

The causal organism of purple blotch disease on *Sedum*

H. A. VAN KESTEREN

Plant Protection Service (PD), Wageningen

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Stems and leaves of *Sedum telephium* and other *Sedum* spp. often show purple spots caused by a typical species of the form-genus *Phoma* Sacc. (cf. Boerema, 1970). The plants may suffer seriously from this 'purple blotch disease' (Fig. 1).

On the spots the *Phoma*-pycnidia occur in groups; they are subglobose, black and 200–500 μm in diameter. The pycnidiospores, arising from undifferentiated parent cells through a repetitive budding process, are hyaline, oblong, rounded at both ends and often slightly curved. Some of them are continuous, $3.8\text{--}7.6 \times 2.1\text{--}3 \mu\text{m}$; the others 1-septate, $6.8\text{--}12 \times 2.5\text{--}3.5 \mu\text{m}$. (The septation of the pycnidiospores in *Phoma* is a secondary process, independent of the sporogenesis, Boerema 1970). In culture the fungus produces a white mycelial mat gradually changing in colour to olivaceous buff (21''d) or pale olivaceous grey (23''''f) with a citrine (21k) underground (for colour names and notations see Rayner, 1970). The pycnidiospores in vitro are mostly continuous; otherwise they are of the same shape and size as in vivo. Comparison with the numerous *Phoma*-isolates from different sources in the collection of the Plant Protection Service led to the conclusion that the natural occurrence of the fungus is restricted to species of *Sedum*.

On *Sedum* four *Phoma*-like fungi were described with conidia similar to those of the fungus of the purple blotch disease:

1. *Phoma doliolum* P. Karst. (1888). The original material of this species on stems of *Sedum telephium* (lectotype: Herb. Karsten, H, September 1868, Aboa = Turku) deals with a fungus with sclerotized pycnidia. It agrees with *Plenodomus microsporus* Berl. (1890) = *Diploplenodomus microsporus* (Berl.) Höhn. (1918a, p. 250). *Phoma doliolum* does not represent the pycnidial state of *Leptosphaeria doliolum* (Pers. ex Fr.) Ces. & DNot., as Karsten thought. The latter was described by von Höhnelt (1915, p. 75) (compare the cultural study by Lucas & Webster, 1967) as *Leptophoma doliolum* Höhn. = *Plenodomus doliolum* (Höhn.) Höhn. (1918b, p. 139) = *Plenodomus doliolum* (Höhn.) Petr. (1923). As *Plenodomus* (= *Leptophoma*) is regarded as only a section of the form-genus *Phoma* (cf. von Arx, 1970) I propose that the pycnidial state of *Leptosphaeria doliolum* be indicated by the new name:

PHOMA HOEHNELII v. Kest. nom. nov.

= *Leptophoma doliolum* Höhn. in Sber. Akad. Wiss. Wien (Math.-naturw. Kl., Abt. I) 124: 75. 1915. Neotype: Herb. von Höhnelt no. 1017, p. 9393 (FH), on stems of *Lavatera thuringiaca*, May 1916, Sonntagsberg, leg. P. P. Strasser.

2. *Phoma lirella* var. *sedi* Briard & Hariot (Briard, 1891). Its type on dead stems of

Fig. 1. *Sedum telephium* with sunken purple spots on stems and leaves caused by *Phoma telephii*. Often two or more spots are merged in one large lesion (picture in the centre).



Fig. 1 *Sedum telephium* met ingezonken paars verkleurde vlekken op stengels en bladeren veroorzaakt door *Phoma telephii*. Vaak zijn twee of meer vlekken samengevloerd tot een groter geheel (afbeelding in het midden).

Sedum telephium could not be traced (not in PC). Probably it has not been preserved, so that its identity cannot be ascertained.

3. *Ascochyta telephii* Vestergr. (1897). The type of this species on leaves of *Sedum telephium* (UPS) agrees completely with the fungus of purple blotch disease.

4. *Phoma tabifica* v. Kest. (1971). I have introduced this name provisionally for the fungus.

The foregoing means that the oldest reliable epithet available for the fungus of purple blotch disease appears to be '*telephii*':

PHOMA TELEPHII (Vestergr.) v. Kest. comb. nov.

Basionym: *Ascochyta telephii* Vest. in Ofv. K. Svensk. Vetensk-Akad. Förh. 1897: 41. 1897. Holotype: Herb. Vestergren (UPS), on leaves of *Sedum telephium*, July 1895, Södertelje.

Synonym: *Phoma tabifica* v. Kest. in Gewasbescherming 2: 74. 1971.

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Samenvatting

De veroorzaker van de paarse-vlekkenziekte bij Sedum

Onderzoek van de kenmerken en synoniemen van de *Phoma*-soort die de paarse-vlekkenziekte bij *Sedum telephium* en andere *Sedum*-soorten veroorzaakt, heeft geleid tot de nieuwe naamcombinatie *Phoma telephii* (Vestergr.) v. Kest. Voor het pycnidestadium van *Leptosphaeria doliolum* (Pers. ex Fr.) Ces. & DNot. is de nieuwe naam *Phoma hoehnelii* v. Kest. geïntroduceerd.

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Address

Plantenziektenkundige Dienst, Geertjesweg 15, Wageningen, the Netherlands