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STUDY FIRST LINKS WEATHER WITH NATIVE POLLEN DISTRIBUTION

A study by Australia's leading respiratory research organisation has found changes in the weather can influence the timing and incidence of airborne pollen emitted by the Australian native Cupressaceae, Casuarinaceae and Myrtaceae species.

As the first research project of its kind in Australia, the biometeorological study aimed to assess the relationship between weather parameters and the airborne distribution of Australian native arboreal pollen (ANAP), and to demonstrate the incidence of these types of pollens on Australia's eastern seaboard.

The results, recently published in the overseas journal *Aerobiologia*, found ANAP accounts for 18.4% of the total annual pollen count in Brisbane. It is distributed throughout the entire year in relatively low concentrations, reaching a peak during the months August to November during the Cupressaceae season.

Mr Brett Green, Researcher, Woolcock Institute of Medical Research, said pollen shed by the Australian native species are considered to be important aeroallergens overseas, however not enough is known about the incidence of allergy and asthma to ANAP within Australia.

"The results of the Brisbane study show concentrations of ANAP high enough to exacerbate respiratory symptoms were restricted to a brief period each year, and were recorded on 100 days during the five year sampling period," he said.

"However the annual distribution of smaller concentrations of Eucalyptus and Casuarina pollens represent a continual exposure risk, as these pollen types share the same allergens as the allergenically important pollen of grass and Cupressus species."

The seasons recorded in Brisbane are comparable in timing to those in temperate regions including Sydney and Melbourne, with seasonal pollen loads in the temperate regions significantly higher than in Brisbane.

The Woolcock study found daily concentrations of the Cupressaceae and Casuarinaceae pollen were found to be significantly associated with maximum and minimum temperatures and rainfall during the study period. The Cupressaceae pollen season was of greater intensity when the average pre-seasonal rainfall was greater than 1 mm.

The timing of the Myrtaceae season was significantly related to the pre-seasonal average maximum temperature. The pollen season occurred earlier in the year when the average pre-seasonal temperature exceeded 21°C.

"The next stage of the study will be a clinical population based study to assess the pollen's importance as a sensitising source," said Mr Green.