

THE PERFECT STAGE OF *PHLOEOSPORELLA PADI*,  
THE CAUSAL FUNGUS OF CHERRY LEAF SPOT,  
IN THE NETHERLANDS<sup>1</sup>

*Het perfecte stadium van Phloeosporcella padi, de oorzaak van de kersebladvlek-  
kenziekte, in Nederland*

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Proefstation voor de Fruitteelt in de Volle Grond, Wilhelminadorp

The first record of cherry leaf spot in the Netherlands was made by VAN POETEREN (1944: 22), who found the disease prevalent in 1942 on cherry seedlings (*Prunus avium*) near Mill (Limburg). In 1963 several orchards of sour cherries (*Prunus cerasus*) as well as some of sweet cherries (*Prunus avium*) in the province Limburg were severely damaged by the cherry leaf spot fungus.

In the U.S.A. and Canada overwintering of *Phloeosporcella padi* (Lib.) v. ARX (syn.: *Cylindrosporium padi* (Lib.) Karst.) on cultivated cherries occurs by means of the perfect stage, usually called *Coccomyces hiemalis* Higgins (HEALD, 1933: 551). Ascospores are released in spring from the apothecia, which are predominantly formed on the undersides of fallen overwintered leaves.

According to HOCHAPFEL (1952) and BLUMER (1958) the perfect stage of "*Cylindrosporium padi* (Lib.) Karst.", has never been found on cultivated stone fruits in Europe. Overwintering here has been supposed to take place either by means of pycnidia-like bodies (DARPOUX, 1945) or by stromata in the leaves (KASZONYI, 1955; BLUMER, 1958), on which so-called winter conidia are formed the following spring, while VIENNOT-BOURGIN (1949: 648-652) has reported vegetative overwintering of the parasitic fungus on twigs. After the under-mentioned observations had been made, a letter written by KASZONYI<sup>3</sup> came to the notice of the author from which it was evident that KASZONYI met with the apothecia of "*Coccomyces hiemalis*" on overwintered leaves of cultivated cherries in Hungary in April/May 1963, this being the first discovery of the perfect stage of the cherry leaf spot fungus on cultivated stone fruits in Europe.

In one of the sour cherry fields (variety 'Morello') at St. Odiliënberg (Limburg), where the trees were severely damaged by cherry leaf spot in 1963, fallen overwintered leaves were collected from the ground on 12th February 1964 and stored at Wilhelminadorp in wire cages close to the soil surface. Leaves from this sample were examined on 13th April 1964 and several light brown apothecia were seen on the undersurface of the leaves. The apothecia, their asci, paraphyses and ascospores appeared to be identical with those described for "*Coccomyces hiemalis* Higgins" by HIGGINS (1914).

On 28th April 1964 a second sample of overwintered sour cherry leaves was collected from the same orchard and on 1st May 1964 mature apothecia typical for "*Coccomyces hiemalis*" were seen in this sample too (Fig. 1 and 2), although they were rather scarce.

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<sup>3</sup> Letter to Dr. J. A. VON ARX, Centraalbureau voor Schimmelcultures, Baarn, the Netherlands, dated 20 July 1963.

VON ARX (1961) stated that the perfect stage of *Phloeosporella padi* is erroneously classified as *Coccomyces hiemalis* Higgins. He therefore proposed a new name for the perfect stage: *Blumeriella jaapii* (Rehm) v. Arx.

This seems to be the first published record of *Blumeriella jaapii* (the perfect stage of *Phloeosporella padi*) on cultivated cherries in western Europe.

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#### SAMENVATTING

*Blumeriella jaapii* (Rehm) v. Arx, het perfecte stadium van *Phloeosporella padi* (Lib.) v. Arx, werd in het voorjaar van 1964 gevonden op bladeren van morel (*Prunus cerasus*), die afkomstig waren uit een boomgaard bij St. Odiliënberg (Limburg). Dit is waarschijnlijk de eerste vermelding van dit perfecte stadium op gekweekte kersen in West-Europa.

#### REFERENCES

- ARX, J. A. VON, - 1961. Über *Cylindrosporium padi*. Phytopath. Z. 42: 161-166.  
BLUMER, S., - 1958. Beiträge zur Kenntnis von „*Cylindrosporium padi*“. Phytopath. Z. 33: 263-290.  
DARPOUX, H., - 1945. Étude sur l'antracnose du cérisier. Ann. Épiphyt., N.S. 11: 161-175.  
HEALD, F. D., - 1933. Manual of plant diseases. McGraw-Hill Book Comp., New York.  
HIGGINS, B. B., - 1914. Contribution to the life history and physiology of *Cylindrosporium* on stone fruits. Amer. J. Bot. 1: 145-173.  
HOCHAPFEL, H., - 1952. Die *Cylindrosporium*-Krankheit an Süsz- und Sauerkirschen in Europa und Nordamerika. Phytopath. Z. 19: 389-402.  
KASZONYI, S., - 1955. Faiskolai csonthéjasok cilindrosporiumos betegsége. Növénytermelés 4: 337-350.  
POETEREN, N. VAN, - 1944. Verslag over de werkzaamheden van den Plantenziektenkundige Dienst in het jaar 1942. Versl. PlZiekt. Dienst Wageningen 103.  
VIENNOT-BOURGIN, G., - 1949. Les champignons parasites des plantes cultivées. Tome I. Masson et Cie, Paris.

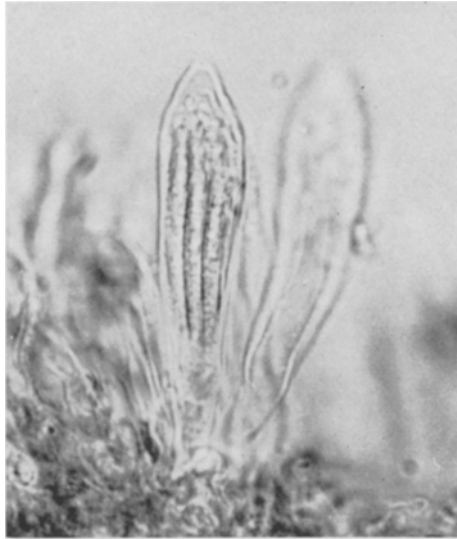


FIG. 1. Asci of *Blumeriella jaapii*; one ascus with mature ascospores from 'Morello'-leaf, St. Odiliënberg, the Netherlands, 1st May 1964. Magnification  $\times 600$ .  
*Asci van Blumeriella jaapii; één ascus met rijpe ascosporen van 'Morel'-blad, St. Odiliënberg, Nederland, 1 mei 1964. Vergroting  $600\times$ .* Foto I.P.O.



FIG. 2. Two ascospores of *Blumeriella jaapii*, 1st May 1964. Magnification  $\times 600$ .  
*Twee ascosporen van Blumeriella jaapii, 1 mei 1964. Vergroting  $600\times$ .* Foto I.P.O.