

# Nature in the city

For most people, their interactions with wild birds form their most common animal encounters. **Dr Daniel Cox** has been investigating the role that birds may play in improving our mental health.

The economic costs of anxiety and mood disorders, such as depression, have been estimated at €187.4 billion per year for Europe alone. These issues are particularly prevalent in people living in towns and cities. There is robust evidence that nature has a role in play in the prevention and treatment of poor mental health. In the UK, 83 percent of people live in urban areas; therefore, the nature that is found there is likely to be critical for providing many of these benefits. Greenspaces, such as parks, gardens and the wider countryside, provide locations where people gain mental health benefits from relaxing, engaging in exercise and socialising, beyond what indoor or built environments can provide.

To date, research into nature and health has often simply compared greenspace to non-greenspace. However, greenspaces are hugely diverse, comprising multiple combinations of plant and animal species. A core part of my research has focused on teasing apart the roles that different components

of nature, such as birds and trees, play in improving our mental health.

## THE EFFECTS ON MENTAL HEALTH

Birds tend to be visible, vocal and active during the day. They are also found throughout towns and cities. Together, this means that birds are not only more likely to be present at the same place and time as people, but that people are more likely to notice them as they go about their daily lives.

The most obvious benefit of this to mental health is that watching birds and listening to birdsong provides people with pleasure. Birds are also interesting to watch, attracting our attention and distracting our minds from daily routines. Watching and listening to birds is thought to promote recovery from mental fatigue, and facilitate a recovery from stress. It also provides us with a connection to the natural world, one that is often lacking in everyday urban life. Those who are more connected to nature are not only more likely to seek out nature, but also to receive greater benefits from experiencing it.

My research, which is a cooperation

between scientists at BTO and colleagues at the University of Exeter, provides compelling evidence that experiencing birds really is good for our mental health. Our results showed that people living in neighbourhoods where more birds are active during the middle of the day were less likely to suffer from depression, anxiety and stress. This was after adjusting for factors such as age, income, ethnicity and the amount of greenspace.

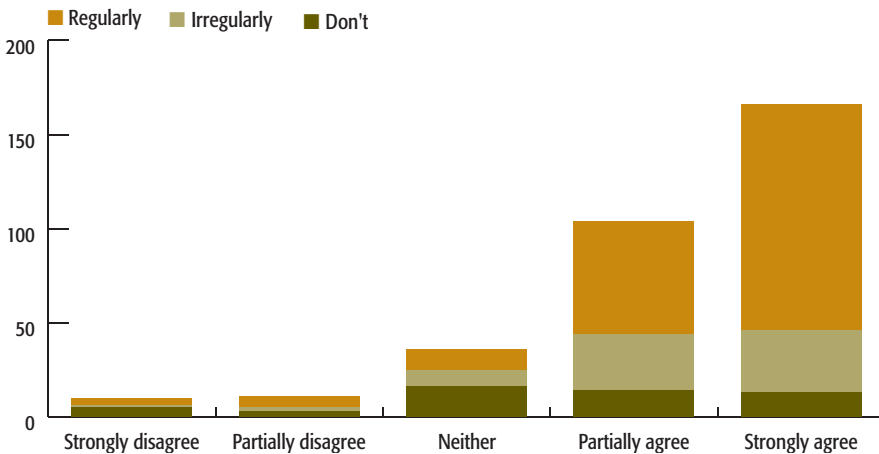
## A VARIETY OF SPECIES

There is huge variation between species, from how a bird looks to its behaviour. From the bold and friendly Robin, reportedly the UK's favourite bird, to the relatively non-descript Dunnock, hiding in the bushes. Such characteristics will influence how likely a person is to detect the bird, whether they recognise it when they do see it, and how the species is perceived, all of which has been found to influence mental health benefits.

Of course, most people do not only gain benefits from seeing individual birds, but





**'I FEEL CONNECTED TO NATURE WHEN I WATCH BIRDS IN MY GARDEN'**

also from seeing groups of birds and species. Generally, people prefer and so presumably gain greater benefits from seeing more individuals. However, precise relationships between wellbeing outcomes and abundance and richness of bird species are unclear. In the general population, the ability to distinguish between different species is low. This means that unless people see many species together, such as at a feeder, they are unlikely to appreciate richness. Instead, research has shown that there is a stronger relationship between benefits to people and the number of species they believe to be present, than to actual richness.

**FEEDING BIRDS**

There is little doubt that the provision of resources for garden birds, such as food and nest boxes, has an important role to play in promoting positive nature experiences for people.

My research has found that people felt relaxed and connected to nature when they watched birds in their garden. A feeder is a place where birds can be seen more reliably, for longer and at closer proximity. Importantly, it also provides a focal location where people who do not normally notice the birds around them are more likely to see and so experience birds. There is good evidence that bird feeders provide a powerful tool for connecting people to nature.

Although there are many causes and drivers of poor mental health, there is increasing evidence that watching birds and listening to birdsong not only provides an enjoyable experience, but can also promote psychological wellbeing and thus improve mental health.

**Credits**

Cox D.T.C. & Gaston, K.J. (2018) Human-nature interactions: causes and consequences of provisioning wildlife. *Phil Trans Royal Soc B*. 373

Cox D.T.C., *et al.* (2018) Covariation in birds providing ecosystem services and dis-services and distribution of people across urban areas. *J Appl Ecol*. In press.

Cox D.T.C., *et al.* (2017) Doses of neighbourhood nature: benefits for mental health of living with nature. *BioScience* 67 (2) pp. 147-152.

Cox D.T.C. & Gaston, K.J. (2016) Urban bird feeding: Connecting people to nature. *PLoS One* 11 (7)

Cox D.T.C. & Gaston, K.J. (2015) Likeability of garden birds: the importance of species knowledge and richness in connecting people to nature. *PLoS One* 10 (11)

