



KORSMAN CONSERVANCY NEWSLETTER

SPRING 2021

After the first spring rain, volunteers started the season's litter and weed cleanups.



Strawberry Fields

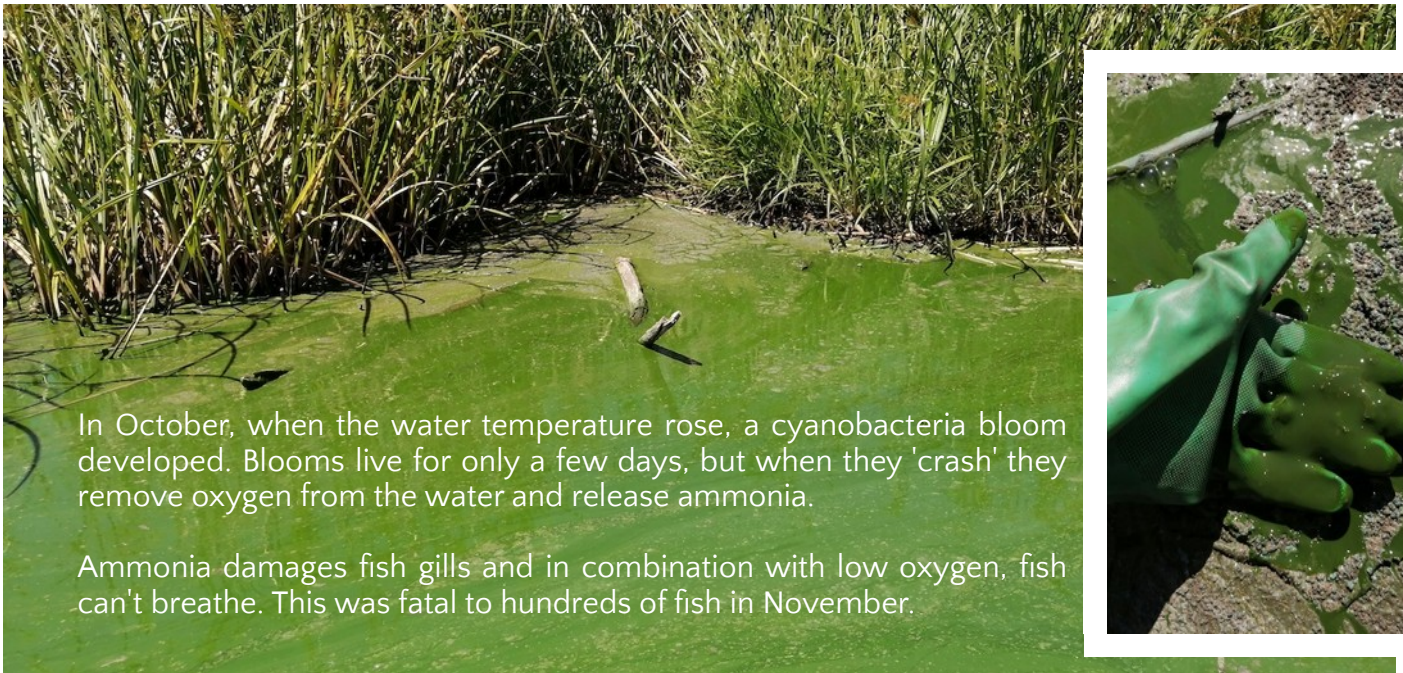
Beatles song = Good

Invasive wild strawberry plants = Not good



Water Quality: The Soap (Household Cleaner) Drama Continues

Domestic cleaning products contain phosphate which soften the water, but are disastrous when released into the environment, such as in the sewerage spill of August/September (Winter newsletter). Phosphates, which fertilise plant growth, algae and cyanobacteria (toxic blue-green algae), are very difficult to remove from the system.



In October, when the water temperature rose, a cyanobacteria bloom developed. Blooms live for only a few days, but when they 'crash' they remove oxygen from the water and release ammonia.

Ammonia damages fish gills and in combination with low oxygen, fish can't breathe. This was fatal to hundreds of fish in November.

Volunteers carried out the sad job of collecting over 600 dead fish out of the water.

Let's hope the environmental crisis prompts Ekurhuleni into carrying out the sewer line and manhole repairs they promised in September.

We are working with Ward Councillor Mary Goby to ensure it is done.



Luke and Barry Jones towing a floating fish-collecting net



Debbie van de Laar and I with a washtub repurposed into a fish dinghy

Picture by David Dooley

National Wetlands Indaba

Wetland professionals and scientists present papers at this annual event. We 'gatecrashed' the scientific community by submitting a practical presentation of our reed removal work, which was very well received.

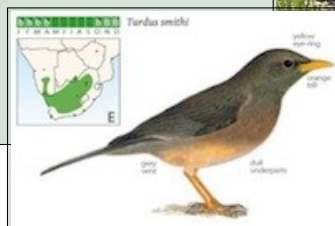
Although the Indaba was held online, we gained a lot out of the other presentations and made valuable contacts.



The Travelling Thrush

In Heather Griffin's veggie patch in Edward St, a Karoo thrush couldn't find its way out of the shadecloth cover. Heather's gardener Blessing (right) noticed a ring on the bird's leg. A search on the SAFRING website revealed the bird was ringed in Fontainebleu, Randburg (34km as the crow flies) in April 2020.

They released the bird before we could enquire if it had a passport to come to the East Rand ;-)



Goliath Grand Central

Our Goliath Heron population continues growing with two fledglings leaving the Kilfenora nest in October, and a new pair arriving in November to breed.



The two fledglings from the Kilfenora nest. One bird clearly hatched several days before the other.



A bird from the new pair gathers nesting material from near the hide. They are nesting in a patch of reeds in the centre of the Pan.

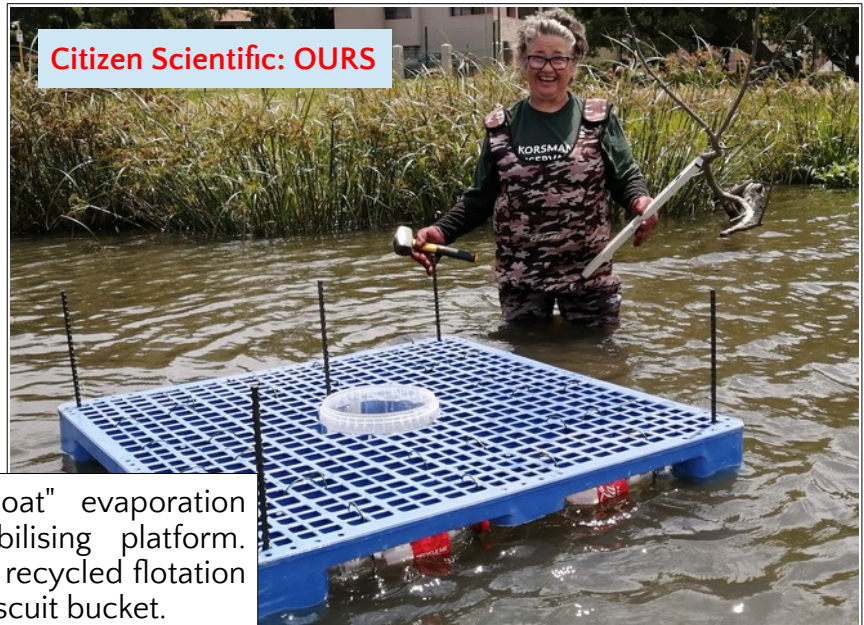
Science by Citizens

Our long-term project calculating stormwater runoff and groundwater inflow on the Pan level continues. This requires knowing the evaporation rate, which might sound simple as there are monthly average charts for each region of South Africa. For precision, we looked for formulas based on the daily weather conditions. We found there are many, but also that man has been trying to calculate evaporation since the 8th century and still hasn't quite figured it out.

We devised equipment to measure evaporation the Korsman way (repurposed household items) with a bucket immersed in the Pan to keep the same water temperature. Many development versions later, we are now on Bucket MkV111.



Example of floating evaporation pan (\$\$\$\$\$\$\$\$\$\$)

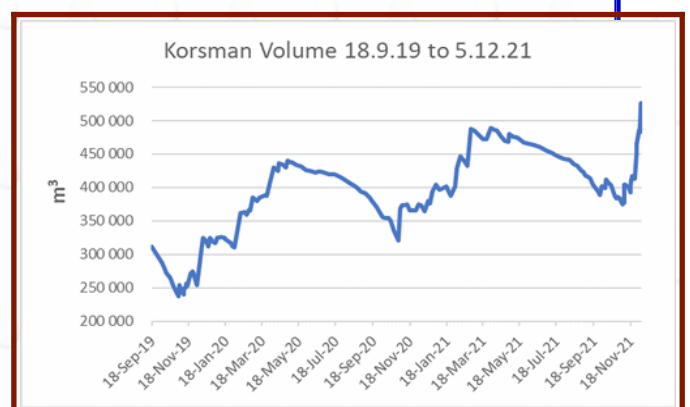
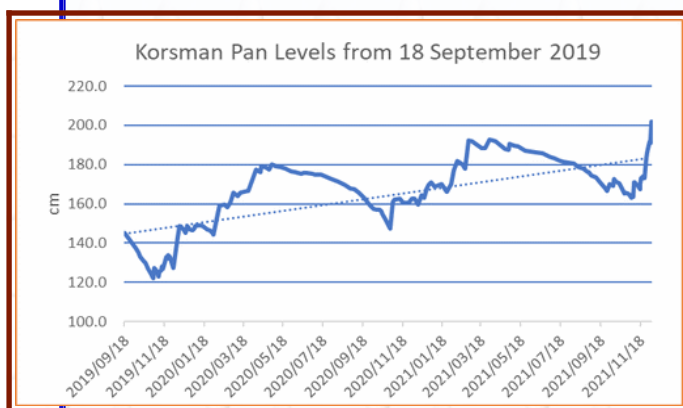


"The Coke Float" evaporation pan and stabilising platform. Named for the recycled flotation devices and biscuit bucket.

It's raining, it's pouring

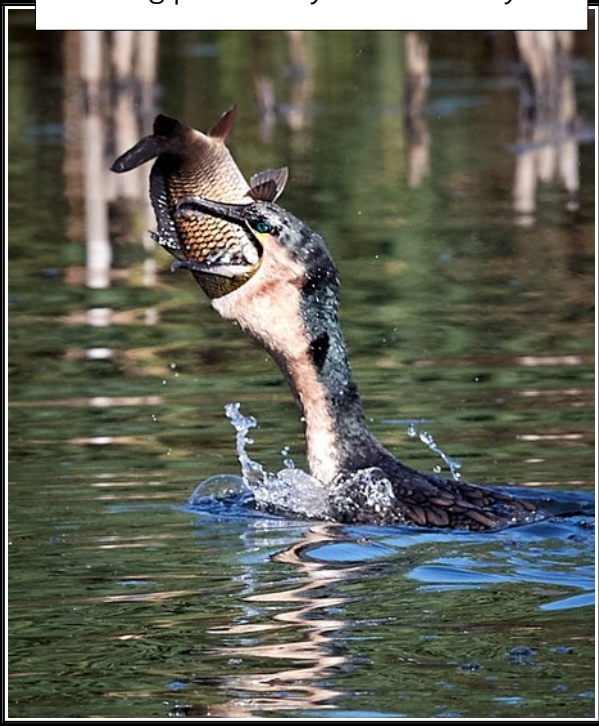
Between 4 November and 9 December, 342mm of rain fell, almost half of the average annual rainfall. Runoff has raised the Pan water level by 400mm, even after evaporation.

Number cruncher on the project, John Livesey, drew up these graphs of level and volume which show the change since September 2019. Because of the flattish gradient of the Pan floor, the level has risen by 24% but the volume by 40%.



The Good News

Despite the number of fish that died, there are still live fish in the Pan to feed our fish-eating birds, including the scavenging Grey-headed Gull. Amazing pictures by David Dooley.



For more of David's incredible photography, visit his website <http://www.davedooley.com/>