IMAGING SPECIMENS AT THE NATIONAL FORESTRY HERBARIUM

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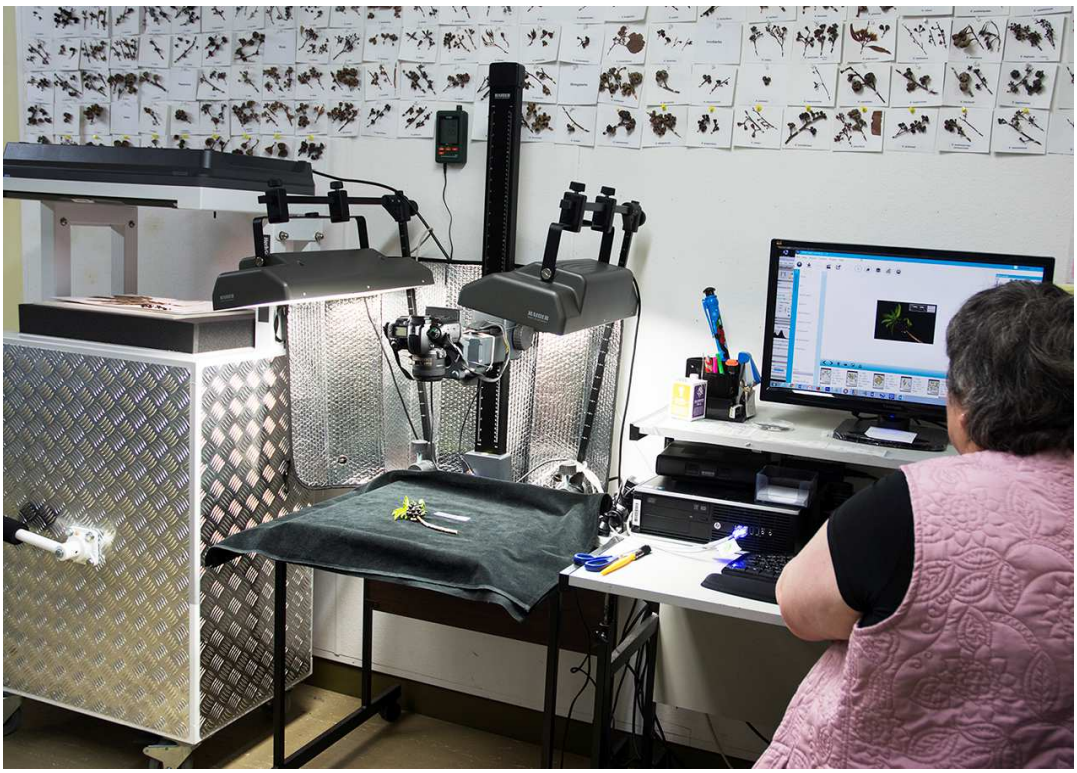
Since 2005 the National Forestry Herbarium has been photographing specimens and adding them to its online data base, now updated to the new BRAHMS (Botanical Research and Herbarium Management System) database.

We currently use a Nikon DSLR camera. We have a Nikon D5200 at 24 mega pixels and use a 40 mm macro lens. The camera is attached to a special adjustable-height camera stand. The white fluorescent photographic lights are also on mounts attached on each side of the camera stand. The camera is connected to a computer that has Photoshop CS6 for processing the photos. A free programme, called Digicamcontrol (www.digicamcontrol.com), operates the camera remotely from the keyboard and allows viewing of what the camera is seeing through the lens in real time before the shot is taken. Images are saved directly to the computer.

Photographing specimens for the herbarium is an ongoing process. Many are brought in as fresh specimens and are photographed as soon as possible while they are at their best for colour of flowers and other details like leaves and buds. Fresh plant material is



Herbarium computer with camera stand and scanner to the left.

photographed on a plain black background as this casts no shadows and shows up the best details for small intricate specimens, while also giving best details for depth of field.

In 2014 the Herbarium purchased a scanner stand, Herbscan, designed at Kew so that herbarium specimens can be scanned in high resolution (600 dpi) without the need to turn them over, as that would allow any loose material to fall off the sheet and leads to specimen damage. The specimen is placed on a platform that is raised to lie against the overhead scanner. The scanner is also remotely operated from the computer keyboard. More than 1000 specimens have been scanned so far.

Herbarium scanner and stand. The specimen platform lifts to lie directly beneath the inverted scanner.

It is possible to zoom in to all recent images, so that considerable detail can be seen. The images, of either scanned or photographed specimens, are shown on the computer monitor and saved directly to the computer. Currently there are images online of each species held by the National Forestry Herbarium, and our long-term goal is to have an image of each specimen available on the web site. There are more than 7000 images of specimens at present on our web site nzfri.scionresearch.com