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Effects of climatic factors and air pollution on damage of London plane (*Platanus hispanica* Mill.)

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London plane (*Platanus hispanica* Mill.) is considered as very tolerant to pollution and other stresses and in the Czech Republic it has been unaffected by important pathogens until now. However, in recent years the health status of London plane has been significantly deteriorating. During an 11-year survey it was found out that development of London plane damage was characterized by important fluctuations. Minimum value of population damage was 3.6% and maximum 97.5%. The health status of London plane was negatively influenced by long-term precipitation totals, higher total precipitation in May, low average air temperatures in January and May and higher NO_x concentrations in the vegetation season. Using the multiple regression analysis a highly significant regression model was obtained, wherein the average air temperatures in January and May explain together 84% variability of London plane population damage. During the period of the highest damage, planes were moreover affected by the pathogen *Apiognomonia veneta* (Sacc. et Spegg.) Höhn.

Keywords:

Platanus hispanica; health status; air pollutants; air temperature; precipitation; anthracnose

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