

PROBLEM

Mistletoe seeds are easy to germinate but adult plants occur on a restricted range of hosts. Is this because seeds never get deposited on other plants? Or if seeds do arrive on other plants, how big does the hopeful mistletoe grow before it is prevented from attaching?

INFORMATION

1. The common mistletoe *Amyema preissii* is found mainly on *Acacia* but also on *Cassia* and *Eucalyptus*.
2. Seed can be collected from March-July and will not germinate if the fruit remains intact with a small stalk.
3. To stimulate germination, separate seeds and dissolve the sticky layer by shaking in water.
4. You can damage the fruit coat and place seeds on branches of different sizes or of different species. You can either leave the seeds alone or water them. It is not known how quickly they will grow.
5. This project is particularly suitable for students living in the wheatbelt of W.A. where heavy infestations of *Acacia acuminata* occur.

DESIGN OF EXPERIMENT

1. How do the seeds normally get lodged on a branch? Will this method affect the size of the branch they usually land on.
2. Observe normal distribution carefully – do any seeds get onto species other than those they usually parasitize?
3. Will you look at behaviour of seeds on branches/leaves of different species, branches of different ages? Will they grow on gymnosperms, inanimate objects, soil?

REFERENCES

Kuijt, J. (1969). *The Biology of Parasitic Flowering Plants* (University of California Press : Berkeley).