

Main Pollen Types Identified in Aerobiological Stations of the Latin American Aerobiology Network (Red Latinoamericana de Aerobiología - RLA)



O. Calderón-Llosa,^{1,2} I. Chérrez-Ojeda,^{3,2} B. Bolaños,^{4,2} P. Mardones,^{5,2} L. Barrionuevo,^{6,2,13} R. García-Almaraz,^{7,2} P. Alcaraz,^{8,2} R. Moreton,^{9,2} N. Rosario,^{9,2} E. Sánchez,^{10,2} S. Renato,^{11,2} G. Ramón^{12,2}

1. SANNA / Clínica el Golf, San Isidro, Lima, Peru; 2. Red Latinoamericana de Aerobiología; 3. Universidad de Especialidades Espíritu Santo (UEES), Samborondón, Ecuador; 4. University of San Juan, Puerto Rico, Medical Sciences Campus; 5. Fundación de Aerobiología, Medio Ambiente y Salud, Santiago, Chile; 6. Laboratorio Melisopalinología, Bahía Blanca, Argentina; 7. Hospital Infantil de Tamaulipas Ciudad Victoria, México; 8. Hospital de clínicas - Facultad de ciencias médicas UNA, Asunción, Paraguay; 9. Centro politécnico da Universidade Federal do Paraná, Curitiba, Brasil; 10. Universidade Federal do Paraná, Brasil; 11. Universidad de Salamanca, Spain; 12. Centro Federal de Educacao Tecnológica de Minas Gerais, Brasil; 13. Instituto de Alergia e Inmunología del Sur, Bahía Blanca, Argentina

Background:

The Latin American Aerobiology Network is a collaborative group of active aerobiological stations located in various cities across Latin America. This study aimed to report the main pollen types identified in the cities within the RLA, which could potentially affect allergic patients with pollinosis traveling from other latitudes.

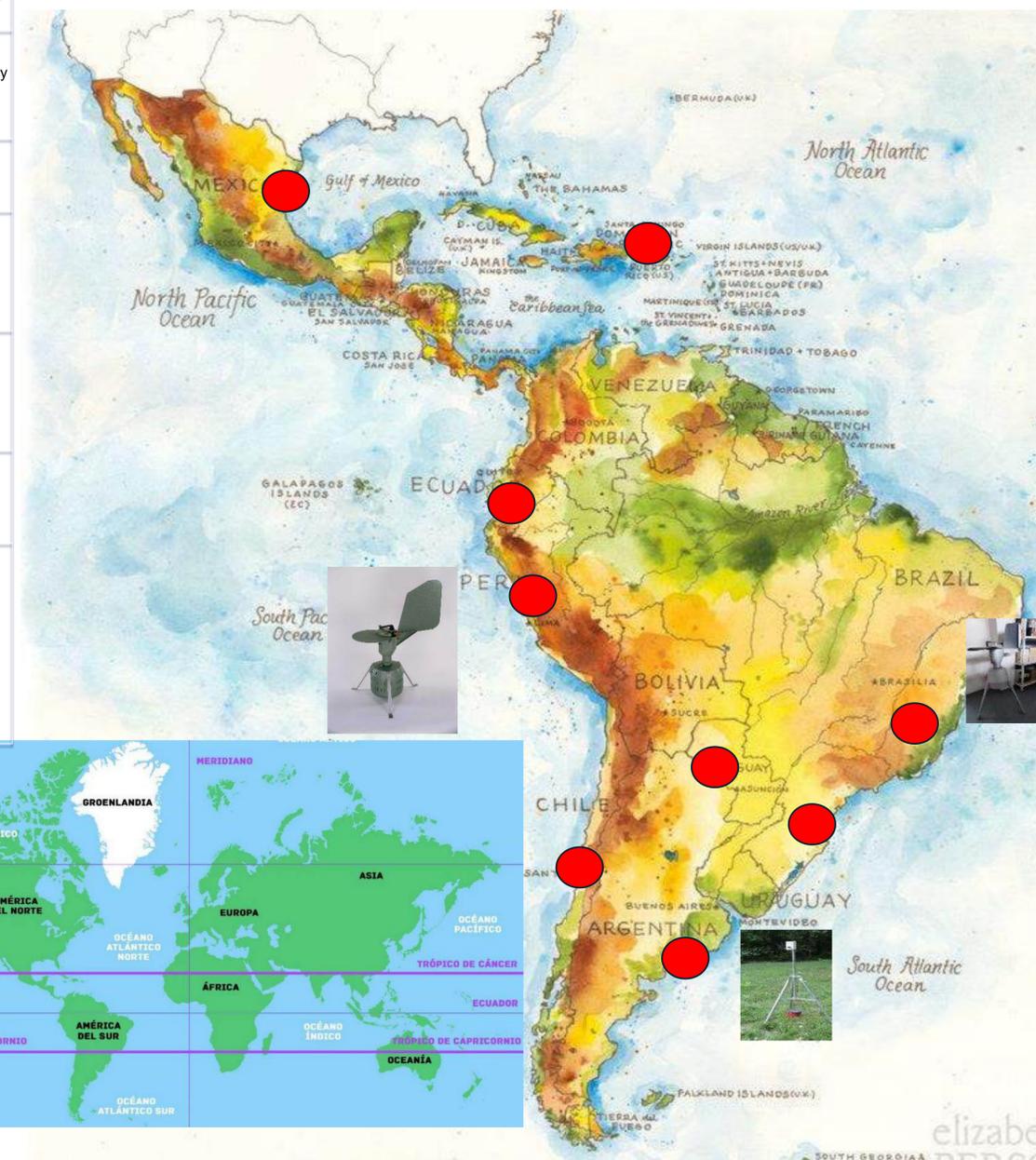
Methods:

Data was collected from RLA coordinators, using Rotorod M40® and/or Burkard/Lanzoni spore traps for 7-days sampling intervals. We followed National Aerobiology Board (NAB) pollen counter guidelines, according to the American Academy of Allergy, Asthma and Immunology (AAAAI). The selection of pollen types was based on their frequency and seasonal variation.

Results:

- **Argentina (Bahía Blanca), Poaceae (grass)** was the most abundant, peaking from November to January, Olea europaea (olive) and Amaranthaceae were also significant. [\(Rotorod M40 device\)](#)
- **Brasil (Curitiba), Poaceae** dominated, with peak concentrations from September to November. In **Minas Gerais**, the station is still in the early stages of data collection, and results are being compiled for future analysis. [\(Lanzoni trap\)](#)
- **Chile (Santiago de Chile), Poaceae** peaked from September to December, while Olea europaea, Amaranthaceae and Platanus spp. also appeared in significant concentrations.
- **Ecuador (Guayaquil), Poaceae** (the dominant pollen type) had two peaks, one from March to April and another from September to December, Ambrosia spp. was also registered.
- **Paraguay (Asunción),** also showed two **Poaceae** peaks in February and September, also appeared Cecropia spp.
- **Perú (Lima, San Isidro district), Poaceae** (also the dominant type) peaked from November to January, and Olea europaea was identified together with Amaranthaceae.
- **Puerto Rico (San Juan),** tropical pollen types such as Cecropia spp., Mimosa spp. and Rizophora mangle were the predominant, whereas in **Mexico (Ciudad Victoria),** Moraceae, Cupressaceae, and Urticaceae were the main pollen types.

	Poaceae (Grass pollen)	Olea europaea	Amaranthaceae and *Others:
Argentina Buenos Aires (Bahía blanca)	November to January	October to December	January to February
Brasil Paraná (Curitiba)	September to November	-	-
Chile (Santiago)	September to December	November to December	January to March * Platanus spp. (September to October)
Ecuador (Guayaquil)	2 peaks: -March to April -September to December	-	*Ambrosia spp. (November to February)
Paraguay (Asunción)	2 peaks February and September	-	*Cecropia spp.
Perú Lima (San Isidro district)	November to January (Lima)	December to January	October to December
Cusco, Tacna, Arequipa cities	September to December	Tacna and Arequipa September to December	September to December



Grass pollen

Pooideae

Panicoideae
Chloridoideae

Pooideae

Conclusions:

Poaceae (grasses) was the most common pollen type across Latin America, with peak concentrations between September and January, aligning with the Southern Hemisphere's spring and summer. This is important for patients with pollinosis, as it marks a predictable period of heightened exposure. Regional variations in pollen patterns highlight the need for allergists to consider these factors when advising patients, especially those traveling to different areas of Latin America. For that reason, we encourage other aerobiologists to join the RLA, helping to improve the management of allergic diseases in the region.