

- Ascospores bent more or less in the middle or almost straight.
  - Ascospores allantoid, oblong, bean or banana-shaped, ratio length / width < 7.....A
  - Ascospores cylindrical or vermiform, ratio length / width > (8) 9.....B
- Ascospores bent in the lower third or quarter, geniculate to sigmoid
  - Ascospores geniculate, the bent part tapering into a sharp point .....C
  - Ascospores geniculate or sigmoid, rounded at both ends or only at distal end and then proximal end conical to slightly tapering, sometimes with hyaline appendages.....D

A- Perithecia small, glabrous, about 150 µm high, fringed around the base with short brown hyphae 35 – 60 x 3 µm. Ascospores fusoid oblong slightly curved, yellowish, obscurely 7 – 9-septate, 35 – 40 x 6 – 7 µm.....

- .....*L. trichopus* Ellis & Everh.  
**A** – Perithecia higher than 250  $\mu\text{m}$ .....**A1**
- A1** – Perithecia glabrous ..... **A2**  
**A1** – Perithecia setose.....**A3**  
**A1** – Perithecia covered by a tomentum.....**A8**
- A2** – Perithecia smooth, usually densely gregarious. Ascospores allantoid, hyaline, nonseptate, 19 – 23 x 3 – 4  $\mu\text{m}$ .....  
 .....*L. spermoides* (Hoffm.) Ces. & de Not.  
**A2** – Perithecia tuberculate, reminiscent of *Bertia moriformis*. Only known on coniferous wood. Ascospores allantoid, sooty-brown, up to 3 – septate, 28 – 31.5 x 6 – 7  $\mu\text{m}$ ..... *L. porifera* Réblová.
- A3** – Ascospores width less than 8  $\mu\text{m}$ .....**A4**  
**A3** – Ascospores width more than 8  $\mu\text{m}$ .....**A6**
- A4** – Perithecia black, covered by dark brown conidiophores of an associated *Endophragmiella* and light brown thick-walled setae. Ostiolar neck conical and sulcate. Ascospores banana-shaped, rough, up to 5 – septate, 34 – 42 x 4 – 6.8  $\mu\text{m}$ ..... *L. punctata* Munk  
**A4** – Perithecia dark brown, covered by thick-walled setae varying from red-brown to whitish. Ostiolar area obtuse, nonsulcate.....**A5**
- A5** – Ascospores allantoid, smooth, 0 – 1- septate, 18 – 22 x 4 – 5  $\mu\text{m}$ .....  
 .....*L. canescens*<sup>2</sup> (Alb. & Schwein. : Fr.)  
 Sacc. **A5** – Ascospores banana-shaped with conical ends, wall smooth to verruculose, 1 – 3-septate, 30 – 38 x 5.5 – 7  $\mu\text{m}$ .....  
 .....*L. strigosa*<sup>2</sup> (Pers. : Fr.) P. Karst.
- A6** – Ascospores fusoid – oblong with rounded ends, almost straight, 7 – 15 – septate, 45 – 65 x 8 – 10  $\mu\text{m}$ . Perithecia clothed with long stout setae 6 – 7  $\mu\text{m}$  wide, except the papilla.....*L. hystrix* Ellis & Everh.  
**A6** – Ascospores wide allantoid, shorter..... **A7**
- A7** – Perithecial wall light brown, apex light brown, almost glabrous, papillate. Ascospores allantoid, smooth to verruculose, yellowish to light brown, 1-3-septate, 25 – 30 x 8 – 12  $\mu\text{m}$ ..... *L. pallida*<sup>3</sup> sp. nov.  
**A7** – Perithecial wall black, apex black and cruciform. Ascospores allantoid to bean-shaped, smooth to minutely verruculose, light yellow, 1- septate, 23 – 34 x 6.8 – 11  $\mu\text{m}$ .....*L. stuppea* Ellis & Everh.
- A8** – Perithecial contents pink. Perithecia 500  $\mu\text{m}$  high, 400  $\mu\text{m}$  in diam., covered by greyish-white sinuate hyphae. Ascospores cylindrical to allantoid,

smooth, pinkish, (28) 36 – 40 (45) x 6 – 7 (8)  $\mu\text{m}$ . Asci without subapical globulus..... *L. sorbina* (Nyl.) P. Karst.

**A8** – Perithecial contents hyaline to yellowish..... **A9**

**A9**– Perithecia subglobose 460 – 540  $\mu\text{m}$  high with a caplike apex, covered by a brown tomentum. Asci with a subapical globulus indistinct or 2  $\mu\text{m}$  in diam. Ascospores oblong with rounded ends, verruculose, yellowish, 1 – 7 septate, 32 – 45 x 6.8 – 8.8  $\mu\text{m}$ ..... *L. capitata* sp. nov.

**A9** – Perithecia more conical, 160 – 360  $\mu\text{m}$  high, with a pointed papilla, covered by a yellowish tomentum. Asci with an irregular subapical globulus 3 – 3.5  $\mu\text{m}$  in diam. Ascospores oblong to clavate, slightly curved, smooth, yellowish, up to 7 - septate, 30 – 43.5 x 5.5 – 7.5  $\mu\text{m}$ ..... *L. vestita* sp. nov.

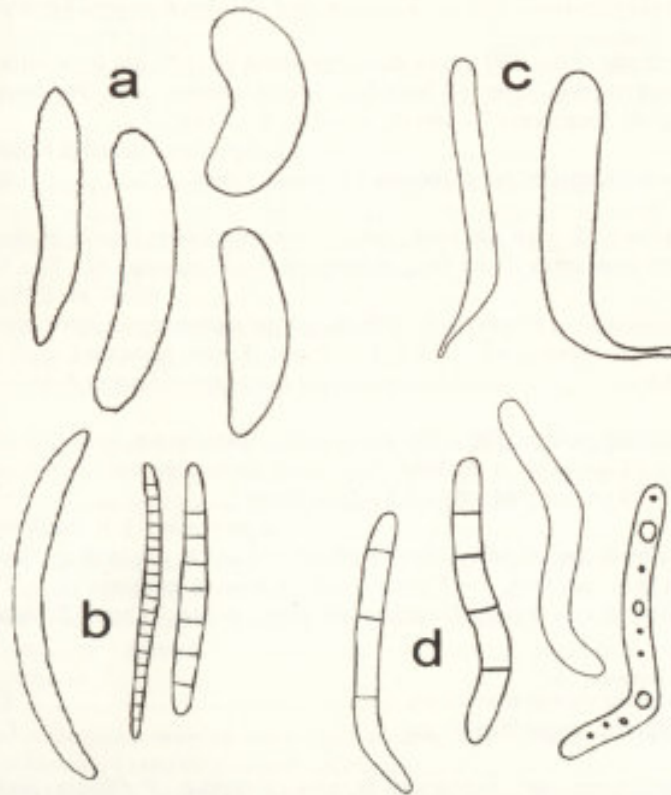


Figure 1: Ascospore shape as considered in the proposed key

- B** – Perithecia glabrous (the apical papilla may be of short setae less than 15  $\mu\text{m}$  long). Subiculum, if present, hardly visible..... **B1**  
**B** – Perithecia setose. Subiculum possibly well developed..... **B6**
- B1** – Ascospores aseptate, 46 – 56 x 6.6 – 7 (-8)  $\mu\text{m}$ .....  
 ..... *L. cylindrospora* L. N. Vasilyeva  
**B1** – Ascospores multiseptate..... **B2**
- B2** – Ascospores longer than 70  $\mu\text{m}$ ..... **B3**  
**B2** – Ascospores shorter than 70  $\mu\text{m}$ ..... **B4**
- B3** – Ascospores 5 – 7 - septate, 80 x 6  $\mu\text{m}$ ..... *L. depilata* Fuckel  
**B3** – Ascospores up to 8 – 12- septate, 90 – 115 x 5 – 5.5  $\mu\text{m}$ .....  
 ..... *L. glabra* Rossman
- B4** – Perithecia 430 – 530  $\mu\text{m}$  in diam., peridium 70 – 90  $\mu\text{m}$  thick with a dark brown median layer of brick-like almost opaque cells. Perithecial contents pink. Ascospores 7 – septate, 40 – 50 x 5 – 6  $\mu\text{m}$ .....  
 ..... *L. lapaziana* Carroll & Munk.  
**B4** – Perithecia smaller, not exceeding 250  $\mu\text{m}$  in diam..... **B5**
- B5** – Peridium 12 – 16  $\mu\text{m}$  thick, pseudoparenchymatous. Papilla of short dark brown setae up to 15  $\mu\text{m}$  long. Ascospores 3 – 7 – septate, 50 – 70 x 3 – 4  $\mu\text{m}$ ..... *L. ellisi*<sup>4</sup> M. E. Barr  
**B5** – Peridium 20 – 35  $\mu\text{m}$  thick, with an opaque carbonaceous inner layer. Ascospores 9- septate, 40 – 50 x 4 – 5  $\mu\text{m}$ . Found associated with *L. spermoides*..... *L. mycophila* Carroll & Munk
- B6** – Perithecia globose, 500 – 700  $\mu\text{m}$  in diam.. Setae brown, up to 200  $\mu\text{m}$  long, 12 – 14  $\mu\text{m}$  wide at the base. Ascospores nonseptate with a proximal apiculus 7 – 8  $\mu\text{m}$  long, 64 – 68 x 3.5 – 4 (-4.5)  $\mu\text{m}$ .....  
 ..... *L. angustispora*<sup>5</sup> L.N.Vasilyeva  
**B6** – Perithecia conical with a flattened base, 250 – 300  $\mu\text{m}$  in diam. Setae black, up to 60  $\mu\text{m}$  long, 4 – 5  $\mu\text{m}$  wide at the base. Ascospores 13 – 17 – septate, 50 – 65 x 2 – 4  $\mu\text{m}$ ... *L. raciborskii*. (Penz. & Sacc.) Carroll & Munk
- C** – Ascospores shorter than 45  $\mu\text{m}$ ..... **C1**  
**C** – Ascospores longer than 45  $\mu\text{m}$ ..... **C3**
- C1** – Ascospores not pigmented in asci, 1-septate. Perithecia partly immersed, often covered by reddish - brown aseptate setae. Ascospores hyaline to light brown, (18-) 23 – 32 x 3.5 – 4.5 (-5.5)  $\mu\text{m}$ .....  
 ..... *L. munkii* R & O Hilber.

- C1** – Ascospores already pigmented in asci, 3 – 6- septate..... **C2**
- C2** – Ascospore width more than 4.5  $\mu\text{m}$ , 3- septate, at times with a rounded diverticle at the distal end, 28 – 33 x 4.5 – 6  $\mu\text{m}$ ..... *L. sp.1*
- C2** – Ascospore width less than 4.5  $\mu\text{m}$ , becoming sooty - grey, 3 – 6 – septate, 40 – 46 x 3.2 – 4  $\mu\text{m}$ ..... *L. breviseta* P. Karst.
- C3** – Perithecia covered by reddish - brown stiff setae, rarely 1 – septate near the base. Ascospores hyaline to yellowish, 3 – septate, 48 – 58 x 3.5 – 3.8  $\mu\text{m}$ ..... *L. rufa* sp. nov.
- C3** – Perithecia covered by long black shining septate setae. Ascospores longer. ....**C4**
- C4** – Ascospores hyaline to light brown, 5 – 8 (10) – septate, (55) 62 – 90 x (4) 4.5 – 6 (7.2)  $\mu\text{m}$ ..... *L. meznaensis* R. Hilber
- C4** – Ascospores hyaline to yellowish, 3-septate, 55 – 68 x 6  $\mu\text{m}$ .....  
.....*L. caudata* (Fuckel) Sacc.
- D** – Ascospores shorter than 30  $\mu\text{m}$ . Perithecia small-sized, 250 – 400  $\mu\text{m}$  in diam., seated in a brown subiculum. Ascospores sigmoid, hyaline, nonseptate, (19.6) 22 – 27 x 4.5 – 5 (6)  $\mu\text{m}$ ..... *L. insignis* L. N. Vasilyeva.
- D** – Ascospores longer than 30  $\mu\text{m}$ ..... **D1**
- D1** – Perithecial wall membranaceous, fragile. Perithecia immersed in wood at least in first stages..... **D2**
- D1** – Perithecial wall leathery. Perithecia superficial.....**D4**
- D2** – Ascospores olive - brown to brown, geniculate, 1 – 3 (4) – septate, 28.5 – 36.8 x 5.5 – 7.5  $\mu\text{m}$ . ....*L. volvestriana* sp. nov.
- D2** – Ascospores hyaline, sigmoid turning geniculate.....**D3**
- D3** – Ascospores nonseptate, 50 – 60 x 5 – 6  $\mu\text{m}$ . Perithecial contents chrome – yellow. Perithecia becoming superficial..... *L. glabrata* (Fr.) Munk
- D3** – Ascospores up to 7-septate, (38) – 43 – 51 x (3.5)- 4.2 - 4.6(5.7) $\mu\text{m}$ . Perithecial contents hyaline to yellowish. Perithecia remaining immersed.....*L. immersa* P. Karst.
- D4** – Peridium with an outer layer of textura prismatica to epidermoidea. Perithecia covered by a whitish tomentum..... **D5**
- D4** – Peridium pseudoparenchymatous. If present, tomentum dark brown..**D6**
- D5** – Ascospores smooth, hyaline to yellowish, appendaged when young, 42 – 46 x 5  $\mu\text{m}$ , subapical globulus warted, hyaline, 3  $\mu\text{m}$  in diam.....

- .....*L. ovina* (Pers. : Fr.) Ces. & de Not.  
**D5** – Ascospores pitted, yellowish, appendaged when young, 42 – 46 x 5 µm, subapical globulus echinulate, golden – brown, 4 – 5 µm in diam.....  
 .....*L. chrysentera* Carroll & Munk
- D6** – Ascospores already pigmented in asci, geniculate, proximal end attenuated, 3 – 4 –septate, 42 – 55 x 4 – 4.6 µm. Perithecia roughly tuberculate, with a conical sulcate ostiolar neck, covered by robust brown setae..... *L. moseri* O. Hilber  
**D6** – Ascospores hyaline in asci, possibly becoming yellowish to light brown at maturity..... **D7**
- D7** – Ascospores sigmoid, hyaline, with acute fugacious appendages when young, becoming geniculate, light brown and up to 7(8)-septate when mature, 50 – 72 x 5 – 7 µm. Perithecia almost glabrous to densely setose, tuberculate  
 .....*L. hirsuta*<sup>6</sup> (Fr.) Ces. & de Not.  
   *L. hispida* (Tode : Fr.) Fuckel  
   *L. tuberculosa* Carroll & Munk  
   *L. rhacodium* (Pers. : Fr.) Ces. & de Not.  
**D7**– Ascospores remaining hyaline at maturity, shorter..... **D8**
- D8** – Perithecia covered by a dark brown tomentum. Ostiolar neck well differentiated, black, coarsely pitted. Ascospores sigmoid, nonappendaged, 1 – 3-septate, (43) 46 – 53 (58) x 3.5 – 5 µm..... *L. sp. 2*  
**D8** – Perithecia glabrous, upper portion conical becoming sulcate when dry. Ascospores sigmoid, distal end slightly capitate, proximal end with a blunt gelatinous appendage, up to 12 – septate, 42 – 55 x 3.5 – 5 µm.....  
 .....*L. pyramidata* Carroll & Munk