

***Quercus* airborne pollen tendencies in the south of Iberian Peninsula, its correlation with meteorological trends and possible effect of the climatic change in mediterranean forests**

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This study analyzes the aerobiological tendencies of the more representative and important native species of the Mediterranean forest. Using pollen registered in the atmosphere of Malaga during 1992-2012 and their relationship with meteorological parameters, have been possible to observe very interesting results concerning annual trends, that could explain possible effects of climatic change.

We have observed significant trends to increase the spring pollen index, the number of days with pollen counts, to advance the beginning of the pollen season and to extend the duration of the pollination period. At the same time, significant annual tendencies for some meteorological parameters have been showed. Not only there is a tendency to increase the temperature, but also to diminish the relative humidity and to increase the sunshine hours. All this suggests that a greater environmental dryness is taking place. It could affect to the formation and development of the floral buds that occur in winter, interesting aspect to investigate. At least in Malaga, and only for this taxon, we have observed that every four years takes place an important peak of pollen index, which in addition coincides with the more dry years. This led us to investigate and to verify if it happened the same in other localities in the south of the Iberian Peninsula. During spring, the humidity is a negative factor for the bouyancy of the pollen grains in the air, therefore its tendency to fall would make increase the pollen index. Using Spearman correlation analysis, we have obtained significant associations between all the studied variables.

On the other hand, there is a tendency to advance the chilling period, as well as to increase the accumulated maximum temperature from December to late February, both factors are probably being the cause of the advance of the beginning of the pollen season, since there was a significant correlation between both variables.

Finally, there was a significant trend for the wind speed to increase.