

# Bats to the future

The Bat House project at London Wetland Centre, says **Bridget Nicholls**, can be a pivotal landmark in the ongoing study of wildlife

**A**S THE COLONY OF MILLIONS OF Mexican Free-tailed Bats emerged in one burst, taking to the skies and filling the screen at the end of Jeremy Deller's film, it created such a stirring and cathartic finale to a powerful but melancholic piece that it won the artist the 2004 Turner Prize. The rest, as they say, is art history.

That image forever engraved in our minds and Deller's conscience is the foundation of his latest project, the iconic Bat House competition which you can read about on page 21. And why not? What better way to thank the bats for their contribution to art than by building them a prize-winning home?

But what of the animals that inspired Deller in the first place? Back in Mexico every night, as humans sleep, these flying mammals are hard at work. They pollinate plants such as the agave, the source of Mexico's iconic tequila. Their excrement, called *guano*, is a valuable and prized fertilizer. And, as they eat up to one-quarter of their body weight in insects every night, they are one of the most cost-effective forms of pest control available.

In fact these Free-tailed Bats have suddenly become high-profile because of their proclivity to eat the Corn Earworm, a moth that devours corn crops as it migrates from Winter Garden, Texas, to the Canadian border. As a pest control, bats are more attractive than chemicals because they cost little, pose almost no risk to human health and target specific bugs, leaving the rest of nature undisturbed. Farmers are finally sitting up and taking notice, as they realise the ecological and economic benefit of bats.

It's taken us a long time to understand these extraordinary creatures. In fact, their powers



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of ultrasonic navigation were only confirmed less than 70 years ago. It was the late Donald R Griffin who made the breakthrough in 1938, when an undergraduate at Harvard. Griffin earned the nickname 'Batman', after he and his lab partner, Robert Galambos (no, that's Robert, not Robin), placed a microphone in a dark room and sat back to take notes. They proved that bats could 'see' in the dark by emitting ultrasonic sounds and navigate through the air using the echoes as an internal guidance system. In 1958, Griffin described this as 'echolocation'.

In the process, of course, Griffin effectively invented the bat detector, an instrument that has given so many people hours of fun over the years and allowed so many scientists deeper understanding of bat communication. Bats enchant anyone who has heard their sonar calls played through a bat box. Being able to dial up different bat species at different frequencies, as the bats' voices coruscate across the evening sky is just magical. With the imagination dusk brings, you can almost believe you are part of this trans-species opera, conducting and composing your very own music of the night.

And now the bats will be coming in greater numbers than ever before to Barnes. The design competition for the new Bat House is still underway, so if you'd like to try your hand, there's still time (see [www.bathouseproject.org](http://www.bathouseproject.org)). Perhaps the best thing to do, however, is ask the bats themselves what they want from a Bat House. Sound ridiculous? Maybe not. Griffin was not just a pioneer in the study of animals in their natural environments, he also suggested that animals, like humans, are capable of thought and awareness, a theory that was virtually taboo in the scientific circles of his time, and that is still the one great aspect of the world's wildlife that is the most poorly understood.

But our study of the animals is in its infancy. If we only discovered how bats communicate a few decades ago, it could still take some time before we discover how they think. But what a discovery it will be! In fact, it's quite possible that the Griffins of the future are the children of the present who will be inspired by Deller's Bat House, and by the work of WWT. It's the seeds we sow now, planted in prized guano fertilizer, that lead to the discoverers of the future.

And the rest, as they say, is natural history. **W**