Fungi on *Asparagus* spp. in Africa

Classification of *Asparagus* has been controversial. Obermeyer (1983) transferred several species of wild asparagus to the new genus *Protasparagus*, including *Protasparagus falcatus*, *Protasparagus laricinus*, *Protasparagus plumosus*, *Protasparagus sarmentosus*, *Protasparagus striatus*, and *Protasparagus subulatus*, but this has not been universally accepted (GRIN 2006). *Asparagus* (and *Protasparagus*) are sometimes classified in the Asparagaceae and sometimes in the Liliaceae (GRIN 2006).


**Aecidium capense** Berk. & M.A. Curtis 1858 [1860] (Urediniomycetes, Uredinales)

Notes: This fungus was described by Berkeley & Curtis from fruit of Asparagus or some allied plant. Doidge (1950) lists it as a doubtful species. According to Sydow (1924), the type specimen of *Aecidium capense* does contain a fungus that appears to be an Aecidium, but it cannot be described due to lack of material. He states definitively that this should not be accepted as a species, especially since the identity of the host plant is uncertain.

**Distribution:** Africa (South Africa, type).

**Substrate:** Fruit.

**Host:** *Asparagus* sp. or some allied plant (Berkeley & Curtis 1858).

**Supporting Literature:**


Verified By: Erica On Feb 01, 2006

This fungus was given a brief description by Berkeley & Curtis (1858), based on a collection from South Africa, on “fruit of *Asparagus* sp. or some allied plant”. It is apparently known only from the type collection. Doidge (1950) lists it as a doubtful species. According to Sydow (1924), the type specimen of *Aecidium capense* does contain a fungus that appears to be an Aecidium, but it cannot be described due to lack of material. He states definitively that this should not be accepted as a species, especially since the identity of the host plant is uncertain.

*Aecidium schlechterianum* Henn. 1898 also occurs in South Africa on *Asparagus* spp., but was collected from leaves rather than fruits. The other Uredinales reported on *Asparagus* spp. from South Africa are all *Puccinia* spp.: *Puccinia asparagi*, *Puccinia myrsiphylli*, *Puccinia ranulipes* (see below), and *Puccinia phyllocladiae* (see below) (Farr et al. 2006).

Additional references:

Diatrype caulina Syd. 1939 (Ascomycetes, Xylariales)

Distribution: Africa (South Africa, type).

Substrate: Dead stems.

Host: An undetermined Asparagus sp. (Asparagaceae, also sometimes placed in Liliaceae).

Supporting Literature:


Verified By: Erica On Feb 03, 2006

This fungus was described by Sydow (1939) from dead stems of an undetermined Asparagus sp. in South Africa. It is known only from the type collection. Both Doidge (1941) and Rappaz (1987) accepted it as a distinct species, having reexamined and redescribed the type specimen.

Diatrype caulina is the only Diatrype species reported on Asparagaceae or Liliaceae. There are four other Diatrype spp. reported from Africa on hosts from other plant families: Diatrype auristroma, Diatrype caminata, Diatrype leonotidis, and Diatrype macowaniana (Doidge 1950).

Additional references:


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Hysterostomella tenella Syd. & P. Syd. 1912 (Ascomycetes, Incertae sedis)
≡Hysterostomina tenella (Syd. & P. Syd.) Theiss. & Syd. 1915

Distribution: Africa (South Africa),

Substrate: Leaves and stems.

Disease Note: Black scab (Doidge 1950), mole spot (Crous 2000).

Host: Asparagus spp. (considered by some authors to be Protasparagus, Asparagaceae, also sometimes placed in Liliaceae).

Supporting Literature:


Verified By: Erica On Feb 03, 2006

This fungus was originally described by Sydow & Sydow (1912) from a type specimen on leaves of
wild asparagus, *Asparagus striatus (= Protasparagus striatus)*. An additional collection was listed by Sydow & Sydow (1912) on branches and stems of an undetermined *Asparagus* species, which was later reported to be *Asparagus subulatus (= Protasparagus subulatus)* (Doidge 1950). It is known only from South Africa (Farr et al. 2006).

The species was transferred to the new genus *Hysterostomina* by Theissen & Sydow in 1915, as *Hysterostomina tenella* (Syd. & P. Syd.) Theiss. & Syd., but subsequent authors have continued to accept the name *Hysterostomella tenella* (e.g., Doidge 1950, Crous 2000).

Additional references:

http://nt.ars-grin.gov/fungaldatabases/


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**Microcyclus kentaniensis** Doidge 1948 (*Ascomycetes, Mycosphaerellales*)

**Distribution:** Africa (South Africa, type).

**Substrate:** Stems.

**Host:** *Asparagus plumosus (= Protasparagus plumosus, Asparagaceae, sometimes placed in Liliaceae).*

**Supporting Literature:**


Verified By: Erica On Feb 03, 2006

This species was described by Doidge (1948) from stems of *Asparagus plumosus (= Protasparagus plumosus)*. It is known only from the type specimen; it has not been reported on any other species of *Asparagus* (or *Protasparagus*) nor is it known to occur outside of South Africa. It is not mentioned in subsequently published fungus-host indices from South Africa (Doidge 1953, Crous 2000).

No other *Microcyclus* spp. have been reported on host plants in the Asparagaceae or Liliaceae. *Microcyclus kentaniensis* is the only *Microcyclus* species reported in South Africa. *Microcyclus* species reported from elsewhere in Africa are *Microcyclus angolensis*, *Microcyclus canthii*, *Microcyclus placodisci*, and *Microcyclus uvariae* (Farr et al. 2006).

Additional references:


http://nt.ars-grin.gov/fungaldatabases/

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**Puccinia ranulipes Doidge 1926 (Urediniomycetes, Uredinales)**

**Distribution:** Africa (South Africa, Zimbabwe).

**Substrate:** Cladodes.

**Disease Note:** Autoecious rust.

**Host:** *Asparagus laricinus* (= *Protasparagus laricinus*, Asparagaceae, sometimes placed in Liliaceae).

**Supporting Literature:**


Verified By: Erica On Feb 03, 2006

This rust was first described by Doidge in 1926 from cladodes (leaf-like branches) of *Asparagus laricinus* (= *Protasparagus laricinus*). It has been reported from various locations in South Africa on that host (Doidge 1926), and from an undetermined Asparagus species in Zimbabwe (Whiteside 1966). Crous (2000) describes it as common in South Africa. It is autoecious; the uredinial state and the telial state occur on the same host.

The other *Puccinia* spp. occurring on *Asparagus* spp. in Africa are *Puccinia asparagi*, *Puccinia myrsiphylli*, and *Puccinia phyllocladiae* (see below). Only *Puccinia asparagi* has been reported on the cultivated asparagus, *Asparagus officinalis* (Farr et al. 2006).

Additional references:


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**Puccinia phyllocladiae Cooke 1882 (Urediniomycetes, Uredinales)**

Variant spelling *Puccinia phyllocladia* Cooke 1882  Note: Spelling used by Saccardo, Syll. Fung. VII: 733.

**Notes:** Thirumalachar (1947) added a description of what he believed to be the uredinial state of this species.

**Distribution:** Africa (South Africa, Kenya, Uganda), Asia (India, Pakistan, Sri Lanka).

**Substrate:** Cladodes (leaf-like branches).

**Disease Note:** Autoecious rust.

**Host:** *Asparagus falcatus* (= *Protasparagus falcatus*), *Asparagus sarmentosus* (= *Protasparagus sarmentosus*), and *Asparagus gracilis* (Asparagaceae, also placed in Liliaceae).

**Supporting Literature:**
This autoecious rust was first described by Cooke in 1882, on “stems and leaves” (=cladodes) of Asparagus falcatus (= Protasparagus falcatus), in South Africa. Cooke observed only the telial state. Thirumalachar (1947) was the first to observe and describe the uredinial state for a rust matching the description of Puccinia phyllocladiae on an undetermined Asparagus species.

Puccinia phyllocladiae has been reported from South Africa (Doidge 1950, Crous 2000), Kenya, Uganda, Sri Lanka (Gjaerum 1984), India, and Pakistan (Thirumalachar 1947).

The other Puccinia spp. occurring on Asparagus spp. in Africa are Puccinia asparagi, Puccinia myrsiphylli, and Puccinia ranulipes (see above). Only Puccinia asparagi has been reported on the cultivated asparagus, Asparagus officinalis (Farr et al. 2006).

Additional references:

Uredo kabanyoloensis Gjaerum 1984 (Urediniomycetes, Uredinales)

Distribution: Africa (Uganda, type).

Substrate: Not reported.

Disease Note: Rust.

Host: Asparagus officinalis (Cultivated asparagus, Asparagaceae, sometimes placed in Liliaceae).

Supporting Literature:

This rust was first described by Gjaerum (1984) from cultivated asparagus plants, Asparagus officinalis, in Uganda. The infected plant parts were not specified. This is the only Uredo species reported from Asparagus spp. in Africa (Farr et al. 2006).

The SBML databases contain no other reports of this rust.

Written by Erica Cline, February 2006