

**Class-Ascomycotina****Order- Dothideales****Sub-Order- Pseudosphaeriinae****Family- Mycospharellaceae****Genus- *Didymella* Saccardo.**

Syll. Fung. 1: 545, 1882.

The genus was established by Niessl in 1875 with its type species *Didymosphaeria exigua* Niessl. Saccardo (1882), renamed it as *Didymella exigua* (Niessl) Sacc., von Arx and Muller (1954 and 1975), placed the genus in the family- Mycospharellaceae on the basis of asci, gradually tending to be wider toward the base, ovate or obclavate and sessile or abruptly short-stipectate. Eriksson (1982), also followed the same scheme of classification as per the von Arx and Muller (1975), but treated the genus of uncertainty affinities. The genus is characterized by having superficial, erumpent or rarely immersed pseudothecia and 1-septate, hyaline ascospores. The genus is represented by 482 species. In India it is represented by 8 species and only one species from Maharashtra.

***Didymella umbelliferacum* Bauml.**

Syll. Fung. 16: 479, 1902.

Text Plate figs. No.- 1-3; Plate figs. No.- 1-4.

Infection hypophyllous; stroma black to brown, pseudothecia free, immersed, globose, 200  $\mu\text{m}$  in diam.; wall pseudoparenchymatous, multilayered, cells are brown; asci numerous, elongate to cylindrical, bitunicate, 8-spored, 66-84 X 6-9  $\mu\text{m}$ ; pseudoparaphysate, pseudoparaphyses, hyaline, elongate, 84 X 3  $\mu\text{m}$  long; ascospores linear-lanceolate, guttulate, 1-septate, constricted at septa, dissociated at maturity, hyaline, smooth walled, 18-22 X 6-9  $\mu\text{m}$ . Conidial state absent.

**Habitat:** Collected on living leaves of *Tinospora cordifolia* (Willd.) Miers. (Fam.- Menispermaceae), Botanical garden Y.C.I.S. Satara (Distt. - Satara), 8<sup>th</sup> Sept. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 1.

**Remark:** The present collection has found to be matched well with this species-*Didymella umbelliferacum* Bauml. in respects to morphology and dimensions of pseudothecia, asci, ascospores and pseudoparaphyses except having smaller pseudothecia and slightly long cylindrical asci and therefore, referred to it. This species has been recorded for the first time from India and *Tinospora cordifolia* (Willd.) Miers. is the new host record to the fungi of India.

**Genus- *Mycosphaerella* Johnson**

Oefvers. Vet. Ak. Forh. 41: 163, 1884.

The genus was established by Johnson in 1884, with its type species *Mycosphaerella tassiana* (de Not.) Johnson. Lindau (1897), placed this genus in the family-Dothideaceae of the order-Dothideales. Muller and von Arx (1962), placed this genus into the family-Mycosphaerellaceae of the order-Dothideales on the basis of having large pseudothecia and cylindrical asci. Eriksson (1984) followed the same scheme proposed by von Arx and Muller (1962 and 1975). The genus is characterized by presence of pseudothecia, immersed in the host tissue, asci elongated-ovate or cylindrical, bitunicate and 1-septate, hyaline ascospores. The genus is represented by 1825 species. In India it is represented by 80 species and by 20 species from Maharashtra.

***Mycosphaerella euphorbiae* Nissler ex Schrot.**

Trans. British Mycological Society 67: 1-3, 1955.

Text figs.No.- 4-6; Plate figs. No.- 5-7.

Colonies hypophyllous, sub-epidermal, orbicular, black, sparse, 0.5 mm in diam.; pseudothecia sparse, immersed in the host tissue, sub-epidermal, orbicular, black, 210-230 µm in diam.; ostiolate, ostiole 6 µm in diam.; wall composed of 2-3 layer of dark brown, thick-walled, cells polyhedral; asci obovoid to cylindrical, bitunicate, 8-spored, uniseriate, apseudoparaphysate, 30-36 X 6-9 µm; ascospores obovoid to fusoid, 1-septate, non-constricted at the septum, dissociated at maturity, hyaline, smooth walled, 7-8 X 3 µm. Conidial state not observed.

**Habitat:** Collected on living leaves of *Schleichera olesa* (Lour.) Oken. (Fam.- Sapindaceae), Shendre (Distt.- Satara), 3<sup>rd</sup> Dec. 2006. Leg. L.S. Jadhav and deposited

in M.H.B.D.Y.C.I.S. Satara. No.-2.

**Remark:** Devon (1975), recorded this species on *Euphorbia paralias* L. from England. The present collection has found to be matched well with this species- *Mycosphaerella euphorbiae* Nissler ex Schrot. in respects to morphology and dimensions of ascomata, asci and ascospores and therefore, referred to it. This species has been recorded for the first time from India and *Schleichera olesa* (Lour.) Oken. is the new host record to the fungi of India.

#### **Family- Micropeltidaceae**

#### **Genus- *Dictyothyria* Theiss. and Sydow**

Bio. Soc. Brot. 11: 69, 1893.

The genus was established by Theissen and Sydow in 1893 with its type species *D. fecunda* (Sacc.) Theiss. and Sydow. Clements and Shear (1931), placed the genus in the sub-family-Dictyopeltineae of the family-Micropeltidaceae of the order-Microthyrales due to having dimidate-scutate ascomata, made up of reticulate mycelium (absences of free mycelium) and 1-celled, hyaline ascospores. von Arx and Muller (1962 and 1975), neglected this genus in their classification. Batista (1959) placed it into the sub-family-Dictyopeltoideae of the family-Micropeltidaceae. Luttrell (1973) classified the genus in the same family of the order-Hemisphaeriales of the class-Loculoascomycetes. Eriksson (1984) placed it in the same family-Micropeltidaceae of the order-Dothideales. The genus is characterized by family characters having pseudoparaphysate, bitunicate asci and 1-celled, hyaline ascospores. The genus is represented by 4 species. In India it is represented by only one species.

#### ***Dictyothyria ananasicola* Kapoor and Munjal**

Indian Phytopathology 21: 107-112, 1968.

Text figs.No.- 7-10; Plate figs. No.- 8-10.

**Remark:** Kapoor and Munjal (1968) recorded this species on *Ananas comosus* Schult. from Assam (India). The present collection has found to be matched well with *Dictyothyria ananasicola* Kapoor and Munjal in respects to morphology and dimensions of ascomata, asci and ascospores and therefore, referred to it. This species

has been recorded from India while *Bridelia retusa* (L.) Spreng is the new host record to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Bridelia retusa* (L.) Spreng (Fam.- Euphorbiaceae), Jarandeshwar Hills (Distt. - Satara), 9<sup>th</sup> Dec. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.-3.

**Genus- *Dictyothyrium* Theissen**

Ost. bot. Z. 62: 277, 1912.

The genus was established by Theissen in 1912 with its type species *Dictyothyrium chabybaeum* (Rehm) Theissen. Clements and Shear (1931), placed this genus into the sub-family-Dictyopeltineae of the family-Micropeltidaceae of the order-Dothideales due to having ostiolate ascomata, made up of reticulate mycelium, pseudoparaphysate asci and hyaline, 2-celled ascospores. Batista (1959), placed it into sub-family-Dictyopeltoideae of the family-Micropeltidaceae. von Arx and Muller (1962 and 1975), placed it into the same family of the order-Pseudosphaeriales, while Luttrell (1973), placed it into the same family of the order-Hemisphaeriales. Eriksson (1984), followed the same scheme as von Arx and Muller (1975). The genus-*Dictyothyrium* Theissen is characterized by the family characters having mycelium at the edge of ascomata, bitunicate, pseudoparaphysate asci and 1-septate, hyaline ascospores. The genus is represented by 25 species. In India it is represented by only one species and is recorded from Maharashtra alone.

**i) *D. hironymi* (Rehm) Bat. comb. nov.**

Monographia dos fungos Micropeltaceae

Publ. Inst. Mic. Uni. Recife 56: 55-56, 1959.

Text figs.No.- 11-14; Plate figs. No.- 11-12.

Mycelium superficial, golden brown, 6 µm in diam.; ascomata hypophyllous, superficial, sparse, dimidate-scutate, dark brown, 81-102 µm in diam.; ostiolate, ostiole 9-12 µm in diam.; asci cylindrical, bitunicate, 8-spored, apseudoparaphysate, 30-41 X 6-9 µm; ascospores cylindrical, uniseriate, 1-septate, constricted at the septum, cells separated at maturity, upper and lower cells are rounded at the apex, hyaline, smooth walled, 6-9 X 3 µm. Conidial state not observed.

**Habitat:** Collected on living leaves of *Ficus benghalensis* L. (Fam.-

Moraceae), Forest Nursury Satara (Distt.- Satara), 24<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.-4.

**Remark:** Rhem (1998) recorded this species as *Clypeolum hieronymi* Rehm. Batista (1959), transferred the species into *D. hironymi* (Rehm) Bat. comb. nov. and made a new combination. The present collection has found to be matched well with the species-*D. hironymi* (Rehm) Bat. comb. nov. in respects to morphology and dimensions of ascomata, asci and ascospores except having slightly smaller ascomata and therefore, referred to it. This species has been recorded for the first time from India and *Ficus benghalensis* L. is the new host record to the fungi of India.

**ii) *D. ocoteae* (Batista) Batista, var. *phaseoli* var. nov.**

Text figs. No.-15-18; Plate figs. No.- 13-15.

Mycelium superficilabus, 3  $\mu\text{m}$  in diam.; ascomata hypophyllus, superficilibus, sparsis, bruneus, dimidata- scutata, 128-152  $\mu\text{m}$  in diam.; ostiolata, 13-19  $\mu\text{m}$  in diam.; asci cylindricis, sessilis, bitunicatae, 8-spori, apseudoparaphysatibus, 51-81 X 6-9  $\mu\text{m}$ ; ascosporie ovatus vel cylindricis, 1-septatae, constrictae, cellulae, apicem hyalinae, levibus, 9-12 X 3  $\mu\text{m}$ . Status conidialis absentae.

**Habitato:** Typus lectus in foliis *Phaseolus vulgaris* L. (Fam.- Fabaceae), Shendre (Distt.- Satara), 4<sup>th</sup> Oct. 2006. Leg. L.S. Jadhav et positus in M.H.B.D.Y.C.I.S. Satara. No.-5.

*D. ocoteae* (Batista) Batista, var. *phaseoli* var. nov.

Mycelium superficial, 3  $\mu\text{m}$  in diam.; ascomata hypophyllous, superficial, sparse, dimidate-scutate, brown, 128-152  $\mu\text{m}$  in diam.; ostiolate, ostiole 13-19  $\mu\text{m}$  in diam.; asci cylindrical, bitunicate, 8-spored, apseudoparaphysate 51-81 X 6-9  $\mu\text{m}$ ; ascospores ovate-cylindrical, uniseriate, 1-septate, constricted at the septum, cells separated at maturity, apex pointed, hyaline, smooth walled, 9-12 X 3  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Phaseolus vulgaris* L. (Fam.- Fabaceae), Shendre (Distt. - Satara), 4<sup>th</sup> Oct. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.-5.

**Remark:** Batista (1953) recorded this species as *Microthyriella ocateae*

Batista on the basis of having pointed tipped ascospores. Later on in 1962, he transferred the species into *Dictyothyrium* Theissen and made a new combination as *D. ocoteae* (Batista) Batista comb. nov. This species was recorded by Patil, C.R. (1995), from Chandoli, Sangali (M.S.) on *Embllica robusta* Roxb. The present collection was compared with all respects of morphology and dimensions of ascomata, asci and ascospores with *D. ocoteae* (Batista) Batista comb. nov. and found to be matched well with it, except having larger ascomata and asci. Therefore, a new variety has been proposed here to accommodate the present collection as *D. ocoteae* (Batista) Batista, var. *phaseoli* var. nov.

Holotype : *D. ocoteae* (Batista) Batista, var. *phaseoli* var. nov. Jadhav and Pawar.

Etymology : *phaseoli*- the variety is named after host genus *Phaseolus vulgaris* L.

Type locality : Shendre (Dist.-Satara).

Type specimen : in M.H.B.D.Y.C.I.S. Satara. No.- 5.

**Table No. 1– Comparison between *Dictyothyrium ocoteae* (Batista) Batista comb. nov. and present collection. (Measurements in  $\mu\text{m}$ ).**

Sr. No.	Species	Ascomata in diam.	Asci	Ascospores	Host	Locality
1	<i>Dictyothyrium ocoteae</i> (Batista) Batista comb. nov.	100-140	24-44 X 8-10	10-12 X 4	<i>Ocotea gardneri</i> Hutchinson and M.B. Moss.	Brazil
2	<b>Present</b> Collection: B1/ 4 <sup>th</sup> Oct. 2006	128-154	51-81 X 6-9	9-12 X 3	<i>Phaseolus vulgaris</i> L.	Shendre (Dist.- Satara)

**Genus- *Micropeltis* Montag. ne**

R. de la. Sagra- *Historia Fils. Pol., nat. Cuba Fol. 6: 325, 1842.*

The genus was established by Montag. ne in 1842 with its type species *Micropeltis applanata* Montag. ne. Clements and Shear (1931), placed this genus into

the sub-family-Dictyopeltineae of the family-Micropeltaceae of the order-Microthyriales on the basis of open, reticulate scutellum without free mycelium, pseudoparaphysate asci and multiseptate and hyaline ascospores. von Arx and Muller (1962), neglected this genus in their classification but later on (1975), they placed it in the same family of the sub-order-Pseudosphaeriinae of the order-Dothideales by having hyaline superficial mycelium, wall of the ascomata greenish, bluish or brownish, ascospores often large, multiseptate and hyaline. Luttrell (1973) placed the genus in the same family of the order-Dothideales. The family is characterized by superficial, dimidate-scutate, ostiolate, rounded, appressed to the cuticle, bluish-black or brown, wall composed of hyphal reticulum, thinner at margin and thicker at ostiole; asci arranged in the ring with their tips directed towards the ostiole, elongated, ovate or saccate, bitunicate; pseudoparaphyses hyaline, filamentous, filling the central part of the ascomata or apseudoparaphysate and ascospores are 1 to many celled, hyaline or pigmented when mature. The genus is known by its 259 species. In India it is represented by 10 species.

i) *M. aqualies* Syd.

Syll. Fung. 24: 516, 1926-1928.

Text figs.No.- 19-22; Plate figs. No.- 18-20.

Ascomata hypophyllous, superficial, sparse, orbicular, dimidate-scutate, dark brown, 310  $\mu\text{m}$  in diam.; ostiolate, ostiole 9-12  $\mu\text{m}$  in diam.; asci cylindrical, bitunicate, sessile, 8-spored, apseudoparaphysate, 39-52 X 9-12  $\mu\text{m}$ ; ascospores fusoid, uniseriate, 3-septate, constricted at the septum, cells unequal, hyaline, smooth walled, 17 X 6  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Clausena indica* (Dalz.) (Fam.-Rutaceae), Pateghar (Distt. - Satara), 12<sup>th</sup> March 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 6.

**Remark:** Sydow H. (1912) recorded this species on *Actephilae dispersae* from Philippines. The present collection has found to be matched well with *M. aqualies* Syd. in respects to morphology and dimensions of ascomata, asci and ascospores except having slightly smaller asci and absences of pseudoparaphyses and therefore, referred to it. This species has been recorded for the first time from India

and *Clausena indica* (Dalz.) is the new host record to the fungi of India.

ii) *M. erysiphoides* Rehm, Hedw.

Syll. Fung. 17: 869, 1905.

Text figs. No.- 23-26.

Ascomata hypophyllous, superficial, sparse, orbicular, dimidate-scutate, brown, 228-446  $\mu\text{m}$  in diam.; ostiolate, ostiole 14-20  $\mu\text{m}$  in diam.; asci cylindrical, bitunicate, sessile, 8-spored, apseudoparaphysate, 40-55 X 6  $\mu\text{m}$ ; ascospores fusoid, 3-septate, constricted at the septa, cells unequal, hyaline, smooth walled, 17 X 6  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Actinodaphne hookeri* Meissn. (Fam.- Lauraceae), Mahabaleshwar (Distt. - Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 7.

**Remark:** The present collection has found to be matched well with *M. erysiphoides* Rehm, Hedw. in respects to morphology and dimensions of ascomata, asci and ascospores except having slightly larger ascomata and slightly smaller asci and therefore, referred to it. This species has been recorded for the first time from India and *Actinodaphne hookeri* Meissn. is the new host record to the fungi of India.

iii) *M. umbilicate* Mont.

Syll. Fung. 16: 644, 1902.

Text figs.No.- 27-30; Plate figs. No.- 16-17.

Ascomata hypophyllous, superficial, sparse, orbicular, dimidate-scutate, brown, 276-388  $\mu\text{m}$  in diam., wall made up of hyphal reticulum, cells regular, brown; ostiolate, ostiole 17  $\mu\text{m}$  in diam.; asci cylindrical, bitunicate, sessile, 8-spored, apseudoparaphysate, 27-32 X 6-9  $\mu\text{m}$ ; ascospores obovoid, 3-septate, constricted at the septa, cells unequal, hyaline, smooth walled, 15 X 3  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Securinega leucopyrus* (Wild.) (Fam.- Euphorbiaceae), Shendre (Distt. - Satara), 3<sup>rd</sup> Dec. 2006. Leg. L.S. Jadhav and

deposited in M.H.B.D.Y.C.I.S. Satara. No.- 8.

**Remark:** Montagne (1902) recorded this species on *Henderae* sp. and *Carica* sp. from Belgium. The present collection has found to be matched well with *M. umbilicate* Mont. in respects to morphology and dimensions of ascomata, asci and ascospores except having slightly larger asci and therefore, referred to it. This species has been recorded for the first time from India and *Securinega leucopyrus* (Wild.) is the new host record to the fungi of India.

### **Genus- *Stomiopeltis* Theissen**

Broteria, 12: 85, 1914.

The genus was established by Theissen in 1914 with its type species *Stomiopeltis aspera* (Berk.) Theissen. Clements and Shear (1931), placed this genus into the family-Micropeltaceae of the order-Microthyriales due to having reticulate mycelium, scutellum wavy and plectenchymatic; ostiolate, glabrous and pseudoparaphysate asci. Batista (1959) classified it into the sub-family-Stomiopeltoideae of the family-Micropeltaceae of the order-Hemisphaeriales. While von Arx and Muller (1962 and 1975), placed this genus in same family-Micropeltaceae of the sub-order-Pseudosphaeriinae of the order-Dothideales. Eriksson (1984), followed von Arx and Muller (1975), placed in the order-Dothideales. The genus is characterized by having brown, superficial, reticulate mycelium, ascocarp superficial, dimidate-scutate, ostiolate, uni to polyloculate, shield composed of pseudoparenchyma of in disorderly arranged cells, sinuous, becoming plectenchymatic and merging into a mycelial mat; asci prostrate, radially arranged, their bases lying at periphery while apices converging towards the ostiole, pseudoparaphysate, bitunicate and ascospores are 1-septate and hyaline. The genus is known by its 48 species. In India it is represented by only 4 species and by 2 species from Maharashtra.

### ***Stomiopeltis suttoniae* (Mendoza) Luttrell.**

Mycologia 38: 572, 1946.

Text figs.No.- 31-34; Plate figs. No.- 21-22.

Colonies hypohyllous, black, regular in outline; mycelium superficial, pelliculose, golden brown, 3  $\mu$ m in diam.; ascomata superficial, sparse, orbicular,

dimidate-scutate, brown, 49-124  $\mu\text{m}$  in diam.; centrally ostiolate, ostiole 12-20  $\mu\text{m}$  in diam.; asci clavate-cylindrical, bitunicate, prostrate, 8-spored, pseudoparaphysate, 35-44 X 9-14  $\mu\text{m}$ ; ascospores obovoid to oblanceolate, 1-septate, constricted at the septa, rounded at both the ends, upper cell broader and smaller than the lower one, hyaline, separated at maturity, smooth walled, 12-14 X 6-9  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Glochidion hohenackeri* Bedd. (Fam.-Euphorbiaceae), Mahabaleshwar (Distt.- Satara), 24<sup>th</sup> Feb. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 9.

**Remark:** Mendoza (1925) recorded this species as *Stomiopeltella suttoniae* Mendoza on *Suttonia lessertiana* Mez. from Hawaii. Luttrell (1946) transferred it to *Stomiopeltis suttoniae* (Mendoza) Luttrell due to presence of the pseudoparaphyses. The present collection has found to be matched well with *Stomiopeltis suttoniae* (Mendoza) Luttrell. in respects to morphology and dimensions of ascomata, asci and ascospores except having smaller ascomata and therefore, referred to it. This species has been recorded for the first time from India and *Glochidion hohenackeri* Bedd. is the new host record to the fungi of India.

#### Sub-order- Dothideineae

#### Family- Schizothyriaceae

#### Genus- *Ciferriotheca* Bat. and Lima

Publ. Inst. Mic. Uni. Recife 56: 395-396, 1959.

The genus was established by Batista and Lima in 1959 with its type species *C. brosimi* Bat. and Lima. They placed this genus into the family-Haplopetloidae of the family-Micropeltaceae, due to having orbicular, pseudoparenchymatous brown to black, non-ostiolate ascomata, which dehisces irregularly, apseudoparaphysate asci and hyaline 2-3 septate ascospores. Luttrell (1973), placed this genus in the family-Schizothyriaceae of the order-Hemisphaeriales as a synonymous genus to the genus-*Metathyriella* Syd., due to having superficial ascomata and 2-3 septate, hyaline ascospores. von Arx and Muller (1962 and 1975) and Eriksson (1984) have neglected this genus in their classification schemes. This genus differs in various morphological characters from the genus-*Metathyriella* Syd. viz. ascomata superficial, dull-black to brown, semi-transparent membranous, dehisce irregularly; asci globose to pyriform,

3-6 spored, apseudoparaphysate and ascospores are claviform, 2-3 septate and conglobate. Therefore, a separate existence of the genus has been maintained here and treated it as valid genus. The genus is characterized by absence of free mycelium, ascomata superficial, plano-orbicular, astomatous, dull-black to black-brown, membranous, semi-transparent, marginally pelliculose and hyaline, hymanium, multiloculate, uniascigerous; asci globose to sub-globose or pyriform, sessile, bitunicate, 3-6 spored, apseudoparaphysate and ascospores are claviform, 2-3 septate, rounded at the apex, constricted at the septa, cell unequal, hyaline and conglobate. The genus has been represented by only 4 species.

***Ciferriotheca pere* (Bat.) Bat. var. *clausenae* var. nov.**

Text figs.No.- 35-38; Plate figs. No.- 23-24.

Mycelium libero nullo; ascomata hypophyllus, superficialibus, orbicularae, olivaceus bruneus, 156-178  $\mu\text{m}$  in diam.; cellulae irregulariae vel polgonalibus,, asci globosa vel sub-globosa, bitunicatae, 8-spori, apseudoparaphysatibus, 21-23 X 17-21  $\mu\text{m}$ ; ascospori claviformes, 3-septatae, polystichae, apicem rotundatae, constrictae, hyalinae, levibus, 12-15 X 6  $\mu\text{m}$ . Status conidialis absentae.

**Habitato:** Typus lectus in foliis *Clausena indica* (Dalz.) (Fam.- Rutaceae), Pateghar (Distt.- Satara), 12<sup>th</sup> March 2007. Leg. L.S. Jadhav et positus in M.H.B.D.Y.C.I.S. Satara. No.- 10.

***Ciferriotheca pere* (Bat.) Bat. var. *clausenae* var. nov.**

Free mycelium absent; ascomata hypophyllous, superficial, orbicular, yellowish brown, 156-178  $\mu\text{m}$  in diam.; cells polygonal to irregularly lobed; asci globose to sub-globose, bitunicate, 8-spored, sessile, apseudoparaphysate, 21-23 X 17-21  $\mu\text{m}$ ; ascospores clavate, 3-septate, polystichous, constricted at the septum, cells unequal, upper cells larger than lower one, cells separated at maturity, hyaline, smooth walled, 12-15 X 6  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Clausena indica* (Dalz.) (Fam.- Rutaceae), Pateghar (Distt.- Satara), 12<sup>th</sup> March 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 10.

**Remark:** The present collection was compared (Table No.2) with

*Ciferriotheca pere* (Bat.) Bat. in respects to morphology and dimensions of ascomata, asci and ascospores. It matches with *C. pere* (Bat.) Bat. in all respect except having smaller ascomata and ascospores. Therefore, a new variety has been proposed here to accommodate the present collection as *Ciferriotheca pere* (Bat.) Bat. var. *clausenae* var. nov.

Holotype : *Ciferriotheca pere* (Bat.) Bat. var. *clausenae* var. nov.  
Jadhav and Pawar.

Etymology : *clausenae*- the variety is named after the host genus *Clausena indica* (Dalz.).

Type locality : Pateghar (Distt.-Satara).

Type specimen : in M.H.B.D.Y.C.I.S. Satara. No.-10.

**Table No. 2- Comparision between *Ciferriotheca pere* (Bat.) Bat. and present collection. (Measurements in  $\mu\text{m}$ ).**

Sr. No.	Species	Ascomata in diam.	Asci	Ascospores	Host	Locality
1	<i>Ciferriotheca pere</i> (Bat.) Bat.	413-574	-	12-24 X 4-6 (3-septate)	<i>Peraspheaves</i>	Brazil
2	<b>Present Collection:</b> P18/19 12 <sup>th</sup> March 2007	156-178	21-23 X 17- 21	12-15 X 6 (3-septate)	<i>Clausena indica</i> (Dalz.)	Pateghar (Distt.- Satara)

### Genus- *Leptophyma* Saccardo

Syll. Fung. 8: 844, 1889.

The genus was established by Saccardo in 1889 with its type species *Leptophyma aurantiaca* (Ell. and Mont.) Saccardo. Clements and Shear (1931), placed this genus in the family-Myriangiaceae of the order-Dothideales due to having erumpent, superficial ascomata; asci arranged in a single hymenium layer and 1-septate, hyaline ascospores. von Arx and Muller (1962), placed the genus in the family-Schizothyriaceae of the order-Dothiorales due to its brightly coloured or hyaline, superficial ascomata with hyaline mycelium. They replaced (1975), this

genus in the same family of the sub-order-Dothideineae of the order-Dothideales, due to having non-ostiolate ascomata which opens by ruptures and asci are clavate or nearly spherical. Luttrell (1973), placed this genus in the family-Schizothyriaceae of the order-Hemisphaeriales on the basis of having brightly coloured, gelatinous haemiperithecioid ascomata, opening by splitting or rupturing the tissue; asci distributed individually and separated by remnants of the stromal tissue. Eriksson (1984), placed the genus in the family-Schizothyriaceae of the order-Dothideales. The genus is characterized by free mycelium but marginally pelliculose; hyphae hyaline or brown, indistinct; ascomata superficial, orbicular, light-reddish or yellowish brown or golden-yellow in colour, gelatinous, hymenium hyaline and thin; asci parallel, bitunicate, apseudoparaphysate and 1-septate, ellipsoidal and hyaline ascospores. The genus is known by its 17 species. In India it is been represented by 9 species.

**i) *L. bakeri* Syd.**

Annals. Mycol. 14: 367, 1916.

Text figs.No.- 39-42.

Remark: Sydow, H. and Sydow, P. (1916), recorded this species on unidentified host from Philippines. Patil, M.S. and A.B. Pawar (1989), recorded this species on *Hymenodictyon obovatum* Wall. (Fam.-Rubiaceae), *Flocourtia indica* (Burm. F.) Merr. (Fam.- Violaceae) and *Symplocos canarana* Roxb. (Fam.- Symploaceae) from Maharashtra. The present collection has found to be matched well with *L. bakeri* Syd. in respects to morphology and dimensions of ascomata, asci and ascospores except having slightly smaller ascomata and asci therefore, referred to it. Thus, *Mangifera indica* L. (Fam.- Anacardiaceae) is the additional host record to the fungi of Maharashtra.

Habitat: Collected on living leaves of *Mangifera indica* L. (Fam.- Anacardiaceae) Pateghar (Distt. - Satara), 12<sup>th</sup> March 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 11.

**ii) *L. ugandensis* (Hansf.) Arx var. *pittosporri* var. nov.**

Text figs.No.- 43-46; Plate figs. No.- 25-26.

Mycelium libero nullo; ascomata epiphyllus, superficialibus, orbicularae, dimidata-scutata, gelateniae, sub-translucid, bruneus, aggregata, 112-143 µm in

diam.; hymanium hyalinae, hyphae paries; asci globose vel ovatus, bitunicatae, 8-spori, apseudoparaphysatibus, 17-20 X 14  $\mu\text{m}$ ; ascosporie 1-septatae, constrictae, polystichae, cellulae, unequalie, apicem rotundatae, hyalinae, levibus, 9-12 X 3  $\mu\text{m}$ . Status conidialis absentae.

**Habitato:** Typus lectus in foliis *Pittosporum daxycaulon* Miq. (Fam.-Pittosporaceae), Pateghar (Distt. - Satara), 12<sup>th</sup> March 2007. Leg. L.S. Jadhav et positus in M.H.B.D.Y.C.I.S. Satara. No.- 12.

*L. ugandensis* (Hansf.) Arx var. *pittosporri* var. nov.

Free mycelium absent; ascomata epiphyllous, superficial, orbicular, dimidate-scutate, sparse, gelatinous, yellowish brown, aggregated, semi-transparent, 112-143  $\mu\text{m}$  in diam.; hymenium yellow; asci globose to ovate, bitunicate, 8-sporied, apseudoparaphysate, 17-20 X 14  $\mu\text{m}$ ; ascospores elliptical, 1-septate, constricted at the septum, cells unequal, basal and terminal cells rounded at both the ends, cells separated at maturity, hyaline, smooth walled, 9-12 X 3  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Pittosporum daxycaulon* Miq. (Fam.-Pittosporaceae), Pateghar (Distt.- Satara), 12<sup>th</sup> March 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 12.

**Remark:** Hansford (1946), recorded this species as *Lecideopsella ugandensis* Hansf. on *Artabotrys nitida* Engl. from Africa. von Arx and Muller (1962), transferred this species along with *Lecideopsela gelatenosa* Hansf. to the species-*Leptophyma ugandensis* (Hansf.) Arx, considering the genus as *Lecideopsella* Hohn. as a synonymous one. The present collection was compared (Table No.3) with the known species of *L. ugandensis* (Hansf.) Arx in respects to morphology and dimensions of ascomata, asci and ascospores and it is found to be matched well except having too smaller ascomata and ascospores. Therefore, a new variety has been proposed here to accommodate the present collection as *L. ugandensis* (Hansf.) Arx var. *pittosporri* var. nov.

Holotype : *L. ugandensis* (Hansf.) Arx var. *pittosporri* var. nov.

Jadhav and Pawar.

Etymology : *pittosporri* - the variety is named after the host genus *Pittosporum daxycaulon* Miq.

Type locality : Pateghar (Distt.-Satara).

Type specimen : in M.H.B.D.Y.C.I.S. Satara. No.-12.

**Table No. 3- Comparison between *L. ugandensis* (Hansf.) Arx and present collection. (Measurements in  $\mu\text{m}$ ).**

Sr. No.	Species	Ascomata in diam.	Asci	Ascospores	Host	Locality
1	<i>L. ugandensis</i> (Hansf.) Arx	0.5	16-20	10-20 X 2-3	<i>Artabotrys nitida</i> Engl.	Africa
2	<b>Present Collection:</b> P20/21 12 <sup>th</sup> March 2007.	112-143	17-20 X 14	9-12 X 3	<i>Pittosporum daxycaulon</i> Miq.	Pateghar (Distt.- Satara).

#### **Genus- *Myriangiella* Zimmerman**

Zentbt. Bakt. Parasitkde. Abt. 2(8): 183, 1902.

The genus was established by Zimmerman in 1902 with its type species *Myriangiella orbicularies* Zimmerman. Clements and Shear (1973), classified this genus in the family-Schizothyriaceae of the order-Hemisphaeriales due to having dimidate-scutate, superficial ascomata; asci cylindro-ellipsoidal and ascospores are multiseptate (more than 2-3 septate). von Arx and Muller (1975) placed this genus in the family-Schizothyriaceae of the sub-order-Dothideineae of the order-Dothideales. Eriksson (1984), followed the same scheme proposed by von Arx and Muller (1975). The genus is characterized by the family characters and having multiseptate, hyaline ascospores. von Arx and Muller (1975), transferred number of the other genera to the genus *Myriangiella* Zimmerman and considered as synonymous ones. The genus is known by its 6 species. In India it is represented by 10 species (Geobios, 2008).

#### ***Myriangiella arcuta* Toro var. *lanceolata* var. nov.**

Text figs.No.- 47-50; Plate figs. No.- 27-29.

Mycelium libero nullo; ascomata hypophyllus, superficialibus, orbicularae,

olivaceus-bruneus, dimidata-scutata, 200 µm in diam.; asci lineus-lanceolatus vel cylindraciae, bitunicatae, 8-spore, apseudoparaphysatibus, 73-94 X 12-15 µm; ascospore linier-lanceolatus, 13-septatae, constrictae, cellulae, unequalie, apicem rotundatae, hyalinae, levibus, 55-65 X 3 µm. Status conidialis absentae.

**Habitato:** Typus lectus in foliis *Olea dioica* Roxb. (Fam.- Oleaceae), Mahabaleshwar (Distt. - Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav et positus in M.H.B.D.Y.C.I.S. Satara. No.- 13.

*Myriangiella arcuta* Toro var. *lanceolata* var. nov.

Free mycelium absent; ascomata hypophyllous, superficial, orbicular, olivaceous-brown, dimidate-scutate, sparse, 200 µm in diam.; asci linear lanceolate or cylindrical, bitunicate, 8-spored, apseudoparaphysate, 73-94 X 12-15 µm; ascospores needle like, 13-septate, constricted at the septum, cells unequal, basal and terminal cells rounded at both the ends, unequal, cells separated at maturity, hyaline, smooth walled, 55-65 X 3 µm. Conidial state not observed.

**Habitat:** Collected on living leaves of *Olea dioica* Roxb. (Fam.- Oleaceae), Mahabaleshwar (Distt. - Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 13.

**Remark:** The present collection was compared (Table No.4) with the known species of *Myriangiella* Zimmerman, in respects to morphology and dimensions of ascomata, asci and ascospores and it is found to be well matched well with *Myriangiella arcuta* Toro, except having too smaller ascomata and larger linear asci and ascospores. Therefore, a new variety has been proposed here to accommodate the present collection as *Myriangiella arcuta* Toro var. *lanceolata* var. nov.

Holotype : *Myriangiella arcuta* Toro var. *lanceolata* var. nov.

Jadhav and Pawar.

Etymology : *lanceolata*- the variety is named after larger linear lanceolate asci and ascospores.

Type locality : Mahabaleshwar (Distt.-Satara).

Type specimen : in M.H.B.D.Y.C.I.S. Satara. No.- 13.

Table No. 4— Comparison between *Myriangiella arcuta* Toro and present collection. (Measurements in  $\mu\text{m}$ ).

Sr. No.	Species	Ascomata in diam.	Asci	Ascospores	Host	Locality
1	<i>Myriangiella arcuta</i> Toro	425-550	40-55	45-54 X 8-9 (9-11 Septate)	<i>Caesaria aculeate</i> Roxb.	Brazil
2	<b>Present Collection:</b> M31 9 <sup>th</sup> Feb. 2007.	200	73-94 X 12-15 (Linear)	55-65 X 3 (13-Septate, Linear)	<i>Olea dioica</i> Roxb.	Mahabaleshwar (Distt.-Satara)

#### Genus- *Schizothyrium* Desmaziers

Annls. Se. Nat. Bot. Sec. III, 11: 360, 1849.

The genus was established by Desmaziers in 1849 with its type species *Schizothyrium ptermicae* Desmaziers. Clements and Shear (1931), placed this genus into the family-Micropeltaceae of the order-Microthyriales due to having radiate, superficial ascomata. von Arx and Muller (1962), placed this genus into the family-Schizothyriaceae of the order-Hemisphaeriales of the class-Loculoascomycetes. von Arx and Muller (1975), revaluated the genus and placed in the same family but in the sub-order-Dothideineae of the order-Dothideales. Eriksson (1984), followed the same scheme proposed by von Arx and Muller (1975). The family is characterized by saprophytic or parasitic forms living superficially; mycelium invade the cuticle and composed of flattened, light brown often indistinct hyphae and are dimidate-scutate; asci, lie parallel in a single layer, clavate, spherical or obovoidal, bitunicate, surrounded by pseudoparaphyses like filaments, opening by deliquescence or ruptures and ascospores 2 to more celled, hyaline or brownish. The genus-*Schizothyrium* Desmaziers is characterized by its family characters. The genus is represented by 55 species. In India it is represented by 7 species and by only one species from Maharashtra.

i) *S. courtarea* (Bat. and Lima) Arx

=Diattungen der Didymosporen Pyrenomyceten Beiter. Krypto. Schweiz 11(1): 200, 1962.

Text figs.No.- 51-56; Plate figs. No.- 30-31.

Colonies epiphyllous, irregular, 1mm in diam., black; mycelium superficial, indistinct, hyphae, reticulate, 1.5  $\mu\text{m}$  in diam.; ascomata superficial, sparse, irregular, dimidate-scutate, semi-transparent, olive green, 184-203  $\mu\text{m}$  in diam.; asci numerous ovate to cylindrical, bitunicate, 8-spored, sessile, apseudoparaphysate, 26-29 X 12-14  $\mu\text{m}$ ; ascospores obovate to ovate, 1-septate, polystichous, non-constricted at the septa, upper cells slightly broader than the lower one, dissociated at maturity, hyaline, smooth walled, 9 X 3  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Memecylon umbellatum* Burn. (Fam.- Melastomaceae) and *Cordia gharaf* (Forssk) Ehrenb and tsh. (Fam.- Boraginaceae), Mahabaleshwar (Distt.- Satara), 9<sup>th</sup>Feb. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 14(a) and 14(b) respectively.

**Remark:** Batista and Lima (1959), recorded this species as *Schizopelties courtarea* Bat. and Lima on *Coutarea hexandra* Schum. from Brazil. von Arx and Muller (1962), transferred it to *S. courtarea* (Bat. and Lima) Arx on the basis of having orbicular, astomatous ascomata, hyaline, ascospores and pseudoparaphysate asci. The present collections have been found to be matched well with *S. courtarea* (Bat. and Lima) Arx in respects to morphology and dimensions of ascomata, asci and ascospores, except having slightly smaller asci and ascospores and therefore, referred to it. This species has been recorded for the first time from India and *Memecylon umbellatum* Burn. and *Cordia gharaf* (Forssk) Ehrenb and tsh. are the new host records to the fungi of India.

ii) *S. melanoplacum* (Mont.) Sacc.

Syll. Fung. 2: 726, 1883.

Text figs.No.- 57-60; Plate figs. No.- 32-33.

Colonies epiphyllous, irregular, black; mycelium superficial, hyaline; ascomata superficial, sparse, irregular, dimidate-scutate, dehiscence by rupture, brownish, 122-145  $\mu\text{m}$  in diam.; cells irregular, asci clavate, bitunicate, 8-spored, shortly stalked, apseudoparaphysate, 32-44 X 12-15  $\mu\text{m}$ ; ascospores obovate to ovate,

1-septate, polystichous, non-constricted at the septa, upper cells slightly broader than the lower one, dissociated at maturity, hyaline, smooth walled, 12-15 X 6  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Termanalia chebula* Burn. (Fam.- Combretaceae) and *Scutia myrtina* (Burm.) Fx. Kurnz. (Fam.- Rhamnaceae), Mahabaleshwar (Distt.- Satara), 9<sup>th</sup> Feb. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 15(a) and 15(b) respectively.

**Remark:** Montagne (1834), recorded this species as *Cheilaria melanoplacum* Mont. on *Justica* sp. from Cayeham. Later on Saccardo (1883), transferred it to *S. melanoplacum* (Mont.) Sacc. due to different morphological nature of these two genera. The present collections have found to be matched well with *S. melanoplacum* (Mont.) Sacc., in respects to morphology and dimensions of ascomata, asci and ascospores and therefore, referred to it. This species has been recorded for the first time from India and *Termanalia chebula* Burn. and *Scutia myrtina* (Burm.) Fx. Kurnz. are the new host records to the fungi of India.

**iii) *S. melanoplacum* (Mont.) Sacc. var. *memecyliae* var. nov.**

Text figs.No.- 61-64; Plate figs. No.- 34-35.

Mycelium superficilabus, brunnes, 3  $\mu\text{m}$  in diam.; ascomata hypophyllus, superficilibus, sparsis, bruneus, dimidata- scutata 112-217  $\mu\text{m}$  in diam.; dehiscae irregularibus, asci clavatus vel cylindraxis, sub-sessilis, bitunicatae, 8-spori, apseudoparaphysatibus, 41-52 X 15-17  $\mu\text{m}$ ; ascosporie ovatus vel cylindraxis, 1-septatae, constrictae, cellulae, apicem rotundatae, hyalinae, levibus, 15-18 X 6  $\mu\text{m}$ . Status conidialis absentae.

**Habitato:** Typus lectus in foliis *Memecylon umbellatum* Burn. (Fam.- Melastomaceae), Mahabaleshwar (Distt. - Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav et positus in M.H.B.D.Y.C.I.S. Satara. No.- 16.

***S. melanoplacum* (Mont.) Sacc. var. *memecyliae* var. nov.**

Mycelium superficial, brown, 3  $\mu\text{m}$  in diam.; ascomata hypophyllous, superficial, sparse, dimidate-scutate, brown, irregular in out line, 112-217  $\mu\text{m}$  in diam.; asci clavate to cylindrical, bitunicate, 8-spored, apseudoparaphysate, 41-52 X

15-17  $\mu\text{m}$ ; ascospores ovate-cylindrical, 1-septate, constricted at the septum, upper cells broader than the lower one, cells separated at maturity, hyaline, smooth walled, 15-18 X 6  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Memecylon umbellatum* Burn. (Fam.- Melastomaceae), Mahabaleshwar (Distt.- Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 16.

**Remark:** Toro (1934), recorded this species on *Symplocos rigidissima* Brand. from Africa. The present collection was compared (Table No.5) with *S. melanoplacum* (Mont.) Sacc., in respects to morphology and dimensions of ascomata, asci and ascospores and it is found to be matched well except having larger asci and ascospores. Therefore, a new variety has been proposed here to accommodate the present collection as *S. melanoplacum* (Mont.) Sacc. var. *memecyliae* var. nov.

Holotype : *S. melanoplacum* (Mont.) Sacc. var. *memecyliae* var. nov.  
Jadhav and Pawar.

Etymology : *memecyliae*- the variety is named after the host genus *Memecylon umbellatum* Burn..

Type locality : Mahabalehwar (Distt.- Satara).

Type specimen : in M.H.B.D.Y.C.I.S. Satara. No.- 16.

**Table No. 5- Comparision between *S. melanoplacum* (Mont.) Sacc. and present collection. (Measurements in  $\mu\text{m}$ ).**

Sr. No.	Species	Ascomata in diam.	Asci	Ascospores	Host	Locality
1	<i>S. melanoplacum</i> (Mont.) Sacc.	-	30-40	15	<i>Justicia</i> spp.	Cayehem
1	<b>Present Collection:</b> M41/42 9 <sup>th</sup> Feb. 2007	112-217	41-52 X 15- 17	15-18 X 6	<i>Memecylon umbellatum</i> Burn.	Mahabaleshwar (Distt.- Satara)

iv) *S. perexiguum* (Rob.) Hoh.

Annals. Mycol. 15: 297, 1917.

**Remark:** Bose and Muller (1965), recorded this species on the leaves of *Myrsine semiserrata* Wall from Ranikhet (U.P.). The present collections has been found to be matched well with *Schizothyrium perexiguum* (Rob.) Hoh. in respect to morphology and dimensions of ascomata, asci and ascospores and therefore, referred to it. Thus, *Olea dioica* Roxb. (Fam.- Oleaceae) is the additional host record to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Olea dioica* Roxb. (Fam.- Oleaceae), Mahabaleshwar (Distt.- Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 17.

v) *S. pomi* (Mont. and Fr.) Arx

=Diattungen der Didymosporen Pyrenomyceten Beiter. Krypto. Schweiz. 11(1): 197-199, 1962.

**Remark:** Bose and Muller (1965) recorded this species on the leaves of *Michelia kipasa* Ham. from Chaubatia (U.P.). The present collections have been found to be matched well with *Schizothyrium pomi* (Mont. and Fr.) Arx. in respect to morphology and dimensions of ascomata, asci and ascospores and therefore, referred to it. Thus, *Scutia myrtina* (Burm.) Fx. Kurz. (Fam.- Rhamnaceae) and *Symplocos beddomei* Clark. (Fam.- Symploaceae) are the additional host records to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Scutia myrtina* (Burm.) Fx. Kurz. (Fam.- Rhamnaceae) and *Symplocos beddomei* Clark. (Fam.- Symploaceae) Mahabaleshwar (Distt.- Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 18(a) and 18(b) respectively.

vi) *S. jaapii* (Rhem) Sacc. var. *sahyadrensis* var. nov.

Text figs.No.- 65-68; Plate figs. No.- 36-37.

Colonies epiphyllus, irregularibus, 2.3 mm in diam.; mycelium superficialibus, brunnes, 3 µm in diam.; ascomata epiphyllus, superficialibus, sparsis, bruneus, dimidata- scutata, 96-119 µm in diam.; dehiscae irregularibus; asci globosa vel sub-

globosa, sessilis, bitunicatae, 8-spori, apseudoparaphysatibus, 23-29 X 12-14  $\mu\text{m}$ ; ascospori ovatus vel elliptus, 1-septatae, polystichae, constrictae, hyalinae, levibus, 9-12 X 3  $\mu\text{m}$ . Status conidialis absentae.

**Habitato:** Typus lectus in foliis *Memecylon umbellatum* Burn. (Fam.- Melastomaceae), *Glochidion hohenackeri* Bedd. (Fam.- Euphorbiaceae), Mahabaleshwar (Distt.- Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav et positus in M.H.B.D.Y.C.I.S. Satara. No.-19(a) et 19(b) respectively.

*S. jaapii* (Rhem) Sacc. var. *sahyadrensis* var. nov.

Colonies epiphyllous, irregular, 2.3 mm in diam.; mycelium superficial, brown, 3  $\mu\text{m}$  in diam.; ascomata epiphyllous, superficial, sparse, dimidate-scutate, brown, irregular in out line, 96-119  $\mu\text{m}$  in diam.; asci globose to sub-globose, bitunicate, 8-spored, sessile, apseudoparaphysate, 23-29 X 12-14  $\mu\text{m}$ ; ascospores ovate to elliptical, 1-septate, polystichous, constricted at the septum, cells separated at maturity, hyaline, smooth walled, 9-12 X 3  $\mu\text{m}$ . Conidial state not observed.

**Habitat:** Collected on living leaves of *Memecylon umbellatum* Burn. (Fam.- Melastomaceae) and *Glochidion hohenackeri* Bedd. (Fam.- Euphorbiaceae), Mahabaleshwar (Distt.- Satara), 9<sup>th</sup> Feb. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 19(a) and 19(b) respectively.

**Remark:** The present collections were compared (Table No. 6) with *S. jaapii* (Rhem) Sacc. in respects to morphology and dimensions of ascomata, asci and ascospores and it is found to be matched well except having smaller ascomata and ascospores. Therefore, a new variety has been proposed here to accommodate the present collections as *S. jaapii* (Rhem) Sacc. var. *sahyadrensis* var. nov.

Holotype : *S. jaapii* (Rhem) Sacc. var. *sahyadrensis* var. nov.

Jadhav and Pawar.

Etymology : *sahyadrensis*- the variety is named after the Sahyadri Hills.

Type locality : Mahabalehwar (Distt.-Satara).

Type specimen : in M.H.B.D.Y.C.I.S. Satara. No.- 19(a) and 19(b).

**Table No. 6– Comparison between *S. jaapii* (Rhem) Sacc. and present collection. (Measurements in  $\mu\text{m}$ ).**

Sr. No.	Species	Ascomata in diam.	Asci	Ascospores	Host	Locality
1	<i>S. jaapii</i> (Rhem) Sacc.	200-300	25-30 X 10-12	15-18 X 3-4	<i>Aspidii spinulesi</i>	Germany
2	<b>Present Collections:</b> 11/2 9 <sup>th</sup> Feb. 2007.	96-119	23-29 X 12-14	9-12 X 3	<i>Memecylon umbellatum</i> Burn.	Mahabaleshwar (Distt.- Satara)
3	M91/92 9 <sup>th</sup> Feb. 2007.	87-116	23-26 X 12-14	12 X 6	<i>Glochidion hohenackeri</i> Bedd.	Mahabaleshwar (Distt.- Satara)

#### Family- Leptopeltidaceae

##### Genus- *Leptopeltopsis* Petrak

*Sydowia* 1: 243, 1947.

The genus was established by Petrak in 1947 with its type species *Leptopeltopsis nebulosa* Petrak. Hohnel (1928), put this genus in the family- Leptopeltidaceae of the order-Dothideales. Luttrell (1955), followed the scheme of Hohnel. von Arx and Muller (1962-1975) and Eriksson (1984), placed this genus in the family-Leptopeltidaceae of the order-Dothideales on the basis of apothecoid ascocarp, clavate asci, dehiscencing by splitting. The genus is characterized by intra-epidermal pseudothecia, shield usually radiate and ascospores are 1-septate and hyaline. The genus is represented by only 2 species and by one species from India that is from Maharashtra.

##### *Leptopeltopsis nebulosa* Petrak

*Sydowia* 1: 243, 1947.

Text figs.No.- 69-73; Plate figs. No.- 38-40.

**Remark:** Petrak (1947), recoded this species on *Anthyrium Filix femina* (L.) Roth. from Europe. Ramesh, C.R. (1987), recorded this species on *Eucalyptus* spp. from Anjaneri, (Maharashtra). The present collections were compared and found to

matched well in all respects of morphology and dimensions of ascomata, asci and ascospores of *Leptopeltopsis nebulosa* Petrak and therefore, referred to it. This species has been recorded on the wide range of hosts from different families from Satara district viz. *Bridelia retusa* (L.) Spreng (Fam.- Euphorbiaceae), *Cordia monoica* Roxb. (Fam.- Boraginaceae), *Cinnamomum zeylanicum* Rostl and Garh ex (Fam.- Lauraceae), *Elaeagnus latifolia* L. (Fam.- Elaeagnaceae), *Epiphyllum macropterum* Britton and Rose (Fam.- Cactaceae), *Ficus benghalensis* L. (Fam.- Moraceae), *Litsea stocksii* Hook. (Fam.- Lauraceae), *Mangifera indica* L. (Fam.- Anacardiaceae), *Maytenus rothiana* (Walp) L. (Fam.- Celastraceae), and *Syzygium cumini* (L.) Skeel (Fam.- Myrtaceae). All these are the new host records to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Bridelia retusa* (L.) Spreng (Fam.- Euphorbiaceae), *Cordia monoica* Roxb. (Fam.- Boraginaceae), *Cinnamomum zeylanicum* Rostl and Garh ex (Fam.- Lauraceae), *Elaeagnus latifolia* L. (Fam.- Elaeagnaceae), *Epiphyllum macropterum* Britton and Rose (Fam.- Cactaceae), *Litsea stocksii* Hook. (Fam.- Lauraceae), Mahabaleshwar (Distt.- Satara), 9<sup>th</sup> Feb. 2007, *Ficus benghalensis* L. (Fam.- Moraceae), *Mangifera indica* L. (Fam.-Anacardiaceae), *Maytenus rothiana* (Walp) L. (Fam.- Celastraceae), Pateghar (Distt.- Satara), 12<sup>th</sup> March 2007 and *Syzygium cumini* (L.) Skeel (Fam.- Myrtaceae); from Shendre (Distt.- Satara); 3<sup>rd</sup> Dec. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.-20(a), 20(b), 20(c), 20(d), 20(e), 20(f), 20(g), 20(h), 20(i) and 20(j) respectively.

**Class- Deuteromycotina****Order- Moniliales****Family- Dematiaceae****Genus- *Alternaria* Nees ex Fr.**

Syst. Pilze Schwamme: 72, 1816.

The genus was established by Nees in 1816 with its type species *Alternaria alternata* (Fries) Keissler. The classification and identification system of imperfect fungi was presented by Saccardo (1886), and later on modified by Lindau (1900). Saccardo (1886), classified it into the order-Hyphomycetales on the basis of free conidiophores, arising from the surface of the substrate or from the aerial mycelium and then divided the order into 4 families. The genus-*Alternaria* Nees ex Fr. was included in the family-Dematiaceae because fruiting bodies are not pycnidia and acervuli and by presence muriform conidia. All other European workers adopted Saccardo's system viz. Lindau (1900), Clements (1909), Ferraries (1910-14), Clements and Shear (1931), Ainsworth, G.C. (1973) and put this genus-*Alternaria* Nees ex Fr. in the order-Hyphomycetales (Moniliales) of the family-Dematiaceae due to having mostly single conidiophores, produced in the loose cluster. The workers viz. Barnett, H.L. (1973), von Arx, J.A. (1974), Ellis, M.B. (1975) also have placed the genus in the family-Dematiaceae of the order-Moniliales (Hyphomycetales). The genus- *Alternaria* Nees ex Fr. is characterized by having effuse, usually grey, dark blackish brown or black coloured colonies; mycelium immersed or partly superficial; hyphae colourless, olivaceous brown or brown; stroma rarely formed; setae and hyphopodia absent; conidiophores macronematous, mononematous, simple or irregularly and loosely branched, pale brown or brown, smooth walled, solitary or in fascicles; conidiogenous cells integrated, terminal becoming intercalary, polytretic, sympoidal or sometimes monotretic, cicaterized; conidia catenulate or solitary, dry, typically ovoid or obclavate, often rostrate, pale or mid olivaceous-brown or smooth walled or verrucose, with transverse and frequently also oblique or longitudinal septa. The genus is known by its 491 species. In India it is represented by 101 species and 49 species in Maharashtra.

**i) *Alternaria alternata* (Fries) Keissler**

Beih. Bot. Zbl. 29: 434, 1912.

15297

15297

**Remark:** Rao, V. G. (1963 and 1964), recorded this species on *Cassia occidentalis* L., *Cassia tora* L. and *Blumea wightiana* D.C. from Pune (M.S.) and also by Shukla, H.P. and Singh, P.N. (1975) on *Blumea lanceolata* from Kanpur (U.P). Sarbhoy, A.K. et.al (1978), recorded same species on *Cassia suratensis* Burn. F.Fl. from Pune (M.S.). The present collections also found to be matched well with *Alternaria alternata* (Fries) Keissler in respects to morphology and dimensions of mycelium, conidiophores, conidia and beak except having smaller conidiophores and beak and therefore, referred to it. This species has been recorded for the first time from Maharashtra on *Blumea malcolnii* (Cl.) Hook. F. and *Cassia biflora* L. and thus, these are the additional host records to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Blumea malcolnii* (Cl.) Hook. F. (Fam.- Asteraceae), Satara (Distt.- Satara), 12<sup>th</sup> March 2007 and *Cassia biflora* L. (Fam.- Caesalpinaceae), Shendre (Distt.- Satara), 27<sup>th</sup> Sept. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 21(a) and 21(b) repectively.

ii) *A. papaveris* (Beres). M.B. Ellis

Annls. Mycol. 3: 106, 1915.

Colonies black, powdery, superficial, epiphyllous, mycelium superficial, pale brown, 9 µm in diam.; conidiophores geniculate, pale brown, smooth walled, septate, 100-110 X 6-9 µm; conidia solitary or in chains, ellipsoidal, ob-pyriform to ob-clavate, sometime short beaked, pale brown, smooth with 3-8 transverse and usually a few longitudinal or oblique septa, 45-70 X 15-27 µm.

**Habitat:** Collected on living leaves of *Pimpinella heyneana* (Dc.) Kurz. F. (Fam.- Apiaceae), Satara (Distt.- Satara), 16<sup>th</sup> Sept. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 22.

**Remark:** Kar, A.K. and Das, B.D. (1982), recorded this species on *Papaver rhocos* L. from Parganas (W.B.) and by Udit Narain (1991), on *Papaver somniferum* L. from Kanpur (U.P). The present collection has found to be matched well with *A. papaveris* (Beres). M.B. Ellis in respects to morphology and dimensions of mycelium, conidiophores, conidia and beak except having slightly smaller conidiophores and conidia and therefore, referred to it. This species has been recorded for the first time

from Maharashtra and *Pimpinella heyneana* (Dc.) Kurz. F. is the new host record to the fungi of Maharashtra.

**iii) *A. tenussima* (Kurze ex Pers.) Wittshire.**

Trans. Br. Mycol. Soc. 18: 157, 1933.

Colonies black, powdery, superficial, epiphyllous, mycelium superficial, pale brown, 3 µm in diam.; conidiophores, straight or flexuous, solitary or clustered, simple, septate, olivaceous-brown, smooth, 26-48 X 3 µm; conidia solitary, catenulate, straight, ellipsoidal, tapering gradually to the beak which is up to half the length of the conidium, olivaceous-brown, smooth walled with 4-7 transverse and 4-longitudinal or oblique septa, 29-39 X 12-14 µm; beak 7 X 4 µm in long.

**Habitat:** Collected on living leaves of *Abitulon ranadei* Woodr and Stapf. (Fam.- Malvaceae), an endangered plant from Polyhouse of Y.C.I.S. Satara (Distt.- Satara), 13<sup>th</sup> Sept. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 23.

**Remark:** Ragaswami G., Seshadri, V.S. and Lucy Channamma, K.A. (1970), recorded this species on *Abitulon* sp. from Madurai (T.N.) The present collection has found to be matched well with *A. tenussima* (Kurze ex Pers.) Wittshire. in respects to morphology and dimensions of mycelium, conidiophores, conidia and beak except having slightly smaller conidiophores and beak and therefore, referred to it. This species has been recorded for the first time from Maharashtra and *Abitulon ranadei* Woodr and Stapf. is the new host records to the fungi of Maharashtra.

**iv) *A. triticicola* Vasant Rao**

Mycopathologia 23: 311-313, 1864.

**Remark:** Rao, V.G. (1964), recorded this species on *Triticum astivum* L. and also on stored fruits on vegetables from Bombay (M.S.). Kamal Singh, R.P. and Kumar, P. (1981), recorded this species on *Ficus glomerata* L. from Gorakhpur (U.P.). The present collection has found to be matched well with *A. triticicola* Vasant Rao in respects to morphology and dimensions of mycelium, conidiophores, conidia and beak except having slightly larger conidiophores and beak while the conidia are slightly smaller and therefore, referred to it. This species has been recorded for the first time from Maharashtra on *Ficus recemosa* L. and thus it is the new host record to

the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Ficus recemosa* L. (Fam.- Moraceae), Forest Nursury Satara (Distt.- Satara), 13<sup>th</sup> Sept. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 24.

**Genus- *Curvularia* Boedjin**

Bull. Jard. Bot. Buitenz., III: 13(1), 120-134, 1933.

The genus was established by Boedjin in 1933 with its type species *Curvularia lunata* (Wakker) Boedjin. The classification and identification system of imperfect fungi was presented by Saccardo (1886), and later on modified by Lindau (1900). Saccardo (1886), classified it into the order-Hyphomycetales on the basis character like conidia typically bent by enlargement of one median cell and thus, he divided the order into 4 families. The genus-*Curvularia* Boedjin was included in the family-Dematiaceae by having conidia with often curved and transverse septa. All other European workers adopted Saccardo's system viz. Clements (1909), Ferraries (1910-14), Clements and Shear (1931), Alexopoulos, C.S. and Mims, C.W. (1952), Ainsworth, G.C. (1973), Barnett, H.L. (1973), von Arx, J.A. (1974) and Ellis, M.B. (1975). They placed the genus in the family-Dematiaceae of the order-Moniliales (Hyphomycetales). The genus-*Curvularia* Boedjin is characterized by having effuse colonies, usually grey or black, brown cottony, hairy or velvety; mycelium immersed in natural substrata; stromata often large, erect, black, cylindrical sometime branched; conidiophores macronematous, mononematous, straight or flexuous, often geniculate brown, usually smooth; conidiogenous cells integrated terminal, sometime later becoming intercalary, polytretic, sympoidal, cylindrical; conidia solitary, acropleurogenous, simple, often curved, clavate, ellipsoidal, broadly fusiform, obovoid or pyriform with 3 or more transverse septa, pale or dark brown often with some cells, usually the ends ones, paler than the others, smooth walled or verrucose. The genus is known by its 109 species. In India it is represented by 64 species and by 24 species in Maharashtra.

***Curvularia catenulate* Reddy and Bilgrami**

Current Science 37: 418,1968.

**Remark:** Reddy, M.S. and Bilgrami, K.S. (1968), recorded this species on *Lagerstromia indica* L. from Jodhpur (Rajasthan). The present collection has found to be matched well with *Curvularia catenulate* Reddy and Bilgrami in respects to morphology and dimensions of mycelium, conidiophores and conidia and therefore, referred to it. This species has been recorded for the first time from Maharashtra and *Blumea wightiana* DC. is the additional host record to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Blumea wightiana* DC. (Fam.- Asteraceae), Satara (Distt.- Satara), 9<sup>th</sup> Dec. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 25.

**Genus- *Zygosporium* Montagne**

Ann. Sci. nat. Ser. 2, 17: 120-121, 1842.

The genus was established by Montagne in 1842 with its type species *Zygosporium oscheoides* Montagne. The genus-*Zygosporium* Montagne was included in the family-Dematiaceae. All other European workers adopted Saccardo's system viz. Lindau (1900), Clements (1909), Ferraries (1910-14), Clements and Shear (1931), Ainsworth, G.C. (1973), Barnett, H.L. (1973), von Arx, J.A. (1974) and Ellis, M.B. (1975) have placed the genus in the family-Dematiaceae of the order-Moniliales (Hyphomycetales). The genus-*Zygosporium* Mont. is characterized by having colonies effuse or compact, often thin, grey, blackish brown or black in colour; mycelium mostly superficial, reticulate; setae are absent but in some species the upper part of the conidiophore is sterile and setiform; hyphopodia absent; conidiophores macronematous, or sometime micronematous, mononematous, scattered, unbranched or branched, pale brown, smooth or minutely echinulate; stipe and branches, bearing solitary or catenate dark brown, curved, swollen vesicles, often on short or long stalks, upper part of the stipe frequently sterile, sometime ending in a knob; conidiogenous cell monoblastic, discrete, determinate, ampulliformis or ellipsoidal, often curved and tapering to a point, thin-walled, colourless or pale, borne in pairs, three or fours, on the dark brown vesicle; conidia solitary, acrogenous, simple, ellipsoidal, spherical or subspherical, hyaline to brown, smooth, verruculose or verrucose, non-septate. The genus is known by its 49 species. In India it is represented by 5 species and by 4 species in Maharashtra.

i) *Z. minus* Hughes.

Mycol. Pap., 44: 6-7, 1951.

Colonies black, powdery, superficial, epiphyllous, mycelium superficial, brown, 3 µm in diam.; conidiophores, subulate, unbranched, brown, smooth walled, 43 X 3 µm, bearing a single vesicle laterally on a short stalk just above the base, sterile part sometime terminating in a knob; vesicle brown, 13 X 12 µm; conidiogenous cells ellipsoidal, often curved and tapering to the point, thin-walled, colourless, conidia spherical to round, hyaline, 6-8 µm long.

**Habitat:** Collected on living leaves of *Cocos nucifera* L. (Fam.- Areaceae), an Botanical garden of Y.C.I.S. Satara (Distt.- Satara), 11<sup>th</sup> Oct. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 26.

**Remark:** The present collection has found to be matched well with *Z. minus* Hughes in respects to morphology and dimensions of mycelium, conidiophores, vesicles and conidia except having slightly smaller conidiophores and conidia and therefore, referred to it. This species has been recorded for the first time from India. Thus, *Cocos nucifera* L. is the new host record to the fungi of India.

ii) *Z. oscheoides* Montagne

Ann. Sci. nat. Ser.(2) 77: 120-121, 1842.

**Remark:** Rao, V. G. (1963), recorded this species on *Cocos nucifera* L. from Pune (M.S.) and Patwardhan, P.G. (1966), recorded this species on *Gymnosporia montana* Benth. from Amboli (M.S.). The present collections have been found to be matched well with *Z. oscheoides* Montagne, in respects to morphology and dimensions of mycelium, conidiophores, vesicles and conidia except having slightly smaller conidiophores and conidia and therefore, referred to it. Thus, *Cinnamomum zeylanicum* Garh. Ex Blume., *Areca catechu* L. and *Zamia* sp. are the three, new host records to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Cinnamomum zeylanicum* Garh. Ex Blume. (Fam.- Lauraceae), *Areca catechu* L. (Fam.- Areaceae), *Zamia* sp. (Fam.- Cyacadaceae), Botanical garden of Y.C.I.S. Satara (Distt.- Satara), 17<sup>th</sup> Nov. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 27(a), 27(b) and 27(c) respectively.

**Order- Melanconiales****Family- Melanconiaceae****Genus- *Pestalotia* de Notaris**

Microm. Ital., 2: 28, 1889.

The genus was established by de Notaris in 1839 with its type species *Pestalotia pezizoides* de Notaris, found on grape stem (*Vitis vinifera* Linn.). Klebahn (1914) divided the genus into various sections as quadiloculate (4-celled), quinqueloculate (5-celled) and sexloculate (6-celled) and this arrangement was adopted by Guba (1961), who monographed the genus-*Pestalotia* de Notaris. He removed the genus-*Pestalotia* de Notaris from the family-Melanconiaceae to the family-Discellaceae (order-Sphaeropsidales). Montemartini (1900), described the modification in the fructifications, among various groups of the order-Melanconiales. The different workers viz. Barnett, H.L. (1973), von Arx, J.A. (1974), Ellis, M.B. (1975) The genus-*Pestalotia* de Notaris is characterized by having 4,5,6-celled conidia of which the 2, 3 and 4 middle cells are deeply coloured, dark brown or olive-brown respectively. The setulae are at the apex of terminal cell. Conidia are formed in an acervulus resting on a gelatinous well- developed stroma. The genus is known by its 591 species. In India it is represented by 94 species and by 18 species in Maharashtra.

**i) *Pestalotia betazamiae* Guba var. *satarensis* var. nov.**

Text figs.No.- 74-76; Plate figs. No.- 41-43.

Pustulae epiphyllae, irregulae, atra, sub-epidermatus, 40-60  $\mu\text{m}$  in diam.; conidia 5-cellularie, longae, oblongibus vel fusiformis or recta, 12-18 X 6  $\mu\text{m}$ ; subconstricta; cellulae mediae coloratae pallide, olivaceae-brunae; setulae absentae; pediceli absentae.

**Habitato:** Typus lectus in foliis *Zamia* sp. (Fam.- Cycadaceae), Botanical garden of Y.C.I.S. Satara (Distt.- Satara), 23<sup>rd</sup> Nov. 2006. Leg. L.S. Jadhav et positus in M.H.B.D.Y.C.I.S. Satara. No.-28.

***Pestalotia betazamiae* Guba var. *satarensis* var. nov.**

Pustules epiphyllous, irregular; black, sub epidermal, form sooty mass, 40-60  $\mu\text{m}$  in diam.; conidia 5-celled, long, oblong to fusiform or straight, 12-18 X 6  $\mu\text{m}$ ,

constricted at septa, intermediate cells elongate, olivaceous-brown; setulae absent; pedicel absent.

**Habitat:** Collected on living leaves of *Zamia* sp. (Fam.- Cycadaceae), Botanical garden of Y.C.I.S. Satara (Distt.- Satara), 23<sup>rd</sup> Nov. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 28.

**Remark:** The present collection was compared (Table No. 7) with *Pestalotia betazamiae* Guba in respects to morphology and dimensions of acervolus, conidia, setulae and pedicel. But it differs from *Pestalotia betazamiae* Guba by having considerably smaller acervolus and conidia while setulae and pedicel are not present. Therefore, a new variety has been proposed here to accommodate the present collection as *Pestalotia betazamiae* Guba var. *satarensis* var. nov.

Holotype : *Pestalotia betazamiae* Guba var. *satarensis* var. nov.  
Jadhav and Pawar.

Etymology : *satarensis*- the variety is named after the locality Satara

Type locality : Botanical garden of Y.C.I.S. Satara (Distt.- Satara)

Type specimen : in M.H.B.D.Y.C.I.S. Satara. No.- 28.

**Table No. 7- Comparison between *Pestalotia betazamiae* Guba var. *satarensis* var. nov. and present collection. (Measurements in  $\mu\text{m}$ ).**

Sr. No.	Species	Acervilus	Conidia	Setulae	Pedicel	Host	Locality
1	<i>Pestalotia betazamiae</i> Guba	150-600 X 125-225	28-35 X 7.5-9.5 (5-celled)	19-38	6-10	<i>Zamia</i> sp.	Roland (Brazil)
2	<b>Present Collection</b> : E12/ 23 <sup>rd</sup> Nov. 2006	40-60	12-18 X 6 (5-celled)	Nil	Nil	<i>Zamia</i> sp.	Botanical garden of Y.C.I.S. Satara (Distt.- Satara)

ii) *P. disseminata* Thuem.

Syll. Fung. 3: 784, 1884.

Remark: Gopinath nair, K.R. (1964), recorded this species on *Eucalyptus glosus* Lab. and *Agropyron cristatum* Beauv. from Pune (M.S.). The present collection has found to be matched well with *P. disseminate* Thuem. in respects to morphology and dimensions of acervulus, conidia, setulae and pedicel with this species and therefore, referred to it. This species has been recorded for the first time from Maharashtra on *Sorghum vulgare* Pers. Thus it is the additional host record to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Sorghum vulgare* Pers. (Fam.- Poaceae), Satara (Distt.- Satara), 18<sup>th</sup> Oct. 2006. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 29.

iii) *P. palmarum* Cook.

Syll. Fung. 3: 796, 1884.

**Remark:** Grarwal, G.P., Neema, K.G. and Beliram. R., (1959), recorded this species on *Phoenix sylvestris* Roxb. from Jabalpur (M.P.), Prasad, S.S. and Sinha, B.A., (1962), recorded this species on *Nephelium litchi* from Muzaffarpur (Bihar), Parndekar, S.A. (1964), recorded this species on *Borassus flabelliformis* Murr. from Bombay, (M.S.), Agnihothurudu, V. and Barua, G.C.S. (1956), recorded this species on Tea from Assam, Shivaprukasan, K., Shanmugam, N., Govindaswamy, C.V. and Krishamurthay., C.S. (1968), recorded this species on *Capsicum annum* L. from Tirunelveli (T.N.), Seshadri, V.S. and Lucy Channamma, K.A. (1970), recorded this species on *Areca catechu* L. from Hebbal (Karnataka), and also on *Phoenix* sp. from Annamalinagar (T.N.), Sasikala and Wilson, K.I. (1971), recorded this species on *Manilkara hexandra* (Roxb.) Dub. from Vellayani (Kerala). The present collection has found to be matched well with *P. palmarum* Cook in respects to morphology and dimensions of acervulus, conidia, setulae and pedicel except having slightly larger conidia and absence of pedicel and therefore, referred to it. Thus, *Cocos nucifera* L. is the new host record to the fungi of Maharashtra.

**Habitat:** Collected on living leaves of *Cocos nucifera* L. (Fam.- Arecaceae), Shendre (Distt.- Satara), 3<sup>rd</sup> Jan. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 30.

iv) *P. versicolor* Spreng.

Syll. Fung. 3: 796, 1884.

**Remark:** Ramkrishnan, K. and Subramanian, C.V. (1952), recorded this species on *Carissa* sp. From Karwar (Karnataka), Srivastava, M.P., Sudhirchandra and Tandon, R.N. (1964) recorded this species as a Post harvest diseases of *Eriobotrya japonica* Lindl. and *Mimusops hexandra* Roxb. from Allahabad (U.P), Hasija, S.K. (1964), recorded this species on *Terminalia tomentosa* W.&A. from Jabalpur (M.P), Dube, H.C. and Bilgrami, K.S. (1966), recorded this species on *Syzygium cuminii* (L.) Skeels from Allahabad (U.P.) Ragaswami, G, Seshadri, V.S. and Lucy Channama, K.A. (1970) recorded this species on *Angeissus* sp. from Haliyal (Maysor) and on *Achras sapota* L. from Hessarghatta (Maysore), *Typha angustata* Bory & Chab.

Kengri (Karanataka), Vyas, N.L. and Panwar, K.S. (1974), recorded this species on *Buchanania lazan* Spreng and *Zizyphus jujube* Lamrk. from Jodhpur (Rajasthan), Ratnum and Nemma (1967), recorded this species on *Mangifera indica* L. from Jabalpur (M.P.) and Kerala, Ashok Gaur and Chenulves, V.V. (1981), recorded this species on *Solanum tuberosum* L. from New Delhi. The present collection has found to be matched well with *P. versicolor* Spreng., in respects to morphology and dimensions of acervulus, conidia, setulae and pedicel except having the conidia and setulae which are slightly smaller and short pedicel and therefore, referred to it. This species has been recorded for the first time from Maharashtra and *Manilkara zapota* L. is the new host record to the fungi of Maharashtra

**Habitat:** Collected on living leaves of *Manilkara zapota* L. (Fam.- Sapotaceae), Shendre (Distt.- Satara), 3<sup>rd</sup> Jan. 2007. Leg. L.S. Jadhav and deposited in M.H.B.D.Y.C.I.S. Satara. No.- 31.

## Text Figure Plate No. 1

Text Figs. No. 1-3 : *Didymella umbelliferacum* Bauml.

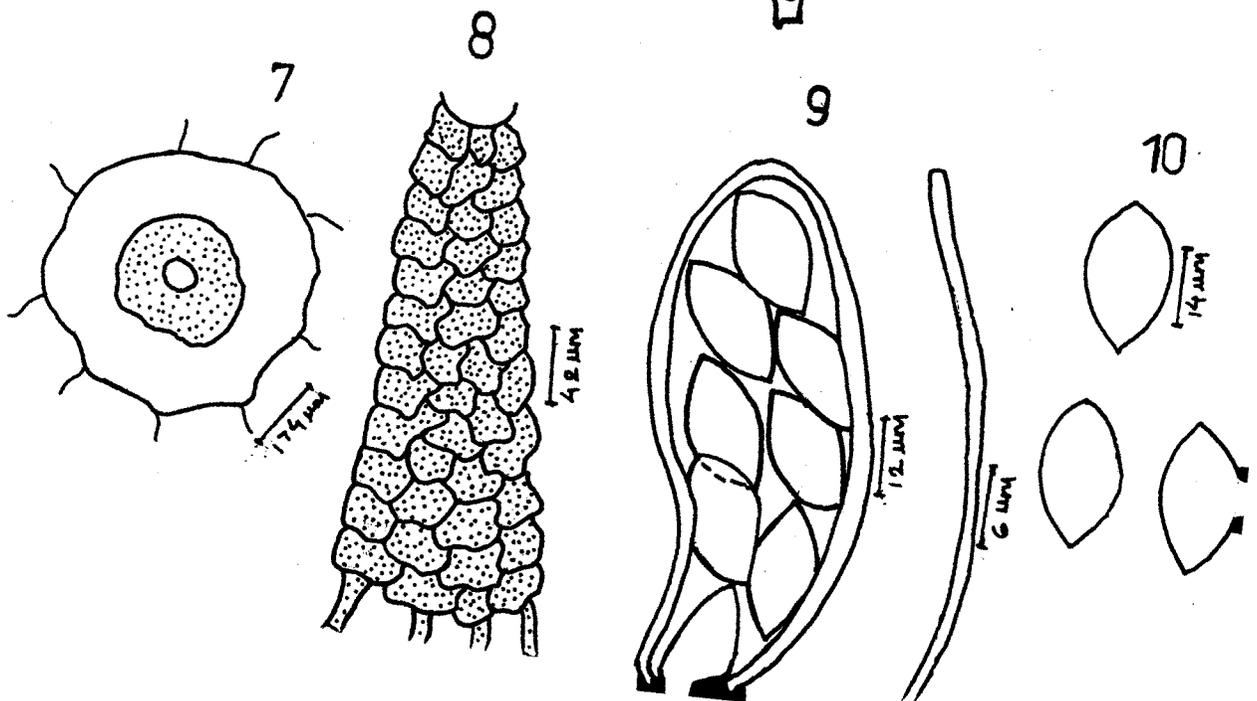
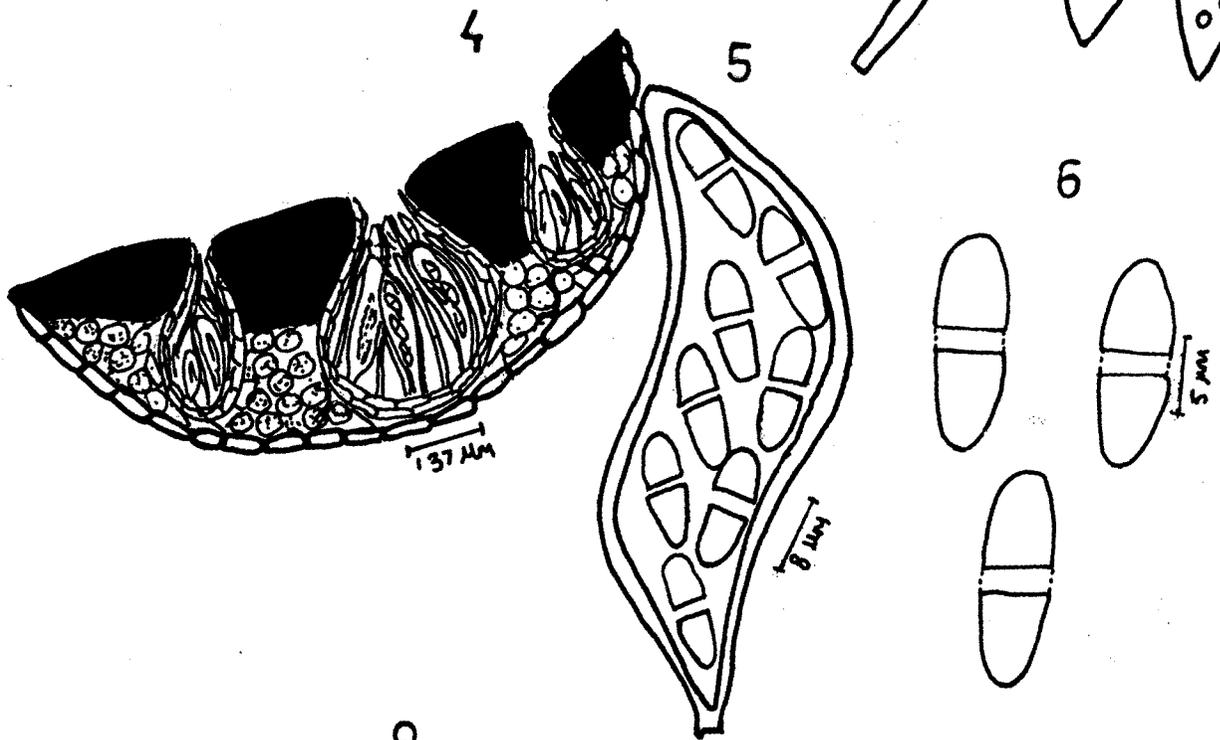
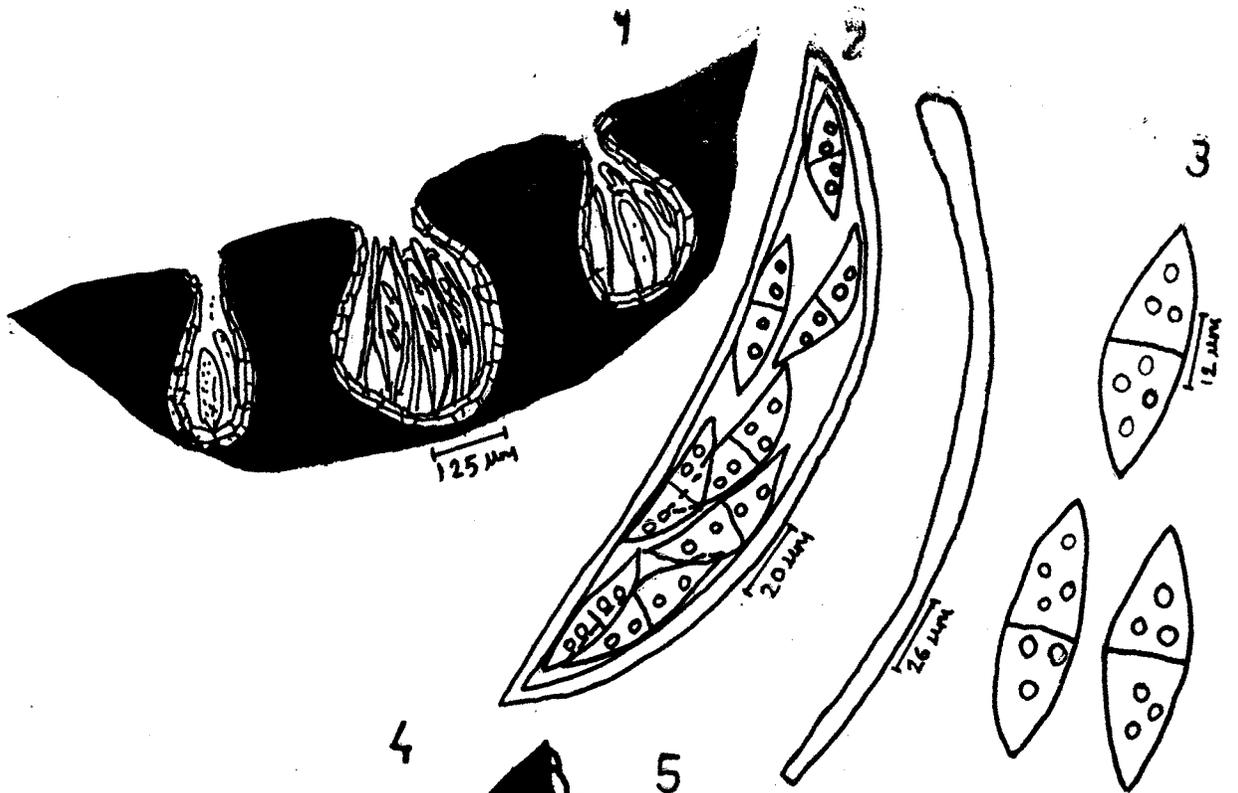
1. : V.S. of Stroma,
2. : A single ascus with ascospores and pseudoparaphyses,
3. : Ascospores.

Text Figs. No. 4-6 : *Mycosphaerella euphorbiae* Nissler ex Schrot.

4. : T.S. of leaf passing through stroma,
5. : A single ascus with ascospores,
6. : Ascospores.

Text Figs. No. 7-10 : *Dictyothyria ananasicola* Kapoor and Munjal

7. : An entire ascocarp,
8. : A part of ascocarp enlarged,
9. : A single ascus with ascospores and pseudoparaphyses,
10. : Ascospores.



## Text Figure Plate No. 2

Text Figs. No. 11-14 : *Dictyothyrium hironymi* (Rehm ) Bat. comb. nov.

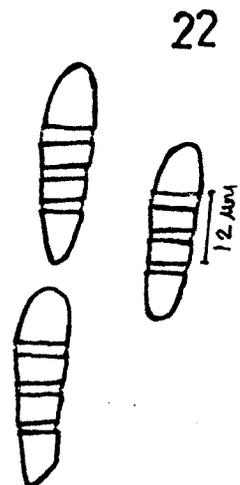
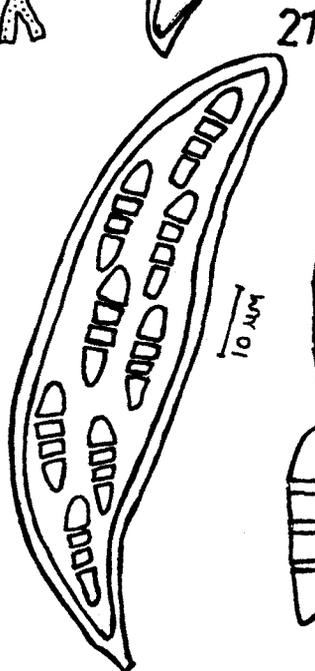
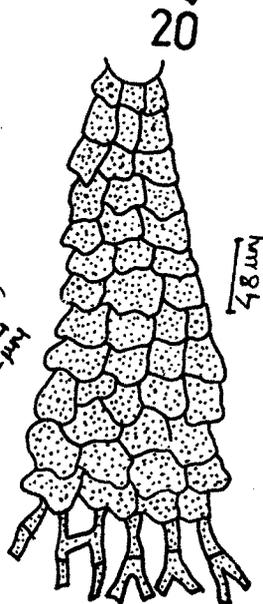
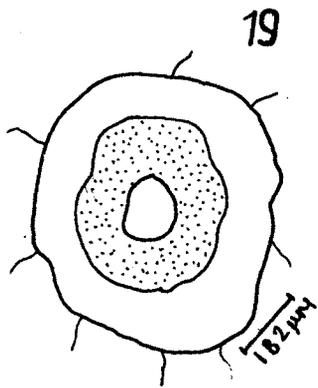
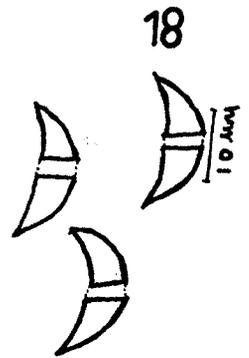
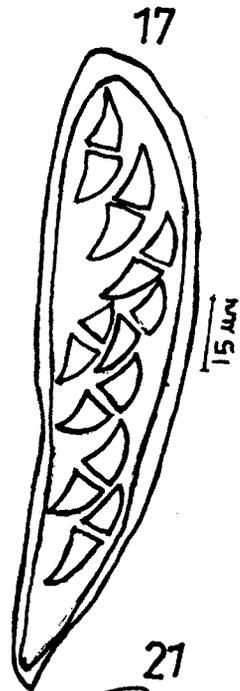
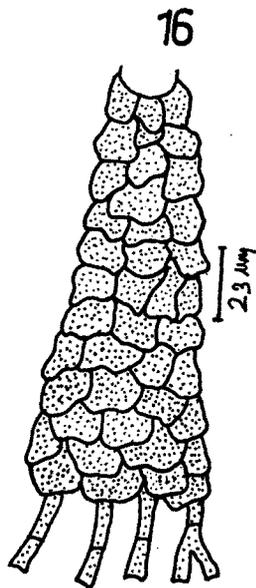
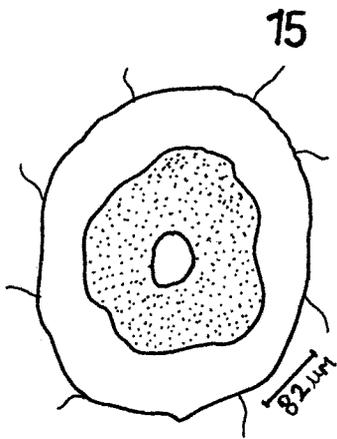
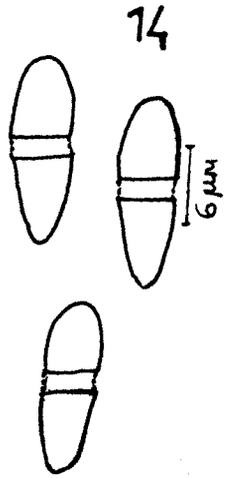
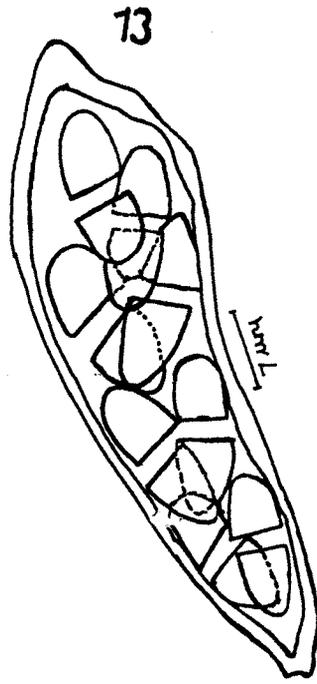
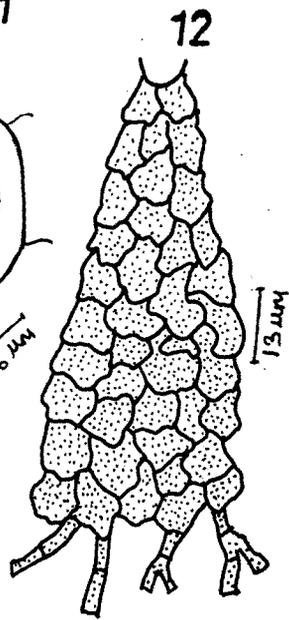
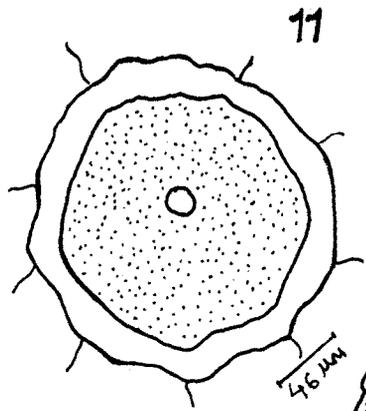
- 11. : An entire ascocarp,
- 12. : A part of ascocarp enlarged,
- 13. : A single ascus with ascospores,
- 14. : Ascospores.

Text Figs. No. 15-18 : *D. ocoteae* (Batista) Batista, var. *phaseoli* var. nov.

- 15. : An entire ascocarp,
- 16. : A part of ascocarp enlarged,
- 17. : A single ascus with ascospores,
- 18. : Ascospores.

Text Figs. No. 19-22 : *Micropeltis aqualies* Syd.

- 19. : An entire ascocarp,
- 20. : A part of ascocarp enlarged,
- 21. : A single ascus with ascospores,
- 22. : Ascospores.



### Text Figure Plate No. 3

Text Figs. No. 23-26 : *M. erysiphoides* Rehm, Hedw.

23. : An entire ascocarp,

24. : A part of ascocarp enlarged,

25. : A single ascus with ascospores,

26. : Ascospores.

Text Figs. No. 27-30 : *M. umbilicate* Mont.

27. : An entire ascocarp,

28. : A part of ascocarp enlarged,

29. : A single ascus with ascospores,

30. : Ascospores.

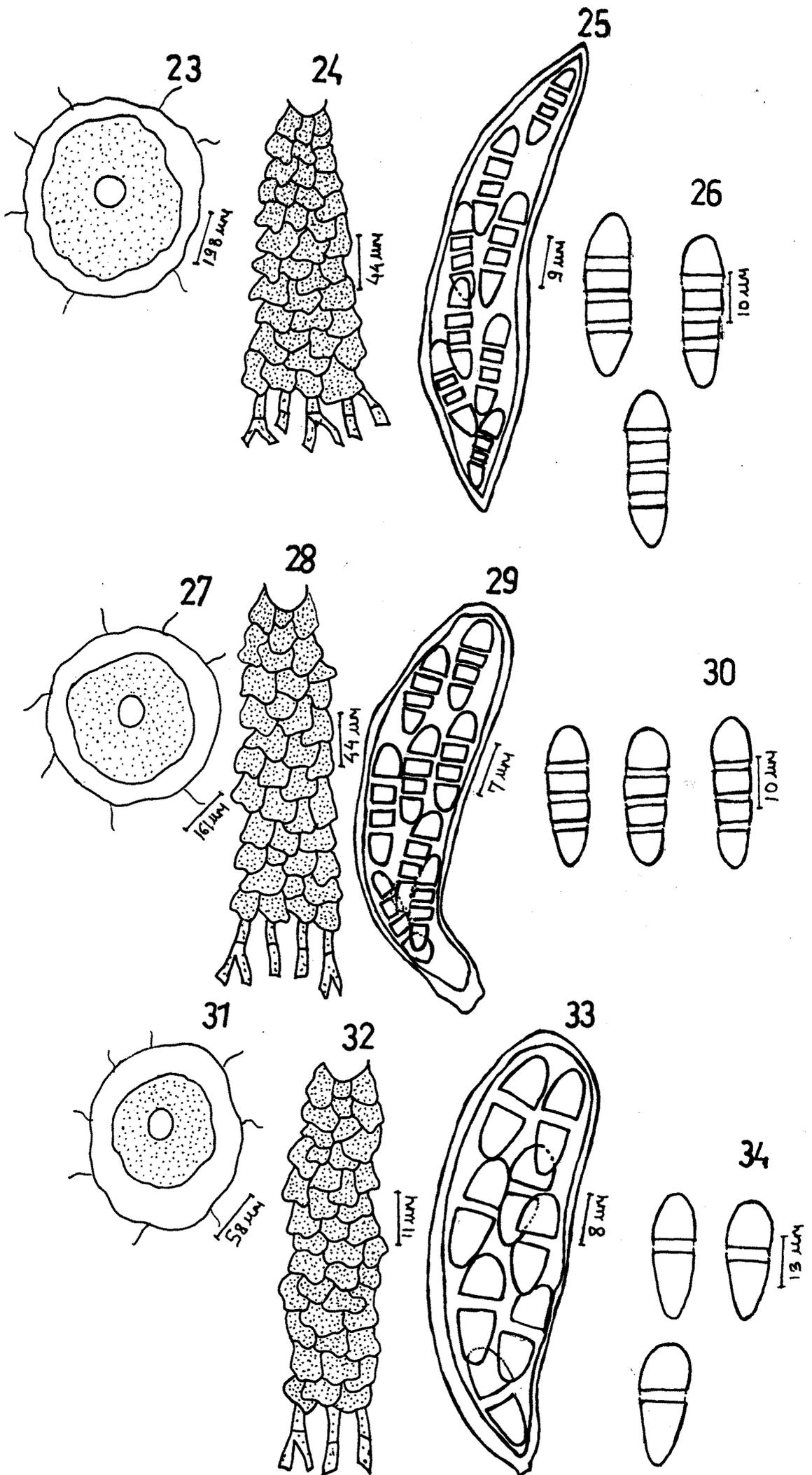
Text Figs. No. 31-34 : *Stomiopeltis suttoniae* (Mendoza) Luttrell.

31. : An entire ascocarp,

32. : A part of ascocarp enlarged,

33. : A single ascus with ascospores,

34. : Ascospores.



## Text Figure Plate No. 4

Text Figs. No. 35-38 : *Cifferiotheca pere* ( Bat.) Bat. var. *clausenae* var. nov.

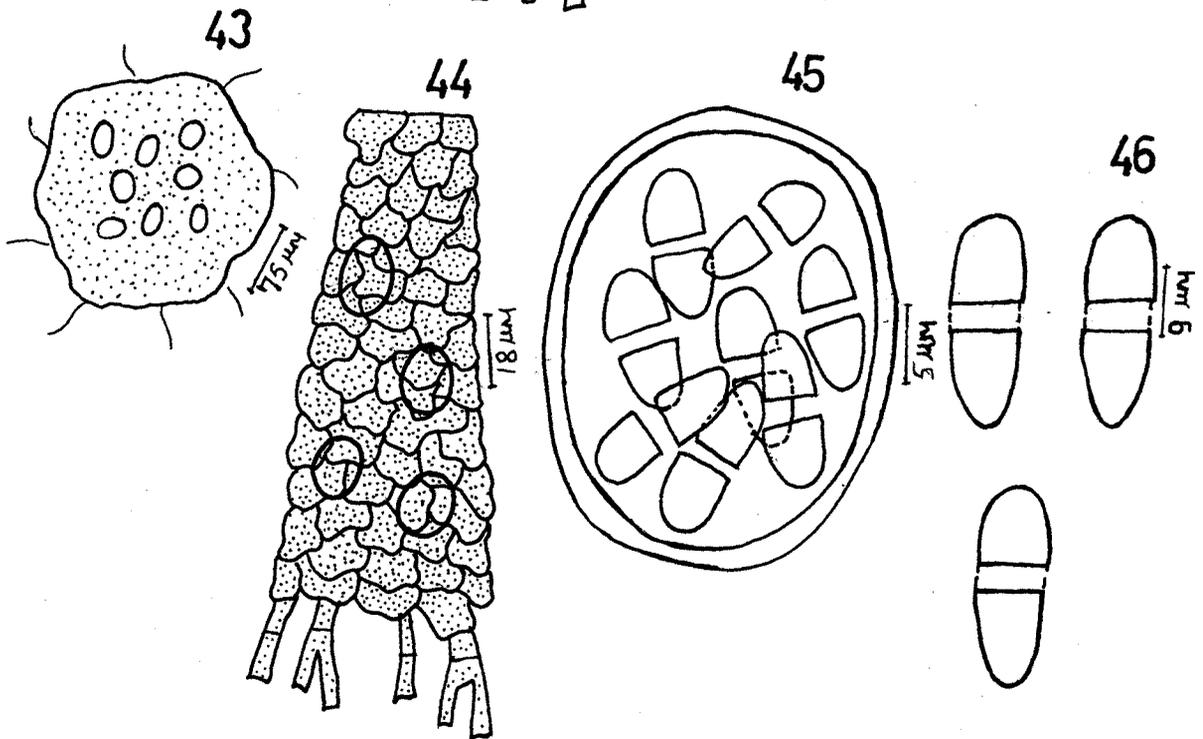
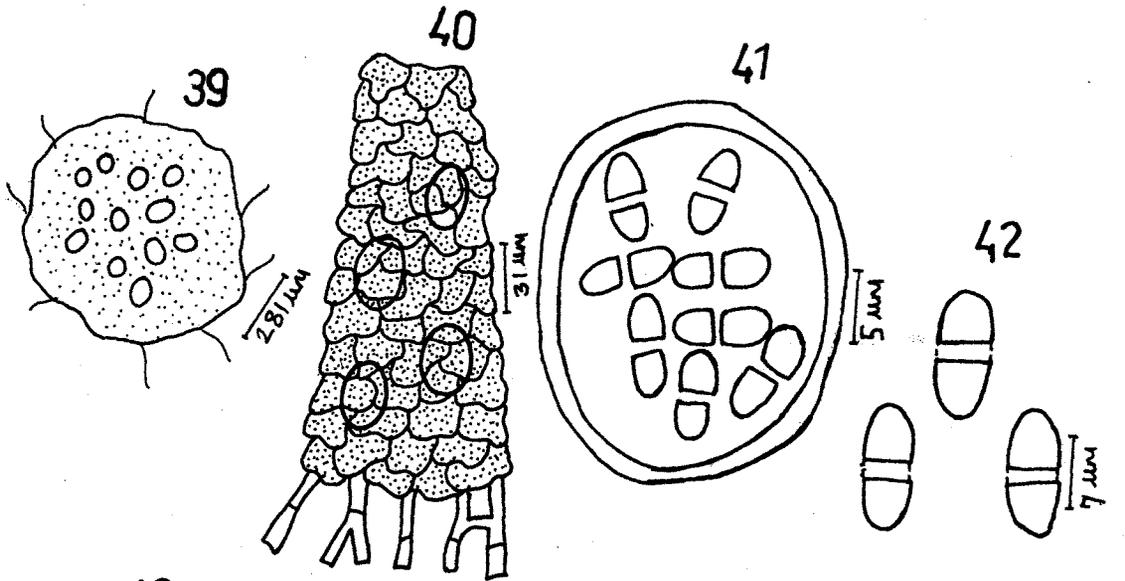
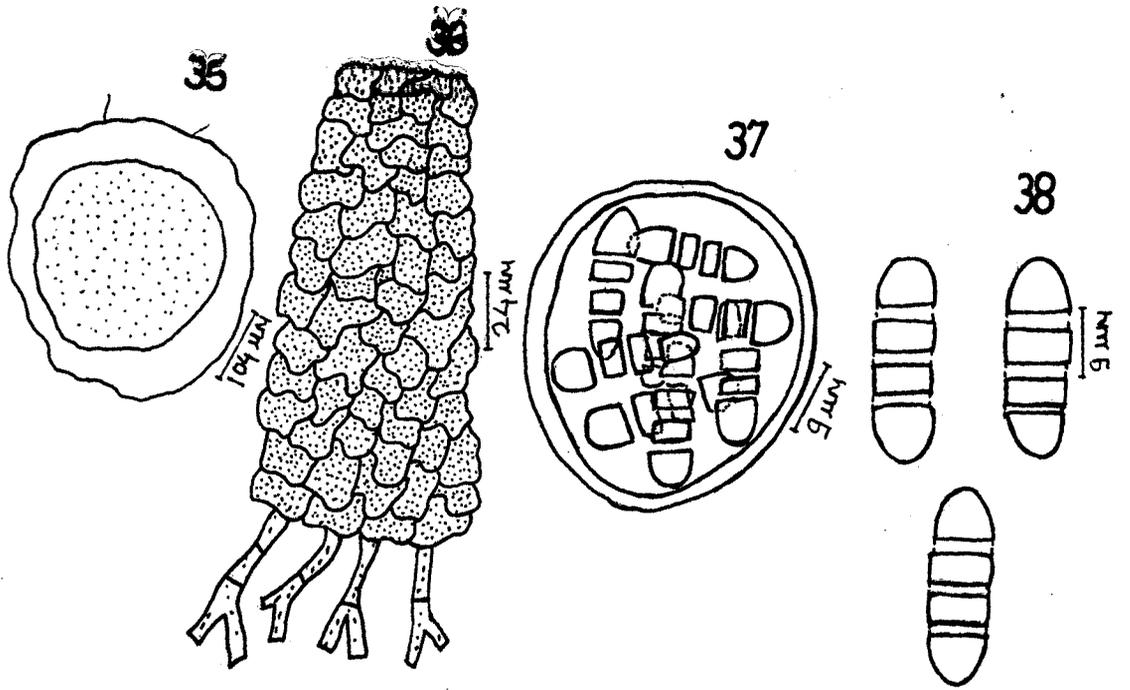
- 35. : An entire ascocarp,
- 36. : A part of ascocarp enlarged,
- 37. : A single ascus with ascospores,
- 38. : Ascospores.

Text Figs. No. 39-42 : *Leptophyma bakeri* Syd.

- 39. : An entire ascocarp,
- 40. : A part of ascocarp enlarged,
- 41. : A single ascus with ascospores,
- 42. : Ascospores.

Text Figs. No. 43-46 : *L. ugandensis* (Hansf.) Arx var. *pittosporri* var. nov.

- 43. : An entire ascocarp,
- 44. : A part of ascocarp enlarged,
- 45. : A single ascus with ascospores,
- 46. : Ascospores.



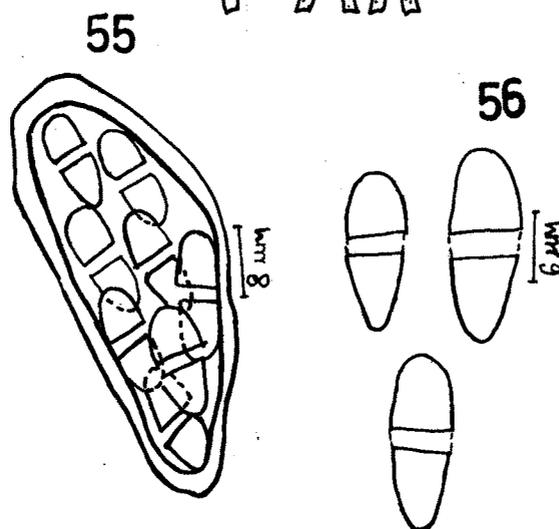
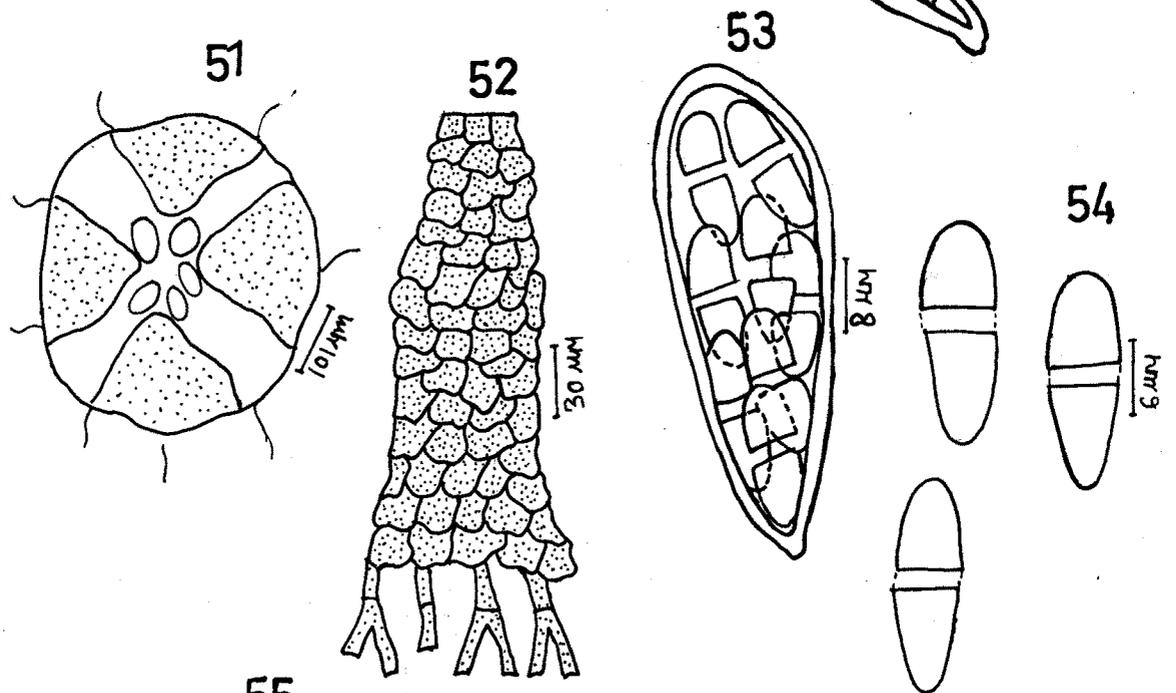
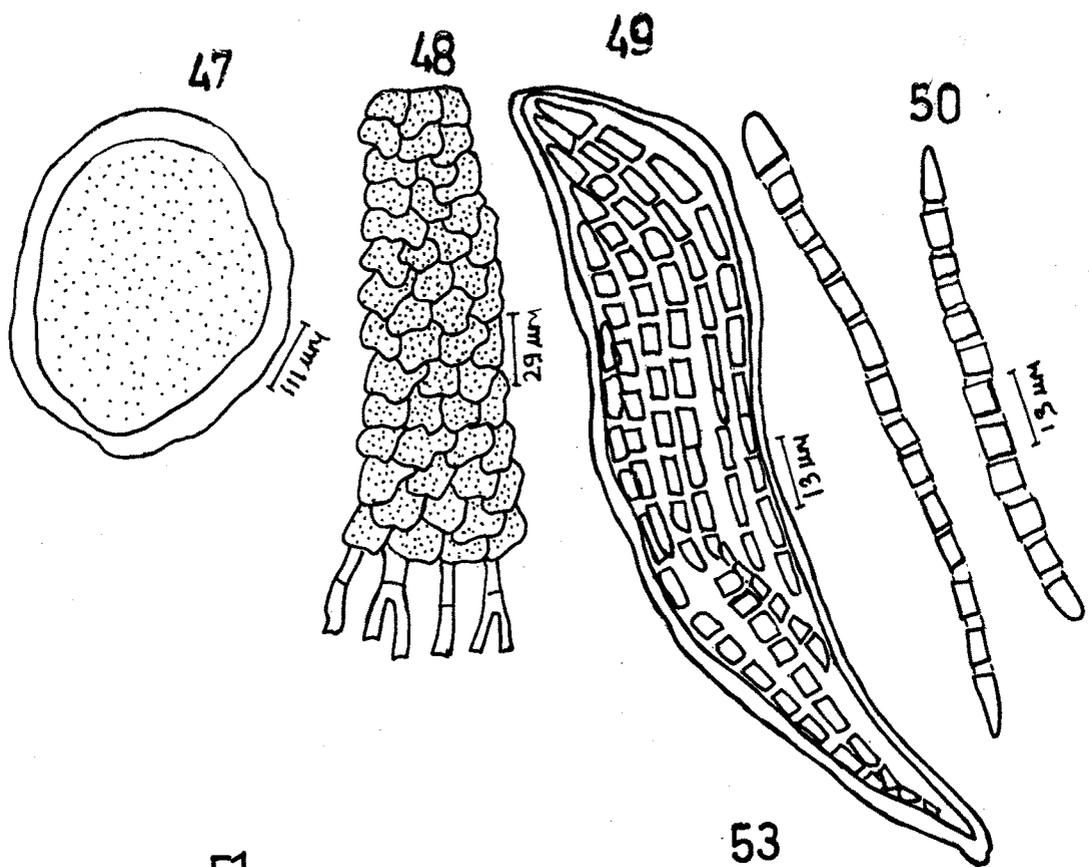
## Text Figure Plate No. 5

Text Figs. No. 47-50 : *Myriangiella arcuta* Toro var. *lanceolata* var. nov.

- 47. : An entire ascocarp,
- 48. : A part of ascocarp enlarged,
- 49. : A single ascus with ascospores,
- 50. : Ascospores.

Text Figs. No. 51-56 : *Schizothyrium courtarea* (Bat. and Lima) Arx

- 51. : An entire ascocarp,
- 52. : A part of ascocarp enlarged,
- 53. & 55. : A single ascus with ascospores,
- 54. & 56. : Ascospores.



## Text Figure Plate No. 6

Text Figs. No. 57-60 : *S. melanoplacum* (Mont.) Sacc.

57. & 58. : A single ascus with ascospores,

59. & 60. : Ascospores.

Text Figs. No. 61-64 : *S. melanoplacum* (Mont.) Sacc. var. *memecyliae* var. nov.

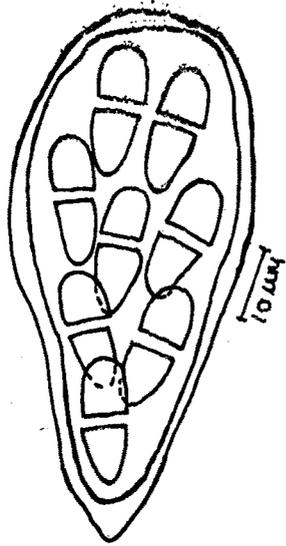
61. : An entire ascocarp,

62. : A part of ascocarp enlarged,

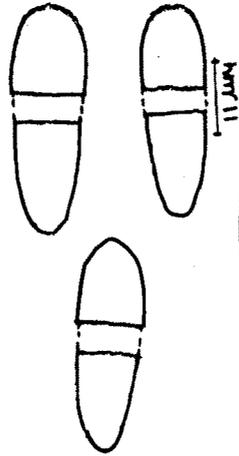
63. : A single ascus with ascospores,

64. : Ascospores.

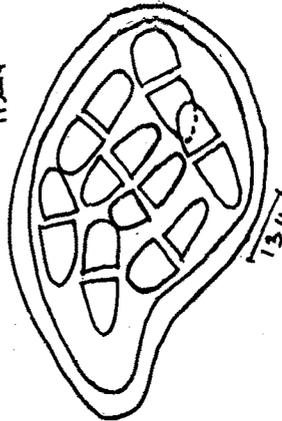
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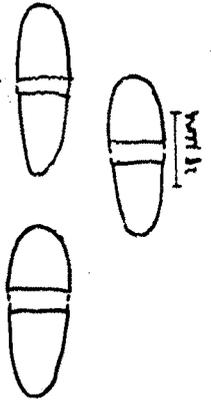
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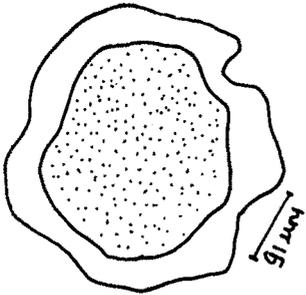
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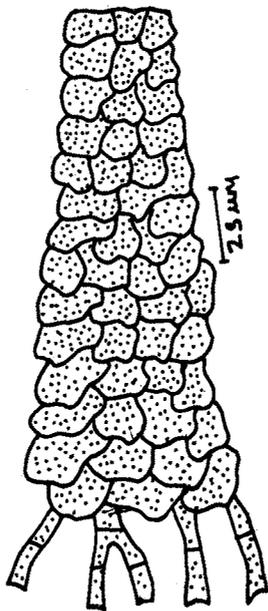
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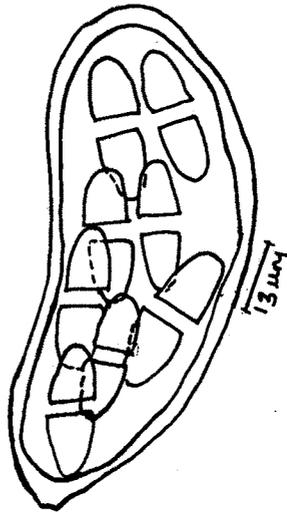
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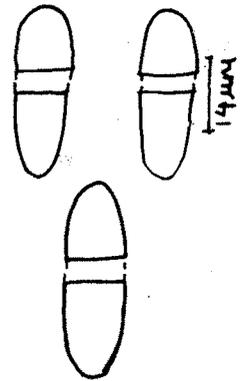
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63



64



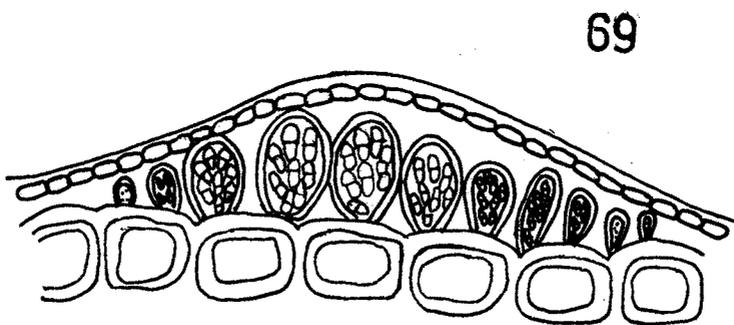
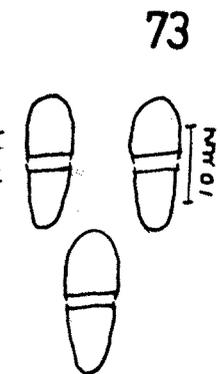
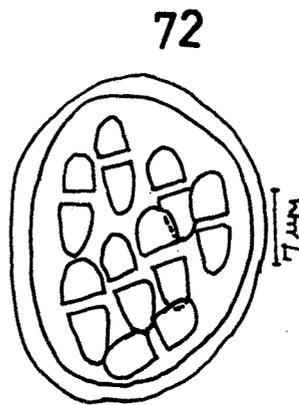
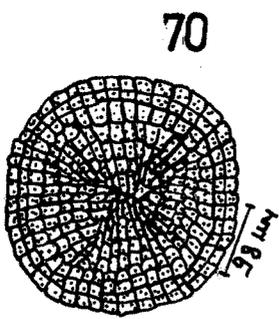
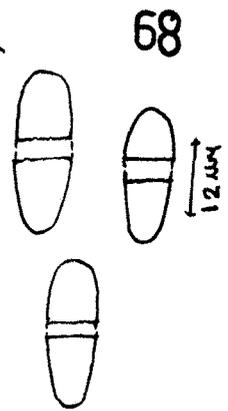
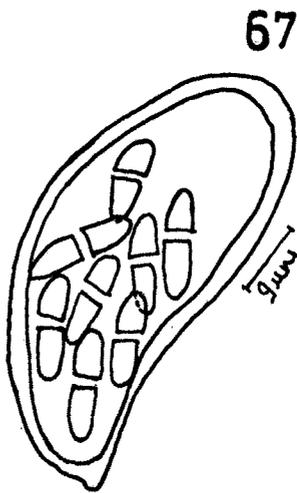
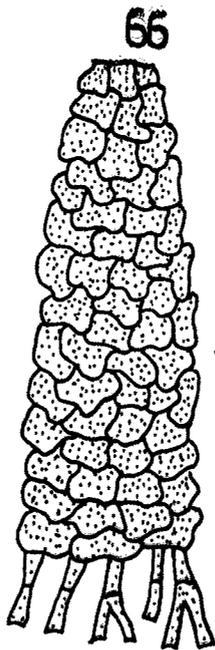
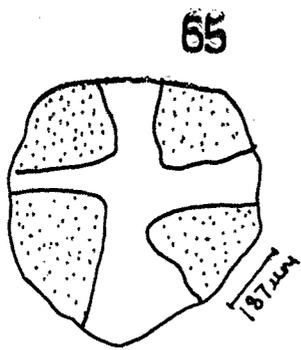
## Text Figure Plate No. 7

Text Figs. No. 65-68 : *S. jaapii* (Rhem) Sacc. var. *sahyadrensis* var. nov.

- 65. : An entire ascocarp,
- 66. : A part of ascocarp enlarged,
- 67. : A single ascus with ascospores,
- 68. : Ascospores.

Text Figs. No. 69-73 : *Leptopeltopsis nebulosa* Petrak

- 69. : V.S. of ascocarp,
- 70. : An entire ascocarp,
- 71. : A part of ascocarp enlarged,
- 72. : A single ascus with ascospores,
- 73. : Ascospores.



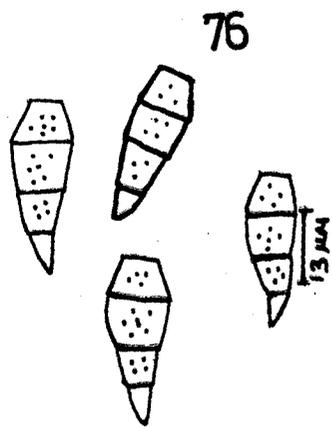
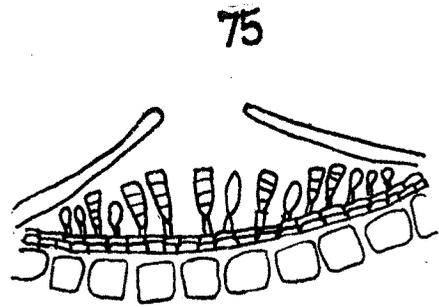
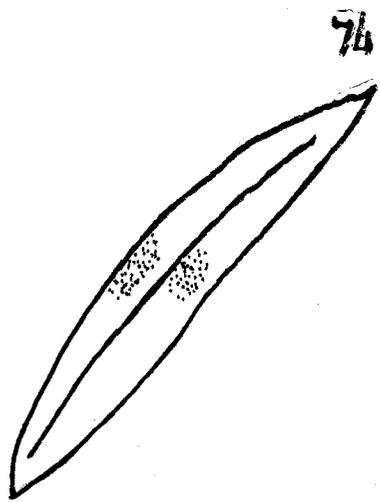
## Text Figure Plate No. 8

Text Figs. No. 74-76 : *Pestalotia betazamiae* Guba var. *satarensis* var. nov

74. : Infected leaf,

75. : T.S. of leaf passing through pycnidia,

76. : Conidia.



## Plate Figure No. 1

Figs.1 to15

Plate Figs. No. 1-4 : *Didymella umbelliferacum* Bauml.

1. : Infected leaf,
2. : V.S. of Stroma  $\times 11$
3. : Asci with ascospores and pseudoparaphyses  $\times 73$
4. : An ascospore  $\times 175$

Plate Figs. No. 5-7 : *Mycosphaerella euphorbiae* Nissler ex Schrot.

5. : Infected leaf,
6. : T.S. of leaf passing through stroma  $\times 11$
7. : A single ascus with ascospores  $\times 136$

Plate Figs. No. 8-10 : *Dictyothyria ananasicola* Kapoor and Munjal

8. : An entire ascocarp  $\times 16$
9. : A single ascus with ascospores  $\times 47$
10. : Ascospores  $\times 100$

Text Fig. No. 11-12 : *Dictyothyrium hironymi* (Rehm) Bat. comb. nov.

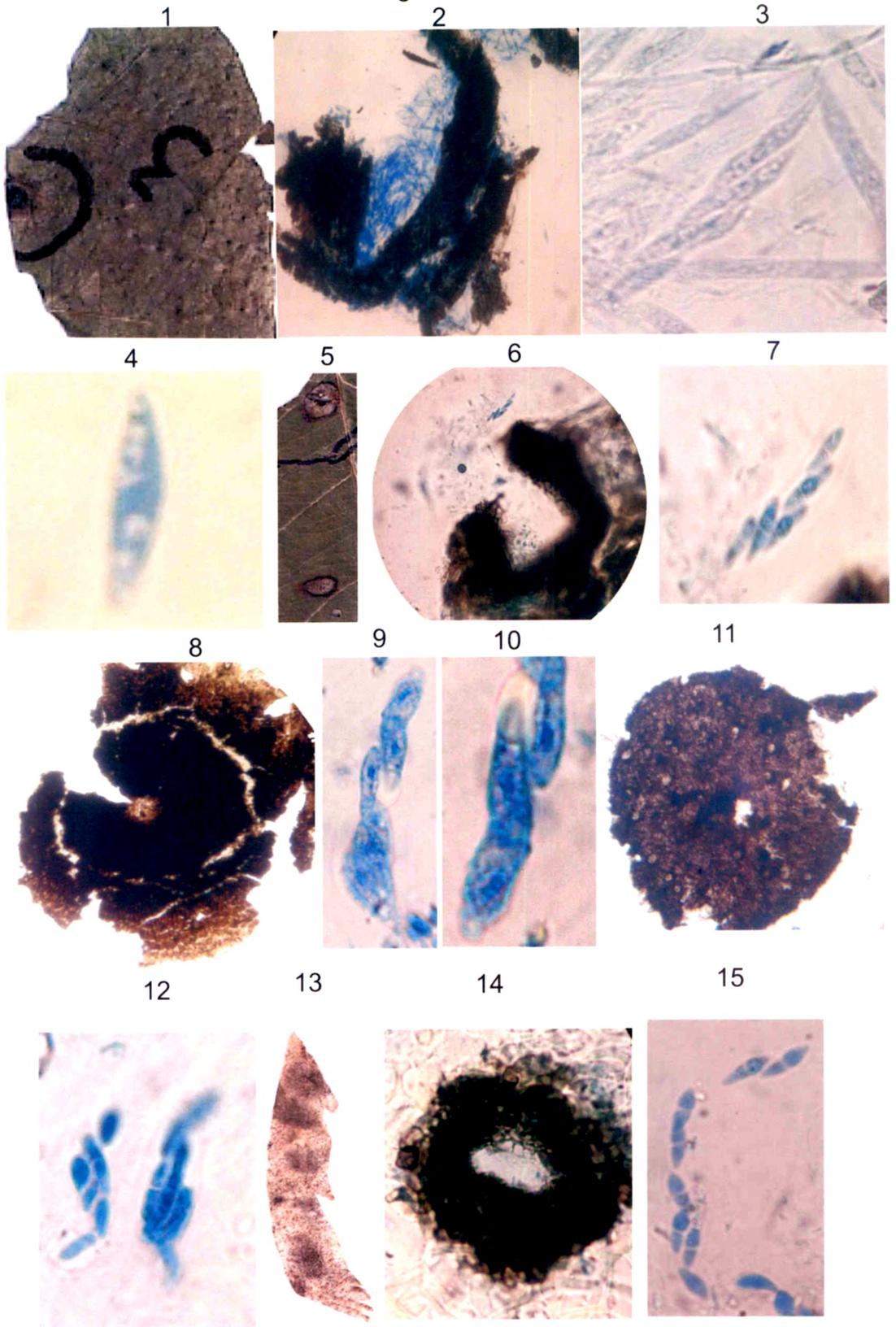
11. : An entire ascocarp  $\times 46$
12. : Asci with ascospores  $\times 103$

Text Fig. No. 13-15 : *D. ocoteae* (Batista) Batista, var. *phaseoli* var. nov.

13. : An infected pod,
14. : An entire ascocarp  $\times 25$
15. : A single ascus with ascospores  $\times 68$

PLATE FIGURE NO. 1

Figs. 1 to 15



## Plate Figure No. 2

Figs. 16 to 29

Text Fig. No. 16-17 : *Micropeltis umbilicate* Mont.

16. : An entire ascocarp  $\times 14$

17. : Asci with ascospores  $\times 90$

Text Fig. No. 18-20 : *M. aqualies* Syd.

18. : An entire ascocarp  $\times 13$

19. : Asci with ascospores  $\times 87$

20. : A single ascospore  $\times 176$

Text Fig. No. 21-22 : *Stomiopeltis suttoniae* (Mendoza) Luttrell.

21. : An entire ascocarp  $\times 53$

22. : Asci with ascospores  $\times 80$

Text Fig. No. 23-24 : *Ciferriotheca pere* (Bat.) Bat. var. *clausenae* var. nov.

23. : An entire ascocarp  $\times 27$

24. : Asci with ascospores  $\times 159$

Text Fig. No. 25-26 : *Leptophyma ugandensis* (Hansf.) Arx var. *pittosporri* var. nov.

25. : An entire ascocarp  $\times 35$

26. : Asci with ascospores  $\times 61$

Text Fig. No. 27-29 : *Myriangiella arcuta* Toro var. *lanceolata* var. nov.

27. : An entire ascocarp  $\times 21$

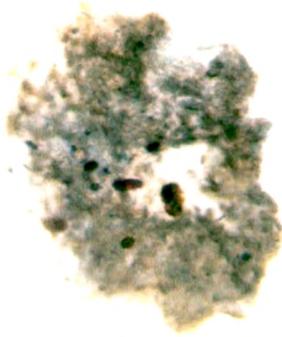
28. : Asci with ascospores  $\times 42$

29. : A single ascospore  $\times 66$

PLATE FIGURE NO. 2

Figs. 16 to 29

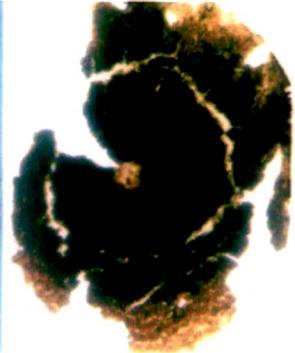
16



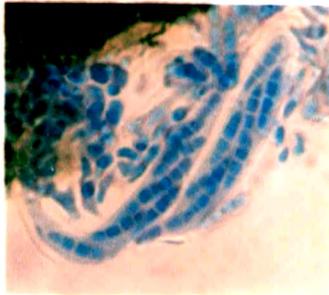
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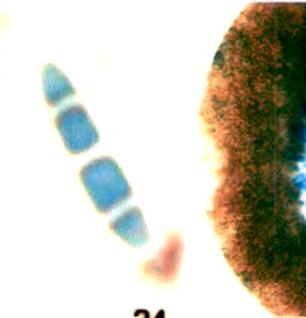
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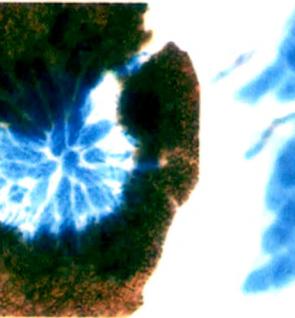
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20



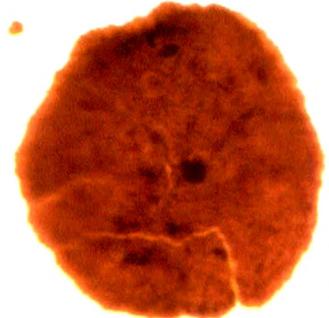
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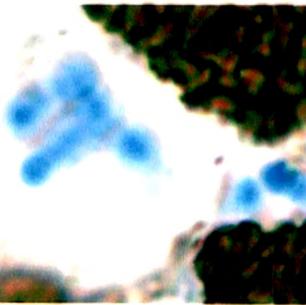
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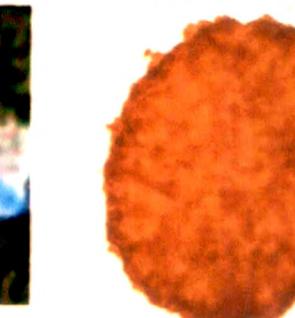
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24



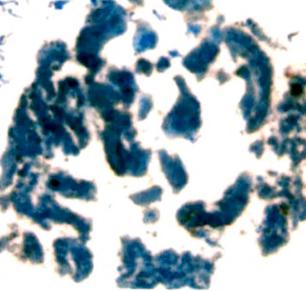
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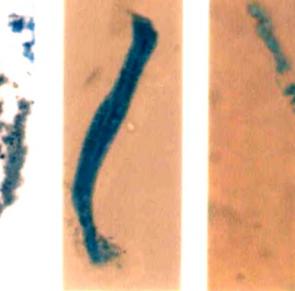
26



27



28



29



### Plate Figure No. 3

Figs.30 to 43

Text Fig. No. 30-31 : *Schizothyrium courtarea* (Bat. and Lima) Arx

30. : An entire ascocarp  $\times 14$

31. : Asci with ascospores  $\times 81$

Text Fig. No. 32-33 : *S. melanoplacum* (Mont.) Sacc.

32. : An entire ascocarp  $\times 34$

33. : Asci with ascospores  $\times 66$

Text Fig. No. 34-35 : *S. melanoplacum* (Mont.) Sacc. var. *memecyliae* var. nov.

34. : An entire ascocarp  $\times 18$

35. : Asci with ascospores  $\times 83$

Text Fig. No. 36-37 : *S. jaapii* (Rhem) Sacc. var. *sahyadrensis* var. nov.

36. : An entire ascocarp  $\times 55$

37. : Asci with ascospores  $\times 180$

Text Fig. No. 38-40 : *Leptopeltopsis nebulosa* Petrak

38. : V.S. of ascocarp,

39. : An entire ascocarp  $\times 22$

40. : Asci with ascospores  $\times 133$

Text Fig. No. 41-43 : *Pestalotia betazamiae* Guba var. *satarensis* var. nov.

41. : T.S. of leaf passing through pycnidia  $\times 40$

42. : Conidia,

43. : A single conidia  $\times 200$

PLATE FIGURE NO. 3  
Figs. 30 to 43

