Fineschi, S., Malvolti, M.E., Cannata, F., Hattemer, H.H. (ed.): **Biochemical Markers in the Population Genetics of Forest Trees.** - SPB Academic Publishing, The Hague 1991. 251 pp. NGL 80.00/US $ 42.00.

The book contains the proceedings of an international symposium on biochemical markers in the population genetics of forest trees, held in October 1988 in Porano, Italy. The aim of this meeting organized by two UIFRO working parties was to discuss the genetic systems and the genetic variation encountered in forest tree populations and, in particular, to present the usefulness of biochemical markers, such as isoenzymes and DNA markers, for the study of the genetic structure of forest tree populations.

The book is composed of 20 papers of lectures and 15 abstracts of posters. Chapter 1, "Genetic analysis" (5 papers), outlines the procedures and methods of identifying marker genes and enumerates some advantageous properties of isoenzymes as gene markers. Simultaneously, it emphasizes the necessity of performing genetic analysis od isoenzymes to determine their genetic controls and describes special conditions which can lead to incorrect conclusions about the mode of isoenzyme inheritance. In chapter 2, "Genetic variation within and between populations" (7 papers), one paper is devoted to the review and evaluation of methods used to study genetic variation in conifer populations. Other papers present methods used for the determination of genetic variation and estimation of genetic effects of biochemical gene-markers on a quantitative trait in some selected forest tree populations. The papers included in chapter 3, "Mating system" (3 papers), deal with limitations in the application of gene markers to the characterization of plant mating systems, the relationship between selfing rate and seed production and the relationship between the genetic structure of the population and the mating system. Chapter 4, "Reproductive system" (2 papers), focuses om mating models that have been applied to forest trees. One paper discusses the use of isoenzymes as genetic markers for detection of the clones representing inter-specific hybrids. Chapter 5, "Molecular genetics" (3 papers), gives an account of phylogenetic and applied studies on the chloroplast genome in forest conifers. These papers show the effectiveness of using chloroplast DNA markers for studying introgresse and for detecting gene amixture of one species in the population of another. Chapter 6 consists of the abstracts of posters concerning predominantly the genetic variation and mating system of selected forest tree populations. The book closes with the index that facilitates quick orientation in the proceeding. These proceedings are very valuable not only for advanced readers and specialists in this field but also for those who intend to obtain an up-to-date overview of the current status and problems involved in this rapidly developing field. For anyone working in this field the book will be a very useful asset and may be strongly recommended.

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