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IPSD: e-repository of Permian seeds from Indian Lower Gondwana

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ABSTRACT. The interest and importance of studying the reproductive strategies of Palaeozoic plants are growing. Fossil seeds play an essential role in this line of study, as they are widely described from different sedimentary formations throughout the Permian period. The Indian Permian Seed Database (IPSD) software will be an information system for ensuring the storage, safety, accessibility and recovery of the details of Indian Permian seed records in a selective manner. The current database includes 28 genera and 44 species of compressed seeds described from Lower Gondwana (Permian), with all the details for researchers. The software provides options for addition, deletion, modification and search facility. The search also includes different options (single or combination). It is a quick and organised way to look for seeds, especially on a data grid for information about seeds that have already been published in the same or different sediments. IPSD is a tool for the computer-based identification of seeds and distinguishing different genera or species within the same category. It is user-friendly and provides updated knowledge of seeds from the Lower Gondwana basins of India. It provides morphotaxonomical characters, distribution and photo documentation of seeds. The software increases accuracy through computer-assisted identification of seeds. Hence, reducing and curtailing unnecessary information while describing a new species with inadequate earlier knowledge of Permian seeds.

KEYWORDS: Database, Gondwana, Permian, photo documentation, seed, IPSD

DATABASE URL: http://14.139.63.228:9092/SeedDatabase/Login.aspx

INTRODUCTION

The *Glossopteris* leaf dominated the Gondwanaland flora during the Permian period. Along with the *Glossopteris* leaves, a good number of seeds were also described by different authors. The flora was dispersed, pronounced by the presence of naked gymnospermous seeds. The seeds described mainly by previous authors were found in the sediments in dispersed conditions. There are two types of seeds recognized: radiospermic and platyspermic, based on the type of plane in which they are preserved (Pant et al., 1985). The radiospermic seeds are preserved in more than two planes, while the platyspermic seeds are preserved in only one plane. The Lower Gondwana seeds are mostly platyspermic. Their importance was recognised after phytostratigraphic and evolutionary studies. They play an essential palaeobotanical role for geological, evolutionary and biostratigraphical studies. Recognising the importance of platyspermic seeds gained momentum after Maithy

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