Two *Ascochyta* species on *Althaea officinalis* and *Aralia elata*

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Two brown zonate leaf spot fungi new to Japan are described. *Ascochyta malvicola* on *Althaea officinalis* and *A. marginata* on *Aralia elata* were recorded in Kyoto Prefecture in 1988.

Key Words—*Althaea officinalis; Aralia elata; Ascochyta malvicola; Ascochyta marginata; brown zonate leaf spot.*

Two fungi in brown zonate leaf spots on *Althaea officinalis* L. and on *Aralia elata* Seem. were found in Kyoto Prefecture, Japan in 1988, and are identified as *Ascochyta malvicola* Sacc. and *A. marginata* J. J. Davis, respectively. These *Ascochyta* species are described as a new record in Japan.

Description


Figs. 1, 2


For additional synonyms see Melnik (1977).

Leaf spots circular or irregularly shaped, appearing zonate, light brown, finally fading to yellow around the spots. Pycnidia epiphyllous, erumpent, pale brown to brown, globose to subglobose, 135.0-190.0 μm in diam, 125.0-160.0 μm high. Pycnidial wall pseudoparenchymatous, composed of several cell layers. Ostiole near the apex papillate. Conidiogenous cells hyaline, monophialidic, determinate, discrete, doliiform, arising from the cells of the innermost layer of pycnidial wall, 5.0-6.0 × 4.0-5.5 μm. Conidia hyaline, smooth, cylindrical to clavate, straight to curved, sometimes constricted at the middle part, medianly 1-septate, sometimes non-septate, 5.0-8.0(-9.5) × 2.0-3.0 μm. Colonies on potato dextrose agar growing moderately slowly, reaching up to 5.3 cm in diam in 2 weeks at 25°C; surface felty, black to grayish brown; reverse colorless.


Specimen examined: on leaves of *Althaea officinalis* L., the Herbal Garden of the Kyoto Prefectural Research Institute of Agriculture, Iden-cho, Ayabe, Kyoto Prefecture, Japan, 7 August 1988, M. Yoshikawa, CBH-8801; the living culture derived from CBH-8801 on potato dextrose agar, CB-8879, has been kept at the senior author's laboratory. A dry specimen has been deposited in the Japan Mycological Institute.

Distribution: Specimen examined was from Japan. Also described with a worldwide distribution (Melnik, 1977).

Notes: The genus *Ascochyta* comprises over 600 described species, of which the majority are plant pathogens with a worldwide distribution. The major reason why so many species are involved in *Ascochyta* is the great dependency on the host plants for the species recognition. Many workers have continued to...
describe new species which do not morphologically differ from the previously described species recorded on closely related host plants. Recently Punithanlingam (1979, 1988) has made a reappraisal of all the Ascochyta species, in which several keys based on the morphology of known species are provided for three defined sections on the basis of the host plants, i.e., those on Gramineae, Monocotyledones excluding Gramineae, and Dicotyledones. The review of those on Dicotyledones has not been published yet.

Three species of Ascochyta have hitherto been recorded on Malvaceae, i.e., A. abelmoschi Harter, A. malvicola Sacc., A. abutilonica Massenot (Melnik, 1977). They are mainly distinguished by the shape and size of pycnidia and conidia. Ascochyta malvicola occurring on Althaea species and other hosts among Malvaceae is much the same as the present fungus morphologically (Table 1). Therefore, the present fungus is identified as A. malvicola Sacc., new to Japan.

Formation of pycnidia and conidia on potato dextrose agar has not been observed yet.

### Table 1. Morphological characteristics of closely related species of Ascochyta on Malvaceae.

<table>
<thead>
<tr>
<th>Fungus</th>
<th>Host</th>
<th>Pycnidia</th>
<th>Conidiogenous cells</th>
<th>Conidia</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. malvicola Sacc. (the present fungus)</td>
<td>Althaea officinalis</td>
<td>Erumpent, Pale brown to brown, Globose to subglobe, Ostiole near the apex</td>
<td>Hyaline, Monophialidic</td>
<td>Cylindrical to clavate, Straight to curved, 5.0-8.0(-9.5) x 2.0-3.0 μm</td>
<td>The present paper (1995)</td>
</tr>
<tr>
<td>A. malvicola Sacc. (1878)</td>
<td>Abutilon, Alcea, Hibiscus, Lavatera Malva, Sida, Urena lobata</td>
<td>Erumpent or immersed, Pale to dark brown, Globose to subglobe, Thin-walled</td>
<td>-</td>
<td>-</td>
<td>B. A. Melnik (1977)</td>
</tr>
<tr>
<td>A. abelmoschi Harter (1918)</td>
<td>Hibiscus esculentus, H. trionum, H. paulinellus</td>
<td>Immersed, Rusty brown, Globose, Thin-walled</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A. abutilonica Massenot (1951)</td>
<td>Abutilon striatum</td>
<td>Semi-immersed, Globose, Thin-walled, 100-140 μm</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

References The present paper (1995) B. A. Melnik (1977)