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Palynofloral Evidences from Sub-surface Sediments of Bhadrawati Area, Wardha Valley Coalfield, Central India

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Abstract

The present palynological study has been carried out on the sub-surface sediments of Wardha valley coalfield, intersected in Bore-hole No. BK-149, drilled at Kesurli village, in the vicinity of Bhadrawati area, Chandrapur District, Maharashtra State, India. The palynoflora contains dominant striated disaccates genus *Striatopodocarpites* in association with *Faunipollenites.* However, in sample No. 3 (257.89m) *Faunipollenites* dominates over *Striatopodocarpites.* Existence of monosaccates *Striamonosaccites* along with *Parasaccites* in lower frequency is recorded from younger horizons of this Bore-hole. Other stratigraphically significant palynomorphs of the assemblage includes *Verticipollenites, Scherungipollenites, Tiwariasporis, Inaperturopollenites, Cyclogranisporites, Crescentipollenites, Klausipollenites, Ibisporites, Falcisporites, Weylandites* and *Playfordiaspora*. This assemblage has shown closer affiliation with Late Permian palynoflora reported from Raniganj/Bijori Formations of different Gondwana basins of India, *e.g.*, Wardha valley coalfield, Maharashtra, Godavari valley, Andhra Pradesh and Telangana, Satpura, Son-Mahanadi and Singrauli coalfields, Madhya Pradesh, Auranga coalfield, Jharkhand, Damodar and Raniganj coalfields, West Bengal and Talcher coalfield, Odisha. The present palynological study has provided supporting evidence for the deposition of sediments of Late Permian age in Bhadrawati area of Wardha valley coalfield. It has also been inferred that the Lower Gondwana deposition in the region initiated with cold climate that changed to warm and humid conditions at later stages.

Keywords: Late Permian palynoflora, Kesruli, Chandrapur District, Wardha valley coalfield, Maharashtra, Central India.