1. Record Nr. UNINA9910293142603321

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Titolo	The Plant Stem : A Microscopic Aspect
Pubbl/distr/stampa	Springer Nature, 2018 Cham : , : Springer International Publishing AG, , 2018 ©2018
ISBN	9783319735245 3319735241
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (VII, 207 p.)
Altri autori (Persone)	BornerA (Annett)
Disciplina	571.32
Soggetti	Plant anatomy Plants - Development Plant physiology Plants Forest products Plant Anatomy/Development Plant Physiology Plant Systematics/Taxonomy/Biogeography Wood Science & Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Preparation techniques - Making anatomical structures visible -- Morphology of the plant body -- Cellular composition of the plant bodies -- Structure of cell walls and cell contents -- Primary, secondary and tertiary meristem -- Stem anatomical structures of major taxonomic units -- Evolution of stems -- Anatomical adaptions to permanent changed environmental conditions -- Anatomical adaptions to temporarily changed environmental conditions -- Coexistence of algae, fungi and vascular plants -- Wood decay -- Fossilization, permineralization, coalification, carbonization and wetwood conservation -- Technically altered wood products.
Sommario/riassunto	This unique and attractive open access textbook combines the beauty of macroscopic pictures of plant stems with the corresponding

colorfully stained images of anatomical micro-structures. In contrast to most botanical textbooks, it presents all the stem characteristics as photographs and shows the microscopic reality. The amount of text is reduced to a minimum, and the scientific information is highlighted with short legends and labeled photographs, allowing readers to focus on the pictures to easily understand how the anatomical structures relate to genetic, ecological, decomposition and technical influences. It includes a chapter devoted to simple anatomical preparation techniques, and further chapters showing the cell content, cell walls, meristematic tissues and stem structures of all major taxonomic units and morphological growth forms in various ecological and climatic regions from subarctic to equatorial latitudes, as well as structures of fossil, subfossil and technically altered wood. This textbook appeals to students and researchers in the fields of plant anatomy, taxonomy, ecology, dendrochronology, history, plant pathology, and evolutionary biology as well as to technologists.