

**Abstract:**

Predation by feral cats is a primary threat to more than 100 species of native Australian animals, across every habitat on the continent. Control of feral cats is an ongoing and difficult problem.

Thylation Ltd are developing an automated feral cat grooming trap (the "Felixer") as a potential new tool for feral cat management. The unit detects the presence of a feral cat and sprays a lethal dose of 1080 toxic gel onto the fur, which is ingested via grooming.

Northern quolls were identified as a potentially problematic non-target issue due to their cat-like shape, and vulnerability to doses of 1080. In collaboration with Roy Hill and FMG, DBCA have been trialling three Felixer units in the Pilbara to determine their safety and efficacy.

We used three Felixers in photo-only mode, paired with Reconyx cameras, for six months in high-density quoll habitat, to assess target specificity. In that time there were almost 200 independent instances of northern quolls crossing in front of the Felixers, of which zero were identified as targets. There were also 19 other non-cat species (birds, mammals, reptiles) that were not targeted. Cats were successfully identified as targets in our study and several other field studies of Felixer efficacy. We are working towards live 1080 trials in order to determine the effectiveness at reducing cat populations, and if there is a subsequent response from threatened species.

If found to be efficient and effective, this automated unit provides an additional method for targeted feral cat control at specific localities. Applications may include: high-value threatened species populations in limited areas (such as night parrot populations), locations that have a predator "sink" (such as the outside of predator exclosures), sources of feral cat populations (such as camps or dumps) or in locations where cats travel through limited areas (such as peninsulas or islands).