Humane and targeted: Felixers enable safe feral cat and fox control in agricultural and peri-urban environments

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Rangoon the ragdoll cat from Kangaroo Island with WID on collar and owner Sarah. The photo below shows although the 3 Felixer activation sensors (white spots) recognise Rangoon as a target (at 137cm) the WID detector blocks the Felixer from firing

SP030005_2019-04-12_02-52-33_TARGET_PHOTO_BLOCKED_137cm

This feral cat below at Rangoon's house was correctly targeted (at 7:47AM on July 30, 2019

SP030005_2019-07-30_07-47-49_TARGET_PHOTO_74c

Felixers are automated tools for delivering measured doses of toxins to the fur of cats and foxes, for ingestion by grooming. Targets are distinguished from wildlife by the unique speed and pattern that LiDAR sensors are broken. In 2019, non toxic photo-only trials of a blocking mechanism that prevents Felixers from targeting pets wearing Wireless Identification (WID) tags on their collars. were conducted on Kangaroo, Phillip and French Islands . WIDs tags were typically detected within 20m of the Felixers. On all 24 occasions when a pet cat wearing a WID was recognised as target the WID detector correctly blocked the Felixer from activating. In the same trials, 23 of 64 uncollared cats encountering the Felixers were correctly identified as targets. Consistent with previous trials, no humans were considered targets and .of over 700 wildlife detections only 1 of 169 brush-tailed possums and 3 of 10 Cape Barren geese were identified as targets,. Future algorithm updates are likely to minimise false targeting of geese, in the same way that this study revealed the improved nontarget recognition of wallabies following algorithm upgrades.

Target distinction by WID equipped Felixers on Kangaroo, Phillip and French Island
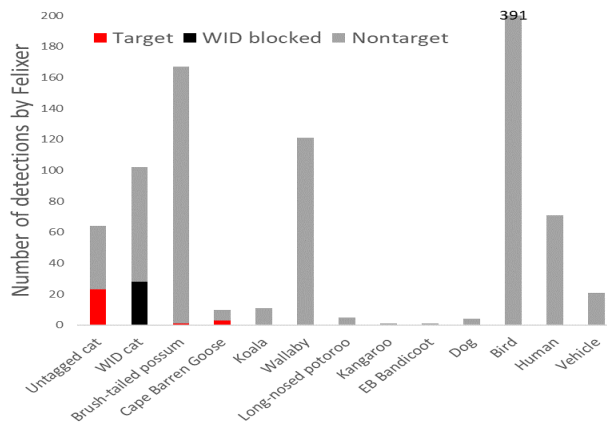
This study showed that Felixers have the potential to control feral cats and foxes in environments also occupied by domestic pets and working dogs equipped with WID tags. WID detectors can also be used to enforce pet containment bilaws and reduce the wildlife predation, human health and cat welfare issues of free-ranging domestic cats.
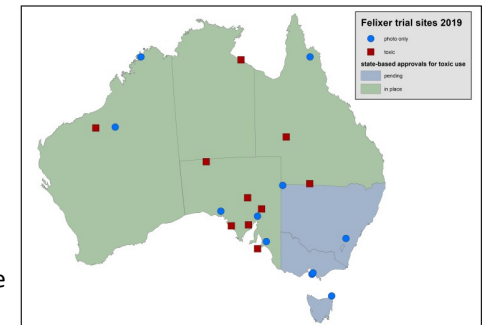

Sequences of Felixers with different algorithms are used to test target distinguishing algorithms with free-ranging wildlife

Location of 2019 Felixer field trial sites

Acknowledgments:

Key References

Read, J.L., Bowden, T., Hodgens, P., Hess, M., McGregor, H. and Moseby, K. (2019). Target specificity of Felixer grooming 'traps'. Wildlife Society Bulletin 43: 112-120.
Moseby, K.E., McGregor, H. and Read, J.L. (in press) Effectiveness of the Felixer Grooming Trap for the control of feral cats: a field trial in arid South Australia'. Wildl Res.

Felixers have featured in two popular science books published in 2019