

**SIXTH ANNUAL REPORT OF THE
DIRECTOR OF THE BUREAU OF
SCIENCE TO THE HONORABLE THE
SECRETARY OF THE INTERIOR. FOR
THE YEAR ENDING AUGUST 1, 1907**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649231249

Sixth Annual Report of the Director of the Bureau of science to the honorable the secretary of the interior. For the year ending August 1, 1907 by Paul C. Freer

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

PAUL C. FREER

**SIXTH ANNUAL REPORT OF THE
DIRECTOR OF THE BUREAU OF
SCIENCE TO THE HONORABLE THE
SECRETARY OF THE INTERIOR. FOR
THE YEAR ENDING AUGUST 1, 1907**

SIXTH ANNUAL REPORT
OF THE DIRECTOR OF
THE BUREAU OF SCIENCE

TO THE HONORABLE
THE SECRETARY OF THE INTERIOR

BY
PAUL C. FREER
DIRECTOR OF THE BUREAU OF SCIENCE

FOR THE YEAR ENDING AUGUST 1, 1907



MANILA
BUREAU OF PRINTING
1908

SIXTH ANNUAL REPORT OF THE DIRECTOR OF THE BUREAU OF SCIENCE.

DEPARTMENT OF THE INTERIOR,
BUREAU OF SCIENCE,
Manila, August 5, 1907.

SIR: The following report gives an account of the work performed in the Bureau of Science for the period from August 1, 1906, to August 1, 1907, together with such recommendations as to future improvements as seemed to me to be necessary.

THE ETHNOLOGICAL MUSEUM.

The Ethnological Survey, which was formerly a Bureau of the Government and which was transferred as a division to the Bureau of Education on November 1, 1905, was placed in charge of this Bureau one year thereafter. This division up to the present time has been confined to temporary and inadequate quarters; first in the district of Malate, subsequently in the General Government building on Plaza Binondo, afterwards in the Bureau of Education. It has never had a place for the proper care and display of its materials, and therefore deterioration, breakage, and loss was the inevitable result. During the present year, sufficient funds have been available in the appropriation for this Bureau to alter and repair the quarters formerly occupied by the Bureau of Architecture and to place them in a fit condition to receive the ethnological museum. The transfer of this building to this Bureau was brought about after considerable delay and the adjustment of the appropriation was also accomplished late in the fiscal year, so that we are only now in the position to begin to move the collection. Show cases in addition to those already on hand have been built, racks to hold weapons, shields, etc., placed on the walls, shelving put in to accommodate specimens, and the entire space renovated and put in condition for a public museum. It is proposed to have this museum open to the public during certain hours of the day, and it is hoped that the migrations of the division of ethnology are now at an end.

About one-fourth of the floor space available has not been utilized at present. It is obvious that room must be left for expansion of the ethnological museum and for other purposes. It is not deemed advisable to place the working collections of the Bureau of Science, such as the

botanical herbarium, the ornithological, geological, and other collections in this building for many fundamental reasons. Some of these are: The distance from the central scientific bureau, which would operate especially to the detriment of both the botanical work and the investigations carried on in the Bureau of Science building which need the assistance of the botanists; the journey to and from the library is also one of the considerations and this is even a more serious matter. Much of the future work in botany will need laboratory facilities for the study of the histology of Philippine woods and of plant physiology and pathology, and none of the facilities for such investigations will be available in the new building. Therefore, it seems fundamentally necessary to provide room on Calle Herran for that class of work in the Bureau of Science which depends upon scientific collections.

THE NEED OF A COMMERCIAL MUSEUM.

In the past few years this Bureau has from time to time collected many specimens and prepared many products of commercial value in the development of the Islands; all of this material has been sent to various collections, exhibitions, and museums in the United States and none reserved here, so that the Islands are confronted with the fact that, whereas we are in every way endeavoring to enhance the availability and volume of our natural resources, we have nowhere in Manila a place where strangers visiting the Islands can go to view specimens of the natural products and to obtain the commercial information which is necessary for their intelligent understanding. Such a place should be in connection with the ethnological museum, which is already established. However, a commercial museum would be of little value were it not provided with a good division of information, a thoroughly competent man at its head and sufficient clerical assistance to collate and supply all details necessary to assist visitors in Manila. A classified and catalogued card system which would give all available information regarding the natural products, so collated that every detail available to the Government and to private persons would be collected in this central spot, would be of the greatest assistance in advancing the interests of the Islands. The subject of Philippine coals furnishes an example. There should be a place where a visitor could ascertain at once and with the greatest facility the result of all analyses which have been made on Philippine coals, the percentage of efficiency resulting from boiler tests, the location of the coal beds, the means of transportation to and from their location, the expenses of labor in the various districts, the wharfage facilities, and so forth. Again, if, for example, a stranger were interested in a product from some of the unexploited oil seeds or nuts found in the Islands, information as to the availability of these seeds, the opportunities for collecting, the percentage and the quality of the oil, and all other data regarding them should be available in such a division

of the Government. The various grades of Manila hemp and the methods of reaching a classification should be on file, and in each instance museum specimens should accompany the records. The above are only a few examples which come to mind owing to past experience, and new questions are constantly arising.

The system to be inaugurated would need to be thoroughly organized with means of obtaining very accurate and complete information, otherwise the project should not be undertaken. One essential feature should be a complete collection of catalogues and price lists. The market values of all local and foreign commodities which may be a factor in the development of the Islands should be available, as under present conditions it is sometimes necessary for the visitor to call upon a number of Bureaus to gather his information section by section, with the possible necessity of making a long journey through the provinces in order to obtain even a preliminary view of the field.

Much information which could really be made available is not now collected for the reason that there is no uniform system, and each Bureau of the Government is simply obtaining such data as it deems necessary for its own work. Such offices as the Bureau of Education and the Constabulary could be utilized for systematically furnishing details from the provinces in regard to products, routes, or maps, and the mere fact that the attention of teachers and Constabulary officers is being called to the desirability of such facts and the existence of a central office for their proper handling will do much to stimulate activity in the line of gathering information.

AN ADDITION TO THE MAIN LABORATORY BUILDING.

In the past annual reports attention has been called to the overcrowded condition of the building of the Bureau of Science. The inauguration of the new Medical School, and the necessity not only of providing space in this building for the advanced work of the faculty but also of taking in a number of advanced students who need better facilities than can be afforded in the Medical School, renders the necessity for increased space in the building of the Bureau of Science more and more apparent. The botanical, pathological, mineralogical, geological, and ichthyological collections are growing rapidly and the space available each year becomes proportionately less. The subject was so strongly urged before the Commission that authority has finally been granted to have plans drawn for a wing approximately 110 feet long and 50 feet wide. This addition would provide for the herbarium, the work in entomology, the collection of natural-history specimens, the division of mines, and the new undertaking in the study of fish and fisheries. It is essential to the unity of the work and to the plan of a central scientific institution that the working collections, together with the staff connected with them, should not be separated from the main structure. The need of intimate intercommunication has

developed more and more as the age of the Bureau increases and the vigorous carrying on of new work is only possible under the stimulus of proper surroundings. Future plans should also contemplate the union of the ethnological and commercial museums under the same roof as the working collections of the Bureau and connected with the present building.

THE NEW WORK IN FISH AND FISHERIES.

We have during the past year, in addition to the amalgamation of the Ethnological Survey with the Bureau of Science, added work in fish and fisheries. This has begun in a modest way by engaging the services of Mr. Alvin Seale, who has a large experience in the identification of tropical and especially Philippine fishes. Authority has also been obtained for a voyage of the United States Fish Commission vessel *Albatross* to the Islands, for the purpose of exploration and investigation, the Philippine Government furnishing the necessary coal during her stay in these waters. It is obvious that, while this Government will obtain many advantages from this exploratory expedition, full and permanent results will not be available until we make up our minds to continue the division of fisheries as a permanent institution with equipment and facilities of its own. It is very certain, owing to the fact that the Philippine Government will provide the coal for the *Albatross*, that it will be entitled to complete duplicate sets of the collections to be made and also to a prompt report on the best means to be taken to increase the commercial availability of the marine fauna, but this is not all. It should be in a position to secure advanced advice and results before the appearance of the probably extended discussion which will be printed in Washington. I hope that during the visit of this vessel to our waters, plans may be begun and funds become available for establishing the system of floating scows which I have advocated in the past. The division of fisheries is certainly of great importance when we consider the food value of the marine fauna to the people, and it should be continued with adequate facilities, aquaria, and personnel after the first exploratory work is over. One feature which I have dwelt on in the past, which I still consider to be not only advisable but almost necessary in this work, is the establishment of a public aquarium for the use of the people of the Islands.

THE PHILIPPINE MEDICAL SCHOOL.

The Director of the Bureau of Science was appointed dean of the school in December, 1906, and as so much of the work of the new institution is connected with that of the Bureau of Science, an account of the progress of the school is included in this report.

The Philippine Medical School was brought to a working basis during the past year and it opened its doors to pupils on June 10, 1907, the total number of admissions being fifty-four. The Commission appropriated

sufficient funds to establish four years of the course at the present time, for although the board of control and the faculty decided that a five years' course was necessary in the Philippine Islands, it was obvious that no students would immediately be available for the fifth year. The object of the school is as rapidly as possible to train Filipinos as physicians, but with the conditions which confront us, it does not seem feasible to allow the students to graduate with less than a five years' course of study. However, it appeared necessary, in order to give an opportunity for many applicants who had not been trained in the Government schools, for the present to be somewhat lenient in the entrance examinations, the standard to be gradually raised as a larger number of the Philippine population becomes familiar with our methods of preliminary study and with the English language. It was also deemed essential to admit as advanced students a number of applicants who had previously studied medicine in other schools. While they have not the preliminary training which we will require of our own beginning classes, nevertheless, by such admissions we will be giving an opportunity for many to take laboratory work and to become familiar with laboratory methods of instruction, who otherwise might not have been able to gain these advantages. The students in question will undoubtedly be more or less weak in the beginning work, but they nevertheless will be available for sanitary work in the Islands much sooner than if we were compelled to wait for the first freshman class to graduate. They have been admitted as special students and will only be considered candidates for a degree if after one year of study they prove themselves to be fit to continue the work.

As soon as the doors of the school were opened one great necessity at once became apparent, and that was the need of increased clinical facilities. The material at St. Paul's Hospital is practically all that is available. The Civil Hospital is a pay institution and at such a distance from the Medical School that the loss of time in journeying to and fro is prohibitive. This lack of clinical material emphasizes even more strongly the fact that the Philippine Islands need and must have a well-equipped general hospital, with a minimum of 350 beds for the first year. Indeed, for a city of the population of Manila, with its many near-by suburbs, an institution of 1,600 beds would ultimately not be unreasonable. The necessities of medical instruction will then inevitably lead to the conclusion that the faculty of the school must also comprise the staff of the hospital, and such being the case it would seem more advisable to have the hospital under the immediate direction of the board of control of the Medical School, rather than to place it under any one Bureau.

It seems evident, to judge from the results of the first year, that we must expect larger and larger entering classes as time goes on, and the temporary quarters of the school will soon be inadequate. An appropriation of ₱250,000 has been made for the construction of a new