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Data Article

Data on introduced plants in Zimbabwe: Floristic changes and patterns of collection based on historical herbarium records



Alfred Maroyi

Medicinal Plants and Economic Development (MPED) Research Center, Department of Botany, University of Fort Hare, Private Bag X1314 Alice 5700, South Africa

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ABSTRACT

National herbaria with significant historical plant collections are critical to tracking floristic changes and patterns, which include the introduction and spread of non-native plant species. To explore the importance of herbarium specimen data in understanding floristic changes in Zimbabwe, the plant collections housed by the National Herbarium (SRGH) in Harare, Zimbabwe were utilized with historical specimens dating back to 1870. A list of naturalised plant taxa and collection data were compiled. A total of 2916 plant specimens were recorded, comprising of 401 taxa, 237 genera and 76 plant families. Twenty eight specimens (1.0%) were collected between 1870 and 1908, prior to the establishment of the National Herbarium in 1909 and 123 specimens (4.2%) were collected in the first 25 years of the establishment of the institute (1909–1934). Intensive collection of herbarium specimens of casual, naturalised and invasive alien plant species occurred between 1950 and 1970. This data demonstrates the utility of plant species data housed in the National Herbaria and how such data can be used to map floristic changes and patterns.

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E-mail address: amaroyi@ufh.ac.za

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Specifications Table

Subject area	<i>Biology</i>
More specific sub- ject area	<i>Botany</i>
Type of data	<i>Tables, text file and graph</i>
How data was acquired	<i>Surveys, conducting herbarium studies by documenting exotic plant species housed by the National Herbarium, Harare, Zimbabwe</i>
Data format	<i>Raw, filtered and analyzed</i>
Experimental factors	<i>All parameters of available data were taken and processed based on 2916 herbarium records</i>
Experimental features	<i>Herbarium specimen retrieval</i>
Data source location	<i>Harare, Zimbabwe</i>
Data accessibility	<i>The data are available with this article</i>

Value of the data

- The data are critical in tracking floristic changes and patterns of spread of exotic plant species.
- This data are important for monitoring purposes and also to fill the gaps in plant distributional ranges.
- This data will contribute to better understanding of the ecological impacts of exotic plant species.
- List of herbarium specimens of exotic plant species will help in future research on this category of plant species.

1. Data

Many non-native plants in Zimbabwe were introduced decades ago through agriculture and horticulture. A number these exotics now occupy large stretches of land and form characteristic features of the Zimbabwean flora. The number of plant exotics increase with time, 1449 exotic taxa have been recorded in Zimbabwe, a country comprising about 6000 plant species [1]. But only a handful of exotic plant species are represented in local herbaria, although most of these species are known to be widely distributed than indicated in herbaria. This development is unfortunate as herbaria must provide quality specimens and data that represent an overview of floristic changes over time. Herbarium specimens can also be used to document plant distributional changes such as exotic species expansions. Periodic plant collecting expeditions are important for monitoring purposes and also to fill the gaps in plant distributional ranges. Collection of herbarium specimens helps in the identification of invasive exotics and detection of new introductions.

The herbarium specimens usually contain important historical information about plant species which is critical for scientific studies. Such information on herbarium labels includes the identity of the species and other details such as family, habit, plant height, leaf arrangement, shape, size, flower colour, shape and size. Other important information usually included on the herbarium label include details about the collector, his or her name, collector's number, the locality, year of collection of the plant species, description of the habitat and notes on uses of the plant species if any and also size of the population. For exotic species, experienced collectors usually include information such as life history traits, such as habit, population size and perceived invasion status, whether casual, naturalised or invasive. Pyšek et al. [2] defined a casual alien as a plant species that reproduces occasionally outside cultivation and it does not form self-sustaining populations and relying on repeated introductions for its persistence. According to Pyšek et al. [2], a naturalised species is defined as an alien species that reproduces consistently without direct human intervention, and invasive alien species as a naturalised species that produces offspring in large numbers and at considerable distances from the

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