

Not to be sneezed at

A case for pollen monitoring in Aotearoa



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Would it surprise you to know that airborne pollen is not monitored in Aotearoa?

The MetService pollen forecast and Allergy NZ's pollen calendar are based on flowering times, but not from actually measuring the pollen in the air.

At the **Aotearoa Airborne Pollen Collective (AAPC)**, we decided to measure the daily airborne pollen for one year in Tāmaki Makaurau, using a sampler on the roof of the Auckland Museum.

One study of airborne pollen in Tāmaki Makaurau was conducted in the summer of 1988/1989. We compared these results of airborne grass pollen (a major allergen) to our record from the 2023/2024 summer.

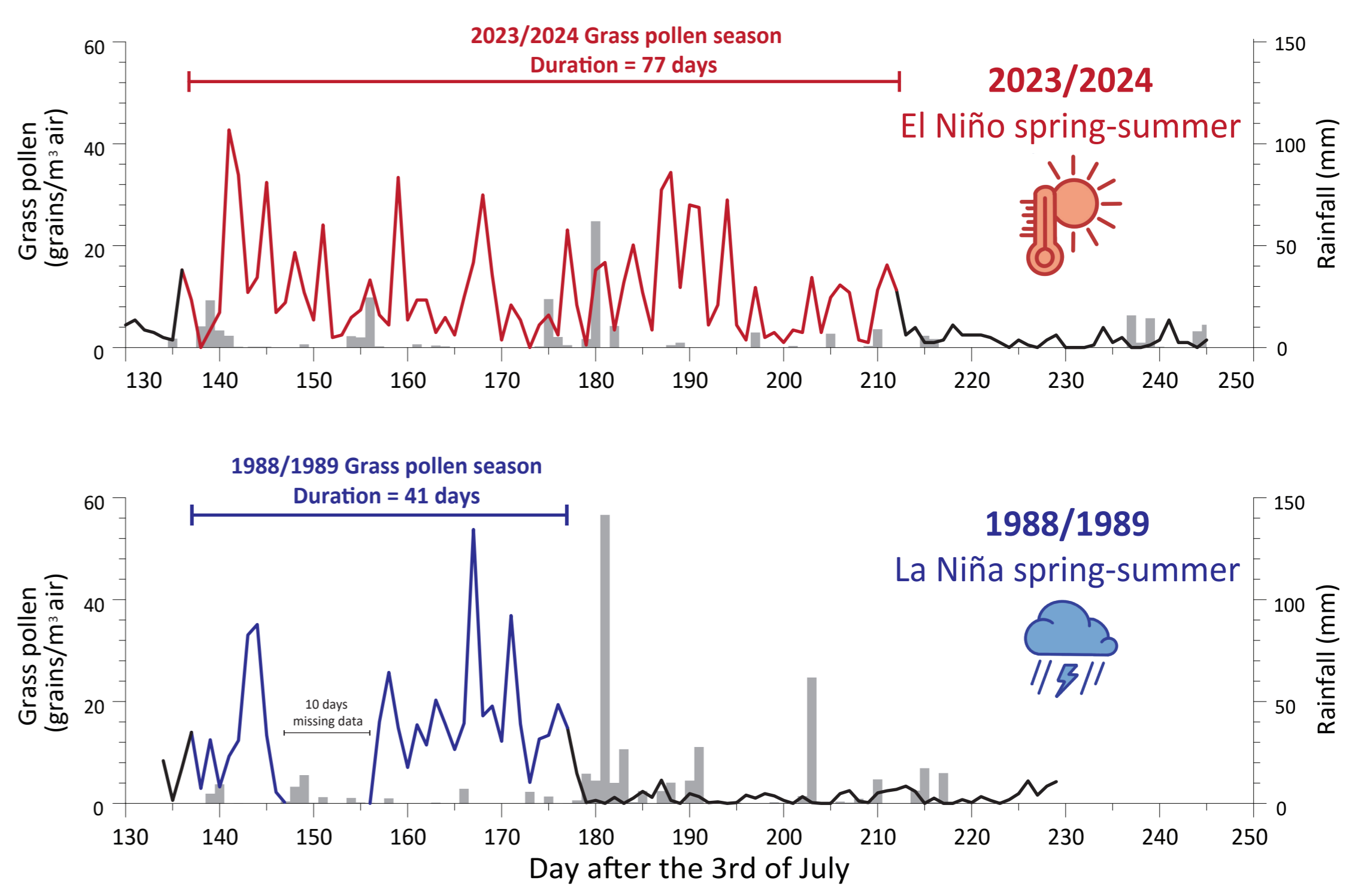
Why is this work important?

Our preliminary results indicate that airborne pollen in Tāmaki Makaurau differs from the MetService and Allergy NZ pollen forecasts and can vary from year to year depending on climatic conditions.

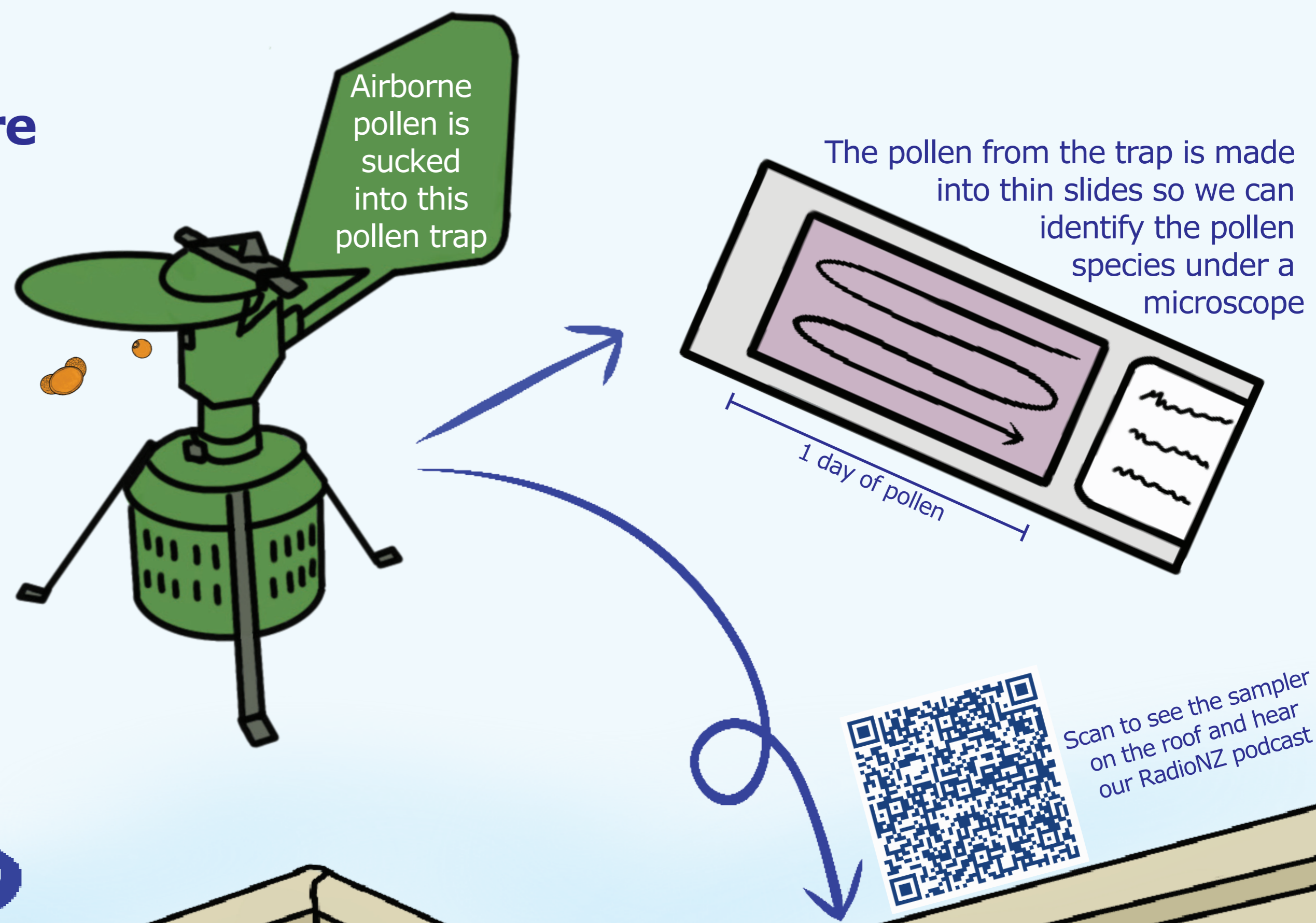
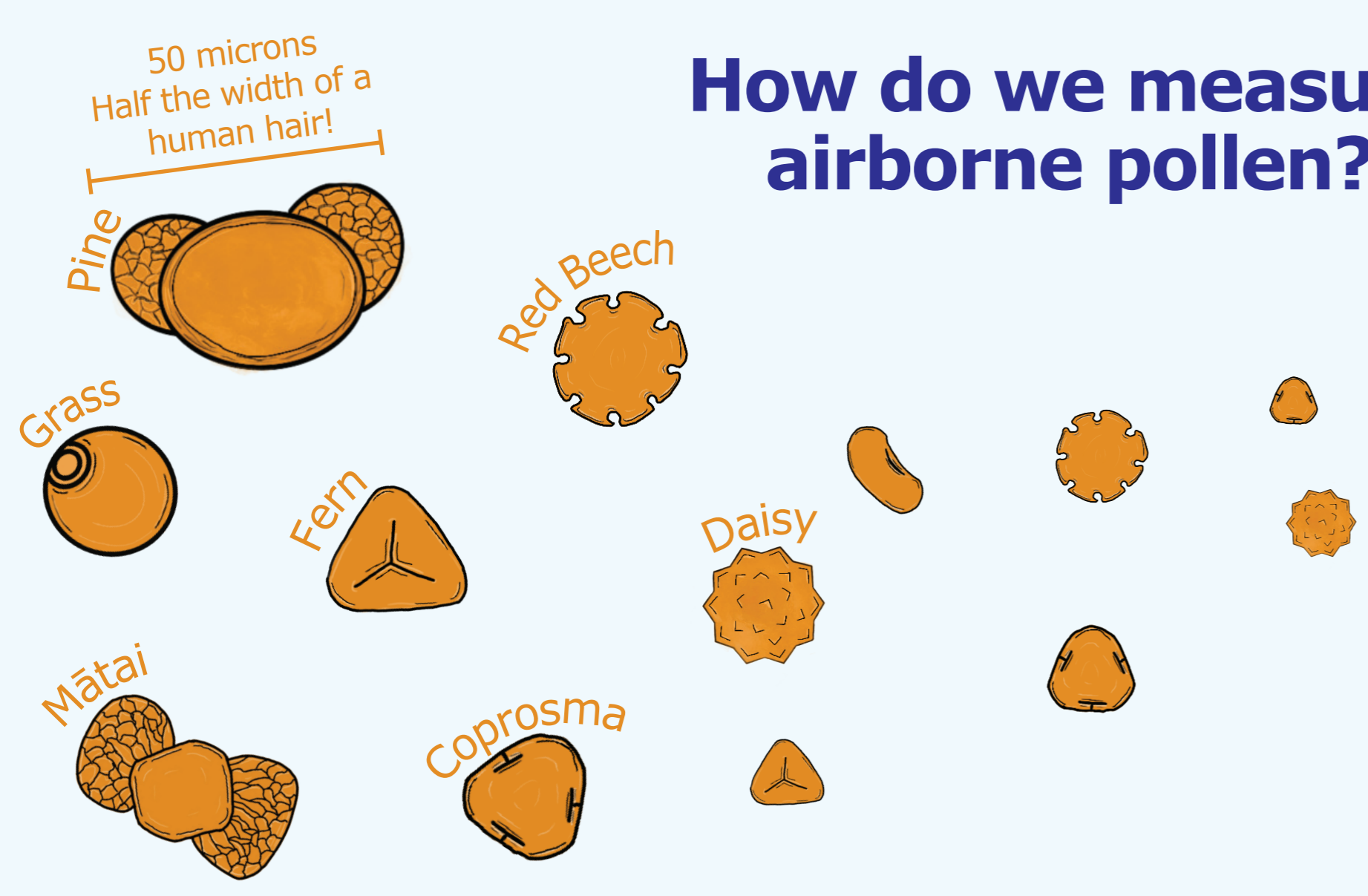
For asthma and hayfever sufferers, having accurate information about pollen allergens in the air is key for managing symptoms and treatments.

El Niño Southern Oscillation (ENSO) impact on grass pollen

- The 23/24 grass pollen season was 36 days longer than the 88/89 season.
- The longer 23/24 grass pollen season occurred during the El Niño phase of ENSO, where temperatures were warmer and there was less rainfall.
- The 88/89 grass pollen season occurred during a La Niña phase, where there was higher rainfall.



How do we measure airborne pollen?



Where to next?

This work is manual and time consuming. We aim to implement an automated pollen sampler in Tāmaki Makaurau to give people real-time airborne pollen information. However, this will require AI training for Aotearoa's native pollen taxa.

The sampler has been on the roof of Auckland Museum since July 2023