



***PHYTOPHTHORA KERNOVIAE* – OF SOUTHERN HEMISPHERE ORIGIN?**

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Phytophthora kernoviae was first recognised in Cornwall in 2003 where it causes diseases of various trees and shrubs. It was described in 2005, when it was speculated it may possibly have been introduced from Asia or South America. Recent DNA sequence studies of *Phytophthora* spp. curated in New Zealand culture collections revealed an isolate of *Phytophthora kernoviae* recovered in 2002 from diseased custard apple *Annona cherimola* (common name cherimoya), an exotic species from South America. Subsequent studies have shown that *P. kernoviae* is present in soils in both indigenous and exotic forests in several regions of the North Island, New Zealand and historical data indicates that it was first recorded in New Zealand (as *Phytophthora* sp.) in the 1950s. No diseased plants other than *Annona cherimola* have been recorded in New Zealand.

Phytophthora kernoviae isolates from New Zealand sequenced to date differ by 1 base pair from the authentic type *P. kernoviae* accession in GenBank (AY940661). Based on ITS sequences *P. kernoviae* is phylogenetically positioned with the small group of *Phytophthora* species that fall outside the main *Phytophthora* assemblage (clades 1-8) and are placed in clades 9 and 10 (Cooke et al. 2000). Other species in this group include *P. captiosa* and *P. fallax* (both recently described from New Zealand) and *P. macrochlamydospora* (presently recorded only from Australia) suggesting a possible centre of diversity for clades 9 and 10 in the Australasian area.

Studies of *P. kernoviae* in New Zealand in the immediate future will focus on identifying further host plants. As no disease outbreaks have been observed on plants other than cherimoya, infection may be asymptomatic, or may be expressed through mild symptoms difficult to distinguish from a background suite of other infections. The genetic diversity of the population will also be assessed to gain insight into the proposal that *P. kernoviae* is native to this region.