MEDIA RELEASE

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What we have in common with wild cats and other fellow urban-dwellers

Wild cats who live quietly side-by-side with humans and domestic animals share more than a preference for the urban lifestyle.

A research team led by the University of Tasmania's Dr Scott Carver has studied parasites common to both the North American wildlife and humans – and they've discovered that it is we who give our afflictions to the bobcat, rather than the other way around.

Dr Carver recently joined UTAS' School of Zoology after four years of postdoctoral study in the US. The last two years were spent at Colorado State University, where he extended the investigations of pathogen spillover that he began in Australia with the mosquito-borne Ross River virus to the bobcat, an elusive and adaptable predator about twice the size of a domestic cat.

"Humans and animals share many pathogens, and this transmission appears to be increasing globally as human populations grow and increase contact with a variety of animals," says Dr Carver. "This can have serious implications for human, domestic animal and wildlife health."

Working in a team that included scientists from Colorado State University, the US Department of Agriculture and the National Parks Service, Dr Carver and his colleagues investigated what parasites were shed into the environment by bobcats in areas heavily populated by people – Ventura County, California, and on the Front Range of Colorado's Rocky Mountains – and also in an area with fewer people in Western Colorado.

Dr Carver and colleagues found that city bobcats are more likely than country bobcats to be exposed to and shed the gastrointestinal disease-causing parasites *Giardia duodenalis* and *Cryptosporidium* spp.

In an urban area pathogens can potentially travel between humans and wildlife, much like a virus that infects one human family member and runs through an entire household.

"Our results suggest that humans transmitted these pathogens to bobcats," Dr Carver said. "The *Giardia* we identified in bobcats is commonly associated with people, so we think that bobcats, and potentially other wildlife, are

becoming exposed while drinking contaminated water around cities. What we have observed in bobcats is probably not uncommon for other wildlife, including wildlife here in Tasmania."

The team's findings, published in the *Journal of Clinical Microbiology*, follow on from a study by the same scientists released in February showing that domestic cats, bobcats and pumas who live in the same area share diseases – and that the domestic cats may bring these diseases into family homes.

Dr Carver is continuing his research on pathogens that move between animals and humans – termed 'zoonoeses' – here in Tasmania. One topic of his research is to better understand how the Ross River virus is transmitted among mosquitoes and wildlife, and spills into humans, causing disease. "The more we understand the natural transmission of Ross River virus, the better our capacity will be to control it," he says.

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