Supplementary host-specificity testing of *Puccinia melampodii*, a biocontrol agent of *Parthenium hysterophorus*

K. Ntushelo and A.R. Wood

ARC-PPRI, Weeds Division, Private Bag X5017, Stellenbosch 7599, South Africa

*Parthenium hysterophorus*, native to South and Central America, is an invasive weed in KwaZulu-Natal, Mpumalanga and the northwest provinces of South Africa. The micro-cyclic rust fungus, *Puccinia melampodii*, has been successfully used in Australia and is being considered for release in South Africa. As this rust was subjected to comprehensive host-specificity testing in Australia, only supplemental testing was necessary. Testing to five selected South African sunflower cultivars and three out of eight indigenous *Heliantheae* (Asteraceae) species was undertaken. Plants were inoculated with basidiospores of *P. melampodii* and incubated at 25°C for 24 h. For each sunflower cultivar, three plants were tested in four replications, two replications for the indigenous plants, and three *P. hysterophorus* plants were included as control in every replication. Rust symptom development was monitored, and no symptoms developed on the sunflower plants and the indigenous Heliantheae, except for a few pustules that developed on two *Spilanthes mauritiana* plants in one replication. All *Parthenium* control plants were heavily infected. The conclusion was therefore made that the tested plant species and the sunflower cultivars are unlikely to be infected by *P. melampodii* in the event that this agent is released to control *Parthenium* in South Africa.

Is *Prosopis* meeting its match in Baringo?

W.O. Ongtuk,¹,² H. Mueller-Schaerer,¹ U. Schaffner,³ P.J. Edwards⁴ and R. Day²

¹Université de Fribourg/Pérolles, Département de Biologie/Ecologie & Evolution, Chemin du Musée 10, 1700 Fribourg, Switzerland
²CABI Africa, ICRAF Complex, United Nations Avenue, Gigiri, P. O. Box 633-00621, Nairobi, Kenya
³CABI Europe–Switzerland, Rue des Grillons 1, 2800 Delémont, Switzerland
⁴Geobotanical Institute, Swiss Federal Institute of Technology Zuerichbergstrasse 38 8044 Zurich, Switzerland

The genus *Prosopis* is native to arid and semi-arid regions of Asia, Africa and America. Neotropical species, such as *Prosopis juliflora* and *Prosopis pallida*, have been introduced worldwide for multipurpose use and their ability to survive poor conditions. *Prosopis* introductions into Kenya occurred mainly in 1980s, and it has since spread to neighbouring areas threatening the livelihoods of humans and ecosystems. In response, Food and Agriculture Organization supports a project to manage *Prosopis*. One objective is to introduce, test and release the *Prosopis* seed-feeding bruchid *Algarobius prosopis* from South Africa. The bruchid is undergoing specificity tests in quarantine. This beetle was imported on the assumption that *Prosopis* is spreading because it is outside its natural range and lacks natural enemies to regulate its population. In an effort to understand the ecology of *Prosopis*, we assessed the biodiversity (arthropods and microorganisms) associated with *Prosopis* at Baringo, Kenya. There an indigenous insect fauna is associated with *Prosopis*. Some of these insects cause significant damage to the trees reducing reproductive potential and timber value. Can these insects be incorporated in a management strategy for controlling *Prosopis*? Studies to determine the relationship between the insects, *Prosopis* and the indigenous flora and to clarify the status and genetic variation of the *Prosopis* species and their assumed hybrids are underway.