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To:
Prof. K. Laxma Reddy,
Organizing Secretary,
Telangana State Science Congress - 2018,
National Institute of Technology - Warangal.

Sub: Submission of Abstract for "Telangana State Science Congress - 2018" – reg.

Sir,

I am here with submitting the abstract of our research paper entitled ***"Palaeoecological significance of non - striate disaccate pollen from Yellandu coal field of Godavari graben, Telangana State"*** (Authors: **D. S. Seetharam and H. Ramakrishna**) for **Oral presentation** in **"Telangana State Science Congress - 2018 (TSSC – 2018)"** to be held on 22nd - 24th December, 2018 at National Institute of Technology, Warangal, Telangana State, India.

I will be grateful, if you accept and acknowledge by e-mail.

Thanking you.

Yours sincerely,

(Prof. H. RAMAKRISHNA)

Palaeoecological significance of non - striate disaccate pollen from Yellandu coal field of Godavari graben, Telangana State.

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ABSTRACT

The present palaeopalynological study deals with the palaeoecological significance of non - striate disaccate pollen from bore hole Q-563 of Yellandu coalfield (Jawahar Khani-5 coal block), kothagudem sub-basin and used to determine the age and palaeoclimatic interpretations of the study area based on the pollen morphological characters. For the palynological investigation sixty samples were thoroughly analyzed from the study area. The samples were processed by standard palynological method (Traverse. A, 1988) using acids like hydrochloric acid (HCL), hydrofluoric acid (HF) and concentrated nitric acid (HNO3), followed by 10% alkali (KOH) treatment.

The qualitative and quantitative analysis of bore hole Q – 563 reveals that the palynoflora is composed with gymnosperm pollen, pteridophytic spores, acritarchs and thecamoeibians. In which well preserved and fairly diversified palynofloral assemblages of Gondwanic affinity were recorded from the coal sediments. About 30 genera and 50 species of palynomorphs, belonging to Glossopteridales, Coniferales, Cordaitales of gymnospermous pollen followed by Filicopsida of pteridophytic spores, few acritarchs of Prasinophyceae, Schizomorphitae, and Zygnematophyceae affinity and thecamoeibians of Arcellidae (protist) were also recorded.

In the present communication the palynoflora belonging to Glossopteridales viz., *Scheuringipollentites* spp., *Ibisporites diplosaccus*, *Primuspollenites* spp. and *Sahnites* spp. etc., were given. Frequency distribution pattern of the palynotaxa reveals that the assemblage is dominated by the non - striate disaccates (51%) followed by striate disaccates (21%), monosaccates (12%) of gymnosperm and pteridophytic spores (2%). Predominance of non - striate disaccate pollen indicates a warm and humid climatic condition with fluvial environment of deposition of the Yellandu sediments. The diversified palynoassemblage of both non striate and striate disaccate pollen strongly suggests that the Yellandu coal belt of Godavari graben is assigned to Barakar Formation of Early Permian affinity.

Keywords: Non - striate disaccate pollen, Palaeoclimate, Barakar Formation, Early Permian, Yellandu Coal field, Godavari graben and Telangana State.