Date: 24-10-2018.

From:

Prof. H. Ramakrishna M.Sc., Ph.D., F. Pb. S., F. B. S.
Palaeobotany-Palynology research lab,
Dept. of Botany, University College of Science,
Osmania University,
Hyderabad-500007,
Telangana State, India.
Email:hrkpaleobot@gmail.com.
Mobile: 9391077923, 9550714351

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/Madam,

I am here with submitting the abstract of our research paper entitled ***"Pollen analysis of spider Webs from Nehru Zoological Park, Hyderabad, Telangana State – An aeropalynological study"*** (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)

Pollen analysis and Aeroallergens of spider Webs from Nehru Zoological Park, Hyderabad, Telangana State – An aeropalynological study.

D.S. Seetharam[#] and H. Ramakrishna[*]

Palaeobotany & Palynology Research Laboratory, Dept. of Botany, University College of Science, Saifabad, Osmania University, Hyderabad, Telangana State, India, 500004.

Email: dsdssiddhu8@gmail.com, hrkpaleobot@gmail.com (Corresponding author).

ABSTRACT

Pollen analyses of spider web samples were carried out from the Nehru Zoological Park, Hyderabad. Fifteen samples of spider webs were collected from in and around Nehru Zoological Park during winter season from November, 2015 to January, 2016. And samples were processed by using HCL and HF treatments then *Erdtmans* (1943) acetolysis technique. The main objective of the present investigation is to know the relationship between the regional vegetation and also the allergenic pollen components of the study area.

A total of about 31 pollen grains along with fungal spores were encountered. The study revealed the dominance of pollen grains of herbs, shrubs and trees, over fungal spores. The predominant pollen grains were *Prosopis julifera, Peltophorum pterocarpum, Cocos nucifera, Eucalyptus globulus, Albizia lebbeck* and *Pithecellobium dulce,* whereas fungal spores i.e., *Alternaria* sp., Ascospores, *Torula* sp. and *Curvularia* sp. In this study the following allergenic pollen viz., *Abutilon indicum, Albizia lebbeck, Ageratum conyzoides, Cocos nucifera, Peltophorum pterocarpum, Syzygium cumini, Tridax procumbens, Xanthium strumarium* and Poaceae pollen and fungal spores viz., *Torula* sp., *Curvularia* sp., *Alternaria* sp., and Ascospores were recorded. The qualitative and quantitative analysis of spider webs reveals that pollen grains (82 %) are predominant than fungal spores (18 %). The dominant morphotype in this area was *Prosopis julifera* (20.54%) followed by *Peltophorum pterocarpum* (10.4%), *Cocos nucifera* (10.22%), *Eucalyptus globulus* (7.16%), *Albizia lebbeck* and *Pithecellobium dulce* (4% each), *Acacia nilotica* (3.34%), *Acacia chundra* (3.16%), where as fungal spores viz., *Torula* sp. (4.46%), *Curvularia* sp. (4.38%), *Alternaria* sp. (3.57%), Ascospores (3.34%) and *Pithomyces* sp. (2.25%) etc.

The present study is helpful to understand the pollen–vegetation relationship and also helpful in analyzing the allergenicity of various aerobiota in the study area causing asthma, allergenic rhinitis, seasonal allergy (hay fever), Pollinosis, naso-bronchial allergy and other respiratory problems like contact dermatitis, conjunctivitis and other health disorders of wild life and people of the study area. Hence spider webs act as natural pollen traps and are useful to know the incidence of allergy causing biological agents in Nehru Zoological Park, Hyderabad.

Keywords: Pollen analysis, Spider webs, Aeropalynology, Pollinosis, Nehru Zoological Park, Hyderabad.