

1916.  
NEW ZEALAND.

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# DEPARTMENT OF INTERNAL AFFAIRS

(ANNUAL REPORT OF THE) FOR THE YEAR ENDING THE 31ST MARCH, 1916.

*Laid on the Table of the House of Representatives by Leave.*

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SIR,—

Department of Internal Affairs, Wellington, 1st July, 1916.

I have the honour to submit herewith the annual report of the Department for the year ended 31st March, 1916. In former years it has been the practice to present to Parliament separate statements on various aspects of the Department's work, but this year it has been considered desirable to publish all these separate statements in one report. I have accordingly taken the opportunity briefly to refer to the organization and functions of the Department as a whole, and in particular to the work of the Head Office, which has not previously been dealt with in any of the published reports.

I have, &c.,

J. HISLOP,

The Hon. G. W. Russell, Minister of Internal Affairs, Wellington.

Under-Secretary.

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## REPORT.

### I.—THE ORGANIZATION AND FUNCTIONS OF THE DEPARTMENT.

Of all the Departments of the Public Service the Department of Internal Affairs is perhaps the one the organization and functions of which as a whole are least known to the people of the Dominion, and this despite the fact that it is the oldest Department, having begun its existence in 1840, before the advent of responsible government, and is thus within twenty-four years of completing the one-hundredth anniversary of its establishment. The reason of this is undoubtedly the fact that the Department's activities cover such a variety of subjects, many of which have no connection with one another, and people dealing with it on as many as half a dozen different matters are naturally still in the dark as to what the Department does in other directions. It is not known to the public, for instance, as a unit of the Public Service dealing with such closely connected matters as those within the sphere of the Lands and Survey or Public Works Departments, still less do its activities cover one matter on a scale comparable to that on which the Treasury deals with the matter of finance. Again, the work of the sub-departments—*e.g.*, the Dominion Laboratory, the Registrar-General's Office, and Census and Statistics Office—to such a great extent involves direct dealings between the public and the sub-departments, without reference to the Head Office itself, as to obscure the fact that they are essentially branches of the Department. Finally, in exercising some of its most important functions the Department does not come into contact with the public.

It is not necessary to trace the history of the Department nor to show how it has been the parent of many of the present Departments. In so far as it exists for the administration of Acts of the Parliament of New Zealand the scope and variety of its activities may be judged from the following list of some twenty of the fifty Acts dealt with in whole or in part by the Head Office:—

Aliens.	Motor Regulation.
Animals Protection.	Municipal Corporations.
Cemeteries.	Race Meetings.
Counties.	River Boards.
Fire Brigades.	Road Boards.
Fisheries (Part II).	Science and Art.
Gaming.	Town Boards.
Land Agents.	War Funds.
Land Drainage.	Weights and Measures.
Local Elections and Polls.	

In addition to administration, the Department has to consider and report for your information on all suggestions for amendment of these Acts, the number of suggestions put forward by the Municipal and Counties Associations alone during the past two years numbering more than 150.

In so far as the Department is not engaged in administering legislation it has certain functions that distinguish it from other Departments. For instance, it is the Department of record for all matters of State—that is, matters affecting the Government of New Zealand. It is the channel of communication between Cabinet and Departments on matters affecting the Service as a whole, and it exercises all the functions of a central Department. In this last-mentioned connection all matters that do not properly fall within the functions of any other Department are dealt with here.

### II.—THE WORK OF THE YEAR.

#### 1. THE EFFECT OF THE WAR ON THE DEPARTMENT.

With the eight months of war that fell within the financial year 1914–15 came a considerable increase in the work of the Department generally, but more particularly in that of the Head Office, and this war increase more than doubled during the financial year 1915–16. There has, of course, been no precedent to help in dealing with the entirely new matters that have arisen, and the preliminary work of thinking out methods and organizing the necessary machinery has been no light one.

*Shipment of Gift Goods and Transmission of Moneys.*—The first work of this description falling to the lot of this Department—namely, the transmission of gifts in kind and money to England—has continued throughout the past year, and in August last a new phase of this work commenced—the shipment of hospital requisites and comforts for our New Zealand troops in hospital in Egypt, Malta, &c.

I here take the opportunity of mentioning the valuable help rendered by the officers of the Defence Department and by the various shipping companies.

The value of gift goods shipped through the Department since the outbreak of war amounts to £139,870 (£80,000 for British and Belgian relief, £8,095 for Red Cross purposes in England, and £51,775 for hospital requisites and comforts for New Zealand troops in hospital in Egypt, Malta, &c.).

The Department continues to be the official channel for remitting relief-moneys to England. During the year the Department has handled £340,335 3s. 6d. The principal item is one of £202,077 7s. 7d. for Belgian relief.

*War Funds Act, 1915.*—The inquiries made by the Government prior to the passing of this Act entailed considerable work by this Department, and the administration of the Act itself has necessitated the organization of a special staff.

The National War Funds Council provided for by section 3 has been set up, and was called together in November.

There have been two conferences of representatives of Patriotic Societies. The second conference affirmed the desirability of a federation of New Zealand Patriotic Societies to be managed by an Advisory Board. Pending the establishment of the federation a provisional Advisory Board consisting of representatives of the most important societies has been appointed. The Board has twice met since the close of the financial year, and its value, even at this early stage, is apparent.

Looking back it is clear that the conferences, the Board, and the work carried out under the Act have been the means of furthering the necessary co-operation of Patriotic Societies in their common object, of preventing overlapping in their work, and helping to co-ordinate their work and that of the Government.

The report of the officer in charge of the War Funds Office is printed in the appendix hereto. Regulations under the Act have been issued.

*War Contributions Validation Act, 1914 (No. 2).*—During the year six funds and the conditions of control and expenditure thereof were approved.

*Permits and Passports.*—The War Regulations of the 15th November, 1915, making it necessary for persons leaving New Zealand to be provided with permits granted in accordance with the regulations, are being administered by this Department, and have enormously increased its work, and in addition that of the Police Department.

It has also been considered desirable in the interests of the travelling public to establish agencies in the more important ports of the Dominion. The complete list of agents outside Wellington is as follows: At Auckland and Dunedin, Registrar of Births; Christchurch, Government Tourist Agent; Oamaru and Hokitika, Chief Postmaster; Dargaville, Postmaster; Bluff, Customs Officer; Whangarei, Thames, Gisborne, Napier, Wanganui, New Plymouth, Blenheim, Timaru, Invercargill, Greymouth, Westport, and Nelson, the Collector of Customs.

The detail work involved is great, and each case is the subject of a special report from the Police Department. The fact, too, that in the great majority of cases very little time is available in which to make the necessary inquiries has added not a little to the strain upon the officers dealing with the work. In the Head Office alone, in addition to the Assistant Under-Secretary and myself, I have found it necessary to detail no fewer than eight officers to deal entirely with permit and passport matters, and it has also been necessary to increase the record and accounting staffs through this exclusively war work. With the exception of Sundays and Christmas Day the office has been open for the conduct of permit business every day since the 15th November last. The overwhelming increase in the issue of passports during the past five months is due principally to the provision in the Imperial Defence of the Realm Regulations making it necessary for British subjects desiring to leave or enter the United Kingdom to be furnished with passports. In the earlier months of the year there had been a considerable increase through a similar necessity in the case of travellers to France, Egypt, and other countries.

From the 1st November, 1915, to the 31st March, 1916, 870 passports were issued, as against a dozen or less in an ordinary year. This is exclusive of permits, which run into several thousands.

*The Gaming Amendment Act, 1915.*—The passing of this Act for the purpose of regulating the raffling of articles for patriotic objects, and for these objects allowing property of any nature to be the subject of raffle permits instead of, as hitherto, only works of art, literature, &c., has resulted in a further large increase in the work of the Department. It has not, however, been necessary to increase the staff for this purpose. It is pleasing to note that the stringent requirements of the Department have been met in every case. Whilst enabling patriotic gifts which were ordinarily unsaleable to be thus easily turned into money, the strict limitation and advertising of raffles to the provincial districts in which they originated has prevented anything in the nature of a gambling mania, whilst the utmost care is taken to secure to the fund the full benefit possible of the money thus raised. A very large sum has thus been obtained for patriotic purposes which would not otherwise have been secured.

*Relieving Staff.*—The relieving staff of this Department was instituted by the Public Service Commissioner before the outbreak of war to furnish a staff of officers who should be available for emergency work in all Departments as occasion required. The war has been the means of largely increasing this staff, the practice up till quite recently being, where possible, to meet the call for assistance through officers going to the front by appointing cadets who were placed on the relieving staff. These cadets have now been placed on the establishment of various Departments, and the relieving staff is now used as a means of supplying clerical assistance to deal with extra work caused by the war. This has had the effect of largely increasing the staff-work of the Department.

*Sub-Departments.*—The effect of the war on these branches of the Department is shown in the attached reports from the officers in charge, but special reference may here be made to a few points. The Government Statistician is now completing the work in connection with the National Register. I take this opportunity of placing on record the extremely valuable help rendered by the Post and Telegraph Department. Without the services of the expert sorters and other officers loaned by that Department the preliminary sorting and classifying of the schedules could not have been completed as efficiently and expeditiously as was actually the case. The report of the Registrar-General shows the effect of the war on marriages, the increase during the year being 894.

*New Zealand Gazette.*—During the year no fewer than thirty-nine *Gazettes* Extraordinary, containing matter dealing with the war, have been issued.

## 2. THE ORDINARY WORK OF THE HEAD OFFICE DURING THE YEAR.

Despite the war the usual work of the Department, particularly in so far as it begins in the first place by correspondence from the general public, has not only suffered no diminution, but, except in one or two directions, has shown a steady increase.

Applications for naturalization have naturally declined as the Government's decision that no letters are to be issued during the war has become known.

Two factors have contributed to a decline in the number of permits granted under the Race Meetings Act, 1909—the war and the fact that a number of clubs are now holding totalizator licenses under the Gaming Amendment Act, 1914. The recommendations of the Commission appointed under that Act have been given effect to.

(1.) *Local Government.*

The war has had comparatively little effect on matters affecting local government, except of course that legislation is practically at a standstill.

*Boroughs and Town Districts.*—The inclusion of the Eden Terrace Road District in the City of Auckland adds another to the list of local bodies absorbed by the city. The extent of this movement towards the creation of a Greater Auckland is shown by the fact that in the last five years the boroughs of Grey Lynn and Parnell have united with the city, and the Arch Hill, Remuera, and Eden Terrace Road Districts have been included within its boundaries. Within the same period another of the adjoining road districts, Mount Albert, has become a borough, while across the harbour the constitution of the Borough of Takapuna has carried the sphere of municipal government further into Waitemata County. A petition was presented during the year for the constitution of a borough at Avondale, but the Commission's report being unfavourable the request was declined.

In Dunedin there has been very marked activity, the boroughs of Mornington and Maori Hill and the Bay Town District having been united with the city from the 1st January, 1916.

A petition for alteration of boundaries of the City of Christchurch by the inclusion of the Opawa Riding of the Heathcote County has been received and is now being dealt with.

No alteration of the City of Wellington boundaries has been made during the year.

Two new boroughs, Te Awamutu and Paeroa, came into existence during this year; the Borough of Napier and the Napier South Town District were united; and the boundaries of the boroughs of Pukekohe, Port Chalmers, and Gisborne were altered. A petition for alteration of the boundaries of Te Aroha Borough was declined.

In the minor sphere of municipal government—the town district—there has been a considerable amount of activity: four new districts have been constituted, and the boundaries of two (Morrinsville and Mangapapa) altered. Two districts were declared not to form part of the county within the boundaries of which they are situated. Otorohanga, the only remaining township constituted under the Native Townships Act, is about to be made a town district, in order to secure the advantages of the better form of local Government.

*Counties.*—No new counties were created by Act either in 1914 or 1915, but there has been record activity among County Councils respecting alterations of county boundaries. The legislation of 1913 has much facilitated departmental dealings with this question. Prior to that year the only method of effecting an alteration (apart from legislation, of course) was by Order in Council upon presentation of an agreement between the Councils concerned. There was no provision to meet the case where these Councils disagreed. Under the Counties Amendment Act, 1913, the Governor in such a case appoints a Commission to inquire and report, and then alters the boundaries in accordance with the report.

During the year alterations of the boundaries of Manukau, Franklin, Masterton, Eketahuna, Opatiki, Waiapu, Waitotara, Castlepoint, Hawera, Eltham, Kairanga, and Horowhenua Counties have been proclaimed. Alterations of the boundaries of the counties of Taieri, Maniototo, and Waihemo, petitioned for by ratepayers of Maniototo and Waihemo Counties, were not made, the Commissions' reports not being favourable.

The question of including portions of Taupo West County (in which the Act is not in force) in adjoining counties has occasioned a great deal of correspondence. Undoubtedly the most important proposal under section 3 of the Counties Amendment Act, 1913, that has yet come before the Department is that dealt with in petitions praying for alterations of the North Auckland counties of Hokianga, Hobson, Whangarei, Bay of Islands, and Mangonui. Commissions have been appointed.

*Road Districts.*—The merging of road districts in counties is proceeding gradually. One was merged during the year. There are now 117, as against 140 at the end of 1912.

*Land Drainage and River Districts.*—The increase of settlement and the consequent demand for land operate to make the number of both these bodies an ever-increasing quantity. One drainage district was constituted during the year, and the boundaries of two altered. There are now fifty-three drainage districts and forty-nine river districts, as against forty-five and forty-three respectively at the end of 1912.

The provision in the Land Drainage Amendment Act, 1913, enabling a Drainage Board to petition for inclusion within the boundaries of its district of outside lands benefiting from its operations has been proved to be just and equitable. A number of petitions have been presented under it, and in every case the Commission has reported favourably to the Board.

No river districts were constituted during the year, but two petitions on which action was not completed by the 1st April have since been disposed of, the district prayed for being constituted in each case. Certain powers of a Drainage Board were conferred on the Otanomomo River Board under the River Boards Amendment Act, 1913.

*Legislation of 1915.*—Very little legislation affecting local government was passed in the session of 1915, the most important being the Cost of Living Act, the Local Authorities Empowering Act, the Lake Coleridge Water-power Act, and short amendments of the Municipal Corporations and Counties Acts.

Regulations have been drafted under the Cost of Living Act, but not yet issued. So far there has not been any demand on the part of local authorities for the powers conferred by the Act. This is to be regretted, as the powers therein conferred upon Borough Councils are capable of being employed by them in not only reducing the cost of living, but also in securing supplies of pure food.

Two applications under the Lake Coleridge Water-power Act for the powers of Borough Councils with respect to lighting and the supply of electricity have been received from County Councils, and are at present under consideration.

The Order in Council contemplated by section 5 of the Counties Amendment Act giving extended powers for the licensing of vehicles in certain counties has been issued.

One application (by the Heathcote County Council) under section 12 of the Counties Amendment Act, for the powers of Borough Councils with respect to drainage and sanitation, has been received, and the necessary Order in Council has been gazetted.

*Future Legislation.*—The war has naturally interfered with prospective local-government legislation, and the accumulation of requests for amendments of various Acts is now even greater than before the session of 1913, when everything in hand was disposed of. The Municipal Conference met in 1914 as usual, and the result of its deliberations was over one hundred requests for legislation. The Counties Conference, due in 1915, was abandoned, and the Municipal Association has decided not to hold its conference this year. Thus the two head bodies connected with local government have recognized the necessity to subordinate legitimate local needs to the national interest during the war. At the same time the fact must be recognized that the war itself—the drain that the cost of it will be on the Dominion when hostilities finally cease—has raised problems with respect to local government that even now in the midst of war cannot be altogether laid aside.

It has been recognized for some years that the administrative cost of local government generally should be reduced. The war has made this a necessity. The finances of the Dominion cannot be allowed to suffer by the diversion of money to a channel that is already, in a manner of speaking, full to overflowing. At the same time the legitimate and necessary expansion of local government to meet local communal needs as they arise must be provided for. The restriction of the one, while providing the necessary powers for the other, is a task that cannot be accomplished at once, and yet its consummation can be hastened by a study of the whole question now, with a view to legislation when the opportune time arrives.

A casual study of the local Acts of Parliament during the past few years, of the resolutions forwarded from the Municipal Conference, and of the difficulties that in actual practice confront them, reveals the undoubted fact that even at present the needs of the four cities at least are not only of a different nature from those of other boroughs, but, further, that the present legislation governing their activities—particularly the Municipal Corporations Act, 1908, which is the foundation of their existence—does not adequately endow them with powers. So long as the statute law of the Dominion does not distinguish them other than by conferring on them the at present empty title of "city," so long must their future progress be hampered.

Requests are constantly made for amendments of the Municipal Corporations and other Acts which, while at least desirable for the cities and larger boroughs, should not be granted to smaller boroughs. Even the machinery of the local Bill as a means of widening their powers can, I think, be proved to be ultimately a hindrance rather than a help. The needs of each, moreover, are so particularly and peculiarly individual that I doubt whether one Act dealing with the four of them would be sufficient. Each one of them needs special legislation, which in one case at least must make provision for metropolitan areas beyond the city proper.

Here again is a matter that does not admit of undue haste. Special study extending, may be, over some years will be necessary, but this study cannot be started too soon. Undue delay, on the other hand, will operate against the consummation of any scheme, for the suburban areas will in a few years be so heavily rated for purely local needs by small local bodies as to make the necessary operations of the metropolitan body an almost unbearable burden. In particular, as the cities and secondary centres of the Dominion extend, the want of a town-planning scheme becomes increasingly evident. The immediate suburbs and outdistricts of to-day will in the not distant future become parts of cities and towns, and provision should now be made that in cutting up lands for sale as residential sites the necessities of drainage, water-supply, school-sites, recreation reserves, and sites for State requirements should be considered.

The local-government question generally, apart from the special case of the cities, has received considerable attention in the past. It has been the subject of Bills and a conference of local bodies—that convened by you in 1912. Opinion is alive to the necessity for new methods and the necessity for better provision being made for the amalgamation of existing local authorities, and, above all, for the codification and simplification of the entire law dealing with local government, which is now spread over so many different Acts.

One further particular phase of the matter has come into prominence during the past two years—the necessity for new and more comprehensive methods of dealing with river-conservation. The existing practice of dealing with small stretches of a river by River Boards constituted under the River Boards Act, 1908, while having been of value where but a small length of river needs conservation, is proving utterly futile in cases like the Orari and Waihi Rivers in South Canterbury, and the Manawatu River in Wellington, where the nature of the rivers and the value of the lands endangered render it absolutely necessary for one authority with an adequate rating-

area to have control of a river from the source to its mouth. This matter, with particular reference to the Orari and Waihi Rivers, is at present engaging your attention.

*General.*—There has been no decrease during the year in the other functions of the Department under the various Acts affecting local government. The regulations under the Municipal Corporations Act, 1908, were revised and brought up to date. By-laws of thirteen local bodies were confirmed under the By-laws Act, 1910. Validations of irregular proceedings in matter of form have been as numerous as in former years, and there is an ever-increasing tendency for local bodies to seek the advice of the Department on various matters. The Department is always willing to advise where possible, but many of the requests have to be declined as involving the giving of legal opinions.

(2.) *Inland Fisheries.*

The Department has now had control of the Rotorua and Taupo fisheries for three years, and during the past twelve months the work begun in 1913 has been developed in conformity with the original object, the improvement of the fishing in the lakes.

*Destruction of Ill-conditioned Fish.*—Immediately on the close of the fishing season 1914–15 the work of thinning out ill-conditioned fish was again undertaken, and carried on from the 1st June to the 31st October. The total number taken and destroyed was—

	Number.	Tons	cwt.	qr.	lb.
Rotorua Lake	14,979	13	7	1	26
Taupo Lake	10,831	19	6	2	6
Total	25,810	32	14	0	4

During that period of the current fishing season falling between the 1st November and the 31st March ill-conditioned fish taken from the fish netted for market and destroyed numbered—

	Number.	Tons	cwt.	qr.	lb.
Rotorua Lake	10,264	9	3	1	4
Taupo Lake	4,843	8	12	3	24
Total	15,107	17	16	1	0

The figures for the three years are—

	Number.	Tons	cwt.	qr.	lb.
Rotorua Lake	58,455	62	10	3	17
Taupo Lake	31,283	68	1	1	10
Total	89,738	130	12	0	27

*Marketing of Fresh and Smoked Fish.*—The following statement shows the business of the 1915–16 season :—

	Number.	Tons	cwt.	qr.	lb.
Rotorua Lake	35,464	20	11	2	23
Taupo Lake	16,137	22	10	2	5
Total	51,601	43	2	1	0

The value of the marketable fish disposed of for each year since this Department took over the inland fisheries is as follows :—

	1915–16.	1914–15.	1913–14.
	£ s. d.	£ s. d.	£ s. d.
Rotorua Lake	963 18 7	655 12 5	706 3 2
Taupo Lake	901 19 2	857 10 8	510 19 8
Totals	£1,865 17 9	£1,513 3 1	£1,217 2 10

Following up the practice of the previous two years, netting operations were carried on during this period at such times and places as would not interfere with sportsmen, and the catches were limited to the number deemed desirable to be taken from the lakes for thinning-out purposes.

The Auckland City Council having established a fish-market under the powers conferred on it by the Auckland City Markets and Empowering Act, 1915, arrangements were entered into whereby a constant supply of fresh trout was made available for the public. Several private fish-merchants in Auckland also marketed the fish. Fish have at various times been sold to dealers in other towns in the Auckland Province, while of course both fresh and smoked have found a ready sale in Rotorua itself. The Railway Department has granted every facility for the carriage of the fish. I have to express appreciation of its co-operation.

In view of the large market proved to exist for fresh and smoked trout it is hoped that during next season it may be possible to start operations on Lakes Rotoiti, Tarawera, and the smaller lakes in addition to Rotorua. The fish in Rotorua are already showing a considerable improvement in quality as the result of the operations of the Department, and as time goes on it may become desirable to have occasional rests, in order to keep the stock of fish up to a high standard. The condition of the fish in Taupo already indicates the necessity of netting operations on a large scale, in order to maintain its established reputation as “the finest fishing-station in the world.”

On the establishment of the Convalescent Camp at Rotorua for invalided soldiers special regulations were made under the Fisheries Act, 1908, to enable free licenses to be issued to the soldiers in the camp. The Department’s launch is placed at their disposal on two days per week.

The market outside Auckland Province is supplied from the Department's depot at Tokaanu. The Department has regular customers in Wellington, the Wairarapa, Wanganui, and Nelson.

Our three years' operations have proved that a large number of fish must be taken from both lakes annually in order to maintain the standard of weight and condition, and it is now evident that many more may be taken without in any way reducing the numbers necessary to be left to keep up the reputation of the lake fisheries as the anglers' paradise. It is hoped next year to be able to open up fresh markets in parts of the Dominion as yet untouched by the Department.

In order to enable anglers to preserve for food purposes as much of their catches as possible, the Department subsidizes a fish-curer at Taupo to smoke such trout as anglers may bring to him.

The importance of the inland fisheries as an adjunct to the food-supplies of the Dominion has been emphasized by you. There can be no doubt that Lake Taupo is teeming with magnificent fish. The difficulty is to get it away. At present our only means is by coach to Waiouru from Tokaanu. If we could secure access to the lake from the northern end, an enormous increase in the output could be secured. In accordance with your instructions inquiries will be made as to the possibility of using a motor-lorry between Taupo Township and Mokai, a distance of only nineteen miles. From there the Taupo Timber Company's line might be used to secure a connection with the Government railway at Putaruru. By the use of insulated wagons the scheme should be feasible.

Your direction to obtain reports as to fishing the South Island lakes will also be carried out during the present close season.

*Study of the Worm Parasite.*—The Director of the Live-stock and Meat Division, Department of Agriculture (Colonel Reakes), is so closely occupied by his military duties that further investigation of this question must wait until the end of the war. In the meantime, however, the experimental ponds at Rotorua are being maintained.

*Destruction of Shags.*—The war on these cormorants continues. During the year 1,328 were accounted for.

*Trout-hatchery.*—The following statement shows the output of the hatchery for the year:—

Number of rainbow-trout ova sold and distributed.	...	...	1,320,000
Number of rainbow-trout fry sold and distributed	...	...	767,000
			<hr/> 2,087,000

The sales for the year include one to the Acclimatization Society at Ballarat, Victoria. While the larger acclimatization societies are required to pay for their supplies, the Department assists the smaller ones by free gifts of fry. Such gifts were made to acclimatization societies in the North of Auckland this year.

The work of stocking the various rivers and streams within the Rotorua Acclimatization District continues, and with the help of the Waimarino Acclimatization Society 450,000 fry were liberated in the Tongariro National Park rivers in that society's district.

### (3.) *Animals Protection Act.*

*Shooting Seasons for Game and Deer* were declared as usual in the various acclimatization districts. The native game permitted to be shot consisted of grey duck, teal, spoonbill duck, pukeko, and black swan (not more than twenty-five head of native game were allowed to be killed by any one person in one day); and the imported game, cock pheasants, Californian and Australian quail, hares, and mallard duck. As in previous years, many representations were made from the southern parts of the South Island for permission to shoot paradise ducks, but were not acceded to. Petitions were received from Natives in the North Island praying that they be allowed to take the native pigeon for food. In view of the fact that the pigeon is becoming rarer every year the petitions were declined. It has now been withheld from shooting-warrants for five seasons. The present season is one of the close seasons fixed by the Act, but owing to the abundance of game all but seven acclimatization societies have applied for and obtained exemption. With regard to deer, the point most worthy of note is that the deer from the Otago herd which have crossed the Southern Alps have now become established to such an extent as to warrant a limited number being shot each year. The deer season just ended was the second open season in Westland. The difficulty of stalking in the wild country of the southern West Coast will not only appeal to the keen sportsman, but will tend to ensure the preservation of a sufficient number of the best stags to keep the herd from deteriorating.

*Sanctuaries.*—During the year eleven sanctuaries were declared, the two most important being at Goulard Downs (Nelson) and Pouto Point (Auckland). The published accounts of bird-life at Goulard Downs do not exaggerate. They teem with native birds now rapidly becoming extinct in other parts of the Dominion. The value of the Downs as a sanctuary depends, of course, upon the degree of isolation they continue to enjoy and the efforts made to prevent poaching. With this end in view Mr. R. E. Clouston, by whom public attention was first drawn to them, has been appointed caretaker. The Pouto Point Sanctuary consists of 13,000 acres purchased under the powers given by the Animals Protection Amendment Act, 1914. The greater portion of this sanctuary consists of sandhills, but in parts there are deep fresh-water lakes full of wild water-birds, and the lowland connecting them where they are in a string is covered with vegetation—manuka, cabbage-tree, &c.—and constitutes a real oasis, the whole making an extraordinarily beautiful effect. The isolation of these lakes in the midst of the sand makes them ideal as sanctuaries.

*Damage by Deer.*—As the result of complaints made by settlers, Mr. Moorhouse, Conservator of Fish and Game, was instructed to report on damage done to farm lands by fallow deer in the Rongahere District (Otago). It is clear from his report that in many cases settlers are working under a very severe handicap owing to the depredations of the deer, and the question of how best to deal with the matter is receiving urgent attention.

*Deterioration of Deer Herds.*—Following up the inquiries made in 1914, Mr. Moorhouse was sent to inspect and report on the condition of the Otago and Waitaki deer herds. His report confirms the need for dealing with the deterioration in a comprehensive manner. Consideration is now being given to the most suitable means of coping with the problem, and in the meantime the Otago and Waitaki Societies have been authorized to proceed with culling operations. A special shooting season was declared to enable the Hawke's Bay Society to carry out culling operations.

*Huias.*—Careful inquiry has been made into all reports received respecting the existence of the hui in various parts of the North Island, but in no case was the evidence sufficient to warrant the belief that the birds seen actually were huias. The Department began the quest for a pair of these birds for the Little Barrier Sanctuary about ten years ago. During that time more than one party has set out on the search, but all have been unsuccessful.

*The Tuatara.*—The lightkeepers on Stephen Island, the Brothers, and Cuvier Island, who are appointed special protectors of the tuatara during the time they are stationed on those islands, report that the tuatara lizards on each show no signs of decreasing. Cats have now been practically exterminated, and constant war is waged on hawks. It being reported that the bush on Stephen Island, which forms the chief cover for the tuatara, is gradually dying off, Mr. Phillips Turner, Inspector of Scenic Reserves, paid a short visit to the island and made valuable recommendations, which can be carried out at a very small cost. The co-operation of the Marine and Lands and Survey Departments will be necessary in this work.

*Miscellaneous.*—Regulations were made respecting the disposal of birds, animals, and skins taken from persons illegally in possession.

Permission to destroy opossums was given in several cases where it was proved they were causing damage to orchards. The value of the opossum for its skin has recently been brought before you, and you have declared your intention of making inquiries as to the practicability of establishing colonies throughout the Dominion, especially in the bush districts. It seems clear that the animal might become a valuable asset to settlers in the backblocks, as it feeds on the leaves of trees.

*Consolidated Animals Protection Act.*—In accordance with your direction a new Animals Protection Bill consolidating the existing law and making provision for many matters not dealt with at present is being prepared. The existing Animals Protection Act is a very faulty measure from an administrative point of view.

#### (4.) *Fire Brigades Act.*

*Fire Districts.*—One new fire district—Woolston—was constituted during the year, and one—Maori Hill—went out of existence. By-laws of four Fire Boards were approved and gazetted. Authorities to borrow moneys amounting in all to £27,500 and two authorities to dispose of property were issued.

*Inspection of Fire Brigades.*—The Inspector of Fire Brigades continued his work without interruption during the year. His report will be furnished later on, as the Fire Boards' year only finished on the 30th June.

*Consolidated Fire Brigades Act.*—As directed by you, material for an amending and consolidating Fire Brigades Bill is being prepared for your consideration.

#### (5.) *Motor Regulation Act.*

Ten County Councils adopted Part II of the Act during the year.

Motor by-laws of thirteen local bodies were deposited as required by section 4 of the Act.

Letters and numerals as identification-marks were allotted to thirty registering authorities.

The regulations were amended to allow of a registering authority prescribing that identification-marks shall be affixed both at the front and the rear of motor-cycles.

#### (6.) *Mutual Fire Insurance Associations Amendment Act, 1913.*

Regulations extending powers of mutual associations under the above Act were issued.

#### (7.) *Land Agents Act, 1912.*

The number of land agents' licenses shows little variation from year to year, Hospital Boards benefitting from fees to the extent of about £4,500 per annum. Two actions to recover the amounts of bonds furnished by defaulting land agents were taken against insurance companies, the Crown securing judgment in each case. The Act requires to be amended in certain directions in order to make it work more satisfactorily.

#### (8.) *Weights and Measures Act, 1908.*

For many years the administration of this Act left much to be desired, its importance both to the buying and selling public apparently not having been recognized. A marked improvement has been effected in the last two years, but much remains to be done. The Act will need amending in several directions before it will be possible to carry out all necessary measures. In the past it was the invariable rule to appoint only members of the Police Force to be Inspectors of Weights and Measures, but of recent years this practice has not given satisfaction owing to police officers' time being so fully taken up with their own duties. As opportunity occurs police



officers are being replaced by officers of this and other Departments, but the process is unavoidably slow. As each of these new Inspectors is appointed he is instructed in his duties by the principal Inspector for the Dominion. The necessity for this instruction has been amply proved.

(9.) *Board of Science and Art.*

The Board of Science and Art appointed under the Science and Art Act, 1913, held its first meeting on the 28th and 31st January. The Board and its committees have already done good work, and its recommendations to the Government are receiving consideration. The Director of the Museum in his report deals further with the operations of the Board as they affect the Museum.

(10.) *Hector Observatory.*

In 1914 Mr. C. E. Adams, the Government Astronomer, was awarded the Martin Kellogg Fellowship in Astronomy of the University of California, and with the consent of the Government and the Public Service Commissioner he left New Zealand on the 7th January, 1915, for a year's work at the Lick Observatory, returning on the 30th January, 1916.

During his absence the work at the Observatory was undertaken by Mr. C. J. Westland, as Acting Government Astronomer. I take the opportunity of expressing appreciation of the valuable services rendered by Mr. Westland.

Mr. Adams, during his absence in America, was awarded the degree of Doctor of Science by the University of New Zealand for his thesis "The Harmonic Analysis of Tidal Observations and the Predicting of Tides," and his other papers on tidal survey, geodesy, &c.

Mr. Adams's report on the year's work at the Observatory is printed in the appendix hereto.

### 3. THE WORK OF THE SUB-DEPARTMENTS DURING THE WAR.

As pointed out above, the war has had its effect on the work of the sub-departments as well as that of the Head Office. In the performance of their ordinary peace-time functions they have been worked efficiently and with a special view to economy.

*Census and Statistics Office.*—The ever-growing importance attached to statistics has naturally led to an increase of work in this office. The staff has been reorganized, and the effect of this reorganization is even now apparent. Owing to the pressure of war work in the Printing Office, the issue of certain of the statistical publications is unavoidably delayed.

*Registrar-General's Office.*—It is proposed for the future to separate the appropriations for the Census and Statistics Office from those for the Registrar-General's Office. The effect of this will be to show clearly the fact that the latter is a revenue-producing office, its operations for the year showing an excess of receipts over expenditure of approximately £8,000.

*Dominion Laboratory.*—The re-establishment of the Chemical Division of the Department of Agriculture, Industries, and Commerce has relieved the Laboratory from dealing with chemical questions relating to farming and kindred interests. The war, however, has considerably increased its work in several directions, the Laboratory proving of great value to the Defence authorities. The extent of this work is shown in the Dominion Analyst's report.

*Dominion Museum.*—The Director and his staff have done excellent work during the year, but until the new building is erected its real extent will not be apparent. A vexed question is the long delay in the issue of Museum Bulletins. There are a number in manuscript, but for various reasons it seems impossible to get them printed. This matter is now receiving special consideration with a view to more satisfactory arrangements after the war.

*Reports.*—The annual reports of the heads of sub-departments are printed in the appendix hereto, along with those of the Officer in Charge of the War Funds Office and the Government Astronomer.

### III.—STAFF.

The pressure on the staff of the whole Department during the past year has been extremely heavy, and I have great pleasure in acknowledging the cheerful willingness of all my officers under very trying circumstances. The heads of sub-departments have shown the true spirit of co-operation in their relations with me as head of the Department. Their knowledge and ability have been of the greatest assistance. As an indication of the increase of departmental work entailed by the war, it may be mentioned that the volume of inward and outward correspondence for a single month of the present year exceeds in number that for the entire year 1912.

### IV.—ASSISTANCE RENDERED BY OTHER DEPARTMENTS.

At all times, of course, the activities of each Department necessitate the assistance of other Departments in some particular phase of its work. The Department of Internal Affairs is no exception. Under ordinary circumstances this assistance would need no special remark, being recognized as a natural co-operation of the various units of the Public Service. So far, however, as this Department is concerned, the special assistance rendered by certain other Departments during the past year demands special acknowledgment. I have already referred to the assistance given by the Postal Department in connection with the compilation of the National Register, and that afforded by the Defence Department in our shipment of gift goods, and here I wish to place on record the indebtedness of the Department of Internal Affairs to the Police, Customs, Tourist, and Post and Telegraph Departments for assistance in carrying out the work created by the War Regulations. The machinery of the Customs Department has been freely placed at our disposal when setting up permit agencies. Without the help of the Police Department the task of reporting on applications for permits and passports could only have been carried out at a considerable expense, and even then the result would not have been satisfactory.

J. HISLOP,  
Under-Secretary.

## APPENDIX.

## I. REPORT OF GOVERNMENT STATISTICIAN.

Census and Statistics Office, Wellington, 18th April, 1916.

THE main work of the office consists in the preparation and publication annually of the Official Year-book and the four volumes "Statistics of the Dominion." On my return from Australia in 1913, and again in 1914, at the special request of the then Minister of Internal Affairs, I furnished reports, which were presented to Parliament, dealing with the various activities of the office (see H.-12 and H.-12A of 1914). As stated in these reports, the statistics of the Dominion are defective principally in so far as they deal with production. The recommendations made in these reports for the improvement of our statistics have been carried into effect in part only.

The trade statistics have been brought into line with Australia, and are now published showing the country of origin. Industrial and economic inquiries (prices, wages, unemployment, &c.) are now dealt with, and a report on the cost of living (retail prices) has been issued, and it is highly desirable that wholesale prices should be covered in the same way as soon as possible. Statistics of industrial production, which have hitherto been collected quinquennially in conjunction with the population census, are being collected again this year. The question of their collection annually as recommended, which would greatly enhance their accuracy and value, has not yet been determined. Statistics of our fisheries and forestry are still practically non-existent, and it is advisable that these should be placed on a satisfactory footing at an early date.

Agricultural and pastoral production forms over 80 per cent. of New Zealand's exports, and the importance to the Dominion of having complete and accurate statistics of agricultural and pastoral production cannot be too strongly emphasized. This was clearly proved during the crisis which arose in connection with the wheat-supply immediately after the outbreak of war in 1914. The defective nature of these statistics made it most difficult to adequately deal with the position. As stated in my previous reports, the collection of these statistics by post is most unsatisfactory; the areas under crop for the 1914-15 season, as shown by returns obtained through the post, were subsequently proved to have understated the acreage in wheat by over 40,000 acres. The new system of collection recommended for these statistics is now in progress, and the first results will be available for the 1915-16 season. I have every hope and confidence that when the new system is fully developed these statistics will be both complete and accurate.

The basis of statistics of agricultural production is the area under crop, and the inherent difference between the new system and previous systems is that it is the areas reaped which will be ascertained after harvest, instead of the areas sown in the spring. Areas sown may never be reaped, as, owing to failure of the crop, or scarcity of other feed, the crop may be fed off instead of being cut. Then again, under the new system the statistics will be collected by permanent Government officials (the police) after personal interviews with the farmers themselves, instead of the returns being obtained through the post, as has been done during the past few years. Advantage will, however, also be taken of the post as an economical means of obtaining certain information supplementary to and based on the main collection by the police. Briefly, the new system involves—

- (1.) Main collection immediately after harvest by the police, after visiting each holding, covering all particulars as to occupied holdings and live-stock thereon.
- (2.) Collection by post of returns showing various breeds of cattle and horses, &c. (probably every third year).
- (3.) Collection by post of returns as to kinds of trees and production in orchards growing fruit for sale.
- (4.) Collection by post in the spring of returns showing areas sown in wheat and oats.
- (5.) Collection by post, probably in December each year, of returns showing commercial stocks of wheat, oats, and flour to ascertain the carry-over from one season to another.
- (6.) Pre-harvest collection by post of returns of estimated yields of wheat and oats.
- (7.) Collection monthly through Field Inspectors of Department of Agriculture, from January to August inclusive, of returns from threshing-mill owners showing actual threshings of wheat and oats.

During the past eighteen months the office has had a particularly strenuous time owing to the extra work caused since the outbreak of war. In addition to the production of the usual statistics the following matters deserve special mention :—

From November, 1914, to October, 1915, no fewer than five censuses were taken at intervals of the commercial stocks of wheat, flour, and oats in the Dominion. Fortnightly returns were collected as to wholesale prices of agricultural produce, and monthly returns of threshings were obtained from threshing-mill owners throughout the Dominion. For a short period until the establishment of the Imperial Meat-supply Branch this office collected and dealt with returns weekly from all meat-freezing companies.

The office was also responsible for the administration of the National Registration Act passed last year, and the personal schedules required under the Act were collected during October and November; early this year local rolls (over 300) of men of military age were compiled for each county, borough, and town district in New Zealand to form a basis from which local recruiting committees might undertake a personal canvass of their districts.

In the compilation of the register the assistance rendered by the Post and Telegraph Department both in the collection and tabulation was most valuable. Under the Act the responsibility for furnishing a schedule was placed on the individual, the forms being distributed and collected per medium of post-offices throughout the Dominion. The fact that over 303,000 schedules were obtained is a splendid testimony to the zeal with which Postmasters and letter-carriers carried out their work.

With the exception of the small staff which could be provided from this office, the Postal Department also supplied officers for the tabulation-work at Wellington, and I cannot speak too highly of the courtesy and assistance received from officers of that Department in this huge undertaking.

The office is gradually improving and developing the statistics of the Dominion, and I hope that in the near future they will present a complete and accurate survey of all our social and economic activities.

MALCOLM FRASER,

Government Statistician.

The Under-Secretary, Department of Internal Affairs, Wellington.

## II. REPORT OF REGISTRAR-GENERAL.

Registrar-General's Office, Wellington, 2nd May, 1916.

THE work of this office is steadily increasing, as will be seen from the following comparative table of business for the last five years :—

Year.	Births.	Deaths.	Marriage Notices received and Certificates issued.	Marriages solemnized.
1911 .. .. .	26,354	9,534	9,160	8,870
1912 .. .. .	27,508	9,214	9,504	9,189
1913 .. .. .	27,935	10,119	9,132	8,846
1914 .. .. .	28,338	10,148	9,589	9,326
1915 .. .. .	27,865	9,965	10,483	10,262
				(approximate).

In addition to the above, the work of the office includes the registration of medical practitioners, dentists, officiating ministers, and Maori births, deaths, and marriages, and a considerable amount of searching done free of charge for the Pensions, Education, Labour, and Defence Departments.

The revenue of the office also shows a steady advance, that for the year 1915-16 constituting a record. The revenue for the last five years ended 31st March is shown hereunder :—

1912.	1913.	1914.	1915.	1916.
£13,966	£14,240	£14,355	£14,163	£16,865

F. W. MANSFIELD,  
Registrar-General.

The Under-Secretary, Department of Internal Affairs, Wellington.

## III. REPORT OF DOMINION ANALYST AND CHIEF INSPECTOR OF EXPLOSIVES.

Dominion Laboratory, Wellington, 8th June, 1916.

### A. THE DOMINION LABORATORY.

#### Staff.

THE Agricultural Chemist and his two assistants were transferred to the Department of Agriculture early in the year to re-establish the Chemical Division of that Department, which had been merged in the Dominion Laboratory since 1909. All chemical questions, therefore, relating to farming and kindred interests now come directly under the Agricultural Department.

All the single men of military age employed in the Laboratory have volunteered for active service. Three were accepted, and are now abroad with the Expeditionary Forces. One resigned after enlistment, but the positions of the others are being kept open, pending their return. The absence of these men has thrown extra work on the remaining officers, and though the shortage was relieved to some extent by the appointment of two cadets, it is only by energetic and full co-operation that the staff has been able to maintain the work of the Laboratory without serious curtailment.

#### Work.

There has been considerable increase in some branches of the work as a direct result of the war. The water-supplies of the various camps have been frequently tested, and the water on the transports occasionally. A few articles of food supplied under contract to the Defence Department have been examined, and in some cases found to be much below specification. This was particularly so with jam. Some drugs and medical supplies for use on transports have also been analysed. Analyses have been made to assess the value of the numerous consignments of scheelite shipped to Great Britain by the Director of Imperial Supplies.

At the request of the Minister of Munitions an investigation was made into the possibility of utilizing the manuka (*Leptospermum scoparium*) and the kamahi or red-birch (*Weinmannia racemosa*) for the production of khaki dye. Reports have also been made on other suggestions for the use of various local products in the manufacture of munitions and military supplies.

The work done for other Departments is of the same character as in previous years.

#### Customs.

No comment is necessary on the samples submitted by this Department, which are analysed to assist classification for tariff purposes.

#### Police.

A few medico-legal cases, and some liquors for purity, comprise most, if not all, of the work required by the police this year.

#### Mines.

The number of prospectors' samples tends to diminish, and the results on the whole disclose little of value. The search for scheelite would appear, however, to be particularly vigorous. Numerous analyses of mine-airs have been made for the Inspectors of Mines.

The Geological Survey forwarded a total of 135 specimens, comprised mainly of coals, rocks, limestones, clays, and quartz for assay. An exceptionally large number were examined for phosphate to assist the Director in his search for further deposits of phosphate rock.

#### Public Health.

The 928 samples analysed for the Public Health Department include baking-powder, butter, coffee, cream, cream of tartar, aerated drinks, lime-juice, lemon-squash, jam, infant and invalid foods, margarine, mince-meat, milk, tomatoes and tomato-sauce, sardines, tea, vinegar, water for potable purposes. The samples of jam were obtained from over twenty manufacturers. The majority complied with the standards, but some were adulterated with excess of apple-pulp. A few contained colouring-matter and preservative. Of twelve samples of butter examined, three contained an excess of water. Several coffee samples did not comply with the regulations.

The position of infant-foods in the Dominion would seem to require careful attention. There are still some in the market that are unfit for young children. Many also tend to deteriorate on long keeping.

#### Milk-supply.

Samples analysed during the year cover the Wellington, Taranaki, Hawke's Bay, Gisborne, and Nelson districts. In all 593 were received under the Sale of Food and Drugs Act.

*Wellington City.*—Only 338 samples were taken during the year from retailers and suppliers in Wellington City and suburbs, and of these eleven had been watered, ten others below the standard in solids other than fat, four were deficient in fat, and ten were stale. The average adulteration of the watered samples was  $15\frac{1}{2}$  per cent., equivalent to  $\frac{1}{2}$  per cent. over the whole of the supply. This is less than in previous years, but would still be highly profitable to the vendor. The use of preservatives does not appear to be so general as is popularly believed.

*Other Districts.*—Over two hundred samples were received from outlying towns and districts. Of twenty-nine from Palmerston North, two were watered and two others slightly below the standard. Wanganui forwarded thirty-two, one being skimmed, another watered, and three more slightly under the standard. Taranaki Province furnished forty-four, of which two were deficient in fat. From the towns in the Wairarapa district twenty came to hand, only one of which was seriously adulterated. Hawke's Bay supplied five, two being watered. Of forty samples from Gisborne, six contained added water, and two others were deficient in fat. Thirty-two samples came from Nelson, two being slightly below the standard, and nine from Marlborough, all good milks. Thirty-two were received from towns on the Main Trunk line, from Marton to Ohakune inclusive. Of these six had been watered, two partly skimmed, and two others were slightly below the standard. The results of legal proceedings taken against vendors for selling adulterated milk are shown in the following table:—

District.						Number of Cases.	Number of Convictions.	Fines and Costs.		
								£	s.	d.
Wellington City	...	...	...	...	...	9	8	67	19	0
Hutt and Otaki	...	...	...	...	...	4	4	118	16	0
Palmerston North	...	...	...	...	...	2	2	12	17	0
Marton	...	...	...	...	...	3	3	30	1	6
Taihape	...	...	...	...	...	1	1	5	7	0
Hunternville	...	...	...	...	...	1	1	6	0	6
Ohakune	...	...	...	...	...	1	1	5	0	0
Wanganui	...	...	...	...	...	2	2	48	1	0
New Plymouth	...	...	...	...	...	1	1	4	0	0
Masterton	...	...	...	...	...	1	1	3	0	0
Waipukurau	...	...	...	...	...	1	1	5	19	6
Napier	...	...	...	...	...	1	1	2	19	6
Gisborne	...	...	...	...	...	5	5	127	4	0
						32	31	437	5	0

The substantial fines imposed in many cases should have a salutary effect.

The study of the bacterial condition of milk retailed in Wellington City has been continued during the year, and has disclosed the disquieting fact that a considerable proportion of the milk, even in the winter-time, is scarcely fit for human consumption. The Plunket nurse reports that in many cases it is impossible to prepare humanized milk from the liquid sold. The causes of this unsound condition may be the use of unhealthy cows, lack of cleanliness in milking and handling, insufficient cooling, or merely staleness. These are all remediable, and the public is justified in demanding that a fresh, clean, healthful article be supplied.

#### *Other Departments.*

A few analyses of waters and miscellaneous supplies were made for the Railways and Post Office.

The total work done for each Department is shown in the following table :—

SUMMARY OF ANALYSES AND DETERMINATIONS FOR GOVERNMENT DEPARTMENTS.						
Forwarded by						Total.
Agricultural Section	...	...	...	...	...	103
Customs	...	...	...	...	...	219
Defence Forces	...	...	...	...	...	125
Explosives Branch (consignments examined)	...	...	...	...	...	33
Internal Affairs	...	...	...	...	...	4
Justice (Police)	...	...	...	...	...	26
Mines—						
Geological Survey	...	...	...	...	...	135
Head Office	...	...	...	...	...	55
Inspectors	...	...	...	...	...	68
Prospectors	...	...	...	...	...	96
Post and Telegraph	...	...	...	...	...	22
Public Health—						
Auckland District	...	...	...	...	...	19
Christchurch District	...	...	...	...	...	141
Dunedin District	...	...	...	...	...	7
Wellington District	...	...	...	...	...	853
Public Works	...	...	...	...	...	27
Railways	...	...	...	...	...	15
Research (Dominion Laboratory)	...	...	...	...	...	3
Other Departments	...	...	...	...	...	17

In addition, members of the Laboratory staff have been frequently consulted by officers of other Departments in matters involving knowledge of chemistry or chemical technology.

#### *Research.*

A study was made of the distribution of titanium, phosphorus, and vanadium in Taranaki ironsand.

Owing to pressure of ordinary routine work no investigation of other chemical problems directly affecting New Zealand could be attempted during the year.

#### *Summary of Work.*

A total of 2,247 samples was analysed during the year. Many of these were of a highly complex nature, involving a large number of separate determinations. For record purposes they have been classified, according to the nature of the analyses required, under the following heads :—

1. Coals and carbonaceous minerals	...	...	...	...	...	32
2. Limestones, marls, and clays	...	...	...	...	...	52
3. Rocks, minerals, and ores	...	...	...	...	...	237
4. Special examinations for gold and silver...	...	...	...	...	...	144
5. Waters	...	...	...	...	...	104
6. Manures	...	...	...	...	...	18
7. Examinations for Customs	...	...	...	...	...	219
8. Milks	...	...	...	...	...	651
9. Butters	...	...	...	...	...	13
10. Miscellaneous	...	...	...	...	...	674
11. Agricultural Section (two months)	...	...	...	...	...	103
Total	...	...	...	...	...	2,247

#### B. EXPLOSIVES AND DANGEROUS GOODS.

##### *Legislation, &c.*

As considerable difficulty was experienced in issuing licenses to individual carters, particularly owing to the many changes in the staffs of carrying firms due to the war, the regulations regarding the issue of carriers' licenses have been amended so as to allow of the license being issued to the employer.

*Authorization of New Explosives.*

No explosives have been authorized during the year, but several explosives are under examination, and will be authorized early in the new year.

*Manufacture.*

The undermentioned factories were licensed for the manufacture of explosives:—

- (1.) Sabulite (New Zealand) Limited, at Waikunete, for the manufacture of "sabulite."
- (2.) H. F. Bickerton, at Wainoni Park, Christchurch, for the manufacture of fireworks.

*Importation.*

The following explosives were imported during the year:—

	lb.
Gelignite ... ..	1,198,000
Dynamite ... ..	65,400
Quarry monobel ... ..	50,000
Blasting-gelatine ... ..	23,000
" Permitted " explosives ... ..	15,500
Atlas " Straight " dynamites ... ..	21,000
Dupont carbonite ... ..	50,000
Atlas gelatinous explosives ... ..	25,300*
Atlas large-grain powder ... ..	14,950*
Blasting-powder (grain) ... ..	299,975
" (pellets) ... ..	205,375
" (sporting) ... ..	2,550
	<hr/>
	2,107,050
Detonators ... ..	2,558,000
Fireworks (approximately) ... .. packages	1,600

All the above explosives passed the necessary tests.

*Storage.*

The number of magazines licensed during the period was 148, being a considerable increase on the previous year; but it has not yet been possible to do more than license most of the larger magazines. The licensing of the smaller magazines at mines and quarries will probably have to be held over until after the war.

Government magazines remain the same as last year—viz., three—at Wellington, Greymouth, and Dunedin. As extremely adverse reports have been made on the two latter magazines by the Public Works Engineers, instructions have been given to commence the erection of the new buildings at both Greymouth and Dunedin early in the new year.

*Packing and Conveyance.*

Exception was taken to the packing of several shipments of nitro-compound explosives imported from South Africa, and on communication with the firm concerned the matter was remedied.

The number of licenses to carry explosives issued during the year was 263, but for reasons given in the first paragraph of this report the issue of licenses was practically held in abeyance for several months, so that it is expected that the coming year should show a decided increase in the number of licenses issued.

*Condemned Explosives.*

With the exception of small lots of explosives condemned for various reasons during the inspection of magazines and registered premises, no explosives have been condemned during the period.

*Sale.*

The conditions under which explosives are sold show a decided improvement as a result of the year's work. In all 635 licenses to sell explosives were issued, as against 213 last year, and approved methods of storage have been adopted in all cases where an inspection has been made.

*Accidents.*

No serious accidents occurred under the conditions to which the Act applies, but several mining accidents were investigated during the period to ascertain if faulty explosives had been used, but in no case could the accident be traced to this cause.

*Legal Proceedings.*

Various irregularities came under the notice of the Inspectors during visits of inspection, but no prosecutions have taken place during the year, it being considered sufficient under the circumstances to warn the offenders.

\* Subsequently exported to Australia.

*Inspection and Testing.*

Owing to the extra work involved in the preparation of new forms, licenses, &c., the inspection of magazines and registered premises has not been as complete as could be desired, but with the exception of those districts in the far north and south all the magazines and most of the registered premises have been inspected once during the year.

*General.*

The work of the Explosives Branch has been considerably hampered by shortage of staff due to the war, and many matters that should have received attention have had to be held over indefinitely. It will be impossible to bring the new regulations completely into operation until the war is over.

J. S. MACLAURIN,

Dominion Analyst and Chief Inspector of Explosives.

The Under-Secretary, Department of Internal Affairs, Wellington.

## IV. REPORT OF DIRECTOR OF THE DOMINION MUSEUM.

Dominion Museum, Wellington, 20th April, 1916.

## THE MUSEUM AND THE WAR.

As a result of the war the number of visitors to Wellington has greatly increased, and the increase has been reflected in the Museum attendance. Unfortunately, the neglect in the past to provide a suitable building and the present call for economy have prevented the Museum from taking full advantage of this opportunity of increasing its usefulness to the State. It was hoped to obtain and exhibit collections relating to the war which would not only serve as historical collections in the future, but would also help to bring home to the people the fact of a state of war at the present time, but neither by private donations nor in response to official requests has the necessary material been forthcoming in the way of war trophies. The lack of space and of adequate staff has prevented the formation of collections, such as are being shown in England, designed to inculcate national economy and to show how it may be effected. The war has left the Museum much where it was except for a reduction in its spending-capacity.

The existing building is not only slowly decaying, but is unsuitable in design and lighting arrangements for the proper display of any collections, and is totally inadequate in floor-space for the existing material. So long as it is in use the Museum must not only come far short of its full usefulness to the present generation, but is losing many opportunities of becoming the storehouse of material which will be unobtainable in the future. As a national institution, visited by most of the travellers to these shores, it must surely undo much of the reputation for enlightenment and efficiency which the Government of the Dominion has so successfully created. It may therefore be questioned whether the postponement of a new building is a true economy.

## BOARD OF SCIENCE AND ART.

The principal event of the year was the meeting, in January, under the presidency of the Hon. Mr. Russell (Minister of Internal Affairs), of the Board of Science and Art, which was set up by the Science and Art Act, 1913, to manage and direct the Dominion Museum, Dominion Art Gallery, and Dominion Library, and for other purposes. The following are the more important of the resolutions adopted which relate to these institutions:—

- “That this Board recommends that the present Museum-site is the most suitable for the proposed new Dominion Museum, Art Gallery, and Library.”
- “That Cabinet be recommended to erect a fireproof building to house the national collection of historical records, the more valuable Maori specimens, and the Art Gallery, the proposed building to be ultimately part of the new Museum Buildings.”
- “That the following committee be appointed to consider the question of collecting historical material now in private hands, and to take such action as is possible—namely, Dr. Thomson and Mr. C. A. Ewen; and that the following gentlemen be asked to associate themselves with the committee: Hon. Dr. R. McNab, Messrs. A. Turnbull, T. L. Buick, and C. Wilson.”
- “That the expenditure of the vote for the collection of historical and other matter relating to the Maori race, and for the establishment of a historical collection regarding the early history of New Zealand, be left in the hands of the committee set up to consider the question of collecting historical matter.”
- “That Messrs. Morgan, Ewen, and von Haast be a committee to advise and assist the Director of the Museum in the purchase and collection of specimens.”
- “That Dr. Thomson and Mr. Morgan be a committee to formulate a scheme for the disposal of the geological specimens belonging to the Geological Survey and now in the Museum, such scheme to be then submitted for the formal consent of the Hon. the Ministers of Mines and of Internal Affairs.”
- “That it is desirable that the number of members of the Board to be appointed by the Governor in Council should be increased.”

It is regretted that for private reasons Mr. A. Turnbull has been unable to act on the Historical Collections Committee, which has already met under the presidency of the Minister. The collection of material has already begun.

## STAFF.

No alterations have been made in the number or personnel of the staff during the year. As in previous years, Mr. Elsdon Best has devoted his whole time to ethnological research on the Maori, and Miss A. Castle has been wholly occupied with the care of the insect collections. The remaining work, including the registration and determination of new specimens, the overhaul of the existing collections, and the registration of accessions to the library, has been shared between myself, Mr. H. Hamilton, and Mr. J. McDonald, Mr. Hamilton being responsible for the majority of the zoological specimens, and Mr. McDonald for the historical and ethnographical specimens.

During the year I continued my work on the classification and description of the Tertiary *Brachiopoda*, and also commenced the formation of a genotype collection of Brachiopods in general. With a view to the future expansion of the library, I commenced also the formation of a card index of literature relating to the South Seas, and another of the prices at which sets of scientific journals are advertised. During the year the following papers were published in scientific journals: "Brachiopod Genera: The Position of Shells with Magaseliform Loops, and of Shells with Bouchardiform Beak Characters"; "Additions to the Knowledge of the Recent *Brachiopoda* of New Zealand"; "The Genera of Recent and Tertiary Rhynchonellids"; "A New Genus and Species of the *Thecidium* (*Brachiopoda*)."

## OFFICERS' REPORTS.

Mr. J. McDonald reports as follows:—

*Library.*—The library of the New Zealand Institute, which has been offered to the Board of Science and Art, and at present used almost exclusively by the Museum staff, has been entirely rearranged under the direction of Dr. Thomson, and is in consequence now a valuable adjunct to the Museum. A skeleton card index for registering accessions was prepared by Dr. Thomson, and has since been kept up to date, both for the Museum library proper and for the library of the New Zealand Institute. At no distant date provision will have to be made for additional shelving. Notwithstanding the space gained by removing little-used books to the Sydney Street store, there is little available space for the publications which arrive by every mail and through the International Exchange Service. The desirability of having a bindery attached to the library is a matter worthy of consideration. Volumes now ready in the joint libraries would occupy a binder for a series of years.

*Exhibits.*—The Maori carvings and other examples of the arts and crafts of our Native race have been carefully examined, cleaned, and oiled, and in many cases repainted. A number of old-time and rare specimens of the art of the *Kai-whakairo*, which were in danger of decay, were removed from their mountings, reinforced with glue, and remounted. Others now having attention are being backed with molten paraffin wax before remounting. Many of the carved slabs which were found to be riddled by the wood-boring beetle were subjected to prolonged soaking in a solution of lime, soda carbonate, and arsenic. A large wooden Cook Island vessel with a capacity of 600 gallons was used, and answered the purpose admirably. Whether the treatment will be effective in badly bored pieces remains to be seen.

Attention has also been given to the collections in the Sydney Street storeroom, particularly to the specimens presented by Lord St. Oswald, the trustees of the late Sir Walter Buller, and Mr. A. H. Turnbull. The cases containing the korowai, kiwi-feather garments, &c., were all carefully examined, and it was satisfactory to find that no traces of moth or other insect were to be seen.

The large geological model of New Zealand, constructed by Sir James Hector, has been given a much needed cleaning and repainting. No alterations were made in the geological formations as laid down by Sir James Hector, but as the chief interest of the model for the general public lies in the topography, the additional railway-lines constructed since the model was made were painted on.

*Photographic Work.*—About a thousand full-plate negatives of Maori carvings and other Maori subjects, and also a number of plates of Fijian fire-walking ceremonies, &c., have been classified for indexing. During the year a number of negatives of Brachiopods and Molluscs, including some microphotographs, were prepared for Dr. Thomson. While the Maori carvings were under treatment opportunity was taken to photograph such as were likely to be required in the near future by Mr. Best. My work on the illustrations for the Museum Bulletins has been intermittent. A number of photographs and drawings have been completed for No. 6, but there is still much to do for this bulletin, and as soon as it is completed the illustrations for No. 7, the manuscript of which is ready, will have to be taken in hand.

Mr. Elsdon Best reports as follows on his ethnological work:—

In regard to the series of bulletins on Maori technology, No. 5, "Maori Storehouses and Kindred Structures" is still in the printers' hands, the long delay in its issue being due to the difficulty of obtaining a suitable and permanent paper. No. 6, on Maori fortifications, awaits illustrations before being sent forward to printers. During the year No. 7, a monograph on Maori canoes and their manipulation, has been compiled, and awaits illustration. Owing to the acquisition of a considerable amount of new matter this latter bulletin has reached 400 pages of manuscript, the subject being one that has not previously been written up in full detail for any Pacific race. Considering that the Polynesians appear to have been the most daring and successful of all peoples in the art of navigation until a late period of history, it is desirable that all information concerning their vessels and ocean voyages should be placed on record. In



order to make these matters known and to awaken some interest in the subject, I have written about a dozen papers of a popular nature for various journals and societies.

It is proposed to make Bulletin No. 8 a monograph on Maori games and exercises, for which a considerable amount of matter has been collected.

But little field-work has been done during the past year, but during a sojourn of two weeks at Wanganui in March I was fortunate in collecting a large amount of new matter, most of which is of value as illustrating ancient forms of ritual. This accumulation of matter opens up the question of publication, the present avenues being unsatisfactory. Not only does the printing of a Museum Bulletin occupy a period measured in years, but there is also little outlet for short papers, brief monographs, &c., so many of which might be compiled on hitherto-undescribed phases of Maori life. In addition, the issue of a large monograph on any subject at once results in the acquisition of new matter from correspondents and critics, and short supplementary papers offer the best means of recording the new information. The overlaid "Transactions of the New Zealand Institute" can afford little relief, while, in my own case, I have effectually blocked egress through the *Polynesian Journal* with over 800 foolscap sheets of manuscript awaiting publication.

The following minor papers were written during the year: "Maori and Maruiwi" (read before the Wellington Philosophical Society); "The Maori as a Voyager" (read before the Wellington Philosophical Society); "Maori Voyagers and their Vessels" (read before the Auckland Institute); "Some Phases of Maori Mentality" (read before the Auckland Institute); "Incidents from Maori History of Wellington District" (in hand); "Maori Place-names" (in hand); "Reminiscences of Fort Manaia" (in hand).

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Mr. H. Hamilton reports on his work on the zoological collections as follows:—

Since the production of the last annual report routine work on the zoological collections has occupied most of my time. The spirit specimens of New Zealand and foreign natural history have been overhauled and in some cases rearranged. The New Zealand lizards are now more readily accessible for classification purposes, and the collection of New Zealand Echinoderms, which contains certain type material, has been remounted and put in better condition for exhibition. Mr. H. Farquhar, of Wellington, was kind enough to rename the collection according to the latest system of nomenclature.

During the winter months I prepared a paper on the "Trachipterids or Deal Fishes of New Zealand," to be published in the "Transactions of the New Zealand Institute."

A start was made to bring together the several collections of New Zealand *Coleoptera* into one representative collection. At present there are four distinct collections of New Zealand beetles housed in the Museum—(1) The Norris collection, (2) the Buller collection, (3) the Lewis collection, (4) the Simmonds collection. It is highly desirable that a truly representative working collection should be built up from the material in the collections named. This is a work of some magnitude, but the results to be gained by such an arrangement will justify the time spent.

An interesting collection of beetles and other insects from Gallipoli was presented to the Museum by Trooper H. E. Browne and Lance-Corporal W. J. Henry.

Another collection, at present temporarily housed in the Museum annexe in Sydney Street, is the Herbarium. Little time can be spared on the maintenance of this valuable collection of (mostly) New Zealand plants. Herbarium specimens are subject to many destroying agencies, and should be constantly under supervision. During the year I attended to a collection made by the late Rev. W. Colenso, but there are still thousands of specimens in other collections requiring expert attention and proper accommodation. No progressive policy in this department can be adopted until these conditions are satisfied.

Active collecting of natural-history specimens had to be curtailed during the past season. I obtained some interesting and rare moths from the Botanical Gardens in the evenings, and during the month of February spent some weeks in Marlborough assisting the Director on a collecting expedition. Although rather late in the season, many forms of insect-life were secured from a locality where practically no collecting had previously been done.

Another of my duties has been the compiling and recording of a pamphlet collection. Miscellaneous pamphlets are classified under authors, given a serial number, and placed in portfolios. Already the number of pamphlets classified exceeds a thousand, and the practical utility of the system has been proved.

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Miss A. Castle reports on the *Lepidoptera* as follows:—

The work of the past year has been principally the relaxing and mounting of six hundred specimens of foreign *Lepidoptera* and about five hundred New Zealand specimens, together with the periodical overhauling of the entomological collections. During the spring and summer months a considerable amount of time was devoted to showing the collections to parties of school-children and many others who made inquiries about them. A number of New Zealand specimens were sent in for identification and information.

Thanks are due in no small measure to Mr. A. Philpott, of Invercargill, for his valuable assistance, given at all times, in identifying certain New Zealand specimens, and for his generous presentation of two hundred New Zealand *Micro-lepidoptera*, a nucleus on which it is hoped to build a fair representative collection. Messrs. S. H. Drew and M. Watt, of Wanganui, and Mr. H. M. Simmonds, of Auckland, have augmented the New Zealand *Macro-lepidoptera* by some good specimens.

Two hundred unmounted specimens from South Africa, obtained during the Boer War, were presented by Miss Madeline and Master Frank Browne, of Lower Hutt. For assistance in identifying these and other South African specimens I am indebted to Mr. H. W. Simmonds. An arrangement was entered into with Mr. Allen, of Nelson, whereby the Museum benefited to the extent of a set of all specimens collected by him in Java, Borneo, and the Solomon Islands, in consideration of mounting his collections. An exchange was made with the Queensland Museum by which we received eighty-eight Australian *Hymenoptera* in return for New Zealand *Lepidoptera*.

#### ACQUISITIONS.

Few purchases were made during the year, for good and sufficient reasons. There are, however, two notable exceptions. An autograph letter of Captain Cook was obtained from London, and, although not adding anything to our knowledge of New Zealand early history, it will undoubtedly be of the highest interest as an exhibit. The other important purchase was also of historical material, being a large collection of portraits, maps, diagrams, &c., relating to the Maori wars of the "sixties," gathered during many years with loving care by Mr. W. F. Gordon, of New Plymouth. This collection, which will retain the name of the Gordon collection, forms, together with the Robley collection of water-colours, a fitting nucleus for the national historical collection, the growth of which, it is hoped, will be the principal feature of the current year's activity. Towards the history of the present war the Museum has received from the Defence Department a partial set of the badges of the various regiments, while Colonel Rhodes has been asked to inquire in Egypt as to the best means of procuring war trophies, copies of newspapers published in the trenches, and other historical matter.

An interesting series of photographs and models of New Zealand yachts was donated during the year by various gentlemen, through the initiative of Mr. P. Freyberg. These have been placed on exhibition alongside the models of ships and of H.M.S. "New Zealand," and it is hoped to extend this series ultimately into a collection illustrating the history of navigation in general, and in New Zealand in particular.

A few ethnographical specimens have been obtained during the year by purchase, but it is now increasingly difficult to obtain such Maori specimens as the Museum needs to complete its series except at exorbitant prices or in association with large collections of commoner articles which are not required. A few stone and greenstone implements and some fish-hooks have been the chief purchases. The most important donation has been a further series of ancient Egyptian articles from the Egypt Exploration Fund.

Zoological specimens other than insects have been acquired chiefly by donation, and include a sea-snake (*Hydruis platurus*) found at New Plymouth, and a rare fish (*Oxynotus brunensis*) from Cloudy Bay. Mr. R. W. Oliver has forwarded an extremely valuable collection of shells from the Kermadec Islands, illustrating his recent paper in the "Transactions of the New Zealand Institute." Miss M. Mestayer, an indefatigable collector of marine shells, has not only presented many rare species of Molluscs, including some paratypes, but has brought in from time to time unusual marine invertebrates of other groups. Land shells have been collected by myself from Mount Egmont and Marlborough. The insects have been already noticed above.

A large series of geological specimens, both rocks and fossils, have been collected by myself during the Christmas holidays in Taranaki, and during May, 1915, and February and March, 1916, in Marlborough. These have been added to the Geological Survey collections in the Museum awaiting determination. The rocks consist chiefly of the Amuri limestone and flints of Marlborough, the volcanic rocks in the underlying Cretaceous (Utatur) rocks, and the igneous intrusives of Mount Tapuaenuku. The fossils come from Upper Tertiary and raised-beach deposits at Waitotara and Hawera, in Taranaki; Upper Tertiary rocks in the Lower Awatere Valley, Marlborough; Middle Cretaceous (Utatur) beds in the Clarence and Awatere Valley, including a new ammonite from the Isolated Hill Creek, Ure River, and from a new fossiliferous horizon in the Herring or Seymour River, Clarence Valley. The rocks of the last locality lie unconformably beneath the Utatur rocks, and the fossils consist chiefly of *Inoceramus*. Unfortunately this locality was only discovered on the homeward journey out of the Clarence Valley, and there was not opportunity to make a full collection.

J. ALLAN THOMSON, Director.

The Under-Secretary, Department of Internal Affairs, Wellington.

#### V. REPORT OF OFFICER IN CHARGE, WAR FUNDS OFFICE.

Wellington, 31st May, 1916.

UPON the War Funds Act coming into force on the 11th October, 1915, the administration of the Act came under the control of the Minister of Internal Affairs. I was placed in charge on the 17th November last.

An early endeavour was made by the War Funds Office to ascertain particulars of the various Patriotic Societies operating throughout the Dominion, with the result that some 120 societies were recorded. A circular setting forth the requirements of the Act was sent to each of these societies, and returns were obtained from a majority of them with more or less promptitude. It was soon evident that there was a large number of societies operating which had not sent in returns required by the Act, and special effort has been made to place these societies on

record. At the present date the particulars of 300 societies have been recorded. From information gained from various sources it is probable that no less than 350 are now collecting funds for various objects in connection with the war, exclusive of hundreds of committees working under the Red Cross and similar organizations in providing personal comforts for the members of our Forces in all parts of the world.

There has been evidence of reluctance on the part of some societies to satisfy the requirements of the Act, and a few have expressed their intention of discontinuing their efforts rather than go to the trouble of supplying the particulars asked for by the Department. This is to be regretted, as the work entailed in furnishing returns cannot be considered arduous. It is fully realized that in a large majority of cases the secretarial work of the society is done gratuitously by men and women actuated by a high sense of patriotic duty, and the spirit of duty is evident from the promptitude with which many of them supply any information required and the care manifested in making up the necessary returns.

It has been the desire of the Government to ascertain as closely as possible the total amounts contributed by the people of New Zealand toward the assistance and comfort of members of our Forces, the relief of those incapacitated and the dependants of those injured or killed, and also the amount of monetary assistance collected for the relief of suffering amongst our Allies, and to ascertain the amount already expended or transmitted to Europe and the amount of the various funds in hand. With a view to obtaining this information a circular was issued on the 22nd December asking for a balance-sheet covering the period from the establishment of each fund up to the 31st December, 1915, and requesting that this information should be supplied not later than the 31st January last; and, although repeated requests have been made for this information, it has been found impossible to compile a full and complete return owing to the failure of a considerable number of societies to furnish the statement required, and also to the fact that in many instances accounts have not been kept, or have been kept in a very crude way.

Another cause of difficulty in the dissection of funds arises from the fact that many societies collect funds for general patriotic purposes, the contributors leaving the allotment of money to various objects at the discretion of their executive committees. Remittances of money for the relief of distress amongst our Allies have been made in different ways—through the Government, through consular agencies, through central organizations in London, and by direct draft. Small societies send moneys to large centres for administration, but even when this is done they frequently reserve the right to administer relief in their own localities.

Until some homogeneity is arrived at in the system of allocating the funds to the various objects for which they were raised it will be quite impossible to present a full and complete statement. Such a position, however it is desired, can only be brought about by the societies themselves, and the proposed federation of societies under the guidance of the Advisory Board now set up may result in some general scheme of centralization of control and expenditure.

The people of the Dominion have given so freely and so whole-heartedly to patriotic funds, and contributed to any and every demand that has been made upon them by all committees and leagues, feeling that whatever they gave would be advantageously used, that they have the right to know that every penny of that money is fairly accounted for, how much of it has been expended, what moneys are available, and what steps are being taken to make the wisest use of the funds. The Department has tried to obtain this information with some degree of accuracy, and the Patriotic Societies, in their own interest, should assist this office by promptly furnishing the necessary statements. Every assistance has been offered them by way of advice as to the preparation of returns where it was felt that such was necessary.

Regulations under the Act have been issued, and monthly and quarterly returns will be required under these regulations, which, with proper care and attention exercised in their preparation, will enable an account to be kept of the funds received and paid out during each period and what moneys are in hand. It is also proposed that the total amounts paid for assistance to returned soldiers or the dependants of soldiers will also be periodically furnished.

It is hoped that in a short time every society will see the necessity of complying with the requirements of the Department, and will recognize their duties as trustees of funds so generously placed in their hands.

In the administration of a new Act dealing with social conditions and developments of such an unusual character it must of necessity happen that any plan of operations can only be of a tentative nature. An endeavour must be made to evolve some scheme of work that contains at least the elements of permanency. No precedents are available for reference or guidance, and in the case of the War Funds Act it was especially difficult to foresee the course of events or judge to what extent the persons particularly subject to its provisions would fall into line and conform with its requirements. The main difficulty previously referred to arose from the fact that the patriotic effort was a voluntary one, and conformance with the Act laid upon those coming under its provisions certain obligations which, at first blush, seemed in some degree inquisitorial. In these circumstances a policy of patience is the only one to take, and, though slow in results, it has been and is being carried out. A very large amount of correspondence has been necessary in dealing with societies, and I am pleased to be able to say that there is now a more general willingness to comply with the requirements, and a better conception of the purposes, of the Act. Until the regulations have been in operation a few months and the effect of such as deal with monthly and quarterly returns is seen, it will be difficult to foretell how the future work of the office will develop; but I have no doubt that when societies realize the necessity of the Government being in possession of the particulars asked for, a condition will be brought about that will make it possible to obtain a very fair and full view of the position of the war funds throughout the Dominion. I hope, however, to be shortly in possession of sufficient data to enable me to place before you a summary of the receipts, expenditure, and funds in hand that will indicate the extent of the patriotic effort and the position as at the end of 1915.

## CONFERENCE OF PATRIOTIC SOCIETIES.

A conference of Patriotic Societies was convened by the Minister and held at the Parliamentary Buildings on Friday, the 19th November, 1915. This was the first conference held after the passing of the War Funds Act, and was attended by delegates from all over the Dominion. Matters of general importance and suggestions as to the functions of Patriotic Committees, the expenditure of their funds, and the responsibility of the Government in connection with returned soldiers were fully discussed.

At the conclusion of the conference the Minister withdrew, and a special meeting of the delegates was held to consider various aspects of the work. Resolutions were carried approving of the desirability of forming a central Board for consultation and advice, representing the whole of the Patriotic Societies.

On the 5th January the Minister wrote to the Patriotic Societies pointing out that as some three thousand soldiers had already returned to New Zealand it had become necessary that steps should be taken to organize the work of Patriotic Societies and to define and agree as to the respective responsibilities of the Government and the Patriotic Societies in dealing with returned soldiers, and also asking for an indication as to whether the societies considered such a conference desirable. The replies received indicated that a very large majority of the Patriotic Societies in New Zealand were in favour of a second conference. Arrangements were accordingly made and a conference, over which the Hon. Mr. Russell (Minister appointed to administer the War Funds Act) presided, was held at Wellington on the 17th February, 1916, where the questions at issue were very fully discussed, and three special committees set up to report upon suggestions and resolutions laid before the conference. On the following day the conference reassembled, and with slight modifications adopted the reports of the committees referred to. It was agreed that an Advisory Board, consisting of twelve members (two from Auckland and two from Wellington Provincial Districts and one from each other district) should be set up, thus giving six representatives for each Island. The members of this first Advisory Board were to be elected at conferences held in the different provincial districts, and to hold their first meeting on the 6th April, when it was hoped that preliminary steps would be taken toward the federation of the whole of the societies in New Zealand.

[The Advisory Board was duly elected, and has already held several useful meetings.]

## NATIONAL WAR FUNDS COUNCIL.

Section 3 of the War Funds Act provides that the Governor may by Order in Council establish a National War Funds Council for the purpose of securing the efficient administration and control of war funds, such Council to consist of the Minister for the time being administering the Act and such other persons as the Governor may by Order in Council appoint.

The Council consists as follows: Hon. G. W. Russell (Minister of Internal Affairs); J. H. Gunson, Esq., Mayor of Auckland; J. H. Upton, Esq., Auckland; J. P. Luke, Esq., Mayor of Wellington; W. E. Bethune, Esq., Wellington; H. Morrison, Esq., Masterton; H. Holland, Esq., Mayor of Christchurch; W. Reece, Esq., Christchurch; J. J. Clark, Esq., Mayor of Dunedin; J. Roberts, Esq., C.M.G., Dunedin; J. D. McGruer, Esq., Invercargill.

The first meeting of the Council was held at the Parliamentary Buildings on the 19th November last, all members being present with the exception of the Mayor of Auckland, the Minister presiding. The provisions of the Act were fully discussed, together with the draft regulations, as provided for in section 23 of the Act.

J. W. KINNIBURGH,  
Officer in Charge.

The Under-Secretary, Department of Internal Affairs, Wellington.

## VI. REPORT OF GOVERNMENT ASTRONOMER.

Hector Observatory, Wellington, 6th May, 1916.

DURING the ten months ended the 31st January, 1916, Mr. C. J. Westland, F.R.A.S., was in charge of the Observatory as Acting Government Astronomer. For the remaining two months I resumed charge on my return from the Lick Observatory, Mount Hamilton, California.

The year has been a very busy one, for in addition to the usual demands for an accurate time-service, the numerous troopships have required many extra time-signals, which has necessitated much more observing; and the Auckland Harbour Board has now established a similar system for time-signals by electric lights to that in use at the Observatory. At least twice a week the Auckland time-signal lights are extinguished at 9 p.m., New Zealand mean time, by direct connection from the Observatory. This method of signalling time is much more accurate than that by time-ball, and it is one that can be readily extended to all parts in the Dominion.

*Admiralty Chronometers.*—All the Admiralty chronometers and watches which had been deposited here were, by direction of the Hydrographer to the Admiralty, returned to the Astronomer-Royal, Greenwich.

*Donohoe Comet Medal.*—This medal is awarded by the Astronomical Society of the Pacific for the discovery of unexpected comets, and the eighty-fifth award is in duplicate to Mr. Leon Campbell, Assistant in Charge of the Arequipa Station of the Harvard Observatory in Peru, for the discovery of an unexpected comet on the morning of the 18th September, 1914, and to Mr. Charles James Westland, Christchurch, New Zealand, for the discovery of the same comet a few hours later.

*Publications presented to the Library.*—A large number of valuable publications have been presented to the library, and for them grateful thanks are tendered to the donors.

*Seismograph.*—A Milne seismograph has been installed in one of the cellars, and is in charge of Mr. G. Hogben, M.A.F.G.S., C.M.G. The duties of daily attendance to change the records, wind the clocks, &c., fall to the Observatory. The seismograph is installed in the same cellar that was used by Professor C. S. Wright in his determination of gravity in conjunction with the Scott Antarctic Expedition. The pendulum pier used by Mr. Wright had to be removed to make space for the seismograph.

*Orbit and Ephemeris of Comet 1915A (Mellish).*—The Melbourne Observatory supplied the orbit elements and ephemeris of this comet, computed by Mr. C. J. Merfield, F.R.A.S., from observations by Dr. J. M. Baldwin made with the south equatorial of the Melbourne Observatory.

*Wireless Time-signals.*—The Melbourne Observatory supplies a time-signal by wireless at 1.30 a.m. and p.m., New Zealand mean time; and the a.m. signal has frequently been heard at the Wellington Radio Station. The value of a wireless time-signal, particularly in the winter-time when the weather is likely to interfere with observations here, is very great; and it is hoped, for the benefit of those who require accurate time-signals, that steps can be taken in the near future to arrange for the receipt of the signal at the Observatory.

A wireless time-signal was recently transmitted to the Arctic ship "Aurora" when she was about six hundred miles south of the Bluff, from the Awarua Radio Station, with very satisfactory results. The Governor of Tahiti has applied for a wireless time-signal from the Observatory, but so far the necessary arrangements have not been made for this service. Its usefulness to the shipping would be very great, but before this service could be undertaken with regularity it would be necessary to have some precision clocks to depend on.

*Longitude of Islands.*—Opportunities should now be taken of the radio station at the Chatham Islands to determine the longitude of these islands, and this work is recommended for the first available chance. In a similar way, if the Government steamer that visits the southern islands were fitted with wireless outfit the longitudes could be readily determined and at small cost. This important piece of work calls for urgent attention as soon as funds are available. It has already been undertaken successfully by most Governments with island possessions.

*Cooke 4 in. Telescope.*—The Lands and Survey Department has lent a 4 in. Cooke telescope with a tripod mounting, fitted with vertical and horizontal motions, to the Observatory. It is proposed to use this telescope in testing the "seeing" in other localities, and to obtain reliable data on this important question.

*Equatorial Telescope.*—This 5 in. equatorial telescope is mounted in a building in charge of the Astronomical Section of the Wellington Philosophical Society, and members of the section freely give their services to showing the general public the telescope on fine Tuesday evenings.

*Equipment of Time-service.*—Much of this equipment dates from 1868 and requires to be brought up to date as soon as possible. The service is deficient in that it has no precision clock. Those in use are in second and third order, and require an undue amount of care and attention to obtain an accurate time-service from them; and when bad weather prevents observations from being taken it is impossible to give accurate time-signals from the present clocks. This is a serious position for the time-service to be in, for an urgent call for accurate time-signals may come through at any time, and it is hoped that urgent steps will be taken to improve this portion of the equipment. Provision will also be required for a charging-plant and new batteries, for these are liable to a breakdown at any time.

*Martin Kellog Fellowship.*—Mrs. Adams and I left Wellington on the 7th January, 1915, for the Lick Observatory, Mount Hamilton, California, and arrived there on the 29th January, 1915. A comfortable cottage at the Observatory, partly furnished, was placed at our disposal rent-free. Every courtesy was extended to us, and our residence made as pleasant and comfortable as possible. Opportunity was taken to attend a meeting of the American Astronomical Society, and those of the American Association for the Advancement of Science, where the acquaintance was made of many eminent American astronomers, and a visit was also made to the great solar Observatory on Mount Wilson, Pasadena, California.

In addition to the many personal courtesies it is right to acknowledge here the valuable gifts of publications made to the library of this Observatory by Director W. W. Campbell, of the Lick Observatory, and by Director G. E. Hale, of the Mount Wilson Solar Observatory, and by Dr. R. V. Aitken, editor of the Astronomical Society of the Pacific.

We left the Lick Observatory on the 5th January, 1916, and arrived at Wellington on the 30th January, 1916.

I am now engaged in writing up the scientific results of this visit, and a report will be presented to the Hon. the Minister in due course.

C. E. ADAMS,  
Government Astronomer.

The Under-Secretary, Department of Internal Affairs, Wellington.

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