Voluntary and professional contributions to knowledge of the Paris Basin flora

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Abstract

The French National Botanical Conservatories (http://www.fcbn.fr) are involved in citizen science. They manage a collaborative database and they motivate a network of volunteers and professional botanists to contribute to knowledge of flora. Using the National Botanical Conservatory of the Paris Basin (hereafter CBNBP) as a case-study we examined the composition of three datasets – from CBNBP staff , from other professionals and from volunteers – with respect to recorder contribution and spatial and taxonomic biases, *i.e.* how, when, where and what observers record.

The external botanist network contributed 30% of the contemporary data, with 20% from volunteers. In both professional and volunteer networks, only a few observers contributed many records while many observers contributed few records; moreover a high temporal turnover in the participation of observers was noted. For the three datasets, the timing of data collection is greatly determined by floristic atlas projects. Spatial coverage of the external botanist networks was very incomplete and heterogeneous among and within administrative entities because of interest for species rich hotspots, home patch effects and heterogeneous organization of botanical events. Volunteers focused on rare species and professionals on forest species.

An increased understanding of volunteer behaviour gained from analyzing the composition of records could thus enhance the fit between volunteers' interests and the needs of scientific projects. Moreover, data collection by CBNBP staff appeared highly necessary to prevent spatial and taxonomic biases in order to build robust indicators.

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