

PREFACE

Volume 6 of the *Advances in Botanical Research* continues our practice of critically appraising progress in subjects from across the whole spectrum of botanical studies.

Smith considers the evolution of the Bryophyta with particular reference to the evidence from cytological studies; the rapid progress in this field emphasizes the probable antiquity of the major groups which were delimited on other criteria. Jones draws on the evidence of his detailed work in the cytogenetics of the Commelinaceae to consider the evolution of the karyotype with particular reference to the role of fusion and fission processes.

Nitrogen is perhaps the plant nutrient which is most frequently in limiting supply in a wide range of habitats; Lee and Stewart explore the biochemical and physiological adaptations of the nitrogen nutrition of plants in a range of habitats. Dell and McComb are concerned with the borders between physiology, fine structure and ecology in their investigation of the structure, functioning and ecological significance of resin glands in plants.

Though many botanists are interested in plant water relations, the subject has lagged for want of new research techniques; in his paper Zimmerman points the way forward to important new work on the water relations of plant cells through the use of his micromethods for the direct measurement of the turgor potentials.

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