n 1894, a new lighthouse keeper took up his post on Stephens Island, an otherwise Luninhabited wilderness of crags and dense vegetation off mainland New Zealand. He brought with him one companion, a cat, with the disarming name of Tibbles. The keeper, David Lyall, was a keen amateur naturalist and took great interest in the prey Tibbles regularly brought home, as cats do, which included specimens of a strange flightless songbird, hitherto unknown to science. Lyall sent skins of various specimens to prominent ornithologists of the day, and the birds came to be recognized as a new species, which was named the Stephens Island Wren, with the congratulatory scientific name Xenicus lyalli ("Lyall's stranger"). Tibbles, however, had arrived on the island already pregnant, and she and her offspring exterminated the wren, which had no natural predators, and in just over a year they thus rendered extinct an endemic species that had evolved over many millennia to adapt to that particular habitat.

study in 2011 of the impact of cats on endangered vertebrate species on some 120 islands around the world concluded that cats had significantly contributed to the decline or extinction of 123 species of birds (including songbirds, parrots and penguins), twenty-five reptiles and twenty-seven mammals (including even a lemur and a bat). But the carnage inflicted by this predatory species is not restricted to islands, which, it can be argued, are a special case. It is estimated that there are as many as 100 million feral (unowned or semi-owned) cats in the USA that kill up to 4 billion birds a year, and in this campaigning study Peter Marra and Chris Santella argue that it is now time to recognize the threat freeranging cats pose for biodiversity. They advocate radical solutions, including licensing and other restrictions on domestic cats as well as the large-scale culling of feral populations – proposals, they note, that are not likely to

Tibbles the killer

How cats have led to the decline in other species

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Peter P. Marra and Chris Santella

CAT WARS

The devastating consequences of a cuddly killer 212pp. Princeton University Press. £18.95 (US \$24.95). 978 0 691 16741 1

make them many friends among cat-owners.

Marra and Santella outline the long history of domestication that has made the cat so popular a species. The domestic cat, Felis catus, seems on the genetic evidence to have This island story is a familiar one now. A evolved from an ancient Near Eastern wildcat, Felis silvestris lybica; and archaeological remains confirm that it was in the Fertile Crescent, the cradle of civilization some 10,000 years ago, where cats first lived in close association with humans. Conditions there favoured early experiments in agriculture, and the storage of grain and other produce will have attracted granivorous rodents and birds, which in turn provided a ready food supply for a strain of cats sufficiently tolerant of human proximity. So began the relationship of commensalism ("sharing the same table"), which offered humans the benefits of efficient pest control and cuddly pets, and enabled cats to spread to every corner of the globe and become, along with rats, one of the most successful invasive (that is, non-native) species on earth.

> The emotional bond cat-owners feel with their pets seems to depend in part on a recognition of their wild origins. In contrast to dogs,



whose relationship with humans has at least as long a lineage, cats are perceived as more independent – playful companions but sometimes secretive and private, even aloof; loners who live on their own terms. For an increasingly urban population they perhaps satisfy the need to connect with animals and are a link of a kind with the natural world. But we know that they are at heart still hunters, who kill for pleasure as well as for food, and this creates some emotional dilemmas.

In the UK, cats kill upwards of 50 million birds a year, typically garden species like blue tits, blackbirds, robins and house sparrows. Most British cats are owned and many of their owners will also be bird lovers. In response to demands for better cat controls, from David Attenborough among others, the RSPB (which will have many cat owners among its million members) felt obliged to issue a reassuring statement to the effect that the impact of cat predation on bird populations in Britain is largely "compensatory" rather than "additive" that most of the birds killed would have died anyway from disease or starvation and that cat predation is therefore not in itself causing population declines. The authors cite research that challenges this conclusion as unduly complacent. Their case is strongest, however, as it relates to other countries like the USA, New Zealand and Australia, where there are huge populations of wholly feral cats that have an undeniable impact on wildlife populations. Well-meaning measures to contain these feral cats by humane means like trapping and neutering have proved inadequate in the face of the enormous, and constantly replenished, numbers involved.

Peter Marra and Chris Santella base their case in the end on an appeal to the scientific evidence, which they set out as calmly as they can, expecting, however, that they will encounter the sorts of denials and resistance that Rachel Carson faced over her revelations about DDT and that still persist in some quarters over childhood vaccinations, smoking and climate change. What they fear most, however, is the inaction of ordinary, decent people who have just not grasped how quickly the tapestry of the world's ecology is unravelling before our eyes, in this as in other ways. Will we in future see museums displaying, alongside the Stephens Island Wren, an extinct piping plover, roseate tern, florida scrub jay and Hawaiian crow? It may not seem plausible. But nor did the fate of the passenger pigeon.

