

# Felixer™ Grooming Traps For Mesoscale Feral Cat Control

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National  
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Program



# The Felixer™ grooming trap



- Uses data from lidar sensors (and camera in newer models) run through a proprietary algorithm to determine if a detected animal fits the criteria for a cat.
- Fires a 1080 infused gel onto the side of the animal which cats will then groom off.

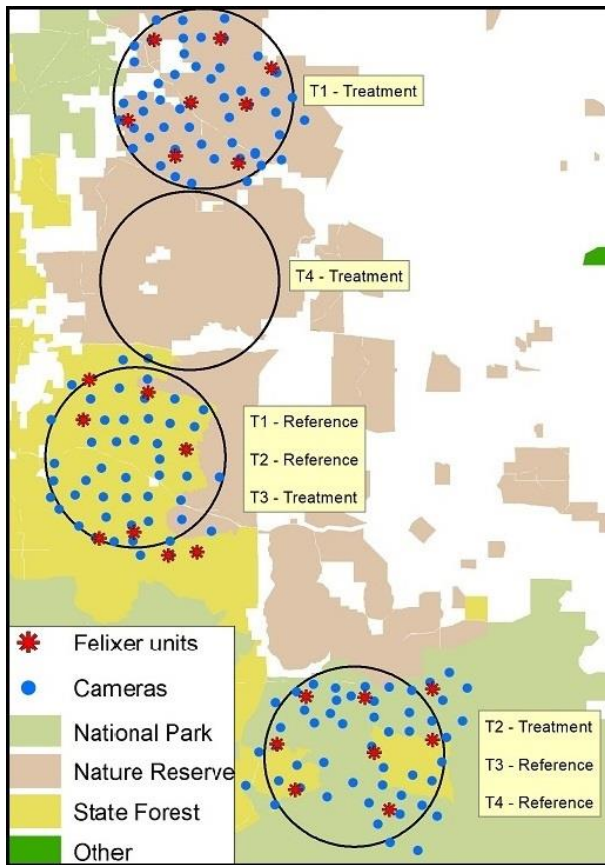
# Felixer grooming traps in the southern forests



Are Felixer traps

- Safe for non-target species?
- Effective at reducing feral cat numbers and activity?

If so, how do we optimise their use?



Blue – Nature Reserve, Red –State Forest, Yellow – National Park, White – freehold (largely cleared)

## Trial sites

- ~14,000-19,000 ha each
- 50 remote cameras at ~2km spacings
- - 8 Felixer traps set across each site





## Are Felixer traps safe for non-target species?

- Pen testing with captive numbats
- 2,445 trap days completed to date (675 in non-toxic mode)
- 6,221 detections in conservative mode

## Non target safety

Common Name	Conservative Mode		Standard Mode	
	Detections	Targets	Detections	Targets
Woylie	933	0	1025	14
Numbat	837	0	15	0
Tammar Wallaby	608	1	95	2
Koomal	511	0	438	0
Quenda	216	0	43	0
Chuditch	178	0	161	0
Western Grey Kangaroo	160	0	94	3
Macropod sp.	57	0	0	0
Quokka	47	0	0	0
Western Brush Wallaby	30	0	5	1
Wambenger	8	0	1	0
Short-beaked Echidna	6	0	5	0
Ngwayir	6	0	4	0

Assuming 100% ingestion of gels lethal dose for targeted species:

Woylie - ~19 gels in 24 hours

Tammar wallaby - ~8 gels in a 24 hours

Western grey kangaroo - ~238 gels in 24 hours

LD50 Source: DBCA 1080 training manual, Appendix 3, McIlroy, 1981, 1982, 1983

# Felixer effectiveness



	Feral Cat	Red Fox
# Detections	105	239
<b>Detections/Trap nights</b>	<b>4%</b>	<b>10%</b>
# Target (Photo-only)	13	38
# Target (Toxic)	25	41
<b>Targets/Detections</b>	<b>36%</b>	<b>33%</b>
<b>Targets/Trap nights</b>	<b>1.6%</b>	<b>3.2%</b>



Estimated % of individual cats present that were targeted:

45-88% Trial 1

40-67% Trial 2

74-89% Trial 3

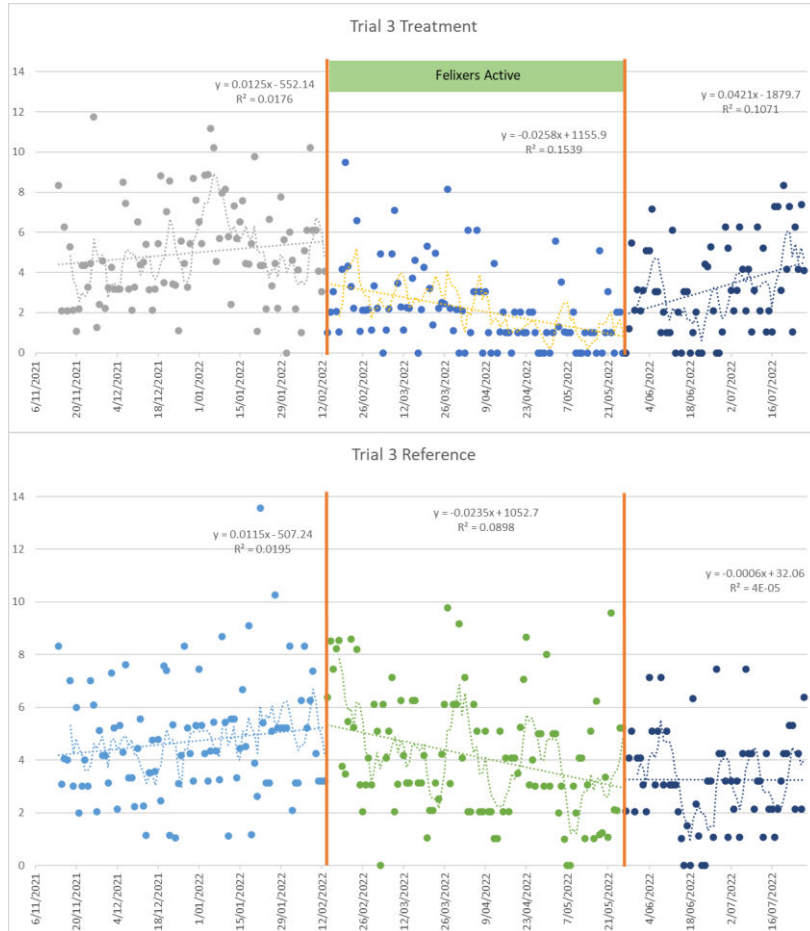


# Were targeted cats killed?

Generally a very low probability that the cat was present in the area after being targeted but not detected

	'Ginger'	Mer09	'Target'	Mer15	Mer12
# of detections	38	101	28	3	82
# of days detected	33	74	25	2	61
# of camera days between first detection & being targeted	181	382	318	210	348
Maximum daily probability of detection	0.182	0.194	0.079	0.010	0.175
# of camera days from deployment to cat being targeted	402	392	412	428	481
Minimum probability of daily detection	0.082	0.189	0.061	0.005	0.127
Camera days after being targeted	121	131	111	93	40
<b>Min. probability cat is still in area but we didn't detect it</b>	<b>2.65E-11</b>	<b>5.62E-13</b>	<b>1.13E-04</b>	<b>0.411</b>	<b>4.49E-04</b>
<b>Max. probability cat is still in area but we didn't detect it</b>	<b>3.15E-05</b>	<b>1.25E-12</b>	<b>9.60E-04</b>	<b>0.647</b>	<b>4.41E-03</b>





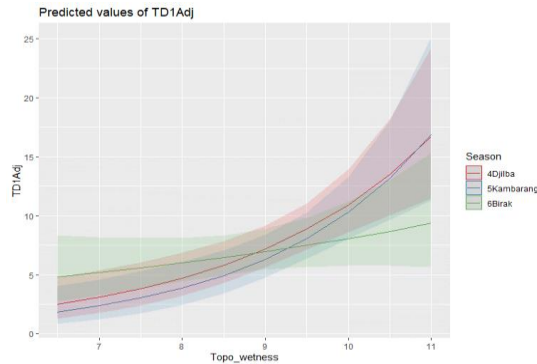
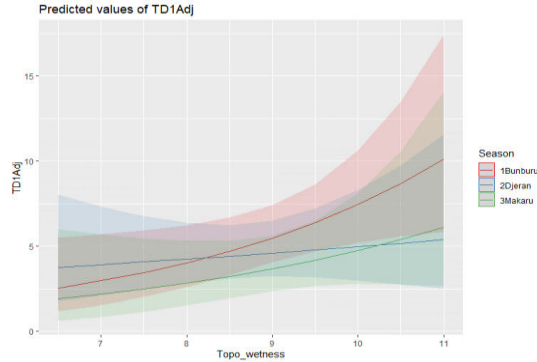
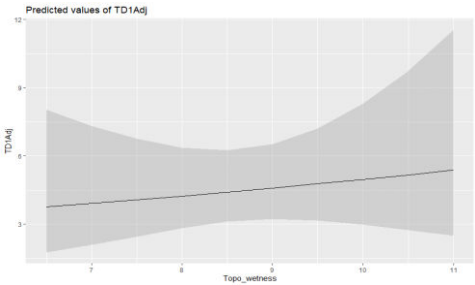
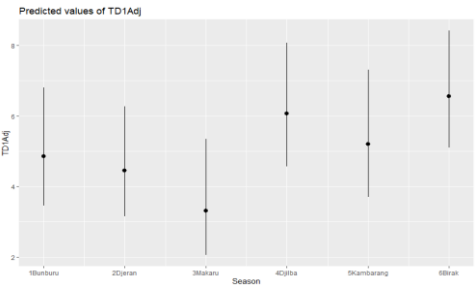
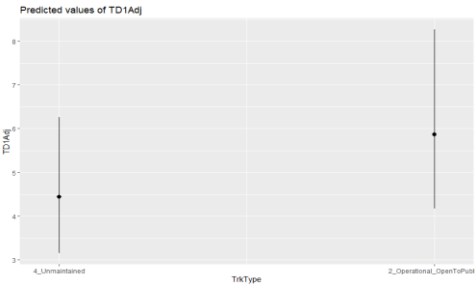
## Changes in cat activity

- Activity reduced by 49%, 31% and 74% at the three trial sites, relative to reference sites
- Reductions in activity sustained for up to 5 months after Felixers removed.
- Rate of increase in activity post Felixer removal appears to related to level of activity reduction.

# Optimising effectiveness

## Can we predict cat activity based on landscape variables?

- Tested – vegetation density, distance to hydro, distance to ag land, road density, fire age, elevation, track type, track width, topographic wetness
- Cat encounters most likely on maintained roads in areas of high topographic wetness between August and November.





## Current trial

- Testing deployment of Felixer traps based on landscape variables – topographic wetness and track type
- Increasing target detection by moving to standard mode rather than conservative.



## Felixer™ grooming traps as part of integrated predator management

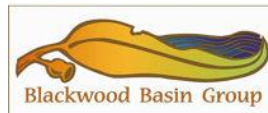
- May potentially achieve mesoscale reduction in feral cats
- Another tool to supplement existing methods of control



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