

unilocular, mostly surmounted by a dark-brown leathery disc. Spores elongate-oblong or strictly cylindrical, usually quite straight, hyaline, continuous, distinctly pedicellate, often issuing in tendrils. (Fig. 19.)

Allied in part to *Cytospora*, but differing in having its larger conceptacles covered by a hard flat leathery disc, which is not fragile and reminds one of *Phacidium*, being in fact an anticipation or adumbration of it. In the simpler pycnidia the disc is less conspicuous or altogether absent. The larger conceptacles may open by 1-3 (or even 4) ostioles; they are, however, often barren. They occur more frequently upon leaves than upon stems; some of them are the pycnidial stages of species of *Phacidium* or *Trochila*. Many of the *Ceuthosporae*, when showing only the smaller (A) pycnidia, have been placed by authors under *Macrophoma*; the larger (B) pycnidia are presumably only the passage forms to the ascophorous stage, though they may often still produce pycnospores exactly like those in the (A) pycnidia.

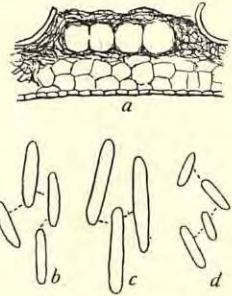


Fig. 19. *Ceuthospora*: a, vertical section of stroma of *C. latitans*, $\times 36$; b, spores of *C. Hederae*; c, of *C. phacidioides*; d, of *C. latitans*; all $\times 600$.

Euonymus

Ceuthospora Euonymi Grove, in Journ. Bot. 1916, p. 190; Kew Bull. 1923, p. 354. *Macrophoma cylindrospora* B. & V. in Atti Soc. Ven.-Trent. 1886, p. 192, pl. 2, f. 12, *p.p.*

Conceptacles amphigenous, of two kinds, (A) unilocular, (B) plurilocular: (A) small, about 250μ diam., densely crowded or somewhat scattered, prominent, subglobose, black, dehiscing by a conico-truncate opening which is surrounded by the laciniae of the epidermis and exposes the disc; disc furfuraceous, composed of numerous loose cells which may be whitish or often show a pinkish or even reddish tinge: (B) maturing later, larger, scattered, flat, round, discoid, 500μ diam. or even more, black, somewhat shining, for a long time solid and sterile, at length dehiscing by 1-3 (usually one,

rarely four) conico-truncate pore-like openings which are often occupied at first by a similar furfuraceous disc, at length filled with a white mass of the exuded spores. Spores alike in both, quite cylindrical, with rounded ends or slightly pointed at the lower extremity, quite straight, perfectly hyaline and free from guttules, $14-17 \times 2-2.5 \mu$; sporophores straight, slender, of about the same length.

On leaves (fallen) and twigs of *Euonymus japonicus*. Wallacey, Cheshire (Ellis). Southampton (Rayner). Ayrshire (Boyd). Kew; Eastbourne; Cornwall; Jersey; Gower; etc.

Aug.—Mar.

This species, when found in a less perfect condition, has often been called *Phoma cylindrospora* Desm. The larger conceptacles resemble those of *Ceuthospora phacidoides* Grev., but are distinguished by the usually more slender spores. *Cytospora foliicola* Lib. var. *Euonymi*, found in the U.S.A., is quite different in its sausage-shaped spores. *Cytospora Euonymi* Cooke (*q.v.*) is also different.

Hedera

Ceuthospora Hederae Grove, in Kew Bull. 1923, p. 355. *Macrophoma cylindrospora* B. & V. *l.c.*, *p.p.*

Conceptacles of two kinds: (A) small, resembling those assigned to the *Macrophoma*: (B) larger, quite flat, hard, leathery, discoid, black or greyish-black, 0.75–1 mm. diam., showing on both sides of the leaf. Spores in both of the same kind, cylindrical, quite straight, obtuse at both ends, colourless, eguttulate, $12-14 \times 2-2.5 \mu$; sporophores filiform, straight, of about the same length. (Fig. 19*b*.)

On dead leaves and petioles of *Hedera Helix*. Uncommon. Liverpool (Travis). Shropshire; Edgbaston, Birmingham; Swansea. Sept.

The larger conceptacles are like those of *C. phacidoides*, and have a similar appearance before the disc emerges; the smaller ones, if occurring by themselves, would be called *Macrophoma*. Could this be, in addition to *Gloeosporium paradoxum* (*q.v.*), a pycnidial stage of *Trochila Craterium*?

Fr. Belg. Ital.

Ilex

Ceuthospora phacidoides Grev. Scot. Cr. Flor. pl. 253. Cooke, Handb. 465, 753. Sacc. Syll. iii. 277. All. vi. 615, with fig. Died. 322. Mig. p. 225, pl. 30, f. 1–3. Grove, in Kew Bull. 1923, p. 357. *Sphaeria*

bifrons Sow. pl. 316. *Cryptosphaeria bifrons* Grev. Flor. Edin. 361. *Phoma Ilicis* Desm., p.p.

Stromata of two kinds: (A) smaller, Phoma-like in appearance, but with 1-4 loculi (more or less connected) within, texture of wall like that of a *Cytospora*, splitting the epidermis into 3-4 triangular laciniae: (B) larger, 1-1.5 mm. diam., numerous, immersed, orbicular or nearly so, at first flat, pitch-black, shining, enclosing 3-7 closely combined loculi; ostiole (when perfect) in the centre of a white furfuraceous disc, surrounded by the epidermis which becomes raised in the centre to form a whitish spot, and ultimately splits into 3-5 laciniae. Spores all alike, cylindrical, usually quite straight, obtusely rounded at both ends or sometimes acute below, often granular within, $12-20 \times 2-4\mu$, issuing in a whitish tendril; sporophores papilliform, rather short. (Fig. 19c.)

On dead fallen leaves of *Ilex Aquifolium*, less often on the dead twigs of the previous year. Very common, but frequently sterile.

The pycnidial stage of *Phacidium multivalve* K. & S. The smaller pycnidia are rarer and are what has sometimes been called *Phoma Ilicis* Desm. (q.v.).

It is worthy of note that a variety of *C. phacidioides* is recorded (Sacc. Syll. xxv. 228), on fading leaves of *Laurus nobilis* in France, with cylindric-oblong spores $9.5-10 \times 2.5-3\mu$, on crowded linear sporophores $7 \times 1\mu$. This, it is suggested, is the pycnidial stage of *Diaporthe ceuthosporoides* (Berk.) Sacc. Syll. i. 646. But rather it is allied to or identical with *Ceuthospora Lauri* Cooke, found on dead leaves and on fruits of *Laurus nobilis* in California; the specimen of this is in Herb. Kew, so named by Cooke; it has linear straight spores like those of *Ceuth. phacidioides*. *Sphaeria ceuthosporoides* Berk. was on *Prunus*.

Fr. Belg. Holl. Germ. Austr. Ital.

Lycopodium

Ceuthospora Lycopodii Lind, in Ann. Mycol. iii. 429; Dan. Fung. 434. Died. p. 323, p. 308, f. 9.

Stromata scattered, epiphyllous, immersed, and later splitting the epidermis lengthwise, conical, 1×0.5 mm., with a few loculi which open into a common mouth. Spores cylindrical, straight, rounded at the ends, eguttulate, $12-16 \times 2\mu$; sporophores unseen.

On dead leaves of *Lycopodium clavatum*. Ness, Wirral, Cheshire (Travis). Sept.