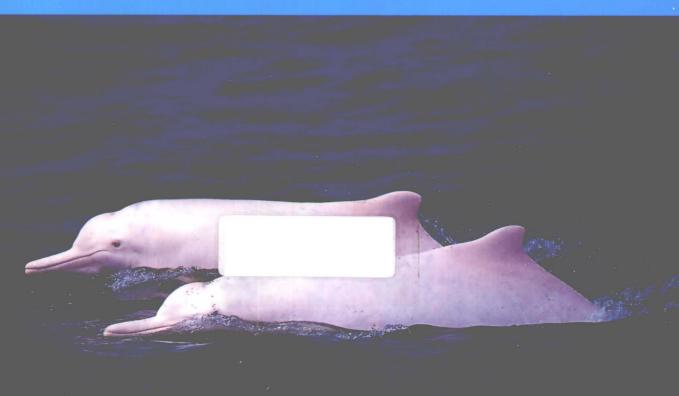
中国鲸类

CHINESE CETACEANS

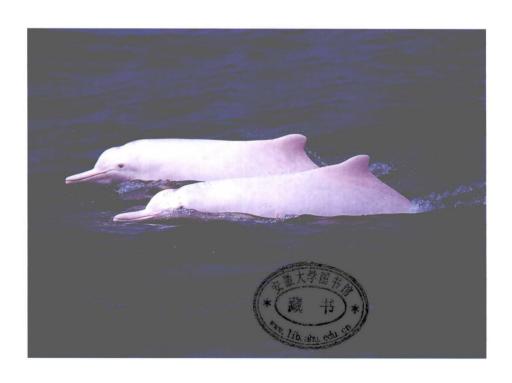
王丕烈 著 Wang Peilie



中国鲸类

CHINESE CETACEANS

王丕烈 著 Wang Reilie



企 化等工业出版社·北京·

本书是一部比较系统、完整的中国鲸类专著,是作者50余年对中国鲸类研究的总结,也是《中国动物 志》目前尚欠缺的海兽志的重要组成部分。全书共分两大部分,第一篇为概论,简单介绍中国鲸类的研究 概况,中国近海捕鲸简史,中国鲸类的分类及检索,中国鲸类区系、经济意义及资源保护。第二篇为分论, 共 37 章,分别记述中国水域产鲸类 37 种,其中须鲸亚目 3 科 4 属 10 种,齿鲸亚目 6 科 21 属 27 种。分别 对各个种的形态、地理分布、洄游、生态特性、生物学特性、种群数量变动或资源利用现状作了论述。各 个种均配有外形图、形态和部分生态照片、头骨图和骨骼照片及分布图。本书可供动物学研究工作者、水 产科技工作者、野生动物保护工作者、环境保护工作者、大专院校师生及有关工作人员参考。

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作者简介

王丕烈 1927年生, 山东省莒县人, 1950年毕业于山东大学水产学系。辽宁省海洋水产科学研究院研究员, 曾任辽宁省动物学会理事、辽宁省野生动物保护协会理事、中国野生动物保护协会第一届理事、农业部水生野生动物自然保护区评审委员会委员。从事海兽资源和鲸类资源研究50多年,发表海兽方面的论文50余篇, 主要有《黄海须鲸类的研究》、《黄海小鰛鲸生殖习性的研究》、《灰鲸在中国近海的分布》、《中国海洋哺乳动物区系》、《中国江豚的分类》等,合著有《斑海豹》等六部,代表性专著有《中国海兽图鉴》、《中国鲸类》等。多次主持海兽和鲸类方面的研究课题,并多次获省级和部级科学技术进步奖。由于为发展我国科学技术事业做出突出贡献,享受国务院政府特殊津贴。

Professor Wang Peilie, borned in Juxian, Shandong Province in 1927, graduated from Shandong University in 1950. Professor Wang has been working in Marine Fisheries Research Institute of Liaoning Province and has done the research about the marine mammals and whale over 50 years. These profound researches dealt with the fauna of marine mammal in China, the resources biology and ecology of largha seal in Bohai Sea, the resources and ecology of whale, the resources and taxonomy of finless porpoise in China and so on. Professor Wang has published 50 articles about marine mammals including: Studies on the baleen whales in the Yellow Sea, Studies on the breeding habits of the Minke whale in the Yellow Sea, Distribution of the Gray whale off the coast of China, Fauna of marine mammals in China and On the taxonomy of the Finless porpoise in China, 6 treatises such as co-written "Largha Seal". The representative monographs are "Guide to Marine Mammals of China", "Chinese Cetaceans", etc. Professor Wang has taken charge of many research projects of the marine mammals and obtained many scientific advances awards from the ministry and province. Professor Wang enjoy the allowance subsided by the State Council.

我国著名的海兽研究专家王丕烈教授,1950年山东大学水产系毕业后,即到旅大水产公司从事海洋渔业捕捞技术研究。1955年,他参加了我国首次捕鲸的筹备工作,接着长期随船出海探捕鲸类,在十分艰苦的条件下,亲自观察并记录各类鲸种的生态习性,积累了大量极其难得的研究资料。嗣后,他转入辽宁省海洋水产研究所专门从事中国海域的海兽研究。他根据自己已搜集的资料,参阅了大量中外文献,先后发表了论文40多篇,专著2部,合著6部,为我国海兽研究做出了突出的贡献。

在作者搜集到的海兽资料中,绝大部分是鲸类。为了使读者系统地了解中国鲸类的情况,他编写了《中国鲸类》这本专著。尤其可贵的是,此书弥补了《中国动物志》缺少鲸类的不足。

大家知道,世界鲸类资源由于各捕鲸国竞相滥捕,有些种类已濒临灭绝,国际捕鲸委员会不得不商定公约,对某些种类进行禁捕或限捕加以保护。中国 1988 年颁布的《中华人民共和国野生动物保护法》亦将白鳘豚和中华白海豚列为国家一级重点保护水生野生动物,其余鲸种全部列为国家二级重点保护水生野生动物,严禁猎捕。这一措施使今后采集标本增加了难度,从而亦使本书已收集到的资料益显珍贵。

本书共收集到中国鲸类 37 种,其中须鲸类 10 种,齿鲸类 27 种。如按海区统计则:渤海 7 种,黄海 18 种,东海 23 种,南海 27 种。本书对中国鲸类区系进行了初步分析;对各种鲸的形态特征、生态特性、生物学特性、分布洄游、资源利用现状等作了较详细的记述。特别是对小须鲸的生态习性、繁殖生长与洄游分布,对西太平洋灰鲸种群的洄游分布与繁殖习性,对中华白海豚的形态特征、生态与地理分布,以及对江豚种群形态特征的地理变异的研究,以及将江豚分为 3 个亚种等均有独特的见解,这些资料填补了中国鲸类研究的空白,对世界鲸类研究也做出了较大贡献。

本书是我国前所未有的、比较系统完整的中国鲸类专著。它的出版,为我国鲸类的科学研究和资源管理保护提供了基础资料。同时,本书反映了作者勤奋好学、意志坚强、献身科学、不畏艰险的优良品质。希望他在此基础上再接再厉,进一步深入研究,力争取得更大的成果。

旁至奎

中国科学院院士1997年2月23日

Foreword

China's most famous marine mammal expert, Professor Peilie Wang, graduated from the Department of Fisheries at Shandong University and then accepted a position at the Luda Fishery Company to study capture methods of marine fisheries. In 1955, he participated in our nation's first meeting on the preparations for whaling operations. He spent many years on board whaling ships where he was exposed to conditions that were challenging and often hazardous. His perseverance on the whaling vessels and initiative to record biological data on the different species of cetaceans resulted in the accumulation of an enormous amount of priceless and difficult to collect information. He later joined the Liaoning Marine Fisheries Research Institute to conduct research on the marine mammals of Chinese waters. Based on the data that he had collected and with reference to internationally published information, he published more than 40 papers, authored two important books and co-authored six other books. He has pioneered marine mammal research in China and his contributions have advanced the field greatly.

With the vast knowledge and experience that he had accumulated, mainly with cetaceans, the author wrote *Chinese Cetaceans* to provide readers with a better understanding of cetaceans in an organized and coherent way. The greatest accomplishment of this book is its contribution to rectifying the deficiency of coverage of cetaceans in the volume, *Fauna Sinica*.

Irresponsible hunting by the whaling nations has resulted in some species being brought to the brink of extinction. As a result, the International Whaling Commission was forced to set international agreements to regulate and even ban whaling of certain species to protect them. In 1988, China drafted and publicly declared the Law of the People's Republic of China on the Protection of Wildlife, which listed the baiji and Indo-Pacific humpback dolphins under first grade protection for species of wildlife requiring special protection. All other cetaceans were considered as wildlife requiring special protection under the second grade protection level. As such, all cetacean species in China are strictly prohibited from being captured. One of the unexpected consequences of such strict legal protection was the difficulties for scientists to collect specimens and samples of, and data about, protected species. Therefore, the information presented in this book is even more precious.

This book includes information on 37 species of cetaceans that have been recorded from Chinese waters: 10 species of the suborder Mysticeti (baleen whales) and 27 species of the suborder Odontoceti (toothed whales). Of these species found in Chinese waters, 7 are found in the Bohai, 18 in the Yellow Sea, 23 in the East China Sea and 27 in the South China Sea; a preliminary area-by-area analysis of the cetaceans in the above regions in Chinese waters is also provided. This volume describes in detail the external morphology, ecology, biology, distribution and migration of cetaceans and present use of cetacean resources in Chi-

na. Especially notable is the author's presentation of information about: the ecology, reproduction, growth, migration and distribution of minke whales; migration, distribution and reproductive behaviour of western gray whales; ecology, morphology and distribution of Indo-Pacific humpback dolphins; and the morphology and geographical differences in finless porpoise, which resulted in the novel idea of dividing the species into three subspecies. This information completed areas of cetacean research that were lacking and contributed greatly to international cetacean science.

This is the first and most authoritative publication about Chinese cetaceans and will provide the foundation for scientific research, resource management and conservation of cetaceans in our nation for many years to come. As well, this book reflects the author's determination, spirit for learning, persistent motivation in conducting scientific research and fearlessness in facing difficult and dangerous situations. I hope the author will continue his efforts to further advance this field and reach greater accomplishments.

23 February 1997

修订版前言

本书于 1997 年编写完成,但到 1999 年才由香港海洋企业有限公司以繁体字在香港出版,距今已时隔 10 余年。此期间,中国鲸类的研究又有新的飞跃和发展,有必要对本书进行修订和补充。

随着分子生物学的发展,对鲸类分子遗传生物学的研究也广泛深入应用,以往传统以物种形态分类,而今可借 mtDNA 控制区测序等手段进行分类,研究更为科学。作者在本书初版中曾命名新种"黄氏海豚",后经 mtDNA 测序"新种"不成立,深感歉意。

本书修订所用鲸类中文名称,是根据 2005 年 12 月在台湾召开的首届海峡两岸鲸类生态与保护学术研讨会上,由两岸鲸类研究专家王丁、王丕烈、王愈超、周开亚、周莲香、杨鸿嘉、祝茜、倪怡训、洪家耀、姚秋如、杨世主、陈涛等 20 余位共同讨论商定两岸统一使用的中文名称。所以,对本书初版使用的中文名称此次进行了全面修订。

本书修订版得到辽宁省海洋水产科学研究院和大连市渔政监督管理局的资助,特致谢意。

本书修订时得到辽宁省海洋水产科学研究院院长姜连新,副院长谭克非、许洁、韩家波博士的热心支持,马志强副研究员协助稿件整编,姚秋如博士、赫崇波博士、王愈超博士、洪家耀博士、杨世主女士、张培君博士、王召会、刘鸣、郑茂财、童慎汉、王云忠、孙玉忠、侯和要、鹿志创、苏新刚、郑作文、张年狮、王火根、赵永波等给予帮助,大连自然博物馆、浙江自然博物馆、青岛海产博物馆、上海自然博物馆、台中自然科学博物馆、厦门大学生物系标本室给予协助,Dr. Robert L. Pitman、加藤秀弘博士、宫下富夫博士提供并允许使用照片,深致谢意。

本书承蒙国际爱护动物基金会(IFAW)允许使用《中国海洋哺乳动物保护图鉴》中的 鲸类图,深表谢意。

我的家人给予极大关心和支持,女儿王焱协助编排,外孙女王馨艺重新绘制鲸类图,虽是耄耋之年,甚感欣慰。

该书再版虽初步做了修订,但难免仍有疏漏错误之处,敬请海内外专家指正。

王丕烈 2011 年 3 月 10 日

Preface for Revised Edition

The Chinese Cetaceans was compiled in 1997, and it has been more than 10 years since the first edition was officially published by Ocean Enterprises Ltd, Hong Kong, using traditional Chinese. Since its publication in 1999, new leaps and developments have occurred on the study of Chinese cetaceans and it is necessary to complement or revise the old version.

With the development of molecular biology, new genetic methods are now using to solve some biology puzzle. For example, with the help of mtDNA sequencing, the study of taxonomy on cetaceans can be more scientific and precise than the traditional method only based on morphology data. Much to my regret, I gave a new species named "Huang's dolphin" in the first edition, which was not supported by the following mtDNA sequencing. So the new species does not exist.

The Chinese names of cetaceans in the second edition were revised thoroughly, according to decision on cetacean names used in China. The decision was agreed on together in the first Symposium on Cetacean Research and Conservation across Taiwan Straits, by the following cetacean specialists: Wang Ding, Wang Peilie, John Y. Wang, Zhou Kaiya, Lien-Siang Chou, Hung-Chia Yang, Zhu Qian, I-Hsun Ni, Samuel K. Y. Hung, Chiuo-Ju Yao, Shih-Chu Yang, Chen Tao, etc, in Taiwan, in Dec. 2005.

I express my appreciation to Liaoning Ocean and Fisheries Science Research Institute and Dalian Fisheries Policy and Management Bureau, which fund the publication of the second edition of this book.

I thank Director Jiang Lianxin, Deputy Director Tan Kefei, Xu Jie, and Dr. Han Jiabo from Liaoning Ocean and Fisheries Science Research Institute, for their enthusiastic support; thank Deputy Professor Ma Zhiqiang for assisting with the manual script compilation; thank Dr. Chiuo-Ju Yao, Dr. He Chongbo, Dr. John Y. Wang, Dr. Samuel K. Y. Hung, Ms. Shih-Chu Yang, Dr. Zhang Peijun, Mr. Wang Zhaohui, Mr. Liu Ming, Mr. Zheng Maocai, Mr. Tong Shenhan, and Mr. Wang Yunzhong, Mr. Sun Yuzhong, Mr. Hou Heyao, Mr. Lu Zhichuang, Mr. Su Xingang, Mr. Zheng Zuowen, Mr. Zhang Nianshi, Mr. Wang Huogen, Mr. ZhaoYongbo, etc, for their kind help; thank Dalian Natural History Museum, Zhejiang Museum of Natural History, Qingdao Marine Products Museum, Shanghai Natural History Museum, Taizhong National Museum of Natural Science, and Specimen Room of Biology Department, Life Sciences college, Xiamen University, for their assistance; thank Dr. Robert L. Pitman, Dr. Hidehiro Kato, Dr. Tomio Miyashita for their cetacean pictures.

Thank International Fund for Animal Welfare for its permission to use the cetacean pictures in *Identification Guide for Chinese Protected Marine Mammals* .

Thank my family for their care and support on this book. Especially thank for the help of text editing from my daughter, Wang Yan, and the help of cetacean picture portraying from my granddaughter, Wang Xinyi.

前言

由于各捕鲸国长期竞相滥捕,有些鲸种已濒临灭绝。国际捕鲸委员会(IWC)曾屡次决议,对主要鲸种先后实施禁捕; 1983 年第 35 届年会又通过决议,从 1986 年度起暂停商业性捕鲸。中国于 1980 年 9 月加入了国际捕鲸委员会,同年终止了捕鲸。中国已将白鳖豚和中华白海豚列为国家一级重点保护野生动物,其余鲸种全列为二级重点保护野生动物,严禁猎捕。

作者早在山东大学水产系读书时,就幻想着中国有朝一日也能去南极海域捕鲸。毕业后有幸被分配到旅大水产公司,而后参与了捕鲸筹备工作,实现了捕鲸的愿望。作者曾长期随捕鲸船出海,并下放锻炼做过实实在在的捕鲸船员。后来调到辽宁省海洋水产研究所,最初从事试捕海豚的研究。"文革"后,作者克服各种困难和干扰,顽强地进行着海兽类的研究,而后虽逐步纳入正规,但不时受经费短缺的困扰,最后终于完成了中国鲸类资源调查研究这个大课题。

40 多年来,作者北起鸭绿江口,南至海南省及北部湾,足迹遍及沿海重点渔区和各大海岛,长期奔波于渤海、黄海、东海及南海诸海区,亲自调查和观察中国海域的鲸类,并三次赴台湾省考察鲸类,还参加了中日联合黄海、东海鲸类目视调查。将搜集的资料整理并参考国内外有关文献,撰写了《中国鲸类》一书。本书共记录了中国水域产鲸类 37 种,其中须鲸亚目 3 科 4 属 10 种,齿鲸亚目 7 科 21 属 27 种。

在鲸类调查研究过程中,承蒙浙江省自然博物馆、上海自然博物馆、福建省博物馆、山东自然博物馆、天津自然博物馆、大连自然博物馆、青岛海产博物馆、广州水产馆、北海水产馆、台湾自然科学博物馆、中国科学院水生生物研究所、中国水产科学研究院东海水产研究所、江苏省南通博物苑、台湾省水产试验所高雄分所、台湾省水产试验所澎湖分所、复旦大学生物系、台湾海洋大学渔业系、台湾大学动物系等单位允测标本。台湾海洋大学水产学院院长孙宝年教授、陈哲聪教授,中央研究院动物研究所所长邵广昭教授,台湾大学沈世杰教授、周莲香教授,台湾省水产协会曲铭理事长、许登基秘书长,台湾省水产试验所杨鸿嘉先生,海南省海洋局刘胜利先生,福建博物馆李树青先生,上海自然博物馆张年狮先生,北海水产馆孙建运先生,中山大学唐兆恒先生,香港特别行政区渔农处郑和荣博士,辽宁省海洋水产研究所韩家波、华汉峰、徐秉元先生等在工作上给予大力协助,陈延平、邴盛蚨先生绘图,在此深致谢意。

山东大学水产学系首任系主任、中国科学院院士、发展中国家科学院院士、中国科学院海洋研究所名誉所长、恩师曾呈奎教授为本书撰序,谨致最崇高的敬意和深深的感谢。

衷心感谢我的夫人王惠兰女士,40 余年来风雨同舟,相濡以沫,在事业上给了我最大的支持和帮助,虽进入古稀之年,仍热诚鼓励,协同耕耘,为本书的付梓问世,付出了辛勤劳动。

本书书稿虽经多次修改,但出版时仍觉仓促,疏漏不妥之处在所难免,有些标本照片于 出版前亦未能补齐,深感遗憾。尚祈国内外专家指正,不胜感激。

> 王丕烈 1997 年 2 月 25 日 于大连

Preface

Cetaceans, especially for whales, have been suffering long-term over-haunting. Some of them were dwindled to the edge of extinction. For protecting these animals, the International Whaling Commission (IWC) always made agreements to establish catch limits for endangered species. Finally in 1983, a temporal ban of commercial whaling was agreed on, in the 35th IWC annual conference. For cetacean conservation, China joined IWC in 1980 and stopped commercial whaling ever since then. Meanwhile, of all the wild cetaceans in China, baiji dolphin (Lipotes vexillifer) and Chinese white dolphin, (Sousa chinensis) were list to first class national protected animals whereas other cetaceans were list to second class national protected animals by Chinese government.

I had been dreaming to do studies on cetaceans in Antarctic Ocean area one day in the future during my university time. I knew my dream would come true when I was assigned to work in Fisheries Company of Lüda after graduation, where I had the chance to observe cetaceans in the wild. They were really pleasure days for me of that period and I had plenty of time to stay with the ocean and the cetaceans. Later in 1961, I was assigned to work in Liaoning Ocean and Fisheries Science Research Institute, to do researches on ecology and taxonomy of cetaceans in China. It was a hard work then, not only because of the social limits but also for the lucking of money. Poor conditions lasted for about ten years, and then became better after 1976. Through unremitting efforts, finally I finished a program "Survey on Wild Cetaceans in China"

To investigate and observe cetaceans, I visited all the seas and islands in China, from Yalu River mouth in the north to Hainan province and Beibu Gulf in the south, during the last forty years. I also visited all the famous fishing areas and popular sea islands in the Bohai Sea, the Yellow Sea, the East China Sea and the South China Sea. Meanwhile I visited Taiwan three times for cetacean investigation and also joined a sight survey on cetaceans in the Yellow Sea and the East China Sea conducted by Chinese and Japanese governments. Based on the cetaceans' information collected above, I compiled a book *Chinese Cetaceans*. This book contains 37 cetacean species belonging to 3 families, 4 genera, 10 species of Mysticeti, and 7 families, 21 genera 27 species of Odontoceti.

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Wang Peilie Feb. 25, 1997 Dalian

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