

### About the book

This study of plant anatomy is based on newly available data on the structure and spatial organization of the vascular system of plants. For the first time, by means of a new technique of intracellular casting, the vascular system can be observed in its entirety.

Many examples are chosen from among the major groups of the plant kingdom to illustrate the vast field of applications of histological casting: anatomical structures that have so far been little understood or unknown are described and hypotheses relating to the cambial functioning are presented. The text follows a summary of basic concepts of xylem anatomy and is illustrated with several diagrams and photographs of casts made for the most part with scanning electron microscope.

The successive steps of the technical implementation of casting which are incidentally very simple, are described with precision and give the reader the tools with which to undertake other investigations.

The uniqueness and originality of the photographs, mostly unedited, lend a special character to this work, which is addressed not only to scientists and students but also to professionals concerned with wood, trees, and plants in general.

### About the author

*Jean-Pierre André* devoted the first thirty years of his career as researcher at INRA to the study of the chemical functioning, physicochemical functioning (ionic exchanges), and microbiological functioning (denitrification) of soils, then to the study of horticultural substrates, and the past ten years to the study of the vascular system of plants.

Cover: Nodal ramification of a metaxylem vessel cast of *Phyllostachys aurea* (insect) segments of tracheid casts of *Cupressus sempervirens* (ground). Photos by J.P. André.



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