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AN ADDITION TO *CYTOSTAGONOSPORA* FROM PAKISTAN

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Abstract

A new species of *Cytostagonospora yousufii* Abbas, Sutton & Ghaffar is described, illustrated and compared with 4 species of *Cytostagonospora.*

Introduction

Cytostagonospora was erected by Bubak (1916) and is reported to have 4 species viz., *C. photiniicola* Bubak, *C. cryptica* Curzi, (Curzi & Barbaini, 1927), *C. traversiana* Dias & Camara (1955) and *C. martiniana* (Sacc.) Sutton & Swart (1986). During the course of this study another species was found on dead branches of an unidentified host. This is described below.

Key to species

1. Conidiogenous cell determinate or proliferating hologenously ---------- 2
1. Conidiogenous cells proliferating, enterogenous and stationary ----------
---------- *Cytostagonospora martiniana.*
2. Conidia 32-56x1.5-2.5 µm ---------- *Cytostagonospora yousufii.*
2. Conidia 53-65x 3-4 µm ----------
---------- *Cytostagonospora photiniicola* and *Cytostagonospora cryptica.*

Cytostagonospora photiniicola was described by Bubak (1916) with conidia 1-2 septate and 70-80x3.5-4 µm. Curzi & Barbaini (1927) described *C. cryptica* with conidia 3 septate and 45-60x3 µm. However Sutton (1980) redescribed *C. photiniicola* with conidia 0-2 septate and 53-65x3 µm. The conidial measurement of *C. photiniicola* as given by Sutton (1980) are very similar to those for *C. cryptica* and therefore the two taxa may be conspecific. *C. photiniicola* and *C. cryptica* are therefore placed at one place in a key.

Cytostagonospora traversiana Dias & Camara (1955) was described from *Hedera helix* in Portugal. Sutton (1980) considered it as either *Ceuthospora lauri* (Grev.) Grev. or possibly an aggregated *Coeleophoma empteri* (Rostr.) Petrak, therefore it is not included in this Key.

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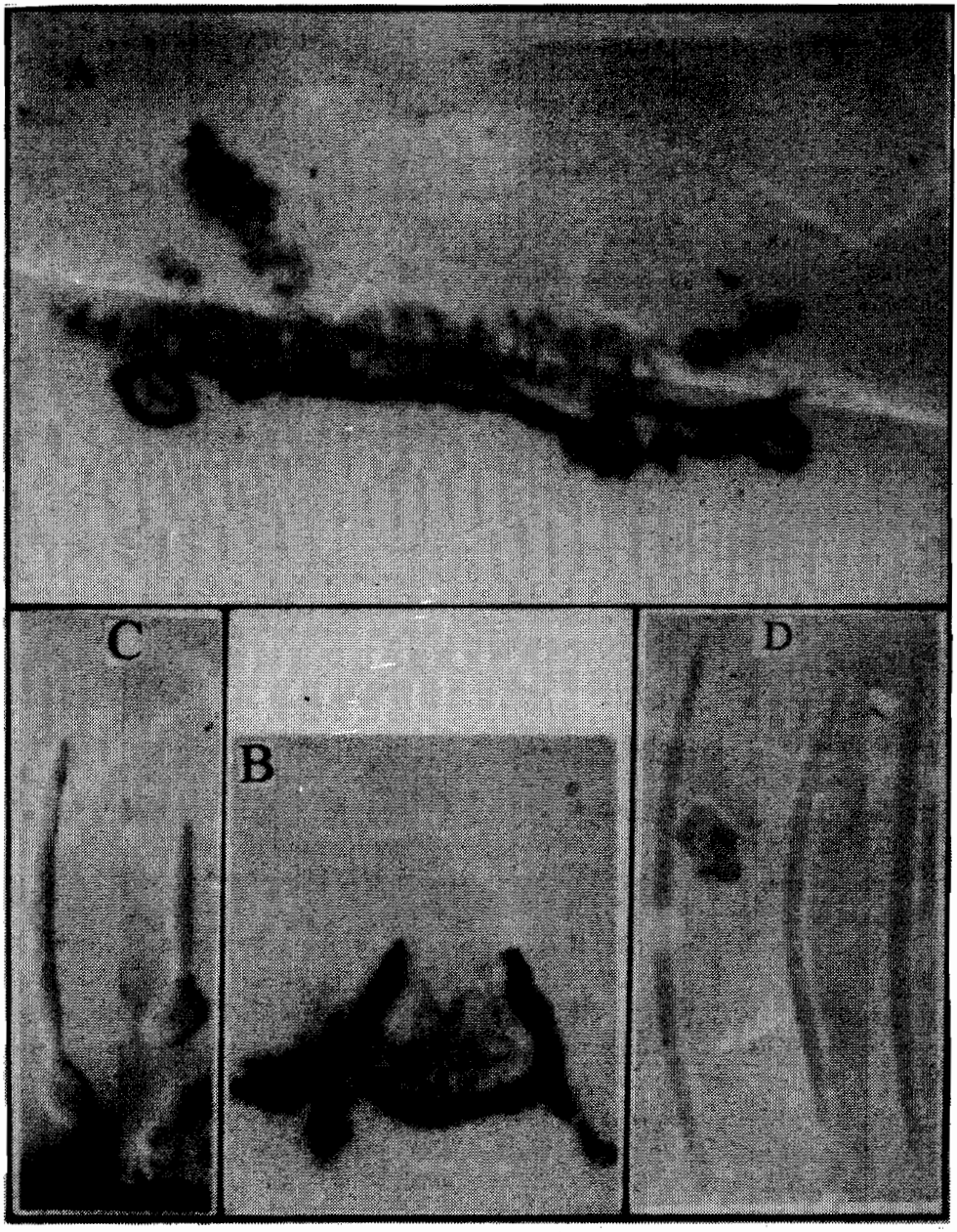

Fig. 1. *Cytostagonospora yousufii* (A) Conidiomata connected with clypeus, 16X; (B) V.S. of conidioma, 40X; (C) Conidiogenous cells, 1800X; (D) Conidia, 1800X.

***Cytostagonospora yousufii* Abbas, Sutton & Ghaffar sp. nov., Fig. 1.**

Conidiomata pycnidialia, separata, nigra, clypeata, immersa, globosa vel applanate globosa vel oblonga, 100-132x116-165 µm., parietes 2-10 cellulis crassi ad 9.5-24 µm lati, ex textura angulari atrobrunnea ad stratum singulum compositi. Ad basim aliquot pycnidia 2-8 cellulis crassis et 12-20 µm latis connexa. *Conidiophora* absentia, raro presentia tum hyalina, cylindrica vel lageniformia, septata, 10-20x3-4 µm. *Cellulae conidiogenae* discretae, raro in conidiophoris incorporatae, ampulliformes vel lageniformes, laeves, hyalinae. *Conidia* hologenitica, hyalina, laevia, longa, cylindrica, apicem obtusa, basim truncata, 1-3 euseptata, raro apicem plus minusve crassiora gradatim versus basim diminuta, 32-56x1.5-2.5 µm.

In ramis emortuis hospes planta non-ignota, Karachi, Pakistan, 25 Apr. 1975, S.Q. Abbas UCMH 756 (IMI 322507), holotypus.

***Cytostagonospora yousufii* Abbas, Sutton & Ghaffar sp. nov.,**

Conidiomata pycnidial, separate, black, immersed, globose to applanate-globose to oblong, clypeate 100-132x116-165 µm. Wall of textura angularis, dark brown, thick-walled, 2-10 cells thick and 9.5-24 µm wide, consisting of a single layer. Several pycnidia are connected to one another by a band of cells 2-8 cells thick and 12-20 µm wide especially at the base. *Conidiophores* mostly absent, but when present then hyaline, cylindrical to lageniform, septate, 10-20x3-4 µm. *Conidiogenous cells* discrete or integrated, ampulliform or lageniform, smooth, hyaline, forming conidia at the apices and laterally, without proliferations, 6.5-11.5x2.4-4 µm. *Conidia* hologenous, hyaline, smooth, long, cylindrical, apex obtuse, base truncate, 1-3 euseptate, sometimes the apex of a conidium is relatively wider, gradually tapering towards the base 32-56x1.5-2.5 µm.

Cytostagonospora yousufii significantly differs from all other *Cytostagonospora* spp. It resembles *C. photiniicola* and *C. cryptica* in the clypeate pycnidial conidiomata, especially *C. photiniicola* in non-proliferating conidiogenous cells and absence of conidiophores. Conidia of *C. photiniicola* (53-65x3 µm) and *C. cryptica* (45-60x3 µm) differ from *C. yousufii* in being longer and wider. According to Sutton (1980), *C. traversiana* is either *Ceuthospora lauri* (Grev.) Grev., or *Coelophoma empetri* (Rostr.) Petrak. Furthermore conidia are smallar (10-13.5x 2.5-2.6 µm) than *C. yousufii* (32-56x1.5-2.5). *C. martiniana* resembles *C. yousufii* in the clypeate conidiomata but differs in the absence of conidiophores and having enterogenous and stationary conidiogenous cells (*phialidic, sensu* Sutton, 1980; Sutton & Swart, 1986), with prominent periclinal thickening and having smaller, wider conidia (40-48x3.5-4 µm). *Cytostagonospora yousufii* shows some resemblance to *Phlyctaeniella humuli* in the presence of conidiophores and conidial morphology. Conidia in *P. humuli* are 2-6 septate, smooth, hyaline, fusiform, similar to those in *C. yousufii*, except that *C. yousufii* has only 1-3 septate conidia. Although conidiophores are present in both taxa they are irregularly branched in *P. humuli* and sympodially branched in *C. yousufii*. The two taxa differ in conidiomatal structure. They are eustromatic and without any clypeus in *P. humuli* and pycnidial with a clypeus in *C. yousufii*. Similarly, conidiogenous cells are determinate or laterally proliferating in *C. yousufii* and enterogenous stationary with prominent periclinal thickening and wide channel in *P. humuli*.

Specimens examined:

***Cytostagonospora yousufii* Abbas, Sutton & Ghaffar sp. nov.**

On dead branches of unidentified host plant, Karachi, Pakistan, 25 Apr. 1975, S.Q. Abbas UCMH 756 (IMI 322507), holotype.

***Cytostagonospora martiniana* (Sacc.) Sutton & Swart**

On phyllode of *Acacia longifolia*, Victoria, Australia, Mrs Martin 4321, ex slide K (IMI 299337), holotype (=holotype of *Septoria martiniana* ≡ *S. phyllodiorum*).

***Cytostagonospora photiniicola* Bubak**

On dead leaves of *Photinia serrulata*, Austria, Jan. 1916, Pfaff 1115d ex BPI (IMI 194179), holotype.

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