

Engagement in citizen science about pavement plants, understanding followers and participants' motivation and attitude

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Increasingly, wild plants in our urban environment are seen as part of nature and valuable providers of ecosystem services. However, people across the world are losing their connection with nature and are unaware of the plants in their environment and their importance, especially in urban areas. Engagement with nature through simple activities, e.g. stopping to look at a flower, is linked to nature connectedness and pro-conservation behaviour. Additionally, identifying plants has been found to increase plant awareness. In the Stoepplantjes citizen science project, organized by the Hortus botanicus Leiden, people in the Netherlands are asked to identify plants growing around and in between the pavement. Observations of pavement plants could be uploaded to the Stoepplantjes project website. Promotional newsletters, social media, flyers, activities and planters in the garden were created, in addition to educational posters, books and a project website. Motivations, attitudes and perspectives of participants in plant-related citizen science are currently understudied. In this study, we surveyed not only the participants who contributed data, but also the people who only followed the project online through social media and newsletters. Researching participation is important to improve citizen science efforts now, and in the future. The survey was conducted with adults in April 2022. Out of 241 respondents (72% female, mean age 57 yrs), 116 (48%) were participants and of those, 53 (46%) were experienced nature volunteers. The attitude towards pavement plants of all respondents was very positive (mean score 87.3, 100 sliding scale). Participants were significantly more motivated by research than followers and, participants with nature volunteer experience were more motivated by their connection with nature and personal interest in urban nature than participants without prior experience. The outcomes of this study are relevant for other botanical gardens who are developing or conducting citizen science projects involving plants.