

## DEFENCE.

IN all the colonies a small permanent military force, consisting for the most part of artillery and submarine miners, is maintained. The colonists of Australasia have always manifested an objection to the maintenance of a standing army, and shown a disposition to rely mainly upon the patriotism and valour of the citizens for their own defence; but each colony 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 the small permanent forces alluded to, 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. The greater portion of the Australian forces, however, consists of volunteers enrolled under a system of partial payment, which affords an effective 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 colonies, the New South Wales scale being 8s. for each whole-day parade, 4s. for a half-day parade, and 2s. for a night drill. 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 colony. The figures refer to the year 1897, with the

exception of those for the colony of South Australia, which refer to the end of 1896 :—

Colony.	Paid.	Partially Paid.	Unpaid.	Total Forces.
New South Wales.....	591	4,280	4,066	8,937
Victoria .....	373	2,895	1,700	4,968
Queensland .....	189	1,905	1,742	3,836
South Australia.....	34	743	294	1,071
Western Australia .....	35	730	.....	765
Tasmania .....	12	431	1,124	1,567
New Zealand .....	250	.....	4,117	4,367
Australasia .....	1,484	10,984	13,043	25,511

The figures relating to Victoria, Queensland, and South Australia include the members of the civilian rifle clubs, numbering about 2,700 men. These men are all trained to the use of the rifle and are not unaccustomed to drill, and in time of need will be available to fill the ranks of the regular forces. The members of the rifle clubs of New South Wales, numbering 1,751 men in 1897, have been enrolled as a volunteer reserve force since 1895.

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

Staff, and all arms not enumerated .....	918
Artillery .....	4,193
Engineers .....	689
Cavalry .....	1,060
Mounted Rifles .....	2,816
Infantry .....	15,835

making a total strength, as shown above, of 25,511 men.

In addition to the military forces enumerated, all the colonies, 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 colonies is as follows :—

New South Wales.....	579
Victoria .....	310
Queensland.....	337
South Australia.....	168
Tasmania .....	39
New Zealand .....	1,004
Australasia.....	2,437

Thus, on their present footing the combined forces of all the Australasian colonies are 27,948 strong, and of these over 20,000 could be mobilised in any one of the colonies of Queensland, New South Wales, Victoria, or South Australia. Most of the colonies 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. In some of the provinces the members of the police forces are, to some extent, also available for defence purposes. Neither the cadets nor the police are included in the figures given.

## 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 12° N. lat., and along that parallel to 160° 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, as was also the Waterwitch prior to its temporary despatch to the China station :—

Name.	Class.	Displacement. tons.	Indicated horse-power.	Draught of water extreme.		Length. ft. in.	Beam. ft. in.	Armament.  Guns.	Speed. knots.	Coal endurance.	
				ft. in.	ft. in.					tons. Coal that can be carried in bankers.	knots. Distance that can be steamed at 10 knots' speed.
Royal Arthur	Twin-screw cruiser, 1st class, pro- tected.	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	
Porpoise	Twin-screw cruiser, 3rd class.	1,770	3,500	15 4	225 0	36 0	Six 6-in. 5-ton B.L.V.C.P. 8 3-Pr., 2 Nordenfeldt.	16·5	325	7,000	
Mohawk	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	
Royalist..	Screw cruiser, 3rd class.	1,420	1,510	16 11	200 0	38 0	Two 6-in. 4-ton B.L.R., 10 5-in. 33-cwt. B.L.R., 4 M., 1 L.	13·1	425	6,600	
Ringdove	Screw gun- boat, 1st class.	805	1,200	13 2	165 0	31 0	Six 4-in. 25-cwt. B.L., 2 3-Pr., and 2 Norden- feldt.	12·0	128	2,500	
Goldfinch	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.	13·0	105	..	
Torch ..	Screw sloop..	960	1,100	14 0	180 0	32 6	Six 4-in. Q.F., 4 3-Pr. Q.F. Hotchkiss, 2 0·45- in. Maxim.	13·25	130	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	2 L., 2 M.....	8·8	64	..	
Water- witch.	Screw yacht..	479	250	12 6	140 0	26 0	2 L., 2 M.....	9·0	70	..	

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-inch thick.

As opportunity offers, the Admiral of the Fleet is empowered to grant commissions, for periods not exceeding six months, to officers of the naval forces of the colonies, in order that they may gain some experience of the conditions under which modern naval warfare is practised. Six cadetships and three 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 14 nor more than 17 years of age for the latter appointments.

An undertaking has been entered into by all the colonies 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, the contribution of each colony being determined on the basis of population. The distribution of the subsidy in 1897, according to population, was as follows:—

	£
New South Wales .....	37,820
Victoria .....	34,244
Queensland .....	13,762
South Australia .....	10,499
Western Australia .....	4,020
Tasmania .....	4,841
New Zealand.....	20,814
<b>Australasia.....</b>	<b>£126,000</b>

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 Boomerang, 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; but the Australasian colonies pay the interest on their prime cost to the amount of £35,000, as well as the actual cost of maintenance, which is not to exceed £91,000, making the total sum of £126,000 which is distributed above. 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 head-quarters are in Sydney, where a residence is provided for

him by the colony 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 4 4 4	{ 16·5 16·5 16·5 16·5	{ 300 300 300 300	{ 6,000 6,000 6,000 6,000
Ringarooma . . . . .	2,575	7,500	17 6	265 0	41 0					
Mildura . . . . .	2,575	7,500	16 6	265 0	41 0					
Wallaroo . . . . .	2,575	7,500	17 3	265 0	41 0					
Tauranga . . . . .	2,575	7,500	17 6	265 0	41 0					
Boomerang . . . . .	735	3,500	10 8	230 0	27 0	{ Two 4·7 in. Q.F. guns, four 3-pr. Q.F. guns.	{ 3 3	{ *18·75 *18·75	{ 160 160	{ 2,500 2,500
Karrakatta . . . . .	735	3,500	10 9	230 0	27 0					

\* This speed can be increased until, under favourable conditions, for a short period, a maximum of 21 knots can be obtained. 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.

The only war vessels which the colony of New South Wales possesses are two small torpedo boats, the Acheron and the Avernus, which are manned by the Naval Artillery Volunteers.

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. 13-ton M.L.R., two 14-pdr. Q.F., six 6-pdr. Q.F., four 1-in. Nordenfeldts, 4 barrels.
Countess of Hope-toun.	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.
Commissioner . . . . .	Wooden steam launch. . . . .	40	Spar torpedoes, and dropping gear for two 14-in. R L. torpedoes.
Customs No. 1 . . . . .	do do ..	30	do do do

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 Fawkner. 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. Particulars of the vessels available for the defence of Queensland ports are given below:—

Name.	Class.	Displacement.	Armament.
		Tons.	
Gayundah.....	Steel gunboat (twin screw)	300	One 8-in. B.L., one 6-in. B.L. Armstrong, two 3-pdr. 13-in. Nordenfeldts, two 1-in. four-barrelled Nordenfeldts, one 0.45-in. five-barrelled Nordenfeldt.
Paluma .....	do ..	360	One 8-in. B.L. Armstrong, one 6-in. B.L. Armstrong, one 3-pdr. Q.F., 4 M.
Otter .....	Tender (twin screw).....	200	One 64-pounder, M.L.R.
Stingaree .....	do .....	450	One gun.
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, and an auxiliary gun vessel. The armament of the Protector consists of one 8-in. 12-ton B.L., five 6-in. 4-ton B.L., four 3-pdr. Q.F., and five Gatling machine guns; while the auxiliary gun vessel carries two 6-in. 5-ton B.L. guns. Tasmania owns one Whitehead torpedo boat. Western Australia has the steel gunboat Victoria, purchased from the Victorian Government, and the Meda, a schooner of 150 tons, which are employed on survey service at the joint expense of the Imperial and Colonial Governments. New Zealand possesses four Thornycroft torpedo boats and four steam launches fitted for torpedo work.

## COST OF DEFENCE.

Most of the colonies have spent considerable sums in works of defence, and the principal ports are well protected by extensive fortifications, erected by the various Governments. The total expenditure from the Consolidated Revenue for defence purposes during 1896-7 was as follows :—

Colony.	Amount.	Per head.
	£	s. d.
New South Wales .....	213,014	3 3
Victoria .....	181,959	3 1
Queensland .....	67,608	2 10
South Australia .....	30,468	1 8
Western Australia .....	18,683	2 9
Tasmania .....	10,047	1 2
New Zealand .....	68,551	1 11
<b>Australasia .....</b>	<b>590,330</b>	<b>2 9</b>

In all the colonies, with the exception of Western Australia, a certain amount of money has been spent out of loans on works of defence. For several years, however, Victoria has discontinued the expenditure of loan moneys for this service. The amounts thus spent during 1896-7 were as follow :—

	£
New South Wales.....	*11,102
Queensland .....	9,626
South Australia.....	473
Tasmania .....	65
New Zealand .....	10,554

Australasia ..... £31,820

\* Inclusive of £5,720 for naval station, Port Jackson.

The total loan expenditure by each colony for defence purposes to the end of the financial year 1896-7 was as follows :—

Colony.	Amount.	Per head.
	£	s. d.
New South Wales .....	*1,242,006	13 11
Victoria .....	98,299	1 8
Queensland .....	224,494	9 5
South Australia .....	235,885	13 1
Tasmania .....	121,423	14 1
New Zealand .....	923,781	25 9
<b>Australasia .....</b>	<b>2,845,888</b>	<b>13 3</b>

\* Inclusive of £313,670 for naval station, Port Jackson.

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 colonies in the construction of works of defence; the amount of such payments, however, it is now impossible to determine. It is estimated that the present values of the defence works in the various colonies are as follow :—

New South Wales .....	£868,000
Victoria.....	486,000
Queensland .....	125,000
South Australia .....	137,000
Western Australia .....	12,000
Tasmania .....	103,000
New Zealand .....	417,000
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Australasia .....	£2,148,000

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 colonies. The commission visited the points mentioned during 1891, and as a result of the evidence taken fortifications have been 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. The garrison of the batteries in King George's Sound is supplied by Western Australia, and that colony bore one-fourth of the cost of construction and equipment, the other provinces contributing the remainder on a population basis. The cost of the defences at Thursday Island was shared by the different colonies in proportion to the number of their inhabitants. The forts are maintained under a like arrangement.