

Small penguin, big people. Perspective makes it look as if these tourists are almost on top of the bird, but volunteer guides ensure they are not as close as they seem to be.

ONLINE

AUSTRALIA

EARTH'S MAGICAL KINGDOM



Penguin *parade*

By Linda Vergnani Photos Doug Gimesy

Despite crowds of city dwellers and tourists, little penguins are thriving in the rather unlikely surroundings of suburban Melbourne.





LITTLE DALLIANCES:
Unfaithful penguins

Little penguins are “socially monogamous but sexually promiscuous”, according to marine biologist Andre Chiarada. Most stick with the same permanent partner from one breeding season to the next. But when their mates are away at sea, both sexes seek

“extra-pair copulation”. During the courtship season, Andre found 75 per cent of microchipped birds at Phillip Island were having ‘affairs’ with strangers – an insurance policy in case their mate dies or leaves. Cheating on mates also ensures genetic diversity.

Vibrating, whirring calls rise from the black volcanic boulders on the breakwater. In the gathering dark, it sounds as if the stones are coming alive; wailing and trilling. Spotting scuffling shapes, Zoe Hogg, a volunteer researcher, shines her red-filter torch onto a small rock platform. “There’s a pair of chicks!” She focuses on two plump baby little penguins that look like fluffy toys. “Look at that beautiful blue,” Zoe says. It is not until another volunteer discreetly shines a torch beam that I can see the tiny flippers are covered in sleek, steel-blue feathers. The unusual midnight coloration of the waterproof adult plumage is the reason these penguins – smallest of the world’s 18 species – are also known as little blue penguins.

Zoe says most of the summer chicks have fledged, so we are lucky to find these youngsters, which she estimates are five to six weeks old. Below us, a flotilla of a dozen birds arrives in the harbour. Swimming in alongside the yachts, the penguins emit soft yaps – “mep, mep”. Then the white-breasted birds rocket in to land and bounce up from

one boulder to the next. Some disappear into the gnarled salt bushes, while others scuttle down the centre of the breakwater. When they reach their nesting burrows, often just narrow clefts between boulders, the adults greet their mates with braying calls. Some raise their heads and beat their flippers up and down as they trumpet their exuberant greetings to one another. **Penguin paparazzi** Just the other side of a high steel fence, hundreds of tourists crowd along the breakwater, watching the nightly return of the adult birds. The rafts of penguins are greeted with delight, surprise and lots of camera and phone lenses. Fans come from

around the globe to see this colony of about 1,400 little penguins, living in Melbourne’s once-bohemian seaside suburb of St Kilda. Each night, Earthcare St Kilda volunteer guides in high-visibility vests protect the birds from the regular influx of tourists and help to educate them. Zoe, an 83-year-old musician, artist and retired analytical chemist, is the charity’s dynamic former president. She has worked with the penguins for 30 years, so knows them intimately, and says they’re accustomed to living alongside the city with its five million inhabitants. They seem unafraid of crowds. “These are fat, lazy, city penguins,” she says. Indeed, research has revealed that the St Kilda penguins are plumper than those of the

Clockwise from above: two little penguins against the backdrop of Melbourne’s city lights; volunteer Kirsty Wilson clears the colony’s nesting area of rubbish,

pulling cigarette butts, coffee cups and fishing lines from between the boulders; a raft of little penguins make their way back to St Kilda’s breakwater; an individual at its



mega-colony at Phillip Island, roughly 70km away as the crow flies, which is home to about 32,000 adult birds. The former find it easy to catch fish in Port Phillip Bay, whereas the latter feed mainly in the turbulent seas of the Bass Strait, which lies between Australia and Tasmania. They forage by day, mostly taking anchovies and sardines, but also other small schooling fish, squid and krill. Almost half a million little penguins live around the southern coastline of Australia and on the shores of North and South Island in New Zealand. Adults stand 30–33cm tall, barely more than a wine bottle, and weigh just over 1kg, so their alternative name of fairy penguin is rather apt. Away from suburban St Kilda, little penguins often live on islands or at the foot



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Above: Zoe Hogg (left) and fellow volunteer Kate Bulling (right) check a little penguin chick for fleas and ticks – parasites that can seriously harm a young penguin.



A LITTLE PENGUIN'S YEAR

of mainland cliffs. They nest in burrows in the dunes, in sea caves or under bushes. Birds begin breeding at two years old and choose a long-term mate, though 'divorce' can occur. Parents take turns incubating clutches of two eggs and guarding, brooding and feeding the newly hatched chicks. Once the youngsters develop their chocolate-coloured down coats, they can regulate their own body temperatures and are left on their own while both parents go fishing.

"These penguins spend only about 20 per cent of their life-cycle on land," says Andre Chiaradia, a marine biologist at Phillip Island Nature Parks. Since they rely on their eyesight to catch prey, they need to forage in daylight, and come to land to feed their hungry brood after dark, when it is cooler. Andre is a prolific researcher, who is also on the steering committee of the IUCN Penguin Specialist Group, and uses high-tech equipment to study how these penguins interact with their prey and react to changes in the environment. He says that, on average, they dive 1,300 times a day.

Keeping tabs

In 1994, Andre began microchipping the penguins of Phillip Island. The tags are inserted between their shoulder blades. "The idea was to collect reliable information without disturbing the birds," he says. Andre installed a weighing machine "like a toll gate for penguins", which allows him to automatically record the time each penguin comes or goes, as well as its weight. From this he is then able to calculate the amount of food gathered by individuals and brought back to the chicks. "To give you an idea of the volume of data," Andre says, "I collect 20 million data points a year."

Using time-depth recorders to see where in the water column the penguins catch their prey, Andre found one bird dived to



an astonishing 72m in the open sea. By contrast, the St Kilda birds fish entirely in the shallower waters of Port Phillip Bay, which has a maximum depth of just 14m. "The St Kilda's penguins can trap their prey at the bottom," Andre says. "It has nowhere to swim, so is much easier to catch."

The St Kilda penguins travel, on average, just 14km a day on their foraging expeditions. As a result, Andre says these penguins are "heavier and bigger, produce larger chicks and have up to three clutches a year". On the other hand, the Phillip Island penguins swim double the distance – an average of 30km – and dive deeper to fish. They can spend up to three days out at sea. Usually these island birds rear just one chick per couple, per year.

Andre explains that the two colonies are affected by climate change in different ways. Droughts that are worsened by climate change affect the flow of the Yarra River, which results in fewer fish spawning in the bay and less food for the St Kilda penguins. At Phillip Island, the penguins have been impacted by an average 2°C rise in sea temperature along the south-east coast of Australia. This drives their prey out into the colder waters further offshore, so the birds need to go on longer fishing expeditions.

I meet the Port Phillip baykeeper, Neil Blake, at a cafe overlooking the windy beach and breakwater. He is founding director of the Port Phillip EcoCentre, and tells me that the breakwater was built to protect visiting yachts that came to the 1956 Summer

JANUARY – APRIL

MOULTING

Where St Kilda

What Old feathers fall out and new ones grow in their place.

Numbers Medium

MAY – JULY

FEEDING UP

Where At sea

What Most penguins are at sea feeding up for weeks before they start breeding. They can have short naps while in the water.

Numbers Low

JUNE – DECEMBER

EGG LAYING

Where St Kilda

What A few penguins start building their nests in the rocks of St Kilda from June onwards, laying eggs in July, but most do so from August to November.

Numbers High

AUGUST – MARCH

CHICK RAISING

Where St Kilda

What Penguins incubate their eggs for 33–37 days. After daily feeding from their parents, the chicks are ready to fledge at 7–11 weeks.

Numbers High



Clockwise from above: after sunset, two little penguins walk along the top of the breakwater, having returned from a day's fishing in the waters of Port Phillip Bay;

volunteer Vicky Lee prepares to carefully weigh a young chick before recording its sex and microchipping it; it takes parents about 35 days to incubate their two eggs.

HOW TO SEE

Melbourne's penguins

● **LITTLE PENGUINS** are present at the St Kilda colony all year, coming ashore after sunset and leaving again just before dawn. There are, however, fewer penguins late in the southern spring and during the winter months.

● **THE BEST TIME** for viewing starts from approximately 30 minutes after sunset. Volunteer guides are on duty every night to help.

● **PLEASE REMEMBER** that this is a wild colony, so stay on the marked areas and boardwalk, do not use flash photography, keep your distance and follow the guides' instructions. Find more advice at St Kilda Earthcare: stkildapenguins.com.au

Olympics. By the time a proposal went to the local council in 1985 to redevelop St Kilda harbour, including the crumbling breakwater, a few penguins had already moved in and made it their home.

At that stage, Neil was a young park ranger for the council. He was one of several volunteers assisting the late Professor Mike Cullen of Monash University with a study of the penguins, finding out more about the colony and the likely impact construction work would have. They ringed and weighed more than 100 adults and 38 chicks over three years. "I was particularly impressed by their bite!" says Neil ruefully. "Every fortnight we went out and got bitten."

The team found that the St Kilda chicks were heavier – at about 1,050–1,300g – than Phillip Island chicks, which weighed about 800–950g. "This pattern of well-fed 'bubs' seems to be the key to the St Kilda success," Neil says. Plans for redeveloping the harbour were dropped, but the breakwater was strengthened using 22,000 tonnes of volcanic rock. Gradually, the birds occupied the whole breakwater, connected to the mainland by a wooden pier. The pier kept out introduced foxes and other predators, but a minority of people were a threat.

Sadly, Neil reveals that they had to keep quiet about the St Kilda penguins at first, because of concern about drunks and "people who were off their brain and wanted to take out their bad feelings on small things". But about 15 years ago, a boat operator began offering penguin tours and then the media reported on the colony. "The whole world

LITTLE PENGUINS

Some penguins were using plastic bags as nesting material.

knows about it now," smiles Neil. Roughly 60,000 to 100,000 visitors come each year, with as many as 600 on summer nights.

Neil's colleague, marine biologist Fam Charko, says the St Kilda's penguins are not only surviving, but thriving. "I find it amazing how resilient they are," she notes, "because they are sharing this space with five million people living right on their doorstep."

Among the research projects in which Fam is involved is a study into microplastic pollution from the Yarra and Maribyrnong rivers. Based on monthly microplastics trawls, Fam says they estimate 828 million pieces of plastic enter the bay each year. They suspect the microplastics are eaten by fish, which are then caught by the penguins. The effect on the birds is still unknown. Scientist Flossy Sperring, research co-ordinator for EarthCare St Kilda, is also concerned about how plastic pollution and rubbish from the Yarra River is affecting the penguins. She has found some penguins using plastic bags, muesli bar wrappers and lollipop sticks as nesting material, instead of using natural vegetation.

Hands on, hands off

Flossy manages about 30 trained volunteers who go out fortnightly to catch and weigh penguins – a tricky task as the feisty birds sometimes have to be hauled out of their nests between the boulders. Each bird is put in a bag and weighed with a spring scale. Chicks of about four weeks old, that are larger than 750g, are microchipped.

"Our main goal is to monitor the population's health," Flossy says. For this reason, the volunteers do not rescue abandoned or weak chicks, as that would be intervening in natural selection, though if the penguin population were to decline or the overall weight of the birds dropped, then they might consider intervening. But, as Flossy says: "We are not here to interfere – we're here to look after them." 🐾



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