

KEY PARTNERSHIPS AND COLLABORATIONS

Murdoch University

A new five-year partnership has been formed with the Harry Butler Institute at Murdoch University which involves sponsorship of the Iluka Chair in Vegetation Science and Biogeography for a five-year term.

Professor Laco (Ladislav) Mucina, the Iluka Chair, published 13 peer reviewed papers in 2019.

Also at Murdoch University, research on the significance of damping-off pathogens was completed during 2019. Iluka's three-year sponsorship of this PhD project, based at Murdoch's Centre for Phytophthora Science and Management (CPSM), helped determine the significance of natural and introduced pathogens present in in post-mining revegetation at Eneabba.

The University of Western Australia (UWA)

Iluka maintains links with researchers and PhD students at UWA's School of Biological Sciences on projects that began under the Iluka Chair and an Australian Research Council Linkage Project. This has led to the publishing of peer-reviewed scientific research articles, two of which were co-authored by Iluka's Principal Rehabilitation Scientist, Mark Dobrowolski.

University of Adelaide

Iluka has a strong history of supporting ecological research at Jacinth-Ambrosia in South Australia, through its partnership with the University of Adelaide. The research programmes and partnerships complement the on-site rehabilitation activities and contribute to the broader understanding of revegetation in saline and arid environments.

A project investigating the seeding triggers of the local species *Maireana sedifolia* (pearl bluebush) continued during 2019. The researchers, in collaboration with the Jacinth-Ambrosia Rehabilitation Specialist, are investigating methods for inducing regular seeding events in the pearl bluebush which is a dominant chenopod in the local vegetation association.

Botanic Gardens and Parks Authority

Iluka has ongoing projects with researchers at Kings Park Science on endangered flora, the pollination biology of restored vegetation after mining and the soil microbiology of rehabilitated mine sites. The latter project is part of a larger research programme comparing the soil microbiology of post-mining and natural ecosystems, in collaboration with other mining companies and the Australian Microbiome Initiative (www.australianmicrobiome.com).

Virginia Polytechnic Institute and State University (Virginia Tech)

Iluka has had a cooperative research partnership with the Department of Crop and Soil Environmental Sciences at Virginia Tech since 2004.

Research has included: management and analysis of crop rotation, yields and farming practices; native species revegetation trials; post-mining soil reconstruction research; and a trial to determine the net effects of mining on post-disturbance water quality and levels.

In 2019, Iluka and Virginia Tech commenced a study on mine soil and crop yield spatial variability on previously mined land that has been placed back into intensive agriculture.