

City flora

BY NATHALIE MACHON
AND AUDREY MURATET

TRAMPLED, squashed, dehydrated and even eradicated, wild plants in town have a hard life. Yet they resist and return to grow in the smallest of available cracks. With its hectic pace, the city is not built for nature but, in the midst of these entirely artificial surroundings, a flora and a fauna manage to live even though their future seems anything but secure. Extinctions and colonisations follow one after the other with plant populations that can contain just one or two individuals. At this density, reproduction is clearly a challenge!

Urban floristic inventories are not new – in 1635, Jacques Cornut was already listing the plants growing in the Paris region in his *Enchiridion botanicum Parisiense* – the study of urban ecosystem dynamics has today reached a peak. After having studied nature from which man was excluded, the scientist became aware of the interest of towns and cities as experimental laboratories. Also, with the impetus of sustainable development, cities have started to pay attention to their biodiversity. In Europe, cities like Berlin and Halle in Germany, Plymouth and Birmingham in the United Kingdom, Rome and Brussels have taken a closer look at the plant diversity growing out of their walls. In the National Natural History Museum in Paris, we looked at the flora of the *Hauts-de-Seine*, just outside the Paris city walls. This *département* is the most densely populated in France, with 8118 inhabitants per km².

COUNTING AND NAMING

As seen in other studies, the mosaic of urban habitats favours a variety of species – in *Hauts-de-Seine*, we counted 626. In Halle, in Germany, the urban area contained almost 20% more species than the surrounding agricultural land. Mostly, these plants are cosmopolitan and do not represent much conservation value for biodiversity. Many colonise the cracks and gaps in the tarmac, paving and walls of the built-up areas. Others are found in urban lawns, waste-

land, ornamental hedges, roadsides or railway embankments, along waterways, ponds, etc. But some rare species, usually living in rather special habitats, natural relicts in an urban setting, resist. In *Hauts-de-Seine*, we found 5



Plants colonise the slightest crevice, like here on the banks of the Seine near Paris (France).

plants that have heritage value, and three of them – *Cardamine impatiens* L., *Cuscuta europaea* L., and *Thelypteris palustris* Schott – live in the wet habitat bordering the river that flows through the *département*, the Seine. The cosmopolitan species live alongside a fair proportion of exotics – 16% in our study. Whether they were introduced voluntarily or not, they now behave like native plants. Difficult to eliminate when they become invasive, they sometimes cause management problems in parks and gardens. They are mostly found in sites left vacant by the local flora and thus in fact do not cause much disturbance of the urban ecosystems that they invade.



QUESTIONS AROUND TOWNS

Concerning the dynamics of gene flow in the urban habitat, it appears that in spite of the high proportion of built-up area in the *département* – it accounts for about 70% – the seed and pollen migrate from one habitat to another. The exchanges are however more numerous between sites of over 2500 m². A low density of buildings and an urban structure crossed by numerous communications networks favours exchanges between populations.

The floristic inventories will serve as references for the future and will allow the priorities of urban management to be better identified. Do we wish to preserve the natural mechanisms of species dispersion – facilitated for example by a lower proportion of built-up area – or have relict populations? Are city dwellers ready to put up with wild plants in town? As these questions try to make themselves heard at the city gates, it becomes increasingly necessary to find answers: one human being out of two today lives in an urban area. ■

Are townsfolk ready to accept wild plants in an urban setting?

Further reading

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