

**DIAGNOSIS OF
PROTOZOA AND
WORMS PARASITIC
IN MAN. PP.1-71**

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Diagnosis of Protozoa and Worms Parasitic in Man. pp.1-71 by Robert W. Hegner & William W. Cort

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ROBERT W. HEGNER & WILLIAM W. CORT

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THE JOHNS HOPKINS UNIVERSITY
SCHOOL OF HYGIENE AND PUBLIC HEALTH

DIAGNOSIS OF PROTOZOA
AND
WORMS PARASITIC IN MAN

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PREFACE*

This bulletin has been prepared for the use of physicians and public health workers who are called upon to diagnose diseases caused by Protozoa and worms. No attempt has been made to include in the keys and descriptions all of the species that are now known. On the contrary, species that have been recorded only once or a very few times have been purposely omitted to avoid confusion.

The information and figures contained in this bulletin have been selected from original articles in periodicals, and from reference and text books wherever available. Credit for the use of figures is given in every case in the descriptions of the figures. A few of the more important books and articles relating to the parasites described are listed at the end of the account of each group. Other lists will be found in the bibliographies contained in most of these books and articles. So far as possible we have verified statements regarding the organisms described, but errors are almost certain to creep into such a compilation, and we will welcome corrections. We will also be glad to accept any suggestions for the improvement of the bulletin which may be incorporated in a second edition if called for.

The methods employed by various workers for the diagnosis of parasitic Protozoa and worms are very numerous and only a few could be described in this bulletin. These have been selected on the basis of simplicity and effectiveness. It seems to us desirable that methods applicable to field conditions and requiring the minimum of apparatus and reagents should be emphasized. Modifications of these methods may be devised to fit the circumstances encountered in the field.

* The publication of this bulletin was made possible by a grant from the International Health Board.

GENERAL LITERATURE LIST

This general list contains titles of only a few books and periodicals selected on the basis of helpfulness and accessibility. Special lists will be found at the end of each section of the bulletin.

GENERAL REFERENCE BOOKS ON ANIMAL PARASITES OF MAN

- BRUMPT, E.: *Précis de Parasitologie*. 2 ed. 1011 pp. Paris, 1913.
- CASTELLANI, H., AND CHALMERS, H. J.: *Manual of Tropical Medicine*. 3 ed. 2436 pp. London, 1919.
- CHANDLER, A. C.: *Animal Parasites and Human Disease*. 570 pp. New York, 1918.
- FANTRAM, H. B., STEPHENS, J. W. W., AND THEOBALD, J. F.: *Animal Parasites of Man*. 900 pp. New York, 1916.
- MANSON, SIR PATRICK: *Tropical Diseases*. 5 ed. 937 pp. London, 1914.
- MENSE: *Handbuch der Tropenkrankheiten*. 2 Aufl. 1915.
- NEUMAN, R. O., AND MAYER, M.: *Atlas und Lehrbuch wichtiger tierischer Parasiten und ihrer Uebertrager*. 580 pp. Munich, 1914.
- STITT, E. R.: *Practical Bacteriology. Blood Work and Animal Parasitology*. 5 ed. 559 pp.

GENERAL PERIODICALS ON ANIMAL PARASITES OF MAN

- Tropical Diseases Bulletin*. Vol. 1, 1912, London.
- Parasitology*. Vol. 1, 1908, Cambridge.
- Annals of Tropical Medicine and Parasitology*. Vol. 1, 1907, Liverpool.
- Journal of Parasitology*. Vol. 1, 1914, Urbana, Illinois.
- Centralblatt für Bakteriologie, Parasitenkunde, und Infektionskrankheiten*. Vol. 1, Jena, 1887.
- Memorias do Instituto Oswaldo Cruz*. Vol. 1, 1909, Rio de Janeiro.
- Bulletin de la Société de Pathologie Exotique*. Vol. 1, 1907, Paris.
- Archives de Parasitologie*. Vol. 1, 1898, Paris.
- Archiv für Schiffs- und Tropen-Hygiene*. Vol. 1, 1897, Leipsig.

- Journal of Tropical Medicine and Hygiene. Vol. 1, 1898, London.
Transactions of the Society of Tropical Medicine and Hygiene.
Vol. 1, 1907, London.
Indian Journal of Medical Research. Vol. 1, 1913.
Philippine Journal of Science, Series B. Manila, 1906.

GENERAL BOOKS AND PERIODICALS ON PROTOZOLOGY

- CALKINS, G. N.: Protozoology. 349 pp. Philadelphia, 1909.
DOFLEIN, F.: Lehrbuch der Protozoenkunde. 4 ed. Jena, 1917.
HARTMANN, M., AND SCHILLING, C.: Die Pathogenen Protozoen.
462 pp. Berlin, 1917.
MINCHIN, E. A.: Introduction to the Study of the Protozoa. 520
pp. London, 1917.
PROWAZEK, S. V., AND OTHERS: Handbuch der Pathogenen Proto-
zoen. Leipzig, 1912-14.
ROBERT, A.: Protozoaires. Paris, 1914.
Archiv für Protistenkunde. Vol. 1-39. 1902-1919. Jena.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part outlines the various methods and tools used to collect and analyze data. This includes the use of surveys, interviews, and focus groups to gather insights from stakeholders. The analysis of this data is then used to identify trends and areas for improvement.

3. The third part of the document focuses on the implementation of the findings. It details the steps taken to address the identified issues and the measures implemented to prevent similar problems from occurring in the future. This includes the development of new policies and procedures, as well as the provision of training and support to staff.

4. The final part of the document provides a summary of the key findings and conclusions. It highlights the overall success of the project and the impact of the implemented changes. It also identifies areas for further research and development, and provides recommendations for ongoing monitoring and evaluation.

TABLE OF CONTENTS

Preface.....	3
PART I. PROTOZOA PARASITIC IN MAN	
1. Introduction to the Protozoa.....	11
2. Blood Inhabiting Protozoa of Man.....	11
A. Organisms that cause malaria in man. 1. Classification. 2. Life history. 3. Distinguishing features of the three species of <i>Plasmodium</i> occurring in man. 4. Methods of making films for the diagnosis of malaria. Special literature on malaria.....	11
B. Organisms that cause trypanosomiasis (sleeping sickness and Chagas' disease) in man. 1. Classification. 2. Description of species. 3. Methods of diagnosis. Special literature on trypanosomiasis.....	18
C. Organisms that cause leishmaniasis in man. 1. Classification. 2. Description of species. 3. Methods of diagnosis. Special literature on leishmaniasis.....	19
3. Intestinal Protozoa of Man.....	21
A. Methods of fecal diagnosis of intestinal protozoa. 1. Donaldson's iodine-eosin smear method. 2. Cropper and Row's concentration method. 3. Schaudinn's alcoholic sublimate iron-haematoxylin method. Special literature on methods of diagnosis of intestinal protozoa.....	21
B. Intestinal Entamoebae of man. 1. Classification. 2. Species. 3. Distinguishing features (a) of motile stages and (b) of cysts. 4. Distinguishing features of cysts of intestinal amoebae of man; (a) <i>Entamoeba histolytica</i> . (b) <i>Entamoeba coli</i> . (c) <i>Endolimax nana</i> . Special literature on Entamoebae.....	23
C. Intestinal Flagellates of man. 1. Classification. 2. Description of species. (a) <i>Trichomonas hominis</i> . (b) <i>Chilomastix mesnili</i> . 3. Methods of diagnosis. Special literature on intestinal flagellates.....	31
D. Intestinal Coccidia of man. 1. Classification. 2. Description of species. (a) <i>Isospora hominis</i> . (b) <i>Eimeria wenyoni</i> . 3. Methods of diagnosis. Special literature on Coccidia.....	34