

## DEFENCE.

THE colonists of Australasia have always manifested an objection to the maintenance of a large standing army, and shown a disposition to rely mainly upon the patriotism and valour of the citizens for their own defence; but each state possesses a more or less complete system of fortifications, armed with expensive ordnance which requires a more regular and constant attendance than could well be bestowed by those who devote only a portion of their time to military affairs; hence it has been found advisable to institute in each state small permanent military forces, consisting for the most part of artillery and submarine miners, whose chief duty it is to man the fortifications and keep the valuable armaments therein in a state of efficiency, so as to be ready for any emergency. At the same time, it is expected that they will prove the nucleus for an effective defence force if ever hostilities should unfortunately occur. Under the terms of the Commonwealth Constitution Act, the control of the naval and military defence forces of the states was assumed by the Federal Government in March, 1901.

The greater portion of the Australian forces consists of volunteers enrolled under a system of partial payment, which affords a defence force without the disadvantages and expense of a standing army. The men receive payment according to the number of parades and night drills they attend, as compensation for wages lost while absent from their employment for the purpose of receiving military instruction. The remuneration varies in the different states, the New South Wales scale being about £7 8s. per annum for the ordinary land forces, and £8 10s. for the naval forces. There has been a marked tendency in most of the provinces to discourage the services of those who are purely volunteers, as the system was found to work unsatisfactorily, especially in the country districts. In New Zealand alone is the volunteer system the mainstay of defence.

The following table shows the strength of the military forces maintained by each state as at 30th June, 1902. The total number of men of military ages (from 20 to 40 years) in Australasia was ascertained at

the Census of 1901 to be 775,000, and compared with this figure the forces of the states appear extremely small.

State.	Paid.	Militia or Partially Paid.	Volunteers.	Total Forces.
New South Wales.....	757	5,525	3,456	9,738
Victoria .....	396	3,404	3,135	6,935
Queensland .....	322	4,180	903	5,405
South Australia.....	52	3,047	.....	3,099
Western Australia .....	56	2,137	.....	2,193
Tasmania .....	53	362	2,593	3,008
Commonwealth .....	1,636	18,655	10,087	30,378
New Zealand .....	393	.....	19,288	19,681
Australasia .. .....	2,029	18,655	29,375	50,059

The relative strength of the various arms in the Commonwealth States may be summarised as follows :—

Staff, and all arms not enumerated .....	1,175
Artillery .....	4,163
Engineers .....	402
Submarine Miners.....	338
Machine Gun Corps .....	54
Cavalry .....	1,401
Mounted Rifles and Mounted Infantry .....	4,372
Infantry .....	18,473

making a total strength, as shown above, of 30,378 men.

In addition to the above there are small bodies of reserves in New South Wales and Victoria, and rifle clubs are enrolled in all the states except Tasmania. These men are all trained to the use of the rifle, and have a slight knowledge of drill, and would be available in time of war to complete the establishment of the regular forces. Under the provisions of the Defence Acts in Queensland and South Australia the police received a certain amount of military training, and in case of emergency could be called upon to perform military service. The

following table shows the strength of reservists, members of rifle clubs, and school cadets in the various states, on the 30th June, 1902:—

State.	Reservists.	Members of Rifle Clubs.	Cadets.
New South Wales.....	2,260	4,612	64
Victoria .....	158	22,112	5,613
Queensland .....	.....	4,110	1,033
South Australia .....	.....	3,340	.....
Western Australia .....	.....	1,500	200
Tasmania.....	.....	.....	199
Commonwealth .....	2,418	35,674	7,109
New Zealand .....	140	1,801	1,956
Australasia .....	2,558	37,475	9,065

In addition to the military forces enumerated, all the states, with the exception of Tasmania and Western Australia, have small corps of Naval Volunteer Artillery, or partially-paid forces of a similar character, capable of being employed either as light artillery land forces or on board the local war vessels. The strength of the marine forces of the states, on the 30th June, 1902, was as follows:—

State.	Paid.	Partially Paid.	Total.
New South Wales .....	6	657	663
Victoria .....	158	152	310
Queensland .....	56	729	785
South Australia.....	21	154	175
Commonwealth .....	241	1,692	1,933

For many years the question was discussed of organising reserve forces in the states for the Imperial navy, and early in 1899 the Admiralty forwarded a despatch to the various states outlining a scheme to give effect to the proposal. In July, 1899, a conference of naval officers, representing New South Wales, Victoria, Queensland, and South Australia, was held at Melbourne, when it was decided that it would be impossible to raise a reserve force in Australasia on the conditions prescribed by the Admiralty, and it was deemed expedient to defer further consideration of the question till the establishment of a central authority under Federation.

On their present footing the combined forces of the Commonwealth states are over 32,000 strong, as will be seen above, and of these over 20,000 could be mobilised in a very short time in any one of the states of Queensland, New South Wales, Victoria, or South Australia. Most

of the states have also cadet companies, consisting of youths attending school, who are taught the use of arms so as to fit them, on reaching manhood, for taking a patriotic share in the defence of their country.

The outbreak of hostilities with the Boers in October, 1899, served to demonstrate the strength of the loyalty of these states to the mother country. From all parts of Australasia members of the various defence forces, as well as civilians, volunteered for service with the Imperial troops in South Africa. The total number of men despatched in the various contingents was 22,928. The table below shows the number of men and horses sent from each state:—

State.	Officers.	Non-commissioned Officers and Men.	Horses.
New South Wales .....	327	6,000	5,877
Victoria .....	183	3,393	3,878
Queensland .....	143	2,756	3,085
South Australia .....	78	1,450	1,524
Western Australia .....	63	1,160	1,044
Tasmania .....	35	827	725
Commonwealth .....	829	15,586	16,133
New Zealand .....	342	6,171	6,662
Australasia .....	1,171	21,757	22,795

In addition to the above, several special service officers were, at the request of the colonial Governments, attached to the British troops for the purpose of gaining experience, and 14 nurses were despatched from New South Wales.

The states again offered to assist Great Britain on the outbreak of hostilities in China. The Imperial Authorities accepted the offer, and contingents of naval volunteers were despatched from New South Wales and Victoria numbering 260 and 200 men respectively, while South Australia equipped and sent the gunboat Protector.

#### NAVAL DEFENCE.

The boundaries of the Australian Naval Station have been defined as follow:—From 95° E. long. by the parallel of 10° S. lat. to 130° E. long.; thence north to 2° N. lat., and along that parallel to 136° E. long.; thence north to 12° N. lat., and along that parallel to 160° W. long.; thence south to the Equator, and east to 149° 30' W. long.; bounded on the south by the Antarctic Circle; and including the numerous groups of islands situated within the limits specified.

The defence of the Australasian coast is entrusted to the British ships on the Australian Station and the Australasian Auxiliary Squadron. Sydney, the head-quarters of the fleet, ranks as a first-class naval

station, and extensive repairing yards and store-houses have been provided for the accommodation of the ships of war. The vessels of the Imperial fleet are detailed below. The Penguin and Dart are engaged in surveying service.

Name.	Class.	Displacement.	Indicated horse-power.	Draught of water extreme.	Length.	Beam.	Armament.	Speed.	Coal endurance.	
							Guns.		Coal that can be carried in bunkers.	Distance that can be steamed at 10 knots' speed.
Royal Arthur (flagship)	Twin-screw cruiser, 1st class, protected.	7,700	10,000	24 10	360 0 60	8	One 9·2-in. B.L., 12 6-in. B.L.Q.F., 12 6-Pr., 5 3-Pr., 7 Nordenfeldt.	19·75	1,250	10,000
Phœbe ..	Twin-screw cruiser, 3rd class.	2,575	7,500	15 6	265 0 41	0	Eight 4·7 Q.F., 8 3-in. Pr. Q.F., 4 M., 1 L.	19·2	300	4,800
Archer ..	Twin-screw cruiser, 3rd class.	1,770	3,500	15 7	225 0 36	0	Six 6-in. 5-ton B.L.V.C.P. 8 3-Pr., 2 Nordenfeldt.	16·5	325	7,000
Pylades ..	Screw cruiser 3rd class.	1,420	1,510	16 11	200 0 38	0	Eleven 5-in. 38-cwt. B.L. R., 8 M., 1 L.	12·6	425	6,600
Sparrow	Screw gun-boat, 1st class.	805	1,200	13 3	165 0 30	0	Six 4-in. 26-cwt. B.L.R., 2 Q.F. Hotchkiss, 2 M.	13·7	105	..
Torch ..	Screw sloop..	960	1,100	14 6	180 0 32	6	Six 4-in. Q.F., 2 3-Pr. Q.F. Hotchkiss, 2 0·45-in. Maxim.	13·25	180	2,000
Penguin.	Screw sloop..	1,130	700	14 0	180 0 38	0	Two 64-pr. M., 1 L., 2 M.	10·0	200	..
Dart ....	Screw yacht..	470	250	12 11	133 0 25	2	L., 2 M.....	7·5	64	..

Q.F., Quick-firing guns; M., Machine guns; L., Light guns under 15 cwt.; B.L.R., Breech-loading rifled guns; V.C.P., Vavasseur Centre Pivot.

The Royal Arthur has no armour, but carries a protective deck of steel, varying in thickness from 1 to 5 inches. Her 6-inch guns are also enclosed in casemates of steel 6 inches thick.

Six cadetships and two engineer studentships in the Imperial Navy are given annually to Australian boys, who must not be less than 14½ nor more than 15½ years of age to qualify for the former, and not less than 14½ nor more than 16½ years of age for the latter appointments. The cadets undergo a course of instruction for about two years on board the "Britannia" training ship, and at the expiration of their apprenticeship are appointed to the various warships. In addition the Board of Admiralty may admit one candidate annually to the Medical Branch of the Royal Navy, who has been proposed by the University of Sydney, and passed an examination as to physical and professional fitness before a Board of Naval Medical Officers on the Australian Station.

An undertaking has been entered into by the Commonwealth and New Zealand for the payment of a *pro rata* subsidy towards the maintenance of an auxiliary fleet. The total subvention to be paid amounts to £126,000 per annum, made up of £91,000 for maintenance, and £35,000 as interest

charge on the cost of construction, at the rate of 5 per cent. per annum, the contribution of each State being determined on the basis of population. The distribution of the subsidy is as follows:—

New South Wales .....	£ 37,973
Victoria .....	32,749
Queensland .....	13,585
South Australia .....	10,439
Western Australia .....	4,816
Tasmania .....	5,134
New Zealand .....	21,304

Australasia..... £126,000

The fleet consists of five fast cruisers and two torpedo gunboats of the Archer (improved type) and Rattlesnake classes of the British Navy. Three cruisers and one gunboat are continuously kept in commission, and the remainder are held in reserve in Australasian ports, ready for commission whenever circumstances may require their use. At the present time the vessels in reserve are the Katoomba, Mildura, Tauranga, and Karrakatta, the Katoomba being used as guard-ship. The agreement is for a period of ten years, and is then or at the end of any subsequent year terminable, provided two years' notice has been given. The vessels have been built by the British Government; and the Australasian Governments have no voice whatever in their management, nor any control over their movements. On the termination of the agreement the vessels will remain the property of the Imperial Government. The strength of the British fleet in Australian waters before the agreement was entered into is maintained independently of the presence of the Australasian vessels. The squadron is commanded by the Admiral on the Australian Station, whose headquarters are in Sydney, where a residence is provided for him by the State of New South Wales. The squadron, which arrived in Port Jackson on the 5th September, 1891, consists of the following vessels:—

Name.	Displacement.	Indicated horse-power.	Draught of water extreme.	Length.	Beam.	Armament.		Speed.	Coal endurance.		
						Guns.	Torpedo tubes.		Coal that can be carried in bunkers.	Distance that can be steamed at 10 knots speed.	
	tons.		ft. in.	ft. in.	ft. in.			knots.	tons.	knots.	
*Katoomba ..	2,575	7,500	17 6	265 0	41 0	Eight 4·7 Q. F. guns, eight 3-pr. Q. F. guns, one 7-pr. M. L. R. gun (boat and field), four 4·45-in. 5-barrel Nordenfeldt.	4	19·2	300	6,000	
Mingarooma ..	2,575	7,500	17 6	265 0	41 0			4	19·2	300	6,000
Mildura .....	2,575	7,500	16 6	265 0	41 0			4	19·2	300	6,000
Wallaroo .....	2,575	7,500	17 3	265 0	41 0			4	19·2	300	6,000
Tauranga .....	2,575	7,500	17 6	265 0	41 0			4	16·5	300	6,000
Boomerang ..	735	3,500	10 8	230 0	27 0	Two 4·7 in. Q. F. guns, four 3-pr. Q. F. guns.	3	19·0	160	2,500	
Karrakatta ..	735	3,500	10 9	230 0	27 0			3	19·0	160	2,500

\* Guard ship of reserve. Q. F.—Quick-firing guns. M. L. R.—Muzzle-loading rifled guns.

The Boomerang and Karrakatta are classed as torpedo gun-boats; all the other vessels are third-class screw cruisers. The hull of each vessel is of steel. The deck armour over machinery space is 2-in. and 1-in., and the conning-towers are protected by 3-inch armour, except in the case of the torpedo gun-boats, the towers of which have 1-in. armour. Each of the cruisers carries four, and each of the torpedo gun-boats three torpedo tubes. In the event of any of the squadron being lost, the vessel is to be replaced by the British Government.

Under the terms of the proposed new agreement with the Admiralty, the Federal Government will be asked to provide for an annual subsidy of £200,000 per annum, instead of £106,000, or £2,000,000 for the period of ten years. In consideration of this concession the Admiralty will add about 8,000 tons to the displacement of the fleet and engage to keep it up-to-date, while the Australian Naval Station will be raised in status by the appointment of a Vice-Admiral, instead of a Rear-Admiral, to the Command.

The only war vessels which the State of New South Wales possesses are two small torpedo boats, the Acheron and the Avernus, which were manned by the Naval Artillery Volunteers; but the vessels are now out of Commission.

Victoria has the following vessels available for harbour defence:—

Name.	Class.	Displacement.	Armament.
Cerberus .....	Armoured turret ship (twin screw).	tons. 3,480	Four 10-in. 18-ton M.L.R., six 6-pdr. Q.F., four 1-in. Nordenfeldts, 4 barrels.
Countess of Hoptoun.	First-class steel torpedo boat.	120	Three 14-in. Mark IX R.G.F. torpedoes, and two 2-barrel Nordenfeldt 1-in. M. guns.
Childers .....	do do ..	63	Two 14-in. Fiume torpedoes, and two 1-pdr. Hotchkiss Q.F. guns.
Nepean .....	Second-class steel torpedo boat.	12	Two 14-in. Mark IV Fiume torpedoes.
Lonsdale .....	do do ..	12	do do do
Gordon .....	Wooden torpedo boat ..	12	Two 14-in. Mark IV Fiume torpedoes, three 2-barrel 1-in. Nordenfeldt guns.

In addition to the vessels mentioned, Victoria formerly had in commission two steel gunboats, the Victoria and the Albert, the wooden frigate Nelson, and the armed steamer Gannet. In consequence of the promulgation of an opinion by the Colonial Defence Committee that where there are complete fixed defences floating defences do not add to the strength of a place, but in most cases even tend to weaken it, by interfering with and limiting the arcs of fire of the battery guns, it was decided to dispose of the vessels named, and to give up the use of the Melbourne Harbour Trust's hopper barges, the Batman and the Fawknar. In 1896 the Government of Western Australia purchased the gunboat Victoria, with the intention of employing it in surveying service; and the frigate Nelson was sold in 1898 to be broken up.

Queensland has two gunboats, one of which, the Paluma, was formerly employed on survey service on the coast of Queensland at the joint expense of the Queensland and British authorities. Afterwards, the Paluma was lent to the Imperial Government; and, since handed back to Queensland in April, 1895, has been placed in reserve. The other gunboat, the Gayundah, was paid off and placed in reserve on the 30th September, 1892, and recommissioned on the 1st December, 1898. Particulars of the vessels available for the defence of Queensland ports are given below:—

Name.	Class.	Displacement.	Armament.
Gayundah.....	Steel gunboat (twin screw)	Tons. 360	One 8-in. B.L., one 6-in. B.L. Armstrong, two 3-pdr. 1½-in. Nordenfeldt, one 1-in. four-barrelled Nordenfeldt, one Maxim.
Paluma .....	do ..	360	One 6-in. B.L.; two 5-in. B.L.; two 1½-in. Q.F. Nordenfeldts; one 1-in. four-barrelled Nordenfeldt; one 0·45-in. five-barrelled Nordenfeldt.
Midge.....	Steam pinnace .....	....	Three machine guns.
Mosquito .....	Second-class steel torpedo boat.	....	One machine gun.

South Australia maintains one twin-screw steel cruiser, the Protector, of 920 tons. The armament of the Protector consists of one 8-in. 12-ton B.L., five 6-in. 4-ton B.L., and four 3-pdr. Q.F. The state also possesses two 6-in. 5-ton B.L. guns, intended for use in an auxiliary gun-vessel, and five Gatling machine guns for boat or land service. Tasmania owns one torpedo boat with dropping gear for Whitehead torpedoes. New Zealand possesses three Thorneycroft torpedo boats and two steam launches fitted for torpedo work.

#### COST OF DEFENCE.

The following table shows the expenditure by the Commonwealth Government on naval and military defence for the year ended 30th June, 1902:—

State.	Amount.	Per head.
	£	s. d.
New South Wales .....	309,137	4 6
Victoria .....	317,102	5 3
Queensland .....	186,062	7 3
South Australia .....	58,694	3 3
Western Australia .....	35,303	3 7
Tasmania .....	29,118	3 4
Commonwealth .....	£935,416	5 6

In all the states, with the exception of Western Australia, a certain amount of money has been spent out of loans for purposes of defence. Victoria, however, from 1872 to 1899 did not expend loan moneys on this service. The amounts thus spent during 1900-01 were as follow :—

	£
New South Wales.....	65,218
Victoria .....	4,080
Queensland .....	49,462
South Australia.....	16,255
Tasmania .....	1,827
Commonwealth .....	136,842
New Zealand .....	41,610
Australasia .....	£178,452

The total loan expenditure by each state for defence purposes to the end of the financial year 1900-1 was as follows :—

State.	Amount.	Per head.
	£	s. d.
New South Wales .....	*1,419,106	20 8
Victoria .....	137,435	2 4
Queensland .....	328,093	13 0
South Australia .....	260,328	14 4
Tasmania .....	126,378	14 7
Commonwealth .....	2,271,340	11 11
New Zealand .....	1,050,461	26 11
Australasia .....	£3,321,801	14 6

\* Inclusive of £312,485 for naval station, Port Jackson.

There were probably small additional amounts spent from loans by each state during the financial year 1901-2, but the details are not at present available.

This does not represent the whole cost of the fortifications, as large sums have from time to time been expended from the general revenues of the states in the construction of works of defence; the amount of such payments, however, it is now impossible to determine.

In 1890 a military commission was appointed by the Imperial and the different Australian Governments to take evidence and report on the question of fortifying King George's Sound, Hobart, Thursday Island, and Port Darwin, at the joint expense of the states. The commission visited the points mentioned during 1891, and as a result of the evidence taken fortifications were erected at King George's Sound and Thursday Island; and it is probable that similar works will be begun at Hobart and Port Darwin in the near future. On 11th March, 1892, the four states New South Wales, Victoria, Queensland, and South Australia entered into a contract with Western Australia, to contribute to the cost of the defence of Albany. The agreement provided for one-fourth of the total expense to be defrayed by Western Australia, and three-fourths by the other states, the proportion to be paid by each to be calculated on the basis of its population. Western Australia was to provide the garrison and exercise general superintendence. A similar agreement was made on the 1st January, 1893, between the same five states for the defence of Thursday Island. In this instance each state contributed towards the total expense of maintaining the garrison in proportion to its population. The general management of all defence works is now in the hands of the Federal Government.