CONCLUSIVE REMARKS

The results have been summarized below :

- From the floristic survey of Jalpaiguri town of West Bengal, India, a complete picture of the floristic composition of the investigated area, together with the pollen of the most dominant plants, essential for identification of airborne pollen grains have emerged. The survey results revealed a heterogenous composition of related and unrelated taxa. A total 709 species under 491 genera and 134 families have been enlisted. There are 29 monocot families consisting of 106 genera and 135 species and 105 dicot families having 385 genera and 574 species. This survey revealed that Fabaceae was found to be the most dominant family followed by Asteraceae, Poaceae, Euphorbiaceae and Rubiaceae. Statistically the flora was dominated by herbs (360 species). It was found that entomophilous plants were predominant consisting of 477 species. Seasonal distribution of the flora showed that highest flowering occurred during September-October.
- Pollen morphological studies of 108 common plant species of Jalpaiguri town was done, based mainly on apertural types for identification of airborne pollen grains.
- A total of 32 pollen types were identified from two years volumetric aerobiological survey by using rotorod sampler and 39 pollen types were identified by gravity slide method. High abundant types originated from Poaceae, Asteraceae, Solanaceae, *Cannabis sativa, Cassia* sp. etc.
- Seasonal periodicity was studied for all the pollen types. The highest incidence of total pollen was recorded in between November-February and minimum in between July and August. The frequency of pollen grains depended mainly on meteorological factors as a result of fluctuations of pollen concentration in different seasons.
- From the results of skin-prick test, some important allergenic pollen types viz. *Eucalyptus globulosus Saccharum, spontaneum, Azadirachta indica, Areca catechu, Cassia siamea* and *Borassus flabellifer.* were identified. It was observed that the allergenic intensity of pollen was not related to its abundance in the air.
- The fraction II i.e. 30-60% ammonium sulphate cut fraction of crude antigens of the eight selected pollen were found to be the allergenically highly potent.