



Missing plants as compared to Flora of Ahmedabad (B.S. Vaidya -1967) with the present study, Ahmedabad, Gujarat, India

KEYWORDS

Missing plants, Flora, B.S. Vaidya, Ahmedabad city

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ABSTRACT Ahmedabad is situated in Central Gujarat, it is a largest city of Gujarat state located on Sabarmati river. The floristic diversity is highly diversified in vegetation and has rich number of floristic composition due to topography, climate and edaphic factors which are favourable for such luxurious vegetation. Present paper deals with missing plants from the original flora of Ahmedabad listed by B.S Vaidya (1967). Vaidya has mentioned a total number of 517 plant species in his treatise. Out of these 26 species have not been noticed in the Ahmedabad city and its surroundings during the present survey (2009-10).

Introduction:

Ahmedabad is situated in Central Gujarat; it is a largest city of Gujarat state. It lies between 22°55' 35'36" and 23°07' 51"44" North latitude and 72°28' 41"95" and 72°41' 19"59" East longitudes. The North side of the city is bounded by Kalol and Gandhinagar talukas of Gandhinagar district. North-East by Dahegam taluka of Gandhinagar district and South of City taluka of Ahmedabad district and the West side by Sanand taluka of Ahmedabad district. Ahmedabad the district headquarters was also the state's capital from May 1960 to May 1970.

The Ahmedabad municipal corporation declared the city as megacity and built up Sardar Patel ring road on periphery of the city. Except the peripheral agricultural land, rest part is the city area. It covers 10,000 square kilometer and circumference of the Sardar Patel ring road is 70 kilometer. As per census of 2001 approximate population of the city is 61, 67,589.

Saxton and Sedgwick (1918 and 1922), Sutaria (1958), Gandhi (1958), Vaidya and Vora (1964), Vaidya (1967), Pandya (1972), Patel (2010) carried out Floristic study in Ahmedabad. The area has been eroded which might be owing to the proliferation of human activities in these areas. The present paper is there for based on fresh field work carried out during the year 2010 with a few frequent observations in city and vicinity of Ahmedabad city to incorporate data of missing plants.

Methodology

Field work

The result embodied in this work based on collections 2009 to 2010 through well planned explorations in these areas. Number of extensive explorations of 10-20 days duration each, were made in different areas of Ahmedabad city with emphasis on intensive rather than extensive explorations. Field work was carried out in all seasons with more frequency during rainy season, so that nothing escapes of the herbaceous ephemeral flora appearing in that season. The help of Floristic key of Cooke (1908) and Shah (1978). As far as possible local names of the plant were confirmed by showing actual specimens to the local people who know much about them.

Laboratory work

The identification was finally confirmed by matching with the help of authentic herbarium specimens available at S.P. University Herbarium, Vallabh Vidyanagar and Saxton & Sedgwick Herbaria, Gujarat College, Ahmedabad. After the identification was confirmed, all the herbarium sheets were labeled and arranged according to Bentham & Hooker System.

Observation:

Missing plants from the original list of Vaidya (wild plants)

Vaidya (1967) has mentioned a total number of 517 plant species in his treatise. Out of these twenty six species have not been noticed in the Ahmedabad city and its surroundings. A number of facts pertaining to some of the plants that could not be observed during the period of the present survey are mentioned below :

1. Clematis gauriana Roxb.
2. Ranunculus sceleratus Linn.
3. Eruca sativa Mill.
4. Cleome scaposa DC.
5. Flacurtia indica (Burm.f.).Merr.

The above mentioned plant were recorded by Sedgwick as rare plants in Ahmedabad on (February, 1916, herbarium No. 1234). These plants were not found by Gandhi and Vaidya, although they have mentioned them in the flora of Ahmedabad on authority of Sedgwick. Since then the plants are not found in the present survey and it can be concluded that the plants are no more found in the area.

6. Talinum portulacifolium (Forsk) Aschors.

The plant was recorded as a garden plant by Sutaria (1948) and later on found as a weed in Gujarat College campus, (August 1963, herbarium No. 508a). The plant is also mentioned in the flora of Gujarat State on authority of Vaidya. Now, the plant is no more found in the Gujarat college Campus and its vicinity due to urbanization.

7. Pavonia zeylanica Can.

The plant was recorded from Vasna area, (September

1960, herbarium No. 188) in hedges, which is extinct today.

8. *Lathyrus aphaca* Linn.

The plant was found in the bad of Sabarmati river, (January, 1942). by Sutaria, further more on his authority. Vaidya included the plant in the flora of Ahmedabad. The plants is mentioned in flora of Gujarat State on authority of Sutaria which was not found during the present survey.

9. *Ammannia auriculata* Monti.

Saxton recorded the plant in swamp area north west of Gujarat college, (September 1921, herbarium No. 2457). The species is not mentioned in Cooke's flora and flora of Gujarat state and it was not found during the present survey.

10. *Ammannia octandra* L.

The species was recorded by Gandhi in marshy places, while it is not found during the present survey. The plant was recorded in flora of Gujarat state but the herbarium was not found in Gujarat College. On the authority of Gandhi the species was mentioned in the Flora of Ahmedabad.

11. *Ludwigia adscendens* (L.) Hara

The plant was recorded by Gandhi near Dudheshwar water work but it is no more found in the area.

12. *Kedrostis rostrata* Cogn.

Saxton: (Vastrapur, August 1919, herbarium No. 1880) The plant was included on authority of Saxton in flora of ahmedabd by Vaidya which is not found in the present survey.

13. *Meyna laxiflora* Robyns.

A stump of the plant- (October, 1962) was recorded by Vaidya between Memnagar and Thaltej and was not found in the present survey due to urbanization.

14. *Hoppea dichotoma* Willd.

15. *Sericostoma pauciflorum* Stks.

The plant was recorded by Saxton on the south west hilly region of Gujarat College, (August 1919, herbarium No.1716) but later on Gandhi and Vaidya could not find the plant from the area, although on authority of Saxton, the plant was mentioned in Flora of Ahmedabad by Vaidya.

16. *Convolvulus pluricaulis* Choisy.

17. *Ipomoea leari* Pax.

18. *Ipomoea longiflora* R. Br.

The plants were recorded by Gandhi from open land. The plant are not mentioned in flora of Gujarat state and not found in the present survey.

19. *Hewittia sublobata* (L.) Kuntz.

The plant was recorded by Saxton on the road side of Vastrapur. (June, 1921, herbarium No.2446) which was also recorded by Gandhi. However, during the present survey the plant was not found.

20. *Lycium europoem* L.

The plant was recorded by Vaidya on the bank of Chandola lake (October, 1959). However the plant is not mentioned in Flora of Gujarat State not found during the present survey because of land filling and road construction.

21. *Veronica anagallis – aquatica* L.

The plant was recorded by Saxton from the mouth of Vadaj nalha, (February 1922, herbarium No.2864). The plant was not found by Gandhi and Vaidya, still it is mentioned in the Flora of ahmedabad on authority of Saxton. However, the plant was not found during the present survey.

22. *Utricularia arcuata* Wt.

This plant was recorded by Saxton in the swamp two miles north west of Gujarat College (October 1921, herbarium No. 2559). The plant was not found by Gandhi and Vaidya, still it is mentioned in the flora of Ahmedabad by Vaidya and in the flora of Gujarat State on authority of Saxton. The swamp area is no more; the area has been developed due to urbanization. The plant is not found in the near by area of the swamp.

23. *Leonotis nepetifolia* Br.

The plant was recorded by Saxton from Vastrapur area (January 1922. herbarium No. 2845). The plant was not found during present survey.

24. *Beta* sp.

25. *Rivinia humilis* L.

The plant was recorded by Saxton near Sabarmati river, (September 1914, herbarium No.458) but during the present survey it was not found.

26. *Monochoria hastaefolia* Presl.

The plant was recorded in marshy places by Gandhi. On authority of Gandhi it was included in the Flora of Ahmedabad by Vaidya. This plant was not mentioned in Flora of Gujarat State and during the present survey the plant was not found.

Difference in observed facts with regard to plant species previously mentioned – a critical perception

1. Vaidya had reported that 151. *Ammannia baccifera* L. and 154. *Ammannia salicifolia monti*. were two different species. However it is not justified as *Ammannia salicifolia monti*. is a synonym of *Ammannia baccifera* L. (Flora of Gujarat state – G. L. Shah 1978).
2. Vaidya has reported that 271. *Merremia aegyptia* L. and 274. *Merremia pontaphylla* Hall. were two different species. However it is not justified as *Merremia pentaphylla* Hall. is a synonym of *Merramia aegyptia* L. (Flora of Gujarat state – G. L. Shah 1978).
3. Vaidya has reported that 401. *Dioscorea bulbifera* L. and 402. *Dioscorea sativa* Hork. were two different species. However it is not justified as *Dioscorea sativa* Hork. is a synonym of *Dioscorea bulbifera* L. (Flora of Gujarat state – G. L. Shah 1978).
4. Vaidya has reported that 440 *Cyperus flavidus* Retz and 441 *cyperus globosus* acut. were two different species. However it is not justified as *Cyperus globosus* acut. is a synonym of *Cyperus flavidus* Retz. (Flora of Gujarat state – G. L. Shah 1978).
5. Vaidya has reported that 431 *Bulbostylis barbata* (Rottb) Clarke and 459 *Stenophyllus barbata* Rottb. were two different species. However it is not justified as *Stenophyllus barbata* Rottb.. is a synonym of *Bulbostylis barbata* (Rottb) Clarke. (Flora of Gujarat state – G. L. Shah 1978).

Results and Discussion:

Vaidya (1967) has mentioned a total number of 517 plant species in his treatise. Out of these 26 species have not

been noticed in the Ahmedabad city and its surroundings, besides 5 species are those species whose synonyms are already recorded in the present study. Due to exploitation, urbanization and habitat fragmentation these species may disappear.

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