

Biodiversity Week 2018: Celebrating 25 Years of Active Citizenry

Text by Joy Wong, Goh Pei Shuan and Linda Goh



Located one-degree north of the equator, Singapore's prime location puts it in the richer belt of the latitudinal biodiversity gradient for many animal groups¹. Nonetheless, the steady pace of urbanisation and development in the past few decades has undeniably decreased the connectedness of many Singaporeans and their natural environment². Recognising the importance of conserving our natural heritage, the National Parks Board (NParks) has set out a holistic plan to strengthen and intensify biodiversity conservation in Singapore through coordinated efforts in four key areas identified in the Nature Conservation Masterplan – (1) conservation of key habitats, (2) habitat enhancement, restoration and species recovery, (3) applied research in conservation biology and planning and (4) community stewardship and outreach in nature. NParks strives to green the city and conserve natural heritage for future generations using science-backed decision making, and reaching out to the public constitutes an important arm under the Masterplan, to inculcate a sense of wonder and appreciation for the city's flora and fauna.

The "Community in Nature" (CIN) initiative was conceptualised and developed to synergise and coordinate nature-related activities, a platform for people to interact with one another and connect with nature. Singapore is not alone in its efforts; increasing the understanding and awareness of biodiversity issues is a global movement embraced by many cities. The United Nations has proclaimed May 22 the International

Day for Biological Diversity (IDB), a day dedicated to increase understanding and awareness of biodiversity issues. In commemoration of this day, NParks organises a suite of events and activities each year during Biodiversity Week. In 2018, Biodiversity Week was held from 18 May to 3 June, with activities targeting different segments of society happening all around the island. Adapting from the IDB 2018 theme of "Celebrating 25 years of Action for Biodiversity", NParks celebrated 25 years of active citizenry, which began with the formation of NParks' first nature volunteers group in Sungei Buloh Wetland Reserve. Today, citizens are engaged in a variety of activities in multiple parks, gardens and nature areas to help contribute toward biodiversity conservation.

Citizen Science Programmes

An increasingly popular method of engaging the community, citizen science involves non-scientists in contributing to quantitative and qualitative surveys in collaboration with experienced scientists and guides. The Nationwide BioBlitz was one such programme, where volunteers were invited to join biodiversity surveys or habitat enhancement efforts on increasing local biodiversity. Held for the second consecutive year, over 3300 citizen scientists were involved in surveys of multiple taxa, including birds, butterflies and marine animal groups, in over 80 sites across Singapore covering parks, gardens, nature areas and schools.

1. Participants contributing towards habitat enhancement at Coney Island Park.
Photo Credit: Neo Meng Yang

References

¹Willig & Presley (2018) Latitudinal Gradients of Biodiversity: Theory and Empirical Patterns

²Anderson & Tate (2014) I like the red plants: Children's perceptions of their local natural environments in Australia and Singapore. *Procedia – Social and Behavioural Sciences* 141 (2014) 940 - 950



2. The Pearly-banded Bee (*Nomia strigata*), one of the common bees that can be spotted in our gardens. Photo credit: Zestin Soh

3. Participants enthusiastically taking photos of a rare butterfly at the butterfly survey at Rail Corridor, led by members of the Friends of Rail Corridor. Photo credit: Khew Sin Khoon

4. Photo: Visitors learnt about maintaining a butterfly garden and had the chance to look at butterflies up close at the Bukit Panjang Butterfly Garden Open house. Photo credit: Jacqueline Chua

A new addition of bees as an indicator species survey group in Nationwide BioBlitz 2018 helped shed light on the importance of these pollinators in the natural ecosystem to the BioBlitz participants. Staff and guides attended training sessions, and learnt to identify 11 common bee species in Singapore’s parks and gardens. Despite the challenges faced in identifying these fast flying insects, many gained insights about the local bee species, including the fact that some bee species have bands in striking metallic shades of green and blue! All in all, 20 species of bees were recorded across all surveys.

A number of corporate groups also participated in the BioBlitz. Despite the inclement weather early in the morning, 25 Keppel staff members waited out the pouring rain to survey the Learning Forest, one of the restoration projects which the company has donated towards. The BioBlitz provides Keppel staff an opportunity to continue their contributions towards this beautiful part of the Singapore Botanic Gardens through monitoring its biodiversity.

Other groups included the Friends of the Parks, such as the Friends of Bishan-Ang Mo Kio Park, where participants helped with rehabilitation and enhancement works on the vegetation. Biodiversity experts from the Friends of Rail

Corridor also joined in leading surveys along the green corridor. Members from Friends of Sungei Buloh Wetland Reserve, on the other hand, attended leadership training and led the public in conducting these surveys.

The Butterfly Watch in NParks’ CIN Biodiversity Watch series also coincided with Biodiversity Week. Trained surveyors headed out to record butterfly species in assigned parks, covering a total of 45 parks and gardens across Singapore. The combined effort involving 147 volunteers saw a total of 3,446 individual butterflies recorded, making up 80 species of butterflies.

Nature Education

NParks also organised walks and talks in conjunction with Biodiversity Week to engage the public in nature. In the lead up to Biodiversity Week, craft workshops were held in the Singapore Botanic Gardens and Jurong Lake Gardens for children to learn more about native plants and animals through fun and simple crafts.

Nature interpretation, facilitated by experienced nature guides, is an important way for people to understand plants and animals that make up the ecosystem and hence appreciate the intricacies of these important habitats. Guided walks during Biodiversity Week brought people to



different habitats all around Singapore, ranging from the mangroves and intertidal areas to forested reserves located in the middle of our island.

Many Community-in-Bloom gardens, including schools, welcomed the public into their community gardens to learn about how gardens can support local fauna, with a strong focus on pollinators. During these open houses sessions, community gardeners have shared how certain plants can be grown to provide food and shelter for native birds, butterflies and bees. One of the highlighted gardens was the Bukit Panjang Butterfly Garden, a fenceless butterfly garden maintained by passionate volunteers from the Butterfly Circle, that features a wide variety of nectar and host plants for native butterflies and other pollinators.

Biodiversity Week for Schools

To increase the younger generation's exposure to the city's biodiversity and encourage them to stay curious about the natural environment, a plethora of activities, described below, were available for students of different age groups.

Green Wave is a worldwide initiative suitable for students of different age groups, and aims to educate children and youths about the

importance of protecting the natural environment. Each year, students from around the world plant locally important trees in their school compound on the International Day of Biological Diversity, 22nd May. This creates a figurative 'green wave' that ripples across the globe. Two native plants, the Malayan Ground Orchid (*Spathoglottis plicata*) and Asam Gelugor (*Garcinia Atroviridis*) were chosen for 2018.

The Playtime series targets preschools and lower primary children, and focuses on introducing a different native organism each year through story-telling and animated video. This year, the critically endangered Hawksbill Turtle was featured in the book titled "Shelly the Turtle Returns to Shore".

BioBlitz for Schools is a form of collaborative wildlife survey to document as many species of flora and fauna as possible, within a set location, over a defined time period. Training was conducted for teachers, who in turn guided their students in identifying the organisms found within the school compound.

In 2018, more than 23,000 students from over 340 schools participated in Biodiversity Week for Schools.

5. Many schools participated in the various activities targeted at students during Biodiversity Week.
Photo credit: Goh Pei Shuan



6. Preschoolers carrying out activities in Shelly the Hawksbill Turtle book. Photo credit: Chen Su Lan Methodist Children's Home

7. NParks Conservation staff and volunteers engaging visitors at the Festival of Biodiversity. Photo credit: Andy Dinesh



Festival of Biodiversity

After a fortnight of activities bringing Singaporeans out into nature areas and parks to experience and find out more about local biodiversity, Biodiversity Week 2018 culminated in the highlight event, the Festival of Biodiversity, where the wealth of knowledge and information and biodiversity was brought to people living in the heartlands to experience biodiversity outside of a park setting. The two-day educational event was held over the weekend of 2-3 June 2018, in an outdoor event space in Tampines, marking the seventh instalment of the annual event.

Jointly organised by NParks in collaboration with the Biodiversity Roundtable (a local group made up of nature and conservation-related partners), the Festival of Biodiversity is a national effort to communicate the importance of local biodiversity and its conservation to the public.

Over 100 volunteers and 44 partners comprising nature groups, biodiversity experts, schools, corporate organisations and research institutions, contributed to the festival's programme and exhibits. In addition, there were craft activities for kids, story-telling sessions, informative booths with plant and animal specimens to reach out to some 31,000 visitors in the heart of Tampines.

8. Volunteers helping participants to find hints in the Escape Room.

Photo credit: Youth Corps Singapore

9. Storytelling conducted by partners at the Festival of Biodiversity.

Photo credit: Lim Yi Hee

Plans

As NParks gears up towards Biodiversity Week in 2019, it targets to engage more residents in the line-up of events all across Singapore, celebrating biodiversity. Other than Biodiversity Week, the public will be also invited for the various Community in Nature programmes throughout the year, such as the NParks CIN Biodiversity Watch series, where each Watch focusing on an animal group takes place twice a year. The public can also submit sightings of any flora and fauna they encounter in Singapore through the SGBioAtlas app, which contributes toward the collated information about Singapore's biodiversity. To date, the CIN initiative has engaged people of different ages, including schools and corporate groups.

The wheels to reconnect Singapore's urbanites with nature has been set in motion. Over time, an enhanced appreciation of native flora and fauna and increased community stewardship to conserve biodiversity within the biophilic City in a Garden is anticipated. 