

Preface

Conserving a Rainforest in the City

The National Parks Board (NParks) was established in June 1990 and was entrusted as the steward of the Central Nature Reserves (CNR), comprising Bukit Timah Nature Reserve (BTNR) and Central Catchment Nature Reserve (CCNR), and the two national parks, i.e., Singapore Botanic Gardens and Fort Canning Park. Even in the early 1990s, it was recognised that a coordinated effort to document the biodiversity of CNR was crucial if biodiversity conservation were to be conducted on a scientific basis. Consequently, a physical and biological survey was conducted from 1991 to 1997. The findings were compiled and published in a special issue of the Gardens' Bulletin, Singapore in 1997.

To sustain Singapore as a biophilic City in a Garden, NParks' Nature Conservation Masterplan (NCMP) embodies principles that conserve and enhance key habitats, help the recovery of rare and endangered species, and promote research and community stewardship.

It was timely that the Comprehensive Biodiversity Survey of Bukit Timah Nature Reserve was officially launched in 2015 because 18 years had elapsed since the previous survey was carried out. This also marked the first comprehensive terrestrial biodiversity survey of BTNR to be organised in the twenty first century. Publishing this supplement in 2019, a year that Singapore commemorates the 200th anniversary of the landing of Sir Stamford Raffles, who was a keen naturalist, is serendipitous.

In spite of being the nature reserve in Singapore that is most researched by scientists, the richness of the biodiversity of BTNR still continues to amaze us. A new species of plant, *Hanguana neglecta*, was described in 2014. New species of spiders and several of them endemic to Singapore were discovered during this survey. Two new species of the springtail catchers were described with their DNA barcodes. Ten rediscoveries of native plants previously thought to be extinct were recorded. New sightings of native species that were not recorded in previous surveys were observed during this survey for several taxonomic groups, including mammals, reptiles and amphibians.

The findings of this comprehensive biodiversity survey for BTNR allow us to take stock and plan for the future. As shown through the survey, although BTNR occupies only 0.2% of Singapore's land area, BTNR harbours a very large proportion of Singapore's native species, including 84% of the amphibian species, 60% of the *Neurigona* spp., 59% of the reptile species, 56% of the mammal species and 53% of the vascular plant species, etc. Results also show that the management intervention of the two-year closure from 15 September 2014 to 22 October 2016 brought positive effects including improving forest conditions, natural regeneration and soil conditions.

The results of this survey will be captured in BIOME, NParks' biodiversity database. This will be built up through long-term surveys which will enable a better

understanding of the dynamic ecological processes in a small tropical rainforest like BTNR. All the data can be further translated to conservation and management plans based on sound science.

These 22 papers have a total of 60 authors, of whom 30 are NParks' officers and 30 are from academic institutions, non-governmental organisations or expert individuals. This success of the survey must be attributed to the hard work, dedication and commitment of all the group planners, coordinators, researchers and all the support staff.

The joint funding by Hongkong and Shanghai Banking Corporation and NParks for this survey indicates the good partnership that is forged between the private and public sector.

Indeed, NParks will continue to partner the people and private sectors in its stewardship role beyond 2020, when it turns 30.

Thank you.

Kenneth Er

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National Parks Board.*