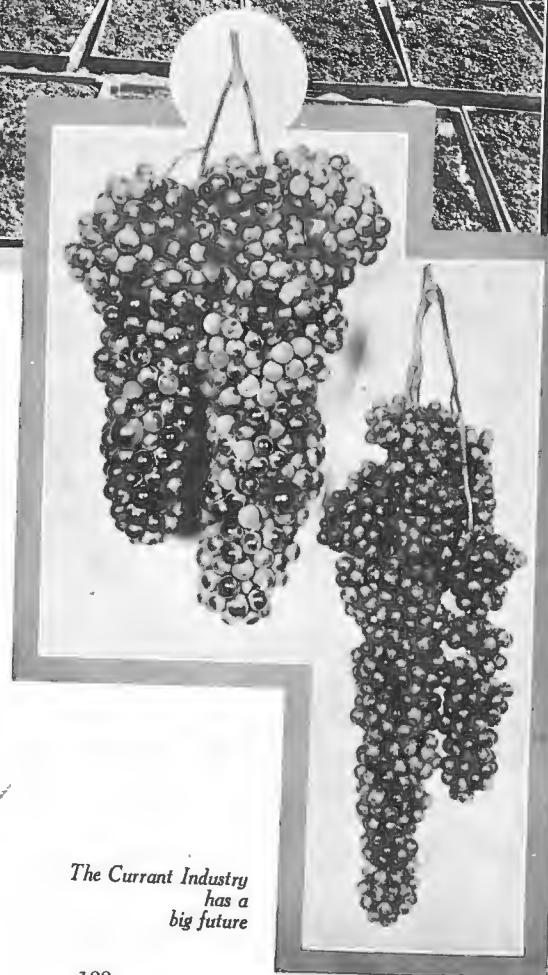
	PAGE
PHYSICAL FEATURES AND HISTORY	9
STATE'S AWAKENING	17
WESTERN AUSTRALIA TO-DAY	29
CLIMATE	47
LAND AND ITS CHARACTERISTICS	53
GROWTH OF LAND SETTLEMENT	63
AGRICULTURE GENERALLY	73
WHEAT FARMING	81
DAIRYING AND ALLIED INDUSTRIES	93
FRUIT GROWING	111
VITICULTURE AND WINE-MAKING	119
PASTORAL	123
FORESTRY	137
MINING	145
FISH AND FISHERIES	157
PEARLS AND PEARLSHELL	163
OUR GREAT NORTH-WEST	169
SECONDARY INDUSTRIES	179
WATER CONSERVATION	189
PERTH, THE CAPITAL CITY	197
PORTS	209
COMMUNICATION BY LAND, WATER, AND AIR	213
EDUCATION	227
WESTERN AUSTRALIA FOR THE MIGRANT	233
TOURIST RESORTS	241
ABORIGINES	251
WILDFLOWERS	257



PERTH—A CITY OF FAVOURED SETTING



The difficulty of finding markets is a world-wide problem in the fruit-growing industry, and by no section of our growers has it been felt more keenly than by those engaged in the production of currants, raisins and sultanas. Considerable attention has been given to the matter by the Imperial and Commonwealth Governments, while the State Government is expected to announce its proposals during the present session of Parliament. Given an effective scheme of organisation and marketing, the expansion of the industry would be tremendous.



*The Currant Industry
has a
big future*

The Pastoral Industry

Flocks and Herds Increasing—Huge Expansion Imminent—Pastoral Areas Described—Building up an Export Trade.



PASTORALIST and pioneer are almost synonymous terms in the history of Western Australian colonisation. Of the early days of the Swan River settlement we are told—"The timber is too thick for flocks and herds; therefore the squatting districts are eastward of the dividing range and north of the Swan." Forced into the vanguard of civilisation from the very beginning of the colony's existence, the pastoralist has remained there ever since. He has been the pioneer of pioneers—pushing into the primeval wilderness, occupying and proving the country, and then moving out still farther to make way for the farmer and other rural producers. And to the pastoralist Western Australia still looks to occupy most of her huge areas of idle lands and bring them under profitable production.

In the earliest days of settlement squatters travelled their flocks and herds inland to the York and Toodyay districts, then a wilderness in the possession of hostile blacks, and laid the foundations of the prosperous farming districts of to-day. From there they pushed on to the Geraldton and Irwin districts. Those, of course, were the days of small things. The flocks and herds multiplied slowly, and by 1866 the total number of sheep was only 481,040 and of cattle 41,323. The development of pastoralism on a large scale dates from the settling of the North and North-West in the sixties. Exploration in 1861 had revealed to the settlers in the south the characteristics of the North-West and its considerable areas of grass country suitable for either sheep or cattle. Two years later a few adventurous settlers landed at Cossack with a few hundred head of stock and opened the first chapter in the conquest of the North—a conquest that has not yet been completed. Those were the days of hardship and peril. The country was untamed and practically unknown; the settlers were without any but the most elementary comforts of civilisation, and they were in almost daily conflict with treacherous and savage natives. But they persevered and succeeded. Their efforts



paved the way for other parties from within and without the colony, and by 1870 the pastoral industry was established in the North-West. Later expeditions into the interior gave an impetus to pastoral settlement in the Murchison, the Upper Gascoyne and Kimberley districts. The stocking up of the runs proceeded rapidly, and many hundred head of first-class stock



Long Grass of the Kimberley Country

were imported in order to impart higher quality. By 1890 the number of sheep had risen to 2,500,000 and cattle to 130,000. Thereafter the increase of cattle in the North proceeded more rapidly as a result of the formation of purely cattle stations in East and West Kimberley, while the extension of agricultural settlement in the South-Western division during the present century led to a big increase in the number of sheep. The latest livestock statistics available are:—Sheep 6,595,867, cattle 953,764, horses 182,000, pigs 61,000, mules and donkeys 10,600, and goats 31,000, while the wool clip represents 42,815,000 lbs. The total value of pastoral production for the same year is returned as £6,275,000.

Room for Expansion. Of all the States, Western Australia offers greatest scope for expansion of the pastoral industry. From one end to the other of this western third of the continent, sheep and cattle-raising may be carried on under favourable and profitable conditions. Pastoral leases aggregating 222½ million acres have been taken up, immense strides are being made, and as yet no one can set limits to the proportions that our wool and meat production bid fair to attain within the next decade or two. The description in other chapters of the South-Western country indicates the room for growth there, but the truly pastoral country is on the North and North-West coast and in the interior. Here are to be found millions of acres that carry nutritious indigenous grasses and shrubs upon which stock thrive. The climate is good and there is a comparative freedom from stock diseases. Some of the areas of the North are equal to the finest pastoral lands in Australasia. The country has wonderful recuperative powers. Though the rainfall in parts is light, and partial droughts

occasionally occur, the edible shrubs are remarkably hardy and provide sustenance through long spells of dry weather. The soil is rich and responds immediately to rain with a strong growth of grass often reaching waist high, and cutting up to a ton per acre. The distribution of sheep and cattle, according to the official statistical divisions, is:—

Statistical Divisions.	Sheep.	Cattle.
South-West	3,161,505	156,415
North	2,571,538	701,621
Central	798,340	79,371
South	64,484	16,357
Total	6,595,867	953,764

The pastoral holdings in the North-West division, including North-West the Murchison, Gascoyne, Ashburton, Roebourne and De Division. Grey districts, are generally fairly well developed. The areas within reasonable distance of transport by rail or steamer are mainly used for sheep and those further back for cattle. A fair proportion of the latter area, too, is improved and stocked, but is not yet developed

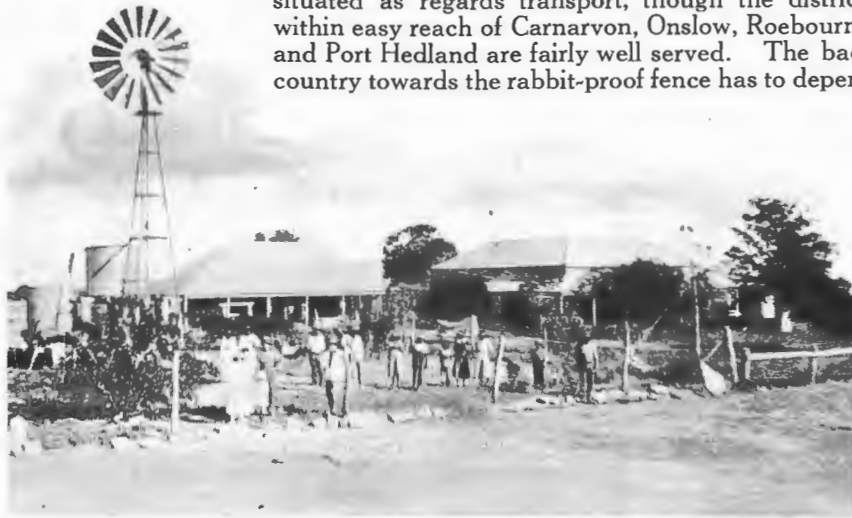


Drysdale River, near Mount Hann

to anything like its full carrying capacity. This is due to the necessity for obtaining water by sinking, for fencing, and for providing storage tanks and troughing, in which directions progress has been retarded during the war and since by scarcity and high prices of material. In the Murchison and generally over the greater portion of the North-West, water is obtained at an

average depth of 40 feet. In other parts artesian or subartesian supplies can be tapped, but this is a more expensive method, and the country has to possess a fairly high-carrying capacity before lessees care to incur the expense. The Murchison occupies a favoured position on account of the railway transport facilities. Though already well improved and stocked, more water and more paddocks would greatly increase its carrying capacity.

The rest of the North-West division is not so well situated as regards transport, though the districts within easy reach of Carnarvon, Onslow, Roebourne, and Port Hedland are fairly well served. The back country towards the rabbit-proof fence has to depend



Argyle Homestead, East Kimberley

mainly upon the stock routes for shifting stock to market, and on those routes the Government has spent large sums to provide water. With water at frequent intervals and better subdivision by fencing, the stock capacity of the whole of the North-West could be doubled.

The Interior. In the Eastern division, including East Murchison and the Eastern Goldfields, considerable development has been carried out during the last few years. Right through the long stretch of auriferous country from Leonora to beyond Wiluna the producer of the golden fleece is taking the place of the cattle-raiser. The pioneers of sheep in that part of the State were told they were mad, but venturesome men dared to take the risks and, by waging incessant warfare against the dingo pest, have not suffered any considerable loss. Water can be struck at reasonable depths, at any rate in the northern portions of the division, and the country is



Cattle Droving in the North

well served by railways to Laverton, Leonora, and Sandstone. Along the Trans-Australian line large areas of good feeding country remain unstocked owing to the water difficulty. In this area there is practically no surface water, but subartesian water at 200 to 400 feet should be obtainable over the greater part of it. There are few catchments for tanks, and much of the ground is not of good holding quality. The solution of the water difficulty would make this area a valuable asset, as it lies within reasonable distance of the railway. In the large unoccupied area



*Sheep
Country
of the
North-West*

extending east of the rabbit-proof fence, south of Kimberley and marked on some maps "desert," it has been proved that large supplies of excellent water can be got at depths of 30 to 40 feet. This is an important factor and, though the country is not of the best, fairly large areas may be expected gradually to come into use. This country has not yet attracted the pastoralist, owing to other land easier of access being available.

Cattle Country.

In the Kimberley division the pastoralists have depended largely on the natural water supply and have done little to supplement it by conservation. A large portion of this splendidly grassed country is well-watered by rivers and creeks, and has a good rainfall. In the early stages, owing to the difficulty of disposing of cattle at remunerative prices, it was considered that the expense of providing water would not be warranted. Consequently, except in the wet season, the water frontages are eaten out and the back country remains unused. When water is provided in the back country, the industry will be capable of tremendous expansion. In the far north of Kimberley there



is a large area of unoccupied country, well grassed and well watered naturally, but as yet neglected on account of the difficulty of access and the presence of troublesome aborigines. Kimberley generally is cattle country. A fair number of sheep are kept in West Kimberley, but their productive value is low in comparison with that of the Murchison sheep. East Kimberley, on the tableland from Hall's Creek to the South Australian



North-West Cattle landed at Fremantle

border, should be more suitable for sheep in respect to both feed and climate. West Kimberley is served by the ports of Derby and Broome. The port of East Kimberley is Wyndham, and the establishment of Government meat works at Wyndham has led to a great increase in the value of cattle in the district. Cattle-raisers have not failed to build up their herds by the importation of stud beasts of quality, and the size and stamina of the fats marketed locally and delivered at the meatworks bear testimony to the success that has attended their enterprise.

Capacity of Runs.

A fair number of the Kimberley cattle stations run to a million acres, but these are mostly on the undeveloped country. One such station would carry up to 30,000 head, whereas in the North-West a cattle station of equal area would carry about 17,000 head. In the Murchison the average holding is about 250,000 acres; though many pastoralists are doing well on 50,000 to 100,000 acres. The carrying capacity of this country is about one sheep to 14 acres, and farther back it is one sheep to 20 acres. Some of the best developed Murchison stations have carried upwards of 20,000 sheep on 200,000 acres over a period of years, but before stocking up to this extent some £8,000 had been expended on fencing into small paddocks and on sinking and equipping wells. One of the best indications of imminent expansion is the activity of develop-

ment exemplified by the large amount of fencing and water supply work recently in progress throughout the sheep country. Western Australia seldom experiences prolonged droughts, and an abundance of top feed and herbage serves to carry the stock over the occasional dry spells. A holding of 100,000 acres with eight wells—the pre-war cost of a well and equipment was £160 to £200—would carry 6,000 to 7,000 sheep until the top feed had disappeared, an extremity that has rarely been reached. In the North-West sheep stations average about 400,000 acres. A large station would comprise half a million acres and well improved would carry 30,000 sheep. Some pastoralists make a good living out of 2,000 to 3,000 sheep, and in the southern part of the State with even fewer. The lambing returns average about 65 per cent. and have touched 90 per cent. in good seasons.



Station Horses, Kimberley

Leases and Tenure. The need for conserving the interests of the State and of future settlers in the pastoral areas has not been lost sight of, and legislation now prohibits an individual being beneficially interested in more than one million acres. Thus it is hoped that the holdings will be kept within reasonable proportions. Rentals on a new selection range up to 10s. per thousand acres per annum, according to the division in which the lease is situated, and are subject to appraisalment after classification. In no instance, however, is a new lease subject to a rental of more than 10s. per thousand acres during the first five years. Leases are granted for a term expiring in 1948.

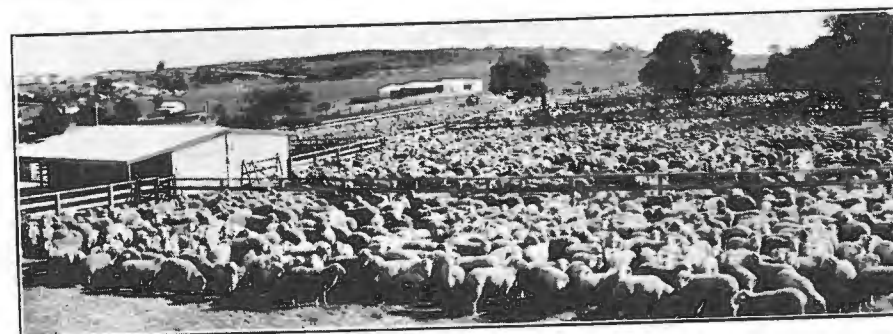
The Basic Merino. The merino forms the basis of the State's sheep stock, and the flocks consist almost entirely of that bred. In years past blood was drawn from many of the best of old-established studs in the Eastern States. This has wrought a wonderful improvement in the flocks, and has resulted in the production of a large-framed sheep of robust constitution carrying a heavier and higher quality fleece. Within recent years ram breeding as an industry has been undertaken in the State, and that it is making solid headway is evident from the fact that, whereas a few years ago three imported rams were used on the

stations for every one locally bred, the proportions now are about equal. Further, sales of rams have been made to other countries, thus proving the quality of the studs and the suitability of local pastures to produce first-class stock. Scattered throughout the South-Western division from Geraldton to the Great Southern are numerous studs of high class British breeds, amongst



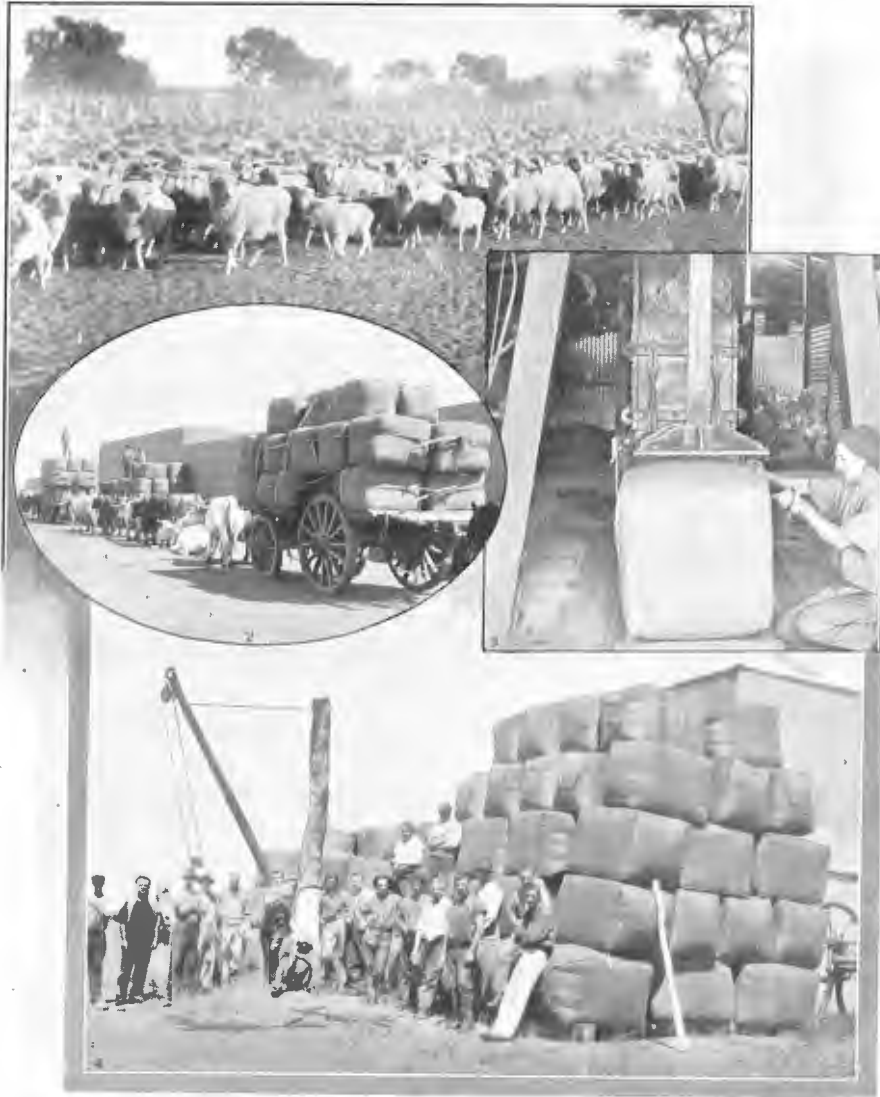
which may be mentioned the Lincoln, Dorset Horn, Border Leicesters, Shropshire, and Romney Marsh. There is a growing demand for Dorset Horns for early lamb-raising. A Flock Book of all British breeds is now being compiled and a number of Western Australian breeders have availed themselves of the opportunity to have their flocks registered. Over 100 merino flocks in the State have been registered.

A decided increase has been recorded lately in the number of sheep farmers, due no doubt to the firm demand for the exceptionally good quality wool that the State produces. The handling by small men of the merino has brought this breed more than ever to the fore, and other breeds serving the dual purpose of mutton and wool have been largely neglected. It is on this account that lamb-raising for export has not developed to the extent it would otherwise have done. The average quality of the farmers' sheep from the wool growing point of view has been very greatly improved in late years. Indeed, it is partly due to this that Western Australia now holds its



Metropolitan Holding Ground

PHASES OF THE WOOL GROWING INDUSTRY



1. The Living Embodiment of Wealth
2 and 4. Loading Wool for transport to the Coast 3. Pressing and Baling the Fleece

own with the other States of the Commonwealth as a grower of first class merino wool. As the country becomes more settled in respect of smaller holdings, the breeding of cross-breds may be expected to become more popular. The Department of Agriculture is trying to induce the small farmers running from 300 to 1,000 sheep, to turn attention to the raising of lambs for export. Wool-growing rightly belongs to the big open spaces, and farmers



Cattle awaiting slaughter, Wyndham Meatworks

are beginning to realise how much more advantageous it would be for them to run the cross-bred than to devote their efforts to the purely wool-growing sheep. There is no reason why Western Australia should not secure a place right in the forefront of lamb-producing countries. It has the land, the climate, and all the conditions requisite to building up a big export trade.

Western Australia has won a world-wide reputation for the excellent quality of its merino wool. A very high standard as regards evenness of quality and of type has been attained, and has resulted in its competing successfully with the super wools of the older States. This has forced competition amongst the world's purchasers, the outcome of which was the establishment recently of a record price for the State of over 45d. per lb. for greasy wool. Technical officers of the Government, in addition to the brokers, have spared no pains to instruct growers in the proper care of their clips, and have opened up avenues for the expert classification of the farmers' wool, to the undoubted benefit of many growers.

The local brokers have done their part to advertise our wools to the buying houses outside the State, and quite a number of direct representatives



"Ulysses"
Employed on a Kimberley station
for thirty-five years

and branches of the world's largest buyers are now established in Perth. Formerly, most of the wool was shipped by growers direct to the Home market for sale; a small portion was taken up by local buyers, and the rest formed part of the offerings at Eastern States' wool sales. In December, 1920, however, wool sales were instituted in Perth, and the bulk of the clip of between 125,000 to 130,000 bales is now disposed of there. The value of the clip for the 1924-25 season was roughly 3½ millions sterling. Leading firms have erected commodious stores and show floors, and have not only met the needs of the moment but have made provision for considerable growth, thus exhibiting



Shipping Frozen Beef, Wyndham

their conviction that the expansion promised by the industry in the not distant future will assuredly be realised. Another reliable index to the stability of the industry is revealed by the pronounced demand for pastoral properties. Much South Australian capital has been invested in this State, particularly in stations in the North Coolgardie areas, for which substantial prices have been paid.

With flocks and herds greatly in excess of our own needs, large quantities of meat will become available for export, and everything that can be done is being done by the Government to encourage the establishment of cold storage and export works at the seaports. At Wyndham Government works have been in existence since 1919 for the treatment of cattle and the export of frozen and canned beef, beef extract, tallow, hides, and other cattle products. The principal reason for the establishment of the works was to stimulate the growing of cattle in the Kimberleys within reach of the port of Wyndham. The capacity of the works, which cost £740,000, is about 30,000 cattle per operating season. The products are exported mainly to

Great Britain but also to Europe and Java. The West Australian Meat Exports Company has erected freezing and export works at South Fremantle. The killing capacity there is 2,000 sheep or lambs per day and 200 cattle, in addition to pigs, and the storage capacity is equal to 60,000 lambs. Meat works have also been built at Carnarvon.

Statistical. The exports of live sheep during the latest statistical year were :—

Destination.	No.	Value.
British Malaya	27,632	£18,601
Java	190	109
Commonwealth States	1,000	£1,000
	28,822	£19,710

Cattle hides numbering 44,179, valued at £49,206, were exported, and of that number 3,306 were sent to the Eastern States. Calf hides sent to Eastern States numbered 5,781, valued at £1,061. Sheep skins with wool, exported overseas, totalled 861,097, of a weight of 5,833,285 lbs., and a value of £393,190. Of these 10,740, weighing 67,561 lbs., valued at £4,820, went to the Eastern States. Hides tanned locally numbered 48,285, skins tanned locally numbered 9,591, and the quantity of leather produced was 1,817,044 lbs. In the last calendar year 535,000 sheepskins and 51,000 hides were sold by auction, and in each instance half as many again were disposed of privately. Kangaroo skins, including brush and wallaby, to the number of 250,000 were marketed during the same period, these having been made up of consignments from every part of the State. It is estimated that another 250,000 were disposed of through private dealers, particularly in Geraldton, whence the skins are shipped to America via Sydney. In the first 5½ months of the current year the yardings at metropolitan fat stock markets were :—Sheep and lambs 199,964, cattle 14,546, and pigs 17,879. The average values realised per pound were :—Mutton 11½d., beef 8d., pork 11d., and bacon 10d.



Commodious Wool Stores



River Pools near Marble Bar in the North-Western Interior

oundation stone of the
was laid on August
took the simple form
down a gum tree which
the block now occupied
lic offices. The laying
town was undertaken
the Surveyor-General,
official establishment
quarters there during
month. During the
of the year settlers
y established on their
and by the end of
ew colony of Western
was fairly launched.
s small community,
at the time 850 people,
resent State of Western
what tardy of recog-
even the most sanguine



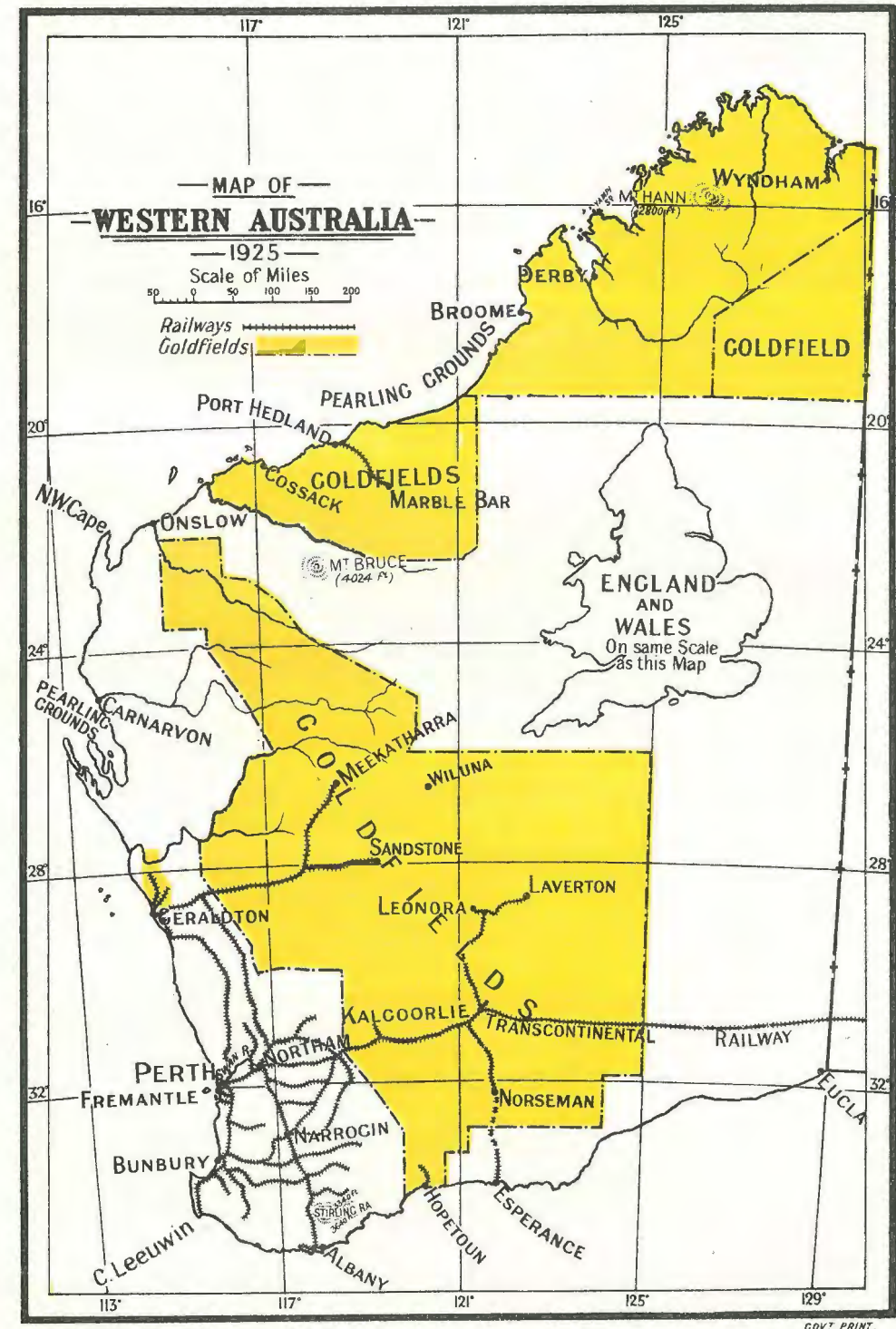
plains. There can be no doubt that there still exist all over the State very numerous lodes and reefs not yet discovered, and also plentiful shoots of payable ore in lodes which have been partially tried; and that there is more than ever need and scope for active prospecting both in the older fields and in the untried country. There is great need for better organised and more systematic search for minerals than has hitherto been customary, and still more need for sane judgment in opening up and developing any discoveries which are made in order to avoid the evils of undue market excitement and 'booming' inflation of share values." Again, the Government Geologist remarks:—"There are in addition to those areas occurring within the limits of the goldfields of the State some in which gold-bearing deposits have been mined, and others in which the occurrence of auriferous deposits of possible exploitable value may be looked for with a reasonable degree of confidence."



Mines on the Golden Mile

The accompanying map of Western Australia shows that the main line of known auriferous country stretches for a distance of more than a thousand miles between the south-east coast and the north-west coast, bulging out for 600 miles at its widest part, and that the goldfields comprise 436,000 square miles or nearly half the total area of the State. The East Coolgardie fields have yielded 19,360,286 ozs., or more than one-half of the total gold production of the State, and 90 per cent. of that quantity has come from the pocket-handkerchief area in and around the Golden Mile. Were geological evidence less promising and technical opinion less optimistic, reason would still suggest the probability of many years of greatness ahead of the industry.

The total recorded gold production of the Commonwealth is in the region of £620,000,000, of which Victoria has contributed nearly one-half, while Western Australia ranks an easy second with about a quarter of the total. For all its retrogression as a gold producer, Western Australia still has the largest annual output of any State of the Commonwealth, the latest statistics crediting her with 64.5 per cent. of the Australian total yield. And the famous Golden Mile, despite the active operations of 30 years, is still the chief producing district. Outside of Kalgoorlie and Boulder a fair number of individual mines have survived



enter and leave it at any state of the tide, and could be loaded directly from the quarries at a very low cost. At present there are two syndicates in the field, and each claims to have considerable backing from British shipping magnates and iron-masters. Estimates are being made to determine whether these deposits can be worked and the iron shipped to England in competition with the principal supplies being drawn from Spain, Algeria, Cuba, and Newfoundland. The only other place in the world that has iron deposits equally favourably situated is said to be Newfoundland, where the iron ore is found just on the shore of Conception Bay and the mine workings have been carried two miles under the bay. Considerable deposits of *manganese* have been located in various parts of the State, the chief one being at Horse-shoe Range, 16 miles north-west of Peak Hill. It is well situated for cheap open-cut mining, and steps are being taken to work the deposit. *Asbestos* is being mined in the North-West, and the quality of the fibre is so favourable that it now forms the basis of a very promising industry. Other minerals found in Western Australia include pyritic ore, tantalite, antimony, bismuth, gadolinite, graphite, gypsum, magnesite, mica, molybdenite, scheelite, wolfram, and zinc. Indications of the occurrence of natural mineral oil have been obtained in the northern part of the State and boring is being carried on at Mount Wynne.

The total value of mineral production to the end of December, 1923, has been:—

	£
Gold	150,135,505
Silver....	586,275
Copper	1,746,122
Tin	1,510,066
Lead	703,385
Pig Lead	628,956
Coal	3,831,878
Pyritic ore	45,496
Ironstone	36,695
Limestone	18,290
Asbestos	35,696
Tantalite	18,780
Arsenical Ore	10,036
Other....	24,609
Total	£159,331,789



Boring for Oil,
Mount Wynne,
Kimberley

Fish and Fisheries

Wide Range of Edible Species — Experimental Trawling — Turtle Canning — Whaling.



NOTWITHSTANDING the enormous coastline of Western Australia, the fishing industry has not developed to the extent that might have been expected. Except as regards pearling, fishing operations have been conducted on only a limited scale and have been confined to estuaries or familiar places at no great distance from ports; and this in spite of the fact that experimental trawling operations have proved that there exist favoured localities carrying an abundance of edible fish. Unfortunately capital has not been available for exploitation, and an industry of undoubtedly great potentialities remains practically neglected.

The Finny
Tribes.

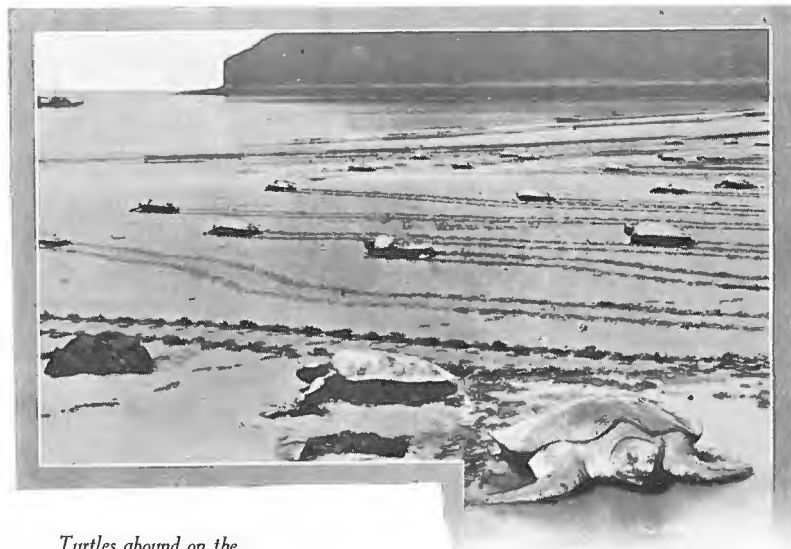
Western Australia has a fish fauna of not less than 500 species, of which at least 250 are edible. As time goes on it

may reasonably be expected that our already long list will receive numerous additions, particularly from the gregarious, oceanic, or pelagic species and fish obtainable by trawl, which have thus far escaped observation and record. Among the better known, which range in size from the enormous Queensland groper, attaining a weight of nearly 600 lbs., to the garfish of a few ounces, may be mentioned the schnapper, jewfish, kingfish, Spanish mackerel, mullet, bream, whiting, tailor, rock-cod, flathead, flounder, trevally (locally known as skipjack), Sampson-fish, Australian salmon, John Dory, king schnapper, tassel-fish, dart, and herring, but there are many others, though less commonly known, of great importance, and destined to play an important part in future fisheries. Under present day conditions practically all fish disposed of throughout the State is captured by ordinary seine or hauling net, or by hand line, and though trawling experiments of some years back were carried out successfully, no serious attempts have been made to exploit the resources of the ocean waters by this method. In the waters of the North-West coast, the resources of which up to the present time have hardly been tapped, vast quantities of edible fish are obtainable. Here is presented a magnificent opportunity for the establishment of a big and permanent industry. From the angler's point of view, the waters



of the State leave little to be desired. To the sportsmen who wish to test their skill against the larger "game," the North-West waters offer an extensive and sure field, while to those content to angle under other conditions, the coastal or estuarine waters of the west and south coasts provide excellent sport.

The crustaceans which at present find a place in the fisheries of the State are—those species of crayfish or spiny lobster of the genus *Palinurus*; different species of prawns of the genus *Penaeus*, of which the principal are the school prawn, the king prawn, and the tiger prawn, and several species of swimming crab of which the chief one is the blue crab. In addition there are several kinds of fresh water crayfish, notably the marron, and shrimps. Prawns measuring up to 10 inches in length, and of excellent gastronomic qualities, have been obtained in great numbers in the waters west of Carnarvon.



*Turtles abound on the
North-West Coast*

Trawling operations, carried out under the auspices of the Experimental Government some years back, revealed splendid ground Trawling. between the Abrolhos Islands and the mainland, while in the vicinity of Carnarvon, in semi-tropical waters, good bottom carrying abundant feed was discovered. In this locality flat fishes, including three varieties of sole, were found to be plentiful. A large area there, approximately 40 miles square, was proved to be the nursery ground of the principal edible fishes. The operations with the trawler showed that many of the same species are distributed along the 600 miles of coastal waters prospected, viz., from Geographe Bay to Carnarvon, and that the flat fishes exist in great numbers in some of the northern waters.

Turtles. Until recently no attempt was made to turn to account the great supplies of turtles. It has long been known that many places exist along the north-west coast where it would be possible to establish stations for the curing or the preparation of the commercial products of the turtle. The three species to be found in North-West waters are the green turtle, the hawk's-bill, and the loggerhead. Of these the green and the hawk's-bill are the most valuable commercially, the former owing to its edible qualities, and the other because of the beauty and quality of the horny shield developed on the surface of the carapace. This is known as tortoise-shell, from which are made articles such as combs, fans, bag tops, etc. Some very fine specimens of tortoise-shell were sent to the Empire Exhibition at Wembley. Green and hawk's-bill turtles range over practically the whole of the North-West coastal waters, and attention is now being turned to them commercially. One company with British capital has already commenced operations at Cossack for the preparation of the products of the green turtle, and it should not be long before a thriving industry in the production of turtle soup and by-products is firmly established. A second turtle soup factory has been built at Rockingham, 14 miles south of Fremantle, but operations there have been temporarily suspended.

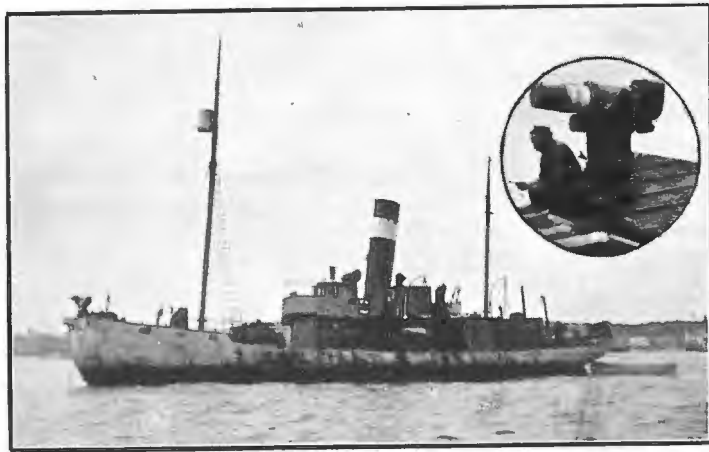


Point Cloates Whaling Station

Beche-de-mer. Fishing for beche-de-mer also may be assumed to reach great proportions in future. The North-West coast produces beche-de-mer, or, as it is popularly called, trepang, in considerable quantity, but the fishing operations are conducted in a desultory manner, and only the species that are closely allied to the surf red-fish of the Queensland coast have been collected. The superior species for which the Torres Straits and the Great Barrier Reef are famous have been met with at the Abrolhos Islands.

Cetaceans. As far back as the eighteenth century whaling was carried on in the coastal waters of the south and south-west by American and French vessels. Then in the forties companies were formed in Perth and Fremantle, and operations were conducted with more or less success. Modern whaling—the employment of fast steamers with harpoon guns—was first undertaken here in 1913, when Norwegian companies established headquarters at Albany and at Point Cloates. Shore stations and factories were erected at each place, and up to 1916, when work was suspended, more than 4,000 whales had been captured. In that period

over 130,000 casks of oil and 1,500 tons of fertiliser were produced, the value being more than half a million sterling. The war compelled a cessation of operations, but in 1922 a local company acquired the property and equipment at Point Cloates and operated for two years with good results. Operations have been resumed at that station.



Whaler and (inset) Harpoon Gun

The hump-back whale is a regular visitor, making its appearance in the southern waters during May of each year. This visitation marks the beginning of a periodical migration, and in all probability, those appearing in the southern coastal waters are detached members of the main school which, during June and July, finds its way to the warmer waters of the North-West, to return south during September and October. The sperm whale, so far as is known, does not visit the waters of the North-West coast. Its feeding grounds are apparently the deeper waters of and about the edge of the Continental Shelf 40 to 50 miles south of King George's Sound. In this vicinity very large schools are found practically throughout the year. Many of the species were secured during the operations of the Norwegian companies, some of the "bulls" being of huge proportions.



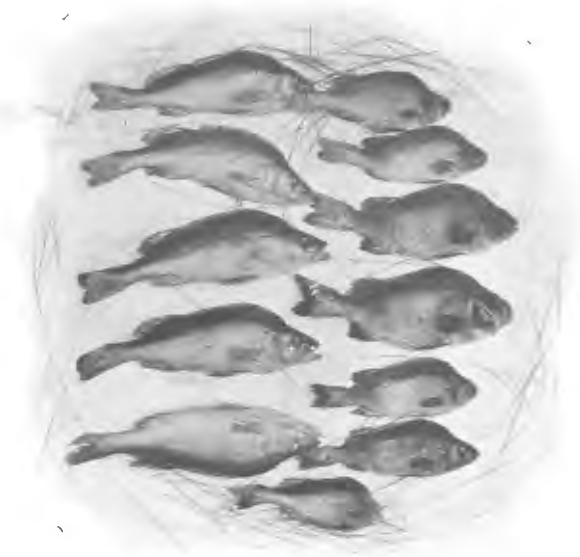
The Dugong

Dugong.

In the warmer waters off the North-West coast are found that highly interesting and undoubtedly valuable herbivorous mammal known as the dugong. This creature is found in more or less greater numbers from as far south as Shark Bay to the northernmost point of the State, and is sought mainly as an article of food, its flesh being of excellent quality. The dugong grows to a length of eight feet and more, and also yields an oil containing valuable medicinal properties. Its hide is of rare thickness, and should be turned to good use as leather.

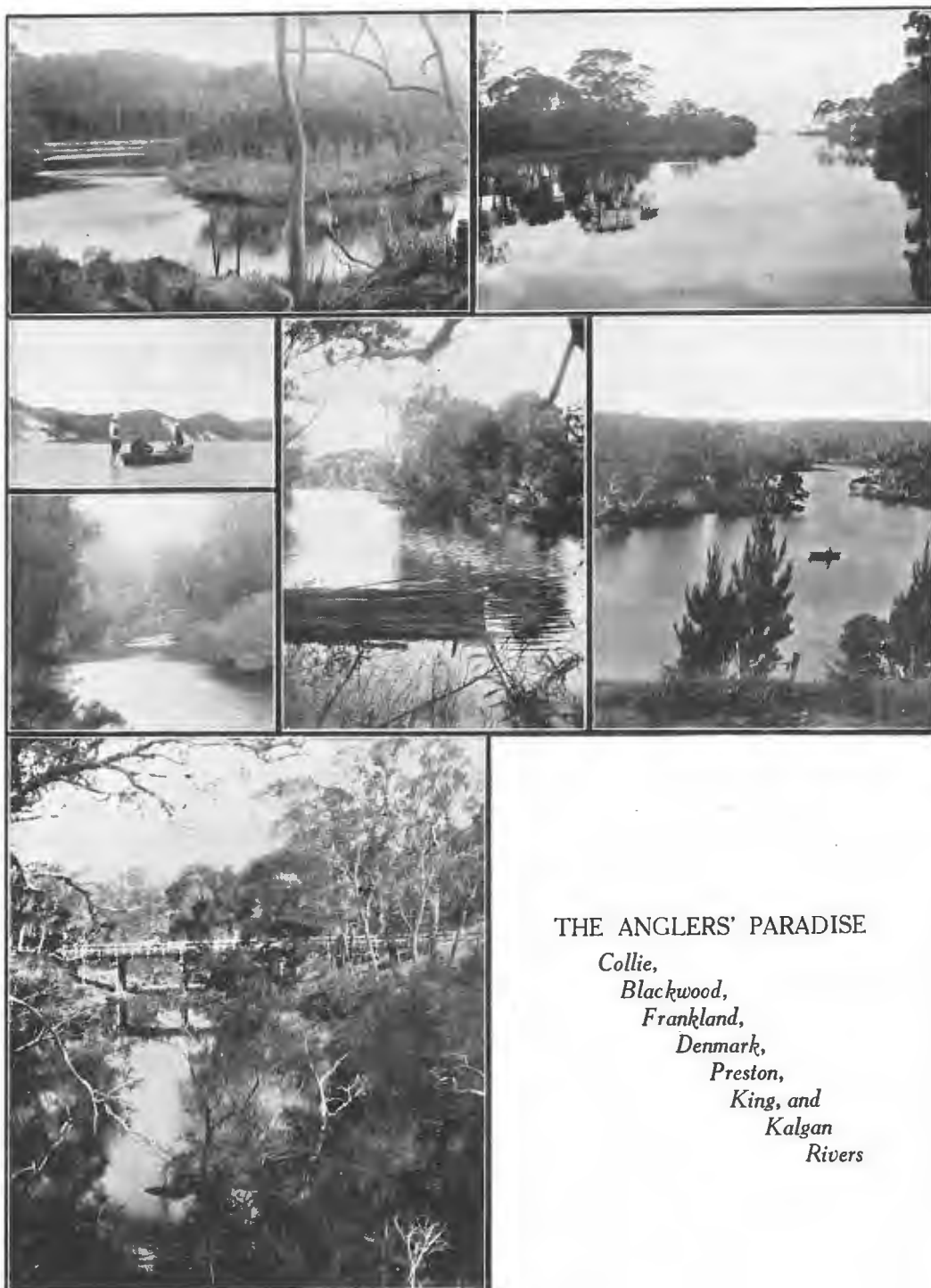
Sponges and Fibre.

The sponge fauna of Western Australia is considerable, but so far it has been imperfectly worked. Sufficient is known, however, to justify the belief that there is a reasonable prospect of a sponge fishery being established. As showing the wide distribution of the growth of the sponges, it might be mentioned that very good samples have been obtained from Esperance in the south to the Lacepede



Islands in the north, a distance of over 1,500 miles. It is important to note that Esperance is in the same latitude as the Mediterranean, which is the home of the sponges of commerce, and that the Lacepede Islands are situated in the same parallel of latitude south as the Gulf of Florida, where also sponges of great value are found, occupies in the north.

The development of a large fishing industry is only a matter of time. With the long stretch of seaboard, broken by numerous inlets and estuaries, there is practically unlimited scope for the profitable investment of capital. The quantity and quality are obtainable and the market for fish is invariably good.



THE ANGLERS' PARADISE

*Collie,
Blackwood,
Frankland,
Denmark,
Preston,
King, and
Kalgan
Rivers*

Pearls and Pearlshell

*Valuable Tropical Industry — How the Luggers operate — Polyglot Town of Broome —
Total Exports, £8,500,000.*



PEARLING, with all the picturesqueness and romance attaching to that enterprise, finds a place amongst the primary industries, and Western Australia is responsible for the production of more than one-half of the world's output of pearls and pearlshell. The life of the pearler is one which, at a distance, appeals strongly to adventurous and romantic natures, and in Western Australia, as elsewhere, the industry possesses an attractive glamour quite apart from its commercial aspect. The very idea of man descending the mighty deep and raiding the kingdom of Neptune for mother-of-pearl shell and the more attractive offspring, the pearl, appeals strongly to the imagination; more than that, the environment of the industry invests it with romantic interest. Essentially tropical in its habitat, pearling is associated with strange seas, burning sunshine, swarthy faces, adventurous life in polyglot company, a gambling element, and generally abnormal conditions that lift it from the plane of the commonplace. It is set in tropical waters, the luggers are manned by aliens of all shades of colour, and Broome, its commercial base, is almost a patch of the Orient planted on Australian soil.

The aborigines of the North-West of Australia seem to have had a knowledge of the existence of pearl shell long before the white man appeared on the scene. Ornaments made from the shell were frequently found by early explorers; indeed many natives used small shells as the only article of apparel. There is also evidence that the natives of Malaya knew of the reaches where shell was to be found, and to some extent exploited them. When settlers of the Swan River colony ventured into the northern part of their immense heritage, they employed aborigines in naked diving, and large quantities of shell were obtained in comparatively shallow water. All the means adopted for exploiting the waters were primitive, but when the discovery was made that shell in practically inexhaustible quantities was to be found in deep water, the unfortified diver was succeeded by the operator equipped with modern diving dress and all the appliances requisite for searching at depth. For a long time the industry was conducted at several points along the coast from Shark Bay northward, but in late years the business has tended to concentrate at Broome.



Fleet and Equipment.

With the operations in deeper waters came the building and equipment of up-to-date and handy pearling luggers, the installation of air pumps, hoses, etc., and the use of the most approved design of diving dress, until at the present time Western Australia possesses a pearling fleet which, although numerically smaller than in pre-war days, remains second to none in the world. Individually the luggers are small—they range from 10 to 15 tons register—but small though they be, their build is so stout and their equipment so complete that periodically they successfully pass through tropical storms, and in some instances have emerged scathless from cyclonic disturbances which have proved the undoing of much larger craft. Before the war, the North-West

pearling fleet consisted of more than 300 vessels—luggers and schooners—with a value, including gear, of between £150,000 and £200,000. In 1914 many ships went out of commission by reason of the fact that, of the white population engaged in the industry, 25 per cent. enlisted. Many of the luggers that were then "laid aside" still remain idle. Last year 195 vessels were licensed, representing a tonnage of 2,728, and a value including equipment of £100,000. The sailing lugger still raises most of the shell, but the boat equipped with a motor engine has come into use and, needless to say, it has weighty advantages over the vessel that depends upon canvas for its motive power. The total labour engaged last year was approximately 1,700, of which number 120 were whites.



Broome, the Pearling Centre

Improved Diving Methods.

With the advent of deep-water diving, the number of accidents, some unfortunately fatal, was materially increased, and what is known as "divers' paralysis" became of rather frequent occurrence. During recent years, however, a more complete knowledge of the British admiralty methods of decompression has been instilled into the minds of divers, divers' tenders and crews, with the result that accidents—even though a depth of 25 fathoms is worked—have become less frequent, as has also the number of fatal cases. Divers now affected, even at night, are decompressed by being "sent down" and very gradually "staged" to the surface. A death roll of 31 divers during 1914 was reduced to two during 1923. February is looked upon as the beginning of the season, and the boats are usually equipped then with three months' provisions. At about the end of that period they return to port for

HOW PEARLS ARE WON



1. Diver Descending. 2. Landing Shell. 3. Shell Opening. 4. Lugger Crew.

reprovisioning. Some luggers obtain their supplies from schooners that engage in the trade of provisioning. These schooners also take back to port loads of shell already fished. The pearling grounds are well stocked with edible fish, and the crews of the vessels are able to enjoy this addition to their dietary scale. It is perhaps unnecessary to draw attention to the magnificence of the white pearls found in the North-West



Broome
Pearling
Fleet



fishery. Their beauty is known and appreciated throughout the civilised world. Size, shape, colour,

lustre are all in evidence, and buyers from practically all parts of the world periodically visit the pearling centres. The large and valuable mother-of-pearl oyster, known scientifically as *Meleagrina margaritifera*, which for many years has been an important article of commerce, is found in these waters.

Operations are carried on at Shark Bay in a manner quite distinct from those in the waters further north. Here divers are not employed, as the habitat of the shell is the comparatively shallow water of the "banks" or "bars," although it may also be found at a depth of five or more fathoms. Dredges are used, but there are also what are known as "pick-up" banks, and over them at low tide the pearl fishers wade and collect the oysters by hand. Although much smaller in size, the Shark Bay oysters are of commercial value, and are usually disposed of in Home markets mainly for the manufacture of buttons. Pearls from this fishery are not remarkable for their size, but many beautiful small specimens of great lustre are secured. Here too are obtained most of the straw-coloured pearls.

Broome, with its 4,000 inhabitants, is one of the few towns in the Commonwealth in which coloured people predominate. All the races of the Orient are there represented and all are, in some capacity or other, connected with the pearling industry. It was recognised that if a valuable national industry was to be preserved, the coloured man was necessary to undertake the all-important

work of diving. Therefore he is admitted under legal sanction and stringent conditions. All coloured labour is indentured for a specific number of years, and the person importing Asiatics is compelled to return them to their native

land at the expiration of the engagement. The divers are trained and reliable, as they needs must be, for the success or failure of the season's operations depends upon the qualifications of the diver. The lugger crew usually consists of five men of mixed nationalities, while the "boss," who acts as shell opener, is a white man. Operations are regulated under the provisions of the Pearling Acts 1912-24, and no unlicensed person may lawfully partake in pearling or buy or sell pearls. The provisions of the Act of 1912 were amended in 1924, by the insertion of sections aiming particularly at the suppression of 'dummying,' viz.,



The Pearl Diver

the acquisition by unqualified persons of pearling (ships) licenses, or the right to share in the proceeds of pearling. Wider powers have also been granted to the State's officers, and for offences heavy penalties, including even the confiscation of the ships concerned, have been provided. The growing of so-called "culture" pearls is, by the same Act, declared to be illegal.

There is every promise that the industry will be permanent, as the limits of the shell-bearing grounds have not yet been determined, and the depleted portions of the ocean bed are constantly undergoing natural replenishment. For the year ended June 30th, 1924, the value of pearls exported was £93,669, and of pearlshell £243,680, a total of £337,349. The value of the total exportations recorded, since 1870 is estimated at £2,100,690 for pearls and £6,403,640 for shell, together giving a total production of £8,504,330.



The sea
hath
its pearls

GLIMPSES OF THE NORTH-WEST



Our Great North-West

Cattle, Sheep, and Pearling Industries Established — Experiments with Cotton, Tobacco, and Other Tropical Products — Mineral Wealth — Space and Possibilities.



WESTERN AUSTRALIA, comprising one-third of the island continent, has approximately half of its own territory in the tropics. Thinly-peopled as is the South-West division of the State where settlement most is concentrated, the northern part is able to boast a white population of not more than 7,000 souls, while the aborigines number 23,000, and 2,000 Asiatics find employment in the pearling industry. Thus our great North-West is a comparatively empty territory, presenting a most difficult problem to statesmen, who recognise in its unsettled state a serious menace to Commonwealth and to Empire. Just prior to the outbreak of the war it seemed that the North was on the eve of a forward move, but the call to arms took away much of the man-power, and the leeway has not since been made good. From time to time the Government has had investigations made into the possibilities of tropical agriculture, and work on a small scale has proved the suitability of soil and climate to raise many of the products that figure to the extent of 12 millions sterling in the Commonwealth's importations every year, but the State exchequer has never been equal

to the big financial burden of experimenting largely, providing the necessary facilities for making any real headway in the close settlement of the country. When the peopling of the south has become more advanced, the North must command attention, and who knows but that some system of community or group settlement may not prove the most effective means of establishing there an industrious and prosperous people.

The months of the year can be grouped into *growing months*, which are rainy months, and *harvesting months*, which are dry months. A fairly extensive range of temperature is met with from the Lower Gascoyne, near Carnarvon, which possesses a mild climate, about six degrees warmer than Perth in the winter and ten degrees warmer in summer, to Wyndham, on Cambridge Gulf, which is about



Baobab Tree

19 degrees warmer than Perth, winter and summer. Between these coastal points there are extensive stretches of country, situated at a height of from 1,000 to 2,000 feet, where the altitude tempers the climate of the coastal districts. These high plateaux, however, occur some distance from the coast, and although more suitable for settlement by white people, the cost of marketing the products raised places them at present beyond the reach of farmers. Provided water can be secured, settlement, with the assistance of white labour, is quite practicable all along the North-West coast to the Kimberleys.



Northern River Scene

The prevalence of high temperatures over the north country would be more severely felt were it not for the breeze that almost throughout the year blows from one quarter or another with even more pronounced regularity than does the sea breeze in the south-west. The most windy months are October, November, and December, when the wind blows strongly from the south-west. From Broome to the North-West Cape, cyclones now and again strike the coast. These "willy-willies" blow between January and April, starting first from the East, and going all round the compass. A good deal of destruction is occasionally left in their track, but at the same time they bring along beneficial rain.

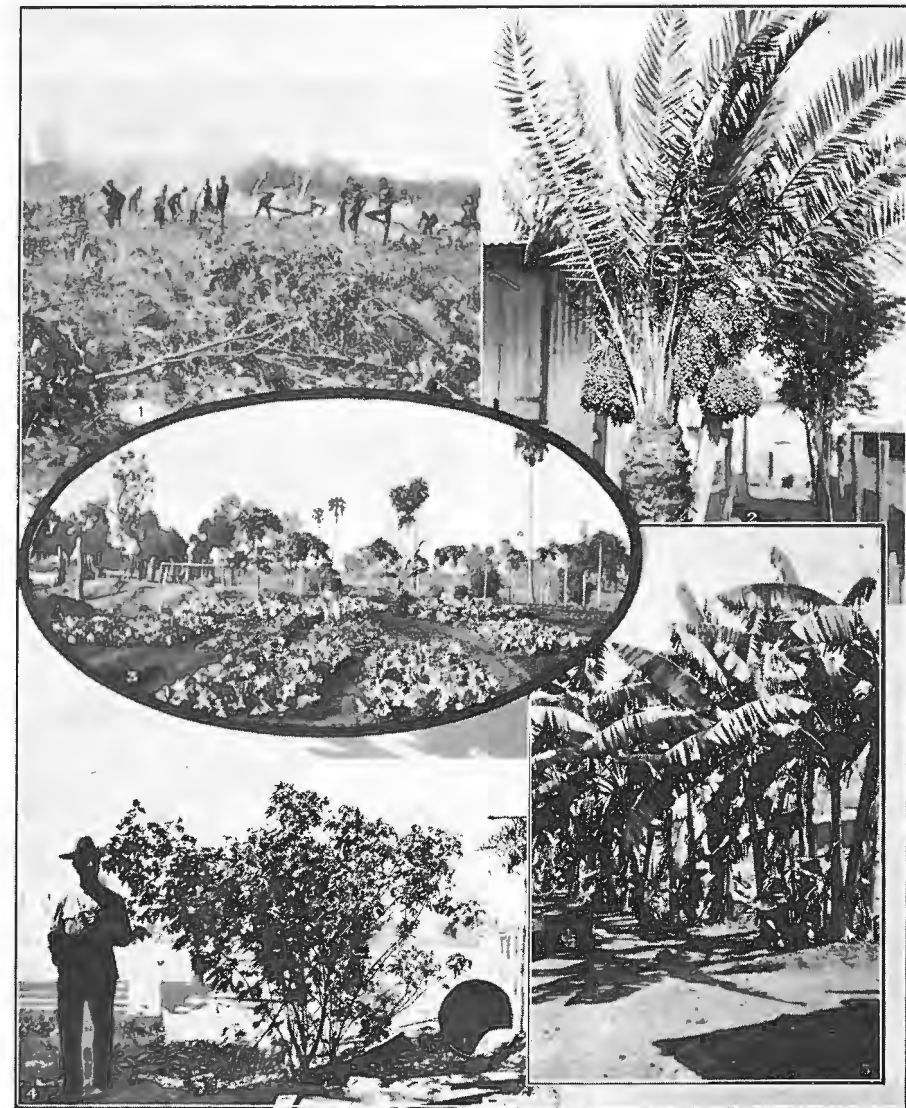
Land and Rainfall. Extensive tracts of grazing land are intersected at intervals with beds of rivers and watercourses, a number of which run for only a few months in the year. At a distance of from 60 to 100 miles from the coast the country rises, and extends eastward in rolling downs. The soil of the plains, on the whole, consists of deep alluvial deposits, the result of the disintegration of the rocks which form the backbone of the ranges behind. Analyses made of the soils, compared with others from places of well-known fertility in the South-West division, show that they are richer in potash and in nitrogen, two of the essential elements of plant food.

In the North, no doubt on account of the lesser rainfall and the stronger winds, trees are scarce, and in their place are found shrubs, grasses, and herbage. The rain-



Crossing a Flooded River

TROPICAL PRODUCTS GROW PROLIFICALLY



1. Aborigines Clearing Land. 2. Date Palm. 3. A Station Garden. 4. Cotton Bush. 5. Plantains at Port George.

fall, as compared with the South-West, is sparse. On the Gascoyne the bulk of the rainfall comes during the winter months, whereas at Broome and through the Kimberleys the order is reversed and most rain falls during the summer months. The dews, which right through the North-West are heavy and frequent, prove no mean accessory to the rainfall. The dew is so heavy that it drops from the roofs at night, and in the morning grass, herbage, and shrubs are dripping with water. These heavy dews have a very refreshing effect on vegetation. The water supply is mostly derived from wells, in which water is struck at depths of from 10 to 100 feet, but in most cases at from 20 to 30 feet. Analyses made of samples of water collected show that it is in most cases fit for watering gardens, and very often drinkable. The further north one travels the better the water becomes, and in the Kimberleys it has been found, on deepening existing wells by driving a pipe through the bottom, that an improved supply of sub-artesian water often rises.



Bird Flower of the North-West

Water Supplies.

Artesian bores have been put down in many places. In the North springs are of fairly common occurrence and supply a reliable source of water for stock. From the Gascoyne to the Ord, in Kimberley, over 20 rivers carry away flood water during the rainy season, and, although they do not run continuously, a great many of them have lagoons of varying size, some extending for miles, and holding an abundant supply of good water. Fresh water can be obtained almost anywhere, some distance from the banks of these rivers, in wells from 14 to 20 feet deep. The conservation of a portion of the flood waters, which at times run to the sea, is an engineering proposition that should offer no great difficulties. Anyone who has seen the country at flood time, and who observes the high mark of the flood water, must realise that when these rivers come down an immense body of water runs to waste.

Mr. G. A. Hobler, Engineer of Ways and Works, Commonwealth Railways, made an extensive tour of the North a few years ago, and in summing up his conclusions he stated:—"The Kimberley and North-West division, and that portion of the Eastern division dealt with in this report, undoubtedly contain a very great amount of land with good soil and feed for stock, good soil for tropical and sub-tropical agriculture, and large supplies of water



Sail Fish of Northern Waters

FRUITS THAT FLOURISH



1, 2, 3. Pineapple Growing. 4. Paw-paw Tree.

available for conservation for irrigation, stock, and domestic purposes, besides considerable natural supplies. The country also contains, so far as can reasonably be estimated and assumed, considerable latent mineral and metal resources. . . . With proper development the country could carry a great population, and support numbers of wealth-producing industries,



Portion
of the
Pearling
Fleet

adding immensely to the wealth and revenue of the State of Western Australia and the Commonwealth as a whole. A large extent of the country is suitable for closer settlement, and in any development scheme or schemes this should undoubtedly receive very earnest attention. There is ample room and country for settlers with small means and for those with large means. . . . The country is not necessarily sensational in its extent of natural value and resources, but is just a portion of the very valuable and large extent of country which exists to a considerable degree almost all round the sea coast of Australia for a good distance inland, and it fully warrants opening out and developing in the same way as many of these other portions of Australia have been." To develop the country fully, he mentioned harbours, railways, roads, telegraphs, telephones, water conservation, and Government experimental farms as necessary requirements.

Although it is recognised that the soils of the North-West and the Kimberleys are capable of raising tropical crops, their utilisation is at present subordinate to labour conditions.

Under the system of pastoral leases the vast areas given up to grazing are worked with a minimum number of station hands. This is more particularly true of the cattle-raising country of the Kimberleys, where the surface water in pools and lagoons enables stock to be held under great advantages. On sheep stations more hands are employed as the country is fenced; windmills have to be attended to, mustering of stock is more frequent, and shearing necessitates the gathering together and handling of every sheep on the station. Then there is the cartage of the wool. Shearing is mostly done by contract parties, who move from station to station. The native blacks are found useful for station work.

Workers are scarce in this country, but it is hoped that as development takes place men already acclimatised to Australian conditions will be procurable from the south. The chief obstacles in the way of settlement are the absence of suitable labour, and the lack of cheap, rapid and frequent means of com-

munication with outside markets. These northern provinces are occupied largely by pastoral lessees, who have secured a long tenure of the land at small rentals. On most stations small gardens are found, where with the aid of water, generally pumped from a well sunk on the spot, vegetables are grown in profusion. Each of these gardens is in itself an interesting experimental station, which proclaims the capabilities of the country provided water is made available. Pigs thrive wonderfully wherever they have been allowed to run loose, and in some cases they have increased to such an extent that they run wild, apparently gaining an easy living on natural herbage and nutritious roots which a variety of native plants offer. An undertaking of considerable benefit to the stockowners of the North is the Government meat-works at Wyndham. As the home of the pearl fisheries, the North produces three-fourths of the world's pearlshell, and the industry is still being profitably followed and maintains a large population around the town of Broome.

In recent years attention has been turned to the cultivation of cotton, experiments having proved that climate and conditions are all that are required, while experts have declared that cotton growing must yet become an important industry in various parts of the North. Those who are competent to judge have stated emphatically that it is absurd to proclaim cotton growing an impossibility without the aid of cheap coloured labour. For women and children this occupation is no more laborious than that of hop-picking. As a result of experiments carried out to the north of Geraldton there was obtained a splendid sample of fine, long-stapled, silky lint. Still further north the experiments were even more successful, but the country *par excellence* for establishing cotton plantations is the North-West and the Kimberleys, and the stretch of land along the Ninety-Mile Beach. A couple of years back an expert declared, "With the assistance of irrigation the North-West will possibly rival Queensland in many forms of tropical culture, particularly in producing cotton of a high quality."

Coastal country suited to the growth of cocoanuts and dates can be obtained over an area having a thousand miles of coastline. Tobacco, which is imported into the Commonwealth to the extent of over two million pounds worth annually, presents a field for capital and enterprise. The climatic conditions of the far North are ideal to its cultivation. In this direction, too, experiments that have been conducted have been highly satisfactory. At George IV. Mission to-day, tobacco is being grown, the leaf rolled, and the product given to the natives at the station for smoking purposes. In this way the mission saves a considerable sum of money, and those by whom the leaf has been examined have spoken of it as an excellent product. Rice



Wyndham grown Cotton ready for Export

is grown successfully, and, as with tobacco, the missionaries use it extensively as a ration at the native stations. Pineapples, bananas, peanuts, and other products of the tropics grow prolifically in various parts of the north.

Amongst other crops that promise to give good results may be mentioned the several varieties of peas and beans, some of which are native to the soil, while others, such as Lima bean, Soya bean, and cow pea, are extensively grown in warm climates; amongst roots—sweet potatoes, yam, manioc, and earth nuts. To this list should be added sunflower, sesamum,



Cocoanut
Trees

kapok, pumpkins, melons, tomatoes, paw-paws, pineapples, dates, mangoes, and cocoanuts. On the Gascoyne grapes ripen a month earlier than they do on the Swan, whilst tomatoes ripen right through the winter months, when they are unprocurable in the southern districts. Probably the most profitable crops to grow under intense cultivation where sufficient water is procurable would be lucerne, tobacco, and crops out of season, to supply the requirements of the more populous southern markets.

Though a greater part of this northern territory has been given over to pastoral pursuits, it is still far from being fully developed in that direction. Immense areas are yet available for settlement. But the pastoral industry is by no means the North's only source of wealth. Gold was first discovered in the Kimberleys, and later in the Ashburton and Pilbara districts. There is great mineral wealth awaiting to be unearthed, not only gold, but baser metals. Iron ore of a quality not equalled in any part of the world exists at Yampi Sound, a spacious and almost land-locked deep-water harbour. Exploratory work is being carried on to

locate oil beds. Other metals and minerals existing in this territory include copper, lead, tin, high grade asbestos, mica, antimony, manganese, tungsten, scheelite, graphite, wolfram, etc. Pearling, fishing, and whaling are also playing an important part in the North.

Population Wanted. The necessity for occupying the vast territory that has for so long been practically empty has often been stressed, and Governments have given earnest consideration to the subject.

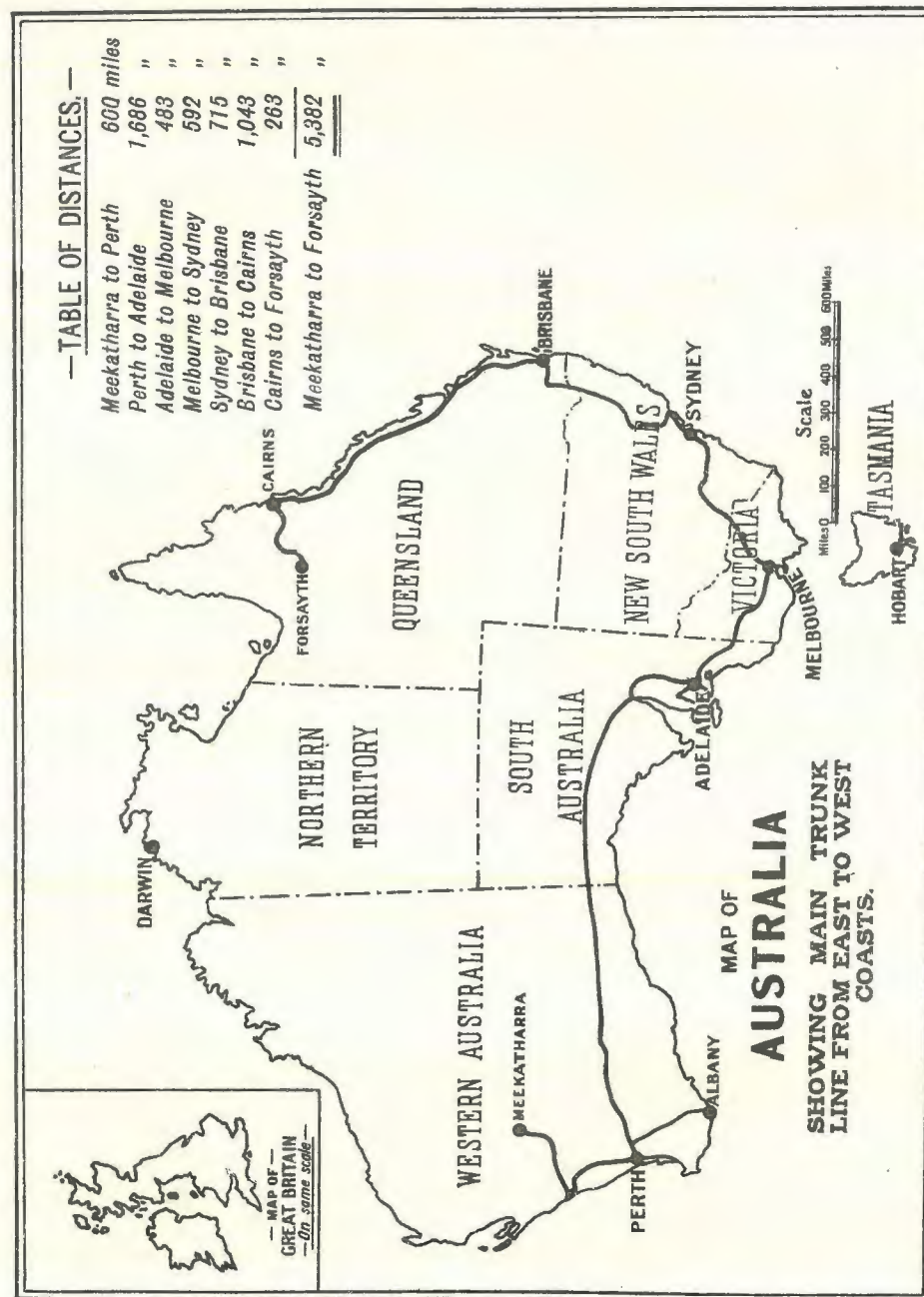
The high latitude of the North, however, has deterred many people from embarking on enterprises in that part of the State. From the health point of view it may not be *inapropos* to quote the opinion of a special committee appointed by a medical congress that sat in Melbourne in 1920. In effect the opinion was that there were no insuperable obstacles in the way of the permanent occupation of tropical Australia by a healthy indigenous white race, and that the absence of semi-civilised coloured peoples in Northern Australia simplified the problem. The opinion concluded thus:—"A great national question is involved, but we are unable to discern any obstacles which cannot be overcome by earnest and skilful application of the principles of statecraft." The people of Australia have declared their intention to keep Australia white, and there is no reason why our great North-West should not be developed and retained.



Transporting Wool

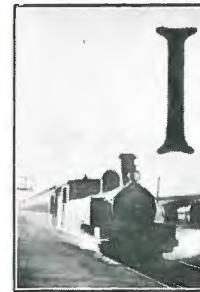


Hollow Tree Butt as a Native Forge



Communication By Land, Water, and Air

*Government Railways—History, Organisation, and Policy—Trans-Australian
Railway—Perth Tramways and Electricity Supply—State Shipping Service—
North-West Aerial Service—Motor Transport.*



IN WESTERN AUSTRALIA the Government railways represent a solid and tangible asset, denoting the stability and general development of the country. The system has been built section by section following a well-defined and continuous policy of development since, by notice in the *Government Gazette* of September 25th, 1877, the first 18 miles from Geraldton towards Northampton were declared open for traffic. In its infancy the State pledged itself to the duty of making its broad and fertile lands accessible to the miner, the timber-getter, the agriculturist, and other primary producers, and the results that have attended that great labour have in every way justified the efforts

put forth to attain them.

The first railway, from Geraldton to Northampton, completed on July 26th, 1879, was followed with a line connecting Perth with Fremantle and Guildford, opened on March 1st, 1881. By October 21st, 1890, on which date Responsible Government was inaugurated, the population of 46,000 possessed a State railway system of 188 miles, which had cost £833,083. In addition the W.A. Land Co.'s Great Southern railway, built under a land grant concession and running from Albany to Beverley (243 miles), had been opened on June 1st, 1889, and a land and immigration concession had been confirmed by the legislature for the construction by private enterprise of the Midland railway, to link the 277 miles separating the Government metropolitan and northern lines. Up to this date only three of the 12 years had



run remarkably smoothly, and a good speed is attained. The flooring is double, with an intervening layer of lagging, by which means the noise of the wheels is deadened.



New Locomotives undergoing test at Midland Junction

Goods Traffic.

Cheap living in the goldfields, pastoral, and agricultural areas depends on cheap and speedy haulage; in fact, with every article

produced or consumed, and every branch of life and industry, the railway is intimately associated. During the year ended June 30th, 1924, the work performed by the system represented a haulage of between eight and nine tons of goods an average distance of 83 miles for each man, woman, and child in the State. A man first settling on virgin country receives timely assistance from the department. When first going to reside on the land purchased from the Government, his goods and chattels are railed to the nearest point to his selection from wherever he may require for £1 2s. per ton irrespective of distance. In a similar manner his stock is taken for £5 per four-wheeled stock wagon, such wagons holding approximately six horses, eight cattle, or 70 sheep. The settler's wife and other members of his family are taken to their new home at half single fare, his children under fourteen at quarter single fare, and his children of less than five years free. These concessions are obtainable on certificates issued by the Lands Department when negotiations for taking up land have been completed.

Railway Workshops and Sawmill.

Magnificent railway workshops have been established by the Government at Midland Junction for the maintenance and manufacture of its locomotives and rolling stock. In this—as in all other respects—it is the object of the State to be self-contained. From 1902 all additional rolling stock has been of local manufacture, and the fact that importation has recently

been made of 10 locomotives is due not so much to any lack in local facilities for building, strictly so considered, as to the excessively rapid developments in trade and traffic generally during the past few years.

Another important section of the department is the timber mill at Dwellingup, which produces the sleepers and sawn timber for railway requirements. An area of 740,000 acres of forest has been reserved for the purpose, and the mill last year turned out 213,000 sleepers and 5,900 loads of sawn jarrah, exclusive of piles, poles, posts, and firewood. The whole of the buildings of the mill township are Government property, and premises are let to business people. The capital cost of this undertaking to June 30th, 1924, was £84,863.

Trans-Australian Railway.

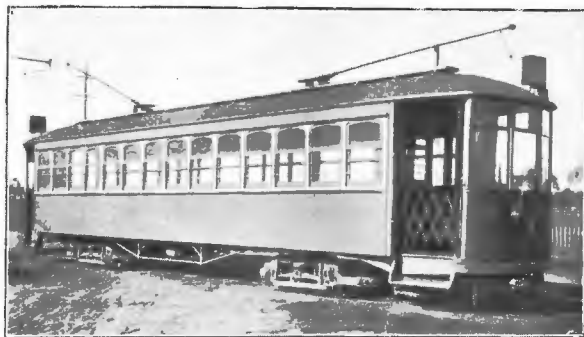
The Trans-Australian railway, constructed by the Commonwealth Government, was opened for traffic in 1917. The building of this line has been of immense advantage to the people of Western Australia, since it affords direct and speedy communication between Perth and the capitals of the Eastern States. The isolation which the people of the West suffered for so many years has been broken by the two thin bands of shining steel which stretch eastward for over a thousand miles. The line connects with the Western Australian system at Kalgoorlie—375 miles from Perth—and joins up with the South Australian Railways at Port Augusta. The railway has a standard gauge track of 4ft. 8½ in., and is equipped with the most up-to-date rolling stock. Luxurious sleeping, lounge and restaurant cars enable the journey to be made in the height of comfort, and the run over the 452 miles of country



Trans-Australian train at Kalgoorlie

lying between Kalgoorlie and the South Australian border affords glimpses of typical inland scenery. No other journey so well illustrates Australia's description as a country of immense distances. The building of the railway occupied four years, and the capital cost of its construction and equipment on June 30th, 1924, amounted to £7,379,785. As a commercial proposition it has not yet become self-supporting, but in other ways it has justified its construction, and presents concrete evidence of the reality of the Australian federation.

Grouped under the control of the Commissioner of Railways are two other public utilities in the form of a metropolitan tramway system and electricity supply. Because of their complementary association both of these services come under the immediate control of a manager who is directly responsible to the Commissioner. The operation of a tramway system dates back to 1899, when



Electric Tram, built at Midland Junction Workshops

the service was installed by a private company. The concession conferred on the company as an inducement to construct and operate the line contained a proviso which gave the Perth City Council an option of purchase in 1925 or 1932, and if such option were not then exercised the complete undertaking was to revert to that body in 1939. The rapid growth of the City and its environs from 1900 onwards emphasised the need for transport facilities in the outer suburban areas where extensions could not be expected to provide immediately a remunerative return, and in consequence would not appeal to the management of a privately-owned concern. It was then that the proposal to purchase the undertaking was put forward, and after protracted negotiations the idea took shape. On July 1st, 1913, the system came under Government control and the Perth Municipal Council relinquished its right to the unexpired term of the option. Upon the completion of the purchase the Government at once framed a policy of development which, in principle, followed that laid down for the railways. As a result tracks were pushed out into sparsely populated localities, which have since grown into populous suburbs. Adherence to such a plan necessarily meant the sacrifice of almost the whole of the substantial profits formerly earned, but the advantages gained in other ways more than counterbalanced the loss of revenue. To-day

no better results are expected of the metropolitan tramways than the balancing of the ledger. The following comparison between the first year of Government control and the latest available figures shows the working results :—

	1914.	1924.
Capital	£506,364	£912,089
Mileage : equivalent in single track	31m. 41ch.	45m. 79½ch.
Earnings	£116,774	£274,583
Working expenses	£74,708	£231,895
Percentage working expenses to earnings	64%	84%
Car miles	1,573,266	2,989,089
Units of current consumed	2,994,643	8,061,920
No. cars, 4-wheeled	52	62
No. cars, bogie	11	41
Passengers carried	10,700,915	27,893,315

Fremantle, Kalgoorlie and Boulder also have tramway systems, Fremantle's being conducted by a board representing the interested local authorities and that on the goldfields being run by a company.

Electricity Supply. With the taking over of the tramways by the Government, it was apparent that increased power would be required, and steps were taken to erect a new power station of broader design and more convenient situation than the company's old building.

Owing to the war the completion of the works was delayed, and it was not until December, 1916, that current was supplied from the new power house. In addition to the requirements of the tramways, current is generated for almost the whole of the municipal authorities in the city and suburbs. It is supplied in bulk at a high tension voltage, and retailed to rate-payers and various industrial concerns within defined radii, none of which exceed five miles from the seat of municipal control. Outside of those areas direct supply is arranged at a low tension voltage, both for domestic and industrial requirements. To give some idea of the growth of this undertaking the



Government Power Station, East Perth

capacity of plant was increased from 12,000 to 19,500 kilowatts in seven years, and a further addition will be completed by December, 1926, which will give a total generating capacity of 32,000 kilowatts. The distribution is now available 20 miles distant from the power house, and further extensions are contemplated.

The following financial and technical statistics enable a comparison to be made between the first and last complete year's working of this undertaking :—

	June 30th, 1917,	June 30th, 1924.
Total capital	£393,865	£800,227
Earnings	£32,618	£166,208
Working expenses	£20,486	£116,150
Interest and antiquation charges	£22,743	£49,629
Profit	£429
Loss	£10,611
Plant capacity (kilowatts)	12,000	19,500
Units generated	10,607,307	45,188,910
Units sold	9,239,191	39,100,707

State
Shipping
Service.

The State Shipping service was inaugurated in 1912 as a result of representations from people of the north for greater facilities for the transport of their stock and general supplies and to serve points at which new settlement was taking place and which needed special treatment to ensure their success. Various boats have been employed in the service, the vessels now running being the s.s. "Bambra" and the m.s. "Kangaroo." The "Bambra" was formerly the German prize s.s. "Prinz Sigismund," and was put on the coast in 1915. The vessel has many good qualities, but her running costs have proved too high for the trade, and the Government is contemplating getting an up-to-date passenger and cargo boat of the Diesel-engined type to replace her. The "Kangaroo" was purchased new in the same year, she having been one of the few ocean-going Diesel-engined vessels afloat at the time. She was used to transport wheat oversea during the war, and with good return freights, she earned considerable profit for the State. In 1920 she was refitted



State Motor Ship, "Kangaroo"

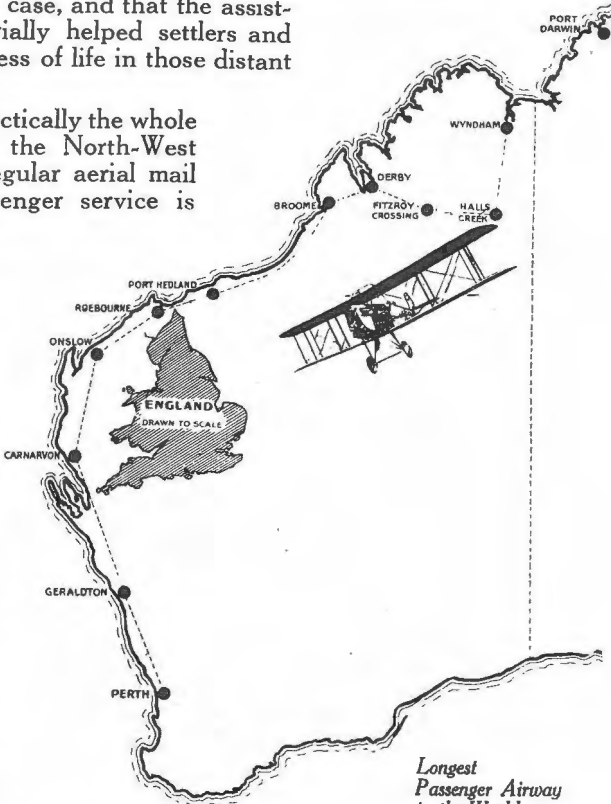
in England to meet the requirements of the local trade, and is now running via the north coast ports to Java and Singapore with the object of working up a bigger trade between the State and those countries. These vessels have an Australian itinerary extending to Darwin. The Government has also catered for

the south-east coast trade, the s.s. "Eucla" making the run from Fremantle via numerous ports and stopping places to the head of the Great Australian Bight. This steamer is proving unequal to the demands of increasing cargo and passenger business, and the Government proposes to secure a Diesel-engined vessel in her stead.

Concessions to Settlers. From Eucla to Darwin, allowing for stoppages at the intermediate ports, represents a steaming distance of 3,500 miles. With such a long coastline and with such scattered settlement, the importance of the Government having some control over the sea transport may be readily appreciated. Often the Government, through its own vessels, can give to settlers assistance that could not be asked of a private company trading solely for profit. Thus the Government has given concessions to pastoralists in the way of special freights on stud stock; to farmers by special freights on fertilisers, implements, wheat, etc.; to pearlers by arranging advantageous oversea freights for their shell; to miners by specially low charges for ore transported for treatment. The wives and children of northern settlers are granted concession fares to enable them to come south for a holiday, and provision is made for tourist parties to go to the north in order that interest in that part of the State may be stimulated amongst city dwellers. It is claimed that the Government boats have kept freights and fares generally lower than would otherwise have been the case, and that the assistance granted has materially helped settlers and added to the attractiveness of life in those distant parts of the State.

North-West
Aerial
Service.

Along practically the whole length of the North-West coast a regular aerial mail and passenger service is operated by a local company known as the Western Australian Airways Limited. The service is a weekly one in each direction, with headquarters at the capital, linking up Perth with Geraldton, Carnarvon, Onslow, Roebourne, Whim Creek, Port Hedland, Broome, and Derby. The length of the route is 1,442 miles, so that nearly 3,000 miles are flown every week. The Federal Government arranged for the service in 1921 by letting a contract to the company for a period of twelve



months. This was largely an experiment to judge the utility of commercial aviation, while it was recognised that there was urgent need for stimulating aviation in the Commonwealth and holding together the trained personnel available at the close of the war. The experiment was entirely successful, and extended contracts were then negotiated. Arrangements are now being made to extend the service to Wyndham, the most northern port in the State. This will link up Fitzroy Crossing and Hall's Creek, as well as the oil prospecting areas in the Kimberleys.



The Air Fleet.

The company employs a fleet of eight aeroplanes capable of travelling at more than 100 miles an hour, and seven highly skilled pilots, in addition to a score of ground engineers and mechanics. At Perth headquarters the complete reconstruction of aeroplanes is undertaken. All work is inspected by Government inspectors, who issue certificates declaring the machines to be in every respect airworthy. A rigid specification is adhered to in every department. The landing grounds and emergency landing grounds have been provided by the Defence Department, while the contracting company has been responsible for installing hangars and workshops. Owing to the scattered population in the North, large tracts of country are crossed that show no signs of civilisation. Consequently, to ensure the safety of travellers, each aeroplane is equipped with portable telephone sets, so that should a forced descent be necessary in the remote country, communication could immediately be established by means of the overland telegraph line, which runs the full length of the route.

Flying Conditions.

Flying conditions along the North-West coast are favourable during the greater part of the year, and the regularity with which the schedule has been carried out has been one of the outstanding features of the service. During the summer months the climatic conditions are sometimes disturbed by cyclonic storms. These, however, are of short duration, and ample warning of their approach is given by the rapid falling of the barometer two or three days beforehand. The

storms attain great violence, and at times cause damage to shipping and to coastal buildings, but apart from delaying scheduled aerial trips, no harmful effects have resulted to the service.

A Useful Service.

The distance flown under the contract approximates half a million miles. To indicate the use made of the aerial mail, the number of letters carried has increased to 20,000 per month. The letters bear a surcharge of 3d. per half ounce, so that from this source the Federal Government receives a substantial revenue each year. There is a considerable and growing passenger traffic between the ports, and large quantities of urgent freight, chiefly machinery parts, medicines, etc., are carried regularly from the city northwards. In connection with shearing and motor transport contracts where large numbers of men have been employed and where contract dates and requirements have been at stake, losses consequent upon machinery breakdowns have been greatly minimised by recourse to the aerial service. Patients have been carried from out-back stations to medical assistance at ports or in the city, while surgeons have been conveyed from the city to urgent cases. Often the saving of time has meant the saving of life. Many station owners near the route have provided landing grounds in order that they may enjoy the benefits that aviation confers. Frequent calls are made at such places, and urgent freight, passengers, and mails are delivered in a fraction of the time that would be entailed by other means of transport. When motorists have been held up by serious breakages or have been marooned in flooded country, the air service has assisted them by carrying spare parts for the cars or conveying the passengers to their destination. All classes of people use the air service. The records show that, apart from station owners, prospective purchasers of stations, agents, etc., there are carried young and old of both sexes ranging from infants of a few months to adults nearing the century. From a defence point of view the service is valuable, in that it affords an economical means of maintaining a regular patrol of a huge length of coastline that otherwise is unprotected.



An Outpost of Empire, North-West

Motor Vehicles.

In all parts of the State motor vehicles, whose types are legion, play an important part in the transport business. To the outback parts especially, where the country lends itself to the formation of good tracks, the speedy petrol cars and lorries have proved a boon in annihilating distance and making for expedition

in so many of the long cross-country journeys that formerly could only labouriously be accomplished by the use of big teams of horses, camels, donkeys, or bullocks.



Motoring in the Cave Country



Everlastings

Education

A complete Ladder without Fees—Special Facilities for Country Children—Scientific and Technical Training.



VERY modern State attempts to provide educational facilities for all its people. The problem varies immensely in different countries, one of the principal factors in the variation being the density of population. In England and Wales there are nearly 40,000,000 people in an area of 58,000 square miles. In Western Australia there are 365,000 people in an area of nearly a million square miles. Thus, outside the towns of Western Australia, there is a very scanty population scattered over a vast area, and this sparse settlement presents great difficulties to educational administration. The Government of the State takes the whole of the financial responsibility for the schools and provides a complete ladder of free education from the infants' school to the University. It erects buildings, furnishes and maintains them, and supplies the teachers, who are civil servants. Education, therefore, is in no way dependent upon local rates, and no settler, however remote he may be from town or village, need fear that his children will be left without education. The people, nevertheless, are encouraged to take an interest in their schools, to co-operate actively with the teachers, and to endeavour to promote the efficiency of the schools and the happiness of the scholars. The establishment of parents and citizens' associations, which elect officially recognised school boards, has proved useful in fostering a real community spirit.

Education is compulsory for all children between the ages of six and fourteen. In spite of long

distances that many country children have to travel to reach school, the average attendance is nearly 90 per cent. of the enrolment. The average enrolment for the 770 schools is 51,394 or 66 children per school. The largest school has an enrolment of 730; only 18 schools exceed 500; 48 have enrolments between 200 and 500, while 119 have enrolments between 50 and 200. There are 584 schools with fewer than

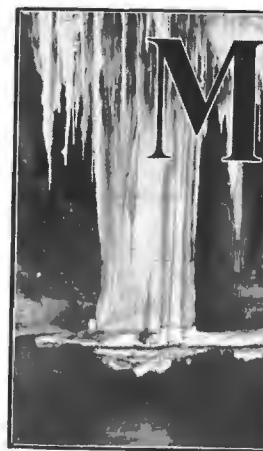


School in sparsely populated area



Tourists' Rest House, Karri Range, Porongorup

Tourist Resorts



ANY and varied are the scenic attractions of Western Australia, and that these features are not better known is due to the fact that until recent years the people and the Government were too fully engaged in industrial development to pay attention to the opening up of natural pleasure resorts. The days when people regarded the West as merely a place in which to make money and hurry to the Eastern States for their annual holidays, thus depriving the country of the advantage of their spending power, are past. Within the last four years there has been called into existence, to meet a popular demand, a well organised Tourist and Publicity Bureau, the function of which is to make more readily accessible the many pleasure resorts within the State for the benefit of residents, and to establish facilities for through tourists to view cheaply and conveniently the industries, resources, and natural beauties in

respect of which Western Australia claims pre-eminence.

Perth and its River.

The State has much to arrest the attention of the tourist, and he who passes through Fremantle without endeavouring to see those things that are to be seen does an injustice to the country and robs himself of a pleasure. For instance, there can be no excuse for the traveller missing the beauties of the Swan River and of Perth and its surroundings. Transit mail boat passengers may, during the stay of the vessel in port, spend a delightful hour on one of the prettiest rivers in the Commonwealth. The stream winds and twists through picturesque banks heavily wooded, now narrowing to a deep channel, and anon broadening into imposing lakes with abundant water and wind for fleets of yachts. Perth, small and youthful though it be, possesses charms for the sightseer. It is a well-built city, and many of its public edifices please the eye with their imposing and artistic design. The streets, the public services, and comfortable hotels, all speak of up-to-dateness and progress. The city has also many public gardens and reserves, including Zoological gardens and the magnificent domain known as King's Park.

There is no prettier landscape under the Southern Cross than this great natural park. Here



Dog's Head Rock, Albany

a thousand acres of almost virgin country have been reserved for the use of the people for all time, and for two miles the park, occupying nearly the whole of the highlands known as Mount Eliza, winds along the river banks, affording a glorious panorama of Perth and its suburbs, and overlooking the blue waters of the Swan and Canning rivers. Here is a continuous prospect of blue sky and blue water and vivid green foliage, with



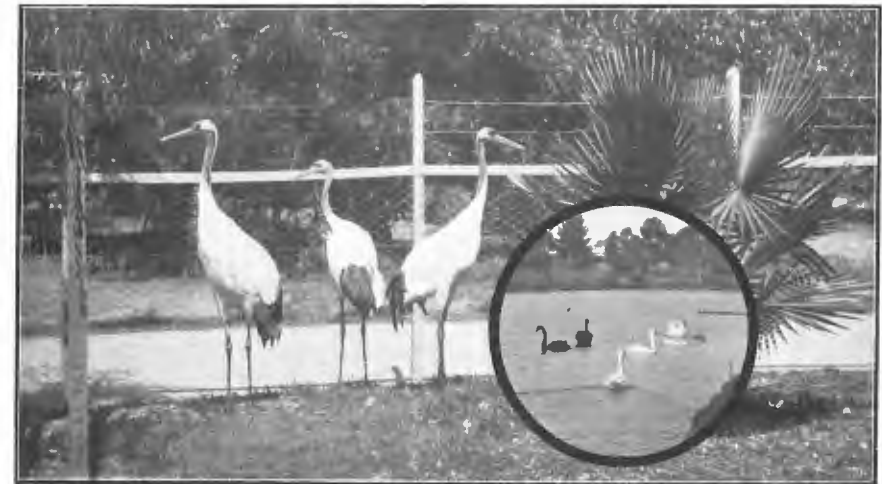
Australian Natives

the heights of the Darling Ranges outlined in the distance. It is customary, in going by road from Fremantle to Perth or *vice versa*, to pass through King's Park. The road, smooth as a cycling track, leads through a magnificent avenue of indigenous trees with here and there a monument and an artificial garden plot interspersed. When the red gums are in flower the main drive is through an avenue of flame, or if the wattles are blooming the progress is through arboreal clouds of gold, whilst yet again if the traveller should be calling in the spring he will see in the park the native flora of Western Australia in all its glory. Perhaps he may not see the delicate spider orchids—for the orchid is a shy and retiring flower—but he will behold the ground aglow with reds, purples, and yellows, and unique kangaroo paws, one of the most remarkable of the wildflowers, growing profusely under the protection of a law that knows of no excuse for laying spoliating hands on the floral riches of this great public garden. One may see here, in miniature, the Western Australian "bush" in perfect preservation, while the slopes of Mt. Eliza present triumphs of the landscape gardener's art. The tourist who passes through Fremantle without traversing this park misses a rare opportunity. Another excellent view of the city may be obtained from the roof garden of the new G.P.O. building.

Trips to surrounding points of interest may be made cheaply and conveniently through the organisation of the Tourist Bureau. By the payment of a fixed sum the traveller may have a few hours of sight-seeing mapped out

for him, and, if time permits, may make a motor excursion into the Darling Ranges and view Mundaring weir, a picturesque spot in itself, but possessing a greater interest for the thoughtful observer by reason of its being the fountain head of the great pumping scheme that supplies water to the Eastern goldfields. These round trips are especially arranged to meet the requirements of travellers by mail boats, who are thus enabled to get the maximum of enjoyment and information for a minimum expenditure of time and money. If, however, the visitor prefers independent rambles he will find plenty of literature available giving information regarding things and places of interest, and will be able to hire motor cars, or, if attracted by the broad reaches of the Swan river, motor, rowing, and sailing craft will be cheaply at his disposal.

The tourist who has more leisure at his command will never regret the spending of a month in the great British State of Western Australia, and it is by such callers that the services of the Tourist Bureau will be most appreciated. Tours have been planned and organised which embrace all the accessible places of interest in the south-western portion of the State right down to Cape Leeuwin. For a lump payment at the Tourist Bureau the visitor receives coupons which cover all necessary expenses, including train and coach fares, meals, and lodging. By this system one may quickly and economically see the wonders of the Golden Mile with its vast energies and marvellous machinery; the rapidly expanding agricultural and fruit-growing areas embracing mile upon



At the Zoo

mile of crops and orchards; the handsome forests of the South-West and the timber industry in being; the myriad brilliant wild flowers with which Nature paints the landscape in spring; and the several ports which afford outlet for the State's increasing production. To the students of Empire, to the Briton who is interested to see how his kinsmen are "clinch the rivets of an Empire down" in these southern seas, and how great provinces of silence and



1. Deepdene Cliffs and Valley
2. On the Banks of the Denmark River
3. Frankland River
4. Upper Kalgan River
5. On the road to Nornalup



unproductiveness are being conquered and converted to the uses of the Anglo-Saxon people, and to those who may care to see a land of opportunity for their kith and kin, a trip of this nature is invaluable because of the enjoyment it gives and the knowledge it instils.

Western Australia Caveland. has a wonderful caveland. Portion of the South-West, near the coast, is literally honeycombed with huge caves wherein the master craftsman, Nature, has been silently and invisibly at work through countless centuries, evolving the most beautiful and entrancing forms, transforming subterranean caverns into fairy palaces, manufacturing by imperceptible processes dazzling displays of strange jewellery, and setting the Earth's interior with stalagmites, stalactites, pillars, and shawls of wondrous symmetry and colour. Here a veritable fairyland has been unearthed, and exploration from year to year brings to knowledge further marvels of beauty and splendour and vast subterranean halls more remarkably brilliant than any palace of Oriental story. How old they are no one knows, but fossils of prehistoric monsters have been found therein, and apparently since the days when great amphibians crawled out of the sea and rested in these caves Nature has been at work with infinite patience and incomparable genius in moulding and storing these treasures, which have now been laid bare to the reverent gaze of man. This is not the place in which to describe their manifold beauties, but the tourist will find them well worth a visit, more especially as a trip to caveland introduces him to delightful landscapes and glorious drives through majestic forests. On this trip the coupon system will be found particularly useful.





CAVES OF THE SOUTH-WEST

1. *Mysteries, Yallingup Cave*
2. *Folded Shawl, Yallingup Cave*
3. *Arab's Tent, Yallingup Cave*
4. *Eagle's Wings, Mammoth Cave*
5. *Suspended Table, Lake Cave*



CAVES OF THE SOUTH-WEST

1. *On the road to the Caves*
2. *Cathedral Terrace, Mammoth Cave*
3. *Cave House, Yallingup*
4. *Shawls*
5. *Lovers' Walk, Yallingup*
6. *Bride's Cave*

For the
Resident.

There is no lack of pleasure resorts for the resident, and the time is past when people thought it necessary to go outside the State in order to spend a holiday enjoyably. Not only are the resorts already referred to cheaply accessible, but the holiday-maker has the choice of dozens of other places which an enterprising Tourist Bureau is opening up for the people. Those who have a mind for cool breezes may go to one of the many river resorts, to Fremantle, or Cottesloe Beach, or to Albany, Denmark, Nornalup, Bunbury, Busselton, or Mandurah. At the last-named group of places disciples of Izaak Walton will find all the sport their hearts desire. Again, there is Rottnest Island, twelve miles from Fremantle—a pleasure place which is destined to become the Isle of Wight of Western Australia. Formerly utilised as a penal station for aboriginal prisoners, it is now converted into a holiday retreat. Here, throughout the summer, the breezes blow cool from the wide expanse of the Indian Ocean; here are hills, dales, and lakes, rugged rocks and white sandy beaches, fishing,

boating, and swimming. It is a place where the conventions of fashion may be put aside, and a holiday-maker either settles down to be lazily comfortable or girds up his muscles to strenuous open-air recreation. Rottnest is admirably suited to serve the purpose of a popular watering place, and annually its beaches



*Views of
Rottnest Island*



are thronged with campers to whom the sea breezes waft comfort, energy, and health.

Nature has not dowered Western Australia with sky-piercing snow-clad mountains or far-flung provinces of water in its interior, but she has in other ways given it a complete equipment to serve its people with recreation and pleasure.



Freshwater Bay—a suburban view of the Swan River



Aborigines of North-Western Australia

The Aborigines

A Decadent Race—State Protection—Food and Clothing Supplies—Cure and Prevention of Disease—Native Cattle Stations—Settlements and Feeding Depots—Protective Legislation.



THE PROBLEM of assisting the native race is beset with difficulties, because of the low place of the Australian aborigine in the anthropological scale. The natives as a race have never been able to absorb civilisation to their own advantage; on the contrary they have shown an alarming aptitude in adopting the vices of the white man and applying even the virtues of civilisation to their own detriment. Therefore, despite all that has been done by the Government to preserve the native race, they are fast dwindling away. Nevertheless, the fact that the complete salvation of the aborigine seems impossible has not deterred the Government from doing everything in its power to protect the black brother against himself and against the evil influences of civilisation. In Western Australia, as elsewhere in the Commonwealth, the native seems to have withered before civilisation as before a plague.

He has almost entirely disappeared from the south-western portion of the State, although in the early settlement days the tribes were numerous enough to harass the pioneers and deplete their ranks by many a murder and massacre. With the advance of civilisation through the interior, following up and widening the path of the pioneer, the aborigines either have been turned from their natural habitations to find means of existence further out in the wilderness, or have mingled with civilisation and readily acquired vices that have brought about their ruin and in some districts extinction. The State has had recourse to drastic steps to protect the natives, and though the task has been attended with many difficulties, a great measure of success has followed. Indeed it is doubtful whether very much more could be done to improve the conditions of these people morally and physically, and to make their lot contented.

What the Native Costs. It is estimated that there are 14,200 natives in the State who are in touch with the white population, most of them being in the North and the North-West, and some 10,000 amongst the wild tribes of East Kimberley and other places remote from civilisation. Up to 1897 the aborigines were controlled by a board, but by an enactment in that year the control was transferred to a sub-department of the State under a responsible Minister of the Crown, and provision was made in the Aborigines Act of 1905 for the annual appropriation of £10,000



Age two years—weight 58 lbs.

for the use of that sub-department in distributing blankets and other relief, to provide for the custody of children, medical assistance and comforts for the sick, aged, and infirm, to manage native reserves, and to exercise a general



Aborigines in War Paint

supervision. The money, however, was found to be inadequate, and soon afterwards the vote was doubled. Even then it proved to be insufficient to meet all the needs. So much had to be done that for the 12 months ended June 30th, 1924, the total expenditure, including maintenance of native stations, settlements, depots, the subsidising of missions, and the relief of aged and infirm natives, amounted to £25,855. For the more efficient administration of the Act the department has been divided into two sections, the Chief Protector of



Goats at Drysdale Mission Station

Aborigines administering that portion of the State north of the 26th parallel south latitude, while the balance of the State is under the control of the Deputy Chief Protector of Aborigines. Connected with the department is an Inspector of Aborigines, who moves continuously amongst the natives in the northern portion of the State to ascertain their conditions and provide for their necessities. In addition there are 92 honorary protectors scattered over the

State. Through these officers, assisted by the police, much is done to protect the natives against want, vice, and the lust of Asiatic aliens and occasionally of depraved white men.

While in the less enlightened days natives were utilised by some of the settlers with far too much license, nowadays a native can be employed only under permit, or permit and agreement issued by a protector. To guard against unscrupulous persons employing natives, it is essential before a permit

is issued for a police officer to certify to the good character of the employer and recommend the issue of the permit. A permit is also liable to cancellation should the conditions under which it is granted be infringed, or should it be found that the native employees are not being properly cared for and treated. Due mainly to the advance of settlement which has resulted in native game becoming scarce, the Government provides sustenance for natives at various



In a Northern Garden

centres throughout the State. In past years the custom was to make a capitation grant to various persons for rationing natives requiring food, but as that system was open to abuse, rationing stations were established under the direct supervision of the department or of police officers. During the 12 months ended June 30th, 1924, there were 52 stations whereat 956 natives were provided with food, blankets, clothing, and medicines. In many instances settlers at their own expense feed natives, thereby recognising their obligations to those who, by their labours, have assisted to develop the country

**Native
Cattle
Station.**

Some years ago cattle-killing by natives to satisfy their natural taste for meat was very prevalent, and the cost to the State to apprehend the offenders and to maintain them while under sentence amounted to thousands of pounds annually. To minimise these depredations the Government established a cattle station in East Kimberley, now known as Moola Bulla Native Station, the object of which was to breed cattle from which to supply the natives with meat. The scheme has proved a great success and the natives, knowing that they can now obtain meat whenever they require it have, to a great extent, relinquished the former habit of indiscriminately slaughtering cattle. The area of the station is 1,069,000 acres. Apart from supplying the natives with meat and other provisions, horse, cattle, and mule breeding is carried on there. The value of livestock on the station at June 30th, 1924, was £35,465.



Sewing Room, Moore River Native Settlement

**Native
Settlements.**

To save the remnants of this fast disappearing race in the South-Western portion of the State the Government in recent years has established settlements whither the natives were induced to move in order to be properly cared for. At these settlements the old people are provided with sustenance in their declining years, while the younger ones are educated and taught various callings, the males agricultural pursuits, and the females domestic work and sewing. The girls make efficient domestics, and their services are keenly sought. Many of the girls are first-class machinists, and practically the whole of the clothing required for natives throughout the State, as well as for Government institutions, is manufactured at the Moore River Native Settlement.

**Venereal
Disease.**

Another important step taken by the Government was the establishment of hospitals for the segregation and care of natives suffering from venereal disease. Disease was part of the price the black race paid for its contact with the white conqueror, and the untutored savage, incapable of doctoring himself or

applying medicines supplied to him, simply allowed the malady to take its course. Pursuing unaltered his daily life, he passed his misfortune on to his fellows. All attempts at elimination of the disease amongst natives in their wild state having failed, segregation was proposed as the only effective measure.



A Morning Dip

Accordingly two large islands to the west of Carnarvon were converted into lock hospitals, one, Bernier Island, being reserved for the men, and the other, Dorre Island, for the women. The necessary hospital buildings were erected and a medical officer and nurse appointed. Owing to the excessively heavy cost of administration, it was found necessary to secure a more suitable location for these unfortunate people, and in 1916 it was decided to re-erect the hospital buildings at Port Hedland, whither all the patients were removed. With the latest methods of treatment, the percentage of cures is very satisfactory.

Legislation. In 1911 Parliament passed an amending Aborigines Act to correct certain deficiencies in the otherwise excellent statute of 1905. One of the chief provisions was that the Chief Protector's guardianship should supersede the right of the mother of an illegitimate half-caste child. Such children can now be legally taken from the bush camps and placed in an institution. The 1905 Act restricted native reserves to 2,000 acres; the new law provided for areas without limit. Thus it has been possible to declare as native reserves Moola Bulla Native Station, as well as various feeding depots and settlements. Parliament recognised that natives often committed crime after indulgence in alcoholic liquors, and the law now is that any person convicted of supplying liquor or opium to any aborigine is liable to a maximum penalty of £100, or in default six months' imprisonment. The minimum penalty is £20, or one month's imprisonment, or both fine and imprisonment may be ordered by the court. In addition, it is made an offence for the native to take liquor. No court can take the plea of an aborigine by himself; the native must be represented in court by a protector, and the protector must plead for him, unless the court takes the plea of the native with the consent of the protector. A protector has power to appoint counsel for the native's defence, and that is often done. In order to make better provision against immorality



Tribal Markings

along the coast, particularly where coloured men of other nations are employed in pearling operations, power has been given to declare any portion of the coast a prohibited area, and preclude the coloured crews of pearling boats from landing there.

Private religious effort has never been wanting to improve the lot of the blacks, and noble work has been done. Many natives have proved amenable to the influence of the organisations under whose control they were placed, and have become well-trained tradesmen and completely civilised beings. There are six missions subsidised by the State, and they care for some hundreds of adult and young natives. They also give native full-blood and half-caste children education and training in various crafts, while a number of half-castes receive tuition at ordinary country schools.



"Chara"—a sunspot

Wildflowers of Western Australia



1. *Coladenia longicauda* (Spider Orchid).
2. *Angoranthus mangleri* (Red and Green Kangaroo Paw).
3. *Hovea trispeta* (Hovea).
4. *Coladenia potersonii* (White Spider Orchid).
5. *Leschenaultia blanda* (Blue Leschenaultia).
6. *Isotria medeoloides* (Isotria).
7. *Coladenia flava* (Cowslip Orchid).
8. *Dialia longifolia* (Star Head Orchid).
9. *Verticordia grandis* (Crimson Verticordia).
10. *Burchardia umbellata*.

11. *Clivia* (Sturt's Desert Pea).
12. *Angoranthus flammula* (Orange Kangaroo Paw).
13. *Coladenia discolor* (Small Spider Orchid).
14. *Chamaecrista* (Wax Flower).
15. *Trichomanes* (Goldfield Clover).
16. *Hibiscus* (Swamp River Hibiscus).
17. *Hibiscus* (Coccyz).
18. *Kennedy* (Black and Gold Kennedy).
19. *Thlaspi* (Trained Lily).
20. *Cephalanthus* (Fletcher Plant or Fly Trap).
21. *Boronia megastigma* (Sweet Scented Boronia).