

FABI COLLABORATES WITH RESEARCHERS OF NATURAL RESOURCES CANADA

Dr Marc Bouwer, a recent FABI graduate, had the opportunity visit the Great Lakes Forestry Research Centre situated in Sault Ste. Marie, Canada. The purpose of the trip was to establish an international collaborative research project in the field of chemical ecology with Dr Jeremy Allison. Dr Allison is an expert on Cerambycidae (long horn beetles) beetle pheromones and chemical ecology of forest insects in general.



Photo: Top right: Marc Bouwer holding an Asian longhorn beetle in the quarantine facility at the Great Lakes Forestry Research Centre. Background: State of the art dynamic headspace sampling system used to sample Spotted Pine Sawyer beetle.

During the visit Dr Bouwer had the opportunity to work with state of the art sampling facilities and an electro-antennography system coupled to a gas chromatograph. These instruments allow one to measure electrophysiological responses of insects to volatile chemicals that can be sampled from the insects themselves or their host plant material (Photo, left). Pest insects that were investigated included the Cabbage Looper moth (*Trichoplusia ni*), Emerald Ash Borer (*Agilus planipennis*) beetle and Spotted Pine Sawyer (*Monochamus mutator*) beetle. Dr Bouwer also had the opportunity to visit their quarantine facilities where the Asian Long Horn Beetle (*Anoplophora glabripennis*) is kept.

Dr Bouwer gained experience in trapping Cerambycid beetles with aggregation pheromones. This work has led to the development of a collaborative field trial that will be conducted at the

ARC Roodeplaat near Pretoria in South Africa. This trial aims to test North American Cerambycid pheromones such as Monochamol (the pheromone of the White Spotted Pine Sawyer beetle, *Monochamus scutellatus*) for activity on South African Cerambycid beetles. These experiments will shed some light on the unknown South African Cerambycid pheromones and their structural similarity to pheromones of beetles from other continents