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Study of alien floral diversity of sambhal district, Uttar Pradesh, India

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Abstract
This accentuates on the variety of different species of plants along with their vernacular names, customs and occurrences in the Sambhal district of Uttar Pradesh in India. With an intent to demonstrate the present state of plant diversity in the district, the study is first of its kind. "Current research has described a total of 63 species of floral plants belonging to 30 families in this field. The study also recognises that because of the very rapid rise in the human population and their increased desire for more use of natural resources, the ecological equilibrium is being disrupted. Proper awareness of plant diversity may also play an important role in planning the conservation and sustainable use of the resources available."

Keywords: sambhal, floral diversity, ecological balance, taxonomy

Introduction

There is immense biological diversity endowed by nature in India, a land of physical, cultural, social and linguistic diversity. "As a consequence, India ranks among the 12 mega-biodiversity nations in the world and consists of 17,000 flowering plant species. With just 2.4% of the world's total land area, it accounts for 8% of the world's biodiversity, 1 2. Utter Pradesh in India is among the prosperous states and has significant historical relevance."

The Sambhal district is a district in India's state of Uttar Pradesh. As one of three new districts in the province, it was announced on 28 September 2011. Formerly, it was called "Bhimnagar". "Bahjoi Town is the Sambhal Head Quarters. Sambhal is 158.6 kilometres (98.5 mi) from New Delhi and 355 km eastwards from Lucknow, the state capital."

With respect to the changes in heavy agriculture, urbanisation, industrialization and other such factors, Sambhal district is yet to be explored. An attempt has been made in the study to encompass the biodiversity of floral in order to provide floral details according to their current status. "The science of description and classification of organisms, essential in theoretical and applied biology, is taxonomy." [3]'

"Floral diversity is one of the basic elements of biodiversity, so knowledge of floral species found in various parts of the world is a prerequisite for conserving ecological biodiversity. It enables us to understand the overall structure and function of an ecosystem [4]. Floral diversity is one of the basic elements of biodiversity, so knowledge of floral species found in various parts of the world is a prerequisite for conserving ecological biodiversity. It enables us to understand the overall structure and function of an ecosystem."

"The K taxonomy. K. Nair [5] is an essential part of biodiversity security, remediation and eco-development. From a taxonomic point of view, the present study aims to highlight the floral diversity of the Sambhal district, which, in turn, will be a valuable source of application in various other fields of biology in general and botany in particular."

Collection, sampling and Identification

First of all, the research field was chosen and split into regions for convenience and systematic study purposes, so as to decipher on floral diversity in the Sambhal district of Uttar Pradesh in India (Figure 1). A general survey of vegetation has been undertaken and numerous floral species have been found, such as herbs, shrubs or climbers. Comprehensive field surveys were carried out in the district during (2018-2019) the different seasons via regular field visits to obtain a full representation of the various floral Species. Floral samples of unique species from fields, natural areas, wastelands, roadsides, railway tracks, parks, lawns, rivers, river banks and other similar locations were collected and photographed during our field trips...In course our field trips, floral samples of unique species from farms, natural areas, wastelands, roadsides, railway tracks, parks, lawns, reservoirs, river banks and other associated locations were collected and photographed to systematically cover almost the whole district.

Floral diversity found in Sambhal District, Utter Pradesh

The current study exerts on decline of the floral diversity, which is in not only an ethical catastrophe but also a significant social, economic and cultural concern. We noted that 63 plant species belonging to 30 families were described in that specific region during the current work, and the results of the analysis are presented in Table 1.."A total of 53 herbs; 4 shrubs, 3 grasses, 2 sedges and 1 climbing species (Figure 2) are including in this study. Amaranthaceae (4 species); Capparaceae (1 species); Cannabaceae (1 species); Primulaceae (1 species); Papaveraceae (1 species); Typhaceae (1 species); Zygophyllaceae (1 species); Scrophulariaceae (1 species); Oxalidaceae (1 species); Nyctaginaceae (1 species); Mimosaceae (1 species); Fabaceae (1 species); Onagraceae (1 species); Lamiaceae (1 species); Verbenaceae (1 species); Balsaminaceae (1 species); Pontederiaceae (1 species); Cuscutaceae (1 species); Polygonaceae (1 species); Poaceae (3 species); Euphorbiaceae (3 species); Malvaceae (3 species); Asteraceae (10 species); Portulacaceae (2 species);

Cyperaceae (2 species); Tiliaceae (2 species); Chenopodiaceae (2 species); Caesalpiniaceae (2 species); Asclepiadaceae (2 species); Solanaceae (5 species); Convolvulaceae (5 species). ”Also, the most commonly used measure of loss of diversity is the amount of plant species lost. “The general causes of lack of diversity are similar to those responsible for land usage and modification of the land surface. This study also shows that the rapid growth of the human population, with its increased demand for greater use of natural resources, is disrupting the ecological balance. Our breathing habitat has been covered by new natural forests.”

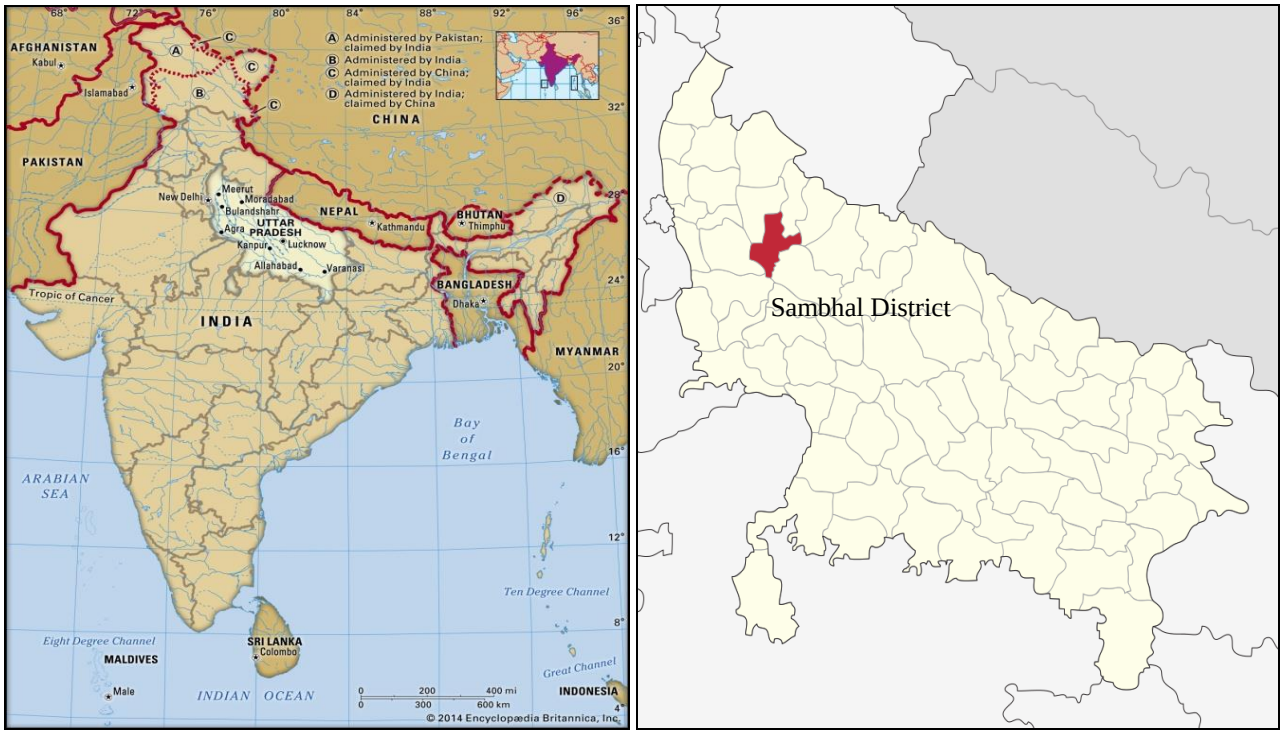

Fig 1: Map of Study area

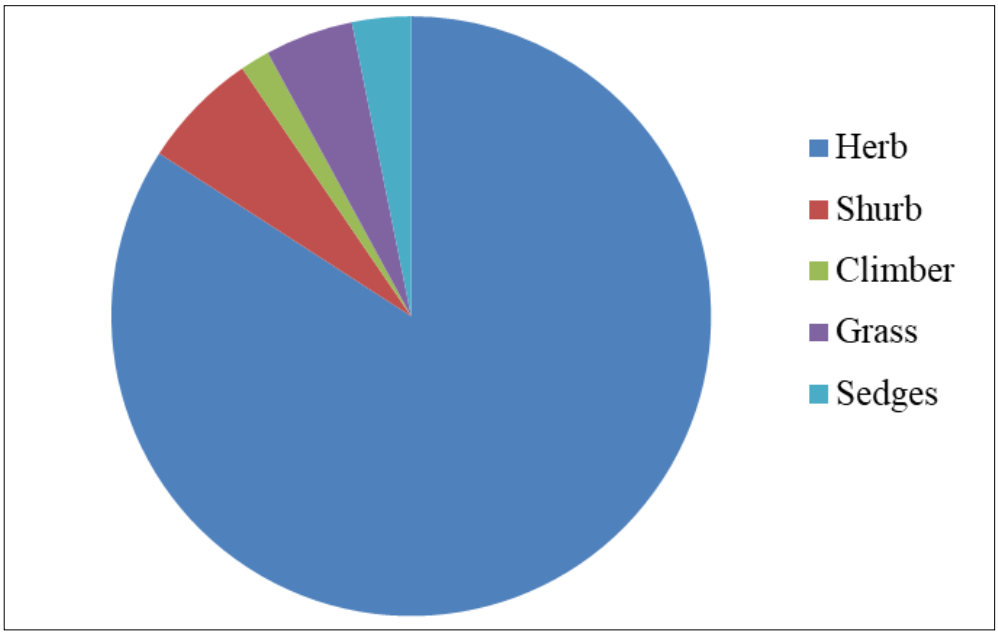

Fig 2: Distribution of floral plant species.

Table 1: Floral plant diversity of the study area.

S. No.	Species	Family	Habit
1	*Alternanthera pungens Kunth*	Amaranthaceae	H
2	*Antigonon leptopus*	Polygonaceae	C
3	*Argemone mexicana*	Papaveraceae	H
4	*Ageratum conyzoides*	Asteraceae	H
5	*Bidens pilosa*	Asteraceae	H
6	*Anagallis arvensis*	Primulaceae	H

7	*Amaranthus spinosus*	Amaranthaceae	H
8	*Blumea lacera*	Asteraceae	H
9	*Calotropis gigantea*	Asclepiadaceae	S
10	*Calotropis procera*	Asclepiadaceae	S
11	*Cannabis sativa*	Cannabaceae	H
12	*Cassia occidentalis*	Caesalpiniaceae	H
13	*Cassia tora*	Caesalpiniaceae	H
14	*Celosia argentea*	Amaranthaceae	H
15	*Chenopodium album*	Chenopodiaceae	H
16	*Chenopodium ambrosioides*	Chenopodiaceae	H
17	*Cleome viscosa*	Capparaceae	H
18	*Convolvulus arvensis*	Convolvulaceae	H
19	*Corchorus aestuans*	Tiliaceae	H
20	*Croton bonplandianum*	Euphorbiaceae	H
21	*Cuscuta reflexa*	Cuscutaceae	H
22	*Cyperus bifax*	Cyperaceae	Se
23	*Datura metel*	Solanaceae	S
24	*Datura stramonium*	Solanaceae	S
25	*Echinochloa colona*	Poaceae	G
26	*Cyperus difformis*	Cyperaceae	Se
27	*Eichhornia crassipes*	Pontederiaceae	H
28	*Emilia sonchifolia*	Asteraceae	H
29	*Euphorbia heterophylla*	Euphorbiaceae	H
30	*Euphorbia hirta*	Euphorbiaceae	H
31	*Evolvulus nummularius*	Convolvulaceae	H
32	*Gnaphalium pensylvanicum Willd.*	Asteraceae	H
33	*Gomphrena celosioides Mart.*	Amaranthaceae	H
34	*Grangea maderaspatana*	Asteraceae	H
35	*Impatiens balsamina*	Balsaminaceae	H
36	*Imperata cylindrica*	Poaceae	G
37	*Ipomoea fistulosa*	Convolvulaceae	H
38	*Ipomoea pes-tigridis*	Convolvulaceae	H
39	*Ipomoea quamoclit*	Convolvulaceae	H
40	*Lantana camara*	Verbenaceae	H
41	*Leonotis nepetifolia*	Lamiaceae	H
42	*Ludwigia octovalvis*	Onagraceae	H
43	*Malvastrum coromandelianum*	Malvaceae	H
44	*Melilotus albus*	Fabaceae	H
45	*Mimosa pudica*	Mimosaceae	H
46	*Mirabilus jalapa*	Nyctaginaceae	H
47	*Nicotiana plumbaginifolia*	Solanaceae	H
48	*Oxalis corniculata*	Oxalidaceae	H
49	*Parthenium hysterophorus*	Asteraceae	H
50	*Physalis minima*	Solanaceae	H
51	*Portulaca oleracea*	Portulacaceae	H
52	*Portulaca quadrifida*	Portulacaceae	H
53	*Saccharum spontaneum*	Poaceae	G
54	*Scoparia dulcis*	Scrophulariaceae	H
55	*Sida acuta*	Malvaceae	H
56	*Solanum nigrum*	Solanaceae	H
57	*Sonchus asper*	Asteraceae	H
58	*Tribulus terrestris*	Zygophyllaceae	H
59	*Tridax procumbens*	Asteraceae	H
60	*Triumfetta rhomboidea*	Tiliaceae	H
61	*Typha angustifolia*	Typhaceae	H
62	*Urena lobata*	Malvaceae	H
63	*Xanthium strumarium*	Asteraceae	H

Abbreviation: H= Herbs; S= Sherbs; G= Grass; C= Climbers and Se = Sedges

Conclusion

Awareness of taxonomy is an excellent method for the identification of various species of plants. In order to face the demands of biodiversity conservation in the 21st century, taxonomic awareness is essential. Awareness of biodiversity and the functioning of the ecosystem is crucial because it provides us with data through scientific studies to Examine and explain biodiversity. “This study provides basic information about the different species of plants currently present in the Sambhal district. For local and regional authorities interested in preserving this precious diversity of floral plants, such a list could play an important role in the possible exploitation of the health of future generations and the sustainable development of the region.”

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