

Grass pollen counts in Madrid during 37 years. Changes in the tendencies of the total monthly concentration in May and June.



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Poster 1482



Objectives

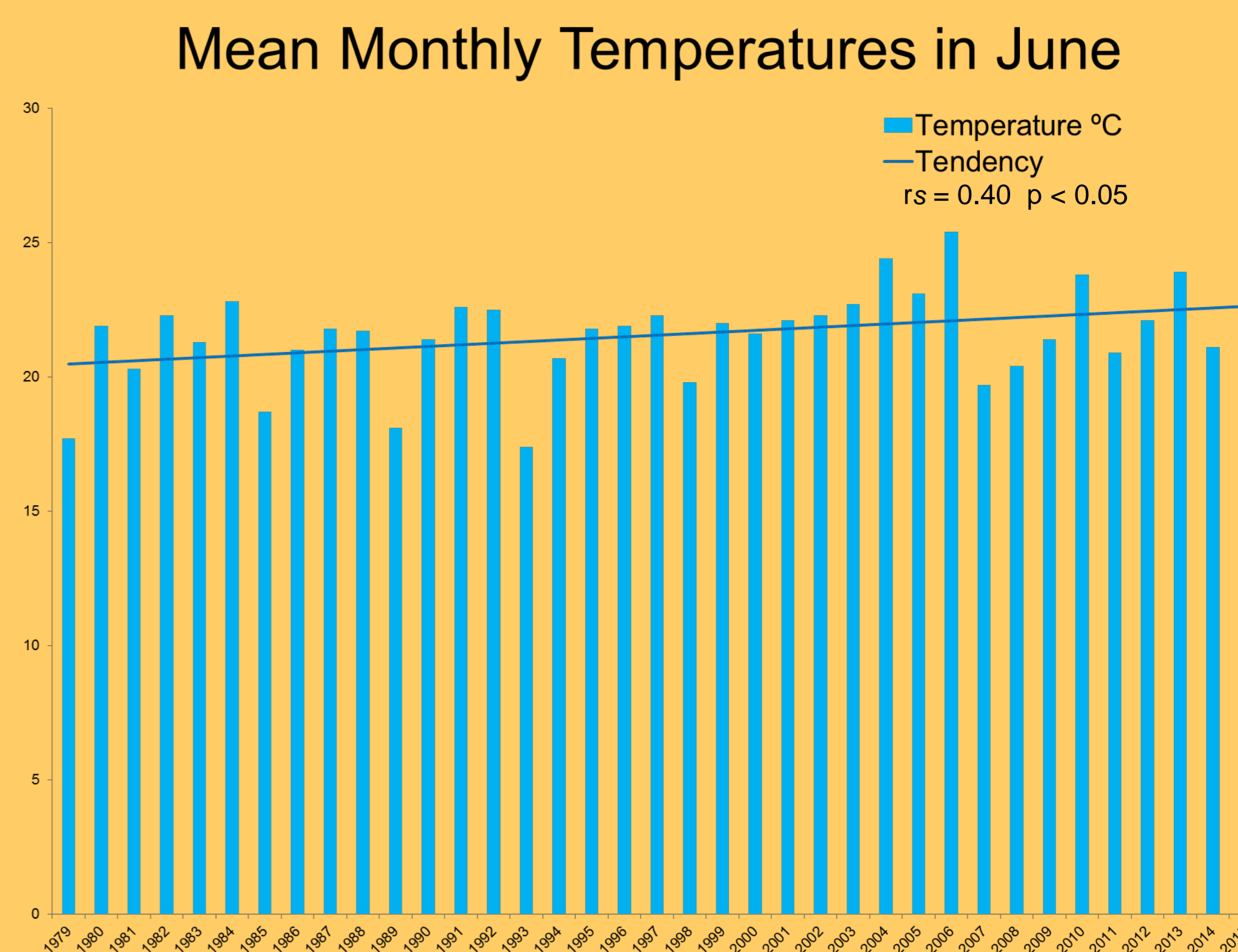
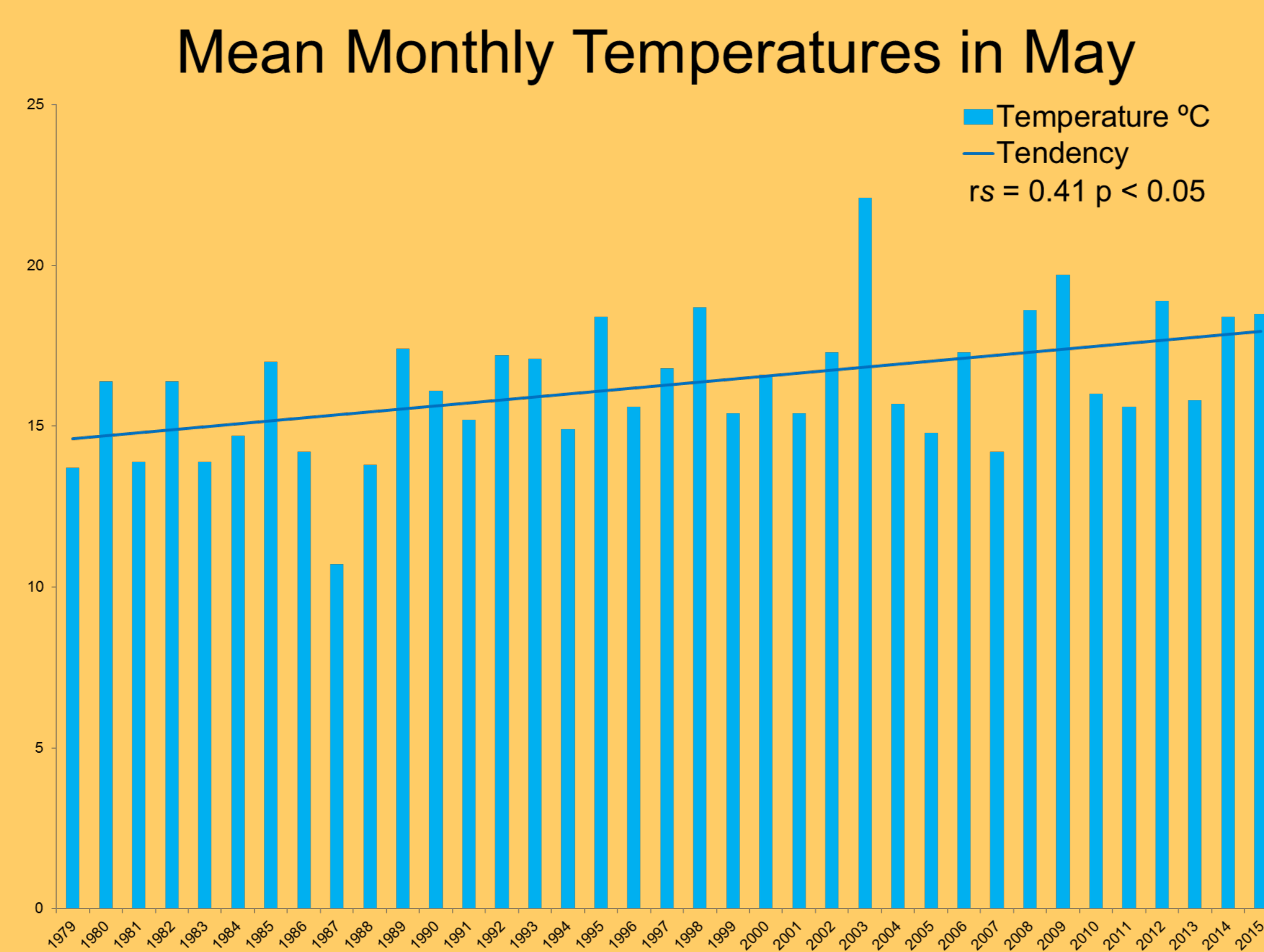
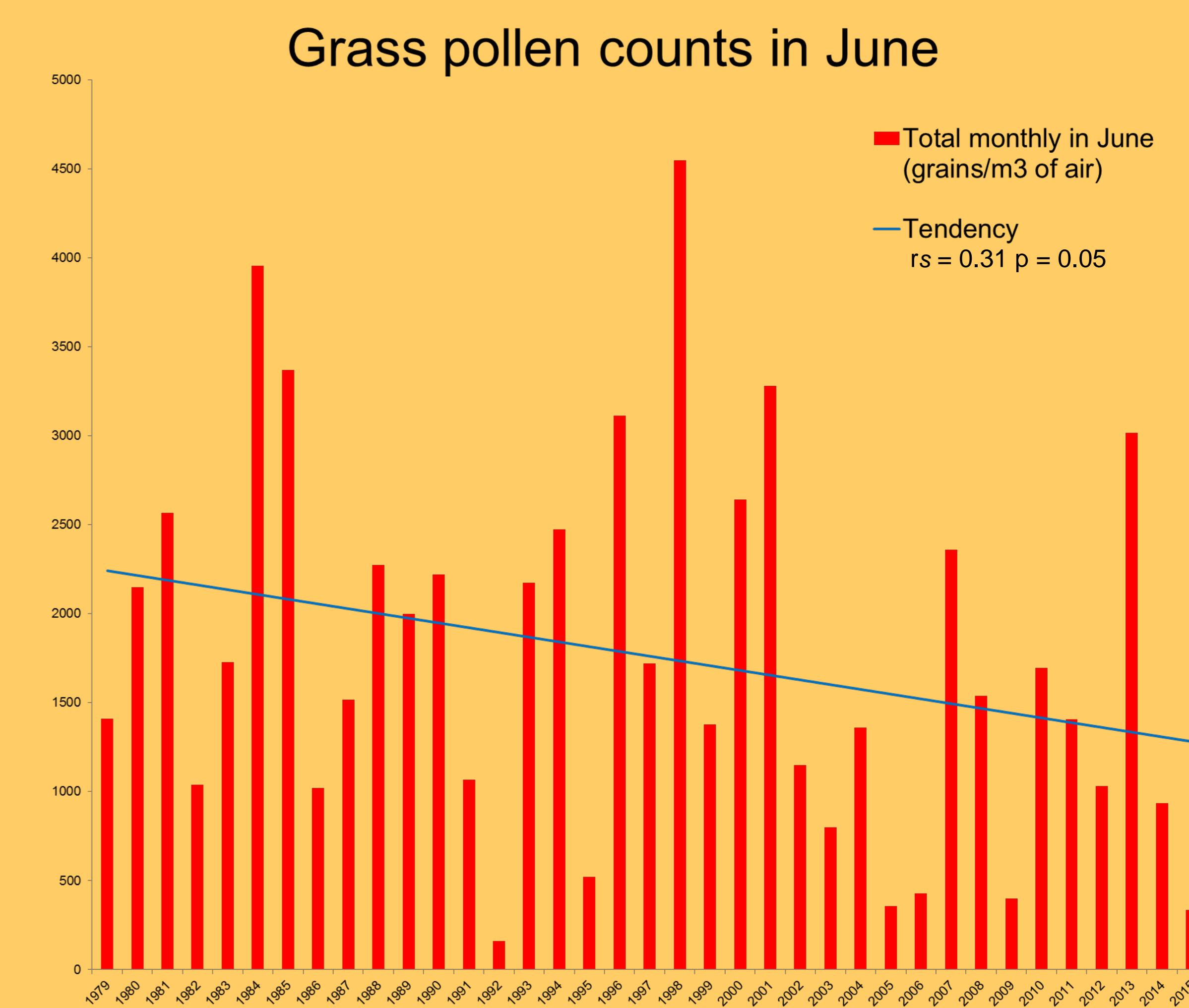
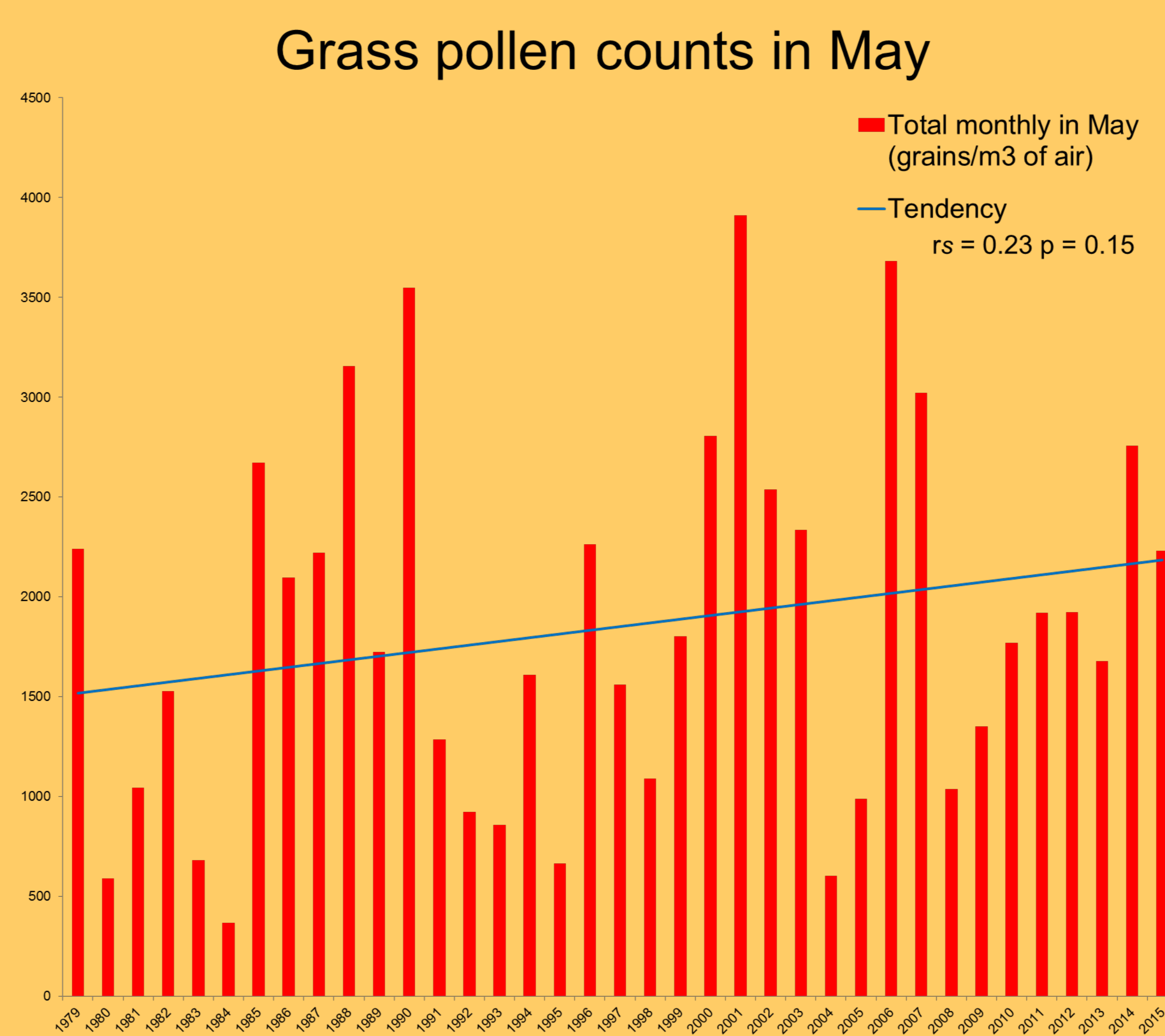
One of the most well-known effects of the climate change is global warming, with an advancing of the summer climate compared to the astronomical summer. The aim of this study was to find out whether this change was affecting the pollination of grasses, the principal cause of pollinosis in our environment.

Materials and Methods

Following standard methodology, we used a volumetric Hirsht spore trap from 1979 to 1982 and a Burkard 7-day recording volumetric spore trap from 1983 to 2015. The Spearman Rank Correlation Test was used to compare the changes in the tendencies of the total annual concentration, the total monthly concentration in May and the total monthly concentration in June

Results

1) There were broad, year-to-year variations in the total atmospheric grass pollen count, (ranging from 1.863 to 7.885, mean 4.580). To the contrary, no significant change in the trend was seen during the 37 year period of the study ($r_s = -0.09$, $p = 0.57$).
2) In the monthly concentration corresponding to May, there was a clear tendency to increase, although such increase was not statistically significant ($r_s = 0.23$ $p = 0.15$). Fig 1
3) The total monthly concentration for June was clearly lower and almost statistically significant ($r_s = 0.31$ $p = 0.05$). Fig 2



Conclusions

The grass pollen concentration in the atmosphere of Madrid is increasingly higher in May, and lower in June, probably as a consequence of the climate change which is causing temperatures to rise (see Figures 2-3). This in turn, causes a more intense pollination in May, and less intense pollination in June, due to the early drying-out of the grasses. These changes are of clinical importance because they are probably causing a change in the behaviour of pollination in Madrid