



The Comparative Pathology of Zoo Animals

RICHARD J. MONTALI and GEORGE MIGAKI, *Editors*

With Section Editors

KURT BENIRSCHKE, JOHN C. HARSHBARGER,
FRANKLIN M. LOEW, and JOHN D. STRANDBERG

THE SYMPOSIA OF
THE NATIONAL ZOOLOGICAL PARK
Smithsonian Institution

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Proceedings of a Symposium
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National Zoological Park
Smithsonian Institution
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Smithsonian Institution Press
Washington, D.C., 1980

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Chief
Department of Pathology
National Zoological Park
Washington, D.C.

George Migaki
Chief Pathologist
Registry of Comparative Pathology
Armed Forces Institute of Pathology
Washington, D.C.

Section Editors:

Kurt Benirschke
Director of Research
Zoological Society of San Diego
San Diego, California

John C. Harshbarger
Director
Registry of Tumors in Lower Animals
National Museum of Natural History
Smithsonian Institution
Washington, D.C.

Franklin M. Loew
Director
Division of Comparative Medicine
The Johns Hopkins University
School of Medicine
Baltimore, Maryland

John D. Strandberg
Associate Professor
Division of Comparative Medicine and
Department of Pathology
The Johns Hopkins University
School of Medicine
Baltimore, Maryland

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National Zoological Park, Smithsonian Institution
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Pathology*
Zoological Society of San Diego
Registry of Tumors in Lower Animals, Smithsonian Institution
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Supported by the Friends of the National Zoo (FONZ)

Library of Congress Cataloging in Publication Data
Symposium on the Comparative Pathology of Zoo Animals,
National Zoological Park, Smithsonian Institution, 1978.

The comparative pathology of zoo animals.

(The Symposia of the National Zoological Park)

Sponsored by National Zoological Park, et al.

Includes bibliographical references and index.

1. Zoo animals—Diseases—Congresses. 2. Veterinary pathology—

Congresses. 3. Pathology, Comparative—Congresses. I. Montali,

Richard J. II. Migaki, George. III. Washington, D.C. National

Zoological Park. IV. Title. V. Series: Washington, D.C. National

Zoological Park. Symposia of the National Zoological Park.

SF996.S94 1978 636.089'607 79-24354

ISBN 0-87474-642-6

ISBN 0-87474-643-4 pbk.

* The Registry of Comparative Pathology is supported in part by Public Health Service Grant No. RR00301-13 from the Division of Research Resources, National Institutes of Health, U. S. Department of Health, Education, and Welfare, under the auspices of Universities Associated for Research and Education in Pathology, Inc.

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SF996.S94 1978 636.089'607 79-24354
ISBN 0-87474-642-6
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It is a great pleasure for the Smithsonian Institution to serve as a host for the first international symposium held in the Western Hemisphere on the comparative pathology of zoo animals. The staff of the National Zoological Park, I am sure, is particularly proud that this significant meeting was held in their new education facilities. We applaud the efforts of the other sponsors: The Registry of Comparative Pathology, Armed Forces Institute of Pathology; The Zoological Society of San Diego; The Baltimore Zoological Society; and the Smithsonian Registry of Tumors in Lower Animals. We also appreciate the great support of the Friends of the National Zoo who have actively participated in and contributed to so many of these functions.

These 88 papers, which were presented over a course of three days, cover a variety of subjects—some concerned with the effects of disease on zoo animals, many of which represent endangered species—others pointing out possible new animal models for the study of certain diseases in man. One interesting paper concerns the study of stress-caused renal failure in captured roe-deer. It addresses the problems associated with the restraint and transportation of these wild deer and the trauma which may result. Studying the biologic mechanisms of how these untoward effects of capture occur can be helpful as well as interesting. The end point of this study, as well as other research presented in this symposium, is that of learning preventative measures necessary to minimize these stressful effects of captivity. Since so much of what we are doing in zoos around the world is concerned with the preservation and reproduction of endangered and rare species, it is most important that these kinds of studies be continued and shared among zoo personnel concerned with the health of their collections.

If we are to keep alive the rare animals, birds, and other fauna for the enjoyment of man, we must continue all efforts to study the diseases which can kill them prematurely—both in captivity and in the wild.

I commend the efforts of those organizing this important meeting and again welcome the participants exchanging their valuable information at this forum.

Richard J. Montali, D.V.M.
George Migaki, D.V.M.
Washington, D. C.
June 12, 1979

Preface

The idea for this symposium originated while we were on a plane trip to another meeting and were discussing the great potential of zoo animals for possible models of diseases of man and domestic animals. We wondered if other investigators were studying any of these diseases intensively. Any emphasis on the diseases of zoo animals in the United States has been recent and apparently coincides with renewed interest in the conservation movement that appears to be burgeoning in this country. In the recent past, diseases of other than pets and food animals have been considered curiosities. European colleagues have taken greater strides in promoting research efforts covering many aspects of zoological animals including their diseases.

A survey to measure the interest and possible, presentable material concerning pathologic studies of zoo animals was very favorable. In fact, we were overwhelmed with material representing a wide array of studies concerned with describing, comparing, and researching disease processes that occur in zoological species. The format in this symposium thus represents not only reviews of numerous topics by experts—who have dealt with some aspects of their discipline as they apply to or may be applied to zoo animals—but also numerous original papers describing familiar entities in unfamiliar species. As well, totally new conditions of exotic species are dealt with which add to the general fund of knowledge of animal diseases and further widen the spectrum of animal pathobiology.

The material from the presentations and poster sessions that went into these proceedings is considered a beginning. Much of it, although providing some answers at this point, serves more to generate stimulating questions and represents fertile ground for continued research efforts. It is anticipated that before long, gaps in the spectrum of animal diseases, including those of man, will be filled by information gleaned from zoological species.

We would like to thank the many individuals who have made these proceedings a reality and regret that it is impossible to name here all who contributed. Special acknowledgment, however, is due Mrs. Judith F. Wilder, editor for the publisher, who guided the construction of this volume from its beginning to a successful completion.

