

CAN AN ALIEN INVASION doom our inland fisheries?

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Alien crayfish pose a real threat not only to local species but also to the livelihoods of rural people

A team of researchers from the South African Institute of Aquatic Biodiversity (NRF-SAIAB), a Research Facility of the NRF, recently studied how invasive freshwater crayfish can affect the inland fisheries and native species.

Southern Africa has been invaded by two crayfish species - the red swamp crayfish, which is native to the southern states of the USA and Mexico, and the red-clawed crayfish, which is native to Australia.

Once crayfish are introduced to a water body, they are practically impossible to remove. The team assessed what the alien species were doing to the ecosystem and how the native species responded to them. The feeding rates of the two invaders were compared to a native freshwater crab and it was found that the crab species has a higher predation rate, but when temperatures increase, the crayfish have an advantage. All three species were able to feed on a variety of organisms (fish fry, snails, mosquito larvae, aquatic plants). The crayfish have been implicated in destroying the catches of subsistence fishers as they consume fish caught in nets and damage the nets themselves. The researchers quantified the amount of dead fish the crayfish species and crabs were able to consume in a given period of time and found that the red-clawed crayfish was able to consume and destroy the highest amount of catch.

This could have a severe negative affect on rural livelihoods as the fish is destroyed and cannot then be sold. It is causing people to change their fishing



Dr Takudzwa Madzivanzira holding large red-clawed crayfish in Mpumalanga.

techniques from passive gear to more destructive active gear as nets can no longer be left in the water overnight. Invasive species are able to consume native species that are used as fishery species and are also found to be consuming invertebrates that are food for commercially important species. ■

* *In Memoriam of Prof Olaf Weyl, who, passed away in November 2020.*

SA IMAGE JOSIE SOUTH



“A true conservationist is a man who knows that the world is not given by his fathers, but borrowed from his children.”
John James Audubon