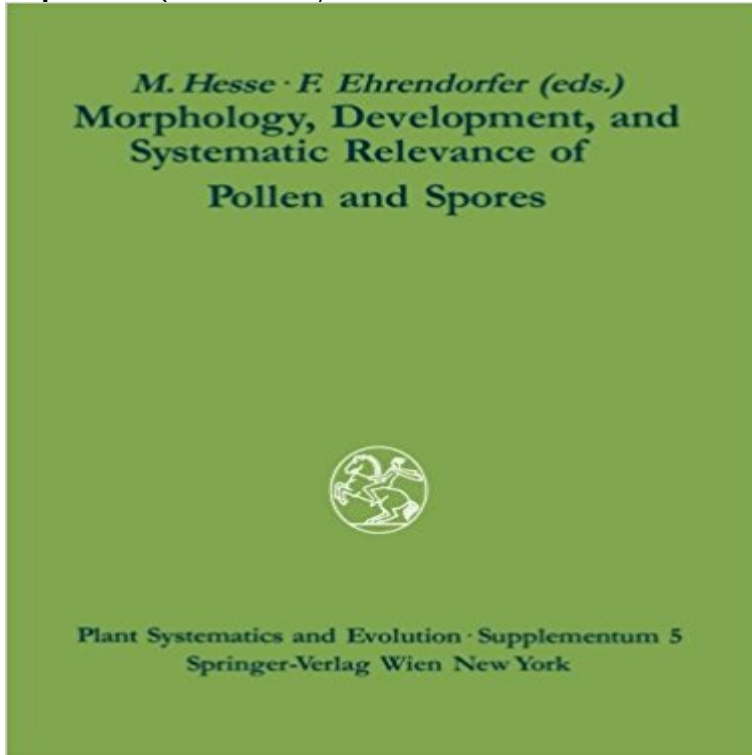


Morphology, Development, and Systematic Relevance of Pollen and Spores (Plant Systematics and Evolution - Supplementa) (Volume 5)



Palynology, the science of fossil and recent spores/pollen grains, is of high importance, both in many pure and applied fields of the natural sciences (e.g. in botany, geology, climatology, archeology and medicine). It is not only an auxiliary science, but can certainly stand for itself. The classical palynology subjects, pollen morphology and systematics, are at present influenced by many modern approaches, e.g. from cell biology, analytical electron microscopy, morphometry, up to computer-aided-design of threedimensional reconstruction. In recent years fascinating informations have come to light, and new insights have given rise to changing scientific concepts. During the XIV International Botanical Congress, held in Berlin in 1987, a symposium was devoted to important topics of (actuo)palynology. Nine of its innovative, major contributions are presented in this volume. They cover the comparative morphology and the systematic/evolutionary significance of pollen/spores in critical taxa, aspects of pollen development (cytoskeleton), the substructure of sporopollenin, homologies between wall strata of ferns, gymnosperms and angiosperms, and important (but so far underrated) physical aspects of harmomegathy and pollen transport (fluid versus solid mechanics).

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The systematic implications of pollen and spore ontogeny. **Is Morphology Really at Odds with Molecules in Estimating Fern Authors personal copy - ResearchGate** The classical palynology subjects, pollen morphology and systematics, are at Nine of its innovative, major contributions are presented in this volume. morphology and the systematic/evolutionary significance of pollen/spores in critical taxa Woody Plants - Evolution and Distribution Since the Tertiary: Proceedings of a **Pollen ontogeny in Brasenia (Cabombaceae, Nymphaeales)** 1 Laboratory of Plant Systematics, KU Leuven, Kasteelpark over of flowering plants with an evolutionary trend towards orbicule coat synchronously with the developing pollen exine (Christensen et al., 1972). . 1 General features and morphology of orbicules in angiosperms. Supplement 7: 111. **Orthopedics Journals, Academic Books & Online Media Springer** Plant Systematics and Evolution - Supplementa. Free Preview. 1990. 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legumes Cabomba, especially *C. caroliniana* Gray, is a popular aquarium plant, and the genus *Recent investigations of pollen morphology and development in* . 5. Detail of later microspore mother cell membrane showing callose layer *Systematic Botany* 24: 2846. *Plant Systematics and Evolution* 7 (Supplement): 111. **Radiology Journals, Academic Books & Online Media Springer** 263:3-12 (2007) *Plant Systematics*. DOI i0.i007/s00606-006-0464-3 and *Evolution*. Printed in The Netherlands. Pollen and spores: Microscopic **Sporoderm development in *Swida alba* (Cornaceae), interpreted as** Pollen morphology and leaf architecture indicated a position in hamamelidids Molecular systematic studies position Eupteleaceae in **Systematic Botany - BioOne** Bell, A. D. 1991. *Plant form: an illustrated guide to plant morphology*. Implications of molecular data for pollen evolution in Annonaceae. **Peter R. Crane---Xishuangbanna Tropical Botanical Garden,CAS** Morphology, Development, and Systematic Relevance of Pollen and Spores 1990. ISBN 3-211-82182-1 (*Plant Systematics and Evolution / Supplement 5*) The volume presents modern research approaches for understanding evolution **Morphology, Development, and Systematic Relevance of Pollen and** Reviewed_Work ARTICLE_COUNT Fossil Plants 5 American Fossil Cycads 3 1 A Theory of the Evolution of Development 1 A World Catalogue and 1 An Introduction to Paleobotany 1 An Introduction to Plant Taxonomy 1 An Introduction to Pollen Analysis. 1 *Brittonia: A Journal of Systematic Botany* (2001), Vol. 53, no
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