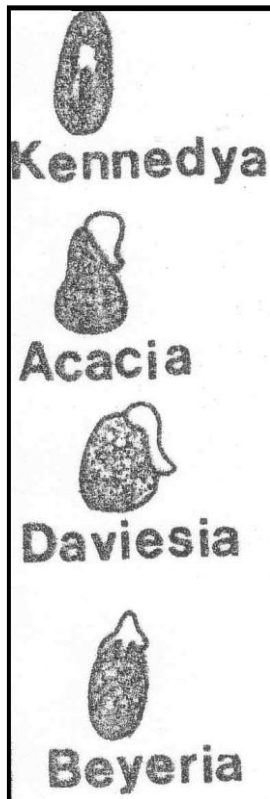


PROBLEM

It has been estimated that there are about 1,500 species of Australian plants that are regularly dispersed by ants. The ants are attracted to the seed because it has a firm fleshy appendage (called an elaiosome) and carry the seeds back to their nests. Only a little is known about the local W.A. plants and one of the experts on the subject lives in Norway and only worked in W.A. for less than a year!

INFORMATION

1. Ant dispersed plants (dubbed myrmecochorous if you can pronounce it) are woody shrubs in sclerophyll vegetation. Species in families Rhamnaceae, Fabaceae, Sterculiaceae are commonly ant dispersed as are members of the genera *Acacia*, *Hibbertia*, *Goodenia*. Look up these groups so you can recognize them in the bush. Many species shed their seeds in summer.
2. The standard test to see if ants are attracted to seeds is to scatter 10 seeds of the species to be tested in a small area near an ant trail about 1-2 m from the nest. Depending on how excited the ants get, score the number of remaining seeds after 10 to 30 minute intervals (up to 1 day).
3. Not all ants collect seeds. Ant identification is difficult so collect specimens and call them A, B, C if necessary.
4. Record how the ants get the relatively huge seeds back to the nests and what happens then. Watch out for seeds (minus the elaiosome) being brought up out of the nest to be dumped.
5. Some species without elaiosomes are sometimes collected e.g. some grasses, daisies and eucalypts.

DESIGN OF EXPERIMENT

1. What other notes should you make about the habitat, the environmental conditions and the ants activity on days you do your experiments?
2. How will you score your results if ants of several species appear on the scene unexpectedly and a brawl ensues?
3. Are you going to study foraging only during the day or at night as well?

REFERENCES

Berg, R.Y. (1975). Myrmecochorous plants in Australia and their dispersal by ants. *Australian Journal of Botany* 23, 475-508. (Good stuff if you can survive the terminology that hits you in the first few pages).

van der Pijl, L. (1972). *Principles of Dispersal in Higher Plants* (Springer Verlag : Berlin).

PROBLEM