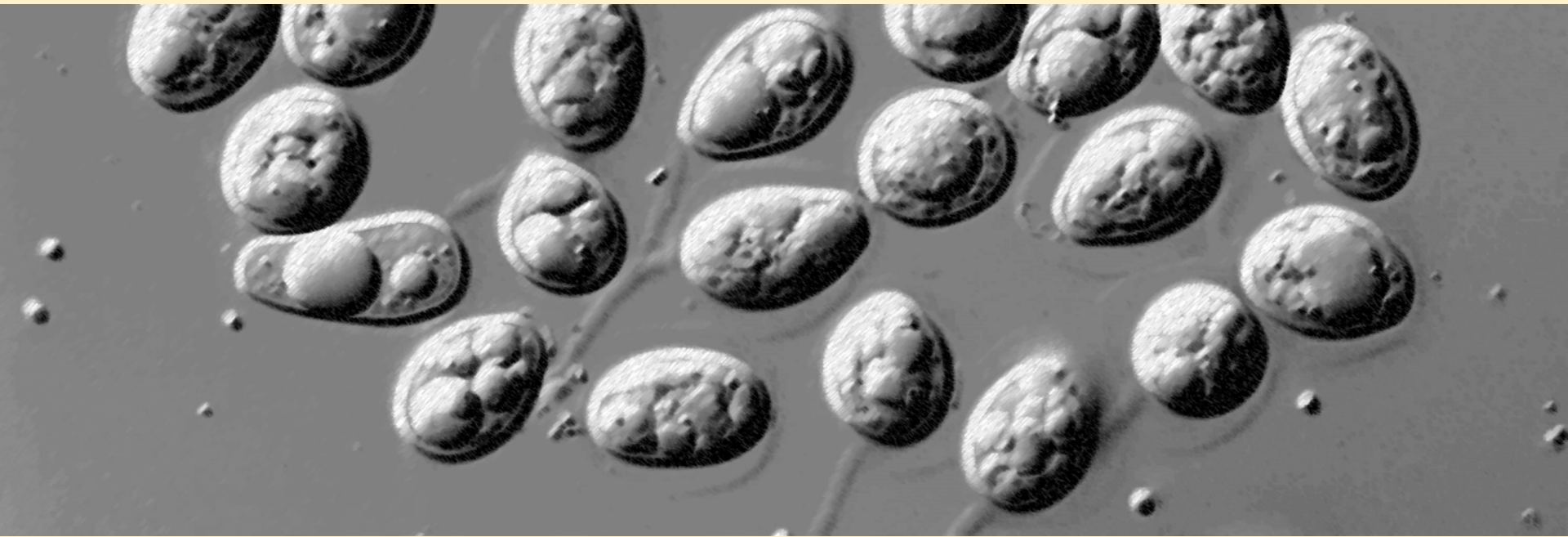


Introduction to *Phyllosticta*

AANZFTA ECWP Diagnosis of Plant Diseases Workshops, 22-26 June 2015



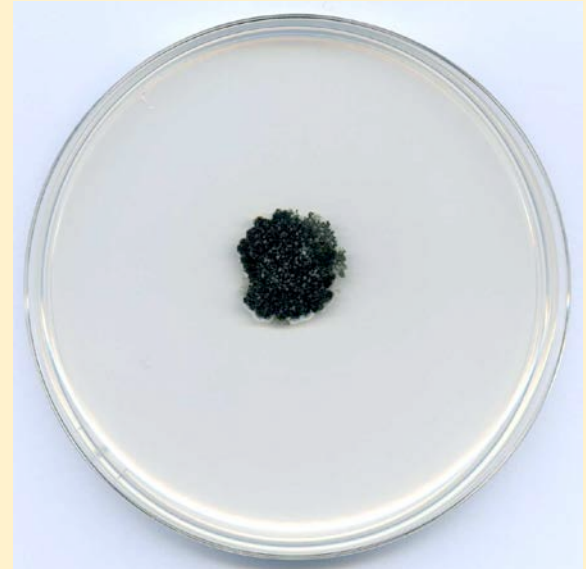
Phyllosticta

- Common plant pathogens, endophytes and saprobes
- Worldwide importance
- Cause many plant diseases including leaf and fruit spots
- Similar in conidial morphology to *Phoma*, *Diaporthe* and other genera with small hyaline, aseptate conidia
- Over 3,400 species names described in *Phyllosticta* (and under the synonym *Guignardia*)



Phyllosticta species described over years and decades

1970-1980	112
1980-1990	55
1990-2000	25
2000-2010	34
2011	5
2012	8
2013	16
2014	8
2015	1



spermatia

conidia

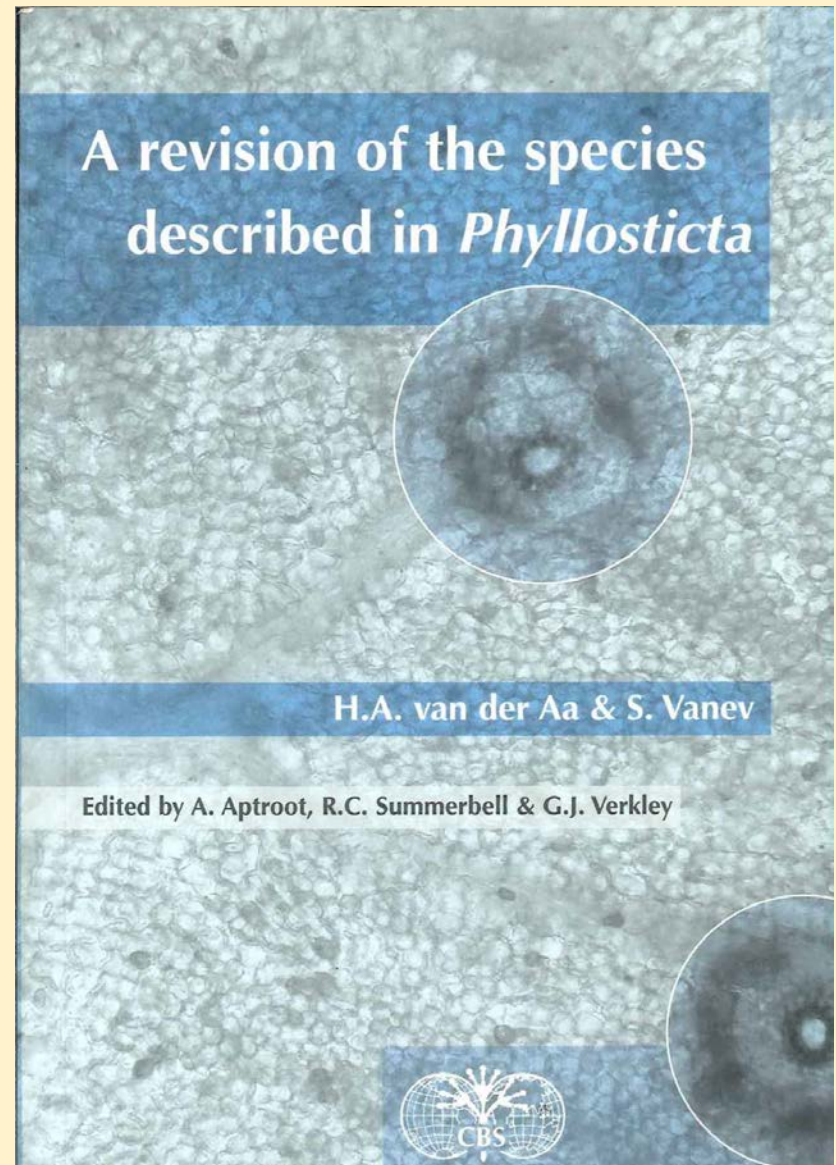
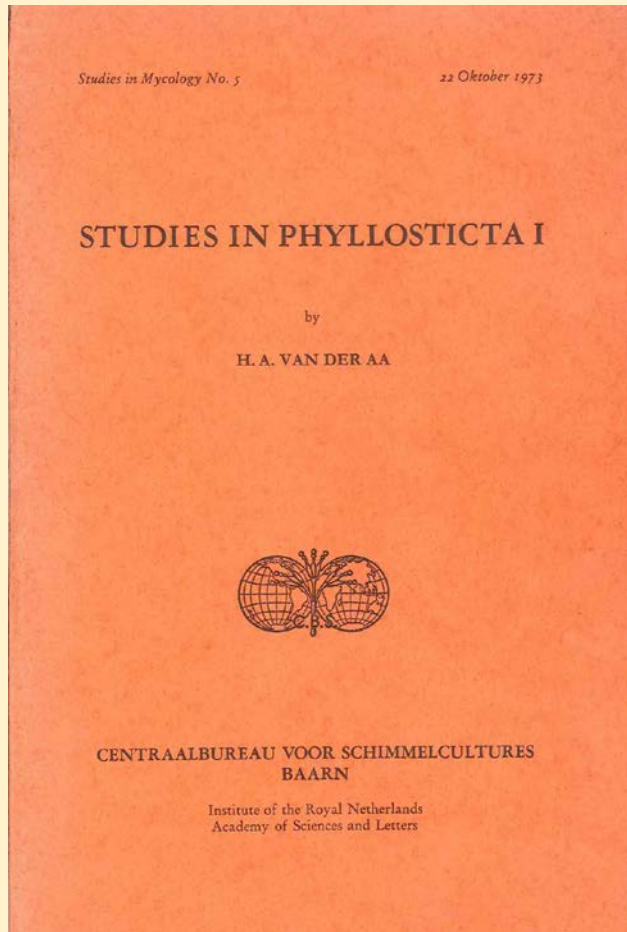
mucoïd sheath

apical appendage

conidiophore

Phyllosticta

Prior to molecular studies, the taxonomy of *Phyllosticta* relied on host range and morphology



Phyllosticta

rather coarse guttules and surrounded by a thick slime layer (on leaves of various trees and shrubs)
P. concentrica (16)

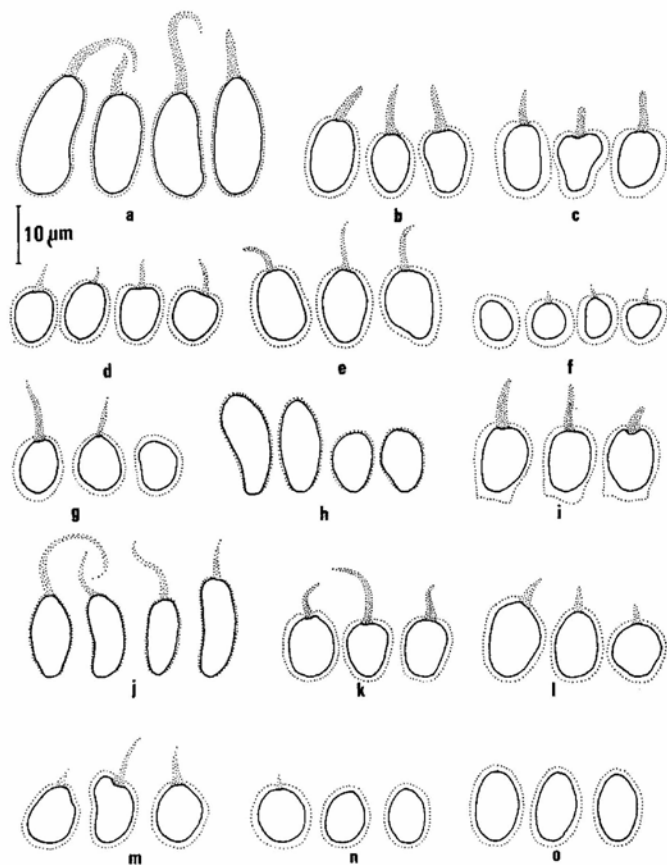


Fig. 4. Conidia of a. *Phyllosticta cruenta*; b. *P. africana* (type); c. *P. amaryllidicola* (type); d. *P. ampelidica*; e. *P. anacardiacearum*; f. *P. aplectri* (type); g. *P. arecae*; h. *P. arxii* (type); i. *P. artocarpina*; j. *P. bokensis* (type); k. *P. capitalensis*; l. *P. celastrina* (type); m. *P. citricarpa*; n. *P. clethricola*; o. *P. colossicola*.

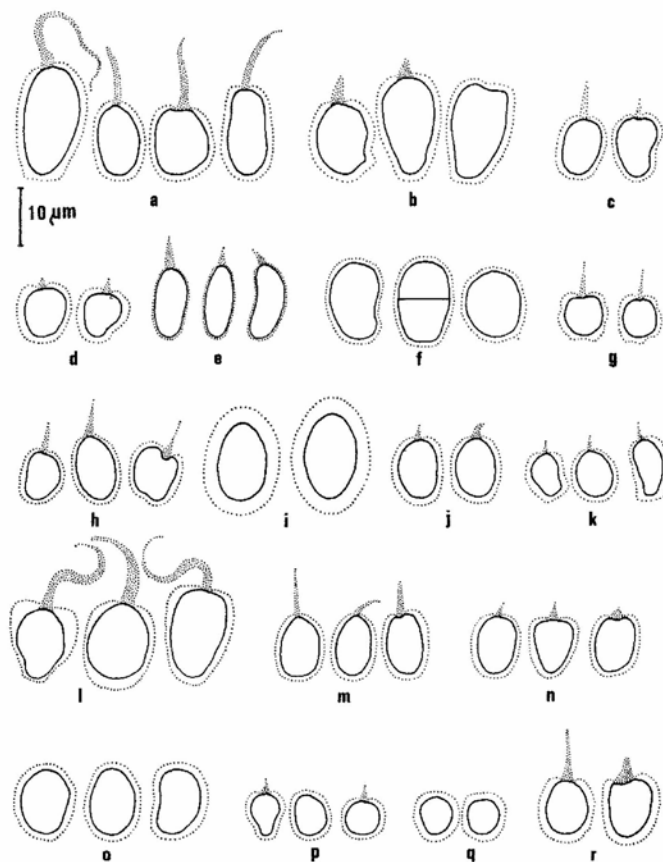


Fig. 5. Conidia of a. *Phyllosticta concentrica*; b. *P. concinna* (type); c. *P. cyamopsidicola* (type); d. *P. dioscoreae*; e. *P. encephalarti* (type); f. *P. flevolandica* (type); g. *P. gaultberiae*; h. *P. ghaesembillae* (type); i. *P. hamamelidis*; j. *P. heveana*; k. *P. hymanaeae* (type); l. *P. hypoglossi*; m. *P. lorantbi* (type); n. *P. melochiae*; o. *P. minima* (type); p. *P. minor*; q. *P. moravica*; r. *P. morindae*.

Phyllosticta

Teleomophic stage

- Sometimes formed in cultures
- Most names in *Guignardia* are synonyms of *Phyllosticta* spp.
- Asci 8-spored
- Ascospores septate, hyaline, often with gelatinous caps

Group task

What are the important plant diseases caused by *Phyllosticta* spp. in your country?

How do you identify species of *Phyllosticta* in your laboratory?



Phyllosticta

Some interesting facts

- *Phyllosticta capitalensis* is a widespread endophyte and weak plant pathogen with a wide host range of more than 70 plant families.
- *Phyllosticta citricarpa* is an important pathogen that causes citrus black spot. There are other species of *Phyllosticta* that infect *Citrus*.
- *Phyllosticta cavendishii* is an important pathogen that causes freckle on bananas. There are other species of *Phyllosticta* that infect *Citrus*.