

EXCHANGES, NOT ON THE JSE, BUT BETWEEN A NATIVE AND AN INVASIVE LEGUME IN THE CAPE FLORISTIC REGION.

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Invasive alien plant species are a major threat to floral biodiversity in the Cape Floristic Region (CFR). Fynbos vegetation is heavily invaded in the CFR, while forests have shown some resistance. However within forest margins - the ecotone between fynbos and forest - there is a high level of invasion. Among the invader species, *Acacia mearnsii* (black wattle), a forest pioneer species in its native ranges, is specifically problematic. Within these forest margins *A. mearnsii* co-occurs with *Virgilia divaricate* ('Cape Lilac', 'Blossom Tree'), a native legume. These two plants not only differ in their origins, but in their distribution over the landscape. *Acacia mearnsii* has invaded almost all biomes in South Africa, excluding the arid Karoo. In contrast, *V. divaricata* is restricted to forest relicts, occurring in isolated patches in the Southern Cape afro-montane forests. The overlap in distribution by these two tree species allows us to investigate whether there are any exchanges; specifically between their associated arthropods and whether tree distribution patterns may influence arthropod distributions. These exchanges could result in range expansions of arthropods, as the presence of *A. mearnsii* may increase the connectivity of forest patches that previously were isolated.



Dewidine van der Colff and **PC Bernade** sampling arthropods with a vacuum sampler – *D-vac* at the Stormsrivier.

In our research, we first established the arthropod and fungal species composition of each host plant within our sampling range, which stretched from Knysna to Stormsriver. We then compared their species richness, abundances and compositions. This information is then used to infer whether exchanges are possible and how it could be used in terms of “Alien Invasive Plant clearing” efforts.

Our current data indicate differences in species composition among the host plants, and specifically within the herbivore trophic level. This provides support for the Enemy Release Hypothesis (a hypothesis that states that exotic plants can become invasive by experiencing less regulation than native plants, by enemies in their introduced habitat), which has also been found in other studies. This study will be the first to document the potential exchange of arthropods in forest margins between native and non-native co-occurring tree species.