PLANT AND ENVIRONMENT INVESTIGATION REPORT

Alder dieback around Lake Wairarapa

Dieback of alder *(Alnus glutinosa)* around Lake Wairarapa was reported in March 2011. Internationally, new species of *Phytophthora*, primarily variants of *P. alni,* have been implicated in the decline of *Alnus*. SPS Biosecurity Ltd made a follow-up inspection and reported the dieback was likely due to environmental conditions such as poor drainage, poor aeration and physical damage to the roots by cattle. Clumps of slightly elevated alder appeared mainly healthy, and clusters of trees in heavy blackberry (where animals couldn't reach) were largely unaffected. Circular holes seen on the trees were investigated for presence of wood-boring insects (e.g. the wasp *Tremex*) and found to contain the common native pit weevils (*Psepholax*). Numerous non-pathogenic basidiomycete fungi such as species of *Mycena* and *Favolaschia* were observed. Based on the likelihood that the above factors were the main contributors to the alder dieback the investigation was closed.

New *Botrytis* sp. reported in Auckland

A new species of *Botrytis* was reported to IDC on 27 May 2011 by a LandcareResearch mycologist. Recent genetic studies have revealed that in fact two species in New Zealand have both previously been referred to as *B. cinerea*. One of these species has been recognised in Europe for several years, and in the literature has been referred to as *B. cinerea* Group I or by the informal name "*B. pseudocinerea*". It is soon to be formally described as *B. pseudocinerea*. In New Zealand this new species is so far known only from grapes in Auckland and North Canterbury but is probably more widespread. It seems to be of similar pathogenicity and biology to *B. cinerea sensu stricto* except for differences in fungicide resistance. Outside New Zealand this species is known from vineyards in several parts of Europe, and a Genbank record shows that it occurs also in Korea. It is likely to be geographically widespread but unrecognised. Owing to its likely widespread distribution in New Zealand and the likely low impact of this fungus, this investigation was closed.

New species of *Phytophthora* found in water

The Plant Health and Environment Laboratory (PHEL) isolated *Phytophthora gonapodyides* from water collected from a water-storage dam in 2003 at Coatesville, near Auckland. During the same year, overseas taxonomists recognised *P. gonapodyides* as a species complex (a group of closely related species) that includes a number of informal species such as *P.* taxon salixsoil. Later in 2006, the fungus-like chromist isolated by PHEL was re-identified as *P.* taxon salixsoil during a MAF operational research project conducted by Landcare Research. However, the identification could not be confirmed at that time because published data on this chromist was incomplete. Recently Landcare Research was contacted by David Cooke, Scottish Crop Research Institute, who confirmed that this New Zealand record is *P.* taxon salixsoil. Shortly he will soon give a formal name to this species in a scientific paper. *P.* taxon salixsoil is known to be a weak aquatic pathogen previously found in soil around roots of *Salix* and *Viburnum* after flooding, and in alder debris, reed beds, streams and road drainage. It is known to be present in Europe and the northwestern USA, and likely to have a global distribution within temperate regions.

The MAF Investigation and Diagnostic Centres (IDCs) investigate and diagnose suspect exotic pests and diseases. In the plant and environment sectors, the IDCs have investigators and scientists based in Auckland and Christchurch. The IDCs provide field investigation, diagnostic testing and technical expertise with regard to new pests and diseases affecting plants and the environment. They also have surveillance and response functions, and carry out research and development to support surveillance and incursion response activities.

Stigmina platani

A fungus new to New Zealand, *Stigmina platani*, was found on plane trees *(Plantanus* sp.) in Patumahoe, South Auckland, during a high-risk-site surveillance survey by Scion. PHEL confirmed the fungus as *S. platani*, a pathogen that is only known to infect plane trees in Asia, Europe, and North America.

Puccinia cnici-oleracei in Canterbury

A rust new to New Zealand, *Puccinia cnici-oleracei,* was collected from yarrow (*Achillea millefolium*) leaves on a riverbank in Hanson Park, Christchurch. The name *P. cnici-oleracei* has been used in a broad sense for a long time, with the type specimen of this species having been described from *Cirsium*. Recent work suggests the name is used too broadly and host-specific forms should be renamed as varieties of *Puccinia xanthi*. Molecular work needs to be done to clarify the species complex and host relationships. The biosecurity risk associated with this fungus is negligible. The unwanted organism status of this rust has been removed.

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