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Wildlife and Fauna of Singapore

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Introduction

Singapore is renowned worldwide as a bustling metropolis, acclaimed for its gleaming skyscrapers, meticulous urban design, and cosmopolitan flair. Nonetheless, beyond the concrete skyline and dense cityscape lies a vibrant natural world. Despite its compact size and significant urbanization, Singapore harbors an unexpectedly rich variety of wildlife and habitats. This remarkable biodiversity is testimony to ongoing conservation efforts and the resilience of nature amid rapid development. The story of Singapore's wildlife is not just one of survival but also of adaptation, restoration, and hope for the future.

The island's natural heritage was shaped over centuries—from lush, towering rainforests and extensive mangroves to the mosaic of parks, gardens, and green corridors that now punctuate the urban landscape. While large-scale deforestation and development since the 19th century led to the decline and even extinction of many native species, dedicated policies and re-greening programs have since helped to protect and revive what remains. Nature reserves such as Bukit Timah, Central Catchment, Sungei Buloh Wetland, and Labrador now serve as key sanctuaries, safeguarding critical habitats for countless species of plants and animals. In addition, the city's pervasive park network and the preservation of offshore islands have substantially bolstered its ecological resilience.

Singapore's wildlife encompasses a dazzling diversity, from rare and elusive mammals like the Sunda pangolin and leopard cat to the charismatic smooth-coated otter, which has become something of a national icon. Bird enthusiasts can rejoice in the sight of resident species like the Oriental pied hornbill and myriad migratory birds that rest in the wetlands each year. The country's rich tapestry of reptiles, amphibians, insects, and marine creatures underscores its position as a true biodiversity hotspot—one where species constantly adapt to changing surroundings, sometimes venturing boldly into urban environments.

Yet, this unique biodiversity sits at a crossroads. Urban pressures, habitat fragmentation, climate change, and illegal trade continue to present formidable challenges. Conservation in Singapore is thus a dynamic, ongoing process involving not just scientists and policymakers, but also passionate community stewards, educators, and everyday citizens. Forward-thinking government bodies such as the National Parks Board (NParks) have led the push for biodiversity protection through strategies like the Nature Conservation Masterplan and extensive community engagement initiatives, ensuring that Singapore's green legacy endures for future generations.

This book aims to serve as a comprehensive guide to the wildlife and fauna of Singapore. Within these chapters, readers will discover the country's remarkable natural history, delve into the intricacies of its ecosystems, and learn about iconic and lesser-known species that make Singapore special. We will explore protected areas and green corridors, urban parks and coastal silts, rainforest remnants, and coral reefs—illuminating the links between nature, people, and the city.

Ultimately, "Wildlife and Fauna of Singapore: A Guide to the Wildlife and Fauna of Singapore" celebrates the extraordinary vitality and variety of the natural world flourishing within a thriving, modern city-state. It is an invitation to appreciate not only Singapore's urban wonders but also the hidden, wild treasures that persist, adapt, and inspire hope amidst the city lights.

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CHAPTER ONE: The Natural Heritage of Singapore

Before the arrival of Stamford Raffles in 1819, Singapore was an island covered predominantly in primary forest, a dense, complex ecosystem teeming with life. Imagine a landscape where lowland dipterocarp forests dominated the terrain, characterized by towering trees and a rich undergrowth. Mangrove forests also lined the coasts and estuaries, providing crucial habitats for a variety of marine and terrestrial species. Freshwater swamp forests added to this mosaic of habitats. This was a world far removed from the urban environment we know today, a place shaped by millennia of natural processes. The island, situated at the tip of the Malay Peninsula, experienced a tropical rainforest climate with high humidity and abundant rainfall, supporting this lush vegetation.

Early accounts and historical records, though limited, offer glimpses into this rich natural heritage. Some of the earliest observations of Singapore's natural world date back to the late 1700s, with charts indicating the appearance of offshore islands. Natural history specimens collected in the 1790s further provide context to the efforts of documenting the island's biodiversity even before the arrival of the British. The 14th-century Chinese traveler Wang Dayuan described the area, noting the presence of two hills resembling "dragon teeth" and a waterway running through the center, alongside descriptions of the local inhabitants. These early records, while not comprehensive scientific surveys, nonetheless hint at a vibrant natural landscape.

However, this natural landscape was soon to undergo a dramatic transformation. The establishment of a British trading settlement in 1819 marked the beginning of rapid development and, consequently, widespread deforestation. The demand for commercially viable crops like gambier and pepper led to large swathes of primary and secondary forests being cleared for plantations. This agricultural expansion, coupled with the growing needs of a rapidly increasing population, reshaped the physical landscape of the island. Hills were leveled, swamps were filled, and coastlines were extended to support urbanization and commerce.

The impact of this early deforestation was significant and swift, leading to the loss of many native species. By the mid-19th century, colonial officials began to recognize the connection between the extensive clearing of forests and changes in the climate, including rising temperatures and droughts. Efforts to conserve nature began to emerge, albeit gradually. In the late 19th century, some of the first laws aimed at protecting wildlife were enacted, focusing initially on birds. The Wild Birds Protection Ordinance of 1884 was a response to the alarming rate at which birds with brilliant plumage were being captured for export.

Despite these nascent conservation efforts, the scale of deforestation was immense. By the end of the 19th century, the main phase of forest clearing was largely completed, with only a small percentage of the original primary forest remaining. The landscape, once dominated by dense forests, had been transformed into a mosaic of plantations, settlements, and cleared land. This period of intense land-use change had a profound and lasting impact on Singapore's biodiversity, leading to the local extinction of numerous species.

The establishment of institutions like the Singapore Botanic Gardens, first in 1822 on Fort Canning Hill and later re-established in 1859 in Tanglin, also played a role in the interaction between humans and nature. While the early gardens focused on plants of economic and horticultural interest, they also became centers for botanical research, contributing to the understanding and classification of tropical plants. These institutions, born out of colonial interests, nonetheless laid some groundwork for the study and appreciation of plant life in the region.

The history of Singapore's natural heritage is thus a narrative of dramatic change. From a richly forested island, it was rapidly transformed by human activity, primarily driven by economic and developmental goals. This transformation resulted in a significant loss of biodiversity. However, the story doesn't end there. The remnants of this original natural world, though fragmented and altered, persisted, setting the stage for the conservation efforts and the complex relationship between nature and the urban environment that defines Singapore today.

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