

THE GENUS *PLEUROTUS* IN ORISSA

By

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During the survey of mushroom flora of Orissa three species of *Pleurotus* namely *P. dryinus* (Pers. ex. Fr.) Kummer, *P. nidulans* (Pers.) Fr. and *P. petaloides* (Bull) Fr. were collected. They occur in most of the forests of Orissa. They are either corticolous or lignicolous. None of them is used as food. Detailed taxonomic studies indicate that one of them namely *P. nidulans* is a new report from India.

INTRODUCTION

Pleurotus (Fr.) Quel. is an well defined genus in the family Polyporaceae containing thirty nine species (Singer, 1975). This genus is relatively of greater importance than many other genera in the family Polyporaceae. Some of members are used as food and medicine. *P. sajor-caju* is cultivated in Japan, eastern Asia and also in India, specially at Bhubaneswar. Some forms like *P. ostreatus* and *P. dryinus* are parasites on trees.

EARLIER INDIAN RECORDS

Butler and Bisby (1931) recorded seventeen species of *Pleurotus* from India from various regions. It is surprising but true that no further additions have been made to this list so far. There is no record of the genus from Orissa.

OCCURRENCE AND COLLECTION :

During 1971-73, in course of the present studies three species of *Pleurotus* were found to occur wild in the forests of Orissa and also around Bhubaneswar.

They are found in noticeable numbers throughout the rainy season and early winter (July to November). All specimens were collected from decaying branches of dead trees.

Specimens were preserved in Formalin Acetic acid-Alcohol and have been deposited in the museum of the Botany Department of the University, Bhubaneswar with proper collection numbers.

MATERIALS AND METHODS

The macroscopic features were noted on fresh materials and the microscopic details were recorded from preserved specimens. Illustrations of macroscopic features were drawn free-hand proportionate to the scale of measurements while the illustrations of microscopic characters were drawn with the help of camera lucida ($\times 1000$). Measurements of dimensions of cap, stipe, gills, etc. are averages of at least five, according to their availability, while those of basidia, cystidia and spores are averages of twenty each.

Description of the species : The three species of *Pleurotus* collected during the present studies are described as follows :

Pleurotus dryinus (Pers. ex. Fr.) Kummer. Hym. Eur. P. 166. 1874.

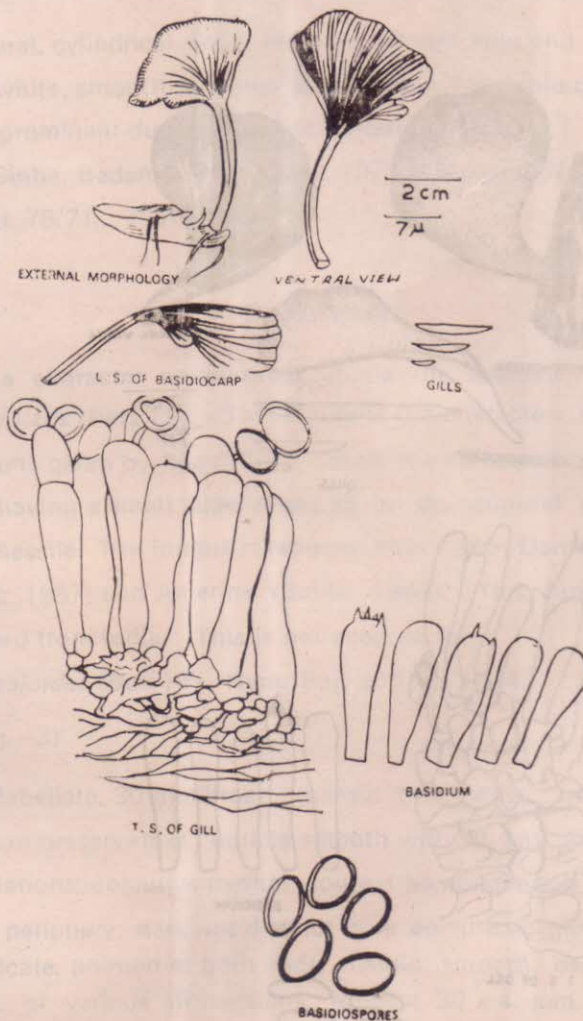
(Text fig. 1)

Pileus flabellate, 35 mm broad and 25 mm long, upper surface broadly ridged, radiating towards periphery ; margin striate, involute ; cuticle grey, smooth without any scale, epicutis hyphal ; context homoiomerous, very thin not distinct from epicutis ; gills decurrent, not crowded, falcate, pointed at both ends, margin wavy, grey, not easily separable from pileus, of various dimensions, longest 22×2 mm, shortest 5×2 mm; basidium clavate ; four sterigmate, $15-18 \times 4-6 \mu\text{m}$; cystidia absent ; basidiospores hyaline under the microscope, thin walled, smooth; ovate $10-12 \times 5-7 \mu\text{m}$; gill edge fertile, interlamellar space fertile ; subhymenium pseudoparenchymatous ; trama thick walled irregular.

Stipe lateral, flattened, solid, 35 mm long, 3 mm broad, fleshy, fibrous, cuticle dark grey, smooth, without any scale. Corticolous, solitary, growing on the barks of unidentified trees.

Collection : Sinha. Bhubaneswar, July 1971. Museum No. BOTU/M.S.1.

Collection No. 29/71 Plate No. 1.



Text-fig. 1. *Pleurotus dryinus* (Pers. ex Fr.) Kummer showing the different macroscopical and microscopical characteristics (x 1000) of the basidiocarp.

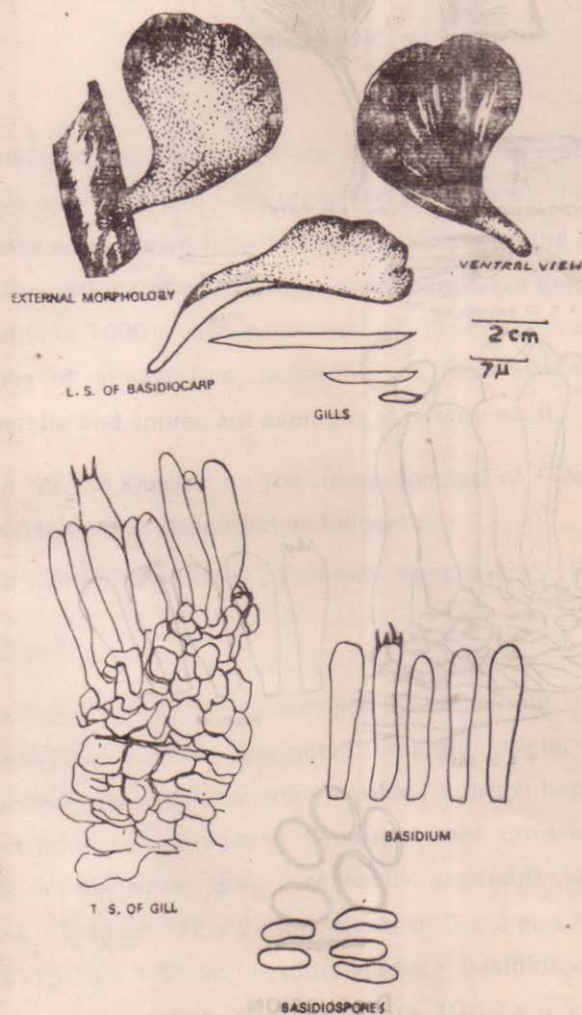
DISCUSSION

The characters enumerated above were matched with the description of the species recorded by Rea (1922). From a careful comparison it was found that

the specimen under investigation is having smooth stipe, whereas the stipe was fibrillose in the original description. This could be considered a minor variation. The fungus has earlier been reported from Ceylon (Sacc. 1897), Britain (Dennis and Pearson, 1948 ; Wakefield and Dennis, 1950), America (Singer, 1975) and India (Bulter and Bisby, 1931). This is not used as food.

Pleurotus nidulans. (Pers.) Fr. Hym. Eur. p. 178. 1874.

Text-fig.-2.



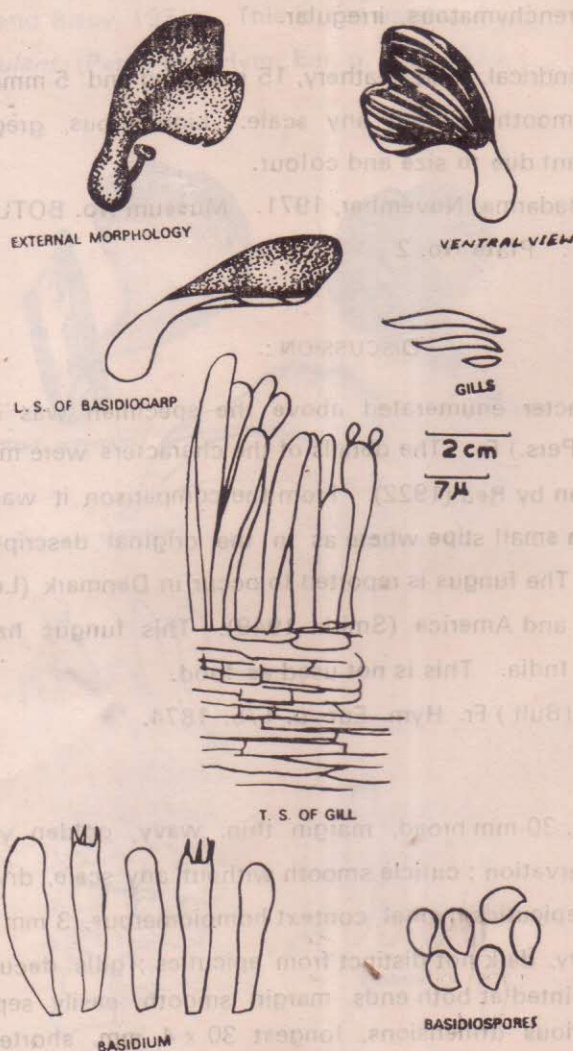
Text-fig. 2. *Pleurotus nidulans* (Pers) Fr, showing the different macroscopical and microscopical characteristics (x 1000) of the basidiocarp.

Pileus flabel ate 40-50 mm broad, margin wavy, cuticle grey, smooth, without any scale, epicutics hyphal; context fleshy leathery, thin not distinct from

cuticle golden yellow, smooth without any scale. Lignicolous, fasciculate on stumps of unidentified trees, neither prominent nor common.

Collection : Sinha November, 1972.

Museum No. BOTU/M. S. 3. Collection No. 10/71. Plate No.3.



Text-fig. 3. *Pleurotus patalooides* (Bull.) Fr. showing the different macroscopical and microscopical characteristics (x 1000) of the basidiocarp.

DISCUSSION :-

The above mentioned characters of the specimen under investigation were matched with the description given by Res (1922) and the specimen was identified as *Pleurotus patalooides* (Bull.) Fr. The specimen under investigation is having

ovate spore where as in the original (desription the spore is elliptical). The species has been reported to occur in Eurpoe (Sacc, 1887), Britain (Rea 1922; Dennis and Pearson 1948 ; Wakefield and Dennis, 1950), Denmark (Lange 1936), America (Smith, 1949) and India (Butler and Bisby, 1931). This is not used as food.

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