

**SMITHSONIAN INSTITUTION. UNITED
STATES NATIONAL MUSEUM. BULLETIN
OF THE UNITED STATES NATIONAL
MUSEUS. NO. 55; A CONTRIBUTION TO
THE OCEANOGRAPHY OF THE PACIFIC**

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JAMES M. FLINT

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SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM

BULLETIN

OF THE

UNITED STATES NATIONAL MUSEUM

No. 55



WASHINGTON
GOVERNMENT PRINTING OFFICE
1905

ADVERTISEMENT.

This work (Bulletin No. 55) is one of a series of papers intended to illustrate the collections belonging to or placed under the charge of the Smithsonian Institution and deposited in the United States National Museum.

The publications of the National Museum consist of two series—the *Bulletin* and the *Proceedings*.

The *Bulletin*, publication of which was commenced in 1875, is a series of elaborate papers issued separately and based for the most part upon collections in the National Museum. They are monographic in scope and are devoted principally to the discussion of large zoological groups, bibliographies of eminent naturalists, reports of expeditions, etc. The bulletins, issued only as volumes with one exception, are of octavo size, although a quarto form, known as the Special Bulletin, has been adopted in a few instances in which a larger page was deemed indispensable.

The *Proceedings* (octavo), the first volume of which was issued in 1878, are intended primarily as a medium of publication for newly acquired facts in biology, anthropology, and geology, descriptions of new forms of animals and plants, discussions of nomenclature, etc. A volume of about 1,000 pages is issued annually for distribution to libraries, while a limited edition of each paper in the volume is printed and distributed in pamphlet form in advance.

In addition, there are printed each year in the second volume of the Smithsonian Report (known as the Report of the U. S. National Museum), papers, chiefly of an ethnological character, describing collections in the National Museum.

Papers intended for publication by the National Museum are usually referred to an advisory committee, composed as follows: Frederick W. True (chairman), George P. Merrill, Otis T. Mason, James E. Benedict, Walter Hough, T. W. Stanton, Leonhard Stejneger, and Marcus Benjamin (editor).

S. P. LANGLEY,

Secretary of the Smithsonian Institution.

WASHINGTON, U. S. A., December 1, 1905.

A CONTRIBUTION TO THE OCEANOGRAPHY
OF THE PACIFIC

COMPILED FROM DATA COLLECTED BY THE UNITED
STATES STEAMER *NERO* WHILE ENGAGED IN
THE SURVEY OF A ROUTE FOR A
TRANS-PACIFIC CABLE

BY

JAMES M. FLINT

Medical Director, U. S. Navy; Curator, Division of Medicine, U. S. National Museum



Washington
Government Printing Office
1905

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A CONTRIBUTION TO THE OCEANOGRAPHY OF THE PACIFIC

By JAMES M. FLINT,

Medical Director, U. S. Navy; Curator, Division of Medicine.

INTRODUCTION.

In the early part of the year 1899 the U. S. S. *Nero*, a steam collier of 4,925 tons displacement, which had been purchased for use during the Spanish-American war, was fitted out by the Navy Department, equipped with the necessary apparatus, and dispatched from San Francisco under the command of Commander Charles Belknap, U. S. Navy, with instructions to survey a route for a telegraph cable between the United States, the Philippine Islands, and Japan.

On account of the illness of Commander Belknap, he was relieved from command on the arrival of the ship at Manila by Lieut. Commander H. M. Hodges, U. S. Navy, who remained in charge of the survey until its completion.

Several previous surveys having established a satisfactory route between the coast of California and the Sandwich Islands, the actual work of the *Nero* began at Honolulu, from which port the ship sailed on the 6th day of May, 1899.

The following table of dates, distances, and number of soundings furnishes an abstract of the cruise:

| Locality. | Date. | Distance run. | Number of soundings. |
|----------------------------------|---------|---------------|----------------------|
| | | <i>Knots.</i> | |
| | 1899. | | |
| Left San Francisco | Apr. 22 | | |
| Arrived Honolulu | May 2 | | None. |
| Left Honolulu | May 6 | | |
| Arrived Midway Island | May 22 | 1, 184. 5 | 195 |
| Left Midway Island | May 24 | | |
| Arrived Guam | July 5 | 3, 520. 35 | 467 |
| Left Guam | July 7 | | |
| Arrived Dingala Bay, Luzon | Aug. 1 | 1, 400. 15 | 191 |