

Zhanjiang Mangrove Wetland

湛江海上森林

■ 雷州半岛红树林综合管理和沿海保护项目实施办公室

■ 湛江红树林国家级自然保护区管理局 编著

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序

红树林是热带和亚热带地区海岸潮间带特有的植物群落。涨潮时红树林浸泡在海水中也能正常生存,形成林水交融、别具一格的自然景观,故红树林又被称为“海上森林”。红树林湿地是由红树林植物、动物、微生物及其赖以生存的滩涂和水体等组成,包括水深不超过6米的海区,它构成一个独特的红树林生态系统,属于滨海湿地的特殊类型。

红树林湿地具有美化环境、净化海水、促淤造陆、保护海岸、保护生物多样性等多种生态、经济功能和作用,是维护沿海地区生态安全的重要屏障,也是开展生态旅游和环境教育的好基地。2004年12月东南亚发生海啸灾难,给相关国家造成巨大人员伤亡和经济损失,但人们发现有红树林的海岸,其损失大大减轻。为此近年来红树林倍受世界各国关注和重视,纷纷采取措施加强红树林湿地保护工作。

湛江地处祖国大陆最南端的雷州半岛,三面临海,海岸线长,海湾众多,滩涂广阔,气候温暖,是红树林生长繁殖的好地方,红树林湿地资源十分丰富,是我国红树林主要分布区。全市有红树林7 000多公顷,占全国的32%,占广东省的78%。红树林已成为我市具有南亚热带特色的珍贵自然资源之一。

近几年来,湛江市各级党委、政府十分重视红树林湿地保护管理工作,全市形成政府推动、林业部门牵头,国际合作项目(IMMCP)带动,各利益相关者参与共同保护红树林湿地的新局面,并取得了良好成效。

由中荷合作雷州半岛红树林综合管理和海岸保护项目实施办公室和湛江红树林国家级自然保护区管理局编写的《湛江海上森林》影册,收录了大量精美的红树林照片,全面、系统、真实、生动地反映湛江红树林湿地的美丽景色,展示了湛江人民保护、管理和利用红树林资源的情景,是林业管理人员以及热心环境保护人士的参考用书,也是开展红树林环境教育的好素材。相信该影册的出版,将有助于宣传推广湛江,有助于推动湛江市林业事业以及环境保护事业不断向前发展。

湛江市市长 陈耀光

2006年6月14日

序





在当今环境问题日益突出的年代，红树林以其独特的生态系统，奇妙的生物学特性、显著的生态功能以及它给人类带来的巨大效益和作出的贡献，正在吸引着越来越多世人的关注和重视。

湛江市地处雷州半岛，地理位置、海岸地貌和气候特征均适宜红树林的繁殖和生长，全市红树林面积达7 770多公顷，是我国红树林的主要分布区。

近几年来，在中共湛江市委、湛江市政府的领导下，湛江红树林保护工作取得长足进步，成效显著。为了展示湛江市红树林湿地美丽风景以及湛江人民保护、管理和利用红树林资源情况，雷州半岛红树林综合管理和海岸保护项目（IMMCP）实施办公室与湛江红树林国家级自然保护区管理局联合编写了本书。本书共收编有关红树林照片200多幅，希望通过这些照片，让更多的人了解湛江红树林，进而关注和投入红树林保护事业。

2006年初共青团湛江市委、IMMCP项目实施办公室、湛江红树林国家级自然保护区管理局和湛江日报编辑部联合主办的“我爱湛江红树林”摄影大赛，为本书提供了良好的照片资源，同时本书的出版也得到IMMCP项目的大力资助，在此致以衷心的感谢。

由于编写时间匆促以及掌握的资料有限，书中如有不妥之处，诚请读者批评指正。

编 者

2006年6月20日

前言



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Preface

Mangroves are a very special plant group occupying the intertidal zone of tropical and subtropical latitudes. Mangroves can survive even when completely submerged during high tide. Mangroves are often a special type of natural scenery where "forest merges with water". This is why mangroves are called the "forest of the sea". Mangrove wetland comprises mangrove plants, animals, microbes, the sand beach or mudflat, and water body, including freshwater and the sea where water depth is less than 6m. These elements comprise a special mangrove ecosystem, a type of very special coastal wetland.

Mangrove has various of ecological and economical functions, such as: beautifying our environment, purifying water, trapping sediments, protecting the sea shore, and conserving biodiversity. Mangroves provide an important barrier that protects the ecology of coastal areas where the energy from waves and storms is often very high. Mangrove coastlines are also interesting sites for eco-tourism and environmental education. The tsunami in South and East Asia in December 2004 caused high rates of death and economic loss in the affected countries. Later it became apparent that coastal areas protected by mangroves suffered much lower losses than unprotected sites. One result of this is increased attention to mangrove conservation in many countries throughout the region where protection of mangroves is now enforced.

Zhanjiang City is located on Leizhou Peninsula – the southern-most point of mainland China. The peninsula is surrounded by sea on three sides, has a long coastline of more than 1 550 km, many bays and estuaries, large expanses of seasonally flooded land, and a warm, sub-tropical climate. This is an ideal place for mangroves to grow and propagate. Zhanjiang is rich in mangrove species and areas. Leizhou Peninsula supports one of the important mangrove distribution areas in China. Zhanjiang is surrounded by more than 7 000 ha of mangrove forest, accounting for 32% of all mangrove forest area in China and 78% of that in Guangdong. Mangrove, a plant type characteristic of China's southern subtropical zone, has become a precious natural resource of Zhanjiang City.

In recent years, mangrove wetland protection and management has been a high priority at all government levels in Zhanjiang City. New prospects for mangrove wetland protection are developing and bringing very positive effects to the city through government encouragement, leadership by forestry departments, and an international cooperation project driving while all stakeholders participate.

The photo album, "Zhanjiang Mangrove Wetlands", was jointly edited by the project implementation office of the Sino-Dutch Integrated Mangrove Management and Coastal Protection (IMMCP) project and Zhanjiang Mangrove National Nature Reserve Management Bureau. The album presents many photos showing the complexity of the mangrove ecosystem. The album illustrates the beautiful scenery of Zhanjiang mangrove wetland in a complete, systemic, factual and vivid presentation. It demonstrates how Zhanjiang people protect, manage and utilize the mangrove resources. The album is not only a very good reference book for forestry managers and conservationists, and also provides good material for mangrove environment education. Publication of the album will enhance the perception of Zhanjiang City in the region and it will encourage further development of forestry and environmental protection in the city.

Mr. Chen Yaoguang
Mayor of Zhanjiang City
14 June 2006



Foreword

We are now in an era in which humankind encounters more and more challenging environmental problems. Mangrove forest, a special coastal ecosystem, has attracted increasing attention because of its magic biological characters, significant ecological effects and provision of valuable ecosystem services to humankind.

Zhanjiang City, on Leizhou Peninsula, is located at a geographic location and with coastal features and climate that support the growth and reproduction of mangroves. For these reasons Zhanjiang City is one of the most important areas of mangrove distribution in China and now supports around 7,770 ha of mangrove forest.

With the attentive care of the city government, mangrove conservation in Zhanjiang has made great progress in recent years. The city goal is to display the beautiful mangrove forest wetland scenery in Zhanjiang and demonstrate the protection, management and utilization of mangrove resources in the city. This book has been edited by the project implementation office of the Integrated Mangrove Management and Coastal Protection project on Leizhou Peninsula (IMMCP) in conjunction with the management bureau of Zhanjiang Mangrove National Nature Reserve. More than 200 mangrove photos have been collected in this album and we hope you can understand more about mangroves in Zhanjiang through these photos, and we hope your interest in mangrove protection will grow.

The rich photographic resources in this album were provided by a photography competition held earlier in 2006 entitled the "I Love Zhanjiang Mangrove" photograph competition. It was jointly sponsored by the Youth League Committee of Zhanjiang, IMMCP office, Zhanjiang Mangrove National Nature Reserve Management Bureau and the editing department of Zhanjiang Daily. The IMMCP project also provided its photographic contributions to the book. Here we'd like to give them our sincere thanks.

The editors
20 June 2006

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第1篇 红树林湿地篇

Chapter One Mangrove Wetlands



湿地是指天然或人工的，永久性或暂时性的沼泽地、泥炭地、水域或水体，包括低潮时水深不超过6米的海域。

红树林是生长在热带和亚热带海岸潮间带的植物群落。红树林湿地属于特殊的滨海湿地类型，它由红树林植物、动物、微生物及其赖以生存的滩涂和水体等组成，构成独特的红树林湿地生态系统。随着潮起潮落，在间隔性海水浸没情况下，红树林能够正常生长和存活，故有“海上森林”之美称。

湛江市地处我国大陆最南端的雷州半岛，北纬 $20^{\circ} 15' \sim 21^{\circ} 55'$ ，东经 $109^{\circ} 40' \sim 110^{\circ} 55'$ ，土地总面积 12 471 平方千米。该地区年平均气温 23°C 左右，年均降雨量 1 500 毫米左右，属北热带气候。湛江市三面环海，海岸线长达 1 556 千米，潮间带滩涂面积约 10 万公顷。半岛独特的地理位置、气候特征和辽阔的滩涂面积为红树林生长繁殖提供了良好自然条件，是我国红树林主要分布区。2001 年全国红树林资源调查结果表明，湛江市有红树林面积 7 770 多公顷，占全国红树林面积 32%，占广东省 78%。地处该市的湛江红树林国家级自然保护区成立于 1997 年 12 月，总面积约 2 万公顷，是我国保护红树林面积最大的自然保护区。2002 年 1 月该保护区被列入拉姆萨公约名录，是目前我国 30 个国际重要湿地之一。





Wetland are habitats, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, where water depth at low tide does not exceed six meters.

Mangroves are the only trees that grow in the inter-tidal zone of the tropics and sub-tropics. Mangroves are a unique type of coastal wetland made up of mangrove plants, animals, microorganisms and mudflat and water areas. Mangroves can grow and survive even if submerged for long periods of time in salt water during high tide and for this reason mangroves are called the "forest on the sea".

Zhanjiang Prefecture covers a total land area of 12,471 km² at the southernmost tip of Mainland China on Leizhou Peninsula. The prefecture is in the northern tropical zone at 20°15' N to 21°55' N and 109°40' E to 110°55' E. Annual temperature averages 23°C and annual precipitation averages 1,500 mm. Surrounded by seas on three sides, Zhanjiang has a coastline stretching for 1,556 km and intertidal-zone mudflat covering about 100,000 ha. The unique location of the peninsula, suitable weather and extensive mudflat are ideal conditions for mangrove growth and propagation. Zhanjiang is the location of most mangroves remaining in China. A mangrove resource inventory conducted in 2001 demonstrated that Zhanjiang had mangrove coverage of around 7,700 ha and accounted for 78% of all mangrove area in Guangdong Province and 32% of the national total. Established in December 1997, Zhanjiang Mangrove National Nature Reserve has the largest area of mangrove wetlands in China totaling 20,000 ha. ZMNRR was declared a Ramsar site in January 2002, qualifying it as one of the thirty "Wetlands of International Importance" in China.

海上森林 *Mangroves on the sea*



■ 湛江市特呈岛红树林傲然屹立在大海中

Mangroves standing erect on the sea (Techeng Island)





徐闻县角尾红树林

Mangroves at Jiaowei, Xuwen county



桐花树被海水淹没的情景

Aegiceras corniculatum submerged in seawater

■ 任凭风浪起

Mangroves withstanding stormy waves

