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## RESEARCH ARTICLE

# THE NEW GENUS HYPOXYNON SPEC.NOV.FROM MAHARASHTRA

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**ABSTRACT**

The Ascomycetous Fungi is the largest group. These fungi are highly diverse and versatile organisms adapted to all kinds of environment. Also they are heterogenous in nature and rich in their pattern. owever, it was observed that since during last few years Mycology, a branch of Botany has been neglected in Marathwada region and no studies have been done on this particular branch. Therefore, it was felt to undertake the work on taxonomic studies of ascomycetous fungi. To investigate fungal flora and to study their taxonomic aspects, Ramling hill forest was selected. Ramling forest is located in Yedsi, Osmanabad district of Marathwada region which forms the part of Deccan plateau. Ramling Forest is a big forest with thorny shrubs mixed with dry deciduous forest type. Therefore, it was intended to undertake the work of investigating various fungi occurring saprophytically on the dead and decaying fallen leaves and twigs of the plants of Ramling forest, particularly to investigate some of the scomycetous fungi. In the present collection, the author has investigated the Hypoxylontamarindiispec. nov.on dead stem of Acacia Tamarindusindica L. which is new to science.



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## INTRODUCTION

Ascomycetes is the large group of fungi growing in diverse habitats. The Ascomycetous fungi, with richness of their pattern and highly heterogenous nature, have posed a difficult task to the taxonomists. The classification and taxonomy of Ascomycetous fungi and the pattern of the treatment of different groups by different workers are widely divergent, depending upon their concept of origin of these fungi and evolutionary characters of various taxonomic criteria. Even in the modern classification original concept of Lindau(1897) of Plectomycetes, Pyrenomycetes and Discomycetes is taken into account, which forms the basis of classification.

His concept of perithecium with the presence of an apical ostiole, basal origin of asci, the presence of sterile threads or paraphyses, even now forms the basis of modern classification. Now, it is admitted fact is that a single character as taxonomic criteria always create more difficulties than solving the problems. Holm(1958) has proposed that, several features like ascus, its structure, manner of ascus opening, its wall, manner of arrangement and development besides the stroma, its nature, colour and consistency of the ascocarp, presensce and absence of sterile threads or paraphyses, number of ascospores in each ascus, their colour, septation and arrangement etc. has taken into consideration.

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## MATERIALS AND METHODS

**The work has been completed through following steps:**

- Collection of infected plant material
- Laboratory work.
- Identification of Fungi.

- The collection of infected plant material was done at every fortnight. The field observation was done carefully and the date of collection and identification of the host was carefully recorded. It may be mentioned that for the identification of the host, particularly for the vernacular names the help was taken from a comman layman.
- In the laboratory, the hand sections of these infected plant material were carefully taken. The slides were prepared by using Lactophenol as a mounting medium and cotton blue as a stain. Then the slides were sealed with nail paint and preserved in the laboratory.
- The prepared slides were carefully observed under caliberated research microscope. The measurement of Ascocarp, Asci and Ascospores were carefully taken. The identification of different genera was done with the help a book "Genera of Fungi" by Clements and Shear(1973).

**Matrix Studied**

***Hypoxylontamarindii* spec.nov:** Collected on dead stemof *Tamarindusindica* L. during the month of January 2005 at

**Comparative Table of the genus Hypoxylon Bull.ex.Fr.from Maharashtra.**

| Sr.No. | Species | Host | Perithecia | Asci | Ascospores |
|---|---|---|---|---|---|
| 1. | *H. acacia* spec.nov. Leg. S.T.Tilak | *Acacia arabica* willd. | 450µ-600µ x 240µ-345µ | 80µ-104µ x 8µ-5µ | 11.2µ-14.4µ x6.4µ-7.2µ |
| 2. | H. bauhiniaespec. nov. Leg. S.B.Kale | Bauhinia malbarica Roxb. | -------- | -------- | --------- |
| 3. | *H.phoenix* (Fr.) Berk. & Curt.spec. nov. Leg. M.S.Patil | Burnt roots of grasses | 537.5µ-812µ x 375µ-697.5µ | 128µ-147.2µ x 9.6µ-10µ | 12.8µ-19.2µ x 6.4µ |
| 4. | *H. ficci* spec. nov. Leg. Nagpurne V.S. | *Ficusglomerata* Roxb. | 333.2µ-510µ x 302µ-430µ | 149.9µ-160µ x 8µ-12µ | 14.2µ-16.6µ x 3µ-6µ |
| 5. | *H. semecarpae* spec. nov. Leg. R.A.Kamble | Semecarpusanacardium L. | 397µ-420µ x 298µ-310µ | 85µ-86µ x 35µ-36µ | 28µ-29µ x 21µ-22µ |
| 6. | *H.tamarindii*spec. nov. Leg. R. A. Kamble | *Tamarindusindica* L. | 454µ-570 x 312µ-320µ | 56µ-57µ x 14µ-15µ | 21µ-22µ x 9µ-10µ |

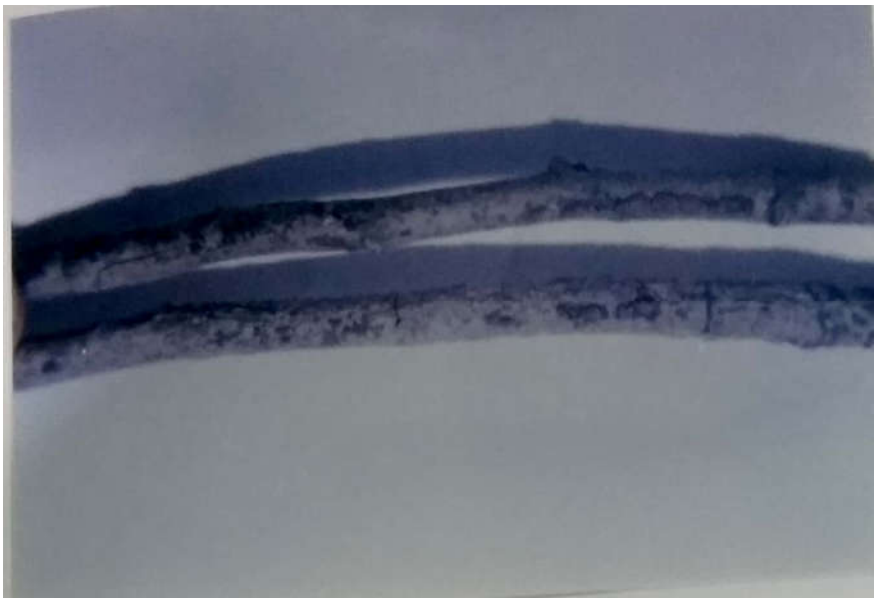

**Fig. 1. Dead stem of Tamarindus nidica L.**

**Fig. 2. V.S. of Perithecia**

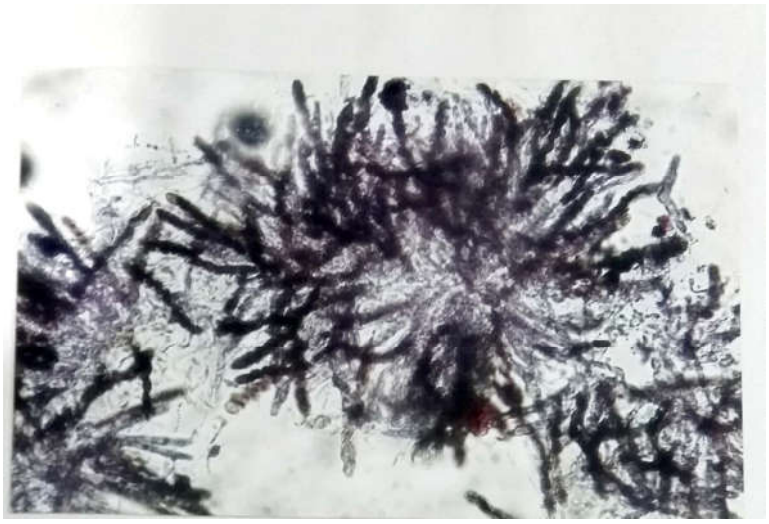

**Fig. 3. ASCI**

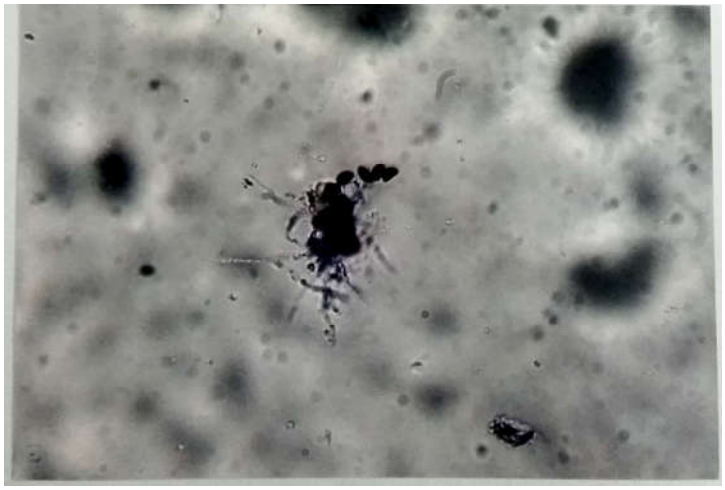

**Fig. 4. Ascospores**

Ramling Forest, Yedsi. Leg. R.A. Kamble. Perithecia superficial, globose to slightly flask shaped, grouped in a common stroma. The stroma may be black to pale yellow in colour. Stromatic surface is papillate due to projecting ostiole. Perithecia are distinctly separated from the stroma by its wall, measuring 454µ-570µ x 312µ-320µ. Ascihyaline, cylindricalunitunicate, paraphysate, 8- spored, measuring from 56µ-57µ x 14µ-15µ. Ascospres1- celled,uniserriate, elliptical to bean shaped, flattened on one side,dark brown at maturity, measuring from 21µ-22µ x 9µ-10µ.

## DISCUSSION

Clements and Shear (1931) in " The Genera of fungi" did not include the genus Hypoxylon, instead this genus has been refered as Hypoxilom Von Arx and Muller (1954) described the systematic position of the genus. Saccardo in "Sylloge Fungorum" included this genus under the order Sphaeriales and family Sphaeriaceae. However, Dennis (1960) included it in the family Xylariaceae. Perithecia superficial, globoid, ostiolate clearly proves its inclusion under the order Sphaeriales. On the basis of which, the author agrees with the Saccardo. In the present collection, the author has described H. semecarpae spec. nov. and H. tamarindiispec.nov. on two different host from Maharashtra.

These two species differs morphologically from the species decribed earlier. Therefore, these have been reported as new species.

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