

Pleurocarpous Mosses

Systematics and Evolution

The shift from traditional taxonomic methods to data-oriented, analytical cladistic methodologies has led to a better understanding of biological processes and more accurate classifications for a wide range of organisms, including mosses. **Pleurocarpous Mosses: Systematics and Evolution** explores the impact of these methods through recent breakthroughs in research on the evolution and phylogeny of pleurocarpous mosses.

This book emphasizes the use of cutting-edge analytical methods, morphological characters, and use of morphological and molecular data in systematics. It investigates the interrelationships within various moss families in which pleurocarpous morphology appears, and their related taxa. The authors examine higher-level relationships to construct the backbone phylogeny of the group and set up relations within subgroups. They present new results derived from molecular data, phylogenetic analyses, and a variety of analytical methods used to evaluate the processes of morphological evolution, including growth patterns, leaf structure, and other morphological features. The final chapters explore the fossil history of pleurocarpous mosses and discuss a proposed timeline for the evolution of critical nodes. They also address wider evolutionary questions relevant to the origin and maintenance of species diversity.

Features

- Includes a bonus CD-ROM containing a host of full-color illustrations and data sets
- Contains previously unpublished results and discussions of original research from leading international experts
- Highlights recent breakthroughs focused on resolving phylogeny for lesser-known mosses
- Uses modern analytical methods to challenge traditional views of relationships between pleurocarpous moss families
- Discusses morphological character systems and their role in pleurocarpous moss systematics
- Analyzes the branching structure of pleurocarpous mosses including figures and case studies of individual species

In addition to upgrading the current knowledge of this complex group of organisms, **Pleurocarpous Mosses: Systematics and Evolution** also raises the standards of analysis and offers a paradigm for resolving phylogenetic relationships and classifying lesser-known taxonomic groups.



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6000 Broken Sound Parkway, NW
Suite 300, Boca Raton, FL 33487
270 Madison Avenue
New York, NY 10016
2 Park Square, Milton Park
Abingdon, Oxon OX14 4RN, UK



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