

BOOKS

Book review - *Allison Knight*

Malcolm, W.M.; Malcolm, N. 2000. *New Zealand Lichens*. 134 pp. Spiral-bound. Micro-optics Press, Nelson. \$42.50

In this excellent little book Bill and Nancy Malcolm use New Zealand lichens as examples to illustrate much broader biological concepts. It is filled with fascinating details, not only of the life of lichens in general, but of the wider intricacies and interconnections of life on this planet. It should be of interest to anyone who has wondered what makes these ubiquitous but much neglected life-forms tick, and how they fit in to the rest of our ecology.

The lively text takes the reader on a journey of discovery from where lichens live to how they live, grow, reproduce and defend themselves. Along the way such ecological concepts as habitat, niche and community are clearly explained and colourfully illustrated (although some might take issue with the assertion that there is no difference between parasitism and predation). The origins of mutualism and symbiosis are discussed, with interesting analogies being made between the association of the lichen fungus with green algae or cyanobacteria, and the presence of mitochondria in plant and animal cells, and of chloroplasts in plant cells.

A nice touch is the boldface printing of 120 key biological and lichenological terms, which are explained in the text and indexed separately.

Likewise the striking illustrations, mostly in colour, which give a close up view of around 200 different species of New Zealand lichens, are well labelled and conveniently indexed by species name. The 10-page section on how lichens are named is far from dry and a useful introduction to botanical nomenclature in general.

Another aspect that has broad botanical applications is the final appendix on using a scanner to obtain high quality colour images at a fraction the cost of using a camera. This could equally well apply to ferns, mosses, leaves, small flowers and any other botanical specimens without too greater depth of field. The book is worth buying for this feature alone.

In all, this is a very worthwhile book, with much broader application than its title would suggest. It would make an excellent companion to "Lichens of rainforest in Tasmania" by G Kantvilas and SJ Jarman, which is still the closest available field guide to lichens in New Zealand. Both books can be obtained from Manaaki Whenua Press, Box 40, Lincoln 8152, NZ, who give a 20% discount to members of Botanical Societies