Survival rates of cat-attacked birds admitted to RSPCA wildlife centres in the UK: implications for cat owners and wildlife rehabilitators

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Abstract

Free-ranging pet cats (Felis catus) frequently kill wildlife but also return live prey to their owners. This raises welfare concerns if live animals released by cat owners subsequently die, since this is preventable, e.g. through prompt euthanasia. To estimate the mortality rate of birds released alive by cat owners, we examined the fates of 3,597 cat-attacked individuals admitted to four RSPCA wildlife centres in the UK. Individuals from 64 species were received but most cases (77%) involved just seven species commonly found in urban areas. The overall mortality rate (based on all individuals admitted to centres, i.e. including those which perished in transport, those which were euthanased upon arrival and those which were admitted for care after having been triaged) was 78%; the post-admission mortality rate (n = 2,070 birds admitted for care) was 62%. On average, individuals that perished (n = 2,798) survived for 3.0 days before dying or being euthanased. Juveniles were more likely to survive to release than adults, possibly because their small size means they are less likely to receive injuries that are ultimately fatal. Extrapolating from the limited data currently available, and applying conservative estimates at each stage, we estimate that a minimum of 0.3 million birds are released annually by cat owners but subsequently die. Substantial welfare improvements could be achieved if owners were more prepared to adopt strategies to limit hunting behaviour (e.g. fitting cats with collars and bells) and if owners and rehabilitators were able to effectively identify individuals with fatal injuries. The latter will require studies that quantify the effects of identifiable physical injuries on the likelihood of survival to release, in order to establish effective triage criteria.

Keywords: animal welfare, depredation, domestic cat, Felis catus, hunting behaviour, wildlife rehabilitation

Introduction

As a companion animal and biological control agent, the domestic cat (Felis catus) has been introduced widely across the globe by humans, including into the UK (Long 2003). Throughout this distribution, cats exhibit varying degrees of dependence on humans and this, in turn, affects how they may impact wild prey populations (International Companion Animal Management Coalition [ICAM] 2011). For example, feral cats (‘unowned roaming’ cats: ICAM 2011), which live independently of humans and whose numbers are linked to the availability of natural prey, have caused the extinction, extirpation and decline of a number of species (Nogales et al 2004; Medina et al 2011, 2014). Conversely, free-ranging pet cats (‘owned roaming’ cats: ICAM 2011) receive the majority of their nutrition from their owners, yet many individuals still catch and kill wild animals (Barratt 1997, 1998; Gillies & Clout 2003; Woods et al 2003; Kays & DeWan 2004; Lepczyk et al 2004; Morgan et al 2009; Balogh et al 2011; Tschanz et al 2011; Loss et al 2013; Woinarski et al 2017). Within urban areas in developed countries, pet cats are often present at very high densities (eg > 200 km⁻² in the UK: Sims et al 2008; Baker et al 2010), such that even low per capita predation rates could result in substantial cumulative numbers of animals killed. This has led, therefore, to increased interest in the potential impact of free-ranging pet cat populations on populations of wild prey species (Crooks & Soulé 1999; Baker et al 2005, 2008; Lilith et al 2010; van Heezik 2010; van Heezik et al 2010; Calver et al 2011; Thomas et al 2012). However, pet cats do not kill every animal that they catch (Martin & Bateson 1988; Turner & Meister 1988; Fitzgerald & Turner 2000). For example, studies conducted in Bristol (Baker et al 2005) and Reading (Thomas et al 2012) in the UK recorded, respectively, that 24 and 14% of prey animals returned home by pet cats were alive, these figures equating to return rates of 0.7–2.1 live prey per cat per annum. Although extrapolations from such figures should be treated with caution because of the marked variation in patterns of predation (Baker et al 2008; Thomas et al 2012), with 10.3 million pet cats in the UK (Murray et al 2010), the majority of which are given access outdoors during the day and/or night (Baker et al 2005, 2008; Thomas et al 2012), these data suggest that approximately 7.2–21.6 million prey animals could be presented alive to cat owners each year.