FABI AND CABI JOINTLY HOST THE FIRST POLYPHAGOUS SHOT HOLE BORER WORKSHOP IN AFRICA

A team of scientists from FABI under the leadership of Professor Wilhelm de Beer hosted the first workshop in Africa on the invasion of the Polyphagous Shot Hole Borer (PSHB) from 27 to 30 November. The Centre for Agriculture and Bioscience International (CABI) requested FABI earlier this year to train scientists from across Africa to enable them to detect the presence of the PSHB elsewhere in Africa.

The PSHB was first reported from South Africa in 2018 after it was discovered infesting trees in KwaZulu-Natal. However, it has not been reported elsewhere on the continent, although the possibility exists that this Southeast Asian pest is already present in other African countries.

The beetle carries and inserts a fungus that might eventually kill the tree, depending on the tree species. The beetle and fungus are responsible for the deaths of thousands of street trees in Johannesburg, Pietermaritzburg, George and Knysna. The beetle also has the potential to cause severe damage to commercial tree crops such as avocado and pecans.

As the invasive PSHB can be confused easily with other common ambrosia beetles, it might go undetected for some time after its introduction into a new area or country. For this reason, CABI approached FABI to train scientists of other countries in Africa to recognise the beetle and its fungus, before an invasion reaches epidemic proportions. This would enable the implementation of management strategies to mitigate its impact.

CABI funded the workshop attended by 25 people from 14 countries – Botswana, Cameroon, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. Members of the FABI team, the Agricultural Research Council and the Early Warning Systems division of the Department of Agriculture, Forestry and Fisheries presented on the biology, life cycle, symbiosis, impact, spread, control and management of the PSHB.

The group also visited streets with infested trees in Johannesburg where City Parks staff assisted in cutting down heavily infested trees to show how reproductive host trees can be recognised. The attendees also spent a day in the UP Plant and Soil Sciences laboratories where they were trained in the pinning of beetles, isolation of fungi from infested material, as well as the preservation, microscopy, and recognition of the PSHB and its fungal symbionts.

The attendees formed a PSHB African network under the guidance of Dr Arne Witt of CABI that will monitor and report possible PSHB infestations in Africa. The PSHB team at FABI will assist in diagnoses of the beetle and fungi where necessary. The success of this partnership between FABI and CABI will hopefully lead to more such workshops in future that will strengthen and build more capacity in Africa to recognise and deal with forest and agricultural pests and diseases.