

Creepy-crawlies reared in CT to root out alien plants

Based in Westlake, the Cape Town Invasive Species Unit's Insect Mass Rearing Facility has reared more than 243,000 insects for release across the city to help root out alien invasive plants (AIP).



The facility currently rears agents for four aquatic AIPs, namely water hyacinth, parrot's feather, kariba weed and water lettuce, which are considered the worst invasive weeds in South Africa. The facility also rears biocontrol agents for one terrestrial AIP, the prickly pear (*Opuntia monocantha*).

The Cape Town Biological Control Programme is a partnership between the Department of Environmental Affairs and Rhodes University's Department of Entomology.

Collected, packaged, readied for their mission

During his visit to the facility, Councillor Brett Herron, mayoral committee member for transport and urban development, saw first-hand how the insects are collected and packaged, ready for their next mission.

"Today's visit to the insect-rearing facility has been most fascinating. In order to rear the agents, our team actually grows the plant which the agents are intended for. The aquatic invasive plants are grown in the artificial ponds at our facility and this is also where the agents grow and complete their life-cycle. The agents are then collected from these ponds when they are ready to be released on their mission," said Herron.



Each of the insects are physically counted and then placed in plastic containers. Within hours they are transported and released on the specific invasive plant.

Generally, the insects are released every two weeks. The number of insects that are released depends on the size of the mission field. Successes in the field depends on the season and other activities that may be taking place in the area.

"When the conditions are right and the optimal number of agents are released onto the invasive plant, it can take only a few days for the agents to start establishing on site. Once they have 'set up camp', it could take weeks for the agents to destroy the plant, depending on the size of the area that needs to be covered. It is important to note that, after the agents have been released, they also continue to propagate and complete their life-cycle. Their offspring also continue to destroy the targeted invasive plant until the whole invasive plant has been destroyed and then their life-cycle comes to an end," said Herron.

War against infestations

The Westlake river, which was previously choked with kariba weed, is an example of a mission accomplished. Biological control is increasingly becoming a cost-effective method of control in the war against infestations of invasive aquatic weeds and prickly pear.



Westlake River before (left) and after (right).

Other methods include the removal of aquatic weeds with machines, labour-intensive manual control or chemical control.

The best successes are realised when biocontrol is employed as part of an integrated control approach, using a combination of one or more of the available methods.

In addition to the environmental benefits, the biocontrol project provides a platform for green job creation, skills development and education.

Job creation

Some of the staff have been trained at Rhodes University, the leaders in biocontrol research in South Africa. Five staff are currently employed under the Expanded Public Works Programme (EPWP) to assist with the day-to-day activities in the biocontrol facility.

"Since the inception of the biocontrol project, a number of people have been trained on how to rear and collect the biocontrol agents as well as to release them in the field. We are very impressed by the commitment and the passion that the staff have for this project.

"We are also very proud to know that the public, especially our learners from various schools, are receiving first-hand experience on the application of biological control as an exciting part of invasive plant management. We really hope that through the interactive education around controlling invasive plants, we would inspire and encourage the next generation of environmentalists or nature enthusiasts," said Herron.

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