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### A STUDY ON THREE FUNGAL DISEASES OF MULBERRY SHOOT IN IZADSHAHR (MAZANDARAN) AND ASTANEH (GUILAN), IRAN

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*Phloeospora maculans*

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*Diatrype stigma*

(*Lasiodiplodia theobromae*)

*Cytospora cincta*

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*C. cincta*

*D. stigma*

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Caplio R30 Ricoh

*Sirosporium mori* *Phloeospora maculans*

Canon A520

*Cercospora* *Pseudocercospora mori*

*Cercospora* (=C. *apii* s.lat.) *moricola*

Crous and Braun, Farr *et al.* 1989) *morina*  
(Ershad 2009; 2003

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Olympus BX51

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(Brooks *et al.* 1963)

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(Ashkan & Hedjaroude 1981)

Glawe & Rogers 1984)

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PDA

CMA MA PDA

(Frame)

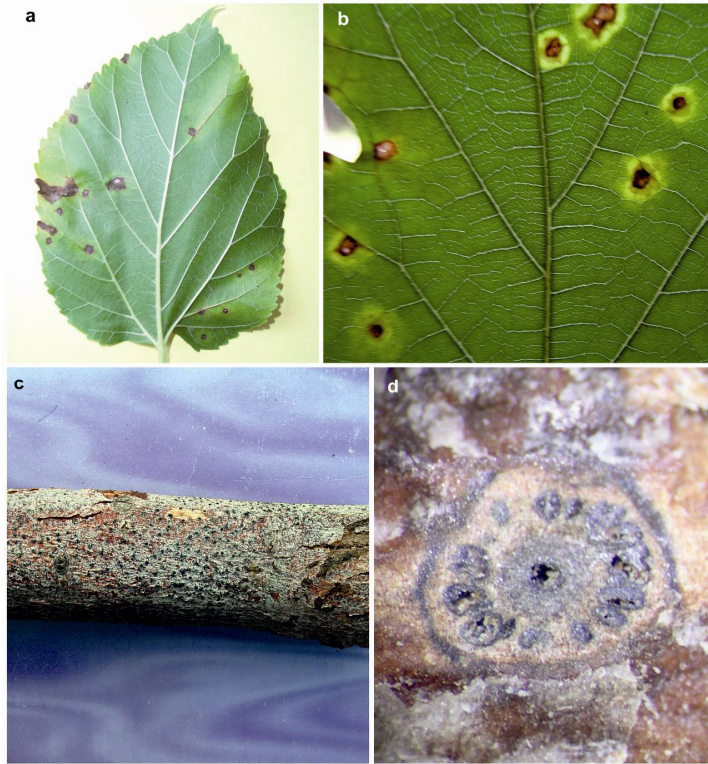
x x

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(b a )

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:c

:b

:a

*Cytospora cincta*

*C. cincta*

:d

Fig. 1. a: Symptoms of Phloeospora leaf spot of mulberry in early stage, b: Symptoms of phloeospora leaf spot of mulberry in late stage along with yellow band, c: A mulberry shoot affected by *Cytospora cincta*, d: Cross section of a pycnidium of *C. cincta* which its locules are arranged radiately and surrounded with a conceptacle.

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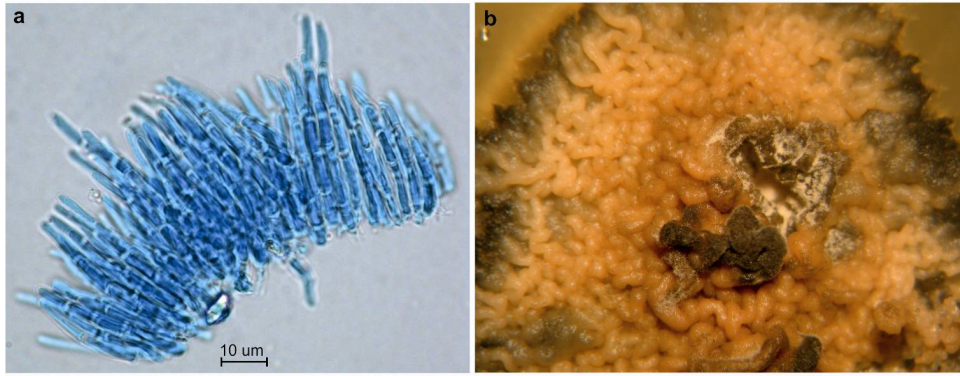
CMA MA PDA

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: a *Phloeospora maculans* .

(x ) PCA

**Fig. 2. *Phloeospora maculans*. a: A bundle of conidia separated from an acevulus, b: A view of 25 day-old colony on PCA medium; Note on bundles of conidia oozed from acevuli.**

(Punithalingam 1990)

*Mycosphaerella mori* (Fuckel) Lindau

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(b )

(*Morus alba* var. *nigra*)

(*Morus alba*)

(Ershad 2009)

*Phloeospora*

*Phloeospora*

(Sutton, 1980)

*maculans* (Bereng.) Allesch.

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IRAN 1646c

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(Gveritishwili 1982)

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*Cytospora cincta* Sacc.

(Hayova & Minter 1998)

(d )

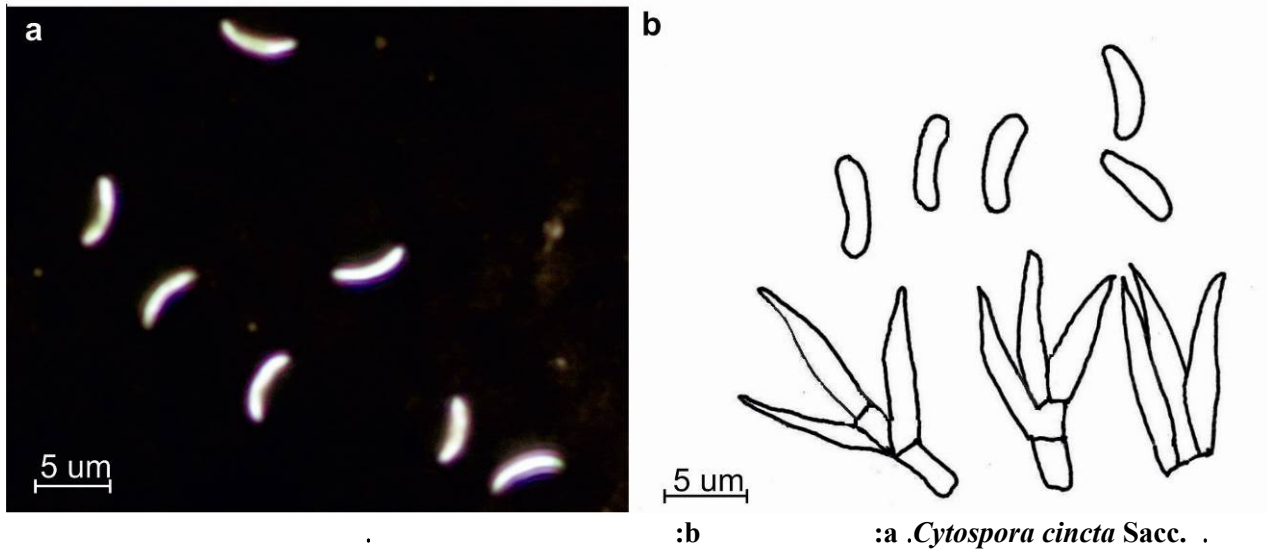
*Leucostoma cinctum* (Fr.)

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Hohn.

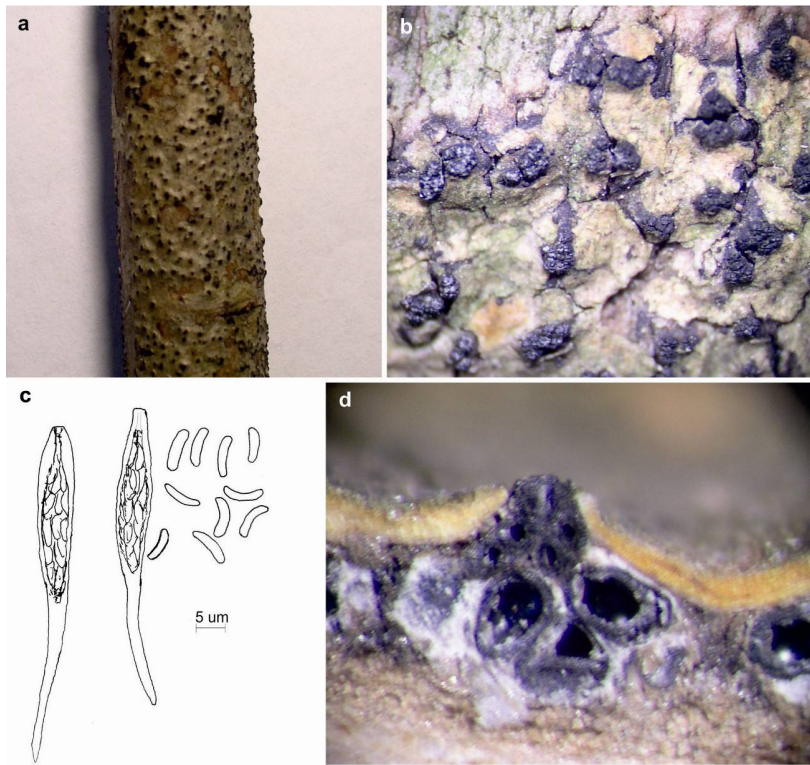
(Invagination)

*C. rubescens*



:b :a *Cytospora cincta* Sacc. .

**Fig. 3. *Cytospora cincta*. a: Pycnidiospores, b: Conidiophores and conidia.**



:b :a *Diatrype stigma s. lato* .  
:d :c

**Fig. 4. *Diatrype stigma s. lato*. a: An affected mulberry shoot with neumerous erumpent perithecial stromata, b: View of discs with several perithecium ostioles, c: Asci and ascospores, d: Longitudinal cross section of a perithecial stroma.**

Diatrypaceae

(Glawe and Rogers 1984).

.(c )

x

x /

x

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*Diatrype stigma* (Hoffm., Fr.) Fr.

(*D. stigma* sensu lato)

(Collection Group 2)

(103-104)