

GEOLOGY AND MINERAL RESOURCES OF ODISHA

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Palaeontological Records

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1. INTRODUCTION

Palaeontological records provide very interesting information about the early history of the earth. Fossils help in establishing the geological age and order of superposition of a sedimentary formation along with their correlation with the other formations. Systematic study of the fossils depicts the distribution of life on land and sea, changes in climatic conditions, palaeoecology, palaeoenvironment, palaeogeography, palaeolandscape, palaeovegetation and such other ancient geographical features on the surface of the earth. Fossil science also facilitates in depicting vegetational reconstruction and revealing missing links of the plant and animal kingdom, which became extinct since long and in establishing a full picture of the organic evolution, fixing their geological age and establishing a correct classification of the organic world.

Rich assemblages of mega fossils, palyno-fossils and ichno/trace fossils have been reported from different Gondwana basins of Odisha (Fig. 1). Besides trace fossils, sporadic animal fossils have been observed in the Gondwana and Tertiary sediments. Plant microfossils have also been reported from Precambrian Koira Group of rocks.

2. GEOLOGICAL SETTING

Odisha forms the north-eastern part of the Peninsular shield for which its major portions are covered by Precambrian rocks. Approximately 25 percent of the total area of the state is covered by Phanerozoic rocks. A generalised stratigraphic succession of Phanerozoic rocks of Odisha is given in Table-1.