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Cover

Ancient Sphenopsids

A few representative fossils of *Calamostachys* and *Sphenophyllum*. The Carboniferous fossil *Calamostachys* in the Calamitaceae had cone-shaped fructifications and peltate sporophylls. *Sphenophyllum* (Devonian to Triassic) with its "jointed" branching pattern and broad, wedge-shaped leaves had a solid stem with abundant secondary xylem. It propagated through underground stems called rhizomes which branched periodically to give rise to aerial stems. It is believed that the stems of Calamitaceae were hollow and got transformed into fossils by the compaction and hardening of sediment deposited in them.

Picture Courtesy

Plant fossils collected by Dr. Philip D. Cantino, Professor Emeritus at Ohio University, U.S.A.
Photographed by Tanmay Singh

Foreword

Plant biology originated in prehistory as the discipline that focused on identification and cultivation of plants, making it one of the oldest branches of science. With the introduction of new techniques, modern botany has become a multidisciplinary subject with a spectrum of research disciplines including study of plant structure, physiology, reproduction, evolutionary approaches, taxonomy, molecular genetics and cell biology. We live in an era where the world continues to privilege scientific paradigms. Our approach to pursue phenomenological concepts has led to an improvement in our ability to reflect and has, therefore, increased the scientific literacy, illuminating our work through contributions in the scientific world.

The 66th volume of The Botanica, a prestigious magazine of the Delhi University Botanical Society, is the concoction of commentaries and articles contributed by teachers, research scholars and students. The magazine is largely fueled by articles from the student community encouraging them to inculcate the habit of appraising scientific literature. The magazine has come a long way enlightening its readers spread across the world. This year too, The Botanica maintains its reputation commissioning an eclectic array of articles ranging from diverse fields of plant sciences including plant taxonomy, microbiology, paleobotany, environmental biology, physiology, molecular biology and reproductive biology.

On behalf of the Department of Botany and Delhi University Botanical Society, I congratulate the Editorial team of The Botanica, especially Prof. Rupam Kapoor (Editor-in-Chief) for her insightful ideas and her ability to keep everything organized and on schedule, playing a pivotal role in preparing this volume of Botanica. I hope the magazine would carry its tradition to encourage and persuade young minds to foster in them the practice of reading and writing.



Ved Pal Singh
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and
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March 10, 2017 Delhi University Botanical Society