

Occurrence of *Dorstenia indica* Wight (Moraceae) in Pune city, Maharashtra, India

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Abstract

Dorstenia indica was introduced in the Fergusson College campus approximately in the year 1906 and was cultivated in the campus till 1999 for its characteristic inflorescence. Since the past two years, we have been observing a multiplying population (indicated by the demographic profile) of this species in the campus. Propagules of the originally introduced plants might have given rise to the current strands and as this population is growing as well as multiplying without any human effort, we report the possible naturalization of this species in the study area.

Introduction

The genus *Dorstenia* is the second largest genus in the family Moraceae and differs from other Moraceae genera by the presence of rhizomes, herbaceous habit and patelliform inflorescences, the coenanthium (Santos 2012). Over 105 species of this genus are distributed throughout Africa and the neotropics with only one species extending into Asia (Santos 2012). *Dorstenia indica* is widely distributed in the southern Western Ghats including Nilgiris, Palnis, Dindigul, Kalakad Mundanthurai Reserve, Kerala and also Sri Lanka (Hooker 1988, Paulsamy *et al.* 2007, Giriraj *et al.* 2008, Sasidharan and Nambiar 1991, Dassanayake and Fosberg 1981). Shinde *et al.* (1995) reported occurrence of this species from Saptashrungi hills near Nashik, Maharashtra which forms the northern distribution limit for the species and also, the first record for Maharashtra state.

Study area and Observations

Herbaceous plants growing under the shade of *Duranta erecta* were observed and studied by us in the campus of Fergusson College, Pune (18° 31' 17.75" N 73° 50' 20.17" E)-Fig 1. They were photographed and identified as *Dorstenia indica* belonging to the family Moraceae on the basis of morphological characters following Hooker (1988). Flowering was seen in the month of August and fruiting in September (Fig 3, 4).

Results and Discussion

A total of 37 plants were observed in the month of September 2012 .The

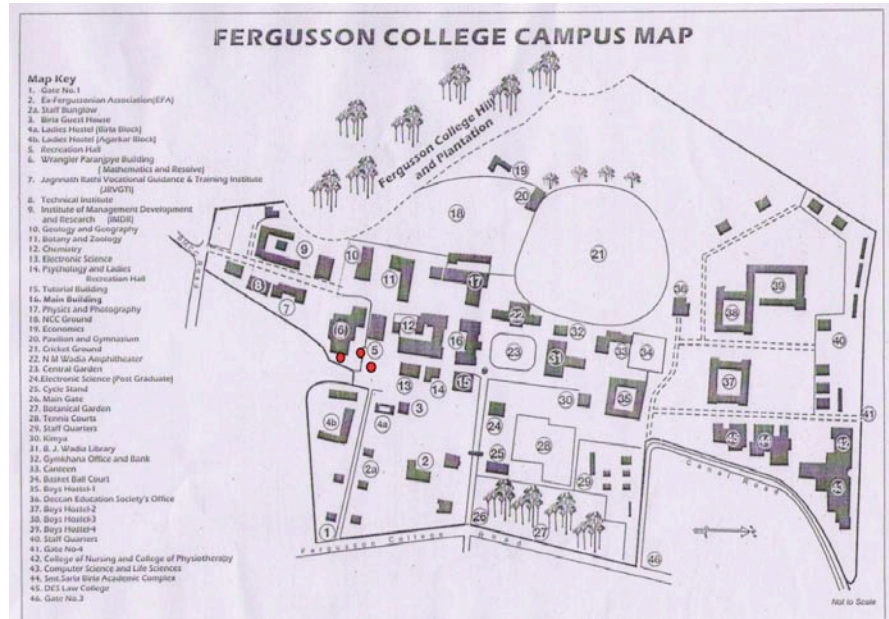


Fig 1. Study area map. Red circles indicate presence of *D. indica*

demographic profile of this species in the campus is indicated in Figure 2. The saplings: adults ratio, as indicated by the graph is 25/12= 2.08 which clearly indicates the multiplication of the species in it's habitat.

Richardson *et al.* (2000) define naturalized plants as 'plant taxa in a given area whose presence there is due to intentional or accidental introduction as a result of human activity that reproduce consistently and sustain populations over many life cycles without direct intervention by humans (or in spite of human intervention); they often recruit offspring freely, usually close to adult plants, and do not necessarily invade natural, semi natural or human-made ecosystems.

In India, the only naturalised exotic plant of this genus is *D. bahiensis* reported from Kerala (Upadhyay *et al.* 2008).

In the present case, *D. indica* was introduced in the college campus approximately in the year 1906 by Professor Shevade in the botanical garden for studying the characteristic inflorescence, which was a part of the

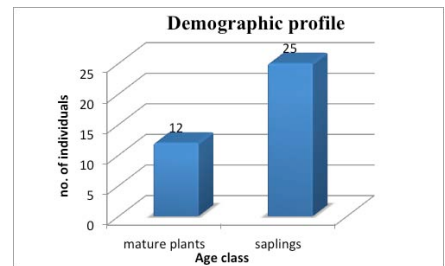


Fig 2 Current demographic profile of the population

graduation botany course. However, in the year 1999, this species was excluded from the syllabus, and hence was no longer cultivated in the botanical garden (Department of Botany, Fergusson College records). We speculate that the current population must have formed from this parent introduction, as this plant is not naturally found in this region.

Conclusion

The age structure of the current population (as indicated in the graph-Fig. 2) shows that the parent plants are producing offsprings. Also, all plants are within a radius of 10 meters from parent plants and are growing without any human effort (personal observation). Hence, we report the

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Fig 3. The habit, leaves and inflorescence of *D. indica* © Ashish Nerlekar



Fig 4. Coenanthium inflorescence of *D. indica* © Ashish Nerlekar

possible naturalization of *D. indica* in this part of Pune city.

Recommendations

In Sri Lanka, *D. indica* is listed under the category 'Threatened' by IUCN (IUCN Sri Lanka 2000). Though in India its ecological status is mentioned as 'Common' (Paulsamy *et al.* 2007), as mentioned above, only a single record of this species exists from a single location in the state of Maharashtra. *D. indica* is also reported to possess medicinal properties (Kholkute 2008) and hence, we

recommend that the existing strands must be conserved and propagated *in situ*.

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