Willows and poplars are an important component of the New Zealand landscape. Willows are planted for horticultural shelter, soil conservation, firewood, river control and amenity plantings and poplar for erosion control, shelter and timber production. New Zealand (Populus spp.) hosts the rust species Melampsora larici-populina, Melampsora medusae and an isolated single season observation of a unique interspecific hybrid Melampsora medusae-populina. Willows (Salix spp.) hosts four Salix spp.) hosts four Melampsora species, Melampsora coleosporioides, Melampsora epitea var. epitea and two unidentified species attacking Salix viminalis and Salix daphnoides/Salix incana x open pollinated hybrids respectively.

Rusts pose the greatest challenge to willows and poplar in New Zealand. We therefore undertook a study to investigate the ultrastructural nature of the urediniospores. We used light and electron microscopy to study urediniospores structure and verify if these rust races are different to already published data and if future research programmes are required. This poster shows in detail the different races of rust.

Summary
Urediniospores isolated and shown in Figures 2, 4, 5, 7 and 8 clearly indicate the presence of different rust races based on the different location of the smooth patches on the echinulate spore surface. Further investigation is required to identify how widespread these different races are and whether susceptibility of the host Populus sp. and Salix sp. has consequently increased. Salix and Populus breeding programmes will need to expose future selections to these new rust races to fully evaluate resistance.

Reference