

Mammal Observations from Camera Trapping in Cat's Hill, Trinidad.

An informal investigation of the wildlife in the Cat's Hill and Inniss Field area of the Victoria Mayaro Reserve was conducted with the use of trail cameras from March 2012 to July 2015. The 2012 camera trapping session involved one camera, a Wildgame Innovations Flash 6 (WGIF6), placed in a variety of habitats; including forest, the banks of forest watercourses and teak fields. It was mounted on a portable metal stand with a plastic rain shield, planted in the soil at approximately two feet above ground level. The stand removed the need to find a suitable tree trunk for placement. Leaf litter was usually piled at the base of the stand to reduce the chances of rain splashing soil onto the camera lens. The results of 2012 proved to be very encouraging with the observation of several species, including agouti *Dasyprocta leporina*, lappe *Cuniculus paca*, red brocket deer *Mazama americana*, and neotropical river otter, *Lontra longicaudis* (Fig 1). As a result of these positive results, an attempt was made to employ a more structured approach in the following year.

In 2013, two cameras were used. The previous WGIF6 had ceased functioning several months after the 2012 session while employed in the field elsewhere and so a new WGIF6 was used. Additionally, a new HCO Scoutguard SG560C was used. Both cameras used an incandescent flash and were set to capture photographs as long as a target was detected. Starting in March, these cameras were placed within the forests along the Cat's Hill Road, one camera at each site and approximately 0.5km apart and 30 m away from the roadway. The decision as to where to place cameras was based primarily on reducing the likelihood of theft and so were never placed on or overlooking a trail (whether human or animal made). Sites were relatively clear of vegetation and typically flat land. Whilst ridgelines are often utilised for trails by animals, they are also frequented by humans. Natural chokepoints, caused by fallen logs or watercourses, were taken advantage of where available. We had also learnt from 2012 that hunting dogs were sometimes able to find our cameras, presumably detecting traces of our human scent on them, so touching of the camera itself was minimised. The cameras were left for a period of 21 days at these locations before being moved to new locations further along the road, the result being a total of eight survey sites (Table 1), each approximately 0.5km apart and at a duration of 21 days each, for a total of 4,032 hours. The initial site was chosen simply on the basis of being adjacent to one of the productive 2012 sites. In addition, a perfume attractant (name withheld) was used with the intention of determining if ocelots, *Leopardus pardalis*, were present in the area. The attractant was sprayed into the husk of a coconut to facili-

Table 1. Coordinates of Trap Sites

Site	Coordinates	Notes
Site 1	10°11'49.31N 61°12'59.55W	Relatively flat site. No activity detected in 2013.
Site 2	10°11'49.93N 61°12'42.79W	Slope. Site was cleared of vegetation in 2015
Site 3	10°11'45.92N 61°12'29.32W	Relatively flat site. Choke-point on bank of waterway. Hunting camp nearby.
Site 4	10°12'5.22N 61°12'14.73W	Flat site bound by steep slope. Hunting camp and scaffolding nearby.
Site 5	10°12'11.83N 61°11'55.02W	Relatively flat site, dominated by <i>Pentaclethra macroloba</i>
Site 6	10°12'14.28N 61°11'38.22W	Relatively flat site, next to active oil well
Site 7	10°12'15.42N 61°11'22.62W	Relatively flat site. Busy oil facility in vicinity
Site 8	10°12'36.62N 61°11'18.83W	Relatively flat site. Busy oil facility in vicinity

tate easy removal from the site and also to provide protection from the rain. The observations of 2013 were in a similar vein to that of the previous year, with the aforementioned species being photographed on a regular basis but with the addition of of *Tamandua tetradactyla* (Fig 2.) and two different ocelots, distinguished by their coat patterns (see Cover Photo for one of the ocelots).

This approach was again employed in 2014 and 2015, at approximately the same time of year, but with fewer locations. Once again, the previous year's WGIF6 had failed and was replaced by another HCO Scoutguard SG560C, so that two of these cameras were now in use. The last two sites (Site 7 and Site 8) were omitted in 2014/2015 as only black eared opossum, *Didelphis marsupialis* had been detected there in 2013 (both sites were close to a very active oil storage facility and so human disturbance was a likely factor). A third ocelot and a crab-eating racoon, *Procyon cancrivorus*, were identified at Site 2 in 2014. A third camera (Bushnell 8MP Trophy Cam with infrared illumination) was introduced in 2015. This camera recorded video observations at the sites in conjunction with one of the other cameras, to determine how animals reacted to the incandescent flash of the other cameras and the perfume attractant. It appeared that most animals (with the exception of small rodents) did not react to the brief incandescent flash but this needs further observation. It was also noted that in addition to ocelot, several mammals were very interested in the attractant as lappe, crab-eating racoon, opossum and agouti were all recorded investigating the perfume. The diversity of species observed in 2015 was similar to the previous year. Unfortunately, much of the vegetation at Site 2 was cleared in 2015, to safeguard

nearby power lines, rendering this previously productive site (and at which two ocelots had been recorded) useless. The Bushnell Trophy Cam had been at this site for 30 days prior to its clearance and recorded agouti, deer and lappe. These observations are included in the tabulations below, however, as human disturbance in the area around Site 2 had commenced prior to this session, animal detection is expected to have been negatively impacted and results are not perfectly comparable to that of 2013 and 2014.

Of particular interest in 2013 was the implementation by the government of a two year moratorium on hunting, commencing in September of that year (and therefore after the 2013 session as completed). This offered an opportunity to see what changes might occur in observations during and after the moratorium.

To this end, observations of mammals at all six sites were collated and are presented below, both in terms of the total number of days that species were detected at all sites (Table 2) and in terms of the numbers of sites at which species were detected (Table 3). Black eared opossum, *Didelphis marsupialis* was found to be common to all sites and has been omitted from these tables.

Whilst these are very informal observations, it would appear that there was a detectable change in mammal populations during the hunting moratorium. This is most noticeable in terms of the agouti which increased from 16 detection days at four sites in 2013, to 42 detection days at six sites in 2015. This was to be expected, given that the

Table 2. Total number of detection days at all six sites

Species	2013	2014	2015*
Agouti, <i>Dasyprocta leporina</i>	16	43	42
Red brocket deer, <i>Mazama americana</i>	1	1	4
Lappe, <i>Cuniculus paca</i>	6	5	5
Armadillo, <i>Dasybus novemcinctus</i>	1	4	8
Tamandua, <i>Tamandua tetradactyla</i>	1	4	1
Ocelot, <i>Leopardus pardalis</i>	2	1	0
Crab eating Raccoon, <i>Procyon cancrivorus</i>	0	2	1

*Site 2 was disturbed by human activity in 2015 which negatively affected animal activity

Table 3. Number of sites at which species were detected

Species	2013	2014	2015*
Agouti, <i>Dasyprocta leporina</i>	4	6	6
Red brocket deer, <i>Mazama americana</i>	1	1	4
Lappe, <i>Cuniculus paca</i>	4	5	5
Armadillo, <i>Dasybus novemcinctus</i>	1	2	2
Tamandua, <i>Tamandua tetradactyla</i>	1	3	1
Ocelot, <i>Leopardus pardalis</i>	2	1	0
Crab eating Raccoon, <i>Procyon cancrivorus</i>	0	2	1

*Site 2 was disturbed by human activity in 2015 which negatively affected animal activity

agouti is the most widely hunted mammal and that they are capable of reproducing more than once a year (Soodnarinesingh 2012). Detections of other species were also relatively better. The authors plan to continue carrying out these investigations and the immediate objective will be to see how these simple detection metrics change after the 2015 hunting season.



Fig. 1. Neotropical river otter, *Lontra longicaudis*, Inniss Field, 20 April 2012



Fig. 2. Tamandua, *Tamandua tetradactyla*, Cat's Hill, Site 3, 29 April 2015

REFERENCES

Soodnarinesingh, C. 2012. *Dasyprocta leporina* (Red-rumped Agouti), The Online Guide to the Animals of Trinidad and Tobago, [Online]. Available at https://sta.uwi.edu/fst/lifesciences/documents/Dasyprocta_leporina.pdf (Accessed 7 July 2016).

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