1880. NEW ZEALAND.

MARINE DEPARTMENT

(ANNUAL REPORT OF THE).

Presented to both Houses of the General Assembly by Command of His Excellency.

Marine Department, Wellington, 3rd August, 1880. I do myself the honor to transmit herewith, for your Excellency's information, the report of the Marine Department of this colony for the financial year ended the 30th June last.

H. A. ATKINSON,

Minister having charge of the Marine Department.

His Excellency Sir Hercules Robinson, G.C.M.G., &c.

Governor of New Zealand.

REPORT.

SIR,— Marine Department, Wellington, 15th July, 1880.

I have the honor to submit the following report on the working of the Marine Department for the nine months ended 31st March last, that being the date on which, under the new arrangements, the Financial Year terminated.

Lighthouses.—During the period for which this report is made, new lights have been exhibited at Hokitika, on the 22nd September, 1879; Akaroa Head and Cape Saunders, on the 1st January, 1880. Hokitika light is a fixed white light of the fifth order dioptric, the illuminant being gas. This light being a local light, is maintained by the Harbour Board. Akaroa Head Light is a flashing white light of the second order dioptric, shewing a flash every 10". Cape Saunders light is a revolving white light of the second order dioptric, attaining its greatest brilliancy once a minute.

A report, by the Marine Engineer, on works in connection with lighthouses, which have been erected under his directions during the past year, is appended.

Paraffin burners have been procured for Pencarrow Head and Tiri Tiri Lighthouses. When these are fitted, all the New Zealand lights will be burning that oil.

New Lights.—The lantern and apparatus for Mokohinau Light have been some years in the Colony; and the land required for its erection has been taken under the provisions of the Shipping and Seamen's and Public Works Acts. I would strongly urge upon the Government to have it erected at once, as it is much required. The light at Cape Egmont is also one which it would be very desirable to go on with at once. The tower apparatus and lantern belonging to the Mana Island light, which was extinguished when the Brothers light was first shown, are, as you are aware, proposed to be used at Cape Egmont. The dangerous passage of the French Pass is now taken by all sizes of steamships, at night, and I fear some serious casualty will arise unless a light is put up to show it.

The leading lights proposed to be erected at Tory Channel have arrived in the colony, and a sum of money to defray the cost of the necessary buildings

has been placed on the estimates.

A number of small port lights have been procured from England; they are intended to replace some of the inferior lights now used at the entrance to small ports, rivers, &c.; arrangements have been made to offer them at cest price to the Harbor Boards which require them.

The store for the Marine Department has been erected near Pipitea Point, Wellington, and has been found to be most useful.

Light Dues.—The light dues collected at various parts of the colony during the nine months amounted to £9404 14s. 9d, being £985 3s. 5d. less than during

the corresponding period of the previous year. In accordance with the promise made to Parliament by the Honorable the Colonial Treasurer, all light dues on coasting vessels were abolished from the 1st April last.

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Government Steamers.—The Hinemoa has been doing work almost exclusively outside this department; her engines and boilers have had a thorough overhaul, and are now in good order. The Stella has been constantly employed, principally in work connected with this department, although she has done a considerable amount of work as opportunity offered for other branches of the Government service.

Advantage has been taken of the Stella being at the out-ports from time to time to clean and examine all the buoys, as also to lay new buoys where it has been found necessary to do so for the convenience of shipping.

Examination of Masters, &c.—Certificates of competency have been issued to 94 candidates, 70 being for masters, mates, and engineers of seagoing vessels, and 24 for masters and mates of river steamers.

An Order in Council making new Regulations for the prevention of collisions at sea having been issued in Great Britain, under the provisions of sections 172 of "The Shipping and Seamen's Act, 1877" it is in force in New Zealand. The Regulations will come into force on the 1st September next. Copies have been circulated to the various Custom Houses, &c., for distribution amongst seafaring people.

Surveys, &c.—Capt. McGillivray having reported some dangers in the Bay of Plenty a survey was made, and that off Plate Island was discovered. A survey was also made of a danger discovered off the South end of Motiti. The result of these surveys has been sent to the Hydrographer to the Admiralty for insertion in the New Zealand Chart. A survey has also been made at Catlin's River for the purpose of enabling the Marine Engineer to report on the removal of certain rocks which obstruct the entrance there.

The necessary data to enable Sir John Coode to frame his reports on Otago, Waitara, Westport, Wairoa and Gisborne (Poverty Bay), have been sent, and Sir John's reports on the Thames, Patea, Milford Lagoon, Bluff Harbour, New River, Hokitika, Tauranga, and Greymouth, have been received.

Steam Navigation.—Passenger Certificates have been issued to 119 steamers 12,036 tons, 4650 horse power.

Naval Training School.—The manager's report is appended hereto. I can only reiterate the remarks that I have already made relative to the criminal element in the school.

Weather Reporting.—Captain Edwin's report is forwarded herewith. The weather reporting is still much appreciated by seamen.

Wrecks and Casualties.—During the nine months, reports have been received of 48 casualties. Of these, 42 were on or near the coasts of the Colony, 14 of 1979 tons, being total losses, 23, of 5587 tons, partial losses, and 6 cases of loss of lives only. Seven lives were lost, viz., one each from the Augusta, Beautiful Star, Clematis, Eliza Firth, Sarah Pile, Shepherdess, and Storm Bird. Of the five casualties reported as having occurred beyond the Colony, one, of 86 tons, was a total loss; three, amounting to 567 tons, were partial losses, and one was a case of loss of life only—a man having been washed overboard from the Rotomahana.

Returns.—The usual returns, wreck chart, &c., are appended hereto; as is also a chart showing the various lighthouses on the coast of New Zealand, which is a reduced copy of one prepared for the Sydney Exhibition.

I have, &c., R. Johnson,

The Honorable the Minister having charge of the Marine Department.

Secretary.

APPENDIX.

REPORT ON LIGHTHOUSE WORKS, BY THE MARINE ENGINEER.

The Marine Engineer to the Secretary Marine Department.

Marine Office, Wellington, 31st March, 1880. SIR,-I have the honor to forward, for the information of the Minister having charge of the Marine

Department, the annual report on works executed for new lighthouses, &c., during the year, viz.:—

Hokitika Harbour Light.—This has been completed since last report. The light was first exhibited on 22nd September, 1879. It is a fifth-order fixed light, the illuminant being gas. It will be maintained

by the Harbour Board, Hokitika.

Akaroa.—These works were satisfactorily completed, and the light was shown for the first time on 1st January, 1880. The light is a second-order flashing light, showing a flash every ten seconds.

Cape Saunders.—The works here have also been completed in a satisfactory manner, and the light was first shown on 1st January, 1880. It is a second-order revolving light, attaining its greatest brilliancy once a minute.

Marine Store and Shed .- These buildings, which were very much needed for the use of the department, have been erected on the Thorndon reclaimed land, near Pipitea Point, Wellington, and are now I have, &c.,

JOHN BLACKETT,

The Secretary Marine Department.

Marine Engineer.

REPORT OF THE EXPERIMENTAL SYSTEM OF STORM WARNINGS.

Captain Edwin to the Hon. the Minister having charge of the Marine Department.

Wellington, May 20th, 1880. SIR,-In forwarding for your consideration the sixth report of the experimental system of storm warnings, I venture to commend to your notice the results of the work as shewn in the accompanying returns, which include information from all the stations since June 30, 1879, with the exception of Mongonui, from which place reports have only been received since January last, the percentage results of correct forecast at that place during the three months are as follows:—Direction of wind, 91.17; force of wind, 17.64. Barometer movement, 75.75; sea movement, 50.00. Return No. 1 gives the percentage value of correct forecast at each station during the last nine months, and the yearly mean for the whole colony is given at the foot of the return; the result for the force of wind is, as heretofore, lower than any of the other values, but the results of the forecast of direction of wind and barometer movement continue the best criterion of the reliability of the work; the barometer forecast especially so, as the force of wind depends upon the nature of the country in the vicinity, which may shelter the station greatly, but the barometer is not affected by such peculiarities, and the result of this forecast is therefore of especial value. Timaru shews the lowest value for force of wind, but it will be seen that the forecast result for barometer movement is not very different from those of Lyttelton and Oamaru. The sea movement continues to shew a good result of correct forecast. This return also shews the number of gales which were experienced at each station without intimation of their approach having been received; of these the greatest number occurred at Wanganui, amounting to nearly 8 per cent. of the warnings received there. Results for New Plymouth are published for the first time in this report.

Return No. 2 is a comparative one, showing the monthly value of correct forecast for the whole colony during a period of three years, with the exception of the months of August and September, 1877, during which time I was under medical treatment. The mean values of the six monthly periods are also given, and this return shows conclusively that reliable information can be given upon these subjects.

Return No. 3 shows the percentage of correct forecast for the whole colony during the first three months of the current year.

Return No. 4 shows the result of a storm warning issued in advance of a depression coming from the south-west on 2nd October, 1879; it was followed by another from the same quarter on the 3rd. In the first instance warnings were, as usual, not sent northward of Napier and New Plymouth, but by the next day the first depression had advanced well to the north-east, and warnings were therefore sent to the northern stations. The approach of the second depression necessitated warnings being again sent to the districts south of Napier. This is a very general method of procedure in this colony.

H.—13.

Return No. 5 shows the manner in which warnings were issued in advance of a depression coming from the northward. Its approach was first detected on the 9th March, and it passed the East Cape on the 11th, moving to the southward inclining to the south-south-west after passing Lyttelton. It did not approach the stations north of Auckland so closely as these areas usually do (for example of this see Marine Department Report for 1878-9), and consequently the wind at those stations came from the westward instead of the eastward of south. This return is also very instructive as showing that the force of wind on the land was not, generally speaking, greater than a strong gale, but the movement of barometer was very marked. I am indebted to Captain J. Bruce, R.N., of H.M.S. Cormorant, for valuable observations made during the passage of this gale when the barometer fell to 28:44, and the full violence of the wind was experienced, the vessel passing through the centre and experiencing the change of wind from north-east to south-west with hurricane force and a tremendous sea.

The remaining returns are copies of those sent by the officers in charge of the stations, and show the manner in which information of results is forwarded to the central office; they contain remarks, &c.,

relative to the warnings in returns Nos. 4 and 5.

The results of warnings are always decided by the officers who receive them. This plan has been in use during the last six years; it has been always found to work well, and there can be no doubt that the verdict of those at the place must be more reliable than any data compiled at a central office.

Since the last report, the work of storm warning has been on more than one occasion favorably noticed by the press; daily forecasts have now been published in the Wellington evening papers for more than two years past, and similar information could be sent to any other evening papers; the Press Association would probably undertake to distribute it, but to enable the morning papers throughout the colony to publish a forecast, a second daily report would be necessary. Almost the whole value of the information connected with weather forecast depends upon promptitude of transmission, and I have to acknowledge the cordial co-operation of Dr Lemon and the officers of the Telegraph Department.

The Hon. the Minister having charge of the Marine Department.

R. A. Edwin, Commander R.N.

No. 1.—Return showing Percentage of Correct Forecast at the undermentioned Places during the Nine Months ending 31st March, 1880.

Place.		Direction of Wind.	Force of Wind.	Barometer Movement.	Sea Movement.	Gales without Warning.	Remarks.
Hokianga		92.10	52.63	76:00 70:16	% 	%	The warnings are limited to
Russell	•••	$81.81 \\ 82.45$	31·95 42·10	72·16 79·24	44 83	1.7	an area of 12 points of the compass. Force — 7 of
Whangarei	•••	89.23	40.00	75.41		1.5	Beaufort scale is the low-
Coromandel	•••	97.29	28.37	77.02	94.11		est for which warnings
Manukau (altitude, 900 feet)	••			84.84		1.3	are considered as being
Auckland	•••	80·26 95·58	45·46 54·41	85.93			verified.
Grahamstown	•••		29.85	80.00		• • •	vermea.
Cambridge (altitude, 200 feet)	• •	83.82			62.00	4.4	
Tauranga		77:38	40.47	75.00	61.36	1.1	
Opotiki	• • •	91.02	70.51	77:33	75.92	•••	
Taupo (altitude, 1,200 feet)	• • •	90.56	18.86	77.35		•••	
Gisborne	• • •	90.24	48.14	83.11	75.00		
New Plymouth		81.92	14.45	82.71	78.04	1.7	
Opunake (altitude, 100 feet)		86 20	31 03	78.56	57.57		
Napier		85.71	34 28	73.53	67.85	4.1	
Wanganui		92.85	56.71	88.57		7.8	
Castlepoint		93.54	43.95	80.23	86 48	2.1	
Nelson		90.47	17.46	87.30			
Tophouse (altitude, 2,185 feet)		76.92	90.76	81.53			
Blenheim		94.02	28.35	89.23		(•
Westport		51.68	26.96	81.60	59.75		
Kaikoura		63.41	46.34	71.60	81.42		•
Kikerangu	• • •	95.94	87.83	95.65	97.43	1.3	
Hokitika	•••	87.34	16.25	92.50	78.57		
Bealey (altitude, 2,180 feet)		94.02	40.29	82.09	덕	•••	
Lyttelton		96.36	27.27	80.00	77.78		'
Timaru		68.13	8.69	65.16	52.50		
Oamaru :		75.24	31.68	72.04	60.86		
Naseby (altitude, 2,000 feet)	•••	80.35	17.85	81.48		•	
Port Chalmers		76.74	61.62	66.67	100.00		
Queenstown (altitude, 1,100 feet)	• • • •	95.00	53.33	83.33			
Roxburgh (altitude, 300 feet)	• • • •	81.17	10.58	84.52			
Balclutha		89.02	17.07	76.31			
TO I OF		71.95	52.43	65.27	83.33		
Blun	•••						
Mean average for nine months		87.63	38.73	79.51	74.04	0.6	l

No. 2—Comparative Return showing Monthly Percentage of Correct Forecast for the whole Colony during three years.

1879. 81.53 33.93 73.36				
878. 1879. 1877. 1878. 1877. 1878. 1879.	April.	May.	June.	Mean of Six Months.
38.88 76.81 86.18 83.05 87.11 81.00 87.65 84.39 79.43 89.70 81.53 57.64 71.01 38.60 44.83 36.81 23.21 57.70 31.21 37.27 54.23 33.93 77.67 85.00 76.19 69.94 78.03 77.77 80.24 74.75 61.78 77.17 73.36 81.03 80.04 76.54 77.43 79.19 77.77 73.36	1879. 1877. 1878.	1879. 1877. 1878. 1879.	1877. 1878. 1879.	1877 1878. 1879.
77.64 71.01 38.60 44.83 36.81 23.21 57.70 31.21 37.27 54.23 33.93 77.67 85.00 76.19 69.94 78.03 77.77 80.24 74.75 61.78 77.17 73.36 31.93 80.00 31.91 37.77 48.43 76.54 71.43 79.19 77.78 76.08 70.90	84.39 79.43 89.70	88.10 92.70 86.88	87.97 88.00 87.73	82.32 88.33 84.07
Move- 73.81 77.67 85.00 76.19 69.94 78.03 77.77 80.24 74.75 61.78 77.17 73.36 71.43 61.59 80.00 91.66 57.14 64.32 76.54 71.43 79.19 77.78 76.08 70.90	31.21 37.27 54.23	57.55 49.59 25.82	48.53 34.90 42.00	41.29 51.41 40.13
71.43 61.99 80.00 91.66 57.14 64.33 76.54 71.43 79.19 77.78 76.08 70.90	74.75 61.78 77.17	80.21 79.40 74.24	79.94 79.80 77.78	74.95 77.37 77.19
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	79.19 77.78 76.08	88.46 75.00 66.33 74.50	74.50 76.00 66.26	80.02 69.48 71.15

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		July.		,	August.		ŭ	September.)	October.		Ž	November.		Ď	December.		Mean o	Mean of Six Months.	nths.
Forecast of	1877.	1878.	1877. 1878. 1879. 1877. 1879. 1877. 1878. 1879. 1877. 1878. 1879. 1877. 1878. 1879. 1877. 1878. 1879. 1877. 1878.	1877.	1878.	1879.	1877.	1878.	1879.	1877.	1878.	1879.	1877.	1878.	1879.	1877.	1878.	1879.	1879. 1877. 1878.	1878.	1879.
Direction of Wind 83.94 88.58 81.98	83.94	88.58	81.98	*	88.95	82.28	*	84.73	81.12	85.44	85.44 92.50 82.13	82.13	92.50 92.00	92.00	84.25	86.85	82.54	86.47	86.47 87.18	88.21	83.04
Force of Wind	45.25	45.25 46.54	39.53	*	49.27	38.58	*	40.80	39.82	60.14	55.46	32.00	47.52 57.78	57.78	49.12	35.39	41.27	39.06	39.06 47.07	48.52	39.68
Barometer Move-	Move- 83.59 76.73	76.73	28.66	*	74.27	89.44	*	76.24	84.33	77.54	81.39	77.04	80.72	75.00	29.98	85.54	78.28		77.50 81.85	86.94	80.31
ment Sea Movement	91.89	91.89 80.00	71.43	*	75.00	20.00	*	68.42		75.70 68.00	67.74	67.74 60.47		81.08	74.35	19.19	56.52 81.08 74.35 67.57 66.67 74.28 70.99	74.28	66.04	73.15	71.03
							-	-	-		-				-	-					

* See Report.

No. 3.—Return showing Monthly Percentage of Correct Forecast for the whole Colony during the three months ending March 31st, 1880.

Fore	cast of			January.	February.	March.	Mean of Three Months.
Direction of Wind				 84.31	90.15	81:14	85:20
Force of Wind			,	 42.35	21.76	32.00	32.03
Barometer Movement		•••		 74.68	68.74	71.42	71.61
Sea Movement			•••	 77.14	64:17	71.05	70.78

No. 4.—Return showing Result of a Storm-Warning, October, 1879.

]			Result	s.		
Warning Sent.	Date.	Place sent to.	Direction of Wind.	Force. of Wind.	Barometer Move- ment.	Sea.	Remarks.
Bad weather probable any direction between N. and W. and S.W.; glass fall again within 24 hours;	2nd	Hokitika Westport	Good Good	7 to 8 5 to 8	Good Good	Heavy Heavy	Thunder an
wind backing.	,,	Opunake	Good	5 to 6	Wrong	Heavy	TT C 71
11 11 12 20 20 20 20 20 20 20 20 20 20 20 20 20	,,	Kekerangu	Good	10 to 11	Good	Heavy	Heavy fall sno
	,,	Kaikoura	Good	9 to 10	Good Good	Rough	
	,,	Castlepoint	Good Good	9 to 10	Good		Heavy rain an
a a la la constitución	,,	Tophouse Lyttelton	Good	7 to 8	Good		snow Hail, rain, an
ad weather probable any direction between N.W. and W. and S.;	,,	hy too too i	0.000		1		snow
expect glass fall soon, and wind	,,	Timaru	\mathbf{Good}	5 to 6	Good	Smo'th	TT 1
backing.	,,	Oamaru	Good	7 to 8	Good		Hard squalls hail and sno
		Port Chalmers	Good	9 to 10	Good	l l	
	,,	Bluff	Good	7 to 8	Good		
	,,	Balclutha	Good	8	Good		Heavy rain ar
]		Cood	7 to 8	Good		sleet Squally
	,,	Queenstown	Good Good	5 to 6	Good		Heavy squalle
	,,	Roxburgh Naseby	Good	5 to 6	Wrong		Cold and sho'i
	,,	Naseby Bealey	Good	3 to 5	Good	•••	Overcast, rai
	,,	200103			}		ing, threater
and weather probable any direction between N. and W. and S.W.; glass fall soon; expect heavy gale and very heavy sea within	,,	New Plymouth	Good	7 to 10	Good	Heavy	Ing
12 hours. ad weather probable; expect heavy	3rd	Hokitika	Good	8	Good	Heavy	
gale, direction as wired yester- day (N. and W. and S.W.); glass should be falling now; ex-	,,	Westport	Good	7 to 8	Good	Rough	·
pect very heavy ssa. ad weather probable between N.	,,	Manukau	Good	5 to 9	Good	Heavy	Violent squa
and W. and S.W.; glass fall again soon, and wind backing; expect heavy sea within 24	۵,	Opotiki	Good	6 to 7	Good	Heavy	
hours. ad weather probable any direction	,,	Nelson	Good	4 to 5	Good		
between N. and W. and S.W.;	,,,	Blenheim	Good	5 to 7	Good	•••	
glass falling again very soon. ad weather probable any direction	,,	Auckland	Good	9 to 10	Good	,	Hard squalls
between N. and W. and S.W.;	,,,	Hokianga	Good	9 to 10	Good		Furious squal
glass falling again soon; wind	,,,	Russell	Good	7 to 8	Good		
backing; indications hard gale.	,,	Whangarei	Good	9	Good Good	•••	
	,,	Cambridge	Good Good	8 to 9 6 to 9	Good		
	,,	Napier Spit	Good	6 to 7	Good		
	,,	Grahamstown Coromandel	Good	7 to 8	Good		Heavy squall
	,,	Tauranga	Good	6 to 7	Good		
	,,	Gisborne	Good	6 to 8	Good	Heavy	Hard squalls
	1 ",	Taupo	Good	8 to 9	Good		

No. 5.—Return showing Result of Storm-Warning—March, 1880.

Bad weather probable any direction between South-east and East and	9th	Monganui Russell	E.N.E. S. to S.W.	2 to 3 8 to 9	Good Good	Wrong Mode- rate	
North; glass fall, sea heavy within 12 hours	,,	Tauranga Opotiki Gisborne	S.W. East Vbl.	5 7 to 8 0 to 2	Good Good Good	Wrong Good Wrong	Heavy rain
Bad weather probable any direction between South-east and East	"	Auckland Hokianga	S.S.W. S.E., N.,	5 to 6 8 to 9	Good Good		pearances
and North; glass fall soon	",	Whangarei Cambridge	N.W. S.S.E.,S.W. S. to E.	7 to 8 5 to 6	Good Good		
	,,	Grahamstown Coromandel Taupo	N.E., W. N.E. N.E., S.	7 to 8 6 to 7 4 to 7	Good Good Good		
Bad weather probable between South- west and South and East; glass further fall, sea likely heavy	10th	Castlepoint Gisborne	S.W., S. E., S.E., S.W.	8 to 9 4 to 10	Good Good		Raining heavily
within 12 hours; expect much rain	,,	Napier	S.S.W., S., S.E.	4 to 9	Good	Good	
Bad weather probable between South- east and South and West; glass further fall, and sea heavy from	,,	Bluff	N.,W.,S.W.	5 to 6	Good	Good	
South of East Bad weather probable between South west and South and East; glass further fall; sea likely making inside after 12 hours, and heavy	,,	Lyttelton	s.w.	8 to 10	Good	Good	Heavy easterl y sea—drizzling rain
outside Sad weather probable between North and West and South-west; glass further fall, river flood, and sea making from South of West	,,	Hokitika Westport	N.W., W. S.W.	2 to 3	Good Good	Good Good	Steady rain Showery, no flood
within 24 hours Bad weather probable between East and South and South-west; glass further fall, expect heavy rain	,, ,,	Timaru Oamaru Port Chalmers	South S.E., S.W. S.W.	5 to 6 6 to 7 8 to 9	Good Good	Good Good	Passingshowers
800D	"	Queenstown Roxburgh Naseby	N.W.,S.W. S.S.W.	7 to 8 3 to 5 5 to 6	Good Good Good		Heavyrain and stormy ap-
	,,	Balclutha	E., S.W.	5	Good		pearance Heaviest rain this season
	,,	Bealey Tophouse	S.E.	4 to 5 for this m	Good		Showers
Bad weather probable between North and West and South-west; glass	,, ,,	Wanganui Nelsoa	South N.W.,S.W.	8	Good Good		Veryheavyrain
further fall, and much rain Bad weather probable between East and South and South-west; glass further fall, sea heavy within	"	Kaikoura Kekerangu	S.W. S.S.W.	8 9 to 10	Good Good	Good Good	
24 hours 3ad weather probable any direction between South-east and South and West; glass further fall, sea heavy after 12 hours, expect	"	Opunake New Plymouth	S., S.E.	7 to 8	Good	Good	e.
much rain Bad weather probable between Southeast and South and West; glass further fall, and much rain, rivers likely rising within 24 hours	,,	Blenheim	West	2 to 3	Good		Not much rain

RETURN No. 1, showing Results of Storm-Warnings received at Bealey (altitude, 2,180 feet) during the Month of October, 1879.

Date and Hour	Indicated Weather.	Res	ult.	Remark *** Forty-eight hours from the time of receipt should
Received.		Direction.	Force.	be allowed before the warning is considered to have failed.
2nd, 4.21 p.m. 10th, 13th, 1.44 p.m. 18th, 4.18 p.m.	Bad weather probable between N.W. and W. and S.; glass fall Bad weather probable between N. and W. and S.W.; glass fall Bad weather probable between N. and W. and S.W.; glass fall		3 to 5 arned 7 to 9 7 to 9	Barometer good; N.W. and N.; overcast, raining and threatening. N.W., 6 to 7; cloudy and squally. Barometer good; N.W., 7 to 9; heavy showers. 14th, S.E., 3; gloomy. Barometer good. 18th, 11 p.m., N.W., 7 to 9; threatening and squally. 19th, N. 3; overcast and rain.

RETURN No. 1, showing Results of Storm-Warnings received at Lyttelton during the month of October, 1879.

Date and		Res	sult.	
Hour Received.	Indicated Weather.	Direction of Wind.	Force of Wind.	Remarks,
2nd, 4 p.m.	Bad weather probable, any direction between North-west and West and South; expect glass fall soon; wind backing	Good	8	Barometer wrong; S.W. gale, with hail, rain, and snow, lasting till midnight on the 5th; g ass rose from 29.15 to 29.48, then fell suddenly to 29.30.
9th, 4 p.m.	Indications strong winds, any direc- tion between Fast and North and North-west; glass fall within 24 hours	Good	2 to 3	N.E. wind, dense fog; barometer fell from 30.32 to 30.00.
10th, 2 p.m.	Bad weather probable, any direction between North-east and North and West; glass further fall	Good	6	North 6, squally and overcast; glass fell four- tenths.
13th, 1 p.m.	Bad weather probable, any direction between N.E. and N. and West; glass further fall; indications bad, and shew may have sea within 24 hours	Good	4 to 6	N.W. 46, squally and overcast from 4 p.m., lasting till midnight, when the wind shifted to S.W. 6, overcast with fog; no sea; glass fell a tenth.

H. McLellan, Harbourmaster.

RETURN No. 1, showing Results of Storm-Warnings received at Hokianga during the month of October, 1879.

3rd, 2.3 p.m.	Bad weather probable, any direction between North and West and South- west; glass falling again soon, and wind backing	Good	9 to 10	Barometer good; gale from S.W.; force 9 to 10 on morning of 4th; had furious squalls before daylight.
6th, 4.50 p.m.	Bad weather probable, any direction between S.E. and E. and N.; glass fall	Wrong		No bad weather; glass rose.
13th, 1.10 p.m.	Bad weather probable, any direction between N.E. and N. and W.; glass fall	Good	7 to 9	Barometer good; had heavy rain on 14th, and wind shifted round from N.E. to W. at 3 p.m. of 14th, blowing furious squalls.
14th, 5.15 p.m.	Bad weather probable, any direction between N. and W. and S.W.; glass further fall	Good	7 to 8	S.W. gale at 8 a.m. of 15th; barometer good.
15th, 2.35 p.m.	Bad weather probable, any direction between S.E. and E. and N.; glass rise, but fall again soon	\mathbf{Good}	4	Light winds, no bad weather; barometer rose steadily.

THOS. L. MILLAR, Telegraphist.

Return No. 2, showing Results of Storm-Warnings received at Kekerangu during the month of October, 1879.

10th, 2.20 p.m.	Bad weather probable, any direction between N.E. and N. and W.; glass further fall; expect consider- able sea within 24 hours	Good	8 to 9	Strong gale 8-9 set in from N.W., 9 p.m. 10th, and continued between N.N.E. and W.N.W. till 8 p.m. on 13th; barometer good.
14th, 12.13 p.m.	Bad weather probable, any direction between S.W. and S. and E.; glass rise fast soon; expect very heavy sea	Good	9 to 11	Strong gale 9-11 from S.S.E., set in 9 p.m. on 14th; during night of 15th, wind shifted South about to S.W., and continued till 1 p.m. 16th; glass rose 46; heavy sea.
18th, 3.41 p.m.	Bad weather probable, between N.E. and N. and W.; glass further fall	Good	7 to 8	18th, N.E. 5 to 6; shifted on 19th to S.E. 7-8, with drizzling rain; glass fell 11.
20th, 4.10 p.m.	Bad weather probable, any direction between N. and W. and S.W.; glass fall again soon	Good	6 to 8	During night of 20th, N.W., 7-8; wind shifted to S.W., 6-7 on night of 21st, with heavy rain; glass fell 40.

Return No. 1, showing Results of Storm-Warnings received at Blenheim during the month of October, 1879.

Date and		Re	sult.	
Hour Received.	Indicated Weather.	Direction of Wind.	Force of Wind.	Remarks.
3rd, 1 p.m.	Bad weather probable any direction between N. and W. and S.W.; glass fall again very soon.	Good	5 to 8	Barometer good; N.W. 5 to 7 in afternoon, and 5 to 8 between 6 and 7 p.m.; snow fell on the hills on night of 3rd and 4th.
10th.	Bad weather probable any direction between N.E. and N. and W.; glass further fall.	\mathbf{Good}	5 to 9	Barometer good; N.W. 5 to 6, all day, with falling glass; calm next morning, but N.N. W. 5 to 8 at 3 p.m.; N.W. 5 to 9 on 12th; falling glass.
13th, 3 p.m.	Bad weather probable any direction between N.E. and N. and W.; glass further fall.	Good	5 to 6	Barometer good; N.W. 5 to 6 during the day; rain, lightning to N.W. night of 13th and 14th; glass fell till a.m. of 14th.
14th, Noon.	Bad weather probable any direction between W. and S. and S.E.; glass rise fast within 12 hours.	Good	2 to 3	Glass began to rise 4.30 p.m. on the 14th., rose twenty-two hundredths in 8 hours S.E. 2-3 commenced evening; continued on 15th.

W. S. Furby, Telegraphist.

Return No. 1, showing Results of Storm-Warnings received at Napier Spit during the month of October, 1879.

3rd, 1.43 p.m.	Bad weather probable, between N. and W. and S.W.; glass fall soon, and wind backing; indications hard gale	Good	6 to 9	Barometer good; hard W.S.W. gale; glass falling.
4th, 3.35 p.m.	Bad weather probable, between W. and S. and S.E.; glass fall another tenth; sea increase; glass rise within 24 hours	Good	4 to 8 to 8 to 10	4th, S.W. to S. 4-8, rain and hail-squalls; 5th, S-W. 8-10, rain and hail-squalls considerable; glass rising steadily.
13th, 1.45 p.m.	Bad weather probable, between N.E. and N. and W.; glass further fall; bad indications	Good	3 to 4	Barometer good, N.E. to N.W. 3-4; morning, 14th, calm; glass falling steadily.
14th, 4.1 p.m.	Bad weather probable, between W. and S. and S.E.; glass further fall; but rise within 24 hours; expect sea rising	Good	4 to 7	p.m. 14th, S.W. to S. 4-7; morning, 15th, S.S.W. 6-7; glass rising; sea moderate swell; barometer good.
21st, 1.52 p.m.	Bad weather probable, between N. and W. and S.W.; glass fall considerably within 24 hours	Good	4 to 5	N.W. to N.E. 4-5; barometer fell 7-10 in 48 hours.

W. WILKIE, Telegraphist.

\$ 65°.

RETURN No. 1, showing results of Storm-Warnings received at Taupo during the Month of October, 1879.

3rd, 1.55 p.m.	Bad weather probable any direction between N. and W. and S.W.; glass fall again soon, wind back- ing; indications hard gale	Good	8 to 9	S.W., 8 to 9; cloudy; glass fell nearly two- tenths, but rose again during the night.
13th,	Bad weather probable any direction	Good	5 to 6	Strong Northerly winds, 5 to 6; blue sky;
$2.33 \mathrm{p.m.}$	between N.E. and N. and W.		}	glass steady.
20th,	Bad weather probable any direction	Wrong	4 to 5	North-easterly winds; glass rose about one-
2.15 p.m.	between N. and W. and S.W.;			tenth.
_	glass fall within 24 hours			
24th,	Bad weather probable any direction	Good	3 to 4	Moderate N.E. winds; glass fell about one-
2.27 p.m.				tenth; no rain.
-	fall again, soon expect much rain			,
	, -		ļ	

RETURN No. 1, showing Results of Storm Warnings received at Westport during the month of October, 1879.

Date and		Res	sult.				
Hour Received.	Indicated Weather.	Direction of Wind.	Force of Wind.	Remarks.			
1st, 3.37 p.m.	Bad weather probable any direction between N.W. and W. and S.; glass further fall; sea very heavy outside, and likely increase on bar.	·	5	Barometer Good. Strongest force 5, from S.W.; wind S. and S.W. all time. Con siderable fall of snow on hills on 1st and 2nd			
2nd.	Bad weather probable any direction between N. and W. and S.W.; glass fall again within 24 hours, and backing.		7 to 8	Strongest force noticed about 8 from S.W.; wind generally S.W., but backed for some time to west force 8; 7 to 8 during that time barometer fell one-tenth; squally, showery, with thunder and lightning.			
3rd.	Bad weather probable; heavy gale direction as wired yesterday; sea very heavy outside, and increase on bar; glass fall very soon.	1	7 to 8	Strongest force as above, which applies generally to this forecast; bar rough, but fell to smooth on 4th, and continued smooth until 11th; glass rose on 4th.			

S. A. LEECH, Harbourmaster.

Return No. 1, showing Results of Storm-Warnings received at Mongonui during the month of March, 1880

lst, 5.35 p.m.	Glass fall, and strong winds between E. and N.E.	E.N.E.	5	Fresh breeze from E.N.E. on 2nd; glass fell steadily.
4th, 10.26 a.m.	Strong winds between S.E. and N. E., and much sea within 12 hours.	N.E.	3	Moderate breeze from N.E.; sea not heavy; Barometer falling steadily.
9th, 12.16 p.m.	Bad weather probable any direction between S.E. and E. and N., glas fall; sea heavy within 12 hours.	E.N.E.	2	Barometer good; light winds from E.N.E.; very heavy rain; barometer fell to 29-55.
15th, 1.10 p.m.	Bad weather probable any direction between S.E. and E. and N.; glass fall; sea heavy within 12 hours; expect much rain.	S.W. to E.S.E.	2	Barometer good; wind backed slightly to E. of S, but soon veered round to westward; no sea; no rain.
20th, 1.15 p.m.	Bad weather probable any direction between S. and E. and N.E.; glass further fall.	N.W.	4	Barometer good; moderate to fresh seabreezes.

S. INDER, Telegraphist.

Return No. 1, showing result of Storm-Warnings received at Coromandel during the Month of March, 1880.

2nd,	Bad weather probable any direction	Good		Winds E. to N.E.; glass falling gradually.
4.20 p.m.	between S.E. and E. and N.; glass fall		~	White E. to 14.2., glass falling gladdary.
4th.	Indications strong winds between	Good	5 to 6	N.E. winds; and glass falling fast.
4.51 p.m.	S.E. and E. and N.; and falling glass	,		
9th,	Bad weather probable any direction	\mathbf{Good}	6 to 7	Rain, with strong winds from N.E.; glass
5.5 p.m.	between S.E. and E. and N.; glass fall soon]	fallen 5-10ths.
15th,	Bad weather probable any direction	•••	l	Fine weather for 48 hours; glass rising
3.49 p.m.	between S.E. and E. and N.; further fall glass, and much rain			slightly.
21st,	Bad weather probable any direction	Good	3 to 4	Winds from N.W.; glass fallen 1-10th.
5.9 p.m.	between S. and W. and N.W.; glass further fall, but rising within		:	
	22 hours			
25th,	Bad weather probable any direction	Good	2	Light winds from N.; glass slight fall.
4.57 p.m.	between S.E. and E. and N.; glass			
- 1	further fall; expect high tides		1	

RETURN No. 2, showing Results of Storm-Warnings received at Grahamstown during the Month of March, 1880.

Date and Hour	Indicated Weather.	Res	sult.	Remark ** Forty-eight hours from the time of receipt should	
Received.		Direction.		be allowed before the warning is considered to have failed.	
20th, 5.20 p.m.	Bad weather probable any direction between S and W. and N.W.; glass further fall, but rising within 24 hours	S. by W.	3 to 5	Barometer good; glass fell considerably, and appearance weather indicated change; had little wind until 23rd, when it blew strong W. gale, after which the glass rose rapidly.	
25th, 4.45 p.m.	Bad weather probable any direction between S.E. and E. and N.; glass further fall; expect high tides and much rain	E.S.E.	4 to 5	Barometer good; weather generally fine; glass fell nearly 4-10ths, but rose almost immediately; tides very high, but no rain.	
30th, 5.25 p.m.	Bad weather probable any direction between S.E. and E. and N.; glass fall soon; much rain within 24 hours; expect high tides	E. by N.	3 to 6	Barometer wrong; weather continued fine; glass rising steadily; no sign change; tides high; no rain.	
31st, 4.40 p.m.	Indications continue same as wired yesterday	•••		No change; glass still rising; wind variable. This month has been one of unusually fine weather here.	

W. Davies, Harbor Master.

RETURN No. 1, shewing Results of Storm-Warnings received at New Plymouth during the month of March, 1880.

			•	
8th, 3.56	Bad weather probably any direction between North and West and South- west; glass fall again within 12 hours, but rise and sea making within 24 hours	N.E.	4 to 6	Glass rose '13 on the 9th, and fell '19 on the 10th, and to 29'22 at 5 p.m. ou 11th. The gale generally appears to reach here from 24 to 48 hours after warning
15th, 4.15 p.m.	Strong winds between South-cast and East and North; glass further fall, indications rain	South	7 to 8	Barometer wrong. No rain.
20th, 4.22	Strong winds between South-east and East and North; further fall glass and rain	S.E.	8 to 9	Strong S.E. winds from 23rd to 29th Rain on 22nd.
31st, 3.54	Bad weather probable between Southeast and East and North; glass fall, rain within 24 hours	Wrong	5 to 6	Glass rose steadily from 31st to 5th April. No rain. The weather has been very exceptional; copious rains have fallen in the bush district to within two or three miles of the town of New Plymouth, but for a radius of a mile and a half scarcely a drop has fallen

WM. NORTHCROFT, Meteorological Observer.

RETURN No. 2, showing Results of Storm-Warnings received at Castlepoint during the month of March, 1880.

10th, 1.16 p.m.	Bad weather probable, any direction between S.W. and S. and E; glass further fall; sea likely heavy within 12 hours.	Good	7 to 10	Barometer good; heavy S.W. gale from 10 p.m. of 10th to morning of 12th; glass fell to 28'94 night of 11th; heavy swell come in morning of 11th.
15th, 4.28 p.m.	Indications S.E. and E. and North; glass fall; sea increase.	\mathbf{Good}	5 to 6	Barometer good; E.S.E. breeze on 15th; glass fell slightly; sea increased to heavy swell.
17th, 3.44 p.m.	Bad weather probable, any direction between S.W. and S. and E.; sea very heavy within 24 hours.	Good	7 to 9	Succession of gales with steady rain, constantly shifting from E. to S.W. by the S. from night of 18th, until morning of 24th; at 7.30 a.m. of 23rd, was blowing S.W. 9 to 11, heavy swell and rough sea continued all the time.

RETURN No. 2, showing Results of Storm-Warnings received at Timaru during the month of March, 1880.

Date and		Res	ults.	
Hour Received.	Indicated Weather.	Direction of Wind.	Force. of Wind.	Remarks.
12th, 4.7 p.m.	Expect further fall glass; indications still show sea heavy, though may not be much wind.	s.s.w.	5 to 6	Barometer good; fresh breezes from S.S.W., with heavy S.E. sea.
20th, 4.8 p.m.	Bad weather probable any direction between E. and S. and S.W.; glass further fall; sea heavy after 24 hours; bad indications; expect much rain.	N.E.	5 to 6	Barometer good: sea good; fresh breezes from N.E., and much rain
22nd, 1.6 p.m.	Bad weather probable, same indications; wind and glass as wired on Saturday; sea heavy from S. of E. within 12 hours.	N.E.	5 to 6	Barometer good; fresh winds from N.E. to S.E., and heavy S.E. swell.
27th, 3.46 p.m.	Bad weather probable any direction between S. and E. and N.E.; glass fall; sea likely decrease, but gale heavy within 24 hours; expect rain.	N.E.	5 to 6	Barometer good; moderate winds from N.E., with continued S.E. sea.
29th, 206 p.m.	Indications continue easterly, and shew increase sea.	N.E.	5 to 6	Barometer rising; fresh breezes from N.E., with passing showers, and sea rising.

ALEX. MILLS, Harbourmaster.

Return No. 1, showing Results of Storm-Warnings received at Naseby (altitude, 2,000 feet) during the month of March, 1880.

8th, 1.57 p.m.	Bad weather probable, any direction between N. and W. and S.W.; glass fall, but rise within 24 hours	Calm		Barometer good, fallen a tenth since yester- day; raining; no wind; very cold
10th, 4.50 p.m.	Bad weather probable, any direction between E. and S. and S.W.; further fall glass; heavy rain soon	$\mathbf{G}\mathbf{ood}$	5 to 6	Winds from S.S.W., raining, and very stormy appearances; barometer fell 3-tenths by 11th
17th, 3.50	Expect very cold night	\mathbf{Good}		It was jolly cold, white frost next morning.
20th, 5.25	Bad weather probable, any direction between S.E. and S. and W.; glass fall, and much rain	Wrong	2 to 3	Barometer fell 3 to 10, ugly and threatening, but rain held off; light winds from N.E.

W. McHutchinson, Telegraphist.

RETURN No. 1, showing Results of Storm-Warnings received at Balclutha during the month of March, 1880.

10th, 5.27 p.m.	Bad weather probable any direction between E. and S. and S.W.; glass further fall; expect heavy rain.	Good	5	The glass fell 5-10; wind from E. to S.W., rose to force 5; the heaviest rainfall experienced this season fell on the 11th.
13th, 3.38 p.m.	River likely rise within 24 hours.			River rose about a foot; rain heavy on 14th.
20th, 4.42 p.m.	Bad weather probable any direction between E. and S. and S.W.; glass further fall; expect much rain.	Good	7	Glass fell steadily on 20th and 21st; wind rose to gale on 21st; a little rain on 22nd.
22nd. 2.30 p.m.	Bad weather probable any direction between E. and S. and S.W.; glass further fall, wind backing soon; expect heavy rain and river high or flooded within 24 hours.	Good	6	The wind blew strong from eastward during most of 48 hours; heavy rain fell during night of 23rd, but river remained low.

H.—13.

REPORT ON THE NAVAL TRAINING SCHOOL AT KOHIMARAMA.

11

Enclosure 2.

The Manager Naval Training School at Kohimarama, to the Secretary, Marine Department. Naval Training School, Kohimarama, 15th May, 1880. SIR,—

I have the honor to transmit, for the information of the Hon. the Minister having charge of the administration of "The Naval Training Schools Act, 1874," the following report for the nine months ending 31st March, 1880.

The health of the boys has been good, the only cases of serious illness being one of dysentery, which was removed to the District Hospital, where a cure was quickly effected, and another of acute rheumatism, supervening on chronic, since taken to the District Hospital, where it is now under treatment. Full particulars under this head will be found in the report of the Medical Officer, which is appended

Table A gives the educational state of the boys. The progress shown is not so great as in my last This is to be accounted for by the fact of several who have been discharged during the period to which this report refers having been long out on license, and also that there are some who appear incapable of acquiring knowledge; but in many cases the improvement has been very satisfactory.

In seamanship the progress has been fair, but with very few exceptions the boys seem to be incapable of retaining the knowledge imparted to them, being often unable to perform what had only a few days previously been taught them, and which they then appeared fully to understand, and being quite adrift when required to put into practice what they can perform with ease when under instruction in

This difficulty will, however, I trust, be in time overcome.

The schooner which was launched last July is still, I regret to say, leaking, and not having been finally taken over from the builders, I have deemed it inadvisable to use her more than is absolutely necessary; but the term for which she was provisionally taken over will shortly expire, when I hope that the matter will be finally settled. Several attempts have been made by Messrs Sims and Brown to find the whereabouts of the leakage, but so far with only partial success.

Table C gives the quantity of clothing made and other work done in the school. With the exception of the carpenters' work, at which they only assist, the whole has been most creditably carried

out by the boys.

Twenty-one boys have been received, and twenty-nine discharged, leaving fifty-six on the register on 31st March, in addition to which one boy whose time expired in June last, but who is not fitted for any regular employment, is still in the school pending a decision being arrived at touching his disposal.

Table B records the visits of clergymen and others for the purpose of imparting religious instruction and performing divine service. The whole of the boys have on several occasions been taken to Auckland

in the schooner to attend at their respective churches on Sunday.

The behaviour of the boys has been generally satisfactory, but there are some very bad characters, whose example and influence have a marked effect, showing clearly the advantage that might be expected to accrue from a better system of classification. I have alluded to this in several previous reports, and I am more than ever confined in the opinion that, until a move is made in this direction, the results obtained will not be nearly so satisfactory as they would under more favourable conditions. Section 10 of the Act is the one which furnishes the largest number of boys over seventy-seven per cent. of those on the register on 31st March, having been sent under the provisions of that section, the actual number being thirty-one, of whom eight may be set down as very bad characters, five as a little deficient in intellect, six have a step-parent, two were sent here at the instance of a man who was living with their mother, she having deserted her husband, and one whose mother having deserted her husband, the father (to use the boy's own words) had got another wife; this, I think, goes far to show that the section referred to is made use of by persons who desire to be rid of the responsibility properly belonging to them. In only eleven out of the thirty-one cases here alluded to are the parents ordered to contribute towards the maintenance of their children. The total amount collected on account of maintenance to 31st March, 1880, was seven hundred and seven pounds one shilling and threepence (including a few small sums paid in advance). At the same date there was still unpaid the sum of three hundred and fifty-four pounds thirteen shillings and ninepence, only a small portion of which is likely to be recovered. The farm and garden work still continue to give fair results; it will be necessary to break up fresh

ground for potatoes this year, and material will be required for fencing it in.

Table I gives the number of boys who have been apprenticed during the period to which this report refers, and the callings to which they have been indentured. A large demand for boys for farm work continues to exist. The boys at present are, with few exceptions, desirous of going to sea, but the opportunities of sending them are not nearly as numerous as could be desired.

Table K, in consequence of the report being furnished three months earlier than heretofore, I am not able to give the particulars under this head; but from the verbal information which I occasionally obtain, I have reason to believe that the majority of those who have been apprenticed are giving satisfac-

tion.

The cost of victualling has been nearly sixpence half-penny (6.496) per head per diem-including fuel, lights, soap, seeds for farm and garden, and for six weeks the cost of conveying the provisions from Auckland to the school.

It is very desirable that cottages should be erected for the instructors, and also that a place should be provided for the boys to play in during wet weather, and in the evenings. The recent alterations in the dormitory-viz., substituting iron framework and hammocks for the wooden bunks previously in use, has conduced greatly to the comfort of the boys, and is also a material improvement, from a sanitary point of view, the erection of a closet for night use (connected with the dormitory), would greatly aid in this respect.

I have again to thank Dr. Goldsbro for his exertions in collecting for the amusement fund, and to the triends who reliberally responded to his appeals on behalf of the boys.

I have, &c.,

G. R. Breton, Manager.

A .- TABLE showing the Educational State of Boys.

		Read.			Write.				Cipher.			
Particulars.	Well.	Indiffer- ently.	Not.	Total.	Well.	Indifferently.	Not.	Total.	Well.	Indifferently.	Not.	Total.
Remaining on 30th June, 1879 Admitted during nine months	30	34		64	33	31		64	17	47		64
ending 31st March, 1880	6	8	7	21	6	4	11	21	3	5	13	21
Total	36	42	7	85	39	35	11	85	20	52	13	85
Discharged during nine months ending 31st March, 1880 Remaining on 31st March, 1880	18 20	11 33		29 56	19 28	10 28		29 56	13 14	16 41	 1	29 56
Total	38	44	3	85	47	38		85	27	57	1	

B.—Table showing the Visits of Clergymen for Divine Service and Religious Instruction during the Nine Months ending 31st March, 1880.

Roman Catholic.	Church of England.	Church of England.	Church of England.
Rev. T. Riordan, 14.	Rev. J. Kinder, 22	Mr. W. St. Clair T. Tisdall, 8	Mr. A. J. Hitchcock, 2

C.—Return of Articles Manufactured and Work Done in the School during Nine Months ending 31st March, 1880, with estimated Cost of Labour employed.

Articles	Quantity.	Rate.	Price.	Articles.	Quantity	Rate.	Price.
Duck Jumpers Duck Trousers Duck Caps Oilskin Jumpers Oilskin Trousers Pillow-cases Flannel Shirts Sheets Serge Trousers Hammocks Ornamental fencing erected Gates for garden	76 99 85 24 24 14 87 4 2 1 04 2 days	s. d. 1 0 1 0 1 0 1 0 1 0 1 0 7 0 6 1 10 1 0 1 0 8 0	£ s. d. 3 16 0 4 19 0 4 5 0 1 4 0 0 1 9 2 10 9 0 2 3 8 5 4 0 1 1 0 0	Amount brought forward Alterations to office and hospital, to provide room for schoolmaster. Table for schoolmaster's room Night-stools for hospital and isolating ward Windows glazed Stretchers repaired Repairs to stone foundations of buildings Sword mats made for schooner	3 days. 1 2 26 8 1 day 16 fms.	s. d. 10 0 5 0 5 0 0 3 1 0 12 0 3 0	£ s. d. 29 18 0 1 10 0 0 5 0 0 10 0 0 6 6 0 8 0 0 12 0 2 8 0
Seat on playground	1 8	$\begin{bmatrix} 5 & 0 \\ 2 & 0 \end{bmatrix}$	$0 \ 5 \ 0$	Spunyarn and nettle stuff made	100lbs. 50 fms.	0 4 9 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Repairs to closets Cover for boiler Oars re-coppered and repaired Framework for tanks Tainting tanks Painting schoolmaster's room, office, and cowshed	$\begin{array}{c c} 2 \text{ days} \\ 1 \\ 20 \\ 2 \end{array}$	10 0 2 6 0 6 2 6 10 0	1 0 0 2 6 3 10 0 0 5 0 0 5 0 1 10 0	Small rope made Aprons and breastplates for leadsmen Draw buckets Rope fenders made Sinnet for sea gaskets Harbour gaskets Side ladder for schooner	50 fms. 2 3 2 50 feet 21 1	1 6 3 0 1 0 0 6 5 0	0 3 0 0 9 0 0 2 0 0 15 0 0 10 6 0 5 0
Amount carried forward		•••	29 18 8	Total			40 5 0

D.—Return showing Admissions and Jascharges during the Nine Months ending 31st March, 1880.

Admitt	eđ.			Number.	-	Discharged.		٠,	Number.
Remaining on 30th June, New boys received	1879 	•••	•••	64 21	On application of Expelled Over age	of relatives	•••		11 7 1 1 9*

E.—Table showing particulars of Parentage of Boys received during nine months, ending 31st March, 1880.

Number of Boys Received.	Both Parents Livi	ing.	One Parent Living.	Both Parents Dead.	One Unknown,	One Living.
21	14		4	2	1	
	Cir	cumstar	nces as shown in Re	egister.		
Sent under Provisions of "" No. Section stated on p companied boy *	,, 9 ,, ,, 10 ,,	3 2 15 1	has second wif Step-mother; boy tered letter be Father at sea; bo Had stolen a coat School Previously in sch obtained his di Step-father; boy Previously in sch boy's discharg for beating hi Has step-father li Step-father Parents receiving Society Had stolen good sentenced to se	her has deserted him e	n burnt a regis- mother argill Grammar I; brother had father obtained vas sent to gaol al drunkard ton Benevolent 3 15s. and been ii goal; mother	10 1 1 1 1 1 1 1 1 1 1 1 1 1
Total		21	r	Cotal		21

F.—Table showing from whence Boys have been received during Nine Months ending 31st March, 1880.

$_{ m Wellington}$		 	4	Auckland	• • • •		
Hokitika		 	1	Invercargill			
Oamaru		 	1	Mercer			• • • •
Christchurch	• • •	 • • • •	1	Opotiki	• • •	• • •	
${f Nelson}$		 	1	Marton			

Total, 21.

G.—Table showing ages of Boys received during Nine Months ending 31st March, 1880.

Number of Boys received.	Aged.								
	10	11	12	13	14				
21	2	9	3	6	1				
21			1						

H.—Table showing Religions of Boys received during Nine Months ending 31st March, 1880.

Church of England.	Roman Catholic.	Presbyterian.	Lutheran.	Baptist.	Wesleyan.	Protestant.
9	4	3	1	1	2	1

Total, 21.

I.—Table showing Number of Boys Apprenticed from the School during the Nine Months ending 31st March, 1880.

When Apprenticed.	Seamen.	Farmers.	Farmer and Nurseryman.	Servant and Messenger.	Total.
Between 1st July, 1879, and 31st March, 1880	4	5	1	1	11

K.—Table showing Conduct of Boys Apprenticed from the School prior to 31st March, 1880.

			Report.			
Particulars.	Good.	Fair.	Indifferent.	Bad.	No Report.	Total.
n	The information requir	ed for this	Return has not l	peen procured.		

Total, 64.

L.—Return of Absconders during nine months ending 31st March, 1880.

Boys' Name.	No.	No. of times absconded during above-named period.	Previous to 1st July, 1879.	Remarks.
Heatley, Charles	141	1	4	Brought back by police.
Durn, Wm	180	1	·	Ditto.
Bateman, Rd	152	2	l	Ditto.
Smith, C. F	155	1		Ditto. ·
Laird, Wm	183	2		Ditto.
Clement, J. A	173	1		Ditto.
Buden, J	87	1	1	Ditto.
Connolly, T	133	1		Ditto.
Kneebone, J. R	153	1	1	Ditto.
Floyd, Wm	166	1		Ditto.
Harkins, J	171	5		Ditto; four times over by a member of staff.
Robinson, J	157	3	•••	Ditto once; returned voluntarily twice.
Wells, W	156	4		Ditto three times; returned voluntary
	1	_		once.
Smith, A. E	162	1 .		Returned voluntarily.
Havna, J.	170	$\frac{1}{2}$		Ditto.
Cooper, G	143	ī	1	Ditto.
McCormick J	160	Ī		Ditto.
Byrne, T.	177	$\bar{2}$		Not apprehended.
Coben, A	163	1		Ditto.

Enclosure 3.

Dr. Goldsboro' to the Secretary of the Marine Department.

Auckland, 15th May, 1880. Sir,-

I have the honor to state that the health of the inmates of the Government Training School, Kohimarama, has been satisfactory since the date of my last report.

No deaths have occurred, and most of the cases have been of the ordinary type affecting boys in general.

One extremely severe case of dysentry occurred, and I found it necessary to remove the patient to the Provincial District Hospital for closer observation and better attention than I could possibly render him at the school. This I did under the sanction of the Hon. Mr. Hall, then in

I made forty-five visits during this period; inspected the boys weekly; examined every boy on admission, and attended to the sanitary condition of the school. (Cases 180.)

Since the erection of the ward for isolating patients suffering from contagious skin diseases, &c., and the oven for fumigation and disinfecting the clothes and bedding, I am happy to report the cessation of itch, which formerly it was almost impossible to banish from the school.

One boy was admitted from the south with this complaint upon him, and he was maimed in the left hand, the greater portion of index and middle fingers having been amputated. Another has suffered from severe injury to the knee-joint (the left) in Germany, and was subsequently removed to the Provincial District Hospital. I consider him an unhealthy boy, and of low mental capacity.

In consequence of the constant breaking down of the Government steam launch, I have been compelled to visit the school by the road, portions of which are in a very bad condition in dry weather, in winter almost impassible and frequently dangerous.

The dormitory has been greatly benefitted, and the ventilation improved by the removal of the wooden and the substitution of iron bunks; it is still, however, overcrowded.

I have to reiterate my thanks to Captain Breton, the manager, for the assistance and kindness rendered to myself, and the aid given to the boys during my absence. By his prompt action and skill many cases that might have proved troublesome have been averted.

The average number of boys in the school during the period (nine months) was :-

	18	79.				188 0.		
July	•••		•••	60	January		•••	57
August	•••	•••		59	February	•••	***	55
September			•••	60	March		•••	57
October		•••		60				
November			•••	58	Total avera	ge,	•••	169
December			•••	5 8	Three mo		•••	$56\frac{1}{3}$
Total averag	ze			355				
Six mont		•••	•••	$59\frac{1}{6}$				

The diseases most prevalent were—Laryngitis, colds and coughs, dysentry (1 case), abscesses in ears, abscess in thighs (2 cases), ditto in feet, stone bruises, enlarged glands, injury to ankle, diarrhoea, and scabies-itch.

I beg to request permission to remove severe and dangerous cases to the Provincial District Hospital should I deem it necessary, without waiting the delay of telegraphing.

Such cases have neither been frequent nor likely to be so, but emergencies may occur.

The schoolmaster has had a slight attack of enteric fever, necessitating rest and removal for a short time. He is now quite well and resumed his duties.

I have, &c.,

CHARLES F. GOLDSBORO', M.D., F.R.C.P., &c., &c. Medical Officer.

The Secretary Marine Department, Wellington.

RETURN showing the Total Ordinary Expenditure of the Marine Department during the nine months, ended the 31st March, 1880.

Nature	of Expen	ditur	e.			Details of Expenditure.	Totals.	Grand Total.
Head Office :—						£ s. d.	£ s. d.	.e s. d
Secretary				·		375 0 0		
Chief Clerk				•••		262 10 0		
Olerk						150 0 0	1	
Clerk	•••					105 0 0	1	
Messenger		•••	• • • •	•••	•••	45 0 0	1	
Marine Engineer		•••		•••		225 0 0	i	
Draftsmen	•••	• • •	•••	•••	•••	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	}	
Engineer Surveyor		•••	• • • •	•••	•••	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Į	
Local Engineer Surveyor		•••	•••	•••	• • •	75 0 0	1	
Examiner of Masters and Local Examiners	ditto	•••	***		:::	168 15 0		
Inquiries into Wrecks and		···	•••	•••	i i	202 9 0		
Survey of Unworthy Ship	i Casuan		•••			17 15 9	1	
Survey of Onworthy Ship	Ja		•••	•••	··· -	1, 10 0	2,195 9 9	2,195 9 9
Iarbours :—								
Manukau,—						470 0 0		
Salaries	• • •	•••	•••	•••	•••	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	į	
Contingencies	•••	• • •		•••		29 0 5	501 0 5	
Russell,—					1		002	
Salaries	•••					220 10 0	}	
Contingencies			•••	***		8 12 1	000 10 1	
90771				• '	-		228 12 1	
Whangaroa,— Salaries					1	100 0 0		
Salaries	•••		•••	•••	•• -	100 0 0	100 0 0	
Whangarei,—					1			
Subsidy to ferryman	•••	•••	•••	•••		37 10 0		
Contingencies	•••	•••		•••		6 17 6	44 7 6	
Hokianga,—							77 1 0	
Salaries						318 0 0		
Contingencies	•••			•••		17 16 4		
ū	•••	•••			-		335 16 4	
Kaipara,—						521 19 0		
Salaries	•••	•••		•••	•••			
Repairs to Steam Lan		•••	•••	•••	•	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1	
Contingencies	•••	•••	•••	•••	[140 5.11	897 15 3	
Waitara,—								
Salaries						84 7 6	ł	
Contingencies	•••	• • •	•••	•••		40 2 5	104 0 11	
77]-		124 9 11	
Foxton,—						246 5 0		
Salaries	•••	•••	•••	•••		35 19 4	1	
Contingencies	•••	•••	•••	•••		90 IV I	282 4 4	
Rangitikei,—								
Šalaries				•••	.,.	112 10 0		
					-		112 10 0	
Wellington,-					į	7 070 10 17		
Salaries		•••	***	••	•••	1,676 18 11		
Contingencies	•••	•••	•••	•••	•••	68 11 5	1,745 12 4	

RETURN showing the Total Ordinary Expenditure of the Marine Department, &c.—continued.

nen Natur	e of Ex	penditure.				Details of Expenditure.	Totals.	Grand Total.
			······			£ s. d.	£ s. d.	£ s. đ
Wairoa,— Salaries						66 9 4		
Collection of data for	r Sir J	. Coode	•••	•••		336 16 9	400 0 1	
Wangawehi Light,— Maintenance						20.0.0	403 6 1	
	•••	•••	***	•••		30 0 0	30 0 0	
Cauranga,— Salaries Contingencies	•••	•		•••		270 0 3 110 18 2		
	•.•	•••	•••	••• ,			394 5 6	
Gisborne Salaries	•••	•••		•••		266 5 0		
Contingencies			•••	•••		19 4 4		
Collection of data for	r Sir J.	Coode	•••	•••	***	63 9 2	348 18 6	
Wairau,— Salaries						99 0 0		
Contingencies	•••	•••	•••			81 1 2		
Picton,—					ļ		180 1 2	
Salaries	•••		•••			96 15 0		
Contingencies	•••		•••	•••		8 11 8	105 6 8	
Velson,—					ĵ		100 0 0	
Salaries Repairs to Boat Lan	dino	•••	•••	•••		$\begin{array}{cccccccccccccccccccccccccccccccccccc$		
Contingencies		•••		•••	:::	31 19 0		
Removal of Buoy Ro	ck		•••	•••		117 15 0	1,253 19 0	
Motueka,—					ĺ	20 0	2,200 10 0	
Contingencies	•••	•••	•••			28 0 0	28 0 0	
Waitapu,—					Î			
Salaries Contingencies	•••	•••	•••	•••	•••	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		
	•••	***	•••	•••	•••		34 10 0	
Riwaka,— Salaries					Į	600		
• • • • • • • • • • • • • • • • • • • •	•••	•••	•••	•••	•••		6 0 0	
Collingwood,— Salaries		•••				25 0 0	1	
Contingencies	•••	•••	•••	•••		25 13 0		
Karamea,—							50 13 0	
Contingencies		•••				19 15 6	10.15	
Westport,—							19 15 6	
Salaries		•••		•••		307 10 0		
Contingencies	•••	•••	•••	•••		144 19 5	452 9 5	
Greymouth,— Salaries						326 5 0		
Contingencies	•••	•••		•••		168 18 10		
Hokitika,—							495 3 10	
Salaries	•••	•••		***		541 10 0		
Contingencies	•••	•••	•••	•••		69 12 11	611 2 11	
)karito,—				**************************************	.	50.		
Salaries Contingencies		•••	•••	∛		33 6 8 46 10 0		
_	•••	•••	•••	•••			79 16 8	
Catlin's River— Salaries		•••				93 15 0	:	
Contingencies		•••	•••			62 7 10	156 2 10	
Vaikawa,—							136 2 10	
Salaries	•••	•••		•••		37 10 0	37 10 0	
Port Chalmers Graving 1	Dock,-	- .			1		. 3/ 10 0	
Wages and Continge	ncies	•••	•••	•••		1,202 7 4	1,202 7 4	
Vaikouaiti,—							1,204 (4	
Salaries Contingencies	•••	•••	•••	•••		$\begin{bmatrix} 56 & 5 & 0 \\ 9 & 15 & 1 \end{bmatrix}$		
_	•••	•••	•••	•••			66 0 1	
Kakanui,— Salaries						112 10 0	j	
	•••	•••	•••	•••			112 10 0	
Akaroa,— Salaries		•••		***		18 15 0	į	
Contingencies		•••	•••	•••		26 6 6		
Sumner,—							47 1 6	
Salaries				•••		90 0 0	ļ	
Contingencies	•••	•••	•••	•••	•••	1 9 10	91 9 10	
, ,							07. 0.10	
Kaiapoi,— Salaries					1	100 0 0		
Contingencies	•••	•••	•••	•••		3 14 0		
					J.		103 14 0	

RETURN showing the Total Ordinary Expenditure of the Marine Department, &c.—continued.

Nature	of Exper	nditure	•			Details Expendi			Totals.	Grand Total.
Kaikoura.—						£	s.	d.	£ s. d.	£ s. 0
Solomian						~~	_	İ		
Buoys and Moorings	•••	•••	• • • •	•••	• • •	56	5	0	ì	
Continue and Moorings	• • •	•••				118		5	İ	
Contingencies	•••	• • •				4	0	0	150 14 5	
Martin's Bay,					}-		_		178 14 5	
8-1							* 0	. 1		
Contingencies	•••	•••			•••		10		ľ	
Contingencies	•••	•••			• • •	10	13	0	07 0 6	
Stewart Island,—					1-				97 3 6	
Salaries					1		7 0	<u>, 1</u>	ì	
Dataties	•••	•••		•••	•••	7	10	U	7 10 0	
General Contingencies	~ /	4	,						$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Port Lights				. ***				- 1	528 9 11	
~ VI 0 1418 1108	•••	•••	• • •	•••	••• [•••			020 9 11	11,557 14
Lighthouses, —					, [ľ		11,551 12
Salaries						4934	10	6	İ	
Lightkeeper's Travell	ing Fra						18	ő	Í	
Oil	mg Tarh	ense.		, •••		1390	7	7		
Stores and Contingend	nion	•••	•••			1229	4	7	į	
Lighthouse Artificer	2160	•••	. •••	•••		140	Õ	ó		
Samue and Million	•••	••••		•••		140		١		7702 0
Departmental Travelling	Ernange	20				***			2 57 6 8	1102 0
Coastal Buoys and Beacor	ray bense		•••	•••		•••		1	17 8 3	
	•••	•••	. •••			. ***		- 1	33 7 0	
Charts	•••	•••	•••	•••		•••		- 1	47 16 8	
Sundries		•••	•••	•••		•••	,	- 1	194 17 11	
Pension of Widow of late	Lightke	ener T	Deck		•••	•••		l	23 19 10	
		oper 1	JOOR	•••]	•••		- 1-	20 10 10	574 16
"Stella" s.s					}				4503 3 11	0,1 20
Less Ration Money re	havian		•••			•••		- 1	8 0 0	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•••	• • • • • • • • • • • • • • • • • • • •	•••		•••		-		4495 3 1
"Hinemoa" s.s			•••		[•••		- 1	7319 12 3	1100 0 1
Less Ration Money					:::			1	53 19 10	
· ·				***	[•••		1_	00 10 10	7265 12
Naval Training School at	Kohima	rama-						- 1	1	•
Dalaries and Wages						560	5	11	1	
Rent of Station		•••	***	•••		132	0	0	· •	
New Vessel (part cost						328	13	0	į	
Repairs, &c., to Build	ings					91	8	6		
Provisions, Clothing,	and Cor	ntinger	ıcies	•••		893	13	8	. 1	
					} -			<u></u> -		2006 1
Weather Reporting, -									. 1	
Officer in Charge						225	0	0		
Assistant	•••		•••		٠ ا	150		0	1	
Salaries of Reporters				•••		380		5		
Contingencies	•••			•••		2	12	5	(
					-					7 56 10 1
C1 TC + 1										
Grand Total			***	•••				- 1	1	36,555 9
									11	

Return showing the Cost of Maintenance of the New Zealand Lighthouses during the Nine Months ended the 31st March, 1880.

	Name of	Lighthouse.		7	Salaries.	Oil.	Stores and Contingencies.	Totals.
Cape Maria van I Tiri Tiri Ponui Passage Bean Rock Portland Island Napier Bluff Pencarrow Head Somes Island Manukau Heads Brothers Cape Campbell Godley Head Akaroa Head (4 n					£ s. d. 281 16 8 187 10 0 105 0 0 112 10 0 289 18 3 193 15 0 141 13 4 206 5 0 202 10 0 396 5 3 195 0 0 250 11 7 90 0 0 184 7 0	£ s. d. 117 7 5 65 0 0 8 5 0 4 11 0 72 11 0 23 8 2 69 13 0 24 2 0 66 18 0 91 11 0 66 6 9 43 2 6 18 15 0 66 3 9	£ s. d. 32 10 0 †424 5 4 48 6 9 2 16 0 40 6 7 9 1 9 ‡90 1 3 9 0 6 13 17 0 45 2 11 46 1 10 75 16 2 19 8 7 12 2	£ s. d. 431 14 1 676 15 4 161 11 9 119 17 0 402 15 10 226 4 11 301 7 7 239 7 6 283 5 0 532 19 2 307 8 7 369 10 7 111 14 8 258 2 11
Taiaroa Head Cape Saunders (4:	 manthul	•••	•••	•••	195 0 0 99 10 0	$\begin{bmatrix} 54 & 2 & 6 \\ 20 & 5 & 0 \end{bmatrix}$	14 16 9	263 19 3 119 15 0
Nugget Point Dog Island Centre Island Puysegur Point Cape Foulwind Farewell Spit Nelson Tota					215 0 0 298 6 8 307 1 4 284 12 5 200 0 0 290 0 0 207 18 0 4,934 10 6	93 0 0 87 11 3 107 1 3 123 4 0 73 17 6 58 15 0 34 16 6	31 3 9 21 9 9 19 6 8 182 11 6 35 1 6 73 9 10 3 6 7	339 3 9 407 7 8 433 9 3 590 7 11 308 19 0 422 4 10 246 1 1

[†]Includes £280 18s. 2d. for repairs to buildings, and £70 8s. 0d., cost of new paraffin burners. ‡Includes £85 3s. 3d., cost of new paraffin burners.

Return shewing the Quantity of Oil consumed at the Various Lighthouses in New Zealand during the Nine Months ended the 31st March, 1880.

18

	Name of I	ighthouse.		G	allons Consumed
ape Maria Van Di	iemen	•••	•••		626
liri Tiri	• • • •	•••	4.4	}	349
onui Passage		•••		\	44
ortland Island		•••	•••	{	384
lapier Bluff	• • •		•••		127
encarrow Head			•••]	371
omes Island		***			129
Ianukau Heads					3 55
rothers	• • •	1+4			487
ape Campbell			•••		3 53
odle y He ad				{	2 3 4
karoa Head (3 mc	nths)	•••	•••	[100
loeraki	•••	•••	•••	[352
aiaroa Head	•••	• • •		}	282
ape Saunders (3 m	onths)	•••			108
lugget Point	•••	•••	•••		496
log Island	•••	•••	•••		467
entre Island	• • • • • • • • • • • • • • • • • • • •		•••		579
uysegur Point	•••	• • •	• • •		666
ape Foulwind	•••		• • •		394
arewell Spit		•••	***		3 08
elson	•••	***	•••		186
Total	•••				7,397

DESCRIPTIVE RETURN of New Zealand Coastal Lighthouses.

Name of Lighthouse.	Order of Apparatus,	Revolving or Fixed.	Period of Revolving Light.		Tower, built of.	Dwellings, built of.	Date first Lighted.
Cape Maria van Diemen Tiritiri Ponui Passage Portland Island Pencarrow Head Manukau Heads Brothers Cape Campbell Godley Head Akaroa Moeraki Taiaroa Head Cape Saunders Nugget Point Dog Island Centre Island Puysegur Point Cape Foulwind Farewell Spit Nelson	1st order dioptrie 2nd ,, 5th ,, 2nd ,, 2nd ,, 2nd ,, 2nd ,, 2nd ,, 2nd ,, 2nd ,, 2nd ,, 1st order catadioptrie 1st order dioptric 1st ,, 2nd ,, 2nd ,, 2nd ,, 4th ,,	Revolving Fixed "" Flashing Fixed Revolving Fixed Flashing Fixed Flashing "" Revolving Revolving Fixed Flashing "" Fixed	 30" 10' 10" 11' 30"	White Red, to show over Columbia Reef White Red, to show over Bull Rock White Red, over Cook Rock White White White, with red are over inshore dangers White White, with red are over Spit end White, with red arc to mark limit of	Timber Iron Timber ,, Iron Timber ,, Stone Timber Timber Stone ,, Iron Timber Timber Timber Timber Timber Timber Timber Timber	Timber "" "" "" "" "" Stone Timber Stone "" "" "" "" "" "" "" "" "" "" "" "" ""	24th Mar, 1879 1st Jan., 1865 29th July, 1871 10th Feb., 1878 1st Jan., 1859 1st Sept., 1874 24th Sept., 1877 1st Aug., 1870 1st April, 1865 1st Jan., 1880 22nd April, 1878 2nd Jan., 1880 4th July, 1870 1st Aug., 1865 16th Sept., 1878 1st Mar., 1879 1st Sept., 1876 17th June, 1870 4th Aug., 1862
			Į	anchorage			

Return showing the number of Masters, Mates, and Engineers examined during the nine months ended the 31st March, 1880, distinguishing the Number of Successful and Unsuccessful Candidates.

	Ατ	CKLA	ND.	WE	LLING	TON.	D	UNED	IN.	Ly	TTELT	on.	r	'наме	s.	נ	'OTALS	3 .
CLASS OF CHRISTICATE.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.
Foreign-going Masters and Mates Home-Trade Masters and Mates	17 13	12 2	29 15	9	7	16 9	20		20							46 22	19 5	65 27
River Steamer Masters Sea-going Engineers River Steamer Engineers	3 2 9	2 1 	5 3 9	 2 3		 2 3	1 2	 ':: 1	1 3	 3	 2	 5	3		3 	7 4 17	2 1 3	9 5 20
Totals	44	17	61	20	10	30	26	1	27	3	2	5	3		3	96	30	126

Return of Steam Vessels to which Passenger Certificates have been issued in New Zealand during the Nine Months ended the 31st March, 1880.

			ше	TATUE IN	lonths ended th	e orse march, r		
Name of	Vessel.		Tons Register.	Horse- power of Engines.	Nature of Propeller.	Class of Certificate.	Nature of Engines.	Remarks.
Akaroa			43	28	Screw	Sea-going	Compound	
Albion		• • •	591	180	Paddle		Condensing	
Anne Milbank		• • •	44 35	24 30	1	Extended River River	Non-condensing	
Antrim Arawata		· · ·	623	300	Screw	Sea-going	Compound	
Argyle			126	40	"	,,	_	
Beautiful Star		•••	126	30	"	Extended River	Condensing	. *
Bella Black Diamond			$\begin{array}{c} 12 \\ 9 \end{array}$	$\frac{12}{20}$	"	River	Non-condensing	
Blanche		• • •	8	9	"	Sea-going		New Vessel
Charles Edward		•••	89	60 40	Paddle	Sea-going River	Condensing	
City of Cork Clyde		 	29 27	$\frac{40}{32}$	Twin-screw	Extended River	Non-condensing	
Clyde		• • •	34	12^{\cdot}	Screw	River		
Comarang		•••	152	$\begin{array}{c} 70 \\ 25 \end{array}$	Paddle Screw	y, Sea	Condensing Compound	
Coromandel Delta		•••	68 60	30	Paddle	River	Non-condensing	
Devonport			23	12	,,	,,,,		
Dispatch		•••	38	40 30	Screw	Sea-going Extended River	Condensing Companyed	
Durham Enterprise No,		• • •	54 61	30	Paddle		Compound Non-condensing	
Effort		•••	13	12	g "	River	,,	
Eclipse		• • •	8 33	8 15	Screw	Extended River	,,	
Fairy Fingal	-		23	13	,,		"	New Vessel.
Gemini			11	7	Twin-screw	River	Non-condensing	
Glenelg	•	•••	156	75 30	Screw	Sea-going	Compound	
Go-Ahead Grafton		• • •	82 270	100	Twin-screw	,,	"	
Hannah Mokau		• • •	35	15	Screw	River	Non-condensing	
Hawea		• • •	461 107	$\frac{160}{25}$	"	Sea-going	Compound	
Huia Ida			107	10	"	River	Non-condensing	
Ino		· · · ·	24	12	Twin-screw	Extended River		
Iona	•	•••	159 75	65 20	Screw	Sea-going	Compound	
Jane Douglas Jane Williams		•••	75 33	$\frac{20}{15}$	"	River	Non-condensing	
Kakanui		•••	57	22	"	Sea-going	Compound	New Vessel.
Kati Kati		•••	15 138	9 50	11	River	Non-condensing Compound	
Kennedy Kina			39	15	· ,,	Sea-going Extended River	Condensing	
Kiwi			133	30	Paddle	Sea-going	Compound	
Koputai			5	$\frac{120}{20}$	Paddle Screw	River	Non-condensing	New Vessel.
Kopuru La Buona Vent	ura	··· ¦	28 4	4	Screw	River	Non-condensing Non-condensing	Steam Launch.
Lady Barkley		'	30	25	$\mathbf{P}\mathbf{a}\mathbf{d}\mathbf{d}\mathbf{l}\mathbf{e}$	Extended River	Condensing	
Lady Bird		••• ¦	287 23	$70 \\ 14$	Screw Paddle	Sea-going Extended River	Non-condensing	
Lallah Rookh Lilie		•••	10	10	,,	River		
Lioness			26	60	Screw	Sea-going	Condensing	
Lily		•••	$\frac{4}{20}$	$\begin{array}{c} 6 \\ 10 \end{array}$	Screw Twin-screw	River Extended River	Non-condensing	Steam Launch.
Lily Little Irishman		•••	6	8	Screw	River);	New Vessel.
Lyttelton			86	25	Paddl	Sea-going	Condensing	C4
Lyttelton		• • • •	$\begin{array}{c} 6 \\ 62 \end{array}$	14 30	Twin-screw Paddle	Extended River	Non-condensing	Steam Launch.
Manaia Manawatu			103	45		Sea-going	Condensing	
Maori			118	60	Screw 4	River	Non-condensing	
Mensahib			6 43	4 25	,, -	Extended River	Non-condensing Compound	
Minnie Casey Mohaka		•••	20	12	"		Non-condensing	
Moa		•••	49	25	Paddle	River	Condensing	
Mountaineer Mullogh		•••	66 46	25 15	Screw	"	Compound Non-condensing	
Murray		···	78	18	"	Sea-going	Condensing	
Napier		••• i	44	24	**	Extended River	Compound Non condensing	
Noko		!	15 20	$\frac{9}{16}$	Paddle	Extended River River	Non-condensing	
Oregon			117	43	Screw	Sea-going	Compound	
Osprey	•	• • •	28	10	Paddle	Extended River	Non-condensing	
Patea Pearl		• • •	51 14	$\frac{22}{5}$	Twin-screw Screw	Sea-going River	Compound Non-condensing	
Pelorus		• • •	18	12	,,		Ŭ	
Penguin		•••	442	180 18	Paddle	Sea-going River	Condensing Non-condensing	
Peninsula Portobello		• • •	31 11	18	Paddle	- ,,	TOU-COMMEMBER	
Rangatira		• • •	186	50	Screw	Sea-going	Compound	
Result		•••	18 13	23 10	Paddle	Extended River	Non-condensing	
Result Rangiriri		• • •	30	30	Stern-wheel	River	,, ,,	
Ringarooma		• • •	623	300	Screw	Sea-going	Compound 1	~
Riro Riro	•		4	4	,,	River	Non-condensing	Steam launch.
Rose Casey Rosina		•••	99 19	40 14	,,	Extended River	Compound Non-condensing	
Rosina Rotomahana		• • •	138	45	**	Sea-going	Condensing	
Rotorua		•••	576	172	,,	"	Compound	
		•••	74 111	30 70	,,	,,	Condensing	
Rowena					7,	• • • • •	00	
Rowena Samson		• • •	20	10	1	River	Non-condensing	
Rowena	•	···			" "	River Sea-going Extended River	Non-condensing Condensing	

RETURN of Steam Vessels to which Passenger Certificates have been issued, &c.—continued.

Staffa	Name of Vesse	e 1,	Tons Register.	Horse- power of Engines	Nature of Propeller.	Class of Certificate.	Nature of Engines.	' Remarks.
	Tainui Taiaroa Takapuna Tam O'Shanter Tangihua Tararua Te Aroha Titan Tongariro Tongariro Tui Vesta Vivid Waipara Waitaki Waitara Wakatu Wakatu Wallabi Wailau Wallace Wanaka Wanganui Wellington		40 175 67 47 228 58 10 20 563 563 563 62 64 3 13 70 228 11,158 1,158 101 3 64 277 165 261	25 45 30 22 110 20 7 15 140 14 55 10 25 20 5 13 30 25 20 5 13 30 25 20 5 13 20 20 5 13 80 20 20 20 20 20 20 20 20 20 20 20 20 20	Paddle Screw Paddle Screw Paddle Screw "" Paddle "" Twin-screw Screw "" Paddle Screw "" Paddle	Extended River Sea-going Extended River Sea-going River Sea-going River Extended River Sea-going River Sea-going River Sea-going River Sea-going Extended River Sea-going Extended River Sea-going "" River Sea-going "" River Sea-going." ""	Condensing Non-condensing Compound Non-condensing Compound Non-condensing Condensing Non-condensing Compound Non-condensing Compound Non-condensing Compound Non-condensing Compound Condensing Condensing Condensing Condensing Condensing Condensing Condensing Condensing Compound Condensing Condensing Compound Condensing	New Vessel.

RETURN showing the Expenditure on New Lighthouses, &c., out of Immigration and Public Works Loan during the nine months ended the 31st March, 1880.

	Nature of Expendi	ture.	Amount.	
Hokitik	Head Lighthouse unders ,, s Island ,, Store Total		 £ s. d. 1530 9 9 1834 9 11 171 0 5 1 5 6 425 15 0	

RETURN showing the Fees, &c., under the Shipping and Seamen's Act (except Light Dues), the Merchant Shipping Act, the Fish Protection Act, and for Sale of Charts and Dues collected for the use of the Otago Graving Dock during the Nine Months ended the 31st March, 1880.

	Natur	e of Recei	pts.		Amount.	
Shipping and S Merchant Ship Fish Protection Sale of Charts, Dock Dues	ping Act n Act			 •••	£ s. d. 1,278 18 7 81 12 9 111 0 0 35 19 6 2,397 0 0 £3,904 10 10	

RETURN of Masters, Mates, and Engineers to whom Certificates of Competency have been granted, from 1st July, 1879, to 31st March, 1880.

Name of Person.		Rank for which grante	d. Class of Cer	tificate.	Date of Issue.	Number.
Edward Buley			Foreign Trade	e	5th July, 1879	196
Edward Finlayson	•••	First Mate	,,		14th ,, ,, *	197
Ole Helgeson	•••		,,	•••	28th ,, ,, *	153
Robert Carnie	•••	3.47 . (. 7	,,	•••	28th ,, ,, *	198
Hugh Hocking Raddon	•••	•	,,	•••	15th Aug., ,, *	177
Thomas Richards	•••	A 1 3/4 1	,,	•••	1041,	129
Kenneth McKenzie William James Singleton —	•••	man v mar i	"	•••	29nd **	199 200
Thomas Masters		3.6 () 11		•••	1 22110 ,, ,,	201
Alfred Feast		T21		•••	9017 " "	202
Alexander Mathieson	•••	C 174.F	,,		23rd ,, ,, *	204
Anton Irens Anderberg		Only Mate	,,		24th	205
Robert Hunter Caitcheon			,,		[4th Oct., ., *]	91
James Alfred Bysantson	• • •		,,	•••	4th *	206
Horatio Charnock Hayward	•••	Master Ordinary	,,	•••	18th ,, ,, *	207
Roderick Currie	•••	0 134	,,	•••	20th ,, ,, *	208
George Wilson	•••		,,		20th ,, ,, *	209
Charles Walter Taylor	•••	T21* / 3.F /	,,	•••	20011 91 19	210
John Johnson	•••		,,	•••	014 1101., ,,	$\frac{211}{199}$
John Thomas Cartwright John Horne	***	3.6 1	,,	•••	9.J ,, ,,	$\frac{133}{146}$
John Horne William Thompson	•••	O 1 76/0" /	···	•••	3rd ,, ,, * 18th *	$\begin{array}{c} 146 \\ 313 \end{array}$
William Donald	• • • • • • • • • • • • • • • • • • • •	. •	"	•••	19th ,, ,, **	$\begin{array}{c} 313 \\ 214 \end{array}$
Colin McDonald		3.6	1 "	•••	1041 ,, ,,	97
John McKenzie		O 1. 3/6 /	1	•••	1011 " " *!	212
Arthur Charles Horne			,,		97+1 ' *	203
Thomas Angel Fry		,,	,,,		9th Dec., ",	216
John Fairchild			,,		16th , *	217
William Waller			,,		17th, *	218
George Alfred Marks			,,		10th Jan., 1880*	219
George William Ames	•••	Only Mate	,,	•••	19th ,, ,,	220
John Matthew Adams	• • • •		,,	• •••	19th ,, ,,	221
William Harris	•••	1 mar r '/o 10 1	,,	•••	25th Feb., ,,	223
William Wallace Wilson	•••	A 1 3/ /	,,	•••	25th ,, ,,	222
Henry Hudson Walter Manning	•••		} ,,	•••	1 10011 141611011, ,,	226
Walter Manning William Thomas Minchem	•••	_	,,	•••	1041 ,, ,,	$\begin{array}{c} 215 \\ 224 \end{array}$
Walter James Rogers		· ·		•••	1641 **	$\frac{224}{176}$
George Mackay			, "	•••	1.6+1. " *	225
William George Louden		**	,,		16+1 " *	94
Harrison Douglas			,,,		31st ,, ,,	227
Carl Julius Neuhaus			,,		31st ,, ,, *	228
Charles Sievwright			,,		31st ,, ,,	230
August John Paesch	•••	Only Mate	,,		31st ,, ,,	229
George Friedrich August Carl Ba	ron }	Master Extra			01.1	125
Von Schoen	5			•••		
Arnold Claudius Schnauer	•••		Home Trade	•••	12th Aug., 1879	5,176
Edward Charles Windsor	*.**		,,	•••	19th ,, ,,	5,177
Charles Samuel Johnson	•••	• • • • • • • • • • • • • • • • • • • •	,,,	•••	5th Sept., ,,	5,178
Bertrand Napoleon John Graham	•••	74.6	,,	•••	15th ,, ,,	$5,179 \\ 5,180$
T 1 701 C 11'	•••		,,	•**	29th ,, ,, ,, 4th Oct., ,,	5,181
Thomas Angel Fry	• • •		, ,,	•••	417	5,182
August Johnson		7/	1 "		1011	5,183
Peter Douglas		TVT 4	,,		20th ,, ,,	5,184
John Cooper			",		30th ,, ,,	5,185
Thomas Henry Richards	•••		;;		14th Nov., ,,	5,186
Frederick Maundrell Alexander			,,		18th ,, ,.	5,187
George McLeod		,,	,,		9th Dec., ,,	5,189
Duncan Chisholm		Mate	,,		9th ,, ,,	5,188
Nicolas Sciascia		Master	,,	•••	16th ,, ,,	5,043
Samuel Charles Bulkeley	•••	• • •	,,	•••	15th ,, ,,	5,190
John Jeffery Cullen	•••	and the second s	,,	•••	15th Jan., 1880	5,191
Richard Baumgart	••••	F	,,	•••	15th, ,,	5,192
Francis Clarence Tayler	•••		··· •,	•••	25th Feb., ,,	5,193
Louis Sorensen Dean George Saunders	•••	,,,	,,		25th ,, ,, 31st March ,,	5,16 3 5,19 4
Communication Communication	•••	4 4 (01) 177	Foreign Trade	•••	19th Arror " *	63
\$\$7*11** T		01 Ol	i		15+1 *	64
william isaac masters	•••		,,	•••		13
William Laird		1st Class			ora Nov.	1.3
William Laird John Gilroy		0 1 Ol	,,	•••	3rd Nov., ,, *	65

^{*} Issued under the provisions of Her Majesty's order, in Council, of the 12th Feb., 1876, and have the same force as similar certifiates granted by the Board of Trade.

† Fore-and-aft-rigged vessels only.

Return of the Certificates of Service issued to Masters and Engineers in New Zealand during the Nine Months ended the 31st March, 1880.

Name of	Person		Rank for which	issued.	Class of Certific	ate.	Date of Issue.	Number.
James Denis Kelly George Campbell William Scurrah George Buchanan Harry Roberts Burt John Symons William Ballard		 	Master ,, ,, ,, Engineer		Home Trade		12th Aug., 1879 17th Nov., ,, 16th Dec., ,, 6th Jan., 1880 6th ,, 9th July, 1879 22nd Oct. ,,	2,480 2,481 2,482 2,483 2,484 1,034 1,035

STATEMENT showing the Amount of Light Dues collected in New Zealand during the Nine Months ended the 31st March, 1880.

Auckland 1,599 13 lb Onehunga 93 6 Whangaroa 10 17 Kaipara 34 14 Chames 6 10 Russell 96 5 Mongonui 2 14 Hokianga 9 3 Whangarei 11 2 Cauranga 56 17 lc Coverty Bay 106 18 New Plymouth 52 0 Vanganui 63 17 Kangitikei 0 9 Foxton 18 10 Fatea 6 7 Wellington 1,754 19 Kapier 243 13 Wairnu 17,754 19 Kaikoura 11 16 Velson 82 1 Kaikoura 11 16 Vestport 116 11 Kreymouth 103 5 Hokitika 34 9 1 Ayttelton 1,951 12 Jamaru 83 17 Kiurton 9 13 Jamaru 9 13 Jamaru 9 13		Name of	Port at	which Colle	eted.		Amount Co	nected
Auckland 1,599 13 10 Onehunga 93 6 4 Whangaroa 10 17 6 Kaipara 34 14 3 Chames 6 10 1 Russell 96 5 5 Mongonui 2 14 2 Hokianga 9 3 4 Whangarei 11 2 0 Cauranga 56 17 10 Cauranga 56 17 10 New Plymouth 52 0 8 New Plymouth 52 0 8 Vanganui 63 17 8 Sangitikei 0 9 8 Foxton 18 10 0 *atea 6 7 1 Vellington 1,754 19 9 **Qapier 243 13 8 Vairau 17 1 4 **Qicton 82 1 4 **Asvelock 4 6 9 **Calkoura 11 16 7 **Vestport 116 11 0 **Vestport 116 11 0 **Teymouth 9 13 7 **Johnstein 9 13 7 **Jamaru 83 17 9 **Liwerton 9 13 7 **Jamaru 9 13 7 **Liwerton								s. d.
Onehunga 93 6 4 Whangaroa 10 17 6 Kaipara 34 14 3 Chames 6 10 1 Russell 96 5 5 Mongonui 2 14 2 Hokianga 9 3 4 Whangarei 11 2 0 Cauranga 56 17 10 Soverty Bay 106 18 5 New Plymouth 52 0 8 New Plymouth 52 0 8 Nanganui 63 17 5 Cangitikei 0 9 5 Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Capier 243 13 5 Wairau 17 1 4 Electon 82 1 4 Havelock 4 6 9 Caikoura 11 16 7 Velson 458 1 3 Westport 116 11 0 Freymouth 9 13 7 Simaru 9 13 7 Ounedin 9 13 7 Ounedin 2,027 3 5 Ounedin 2,027 3 5 Ounedin 2,027 3 5 Ounedin 489 3 11	Auckland						1,599	13 10
Whangaroa 10 17 6 Kaipara 34 14 3 Chames 6 10 1 Russell 96 5 5 Mongonui 2 14 2 Hokianga 9 3 4 Whangarei 11 2 0 Coverty Bay 106 18 5 New Plymouth 52 0 8 Wanganui 63 17 5 Kangitikei 0 9 5 Coxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Gapier 243 13 5 Wairnu 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Velson 458 1 3 Velson 458 1 3 Vestport 116 11 0 Greymouth 103 5 6 Hokitika 34 9 11 Aytelton 1,951 12 4 Cakanui 9 10 Cakanui 9 10 Dunedin 2,027 3 3 Dunedin 2,027 3 19 8 4 Buff 489 3 11						1		
Kaipara 34 14 3 Chames 6 10 1 Russell 96 5 5 Mongonui 2 14 2 Hokianga 9 3 4 Whangarei 11 2 0 Cauranga 56 17 10 Coverty Bay 106 18 5 New Plymouth 52 0 8 Wanganui 63 17 5 Rangitikei 0 9 5 Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Wairnu 17 1 4 Victon 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Velson 458 1 3 Vestport 116 11 0 Hreymouth 103 5 6 Hokitika 34 9 11 Aytelton 9 13 7 Jamaru 83 17 2 Liwerton 9 10 Lakanui 10 10 Dunedin 2,027 3 Dunedin 2,027 3 Life 489 3 11								
Chames 6 10 1 Russell 96 5 5 Mongonui 2 14 2 Hokianga 9 3 4 Whangarei 11 2 0 Cauranga 56 17 10 Coverty Bay 106 18 5 New Plymouth 52 0 8 Wanganui 63 17 5 Rangitikei 0 9 5 Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Valrau 17 1 4 Victon 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Vestport 116 11 0 Vevestport 103 5 6 Hokitika 34 9 11 Aytelton 1,951 12 4 Simaru 9 10 Cakanui 9 13 7 Damaru 9 10 Cakanui 10 10 Dunedin 2,027 3 5 Ounedin 2,027 3 5 Ounedin 2,027 3 5 Ounedin 2,9404 14 0		•				i		
Russell 96 5 5 Mongonui 2 14 2 Hokianga 9 3 4 Whangarei 11 2 0 Coverty Bay 106 18 5 New Plymouth 52 0 8 Nanganui 63 17 5 Rangitikei 0 9 5 Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Vairau 17 1 4 Picton 82 1 4 Havelock 4 6 9 Caikoura 11 16 7 Velson 458 1 3 Westport 116 11 0 Freymouth 103 5 6 Hokitika 34 9 11 yttetton 9 13 7 Oamaru 9 10 Cakanui 19 8 4 Buff 489 3 11 Total £9,404 14 0						1		
Mongonui 2 14 2 Hokianga 9 3 4 Whangarei 11 2 0 Coverty Bay 106 18 5 New Plymouth 52 0 8 Wanganui 63 17 5 Sangitikei 0 9 5 Coxton 18 10 0 Patea 6 7 1 Vellington 1,754 19 9 Gapier 243 13 5 Vairau 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Velson 458 1 3 Vestport 116 11 0 Greymouth 103 5 6 Hokitika 34 9 11 Liwerton 1,951 12 4 Liwerton 9 13 7 Jamaru 9 10 Lakanui 10 10 Dunedin 2,027 3 10 Dunedin 2,027 3 10 Suff 489 3 11 Total £9,404 14 0			•••		•••	••• [
Hokianga			•••	•••	••	•••		
Whangarei 11 2 0 Cauranga 56 17 10 Everyty Bay 106 18 5 New Plymouth 52 0 8 Wanganui 63 17 5 Sangitikei 0 9 5 Foxton 18 10 0 Latea 6 7 1 Wellington 1,754 19 9 Vapier 243 13 5 Wairnu 17 1 4 Vairnu 17 1 7 1 Vairnu 17 1 4 6 9 Vaikoura 11 16 7 Velson 458 1 3 Vestport 116 10 Greymouth 103 5 6 Hokitika 34 9 11 Aytelton 1,951 12 4 Simaru 83 17 2 Damaru 9 13 7 Damaru 9 10 Cakanui 10 10 Dunedin 2,027 3 5 Ouredgin 2,927 3 5 Ouredgin 489 3 11 Total £9,404 14 0			• • • •	•••	. • •	(
Cauranga 56 17 10 Coverty Bay 106 18 5 New Plymouth 52 0 8 Vanganui 63 17 5 Cangitikei 0 9 5 Coxton 18 10 0 Catea 6 7 1 Vellington 1,754 19 9 Gapier 243 13 5 Vairau 17 1 4 Picton 82 1 4 Gelson 4 6 9 Caikoura 11 16 7 Velson 458 1 3 Vestport 116 11 7 Vestport 103 5 6 Hokitika 34 9 11 Johnstellon 1,951 12 4 Eiwerton 9 10 10 Oamaru 9 10 10 Cakanui 2,027 3 5			•••		••	•…		
Poverty Bay 106 18 5 New Plymouth 52 0 8 Wanganui 63 17 5 Sangitikei 0 9 5 Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Kapier 243 13 5 Vairau 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Vestport 116 11 0 Freymouth 103 5 6 Hokitika 34 9 11 Aytelton 1,951 12 4 Liverton 9 13 7 Jamaru 9 10 Lakanui 10 0 Dunedin 2,027 3 0 Dunedin 2,027 3 10 Dunedin 489 3 11 Total £9,404 14 0			•••	** 1	•••	••••		
New Plymouth 52 0 8 Nanganui 63 17 5 Cangitikei 0 9 5 Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Sapier 243 13 5 Wairnu 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Vestport 116 11 0 Greymouth 103 5 6 Hokitika 34 9 11 Aytelton 1,951 12 4 Cimaru 9 13 7 Damaru 9 10 Cakanui 9 10 Dunedin 2,027 3 5 Buff 489 3 11 Total £9,404 14 0			• • •	•••		•••		
Wanganui 63 17 5 Aangtikei 0 9 5 Foxton 18 10 0 Jatea 6 7 1 Wellington 1,754 19 9 Vapier 243 13 5 Vairau 17 1 4 Vairou 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Velson 458 1 3 Vestport 116 11 0 Greymouth 103 5 6 Hokitika 34 9 11 Aytelton 1,951 12 4 Cimaru 83 17 2 Liwerton 9 13 7 Jamaru 9 10 Cakanui 10 10 Ounedin 2,027 3 5 Ounedin 2,027 3 5 Suff 489 3 11 Total £9,404 14 0			• • •		• • • •			
Rangitikei 0 9 5 Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Sapier 243 13 5 Wairau 17 1 4 Picton 82 1 4 Havelock 4 6 9 Gaikoura 11 16 7 Velson 458 1 3 Westport 116 11 0 Freymouth 103 5 6 Hokitika 34 9 11 yyttelton 1,951 12 4 Einaru 83 17 2 Eiwerton 9 13 7 Damaru 9 10 Cakanui 2,027 3 5 Dunedin 2,027 3 5 Nevercargill 19 8 4 Bluff 489 3 11	New Plymo	uth						
Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Vapier 243 13 5 Wairau 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Vestson 11 16 11 Vestport 116 11 0 Freymouth 103 5 6 Hokitika 34 9 11 Lyttelton 1,951 12 4 Limaru 83 17 2 Liverton 9 13 7 Damaru 9 10 Loxanui 10 10 Dunedin 2,027 3 5 Dunedin 2,027 3 5 Suff 489 3 11 Total £9,404 14 0	Wanganui						63	17 5
Foxton 18 10 0 Patea 6 7 1 Wellington 1,754 19 9 Vapier 243 13 5 Vairau 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Veslson 458 1 3 Vestport 116 11 0 Freymouth 103 5 6 Hokitika 34 9 11 Lytelton 1,951 12 4 Liverton 9 13 7 Jamaru 9 13 7 Jamaru 9 10 10 Donedin 2,027 3 5 Invercargill 489 3 11 Total £9,404 14 0	Rangitikei						0	9 5
Patea 6 7 1 Wellington 1,754 19 9 Kapier 243 13 5 Vairau 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Vestoor 458 1 3 Vestport 116 11 0 Greymouth 103 5 6 Hokitika 34 9 11 Aytelton 1,951 12 4 Liwerton 9 13 7 Damaru 9 10 Kakanui 10 10 Ounedin 2,027 3 5 4 Bluff 489 3 11 Total £9,404 14 0	Foxton					1	18	10 0
Wellington 1,754 19 9 Vapier 243 13 5 Wairnu 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Vestoon 458 1 3 Vestport 116 11 0 Freymouth 103 5 6 Hokitika 34 9 11 Aytelton 1,951 12 4 Cimaru 83 17 2 Ciwerton 9 13 7 Damaru 9 10 Cakanui 10 10 Dunedin 2,027 3 5 Dunedin 2,027 3 5 Sluff 489 3 11 Total £9,404 14 0	Patea							
Vairau 243 13 5 Vairau 17 1 4 Victon 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Velson 458 1 3 Vestport 116 11 0 Freymouth 103 5 6 Hokitika 34 9 11 Ayttelton 1,951 12 4 Cimaru 83 17 2 Liwerton 9 13 7 Damaru 9 10 Cakanui 10 10 Dunedin 2,027 3 5 Duredgin 19 8 4 Sluff 489 3 11 Total £9,404 14 0								
Wairnu 17 1 4 Picton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Velson 458 1 3 Westport 116 11 0 Preymouth 103 5 6 Hokitika 34 9 11 Spit 12 4 Viwerton 9 13 7 Jamaru 9 10 10 Dunedin 2,027 3 5 Invercargill 19 8 4 Bluff 489 3 11 Total £9,404 14 0						1		
Ricton 82 1 4 Havelock 4 6 9 Kaikoura 11 16 7 Velson 458 1 3 Vestport 116 11 0 Freymouth 103 5 6 Hokitika 34 9 11 Limaru 1,951 12 4 Limaru 83 17 2 Liverton 9 13 7 Jamaru 9 10 Lakanui 10 10 Dunedin 2,027 1 10 Dunedin 20 19 8 4 Bluff 489 3 11 Total £9,404 14 0						- 1		
Havelock								
Caikoura 11 16 7 Velson 458 1 3 Vestport 116 11 0 Freymouth 10 3 5 6 Hokitika 34 9 11 syttelton 1,951 12 4 Simaru 9 13 7 Damaru 9 10 Cakanui 10 10 Dunedin 2,027 3 5 Ouredgil 19 8 4 Sluff 489 3 11 Total £9,404 14 0			•••	•••	•••	••		
Vestport		•••	• • •	•••				
Westport 116 11 0 breymouth 103 5 6 Hokitika 34 9 11 Lyttelton 1,951 12 4 Limaru 83 17 2 Liverton 9 13 7 Damaru 9 10 Lokanui 10 10 Dunedin 2,027 3 5 Invercargill 19 8 4 Bluff 489 3 11 Total £9,404 14 0		•••	• • •	•••	• • •	•• [
Total		••	•••		•••			
Hokitika			• • •	•••	•••	• • •		
Ayttelton 1,951 12 4 Cimaru 83 17 2 Liverton 9 13 7 Damaru 9 10 10 Cakanui 10 10 Dunedin 2,027 3 5 Invercargill 19 8 4 Sluff 489 3 11 Total £9,404 14 0				•••	•••			
Simaru 83 17 2 Liverton 9 13 7 Jamaru 9 10 Lokakanui 10 10 Jounedin 2,027 3 5 Invercargill 19 8 4 Bluff 489 3 11 Total £9,404 14 0	Hokitika				•••		34	9 11
Riverton 9 13 7 Jamaru 9 10 Kakanui 10 10 Dunedin 2,027 3 5 Invercargill 19 8 4 Bluff 489 3 11 Total £9,404 14 0	Lyttelton		•••	•••	•••		1,951	12 4
Riverton 9 13 7 Jamaru 9 10 Kakanui 10 10 Dunedin 2,027 3 5 Invercargill 19 8 4 Bluff 489 3 11 Total £9,404 14 0	Timaru	•••		•••			83	17 2
Damaru 9 10 Kakanui 10 10 10 Dunedin 2,027 3 5 nvercargill 19 8 4 Sluff 489 3 11 Total £9,404 14 0	Riverton							
Cakanui 10 10 Dunedin 2,027 3 5 19 8 4 Sluff 489 3 11 Total £9,404 14 0	Oamaru			•		}		
Ounedin 2,027 3 5 nvercargill 19 8 4 sluff 489 3 11 Total £9,404 14 0	Kakanui							
nvercargill 19 8 4 sluff Total £9,404 14 0					•••		2 027	
Sluff 489 3 11 Total £9,404 14 0					. •			
Total £9,404 14 0				,	•	1		
	Didit	•••	•••	• • •	4	••• }	4.09	0 11
Corresponding period of last year £10 280 18 9		Total	•••	•••	•••		£9,404	14 0
	Cox	regnond	ing pe	rind of las	at woor	.,.	£10.389	18 2

Return of Certificates of Competency that have been issued to Masters and Engineers of River Steamers from 1st July, 1879, to 31st March, 1880.

STATEMENT showing the Amount of Pilotage, Port Charges, &c., collected in New Zealand during the Nine Months ended the 31st March, 1880.

	Por	t at wh	ich Collecte	đ.			Pilotag	ge.		Port Charg	es,	&c.	Total.
Auckland*					•••		£ 1,046	9	d. 10	£ 653	s. 5	d. 7	£ s. d 1,699 15
Onehunga		•••	***				9	17	0	94	7	6	104 4
Kaipara			,	•••			271	8	5	224	15	9	4 96 4 9
Chames*			***	•••	***		15	6	10	40	19	11	56 6
Russell			•••		•••		67	0	8				67 0
Mongonui							6	18	0	•••			6 18
Hokianga	• • •						86	4	7	•••			86 4
Tauranga	•••	•••					36	16	4			i	36 16
Poverty Bay	•••	• • •	•••	•••	•••	•••	37	4	6				37 4
	•••	•••	•••	***	•••	•••	18	7	9	15	17	8	$34\overline{5}$
New Plymouth*	• • •		•••	•••	•••		29	11	0	28	6	9	57 17
Vaitara	•••	•••	•••	•••	• • •	•••		17	1		U	v	377 17
Vanganui*	•••	• • •		• • •	•••	•••			10	•••			5 19 1
Rangitikei	. •	•••	•••	•••	•••	•••	92		8	•••			$\begin{array}{cccccccccccccccccccccccccccccccccccc$
oxton			•••	•••	•••	•••		5		:	10		
Patea*			•••	•••	• • •		12	8	3	5	19		
Wellington		• • •	• • •		• • • •	•••	555	4	5	1,106		11	
Vapier*	• • •			•••	•••	}	715	3	6	286	4	8	1,001 8
Wairoa			• • •				92	9	9	•••			92 9
Havelock		•••							- 1	1	18	5	1 18
Velson							449		11				449 8 1
Hokitika					• • •			10	4	•••			19 10
Lyttelton*					•••]	2,846	18	6	1,594	5		4,441 3
Timaru*										- 20	5	7	20 5
)amaru*	•••	•••		•••	•••		•••			266	- 7	10	266 7 1
Kakanui				•••						1	9	8	1 9
Dunedin*							2,008	15	0	1,150	14	2	3,169 9
Moeraki	•••	•••	•••	•••	•••		-	10	•	1	9	8	1 9
Waikouaiti	• • •	• • • •	•••	• • • •	•••		•••			î	3	ő	$\hat{1}$ $\hat{3}$
	•••	•••	•••	•••	•••					ō	10	8	0 10
Port Molyneaux		•••	•••	•••	•••		•••			59	13	6	59 13
nvercargill*	• • •	•••	•••	• • •	• • •	•••	444	c	ا ر				
Bluff*	•••	•••	•••	***	•••		444	6	4	338	6	8	782 13
Riverton*	•••	•••	•••	•••	•••		6	18	0				6 18
	Totals		•••		•••		£9,252	10	6	£5,892	19	2	£15,145 9

^{*} Revenue of Harbour Boards.

The pilot was in error in starting an hour after the appointed time, and after the tide at the bar was ebbing. The stopping of the tug when the master thought the tow-line had parted, was the immediate cause of the when the ship began to bump, the pilot at the time being in charge, and the master did wrong in allowing it, and repeating his orders. After the ship stranded, the tug should not have left her helpless for so many hours. William Loven-Being there, it was a mistake to full load her, as vessels The master of the tug should not have orders from the pilot what to do. Note, -One of the was wrong for the Harbournaster to assume command after the vessel bumped, and for the pilot to start at the time he did. Simon Saunders. drawing more than 19 feet are subject to more than ordinary risks in entering and departing from the harbour. The Harbourmaster should not have assumed command. subsequent confusion, which was intensified by the divided stopped but have gone dead slow, until he had distinct nautical assessors did not agree with the decision that it It was a mistake to send a vessel of the Benares' draught of water to this harbour in the present state of the bar. Master mistook Rangitikei River for the William Miller. An-Name of Master. Henry Hansen. John Kingdon. There was a series of mistakes and errors David Bruce Heavy weather caused vessel to spring a William leak Inglis. dale Wrecks and Casualties to Shipping reported to the Marine Department from the 1st July, 1879, to the 31st March, 1880. Manawatu, and there was insufficient water in the former river for the Sarah did not show her light in time Strong breeze | Vessel stood too long on Northern tack Vessel anchored too near the Island Finding of Court of Inquiry. of judgment. command. Strong breeze Fresh gale Light, Light Force. : : Wind. S.S.E. Direction. Souther-S.S.E. East N.E. S.E. Þ New About one mile North Three miles South-Ward's Island, in Wellington Har-bour North Spit of Rangi-tikei River On the bar of Otago Place where Casualty happened. of Tiri Tiri, N.Z. west of Opunake North Spit, River, N.Z. harbour NorthNumber ofi Lives Lost. : : : : : : : total loss Stranded; partial loss Stranded; Stranded; partial loss partial loss Collision; artial loss Nature of Casualty. Foundered Stranded total loss Nature of Cargo. Ballast Ballast General Guano Coals Wheat : Passen-gers. : : ፥ : : : Number of * Crew. မ က co Ç1 311646 Register Tonnage. 9 3 96 44 (25 77 Aft Schooner 4-Masted Barque Schooner Fore-and-Schooner Schooner Schooner Cutter Rig RETURN of \ Lake Michigan, \ 3 years \ Sarah Richard and Mary, Arthur Wakefield, Name of Vessel; also, Age and Class. Jane Anderson, Benares, 2 years; 100 A1. Day Dawn, 12 years 11 years 5 years 6 years က 13 of Casualty. Ξ 14 13 1879. July 2 Date : : : : •

									29						n	13.
Josa Bruno	Samuel Richard	Wm. Solloway Lane.	Olof Johnson.	Wm. H. Manson	George Philip	Kenneth Mc- kenzie.	Thomas Swede,	Thomas Whit-	well. Thomas Herbert. John Bilby.	Peter Doile	Edward Miles	John Scott	William Smith	John Russell	Eugene M'Carthy	James Wills
Vessel not put about soon enough.	Casualty caused by strong set of tide.	Vessel kept too close in, there being no break on the reef owing to the water being name ally smooth	Vessel grounded on a shoal not marked by beacons.	Vessel sprang a leak through one of hold beam fastening bolts becoming loose while on passage from Newcastle to Lyt- telfon, and she had to mit into Nelson	Man killed by main boom falling on him, hooks having eigen way	Master committed error in judgment in overrunning his distance, and not bringing up in sufficient time to take	soundings. Vessel sprung a leak, and was abandoned	Insufficient water on the bar	Heavy rollers breaking into the hay caused vessl to carry away her moor-	rings and unit agnote. Vessel grounded on a spit recently formed	Master committed grave errors of judgment in keeping so near the shore, relying entirely on coast bearings, and not taking soundings. After the vessel missed stays, proper efforts were made to avert the wreck and to save	Being unable to ride at anchor owing to gale, vessel was run ashore to save life		Heavy sea struck vessel and washed a	Vessel stranded on North Spit of Mokau River, as owing to heavy sea on bar	master topic command of ther Water, waster there was a current which set vessel to the rock
[Strong,	Strong gale	Moderate breeze	Moderate	Strong	Strong gale	Strong breeze	Fresh breeze	Light	Calm	Calm	Light	Moderate gale	Moderate breeze	:	Light	Calm
s.w.	S.S.E.	W. by S.	W'sterly	E.N.E.	East	North	S.W.	S.W.	÷	:	North	N.N.W.	ż	:	N.E.	:
Jackson Reef near Cape Colville, Auck-	Kandavau Reef, Fiji	Lat. 19° S., long. 174° V	Southern extremity of North Spit, Hoki-	::	50 miles N.W. of	On beach about 100 yards east of breakwater at entrance	to lort of Napher At sea, Kaikoura, bearing W. by N., 20 miles distant	Mouth of the Grey	Constant Fay. Charleston, County of	North beach, inside bar, Manawatu Iliver, West Coast, N Z	On Farewell Spit, Cook Strait, N.Z.	h Spit at	tika Kiver Hokitika bar	25 miles south Cape	Fourwing North Spit of Mokan River	On a rock in Tory Channel
:	:	:	÷	÷	7	:	:	:	П	:	;	;	-	, -	ŧ	•
Stranded; total loss	Stranded;		Stranded; total loss	Leaky	Loss of life	Stranded; partial loss	Sprung a leak and aband'ned;		Stranded; total loss	Stranced; no damage	Stranded; total loss	Stranded; partial loss	Loss of life	Loss of life	only Stranded; partial loss	Stranded; partial loss
Balla	Maize	Copra, &c.	Timber	Coals	:	Timber	Timber	General	:	General	Coal bal. last	General	Ballast	N.Z. pro	duce General	General
í	÷	က	:	:	:	:	: 2	13	:	-	:	:	TC .	:	:	:
60	9	6	4	6	:	4	9	18	ಣ	13	20	10	-1	:	4	:
24	72	167	51	328	143	65	78	90	30	69	925	98	138	29	35	06
Cutter	Schooner	Brigantine tine	Schooner	Barque	Brigantine	Schooner	Schooner	Schooner	Schooner	Schooner	Barque	Schooner	Brigantine	Ketch	Ketch	Schooner
Heather Bell, 13 years	Energy,	Myrtle, I year	Garibaldi, 9 years	Canny Scot, 14 years	Eliza Firth,	Kate McGregor, 5 years	Laurel, 3 years	Charles Edward	Shepherdess, 7 years	Stormbird (s.s.), 25 years	Messenger, 25 years	Lyttelton (p.s.) 20 years	Angusta, 8 years	Clematis,	Hannah Mokan (8.8.), 16 months	Huia (s.s.), l year
July 24	,, [24	Aug. 4	9 "	œ :	,, 12	Sept. 6	œ •	" 11	" 1	17	" 19	,, 21	,, 24	Oct. 4	,, 14	,, 18

RETURN of Wrecks on which Inquiries have been held, &c.-continued.

Name of Vessel;		-	1 4	Number of	r of			Number			Wind.		
Date of also. Casualty. Age and Class Rig. Crew. Rassen. Crew. Rassen. Cargo. Casualty.	Crew. Ressen. Cargo.	Passen- gers.	Passen- gers.	Nature of Cargo.		Nature of Casualty.		of Lives Lost.	Piace where Casualty happened.	Direction	Force.	Finding of Court of Inquiry.	Name of Master.
Wellington (s.s.), Schooner 279 General Breaking of the pis-	279 General	General	General	General		Breaking of the pis-		:	Approaching entince to Wellington har-	:	::	Piston rod broke when it had been welded	John Anderson
24 Stormbird (s.s.), Schooner 69 General Loss of life	69 General	General	General	General		ton roa Loss of life		-	n Wellington har-	:	:	Man fell overboard when securing the	Peter Doile
Brigantine 115 7 Ballast Los	115 7 Ballast	115 7 Ballast	Ballast	Ballast		only Loss of lif	Φ.	H	Off Cape Egmont	N.W.	Moderate	anchor	William Francis
Nov. 12 Helen and Jane, Schooner 60 4 Oats Stranded. Melbourne, A. 1 1 year	60 4 Oats	4 Oats	Oats			Stranded total los	ss	:	Mussel Beach, Te Wae-wae Bay, Fov- eaux Strait	E.N.E.		Loss caused by missing stays in consequence of heavy ground swell	George Sampter
	86 9 20 Island	9 20 Island	20 Island	Island		Stranded	•• ,	:	Rorotonga	E.S.E.	Moderate	. :	Francis Morton.
8.s., Schooner 865 60 135 General 18; 6	Schooner 865 60 135 General	60 135 General	135 General	General		Loss of lif	.0	, 1	Lat. 33° 15′ S., long. 153° 33′ E.	S.W.	Hurricane	Heavy sea came on board and washed man over	Thomas Under- wood.
Barque 460 16 4 Cattle	460 16 4 Cattle	16 4 Cattle	4 Cattle	Cattle		Stranded		:	In Auckland Harbour	North	Fresh	Pilot in charge did not round to in time	John Broomfield.
22 John Watson, Three 209 9 Coal Stranded Al Lloyds; 4 years; Masted 10 years	Three 209 9 Coal Masted Schooner	9 Coal	Coal	Coal		partial 1085 Stranded		:	Off coast, about 20 miles south of Timaru	Calm	į	Vessel struck on Patiti Reef, and subse- quently went down. No blame at- tached to Master	Robert Storm.
	64 13 8 General	13 8 General	8 General	General		total loss Stranded; partial loss		:	West Ledge at entrance to Welling-	S.S.E.	Moderate breeze	Culpable neglect of Master in leaving direction of vessel and taking helm while in position of danger. His certificate energy of the property of the contraction of t	Thomas Holmes,
25 Nelson, Schooner 56 5 Coal Stranded; 34 years	56 5 Coal Str	5 Coal Str	Coal Str	Coal Str	Str	Stranded; partial loss		:	North Spit, at entrance to Waitara	N.N.W.	Strong breeze	draws suspensed to three months, and he ordered to pay costs of inquiry Grounded on bar when entering	Olaf Johnson.
16 Huon Belle, Ketch 42 4 Cement Stranded; and total loss	42 4 Cement and Timbon	4 Cement and Trimbon	Cement and Trimbon	Cement and Timbor		Stranded; total loss		:	Kiver Goat Island, Dunedin Harbour	N.E.	Fresh	Wind dropped as vessed was passing through the Narrows	Benjamin Bern.
m, LSchooner 96 6 Sleepers	96 6 Sleepers	Sleepers 0	Sleepers	Sleepers		Stranded;		:	Manawatu Bar	N.W.	Light	Bar had silted up unknown to Pilot	Simon Saunders,
Vindex Schooner (40 Collision; partial loss		:	:	:		Collision; partial loss	- 70	:	Off North Head, Auck- land Harbour	ż	Light	Collision caused by steamer shaving too close to Vindex, coupled with wheel	
Tam O'Shanter, s.s., Cutter (22 2 General 4 years	(22) 2	:	C3		General			:			Light	chains giving way	Michael Leman.

	Thomas Under-wood.	John Crawford	Hiscox. James Malcolm.	Samuel Hyne.	William Burk.			Robert Baxter.	Frederick Jones.	John Paton.	William Lamb.	Hamiora Arona.	George McKen-	zie. John Anderson.
-	ne Rotomohana on a m, with a large num- s, to a place seldom steamers, and pre- d, was highly inju- rehensible; and nthe a pilot who did not chart was blameable, hibility did not rest	With the master Casualty caused by failure of wind	Vessel grounded when entering harbour	caused by master thinking he lood tide when there was only		and its bearing observed, no other observation of it was made until 9.30 per When first observed it bore N.N W., and ship's course was N.N.E., and she was going about 4 knots an hour; thus even an occasional notice of her position by her steering and the bearing of light would have shown that she was not keeping her N.N.E.		₽0		Master did not act prudently; but as rock was not defined on the chart, he was exonerated from blame	5		ed when vessel was entering	one river. The principal sails having blown away, J the vessel was beached to save life and property
	Eight breeze	•	Gale	Calm	Light			:	Light	Fresh breeze	Very hard	Strong gale	Light	Whole gale
-	×. ×.	Variable	Easterly	Calm	E.S.E.	V		:	Z E	N.N.W.	N.N.W.	v.	S.E.	ठ ठ इ
	Rock off Great Barrier Island, Hauraki Gulf	Kaipara Heads	Tauranga Harbour	Near Muka Muka Rocks, Palliser Bay	Bull Rock, East Coast North Island, New Zealand		# · · · · ·	Bay	Shag Point	Sunken rock about mile S.E. of the reef on the western point Lyell Bay, Cook Strait	ngo, lat.	White Island, Bay of	North Spit, Waima-	Mouth of the Ure River, about 6 miles from Flaxbourne, East Coast Middle Island of New Zea- land
	ŧ	፧	÷	:	:			፥	-	÷		:	፧	:
	Stranded; slight damage	Stranded;	Stranded; slight	Stranded; total loss	Stranded; partial loss			partial loss	Loss of life	Stranded; partial loss	Stranded partial loss	Stranded;	Stranded;	Stranded; total loss
	Coal	Ballast	General and Coal	Ballast	Stone		,	General au	General	Coal	General	Sulphur	Timber	General
	320	;	70	;	p=d		7	# -	01	10	4	:	:	:
_	63	7	31	œ	œ	*	ĸ	•	<u> </u>	13	rō	C3	41	r
-	865	139	442	210	200		5	5	146	661	58	12	58	130
	1 00	Brig	Schooner	Brigantine	Schooner		Ketoh			Barque	Schooner	Cutter	Schooner	Schooner
_	Roto AA 1, 7		Penguin, s.s., 15 years	Progress, 2 years	Sophia		e e c	2 years.	Beautiful Star, s.s., 18 years	တ်	Caledonia, 2 years.			Rosannah Rose, 33 years
1880.	Jan. 1	د ت	,, 13	., 23	58		Feb. 20	6	Feb. 21	63		Mar. 10	,, 20	









