

Plant invasions in the fynbos: research at the Centre for Invasion Biology with management implications

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This poster gives a flavour of some recent projects at the Centre for Invasion Biology (CIB) looking at plant invasions in the fynbos. As one of the senior technical officers at the CIB, I provide technical support to researchers, students, and associates. Every year, the CIB offers studentships at a variety of levels; see www.sun.ac.za/cib for more details or talk to me. The research provide important insights into the functioning of the Cape Floristic Region (CFR), and the results are useful for management.

Restoration in the Agulhas Plains after invasions

Contact: Dr. Mirijam Gaertner – gaertner@sun.ac.za

Gaertner, M. et al. (submitted) Alterations of ecosystem properties by invasive plants: Implications for restoration of fynbos in the Agulhas Plain, South Africa. *Biological Invasions*.

Mulch added after the burn to reduce excess nutrients



Seedlings after restoration



Dr Mirijam Gaertner

Fire treatment after clearing



Vegetation survey before treatments



An *Acacia saligna* site at Flower Valley, before treatment



Plant invasions along the Eerste River

Contact: Prof. Dave Richardson—rich@sun.ac.za

Meek, C. S., Richardson, D. M. & Mucina, L. (in press). A river runs through it: Land use and the composition of vegetation along a riparian corridor in the Cape Floristic Region, South Africa. *Biological Conservation*.

A permanent transect has been established along the entire 40-km length of the Eerste River. Researchers wishing to use the transect should approach Dave Richardson (rich@sun.ac.za)



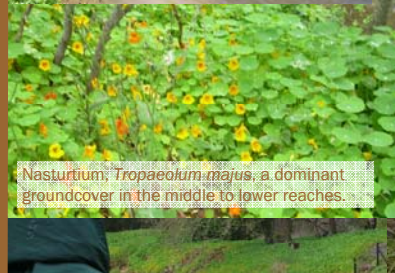
Lower reaches towards Macassar are dominated with agricultural weeds



Clifton Meek, MSc student who undertook the project



Nasturtium; *Tropaeolum majus*, a dominant groundcover in the middle to lower reaches



Many weirs, side tributaries and gabions influence the river flow, water quality and bank vegetation



Small-leave spiderwort, *Tradescantia fluminensis*, dominant under full canopy

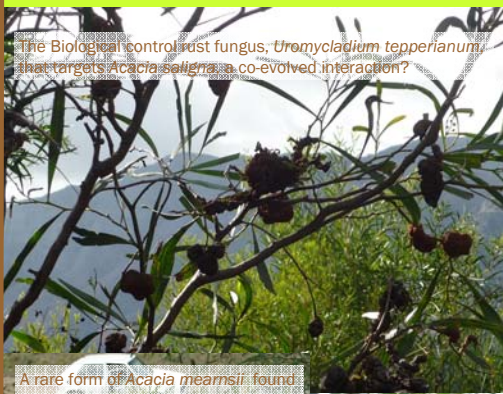


Molecular ecology of alien plant invasions

Contact: Dr. Jaco le Roux—jlroux@sun.ac.za

Wilson, J. R. U. et al. (2009) Something in the way you move: dispersal pathways affect invasion success. *Trends in Ecology & Evolution*, 24, 136–144.
Le Roux, J. J. & Wicczorek, A. M. (2009) Molecular systematics and population genetics of biological invasions: towards a better understanding of invasive species management. *Annals of Applied Biology*.

The Biological control rust fungus, *Uromycladium tepperianum*, that targets *Acacia saligna*, a co-evolved interaction?



Collection trip in South Australia



Collection techniques: the use of a soft cloth to rub the bark for extraction



A rare form of *Acacia mearnsii* found



Stink bean, *Paraserianthus lophanthus*, one of the other species being investigated



Dr Jaco le Roux and Misslope Ndlovu collecting samples of Australian species



Early detection and rapid response (SANBI/WfW)

Contact: Dr. John Wilson —jrwilson@sun.ac.za

Zenni, R., Wilson, J. R. U., Le Roux, J. J. & Richardson, D. M. (in press) Evaluating the invasiveness of *Acacia paradoxa* in South Africa. *South African Journal of Botany*.

The leaves and thorns of *Acacia paradoxa*



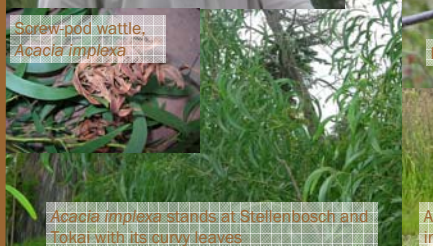
Rafael Zenni with *Acacia paradoxa* stands on the slopes of Devil's Peak, Table Mountain National Park.



Dr. John Wilson



Screw-pod wattle, *Acacia implexa*



Kangaroo Paw, *Anigozanthos* sp.



Acacia implexa stands at Stellenbosch and Tokai with its curly leaves

A stand of Kangaroo Paw encroaching into natural vegetation