

## World

# Boston pigeons give cousins in New York the bird, study finds

## United States

Will Pavia New York

About two hundred miles northeast of Manhattan, as the crow flies, lies the city of Boston: a place famous for baked beans, a strangely-wrought road system and a baseball team that is at enmity with its New York rival. Now there is evidence that the pigeons are different too.

A genetic study of the pigeons in cities along America's densely populated north eastern seaboard found a dividing line in the suburbs of Connecticut that seemed to keep the birds of Boston away from those of New York and cities to the south.

"They are all definitely the same species," said Elizabeth Carlen, a biologist at Fordham University and lead author of the study. The same type of bird perches on the Samuel Adams statue in Boston as on Christopher Columbus, at the corner of Central Park, but it seems that they do not mingle.

"Previous research has shown that on average, maybe pigeons are travelling 6km on a daily basis," Ms Carlen said. "My research showed that within a 50km radius pigeons are more highly related to each other." But she also found evidence of "gene flow" from New York, to Philadelphia, Baltimore and Washington DC, caused by at least one pigeon per generation moving from one cluster to the next.

"Something's going on with Boston and Providence pigeons that I don't quite understand," she said. "Potentially it's caused by Connecticut being so suburban, maybe the pigeons aren't going across this area."

Driving up through Connecticut, collecting blood samples from pigeons, she saw far fewer of the birds. She also

saw forests. "They don't like forest," she added. Ms Carlen, a PhD student, has spent five years "thinking about pigeons non-stop". She once imagined that she would do field work in a remote wilderness. "But it turns out I like the city. I like showering every day. And I like being able to do field work and then go home and go out with my friends."

She goes after pigeons with a heavy black gun that fires a net the size of a table cloth, taking blood samples from the birds and releasing them. She has built a dataset of 473 birds, supplemented by samples taken at animal rehabilitation centres. "I am building a pigeon 23andMe," she said, referring to the genealogy site. Sometimes friends in the towns she was visiting would tell her where the pigeons hang out. "I would start talking to random strangers in a Starbucks, and say, 'Hey, where do you see pigeons?' They always think that I am weird but in an interesting way."

Once a mother in Philadelphia who saw her hunting pigeons in a car park asked what she was doing. She said her children were interested. "She went and got her kids and brought some folding chairs out of her car. We sat in the parking lot and I gave a science lesson."

Anecdotally, she found pigeons in Philadelphia to be the most standoffish. "I would throw down food for some of those Philly pigeons, and they would fly away," she said. "I'd be like, 'Hey, I just fed you!'"

She carries a small sampling kit with her at all times. "I was on the way to a bachelorette party [a hen do] and stopped and took a sample," she said. Often she takes blood from deceased pigeons in the road. "It's one of the weird things about living in a city. You can see the things I study just hanging out on your fire escape."



Work-life balance A fisherman on Inkle Lake, Burma, catches fish with a bamboo basket tied together with lily pad fibres

## Penguins chill out in man-made burrows

## Australia

Bernard Lagan Sydney

Scientists are trying to stop the world's smallest penguins from being made extinct by global warming by giving them a des res that most humans would be happy with if they could fit inside — cool burrows with pitched roofs, tiny chimneys and elevated ceilings.

Found on the southern coasts of Australia and New Zealand, little penguins, also known as fairy penguins, grow to an average height of 33cm (13in). The world's largest colony lives on Phillip Island, about 100 miles south of Mel-

bourne. During the heatwave in southern Australia in March last year, when temperatures exceeded 35C, Peter Dann, a penguin expert, saw that they became heat-stressed while moulting in their burrows. Alarmed, Dr Dann, research director at the Phillip Island Nature Park, rushed to shade burrows with cloths and even placed penguins in fridges to revive them.

He and his team found hundreds dead in the days afterwards, the greatest known loss. "They don't sweat like mammals and unlike some birds they don't pant," Dr Dann told *The Age*. "Eventually they become more dehy-

drated, very disorientated, come out of their burrows and suffer organ failure."

The penguins nest in sandy burrows that they have excavated with their feet or which have been dug by other animals. Now the park is testing more than 1,000 artificial burrows in different designs, to protect penguins better. They have features designed to improve ventilation such as pitched roofs, chimneys and high ceilings. The design lowers temperatures by a few degrees.

"I see it as buying us time as we get the more central problems of climate change and what we're doing to the Earth under control," Dr Dann said.

## FROM OUR CORRESPONDENT

The Ottoman spirit of giving is thriving in Istanbul, where thousands are on the breadline, writes **Hannah Lucinda Smith**

Hannah Lucinda Smith

ISTANBUL



Two days before the start of Ramadan, normally his busiest time, Huseyin was sitting behind the counter of his

bakery in Istanbul and surveying the empty streets outside. "Business is very bad, our takings are more than 50 per cent down," he said. "I don't know how long we can survive."

The pandemic has sucked the noise and energy out of Turkey's biggest city in a way that an attempted coup and terrorist attacks could not. Bars and restaurants have been closed for a month and many residents have left for their family homes in other parts of the country.

And yet a tradition of charity is



Bakers have joined together to run free bread schemes for poor people

enduring. In Huseyin's bakery and many others, customers are still paying for bread "askida", which is donated to the next person who needs a free loaf.

Centuries before the artisan coffee shops of London caught on, Turks were already "paying it forward" for the poor. Askida originated in Ottoman times and is

linked to the Islamic tradition of zakat, which obliges Muslims who can afford it to give away a fortieth, or 2.5 per cent, of their wealth.

Bread was a keystone of the Ottoman diet, with Evilya Celebi, the 17th-century traveller, recording 46 varieties across the empire. In the age of coronavirus, bakeries are one of a small clutch of businesses allowed to open during curfews (pharmacies, water deliveries and animal shelters are the others).

Askida has enjoyed a revival over the past decade, as the tenure of President Erdogan, a pious Muslim, has generated a revival of interest in Islamic customs. Bakers' associations across the country organise askida schemes in which individual businesses keep a whiteboard behind the counter to mark up the loaves they have to give away. Even the street stalls selling simit, sesame-encrusted bread rings, post signs advertising that they offer askida.

In one Istanbul district, Bagcilar, the council has organised the distribution of free bread for ten years, gathering donations from the

public and then delivering the loaves to bakeries.

Since the start of the pandemic the tradition has provided a lifeline for the poorest Turks. The Bagcilar municipality has reported that demand for its askida service has doubled since Turkey began introducing quarantine measures in mid-March, leaving many Turks without employment, while other bakeries and municipalities have started their own schemes.

The Turkish state is also stepping in, organising huge handouts of the special pide, a flatbread that Turks eat for the breaking of the fast each evening. On Saturday afternoon, on the city's deserted streets, volunteers with the Turkish Red Crescent called out their arrival and old women lowered baskets out of their windows on ropes to receive the handouts.

"There are definitely more people coming in asking for free bread, I would say there has been a 30 to 40 per cent increase since the start of the crisis," Huseyin said. "But I never ask why they need it — that is not my job."