## TWENTIETH CENTURY TEXT-BOOKS. ANIMAL FORMS; A TEXT-BOOK OF ZOOLOGY

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Twentieth century text-books. Animal forms; a text-book of zoology by David S. Jordan & Harold Heath

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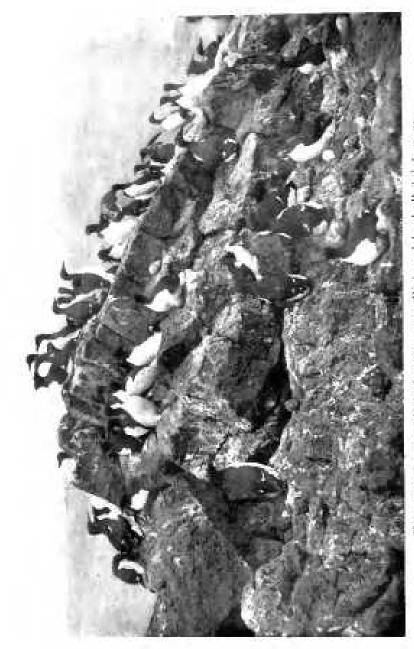
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## DAVID S. JORDAN & HAROLD HEATH

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TWENTIETH CENTURY TEXT-BOOKS

# ANIMAL FORMS

#### A TEXT-BOOK OF ZOOLOGY

BY

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#### PREFACE

THE present volume is designed to most the needs of the beginning student of zoology. Accordingly, technical and scientific names have been avoided as far as possible, and those used are fully explained in the text or elsewhere. The opening chapters deal with the characteristics of living things, and, in contrasting animals and plants, attempt to bring into relief the distinguishing marks of all animals. Then follows a discussion of the cell and protoplasm, preparing the way for the examination of a series of animals representative of each of the great groups, from the simplest to the most complex. These are considered from the view-point of structure; but considerable attention is also paid to the functions of their parts, to their habits and lifehistory, so that while the representatives examined are, for the sake of simplicity, relatively few in number, they are, it is believed, thoroughly typical. Hence, with a knowledge of the facts presented, the student should have a bread view of the animal kingdom, and a foundation on which to base future study and observation. It is perhaps unnecessary to add that from the study of books alone no one can really make such knowledge his own. A personal acquaintance with even a few animals in their native haunts, and an understanding of the structure and the function of their

#### ANIMAL FORMS

parts gained from dissection and experiment, is essential to a full comprehension of what the student learns from textbook and teacher.

The greater number of illustrations are new, and have been drawn or photographed from living or preserved material. When not otherwise accredited, the drawings have been made by Miss Mary H. Wellman and J. Carter Beard, to whom the authors extend their sincere thanks. Our obligations are also due to Mr. Walter K. Fisher, who has made the drawings of the vertebrate dissections; to Messrs. A. L. Melander and C. T. Brues, of Chicago, Ill.; Mr. Wm. H. Fisher, of Baltimore, Md.; Rev. H. K. Job, of Kent, Conn.; Mr. Wm. Graham, of Pasadena, Cal.; and Dr. R. W. Shufeldt, of New York city, for numerons photographs.

> DAVID STARE JORDAN, HAROLD HEATH.

## CONTENTS

CHAPTER										PARE
L-INTRODUCTION	34	F. 1	÷.	10	M	÷.	121		23	1
HTHE CITA AND	рвон	PLA	8 <b>2</b> 4	000	36 - s	0	30	19	10	7
IIITHE PROPOZOA		0	21			-4				11
IVTHE SPONGES	1	85	87 - E	5		8	£	8	10	19
VTun Conterre	47188	leo -		аŠ.,	96) -		10	3	$\mathbf{v}_i$	29
VVL-Tur wonne	1	ñ.,	÷.	81	ŝ. 1	Ğ.,	2	1	2	44 1
VIL-ASIMALS OF US	CERTY	US I	SLA.	10583	nter		÷.	8	ŝ	66
VIIIMOLLUSES .	00	00	90 - C	0	1940 -	÷	(a.).	8	-	721
IXARTHROPODS.	LASS	Ст	STAC	EA.	8 -	91 -	\$	2 I	1	93
X,-ARTEROPODS,	CLASS.	188	egras.	10	ii.	Q	S .	Ş	$\overline{\mathbf{n}}$	114
XL-ARTUROPORS.	3.4.88	Az.	CODX	ID S		÷	302		+11	138
XIL-ECRINODERSS		533 CC 1	1000	14	Ĩі і	9	19		10	140
XIIITHE CHORDARIS	84) - 12		66	66	96 - C	4	25	÷.	43	151
XIVTHE FISORS									+	154
XVТие амринная	8 -		资 :	8	8			8	4	174
XVL-THE REPTILES ,	a s		96 - J	æ	98 - 3	œ.	¥2 3	8		184
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										201
XVIIITHE MANNALS			81	0	81	8	1) - I	19 - E	8	225
							TH			

 $\mathbf{Y}_{i}$ 

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