The contribution of the long-range transport to the presence of *Ambrosia* pollen in NE Spain

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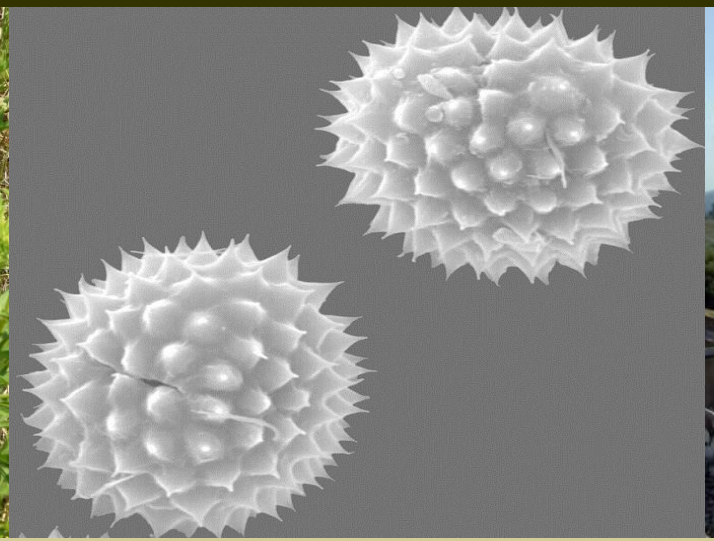

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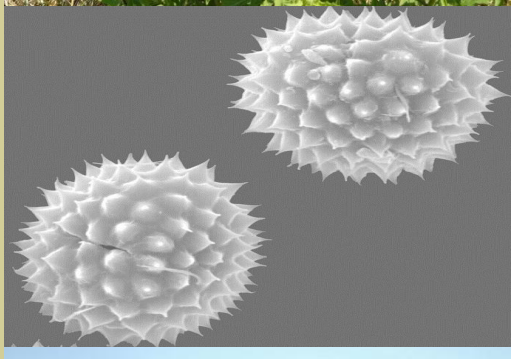
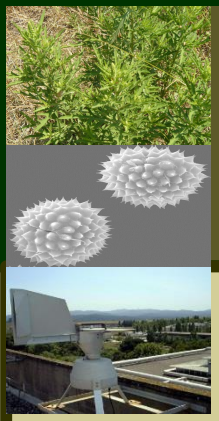
Overall idea

Taking into account that *Ambrosia* is not yet widely distributed in Catalonia, much part of the pollen recorded at the stations of the Aerobiological Network of Catalonia (Xarxa Aerobiològica de Catalunya, XAC) could be originated from allochtonous sources.

- **AEROBIOLOGICAL FOLLOW-UP**
- **STUDY OF AIR-MASS TRAJECTORIES**
- **SOURCE-RECEPTOR MODEL**





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THE ROLE OF LONG-RANGE TRANSPORT ON THE POLLEN RECORDS

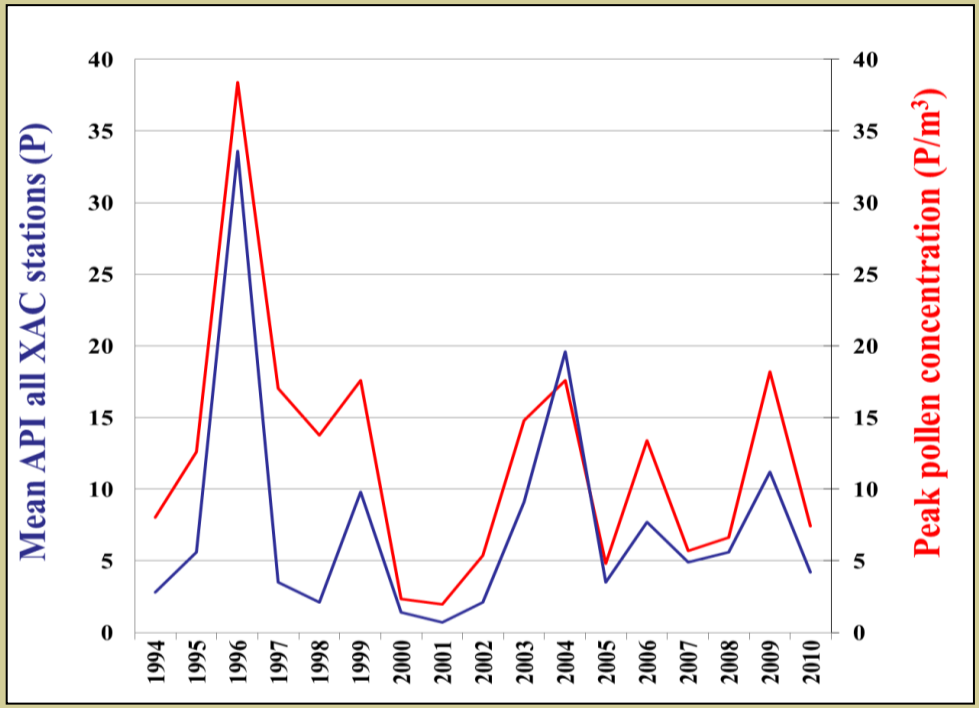
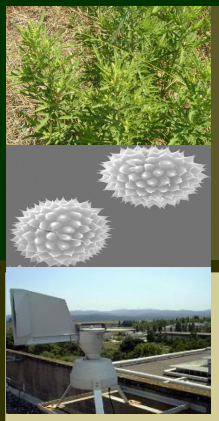


Figure 1. Comparison between the mean Annual Pollen Index (API) of all XAC stations and the absolute pollen peak recorded each year

The mean API for Catalonia appear to be clearly influenced by the peak concentration in the year, which is often linked to episodes of long range transport pollen intrusions. The proportion of the API coming from a peak date varies from 9% (Girona, 14/08/97) to 60% (Tarragona, 07/09/04), with a rate of 32% for all the stations.



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MOST PROBABLE PROVENANCES OF THE POLLEN

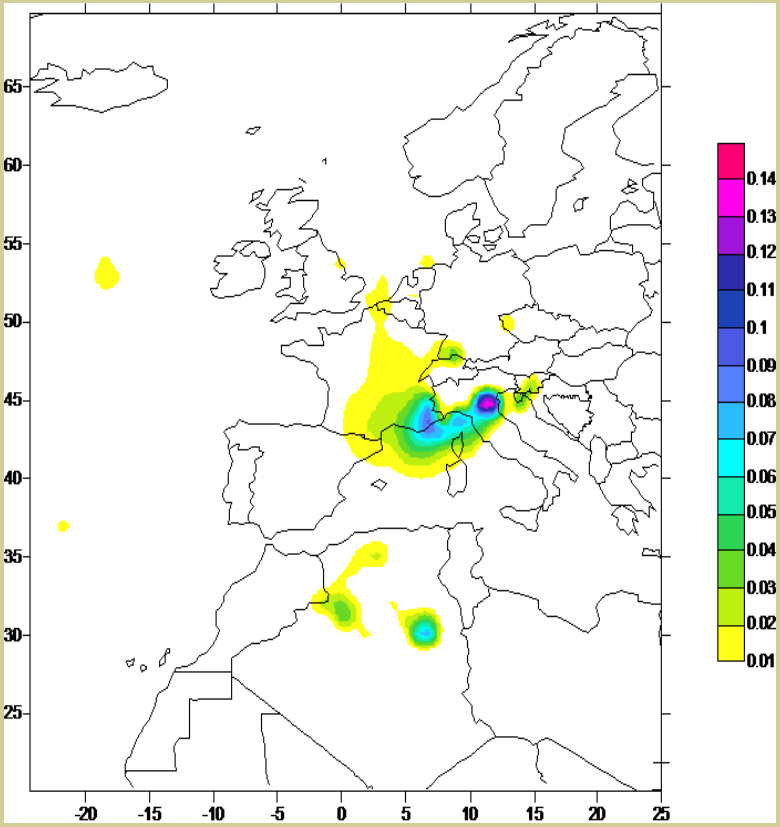

Figure 2. *Ambrosia* concentration field (p/m^3) for the period 1997-2009 (25th June to 10th October) computed at the height of 1500 m.

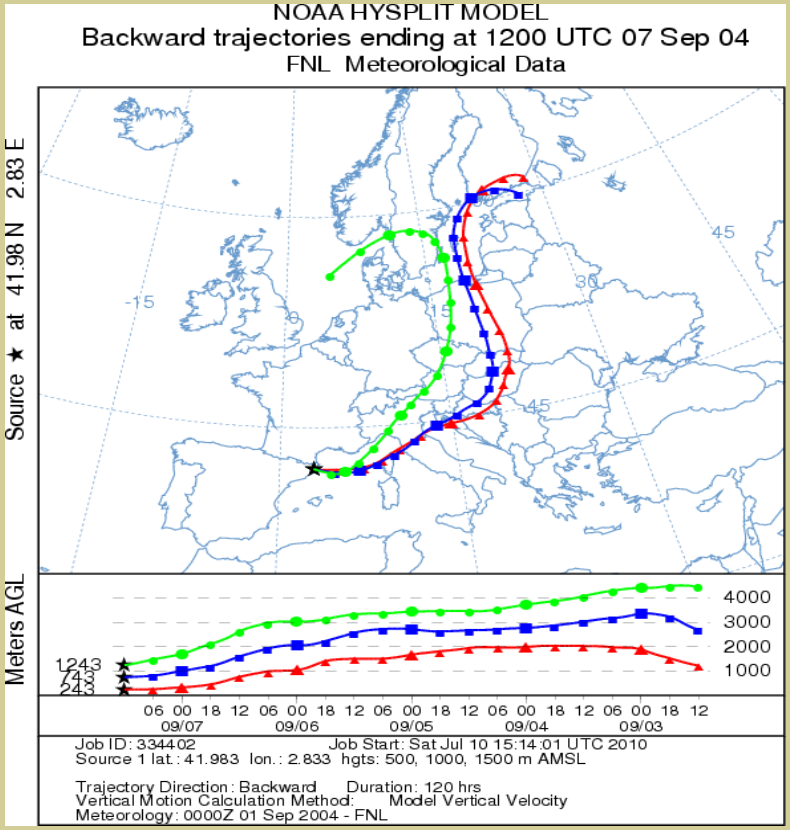

Figure 3. Backward trajectories reaching Catalonia at 12 UTC the 7th September 2004.

Thank you for your attention!

For further information: **http://lap.uab.cat/aerobiologia/en/**

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