

## *Anthostomella* on *Lonicera* in China

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*A. lonicericola* sp. nov. and *Anthostomella* sp. collected on *Lonicera* spp. from Northwest of China are briefly described and illustrated.

Keywords: *Anthostomella*, Xylariaceae, taxonomy.

Thirty European species of *Anthostomella* Sacc. occurring on angiosperms and gymnosperms were treated by Francis (1975), and 4 of the 10 species referred to *Anthostomella* and recorded on various host plants from China have been accepted by Eriksson & Yue (1988) in their annotated checklist of Chinese pyrenomycetes. Francis (1975) and Eriksson & Yue (1988), however, did not report any species from honeysuckle (*Lonicera*). Saccardo (1882) accepted *A. loniceriae* (Fuck.) Sacc. on *Lonicera alpigena*. Two other species described on *Lonicera* are *A. hypsophila* Ell. & Ev. (Ellis & Everhart, 1894) and *A. xylostei* (Pers: Fr.) Guyot, but the latter has been recognized as *Amphisphaerella xylostei* (Pers.) M. de Rulamort (Rulamort, 1986). Since 1980 we have frequently collected ascomycetes on *Lonicera* spp. from the Tianshan Mountains, Xinjiang, China. Two of the species collected belong to *Anthostomella* and show the typical characters of the genus. Both differ from all known species, including *A. hypsophila* and *A. loniceriae*. We propose one of them as a new species of *Anthostomella*, for the other we refrain from a formal description on account of the limited material.

The type material is deposited in the Herbarium of Mycology, August 1st Agricultural College (HMAAC), Urumqi, Xinjiang, China.

*Anthostomella lonicericola* Z.Q. Yuan et Z.Y. Zhao sp. nov. – Fig. 1.

Perithecia solitaria vel gregaria, submersa sub clypeo nigro, papillis brevibus praedita, periphysata, sphaerica vel sphaeroidea, 480–560 µm lat., 440–560 µm alt.; peridia ad 30 µm crassa, e cellulis angulatis, crassitunicatis, atris in stratis externis et e cellulis compressis, tenuitunicatis, hyalinis in stratis internis composita; asci 196–

210 x 16–18(–20)  $\mu\text{m}$ , cylindrici, apice rotundati et truncati, annulo in iodo caerulescenti praediti, 2  $\mu\text{m}$  lat., 4  $\mu\text{m}$  alt., breviter stipitati et parce attenuati, octospori; ascosporae 36–52 x 10–12  $\mu\text{m}$ , oblique monostichae, continuae, elliptico-fusiformes, fuscae, fissura germinativa longitudinali praeditae, sporas aequanti, circumdatae tunica mucilaginosa, hyalina, 2  $\mu\text{m}$  crassa; paraphyses 3  $\mu\text{m}$  crassae, deinde deliquescentes.

Holotypus. – Hab. in ramulis emortuis *Lonicerae hispidae*, Monte Tianshanicis Xinjiangensis Sinica. Z. Q. Yuan, 4 VII 1990, HMAAC 709.

Perithecia scattered or 2–4 aggregated, immersed beneath a black reduced clypeus, without stromatic tissue, with short, barely projecting papilla whose central channel is thickly lined with short, hyaline periphyses, spherical or subspherical, 480–560  $\mu\text{m}$  wide and 440–560  $\mu\text{m}$  high. – Peridium up to 30  $\mu\text{m}$  thick, with a ca. 20  $\mu\text{m}$  thick outer layer composed of dark thick-walled angular cells, and a ca. 10  $\mu\text{m}$  thick inner layer composed of hyaline thin-walled, compressed cells. – Asci 8-spored, cylindrical, stalk short and slightly tapered, 196–210 x 16–18(–20)  $\mu\text{m}$ , apex rounded to truncate with apical ring staining blue in iodine, 4  $\mu\text{m}$  high x 2  $\mu\text{m}$  broad. – Ascospores obliquely uniseriate, dark brown, one-celled, fusiform with obtuse ends, 36–52 x 10–12  $\mu\text{m}$ , some spores with 1–2 oil droplets, with a longitudinal germ slit of the same length as the spores, surrounded by a thin, hyaline, mucilaginous sheath up to 2  $\mu\text{m}$  thick (thicker when spores immature). – Paraphyses numerous, 3  $\mu\text{m}$  wide, becoming agglutinated.

Holotype. – On dead twigs of *Lonicera hispida*, Tianshan Mountain, Urumqi, Xinjiang, China, 4 VII 1990, Z. Q. Yuan, HMAAC 709.

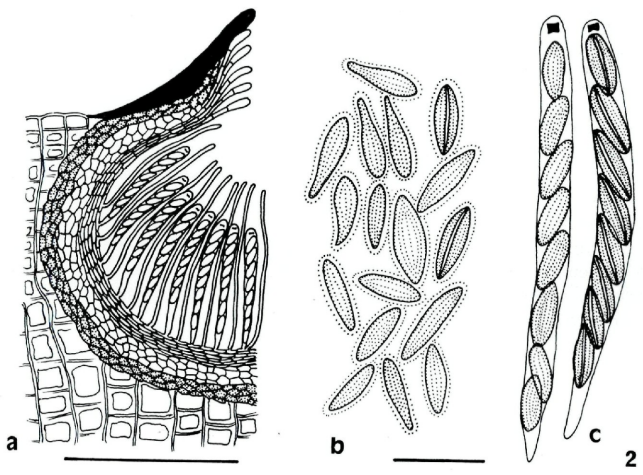
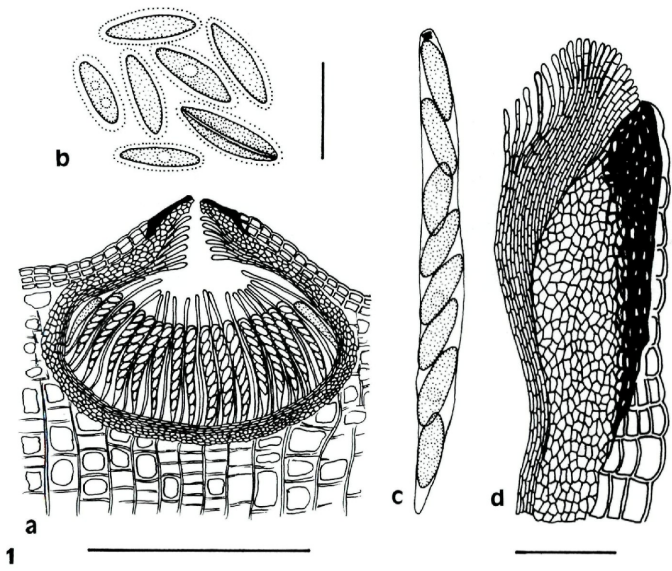
Additional specimens examined. – On *Lonicera* spp., Tianshan Mountain, Urumqi, Apr 1980, Z.Y. Zhao HMAAC 715, 716; on *Lonicera altmanii*, Gunlu, Yili, 21.8.1990, Z.Q. Yuan & Z.Y. Zhao, HMAAC 713; on *Lonicera* sp. Tianshan Mountain, Urumqi, 5.7.1990, Z. Q. Yuan, HMAAC 714; on *Lonicera caerulea* L. Tianshan Mountain, Urumqi, 30.6.1990, Z. Q. Yuan, HMAAC 717.

### *Anthostomella* sp. – Fig. 2.

Perithecia scattered to gregarious, immersed beneath a black clypeus with a short papilla barely projecting, spherical or subspherical, 350–700  $\mu\text{m}$  diam. – Peridium up to 50  $\mu\text{m}$  thick with

Fig. 1. – *Anthostomella lonicericola* (Holotype, HMAAC 709)– a. perithecium (bar = 300  $\mu\text{m}$ )– b. ascospores (bar = 40  $\mu\text{m}$ )– c. ascus.– d. detail of beak of perithecium (bar = 40  $\mu\text{m}$ ).

Fig. 2. – *Anthostomella* sp.(HMAAC 710)– a. vertical section through half of perithecium (bar = 150  $\mu\text{m}$ )– b, c. ascospores and asci (bar = 50  $\mu\text{m}$ ).



dark, thick-walled, angular cells in outer layer and hyaline, thin-walled, compressed cells in inner layer. – Ascii 8-spored, cylindrical, stalk short, 288–305 x 18–20  $\mu\text{m}$ , apex rounded with apical ring blueing in iodine, 3  $\mu\text{m}$  high x 2  $\mu\text{m}$  broad. – Ascospores obliquely uniseriate, brown to dark brown, one-celled, various in shape, long pyriform, elliptic-fusiform, subfusiform with one end attenuated, elliptical to broadly elliptical, 37.5–57.5 x 10–17.5  $\mu\text{m}$ , with longitudinal striations on the surface of the spores and with spore-length longitudinal germ slit, surrounded by a thin mucilaginous sheath; paraphyses agglutinating.

Specimen examined. – On dead twigs of *Lonicera* sp. Tianshan Mountain, Urumqi, IV 1990 Z.Y. Zhao, HMAAC 710.

### Discussion

These two species of *Anthostomella* on *Lonicera* spp. agree with other species of this genus in all features except in the size of ascospores. Ascospores of other known species of *Anthostomella* are not more than 25  $\mu\text{m}$  in length (Francis, 1975, 1978; Saccardo, 1882), whereas the two taxa described here have ascospores that are more than 30  $\mu\text{m}$  in length. Penzig & Saccardo (1904) described *A. grandispora* Penz. & Sacc. on leaves of *Kentia* sp. with spores 32 x 9  $\mu\text{m}$  in size but the two species described here can be distinguished from *A. grandispora* by their longer asci and the much longer ascospores (up to 52  $\mu\text{m}$  and 57.5  $\mu\text{m}$ , respectively) which are uniseriate in the asci and are agglutinated.

*A. lonicericola* is apparently very common on *Lonicera* as we have collected it in several localities and on different species of *Lonicera*. It differs from *Anthostomella* sp. by its morphologically uniform spores.

*Anthostomella* sp. has ascospores of various shapes and provided with longitudinal striations on the surface of the spores. This may well prove to be a separate taxon but on the basis of a single collection we hesitate to describe it as a new species.

According to the description given by Ellis & Everhart (1894) and Saccardo (1882), *A. hypsophila* on *L. involucrata* has brown spores 15–18 x 8–10  $\mu\text{m}$  and *A. loniceriae* is characterized by hyaline ascospores 14 x 4  $\mu\text{m}$ .

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