

## THE AMATEUR BOTANIST

---

The weather is a common topic of conversation because it is something which most people have in common. For very much the same reason there is much discussion about plants. They are what Darwin called "the chief embellishment" of our environment. The intensity of interest varies. At one end of the scale are those people with a single pot plant (be it coleus or cannabis) that gets regular watering and an occasional word of encouragement. The plant fancier at the other end of the scale makes a study of plants, knows all their names and their individual requirements and responses. Then there are those in another class who make a living from plants. A large section of these make a dollar by selling plants or plant products. A small number are paid to study plants. Within these are those whose hobby and occupation cannot be separated. These we can call the professional botanists. Their work is sometimes dismissed as "nature study" by professionals of another group who have had botanical training but regard themselves as plant scientists rather than botanists.

Now, having made a classification of plant fanciers into amateur botanists, commercial botanists, professional botanists and plant scientists to suit my purpose, I can proceed with the topic of this discourse — the amateur botanist.

These are the people who by tending their property give beauty and character to much of the landscape. It is the amateurs who contribute much to our knowledge of plants. It is my belief that they could contribute much more. What has become of the amateur researchers of the kind who made major contributions to science in the past? Glance through a century of papers in the *Transactions of the Royal Society of New Zealand* (and its predecessor the New Zealand Institute) and it is clear that it was the sheer joy of investigation that prompted most of the research by men and women who were not paid to do it. To this day it is the amateur ornithologist who makes most of the contributions in that field. In some of the physical sciences lack of equipment may limit much back room research but in biology there is no such restriction. All that is needed is a good pair of eyes aided by a hand lens, a notebook and pencil, the will to explore, and a little encouragement.

Perhaps the amateur is bewildered by what modern scientists in their well-equipped laboratories have discovered by studying the insides of plants. Let him be assured that our knowledge of such simple and fascinating topics as pollination of plants in our gardens is less than elementary. What do we know about the biology of seeds, or about the life spans of plants, or the opening and closing of flowers, dispersal of seeds, why certain plants grow together, or how fast plants grow!

There is a timidity among botanists and perhaps it is this that deters many knowledgeable amateurs from putting pen to paper. Perhaps they feel that their training is inadequate. Maybe some feel

that without a university education nothing very substantial can be contributed. If this is how you feel you should read what Harry J. Fuller, a university lecturer, wrote in the *American Journal of Botany* in 1956. On page 544 he opened by quoting a letter which begins "I am mad about plants and would never wish to be anything else but a botanist. If anything could stop me, however, it would be one of those courses (the average general botany course)". It is not my task to analyse courses but it does concern me that there are few adequate courses for amateurs and almost no textbooks covering the subject, let alone one which is palatable or stimulating. Gone are the days when someone could sit down and tell you in a book about the elements of botany on a fairly wide field in terms that would stir your enthusiasm. (Upon reflection I doubt if one has ever been written.) If you are waiting for the right book to appear you will never get started in the field of botany.

Many amateurs get their start by finding a book on plant identification. There are many of these. I venture to say that there are too many of some sorts and still nothing very comprehensive for plants growing in New Zealand. Identification is the starting point only. The name is little more than a label but we still make the mistake of assuming that a person who knows plenty of names knows plenty of botany.

Courses in botany and books on the subject will take you only so far. The most interesting facts are still to be discovered, and there is ample scope for amateurs to make these discoveries. I am sure that somebody much wiser than me must have said, "Heed not the books but go to the plants themselves". Don't be satisfied with the botanical outing that takes you from a matai to a miro to a rimu and tells you nothing more than its name. Behind every plant there is a fascinating story that we should try to find out about. In nature there is a degree of orderliness waiting for us to discover.

Plant fanciers bring themselves together as societies and clubs of various kinds where there is enough common ground for sharing of interests. Botanical societies, we may expect, are interested in the broad spectrum of plants, but their main focus is on native plants. They are as much to blame as anyone for the senseless sharp division in the mind between native and exotic plants. We relegate exotic weedy plants to an unloved category. Even the arrival of people from overseas countries where these plants are their treasured wild flowers or wayside plants has not broken down this attitude. If anything they have accentuated it once they have overcome their bewilderment at finding that our forests are not the open woodlands that they expected to see. Weeds too are worthy of study. They are the most prevalent and versatile plants on earth, yet we are not even on nodding acquaintance with them. There is a lifetime of study just outside your back door yet students are conveyed to many distant parts to seek interesting plants.

Why must we wait until an interesting piece of vegetation is threatened by a bulldozer before we bother to record even the species

growing there? There are many amateur botanists capable of studying vegetation, recording it and making others aware of its value before the crisis arises. When an environmental impact report is required someone has to look at the plant life in such a hurry that there is no time to adequately consider the vegetation in question in relation to similar vegetation to ensure that this is not the last of its kind. In most parts of the country we have no vegetation accounts to help us. For instance, it is alarming to see the vegetation north of Auckland city disappearing from vast areas with not even a record of its significant species. To date there has been only one substantial account of that vegetation (excluding islands), and that was Cockayne's 1908 report on Waipoua.

I am appalled by the lack of understanding of the basic biology of New Zealand's most important economic plants. We know much less about our weeds and an infinitesimal amount about the plants we seek to preserve. To manage vegetation for conservation purposes (or any purpose) we must know how it behaves. There are probably not more than a dozen people in the country employed to do this. They need help. If you are an amateur interested in ecology and you are not sure where to start make a species list and do not be deterred by those who dismiss them as "mere floristics". Go a stage further if you can and rate the species according to their significance. The next step is to record the vegetation in some subjective way. Then try to understand how the vegetation changes and why it changes.

I write as if plants existed only to be studied. Wordsworth said

"Our meddling intellect  
Misshapes the beauteous form of things".

What is it that stirs an interest in plants? What is it that has inspired poets, artists and musicians? Even the most ordinary of plants can give pleasure and excite wonder. They give a joy which can be appreciated at quite an early age. When I asked one of my sons why he was always smiling the four-year-old replied without hesitation "Because there are so many wonderful things". I think this is why we have so many amateur botanists.

A. E. ESLER



**Editor's Note:** For photographs of many well-known amateur botanists see the following two pages, which convey the spirit of Botanical Society expeditions.

Photographs by Yvonne J. Cave.