

UROMYCLADIUM RUST

Causal agent: *Uromycladium acaciae*

Hosts: *Acacia mearnsii*. Present on *A. decurrens* but without serious disease.

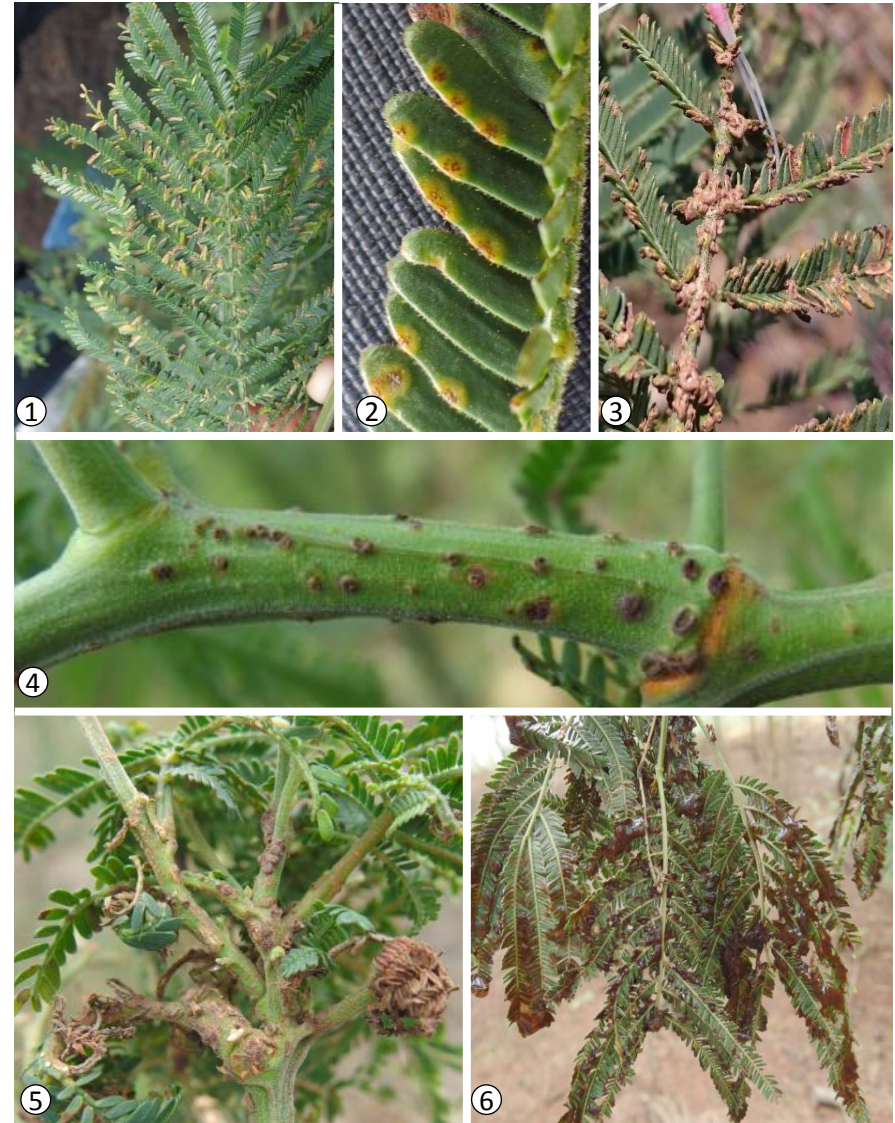
Geographic distribution: Entire South Africa and Swaziland. Disease epidemic with tree defoliation and stunting currently present in KZN.

Relative importance: For 20 years this fungus was not considered of economic concern in South Africa, causing only mild spots associated with the uredinial stage. However, since 2013 the telial stage of *U. acaciae* has caused extensive leaf drop, tree stunting, pinnule and rachis deformation and stem lesions on trees in the KZN Midlands.

Symptoms and signs: Isolated pinnule spots (Fig. 1, 2) caused by uredinia, telia or spermogonia. This may develop into pinnule, rachis and stem pustules and deformation (Fig. 3, 4, 5) and under moist conditions the accumulation of slimy masses of teliospores (Fig. 6). Infections caused by the telial stage may result in pinnule drop and complete defoliation, especially of young trees. Multiple occurrences of leaf drop may result in stunting of trees and even death.

Biology: Three spore types have been identified to date for *U. acaciae*, namely uredinia, telia and spermogonia. Species of *Uromycladium* need only one host to complete their lifecycle.

Management: Chemical treatment is being tested, but is costly. Selection and breeding is underway to find tolerant families.



(1) Pinnule discoloration on an infected tree, (2) uredinial spots on the upper surface of pinnules, (3) masses of brown telia on rachis and pinnules, (4) telial pustules on bark of a young tree, (5) leaf and rachis malformation, (6) slimy masses of teliospores on the leaves of a *A. mearnsii* tree under misty conditions.