The effect of disturbance regimes (fire and slashing) on populations of *Darwinia glaucophylla* on the Central Coast of NSW, Australia

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I hereby certify that the work embodied in this thesis is the result of original research, except where reference has been made to the work of others, and has not been submitted for a higher degree to any other University or Institution.

Signed: .................................................................

(Carmen Booyens)
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The effect of disturbance regime (slashing and time since last fire) was assessed for a vulnerable plant species (*Darwinia glaucophylla*) on the central coast of NSW, Australia. The species has a limited geographic range and high habitat specificity. Percentage cover, flowering, germination and seedling development of the species were measured across disturbance regimes. The habitat of *D. glaucophylla* was examined by measuring photosynthetically active radiation (PAR), cover and height of the surrounding vegetation, mycorrhizal colonisation and a suite of soil attributes (pH, electrical conductivity (EC), nitrogen, phosphorous, moisture and organic matter) within each of the different disturbance regimes. Results indicate significant differences among variables between disturbance regimes. This was less so at the macroplot level, although differences at this level suggest that site-specific characteristics may contribute to some of the variation reported. Slashing had a more significant effect than time since last fire on many of the variables investigated. These findings have implication for management of the species in terms of slashing practices and because the species requires fire-related cues to stimulate germination.