

Plague on their house, but bush rats fight back

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Grainne Cleary with a bush rat

(PhysOrg.com) -- Sydney's native bush rats were unintended victims of a campaign to exterminate foreign black rats during a plague epidemic in 1900, according to new research by scientists who plan to reintroduce the native rats into bushland around Sydney's harbourside suburbs.

A team of Sydney researchers is conducting the three-year experiment to test whether native [rats](#) can mount a counter-offensive against the black rats, which were targeted during the epidemic because they bore disease-carrying fleas that spread easily to people living in poor housing and unsanitary conditions around Darling Harbour and The Rocks areas.

The Sydney epidemic of 1900-1905 claimed more than 163 lives and

was part of a plague pandemic affecting dozens of countries between 1850 and 1912.

In a bid to limit panic and the mounting death toll, the NSW Government offered six pence - four dollars in today's economy - as bounty for the body of every rat delivered to a purpose-built city furnace established in Bathurst Street.

The eradication campaign was highly successful: more than 100,000 rats were culled during the first six months of the program, although the unofficial death toll was probably much higher.

But it also led to the indiscriminate killing of harmless native rodents, according to UNSW biologists Dr Peter Banks and Dr Grainne Cleary.

"Historical records and photographs suggest that harmless rodents such as water rats and the native bush rats were caught up in the culling of black rats," says Dr Banks. "Land-clearing for the suburbs of Mosman, Cremorne and Manly then isolated bush patches on harbour foreshores, depriving the native rodents to recolonise bushland habitats. As a consequence, native bush rats have been a rarity in Sydney ever since - the last confirmed sighting in the city was in 1901."

Despite the black rat's fearsome reputation, Dr Banks says early experiments at Taronga Zoo showed that it is "easily bullied" by native bush rats. The team believes that they are likely to "evict" the invaders from bushland when they are reintroduced, with resulting benefits to many other species preyed on by black rats - notably native birds whose eggs are taken.

Beginning next year, the campaign aims to trap 70 per cent of the vermin rats in four Mosman and Cremorne areas before releasing bush rats in these areas from 2011.

If successful, the trial could be expanded to drive the pests out of suburbs across the city.

The Australian Research Council has awarded the team Linkage Grant funding of \$365,000 over the next three years to protect rare and endangered wildlife by using reintroductions of common native species as a block to reinvasion following pest control.

Provided by UNSW Sydney

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