

RECENT SIREX COLLABORATIONS



USA scientists visit FABI as part of Sirex collaborations

Sirex noctilio, also known as the European woodwasp, is one of the major pests on pine trees. The woodwasp has spread into many countries of the southern hemisphere and was first detected in South Africa in 1994. This introduction has resulted in the establishment of the Sirex research program of the Tree Protection Cooperative Programme, which has grown to be one of the largest research projects in FABI. The global impact of this pest has stimulated a broad network of collaborations, especially around biological control programmes. An important focus of this research internationally is on the primary biological control agent, the nematode *Deladenus siricidicola*. The nematode is native to Eurasia but has been used extensively in the Southern Hemisphere for biological control. To compare the genetic diversity of *D. siricidicola* between native and non-native areas, PhD student

Katrin Fitza visited in September the laboratory of Dr Maria J. Lombardero at the University of Santiago de Compostela in Spain, to collect nematode samples. Dr Lombardero works on forest health and population dynamics of forest insects. The samples collected were brought back to South Africa and form part of a larger collection that is studied to understand the global diversity of the nematode.



Andrea Cole doing nematode isolations from *Sirex* wasps

Prof Lori Eckhardt from the Faculty of the School of Forestry and Wildlife Science of the Auburn University, Alabama, and her MSc student Andrea Cole visited FABI to learn more about *Sirex noctilio*. Andrea started a project on native and potential Siricids in Alabama and wanted to expand her practical and molecular knowledge in the field of *Sirex*. During their visit Andrea practiced how to dissect *Sirex* wasps, isolated the *Amylostereum areolatum* fungal symbiont and the *Deladenus siricidicola* parasitic nematode. She also isolated wasp, fungal and nematode material from older preserved specimens to extract DNA. From these extracts she could successfully amplify barcoding regions that would help identify the species. She would be using similar tools during her study. Prof Eckhardt already has strong ties to FABI to work on Ophiostomatoid fungi associated with bark beetles.



Sirex International Collaborative Project continues at Hogsback

FABI researchers Drs Jeff Garnas and Brett Hurley joined collaborators Flora Krivak-Tetley and Dr Sandy Liebhold in Hogsback, Eastern Cape, to investigate infestations of the Sirex woodwasp, *Sirex noctilio*. This formed part of an international collaboration funded by the USDA and led by Krivak-Tetley, PhD candidate at Dartmouth College, USA, under the supervision of Prof Matt Ayres, involving researchers from the USA, Spain, Argentina and South Africa. The aim of the project was to obtain a better understanding of the factors driving the population dynamics of the Sirex woodwasp, an insect that has become one of the most serious global insect pests of pine. Special thanks to Amathole Forestry Company for providing accommodation and for their assistance in the field.