

Brush-turkeys in Suburbia: About Our Project

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The Australian Brush-turkey (*Alectura lathami*) has become an increasingly common sight in the parks and backyards of suburban Australia. Their success in exploiting the big city has led to conflict with homeowners, who blame the birds for tearing up garden beds and lawns indiscriminately as they forage and build their nests. Added to this is a growing list of complaints including stealing pet food, chasing pets and small children, making a racket walking on tin roofs, and fouling swimming pools. But this was not always the case. Brush-turkeys were hunted by both Indigenous Australians and European settlers and, by the time of the great depression, it was a rare sight. Once native wildlife was protected, Brush-turkeys have made a dramatic comeback. They have successfully recolonised much of their former range, often returning to an environment that changed dramatically since they last lived there. Cities and a human dominated landscape present a difficult challenge for wildlife to overcome. Animals living in urban areas have to deal with a highly degraded and fragmented vegetation community, a radically altered physical landscape, competition with or predation from exotic species, pollution, and disturbance from humans themselves. But cities also provide opportunities for the species that can exploit them. There are new resources and living spaces up for grabs. As other species disappear from the landscape, there are vacant niches and ecological roles waiting to be filled. From this point of view, the return of the Brush-turkey is a remarkable success story of a species that was once heading for extinction, and is now thriving in one of the most hostile environments on Earth. It is this incredible story that is often overshadowed by stories of messy gardens.

On the surface, Brush-turkeys don't seem like the ideal species that we would expect to thrive in urban areas. Their omnivorous diet and general tolerance to disturbance means they can forage easily in the small reserves, parks and gardens common to the suburbs. However their ground dwelling lifestyle, and distinct method of reproduction appear unsuited to city life. Unlike most birds which sit on their eggs to keep them warm, Brush-turkeys construct huge mounds of soil and leaf litter (up to three tonnes), and bury their eggs within them. As the leaf litter decomposes, it produces heat that keeps the eggs warm. The males must maintain their mound throughout the breeding season, constantly topping it off with fresh soil and litter. It is this effort that puts Brush-turkeys so often into conflict with residents. This ancient method of reproduction, more closely aligned with reptiles than other birds, requires plenty of space and resources, two things that aren't always easy to find in the city. The chicks, once they hatch, live completely independently from their parents. They can run, fly, find food, recognise each other, and avoid predators all by instinct, and must do so without any help from the adults. The chicks are especially vulnerable to introduced predators such as foxes and cats, and how they survive in a city is unknown.

There are many things we don't know about how Brush-turkeys are adapting to the cities and suburbs. What are they eating? How are they moving through the city and spreading to new areas? How are they choosing where to forage and reproduce? What effect do they have on the environment and on other wildlife? Are they an ecosystem engineer? How are their behaviours changing in response to living in a new environment?

These are some of the questions I am trying to answer with my research. My project is a collaboration between The University of Sydney, The Royal Botanic Gardens Sydney, and the Taronga Conservation Society. Our research involves tagging and GPS tracking Brush-turkeys, observing their behaviour in both urban and rural areas, and measuring how they change the habitats they live in. The outcomes of our project will increase our understanding how this interesting species is adapting to urban life.

Getting Involved: There are many ways that an interested member of the community can get involved in our research. The best way to get involved is through the *BrushTurkeys* app. The app is available in both a smartphone and web version, and it allows people to report sightings of Brush-turkeys, their nest mounds, and their roosts. It also lets people record interesting behaviours they observe. The data from the app helps us understand how Brush-turkeys are distributed across the landscape, and how they might be behaving in different places. Using the app is a great way to learn about a unique native species and get involved in a community of like-minded people. Users are encouraged to comment on each other's sightings to share information and discuss what they find.

A number of Brush-turkeys have also been tagged as part of the long running Wingtags project. People can report sightings of tagged Brush-turkeys using the *Wingtags* app. Finally we also have a dedicated email address brush.turkey2@gmail.com for people to report more detailed information or ask us any questions.

Useful Links:

The *BrushTurkeys* app

Android: <https://play.google.com/store/apps/details?id=com.spotteron.brushturkeys>

IOS: <https://itunes.apple.com/us/app/brushturkeys-spotteron/id1434760216>

interactive map (web-app)

<https://www.spotteron.com/brushturkeys>

Wingtags project

<https://www.rbg Syd.nsw.gov.au/science/the-wingtags-project/brush-turkey>