



## Hawaan Forest Conservation Trust Monthly site inspection report:

Summary:

28.03.2022

- i. The monthly site visit to the Hawaan Forest by A. Starke was conducted on the 28.03.2022.
- ii. Items checked during the visit are detailed below. Fauna and security monitoring was by trail cameras. The trail cameras are being successfully managed by Marshall (Thulani) and A. Starke. There have been some beautiful wildlife images captured and fortunately no security issues. No specific snare patrol took place in March, however the western portion of the reserve will get checked in April.
- iii. In addition to their monthly routine tasks, the conservation management team have focused on clearing annual seeding weeds in the grassland such as *Khakibos* and *Ageratum*.
- iv. The permitting submission for moving the Tilly shed has been checked by G. Nicholson and has been submitted to the local authority.
- v. The annual stewardship audit by KZN-Ezemvelo wildlife was conducted in early March. This was a good opportunity to ensure that conservation protocols are taking place in the reserve and to develop relationships with the regional conservation management authority.
- vi. The brush cutter has returned from Berrys and is in good working order.

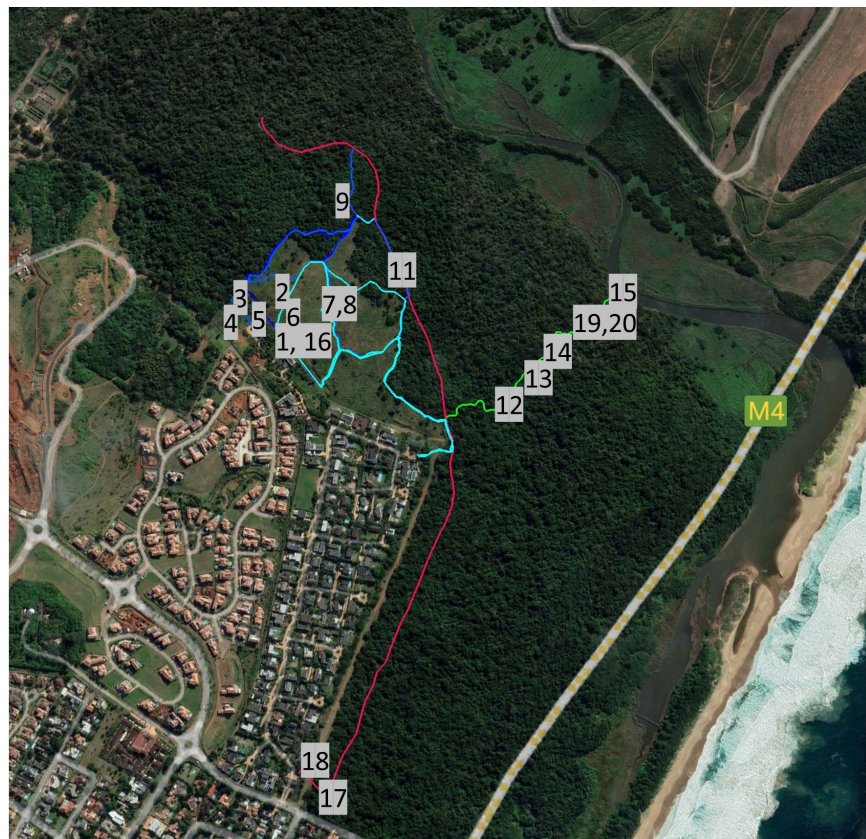
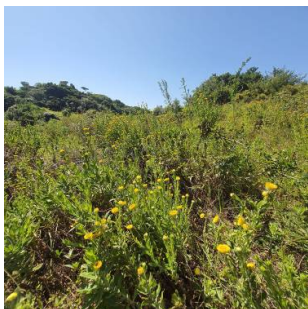


Figure 1. Numbers on the map refer to items below.



---

(1)



On the grassland pathways and verges *Helichrysum cooperi* are flowering nicely late in the summer.

(2)



The grassland and forest pathways have been neatly cut in March, and the brushcutter has been serviced by Berrys.

(3)



The Syringa (*Melia azadarach*) and Yellowbells (*Tecoma stans*) saplings will be dug out the western grassland section this month.

(4)



The sign at the end of Python place will be reset in a more visible spot near to the grassland entrance area.

(5)



In flower in March is the grassland shrub *Searsia nebulosa*. This species should be monitored for bush encroachment in some grassland areas but produces a lot of nectar and pollen.

(6)



Khakibos, and other invasives (*Ageratum conyzoides*) on the grassland ridge have been hand pulled in March. The staff will now work towards the western portion of the grassland at Python Place.

(7)



An unnamed but annual Asteraceae herb has been found growing in abundance in late summer. It appears to be the first year which it has been sighted. Specimens have been collected and have been logged at the SANBI KZN herbarium for formal identification.

(8)



Some northern sections of the grassland pathway have also been cleared of annual weeds such as Khakibos and *Ageratum* before late summer seeding.



Spanish Reed (*Arundo donax*) is an invasive species that occurs in some forest gaps it will be cut in April 22. [https://en.wikipedia.org/wiki/Arundo\\_donax](https://en.wikipedia.org/wiki/Arundo_donax)



Blood berry (*Rivina humilis*), a shade tolerant understory herb will be targeted for hand pulling along the forest pathways in April. [https://en.wikipedia.org/wiki/Rivina\\_humilis](https://en.wikipedia.org/wiki/Rivina_humilis)

Fencing at the browsing exclusion plot needs some light maintenance, which includes tightening up wire and replacing 3 x polls.



The forest pathway to the Bush Shrike trail has been opened up with some slight pruning.

Researchers have tagged some trees on the Bushrike trail. This is part of on going research into the Polyphagous Shot-hole borer, which is an invasive insect. See the inset on the last page for details on this species.



Blood berry (*Rivina humilis*) growing below the look out point will hand-pulled in April.

Fresh golf cart tracks were noted on the grassland trails. We will follow-up, as this may have been the Estate security.



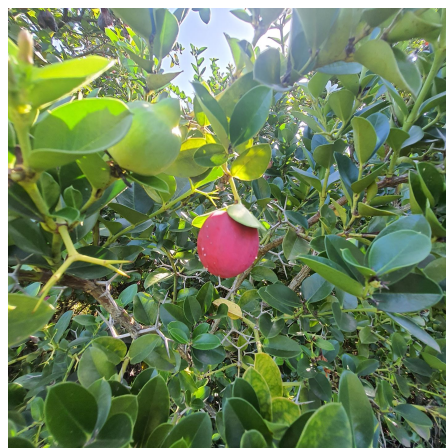
---

(17)



At the entrance gate. Creeping Inch Plant (*Tradescantia fluminensis*), a shade tolerant alien herbaceous ground cover needs to be resprayed with a selective herbicide.

(18)

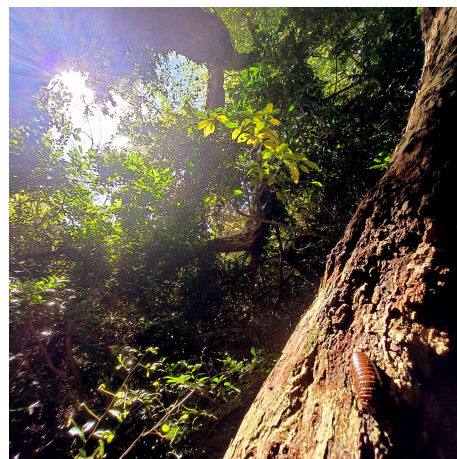


There are still Matengulu fruits on some of the *Carrissa macrocarpa* around the estate.

(19)



(20)



Pill-millipedes were noted out and about on the trunk of a large *Ziziphus*. They are usually found on the forest floor where, being deposit-feeders, they filter out organic matter from the sandy layers of soil among the leaf litter.



## Camera trap images March 2022

During March the HCT have again worked closely with the HRA and Marshall security. Highlights from March 2022 include: Many different forest fauna utilising the water point at the BushShrike junction, including: Blue Duiker; Black Sparrow Hawk; Purple Turaco; and a Wood Owl. The camera on the Bush-Shrike trail also picked up some beautiful images of foraging Banded Mongoose and Crested Guinea fowl.



Blue Duiker



Black Sparrow-Hawk



Purple Turaco



Wood Owl



Banded Mongoose



Crested Guinea fowl



Operations: Tasks 2022															
Category	Item	Task	Schedule	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Trails	1.1	Clearing away vegetation that is growing over, repairing washaways	Weekly	x	x	x									
	1.2	Repairing washaways	Weekly	-	-	-									
	1.3	Resetting concrete sleeper treads on steeper parts of the trails	Weekly	-	-										
	1.4	Cut the trails using a brush cutter once every two weeks in summer and check for overgrowth in winter	Weekly	x	x	x									
	1.5	Trails should be maintained because they function as fire breaks or tracer breaks for fire-fighting when annual burn is done each year in July/August.	Weekly	x	x	x									
	1.6	Check trails for over-hanging branches and other vegetation.	Weekly	x	x	x									
	1.7	Clearing litter on the trails and in the forest twice a week as not much pedestrian traffic if usage increases then checking daily will have to be done.	Weekly	x	x	x									
	1.8	Check fuel and oil for machines and report.	Monthly	x	x	x									
	1.9	Snare management – check hot spot sites for re-applied snares on a weekly basis	Monthly	x	--	-									
Water points	2.1	Check if waterpoints are soiled by animals	Weekly	x	x	x									
	2.2	Fill waterpoints along the trails	Weekly	x	x	x									
Infrastructure	3.1	Observe and report to Management where signage needs to be cleaned or replaced due to vandalism or fading	Monthly	x	x	x									
	3.2	Check signs and clean signs and benches weekly	Weekly	x	x	x									
	3.3	Check exclusion plot for fallen trees or branches damaging the wire.	Monthly	x	-	-									
	3.4	Keep tools and equipment clean and serviced daily for hand tools.	Weekly	x	x	x									
	3.5	Clean and service machine tools after each session of use. Chainsaw, Brushcutter.	Weekly	x	x	x									
	3.6	Service of machinery at Berries	Yearly	-	-	x									



	3.7	Keep Tilley Huts neat and tidy sweep daily, clean windows every 10 days check maintenance and rusting on a monthly basis and report to HCT members.	Weekly	x	x	x									
	3.8	Check that trail cameras daily to ensure they are not stolen.	Daily	-	x	x									
	3.9	Cleaning of toilet and shower on a daily basis after use.	na	-	-	-									
	3.10	Check and order cleaning consumables for shower and toilet	na	-	-	-									
Woody plant management	4.1	On-going daily work is clearing invasive introduced plants such as Pepper Trees, Triffid etc..in both the forest and grassland systems.	Weekly	x	x	x									
		Checking for regrowth of IAPs monthly and set out new work areas each month.	Monthly	x	x	x									
	4.2	Removal of selected indigenous woody encroachment species such Silver Oak in the grassland section	Monthly	x	x	x									
	4.3	Monitoring herbicide stores on a monthly	Monthly	x	x	x									
Fire management	5.1	Ensure tracers belts and pathways in the grassland open before prescribed burn	Yearly	-	-	-									
	5.2	Service fire-fighting equipment once before the annual burn is completed and then oil up so that next season the equipment has not seized up with rust. <i>Fire fighting = equipment one drip torch, 3 rubber beaters with handles, two Knapsack sprayers.</i>	Yearly	-	-	-									
Consumables	6.1	Order uniforms and personal protective gear for the 2 staff.	Yearly	-	x	x									



## Camera trap images February 2022

During Jan/Feb the HCT have worked closely with the HRA and Marshall security. The camera trap maintenance and daily checking is being conducted by Marshall security, though the HCT still have camera located in locations that will capture beautiful and interesting wildlife images. One highlight from February was a Bushbuck male captured at dawn on the interface between the estate and the grassland.



Bushbuck male at dawn.



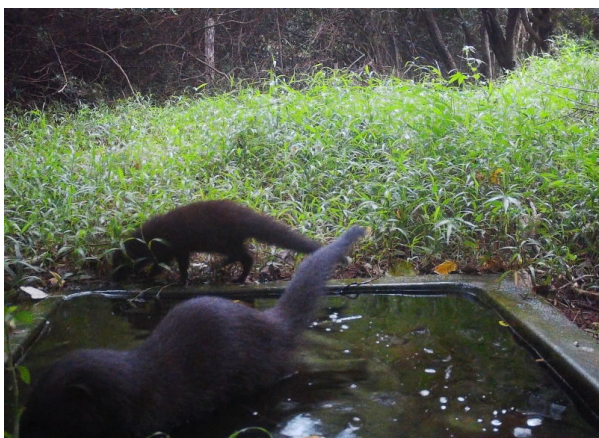
Crested-guinea fowl in the forest at night!



Blue duiker in the forest



Lemon dove in the forest leaf litter



The pair of resident water-mongoose



A pair of Olive-thrush's



# The Polyphagous Shot Hole Borer (*Euwallacea fornicatus*\*) and Fusarium dieback (*Fusarium euwallaceae*)

The Polyphagous Shot Hole Borer (PSHB) is an ambrosia beetle native to Southeast Asia. In 2017 this pest was detected on London Plane trees in the KwaZulu-Natal National Botanical Gardens, Pietermaritzburg. Its presence has since been confirmed in multiple locations in eight provinces in South Africa. The beetle has a symbiotic relationship with the fungus *Fusarium euwallaceae*, which serves as a food source for the adults and their larvae. In susceptible trees the fungus causes a disease called Fusarium dieback, which can lead to dying branches and tree death. The beetles attack a wide range of exotic and indigenous trees in urban, agricultural and natural landscapes.



Above: An adult female is 1.8-2.6mm long. Males are smaller and cannot fly.



PSHB is not able to complete its life cycle on all the tree species it attacks. Trees in which the beetle is able to breed and multiply are referred to as '**reproductive host trees**'. Important reproductive hosts include species of oaks, maples, willows and coral trees, avocado and castor bean. '**Non-reproductive host trees**' are attacked by the beetle, but the beetles do not establish galleries (tunnels) or breed. The fungus may, or may not cause disease.

Trees are generally not expected to die. An updated list of confirmed hosts in South Africa can be viewed at

[www.fabinet.up.ac.za/pshb/](http://www.fabinet.up.ac.za/pshb/)

The movement of infested wood is an important means of spread of the beetle. Therefore, appropriate disposal of infested trees (by chipping/composting, solarization or burning) will be key to reducing the spread of this damaging pest. Surveys to monitor the spread of the beetle in South Africa are continuing. The public can assist by looking out for symptoms. Suspected instances can be reported to [pshb@fabi.up.ac.za](mailto:pshb@fabi.up.ac.za)

Left: Chinese maple tree killed by PSHB and its fungus



Reproductive galleries in pecan



PSHB galleries in coral tree



Shot gun-like symptoms on London Plane

Compiled by Z.W. de Beer & T. Paap (Version 2021-03-04) [www.fabinet.up.ac.za/pshb](http://www.fabinet.up.ac.za/pshb)



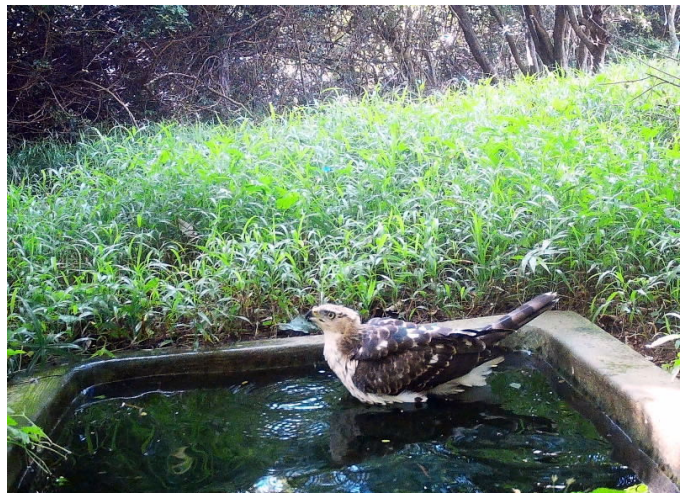
Camera trap observation Jan 2022. Due to the heat in January the most notable camera trap observations for Jan 2021 focused on the water trough at Bushshrike trail. An exciting observation was a juvenile crowned eagle having a drink and cooling off in the water.



Crested Guinea fowl



Purple crested turaco



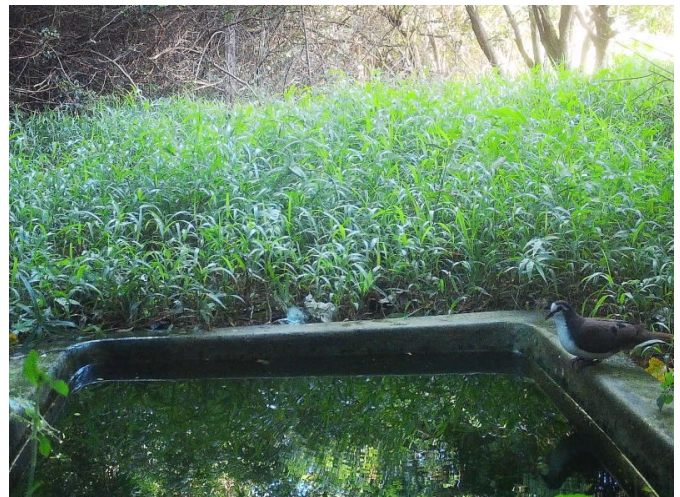
Crowned eagle (Juvenile)



Female bushbuck



Wood owl



Tambourine dove



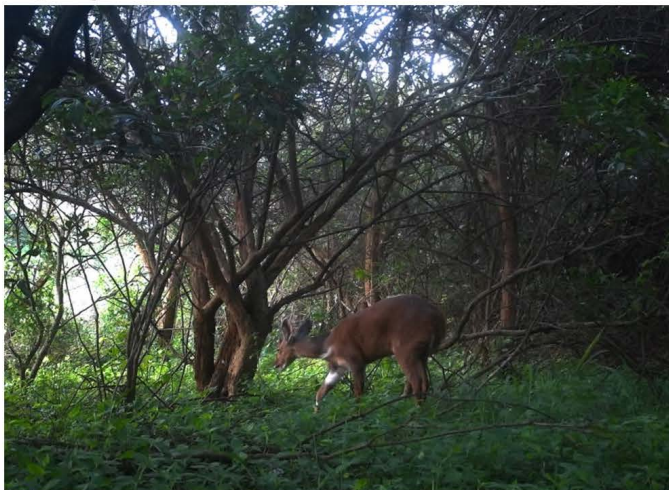
Six of the seven camera have been in operation during November-December. The Seventh camera is due to be installed within the next week. Camera batteries appear to last between 3-4 four weeks, while each camera used between 500 mb and 1gig of data. The data budget for each camera should be in the order of R 50-75 per month. Importantly no non-resident 'humans' have been noted on the cameras. AS will continue to monitor the camera in December but the way forward in January will be garner support from the HOA security to help with monitoring. Some interesting new species were observed over the Nov/Dec period, for example: on Camera V, a Steppe Eagle. Other observations in the images are : i) = Large spotted Genet ; ii) & vii) Female bushbuck; i) Water mongoose i) Male bushbuck.



v)



i)



iii)



vii)



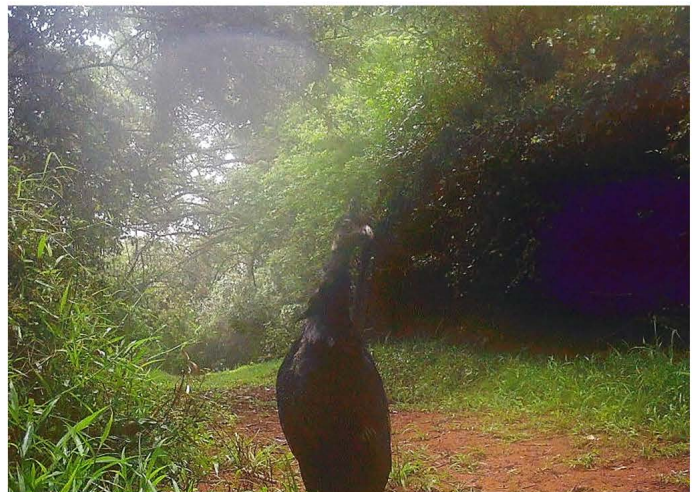
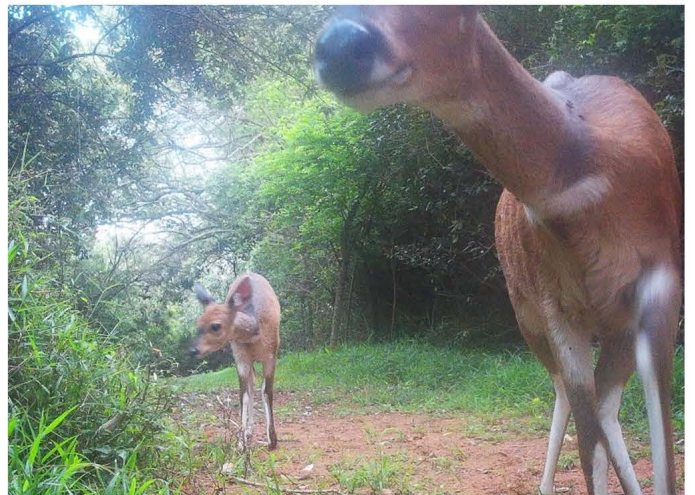
i)



i)



Camera trap images October-November 2021. New species observations in November were Water Mongoose. Other sightings include: Bushbuck family activity, Blue Duiker pairs and Crested Guine fowl.





## Camera trap images September /October 2021

Given that we are still working out how best to deploy the camera traps in the nature reserve, some of the images received so far have been beautiful. Species noted below are as follows: Crested guinea fowl, spotted Genet, and female, male and juvenile bushbuck. Other forest antelope noted have been both red and blue duiker. Four cameras have now been deployed. Their locations have been sited in Fig. 1.

