

## *Anthostomella* on *Lonicera* in China

Z. Q. Yuan & Z. Y. Zhao

August 1st Agric. Coll., Urumqi, 830052 Xinjiang, China

Yuan, Z. Q. & Z.Y. Zhao. (1992). *Anthostomella* on *Lonicera* in China. – *Sydowia* 44: 85–89.

*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  $\mu\text{m}$  lat., 440–560  $\mu\text{m}$  alt.; peridia ad 30  $\mu\text{m}$  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.

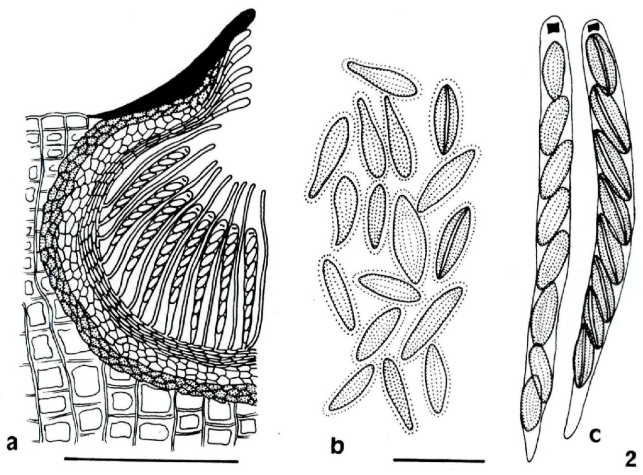
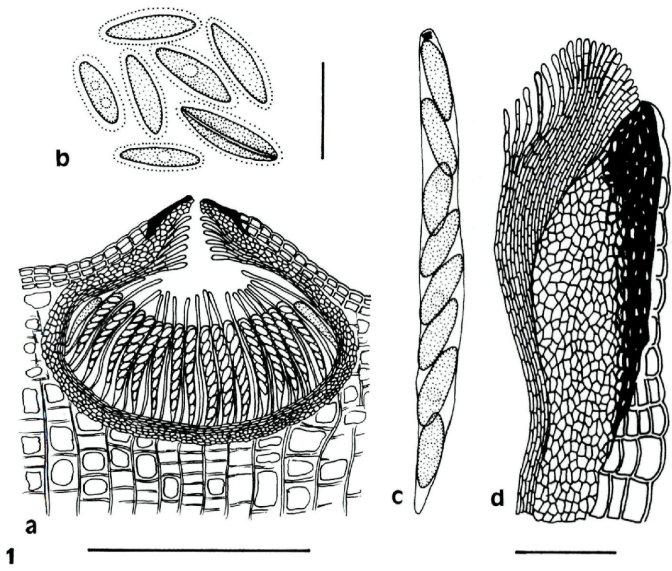
Additional specimens examined. – On *Lonicera* spp., Tianshan Mountain, Urumqi, Apr 1980, Z.Y. Zhao HMAAC 715, 716; on *Lonicera altmanii*, Gunlu, Yili, 21.8.1990, Z.Q. Yuan & Z.Y. Zhao, HMAAC 713; on *Lonicera* sp. Tianshan Mountain, Urumqi, 5.7.1990, Z. Q. Yuan, HMAAC 714; on *Lonicera caerulea* L.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

### Acknowledgments

We are much obliged to Prof. Dr. E. Müller (Zurich, Switzerland) and Dr. O. E. Eriksson (Umeå, Sweden) for their critical comments on the manuscript and to Prof. Dr. L. Holm (Uppsala, Sweden) for kindly checking the Latin diagnosis.

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(Manuscript accepted 2nd May 1991)

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Autor(en)/Author(s): Yuan Zi qing, Zhao Zhen yu

Artikel/Article: [Anthostomella on Lonicera in China. 85-89](#)