

## A new species of *Bertia* from China

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*Bertia sinensis* sp. nov. is described and illustrated from Yunnan province, China. It is compared with *B. moriformis* var. *latispora*. The taxonomic position of *Bertia* is reviewed.

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Les auteurs décrivent et illustrent le *Bertia sinensis* sp. nov. récolté dans la province de Yunnan en Chine et ils le comparent avec le *B. moriformis* var. *latispora*. Ils réexaminent de plus la position taxonomique du genre *Bertia*.

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*Bertia* de Not. was erected for a single species, *B. moriformis* (Tode:Fr.) de Not. Other taxa were subsequently added to the genus, but among those treated by recent authors (Nannfeldt 1975; Eriksson and Yue 1986), none were found to be congeneric. Accordingly, Corlett and Krug (1984) concluded that *Bertia* may be monotypic.

Nannfeldt (1975) in reevaluating the Coronophorales considered that it comprised a single family, the Nitschkiaceae (Fitzp.) Nannf. He concluded that this family was composed of three separate groups but that the differences between them were not sufficient to warrant separate families. However, he did believe that *Bertia* should have an isolated position in the family, which prompted Smyk (1981) to erect the Bertiaceae. Since Nannfeldt's paper additional genera have been described (e.g., Sivanesan 1975, 1978) that are intermediate between the Nitschkiaceae sensu stricto and the Lasiosphaeriaceae Nannf. These taxa have been reviewed by Eriksson and Santesson (1986), who conclude that the recognition of the Bertiaceae might be justified.

During our investigation of *B. moriformis* (Corlett and Krug 1984) we examined a large number of collections. One of these was made in China and was included with material distributed from the herbarium of the Academy of Science at Nanking to several North American herbaria. The most complete set of specimens from the Nanking herbarium is at BPI and CUP, where the material was deposited to avoid destruction during wartime activities.

Although this Chinese collection resembles *Bertia* as typified by *B. moriformis* var. *moriformis*, there are a number of differences based on histological and morphological studies. Initially we considered placing the organism in a separate genus, but after examining the possibilities summarized by Nannfeldt (1975) and Eriksson and Santesson (1986), we concluded that *Bertia* was the only logical generic position. This collection most closely resembles *B. moriformis* var. *latispora* but differs in several respects. Accordingly, we are describing it as an additional species of *Bertia*.

*Bertia sinensis* Krug & Corlett sp. nov. Figs. 1–8

Ascomata aggregata, superficialia, nigra, cylindracea, 1000–1700 × 690–775 μm magna, summe in parte elongata, modice tuberculata, basin versus brevia, 500–600 μm lata; peridium circa 70–115 μm crassum, e stratis tribus compositum. Asci unitunicati, clavati, basin versus in stipitem longum attenuati, (130–)165–220(–270) × 11–15 μm magni, octospori, evanescenti. Ascosporeae hyalinae, uniseptatae, geniculatae, 25–29(–30) × 6.5–8 μm magnae.

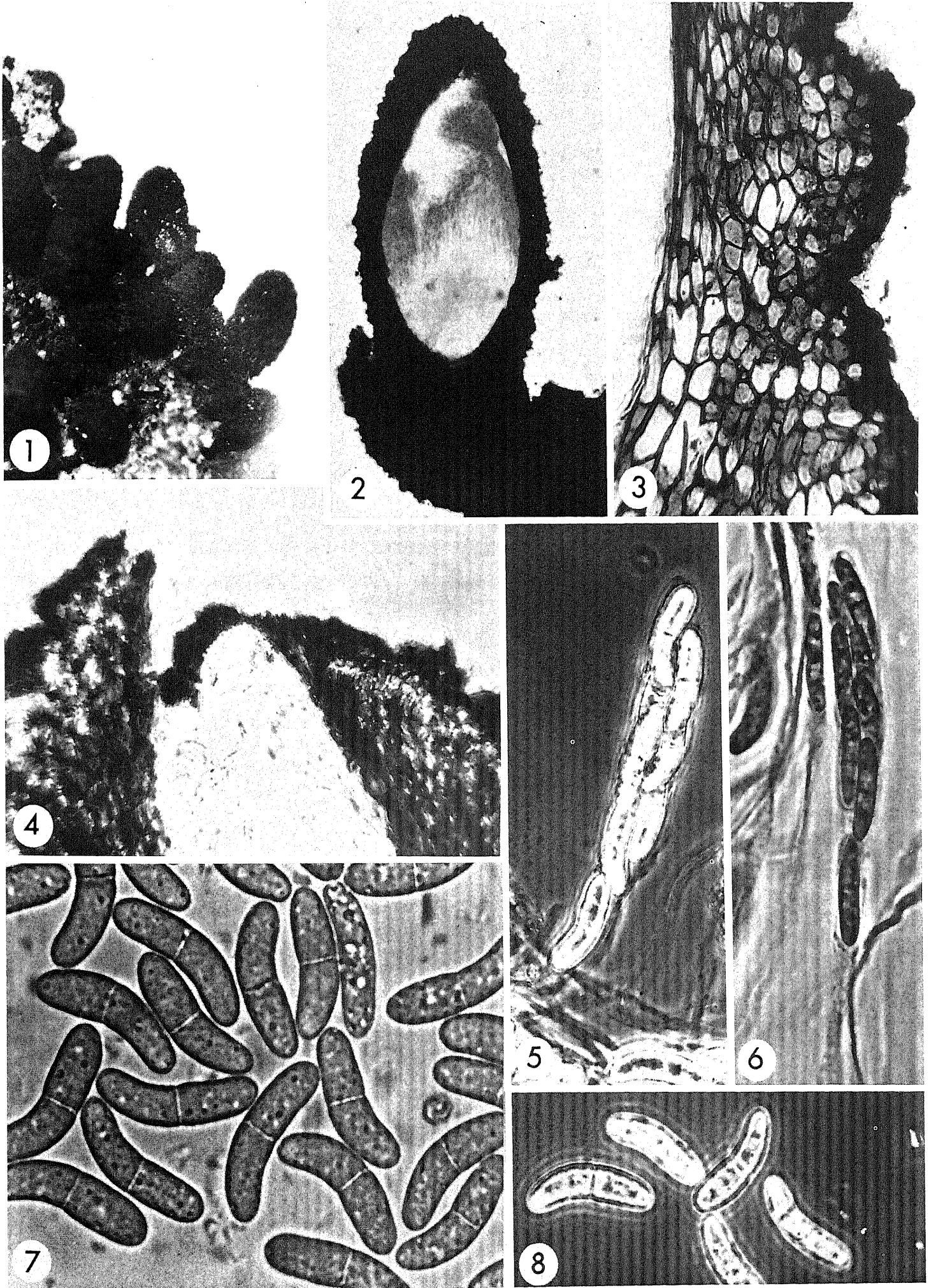
HOLOTYPE: In cortice arborum lectus est, in loco Yen-tsin vocato, in Yunnan provincia reipublicae Sinensis, 11 Aprilis 1934, Y. Tsiang 1170, BPI.

Ascomata clustered, superficial, borne on a dark basal crust, black, cylindrical, 1000–1700 × 690–775 μm inclusive of the basal region; fertile portion elongate, moderately tuberculate, extending from a distinct, short, nontuberculate base, with the ostiolar region appearing as an apical thinning of the ascomal wall; basal portion stromatic, appearing as an extension of the ascomal wall, 500–600 μm wide; ascomal wall unevenly thickened, ca. 70–115 μm thick, being thicker below the tubercles, consisting of an outer layer 1 or 2 cells thick, of heavily pigmented, angular, rind-like cells, a median layer 10–14 cells thick, of brownish, angular, thick-walled cells measuring 25–35(–40) × 10–14 μm, with adjacent cells possessing distinctive "Munk" pores, and an inner layer 2 or 3 cells thick, of hyaline to slightly brownish, tangentially flattened, thin-walled cells measuring 20–45(–65) × 4–6.5 μm. Asci unitunicate, clavate, long stipitate, thin-walled, 8-spored, deliquescent, (130–)165–220(–270) × 11–15 μm, arising from a basal cushion of globular, thin-walled cells. Ascospores irregularly arranged in upper portion of the ascus, hyaline, 1-septate, geniculate, smooth-walled, 25–29(–30) × 6.5–8 μm.

ETYMOLOGY: Latinized from *Sina* = China, referring to the country where the material was originally collected.

SPECIMENS EXAMINED: China: Yunnan: Yen-tsin, bark, 11 April 1934, Y. Tsiang 1170, as *Bertia moriformis*, ex herb.

FIGS. 1–8. *Bertia sinensis* (BPI). Fig. 1. Habitat view of ascomata. ×10. Fig. 2. Longitudinal section through ascoma. ×60. Fig. 3. Longitudinal section of ascomal wall showing "Munk" pores in adjacent cells. ×500. Fig. 4. Longitudinal section through ostiolar region of ascoma. ×120. Fig. 5. Ascus and ascospores. ×1000. Fig. 6. Asci with elongated stipe. ×800. Fig. 7. Mature ascospores. ×1225. Fig. 8. Ascospores in phase contrast microscopy. ×925.



Nanking 1439 (BPI, one packet ex Mo. Bot. Garden 74486; CUP, CH 178; TRTC).

This species superficially resembles *B. moriformis* var. *latispora*, which differs from the type variety primarily by the wider, more geniculate ascospores and a preference for coniferous hosts (Corlett and Krug 1984). However, *B. sinensis*, which has a spore similar to that in *B. moriformis* var. *latispora*, differs from this taxon in a number of respects. These include the elongate fertile portion of the ascoma, as compared with *B. moriformis* var. *latispora*, where it is more globose, the less distinct nature of the tuberculations on the ascomal wall, the presence of a black basal subiculum-like crust, and the smaller size of the ascospores, which are always uni-septate.

At present the taxon is only known from Yunnan in the warm southeastern climatic zone. However, the report of Eriksson and Yue (1986) of a number of Chinese collections identified as *B. moriformis* var. *latispora* might refer to *B. sinensis*, but we have not seen this material.

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