

DEFENDING OUR BORDERS

Biosecurity experts use KAREN to keep New Zealand free from foreign pests and diseases.

New Zealand under threat

New Zealand is under constant threat from invasive pests and diseases. When a suspicious bug is intercepted with imports or in a surveillance trap, accurate identification is critical to determine if it is new to New Zealand and, if so, whether it is a risk to our flora and fauna.

KAREN delivers real-time, expert diagnostics

A rapid decision must be made for treatment of infested imported items, or eradication – delays can be expensive. New Zealand has limited taxonomic expertise, and the few specialists we have are scattered throughout the country, or even overseas. To overcome this problem, virtual identification tools and collaborative software (EVO) are used through KAREN where the taxonomist can remotely identify the pest or disease using an on-line microscopy system.

"Using online microscopy on KAREN, I've been able to share real-time images with overseas colleagues. This saves time in sending specimens and enabled me to identify an Australian species that was intercepted at the border," says Dr Cor Vink, spider specialist, AgResearch.

Preserving valuable specimens

John Marris, a beetle expert at Lincoln University, is set to use online microscopy through KAREN to study important insect

"KAREN is playing an important role in identifying biosecurity threats," Cor Vink, AgResearch.



specimens, called holotypes, in other parts of the world.

Holotypes are the unique descriptive example of a species, and are essential for the identification of insects as they are often tiny and can look very much like one another.

"The trouble is you might be in New Zealand wanting to identify something but the holotype for the species might be at the Natural History Museum in London, which for beetles is often the case. Traditionally we have had to post specimens back and forth, risking loss and damage. Now, with on-line microscopy through KAREN you can examine a specimen in minute detail on the other

side of the world just by looking at your computer monitor," says John.

FIND OUT MORE ABOUT BIOSECURITY OVER KAREN AT:
WWW.KAREN.NET.NZ/BORDER-SECURITY

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