



KORSMAN CONSERVANCY NEWSLETTER

SPRING 2022

Carp Netting: Continuation of Aquatic Biodiversity Project

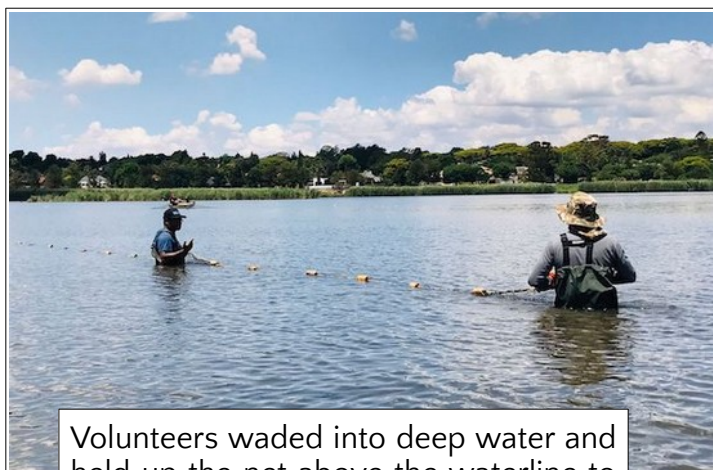
Following the limited carp netting in January when we carried out the indigenous fish release, we continued in spring once the water level was lower and carp moved to the shallows.

Carp, an alien invasive species, negatively affect water quality. They are bottom feeders and stir up silt, reducing water clarity. Over 1.2kg, they are too large for Goliath herons to swallow so they can grow and breed unhindered. Fish under 1kg were thrown back for our fish-eating birds – cormorants, darters and of course the Golis.



Hartebeespoort Fisheries and our volunteers teamed up for the netting.

The fish were removed live in tanks to their aquaponics programme. All netting and removal was done under permit.



Volunteers waded into deep water and held up the net above the waterline to prevent fish escaping over the side.

When fully deployed, the net encompassed about 1 hectare.



Statistics

Net deployed: 16 times over 7 sessions
Carp removed: 2180
Estimated weight: 2 tons
Small fish thrown back: 1030
Escapes: 1200 over top of net or through holes from snagging rocks
Biggest fish caught: 6.5kg



Fish are sorted by approximate weight above and below 1kg for removal or thrown back.



Matteo 'The Fish Whisperer' holds a monster.

This single 'pull' netted 281 large carp. The calculated density over the two pulls that day was 500kg/ha.

Scientists state that environmental damage results once the fish biomass exceeds 100kg/hectare.

At the final session the density had decreased to 300kg/ha, however fish may have already retreated to deeper water after recent rain cooled the shallows.

This work will have to be carried out every spring to control the population and keep the aquatic ecosystem in balance.



Carp netting instantly became the most popular volunteer event ever held at Korsman and chest waders the most sought-after accessory.





Using the book I reviewed in the Autumn newsletter and for African Wildlife and Environment magazine, "Freshwater Macroinvertebrates of Southern Africa" by Christian Fry (being read by Heather and Yolandi, left) we looked for interesting aquatic creatures and identified them using the book. Eileen is reading Freshwater Life, another valuable guide.



This *Appasus* species water bug is a male with eggs glued to his back by the female. He cares for the eggs by using his hind legs to ensure a fresh flow of water.

The bug rested with his rear end tilted up at the water surface, which is where his breathing siphons are.



Nychia species backswimmer



Ready, steady, NET!

INVASION OF THE FLATWORMS

A less happy discovery at Korsman is the first sub-Saharan record of an alien planarian flatworm that is invasive in many parts of the world.

I found two of these worms in a water sample in May and couldn't identify them to any South African species. They looked disturbingly like alien *Girardia* flatworms from pictures on the internet.

I wrote to a world flatworm expert in the Netherlands, Dr Ronald Sluys, who advised that they were definitely the genus *Girardia* but could only be identified to species level by DNA.

The Albany Museum in Grahamstown, which has the leading Freshwater Invertebrates department in South Africa, offered to do the DNA analysis.

The only snag was that I didn't have the worms any more and drew a blank searching for more... until I discovered one could make planarian traps. On my second try, with improved bait (freshly squished garden snails - they are invasive aliens too!) I collected an astonishing 16 flatworms which I couriered to the Albany Museum. They identified the species as *Girardia sinensis*.

How did they get here? Planarian flatworms are notorious aquarium pests which hitchhike on imported plants. They are also highly tolerant of environmental pollution and I found them near the regularly overflowing sewer manhole near Pan St. A flatworm could have been poured down the sink after an aquarium cleanout. They reproduce by division so just one is enough to start an invasion.

They may have been in South Africa for a long time but not recognised. *Girardia* are actually pictured in both of the freshwater reference books above, but not identified. Perhaps South African scientists prefer to study more charismatic organisms than flatworms.

As this is the first record in sub-Saharan Africa (they were discovered in a river in Morocco a couple of years ago) this will be published as a short scientific paper.



And the Winner is.....

David Dooley

of the South Africa section of the
2022 Izele Photo competition
with this exquisite photo of
one of our Goliath Herons.
Congratulations, David!



News Snippets



The first Insect hotel of 2022, created by Ekokids Primary, is installed and ready to receive guests. More hotels will be erected soon.



Two of our latest mosaics were inspired by the current topic of fish.



After years of my persistent requests to Ekurhuleni, they raised two manholes that spill closest to the Pan.

This won't stop sewerage spills when the pump stations break down, but sewerage will discharge from further manholes enabling more filtering before it reaches the water.



Our first Sunday litter pickup for over a year on 20 November was attended by just a few dedicated volunteers. We hope people haven't got out of the habit of helping out.



Eugene's Gallery

Some of of Eugene Liebenberg's recent beautiful bird photographs
Chosen for birds with red and brown on their faces.

