



# KORSMAN CONSERVANCY NEWSLETTER

## AUTUMN 2021

### Pan Night Adventure, 27 March

A small group of intrepid members explored the Sanctuary at night to see what type of creatures were active. We donned chest waders and sloshed about in the watery grassland.

We didn't see anything big close up (as they probably saw us first) but a fascinating array of nocturnal insects showed up in our torchlight.



Cassandra Barbosa made art in the dark



Many spiders only build webs at night, then take them down at daybreak. They eat the silk to conserve the protein.

### Rubbishing old bins

When we asked City of Ekurhuleni to replace the dented, rusted and broken swing bins in Aubrey Ritz Park, the answer was a variation of "Nice try!"

Since they were such an eyesore we decided to spend Conservancy funds to replace them and bring some pride back to the park. Our grateful thanks to member Rod Burnett who installed them for us.



## "Goli's Landing" Bird Hide

The platform at the end of the jetty at Divot St was a base for a Wildlife Society hide which was built in 1996 and burnt down in 2007.

The platform was covered in soil and weeds but while cleaning it for the night adventure we realised it was feasible to restore it enough to build a smaller hide, more like a 'bird screen'. The project should be completed by mid-June. Access to the bird hide will be available to paid-up members.



Levelling the caved-in platform, where the water mongoose made its mark that night. We have preserved the prints in the floor.



We are building the bird hide ourselves. The only professional help we engaged was to put on the roof.

We are very excited at having a structure in the Sanctuary again, for members to enjoy in this beautiful spot.

Details will be emailed when the hide is ready for opening.

## Water Affairs

### Quality Control

In March, our water was lab tested for us. The results show that nutrient levels are high, especially phosphate ( $\text{PO}_4$ ) from household detergents in wastewater inflows. The increase in phosphate and nitrogen provides nutrients for cyanobacteria to develop. An overgrowth would form a toxic bloom which turns the water blue-green (as happens at Hartebeespoort and Rietvlei dams from fertiliser runoff). Fortunately our nutrient level is not yet high enough to threaten fish and bird life.

To keep a close eye in future we have acquired water testing equipment to monitor clarity, salinity, changes in pH (which has been rising steadily for years) and test regularly for phosphate and ammonia.



Our home-made Secchi disk measures depth of clarity, the most fundamental test of water quality. Clarity increases in winter when there is lower cyanobacteria and algal activity.

### Outtasight! (Literally)

The silver lining of higher nutrient levels is that organisms flourish. These are some of the fascinating microscopic creatures found in Korsman water.



Rotifers suck in water by creating a vortex with the crown of cilia (hairs) around their mouth. They filter the water for food.

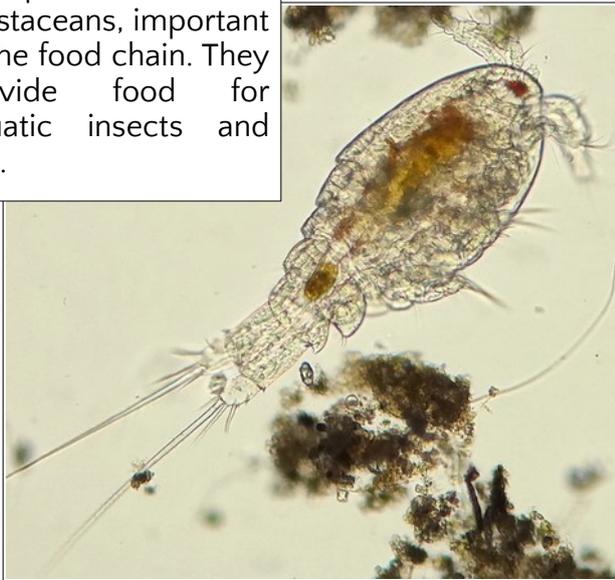


Hydra, related to jellyfish, attaches itself to solid objects in the water. It waves its tentacles about and shoots out stinging cells to immobilise prey.

This 'Hairyback' (Gastrotricha) looks just like a microscopic aquatic mouse, snuffling in the detritus for food. It is actually closely related to worm families.



Copepods are small crustaceans, important in the food chain. They provide food for aquatic insects and fish.

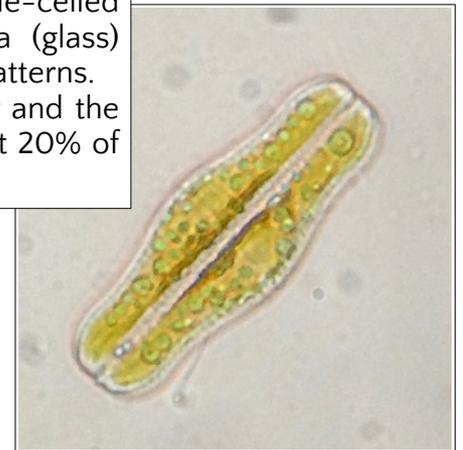


This delicate bunch of 'snowdrops' are ciliates, who activate the water similar to rotifers. The stalks contract when they are disturbed.



Microscopic algae *Pediastrum*. Many of the tiny algae species are delicate geometric shapes.

Diatoms are single-celled algae that build silica (glass) houses in geometric patterns. Diatoms in freshwater and the oceans generate about 20% of the planet's oxygen.



## Millions flowing to waste

The reason why the Pan water level remains so high is the ongoing water leak from the railway line, that we calculate to raise the Pan level by 25cm a year. Previously there was a water pump in the sewerage pump station that could reduce the Pan level, however this was removed a couple of years ago and not yet replaced.

With Councillor Mary Goby thankfully back in the seat we now have support in the fight to get the leak repaired by Ekurhuleni. Mary alerted the Benoni City Times who have done two articles so far.

<https://benonicitytimes.co.za/411865/one-million-rand-a-year-for-13-years-and-still-nothing-but-leaks/>

<https://benonicitytimes.co.za/414139/metro-responds-about-water-leak-in-western-extension/>

A PDF of the first article is emailed with this newsletter.



## Keeping it Clean

### Mudlarks 24 March

A successful "D&D" (Dirty and Dangerous) litter pickup. Inexplicably this is our volunteer's favourite kind.



Shrek and Fiona Jose and Jane wading in the swamp



The more sensible rest of the group stayed cleaner

### Higher and Drier 21 March

A more sedate pickup around the northern side.



### Willowmoore High Interact Club 15 May

The younger generation came to clean up the Victoria area, weeding the rockery of *Kalanchoe delagoensis* (invasive alien succulent) and cleaning litter from the inlets.



## RIP Goliath herons

Two weeks apart in May, we sadly discovered the carcasses of two adult Goliath herons, both floating in shallow water. They had been fatally injured by a predator.

I wrote to GDARD Avian unit, who advised that it was unlikely that water mongooses could take down a Goli and that other predators in urban areas are more common than people think. We have a suspicion but not concrete proof of what animal killed the birds and will continue to monitor.

Because these were the resident adult males there will be no breeding this year at Korsman. Juveniles from last year's broods are still present.



Last portrait of Goli and the inspiration for the new hide name "Goli's Landing"

I made an appeal at the time on our WhatsApp group to borrow a trail camera to set up in the Sanctuary. A few days later at the AGM, Francois Hoffman offered a donation to buy one for the Conservancy. Almost immediately, the camera provided photographic proof that Goliath herons are cathemeral (active day and night).

This discovery was unknown to scientists, who thought that they were active by day only but did not have data to prove otherwise (Feeding Behavior and Ecology of the Goliath Heron, Douglas W. Mock, Karilyn C. Mock). We have shared this information with Doug Harebottle at Sol Plaatje University, SA's leading heron expert.

Goliath herons were recorded on camera throughout the night. This one landed at 11:30pm, proving they fly in the dark too.



Some other active nocturnal residents are water mongooses and vlei rats.

