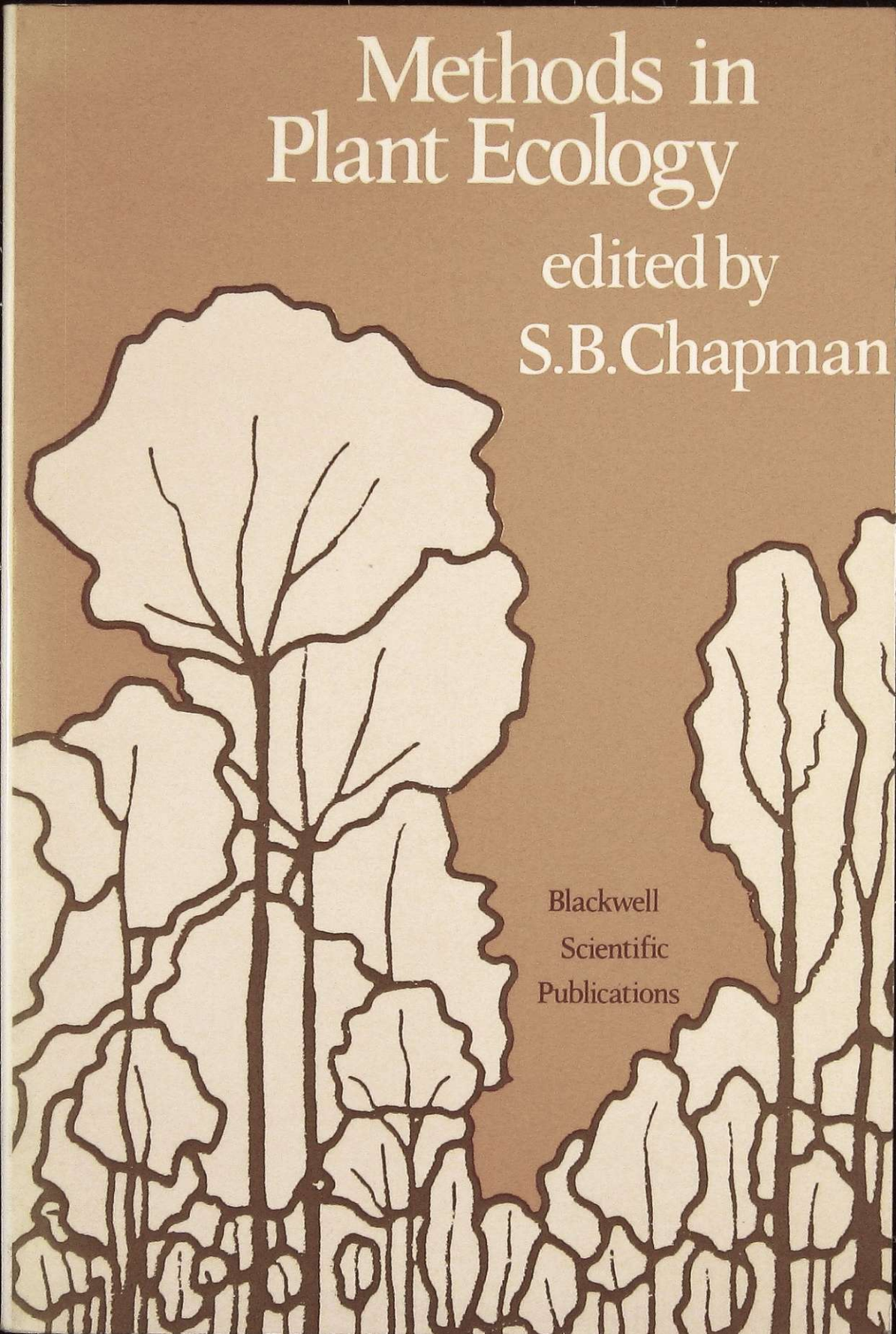


Methods in Plant Ecology

edited by
S.B. Chapman



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CHAPTER 1

INTRODUCTION

S.B. CHAPMAN

It is perhaps relevant that the introduction to a book entitled *Methods in Plant Ecology* should begin by looking at some of the developments and changes that have taken place since the word OECOLOGY was used in 1886. Since Haeckel's introduction of the term for 'the science of treatment of the reciprocal relations of organisms and the external world' a great many changes both in the approaches of workers in the field and in the variety of techniques and methods at their disposal have taken place. Whilst ECOLOGY is now used and misused in a number of different ways it should still be possible to recognize the widest possible meaning of the word but for the purposes of a book such as this to retain the original biological meaning for the study of organisms and their relationship with other individuals and their environment.

Only a few years ago a leading ecologist was heard to comment that 'ecology cannot really be taught but can only be learnt', and some people may still sympathize with this point of view. It is also perhaps significant that a book published in 1934 entitled *Field Studies in Ecology* ends with a description of 'an ecology box' that in addition to a few extra items 'provides all that is required for good, accurate work'. These two separate items serve to illustrate the way that ecology has developed in recent years to a stage where available methods and techniques have increased in number, diversity, complexity, and in many cases also in cost to a degree that many people find alarming.

In 1939 Sir Arthur Tansley delivered a somewhat prophetic presidential address to the British Ecological Society in which he commented upon techniques in ecology:

'It is obvious that the progress of science depends very closely on technique, on the intelligent application of existing techniques and on the devising of new ones. The invention of a new technique frequently leads to very rapid advance in knowledge and to the opening up of completely new fields. Every well defined branch of biology develops its own techniques, so that beginners in the subject can use them from the outset; and if the worker is good enough he can apply them intelligently to new objects and perhaps go on to devise important modifications or completely new methods. In our subject