Postdoctoral Fellow in Plant Invasions

The Bio-Protection Research Centre, a New Zealand Centre of Research Excellence hosted by Lincoln University, finds innovative, natural and sustainable solutions to protect New Zealand's plant-based, productive ecosystems from pests, diseases and weeds. We are now entering a new five-year funding period, with exciting new opportunities for students and post-doctoral research associates.

Within the Bio-Protection Research Centre, the Contemporary Evolution in Weed Invasions project seeks to provide the first comparative assessment of multiple evolutionary mechanisms underpinning weed invasions. Results will be critical in the development of improved weed risk assessment approaches that account for the potential for evolutionary change in alien plants. In particular, it will point to the risks of assuming climate matching is transferable across regions and the conditions under which novel environments may select for evolutionary change.


Shifts in the niche of weeds may result from changes in biotic interactions, phenotypic plasticity or rapid evolution in the introduced range. To examine these options the Postdoctoral Fellow will sample life-history traits and natural enemy damage of weed species across multiple sites along a similar latitudinal range in both the UK and NZ. Seeds from each population in each range will be grown in a common garden in NZ to examine whether clinal variation in life-history traits persists under the same environmental conditions. Comparison between field and common garden studies will test the importance of environmental, maternal and population effects on trait variation and how these differ between ranges. Weeds may not show strong local adaptation but might evolve greater phenotypic plasticity and thus perform better over a wider range of environments than their native congeners. For each species we will test the ability of provenances to maintain fitness homeostasis across gradients in water availability and soil fertility, using clonal material derived from the rootstocks of plants established in the glasshouse. Significant range effects would be indicative of a shift in performance that may facilitate invasion, and will be pertinent to examining potential performance under increased drought frequencies arising from climate change.

The position is funded for a period of 3 years, starting in 2016. Applicants will be required to have:

• A PhD in ecology or a related field

• Research experience in the area of plant invasion ecology.

• Strong skills in quantitative data analysis, particularly statistical modelling.

• A record of peer reviewed publications

As travel between field sites may be a feature of this position, a current driver’s licence is also required.

The position will report to Professor Philip Hulme (Lincoln University)

Further information can be found here:
Application to consist of:

Cover letter expressing interest in position, your suitability for the post and date of availability, CV, publication list, statement of research interests, contact details for three references.

Applications close 29th April 2016.

Philip Hulme  
*Professor of Plant Biosecurity*

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