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RESEARCH ARTICLE

ROSELLINIA SPEC. NOV., NEW GENUS OF ASCOMYCETOUS FUNGI

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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. However, 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 Ascomycetous fungi. In the present collection, the author has investigated the *Hysteriumacacae* spec. nov. on dead stem of *Acacia chundra* Roxb. 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, presence and absence of sterile threads or paraphyses, number of ascospores in each ascus, their colour, septation and arrangement etc. has taken into consideration.

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 common 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 calibrated 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

Rosellinia indica spec.nov: Collected on dead stem of *Mangifera indica* L. during the month of Feb.2002 at Ramling Forest, Yedsi. Leg. R.A. Kamble. Perithecia superficial, globose to sub-globose, smooth, black, ostiole papillate, seated on brown hyphal mat (subiculum) measuring 625 μ -640 μ x 398 μ -410 μ . Asci cylindrical to clavate, hyaline, unitunicate, pedicellate, 8- spored, paraphysate, measuring 71 μ -72 μ x 28 μ -29 μ .

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Comparative table of Indian species of Rosellinia

Sr. No.	Species	Perithecia	Asci	Ascospores
1.	<i>R. mimosa kale</i> Leg. S. B. Kale	805-900 μ X 750-805 μ	114-141 μ X 8-10 μ	18-19 μ X 6-7 μ
2.	<i>R. cassia kale</i> Leg. S. B. Kale	750-1050 μ x 675-900 μ	112-120 μ X 6-8 μ	18-19 μ X 6-7 μ
3.	<i>R. congesta Hino & Katoumoto</i> Leg. M.K.Maity	0.5 mm in diameter	102-120 μ X 6.6-8.2 μ	11.5-13.3 μ x 4.9-5.9 μ
4.	<i>R. macrospora Pande & Mhaskar</i> Leg. D.N.Mhaskar	0.5-0.6 mm in diameter	100-120 μ x 8-12 μ	28-40 μ X 4-6 μ
5.	<i>R. dimidiata starb</i> Leg. U.K.Talde	450-525 μ X 570-660 μ	114-140 μ X 7.6-11.4 μ	15.2 μ - 17 μ X 5.7-7.6 μ
6.	<i>R. sancta-cruciana</i> Leg. U.K.Talde	525-750 μ X 600- 750 μ	162-194 μ X 7.2-14.4 μ	14.4-21.6 μ x 7.2 μ
7.	<i>R. indica spec. nov.</i> Leg. R.A.Kamble	625-640 μ X 398-410 μ	71-72 μ X 28-29 μ	18-19 μ x 7-8 μ



Ascospores brown to black, non-septate, uniseriate, one side somewhat flattened and bearing a longitudinal furrow, measuring 18 μ -19 μ x 7 μ -8 μ .

DISCUSSION

The species described in the present collection, morphologically clearly differs from all other species. Therefore, *R. indica spec. nov.* have been described as new species to the science. Besides this, it also constitutes new host record.

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