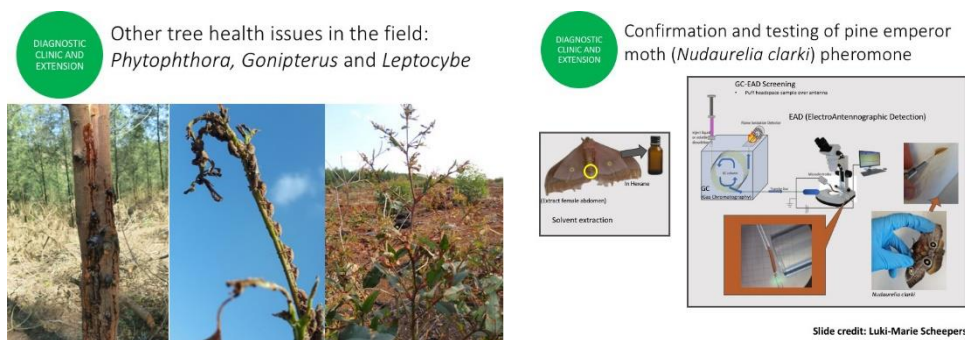


## REFLECTIONS ON THE APPLICATION OF FUNDAMENTAL RESEARCH TO KEEP PLANTATION TREES HEALTHY

Speaking at the historic online meeting of the Tree Protection Co-operative Programme (TPCP) and the DSI-NRF Centre of Excellence in Plant Health Biotechnology (CPHB), Professor Brett Hurley illustrated how fundamental research had laid the foundation for the application of management practices for new and established pests and pathogens of plantation-grown forest trees South Africa. In his presentation on the services that the TPCP provides to its industry partners, Prof. Hurley highlighted just a few projects that have cemented the strength of this relationship over a period of more than 30 years. He showed how the services of the FABI Diagnostic Clinic, its extension and monitoring services as well as the screening and biocontrol programmes form the basis of research in the TPCP.



Professor Hurley said that the TPCP had received 1,300 samples of diseased or damaged *Eucalyptus*, *Pinus* and *Acacia* species between May 2019 and April 2020. The development of a LAMP (Loop-mediated isothermal amplification of DNA) PCR protocol to detect *Fusarium circinatum* (the pitch canker pathogen) had contributed to rapid diagnosis, said Prof. Hurley. On 73 field trips to plantations around the country between March 2019 and March 2020, TPCP researchers had encountered “new and forgotten” pests and pathogens, such as *Orthotomicus erosus* (the Mediterranean pine beetle). He said the prevalence of pests such as *Achaea lineardi* (the wattle semi-looper) illustrated the importance of native insects to the health of plantation trees.

Prof. Hurley stressed the benefits of ongoing monitoring to halt outbreaks of *Phytophthora* species, as well as the Eucalyptus Snout Beetle (*Gonipterus* sp. n. 2) and Eucalyptus Gall Wasp (*Leptocybe invasa*). He said a monitoring programme for *Nudaurelia clarki* (the pine emperor moth) was in the pipeline. Ongoing monitoring had resulted in the discovery of a new lineage of *Deladenus siridicola*, the biological control agent of *Sirex noctilio* and revealed changes in the distribution of *L. invasa*. Research on *Euwallacea fornicatus* (the polyphagous shot hole borer or PSHB) has however yielded no evidence that is a threat to commercial forestry species, he concluded.