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PUCCINIA CYGNORUM DECLARED ERADICATED FROM NEW ZEALAND

In 1994 a new species of the rust genus *Puccinia* was described from Western Australia (Shivas and Walker 1994). It was reported to be just the second rust fungus known on a myrtaceaous host in Australia (subsequently an incursion of *Puccinia psidii* occurred in New South Wales FHN 211, December 2010). The new fungus was found at a single site in coastal heathland in a suburb of Perth and was named *Puccinia cygnorum* because of the location near the Swan River (swans are in the genus *Cygnus*). *Puccinia cygnorum* causes lesions on young stems and leaves and subsequent shoot death of *Kunzea ericifolia*, an erect shrub growing typically to about 2 m tall but sometimes up to 6 m. It occurs in the south-west of Australia with the largest populations around Albany. It grows in moist but well-drained situations. To date *P. cygnorum* has not been reported from any other host species or from other locations in Australia (J Walker pers. comm.).

In March 2006 *P. cygnorum* was collected during a routine High Risk Site Survey (HRSS) from two plants of *Astartea fascicularis* in the Australian section of the Napier Botanic Gardens. Samples were collected by John Bartram (SPS Biosecurity) on 20 March 2003, received at the diagnostic laboratory at Scion on 23 March and identified the same day. Identification was confirmed by Dr Eric McKenzie of Landcare Research. MAF BNZ immediately arranged removal of the affected plants and an intensive targeted survey focussed on myrtaceous plants in the Botanic Gardens.

At left: *Puccinia cygnorum* on *Astartea*

About 40 *A. fascicularis* had been planted in the Botanic Gardens and all these were removed, bagged and disposed of at the MAF quarantine facility at the Napier wharf. *Astartea fascicularis* is also from south-west Australia, forming an erect shrub 3-5 m in height, with similar growth habit to *Kunzea ericifolia*.

Above: *Puccinia* lesions on *Astartea*

Botanist Chris Ecroyd (Scion) stated that although *A. fascicularis* is uncommon in New Zealand the recognised host in Australia, *K. ericifolia*, is widely planted here. New Zealand has no indigenous species of *Astartea* but the possible susceptibility of closely related indigenous *Kunzea* and *Leptospermum* was of concern to New Zealand. New Zealand has several myrtaceous genera in common with Australia (*Leptospermum*, *Kunzea*, *Metrosideros*, *Lophomyrtus*) though the only species indigenous to both counties is *Leptospermum scoparium* (manuka). There are two indigenous species of *Kunzea* with one species separated into three subspecies.

The source of the infection has not been determined. Traceback of the plants by Chris Inglis (SPS Biosecurity) revealed that they had been bought from a local nursery. *Astartea* cuttings were also imported for the cut flower industry in New Zealand.

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*Newsletter of the **Scion Forest Protection team**, and the **Forest Health Reference Laboratory** (incorporating the Forest Research Mycological Herbarium (NZFRI-M), the Forest Research Culture Collection (NZFS), and the National Forest Insect Collection (FRNZ). Edited by John Bain, New Zealand Forest Research Institute Ltd, Private Bag 3020, Rotorua. <john.bain@scionresearch.com> Web site < http://www.scionresearch.com/biosecurity >*

...Puccinia cygnorum continued

Follow-up surveys for *P. cygnorum*, incorporated with HRSS,were carried out annually in Napier and included detailed inspection of *Kunzea* and *Leptospermum*. Napier council staff supported the programme and provided information on location of all Myrtaceae species, particularly *Astartea*. As no evidence of further infection had been found, MAF formally declared the fungus eradicated in December 2010.

Thanks to MAF BNZ for the photographs.

Margaret Dick (Scion) and
Chris Inglis (SPS Biosecurity)

Reference:
Shivas, R.G.; Walker, J. 1994. *Puccinia cygnorum* sp. nov. on *Kunzea ericifolia* in Australia. Mycological Research 98: 22-24.

Above: Bagging infected plants prior to disposal.

NEW ARRIVALS IN THE FOREST PROTECTION TEAM

Debra Bly has joined our group team as the Laboratory Coordinator. She has an NZCS in chemistry and microbiology with over 25 years of experience in various laboratories. She has enjoyed a varied career testing everything from pharmaceuticals, vitamins and herbal products, to petroleum products and beer. Most recently she has been working with water and wastewater in the Rotorua District Council's ISO accredited Environmental Laboratory.

Debra's diverse laboratory background should bring fresh ideas and new approaches to the Forest Health Reference Laboratory and streamline our systems to ensure quality of service provided to our clients. This includes Scion's commitment to gaining ISO accreditation for the laboratories.

She is looking forward to the new challenges the role will bring in working with the scientists in the Forest Protection laboratories.

Rebecca McDougal is another recent arrival. She has come from Massey University (Palmerston North) where she worked as a post doctoral fellow on the biological control of *Dothistroma septosporum* with Assoc. Prof. Rosie Bradshaw. Rebecca completed her MSc and PhD, under the supervision of Prof. Greg Cook, at the University of Otago researching DDT residue degradation by soil bacteria. In her new role at Scion, Rebecca will be involved in the molecular diagnosis of forest pathogens.

The most recent arrival is **Matt Buys**. He is a born and bred Cape Townian and arrived from South Africa towards the end of June to join the Forest Protection team as the curator of the National Forestry Herbarium (NZFRI). Matt has a Ph.D. in Plant Systematics from the University of Stellenbosch. His thesis involved a systematic revision of *Lobostemon*, a boraginaceous genus endemic to the Fynbos, and sister to the European *Echium*.

Matt recently worked for the Compton Herbarium at Kirstenbosch, one of three herbaria managed by the South African National Biodiversity Institute (SANBI). There he curated the ice plant family (Aizoaceae) amongst others and took part in a number of expeditions in Africa in search of new plant species. He also has an interest in technologies that expedite Flora production and online databases. Prior to this, he was a senior lecturer in plant systematics and curator of the A.P. Goossens herbarium at the North West University, also in South Africa. Here his interest in the Aizoaceae evolved and he produced, amongst others, a revised classification of a number of closely related *Delosperma* species using molecular techniques.

Matt has retained his interest in discovering and learning about new plants and is keen to get to know the local flora. His primary role here will be to support the forestry industry by identifying mainly woody plants as well as any plants of interest to the Forest Protection team.

John Bain

NEW RECORDS

We are no longer publishing details of new records. For further information on results of MAF funded programmes see MAF's Biosecurity magazine (http://www.biosecurity.govt.nz/publications/biosecurity-magazine/index.htm) where information on new biosecurity identifications is regularly published.

John Bain

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