

where shall we go • spring | summer 2018

## Seeing Skagen

The Scandinavian landscape that taught artists to paint



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Nature parks help preserve habitat in the 21st-century city-state

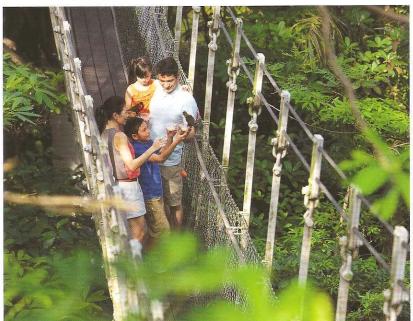
WO MACAWS take flight with hardly an effort, bright red-and-blue plumage and yellow-streaked wings easy to follow against the surrounding leafy green habitat. "Liftoff!" shouts a trainer — awestruck kids and their parents keep their eyes peeled on the birds circling over the crowd-filled amphitheatre. Cheers and gasps soon follow — the birds boldly soar through a hoop clutched by a young man in the stands. "Give the volunteer a round of applause," the trainer commands.

This is the live entertainment at Singapore's Jurong Bird Park. Another act has a green parrot melodically chirping the song "Happy Birthday" into a microphone. The bird show draws to a close when fluttering Dalmatian pelicans with broad wingspans join graceful flamingos on the centre stage, while the squawking macaws swoop down for a dramatic finale — all against the backdrop of a lush, tropical rain forest not unlike this island nation's raw environment.

Home to more than 5,000 birds spanning 400 species, the Jurong Bird Park opened in 1971 as the country's first wildlife park. In this densely populated metropolis, other such nature-themed parks and attractions — the Singapore Zoo, Bukit Timah Nature Reserve, the Botanic Gardens and the colossal Gardens by the Bay — are also nurturing their green spaces by protecting and re-sculpting remaining rain forests and mangrove swamps.

"Singapore is a small country and highly urbanised, but it retains a carefully preserved network of green areas and corridors that allow wildlife to live and flourish," points out Luis Carlos Neves, Director of Zoology with Wildlife Reserves Singapore. This agency operates the bird park and Singapore Zoo with the mission of providing wildlife experiences while conserving this equatorial region's biodiversity.

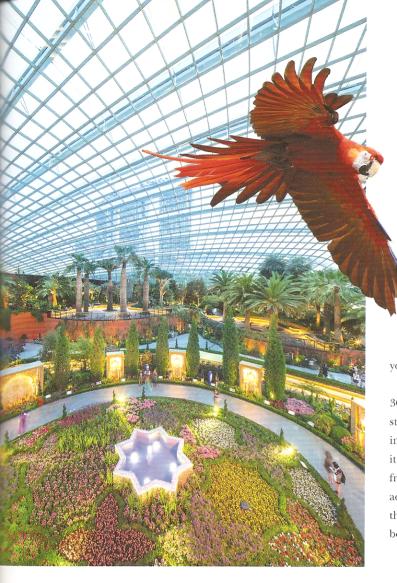
Their work can be seen, for example, at Jurong's colossal Waterfall Aviary, one of the park's many outdoor bird sanctuaries and possibly the world's largest. "Our walk-through aviaries provide an immersive experiential journey through lush tropical vegetation with free-flying birds — a great experience for visitors," says Neves. It's where golden taveta



CLOCKWISE FROM TOP LEFT: SINGAPORE TOURISM BOARD; GARDENS BY THE BAY; WILDLIFE RESERVES SINGAPORE (72); GARDENS BY THE BAY; DERRICK SEE/ SINGAPORE TOURISM BOARD







plunging over a natural cliff, while plump, redfaced guinea fowl meander alongside tree trunks on the rainforest floor. The birds live in a natural environment enclosed by overhead screening.

"You're also informed of the birds' plights and how you can help to save them and their habitats," Neves adds.

At the Singapore Zoo, 2,800 animals representing over 300 species are housed within 65 acres. The rain forest and steamy climate are what's behind the zoo's "open concept", in which excessive plant growth contains the animals, making it one of the few zoos in the world where they can roam freely. "This is possible through careful design and taking advantage of the tropical, dense and fast-growing vegetation that camouflages barriers," says Neves. "Hidden moats below also ensure an unhindered view of the animals."

Such moats join waterfalls and thick vegetation in separating

the visitors from the animals. Free-ranging orangutans can be seen dwelling in the treetops alongside other primates including cotton-top tamarins and Javan langurs, for example. In the zoo's Fragile Forest biodome, visitors get up-close and personal with ring-tailed lemurs, white-faced saki monkeys, Malayan flying foxes and lesser mouse deer that roam freely.

Not far from Singapore's quaint colonial core and imposing downtown skyscrapers, a futuristic and ecologically responsible way of restoring green space came in 2012 with the opening of Gardens by the Bay. The sprawling 250-acre nature park features 1.5 million plants from more than 19,000 worldwide species, many of them growing in two massive domes. The humid Cloud Forest dome has twisting walkways and a waterfall gushing down a man-made 35-metre mountain structure emblazoned with greenery. In

contrast, the larger Flower Dome houses semi-arid tree and plant species in a cool-dry Mediterranean-like climate.

Gardens by the Bay's most stunning attractions, however, are the 25- to 50-metre "supertrees", 18 of them, with their sprawling metal canopies adorned with live plants. Close to 160,000 plants grow on the structures, their trunks blanketed with bromeliads, ferns, epiphytes and tropical flowering tree-climbers. Solar-powered photovoltaic cells line the canopies of seven trees, harnessing about 70 percent of the energy needed to illuminate them in



Clockwise from top left:
Family feeds birds at Jurong
Bird Park; Flower Dome at
Gardens by the Bay; scarlet
macaw at Jurong Bird Park;
Jungle Breakfast at Singapore
Zoo; supertrees towering over
Gardens by the Bay; National
Orchid Garden

## The sweet scents of flowers waft through the air.

dazzling colours at night. One supertree acts like a chimney with air-scrubbing technology, cleansing flue exhaust from an onsite biomass generator used to power the domes' cooling units. Other trees discharge air exhaust from the site's cooled conservatories, easing the heat and humidity at ground level.

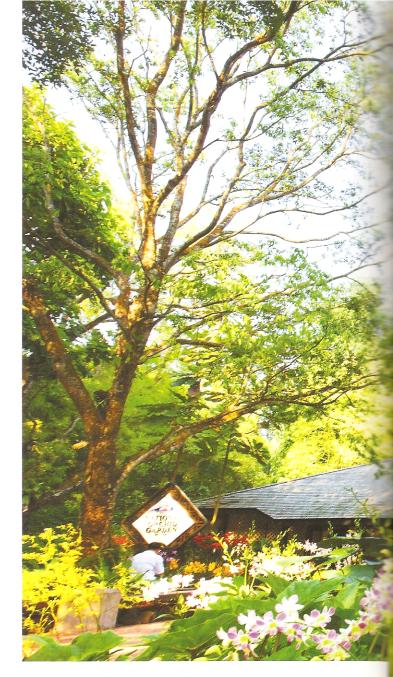
Visitors can get a closer look at the infrastructure along an aerial skyway connecting two of the trees at the park's Supertree Grove. The 22-metre-high walkway offers a bird's eye view of the nature park, Singapore's shining skyline and the imposing, three-towered Marina Bay Sands resort and mall complex.

"The supertrees were designed to complement the height of the buildings in the surrounding Marina Bay area, and more significantly to introduce large-scale vertical greening to a densely urban area," says Andy Kwek, Gardens by the Bay's Senior Director of Conservatory Operations and Engineering.

Away from the city core, the Botanic Gardens offer a peaceful and scenic green respite from the nearby bustle of the upscale Orchard Road mega-mall shopping area. Established in 1859, the Botanic Gardens include a plush landscape of glimmering lakes and waterside gazebos, themed gardens, grassy hills and waterfalls. On some nights, opera and symphony performances draw a crowd along the appropriately named Symphony Lake with the stage located on a centre islet.

Although this greenway was modelled after an English garden stemming from colonial British settlers, part of the natural rainforest habitat remains from before Singapore's 1819 founding. More than 300 plant species including herbs, ferns and giant jelutong trees still grow within a 15-acre area. 'Jelutongs can reach more than 80 metres in height with trunk diameters of up to 3 metres. A conservation effort is underway to also preserve the different species of mature, so-called Heritage Trees — some centuries old — scattered throughout the park.

With trickling fountains and flowered walkways, one of the Botanic Gardens' key highlights is the National Orchid Garden. Since the orchid-breeding programme's founding in 1928, it has resulted in more than 1,000 colourful species and 2,000 hybrids that delight visitors today. Manicured themed gardens include the Healing Garden, with more than 400 medicinal plants and herbs, the Fragrant Garden, where the sweet scents of flowers waft through the air, and the Ginger Garden, with over 3,000 species of ginger-related plants.



Clockwise from above: Singapore Botanic Gardens entrance; the virgin jungle in Bukit Timah Nature Reserve; lories and lorikeets dine at Jurong Bird Park

Although horticultural research remains part of the Botanic Gardens' heritage, the park is considered urban Singapore's main garden for its citizens. Other highlights include Palm Valley, dotted with leafy palm trees, and Swan Lake, frequented by beautiful white swans. An interesting sidebar to Swan Lake — it was once home to an escaped crocodile who, in 1892, snagged a labourer who was drawing water. Officials drained the lake to capture the crocodile.

Not far from the Singapore Zoo, the Bukit Timah Nature Reserve is a patch of original rainforest that once covered the entire island. Today, about 410 acres remain with crisscrossing pathways — a welcome retreat for hikers, cyclists and joggers who might see wildlife including crab-eating macaque monkeys and red-cheeked flying squirrels. Within the park is Bukit Timah Hill, Singapore's highest peak at 164 metres.

Other Singapore green areas include East Coast Park where, in addition to cycling and skateboarding, casting a fishing line is also



popular. A few other reserves protect precious coastal areas and wetlands — yet they are never completely out of danger, as the tug of war between conservationists and developers will surely intensify with the increasing demands for living space among the natural beauty of Southeast Asia. 🐬