

Pyrenomycetes of the Russian Far East—Additions and corrections. 1. *Rossmania ukurunduensis* gen. et sp. nov.

Larissa Vasilyeva

Institute of Biology and Soil Science, Far East Branch of the Russian Academy of Sciences, Vladivostok, 690022, Russia

Received 12 December 2000

Accepted for publication 24 May 2001

Rossmania ukurunduensis gen. and sp. nov. collected in the reserve Bolshekhkhtsirsky (Khabarovsk Territory, Russian Far East) is described and illustrated. *Rossmania aculeata* comb. nov. is indicated as the second species of the genus.

Key Words—*Phragmodiaporthe*, Pyrenomycetes; *Rossmania*; Russian Far East, Valsaceae.

The monograph “Pyrenomycetes and Loculoascomycetes” (Vasilyeva, 1998) published as the 4th volume of the series “Lower plants, fungi, and bryophytes of the Russian Far East” by no means exhausts the biodiversity of groups under consideration in such a rich floristic area as the Russian Far East. Since the manuscript of the monograph was submitted, *Ostropella luxurians* (Vasilyeva, 1997) has been described as an additional member of the Lophiostomataceae. Here, a new, interesting fungus occurring on dead branches of *Acer ukurunduense* Trautv. et Mey. in the Bolshekhkhtsirsky reserve (Khabarovsk Territory) is described as the member of the Valsaceae.

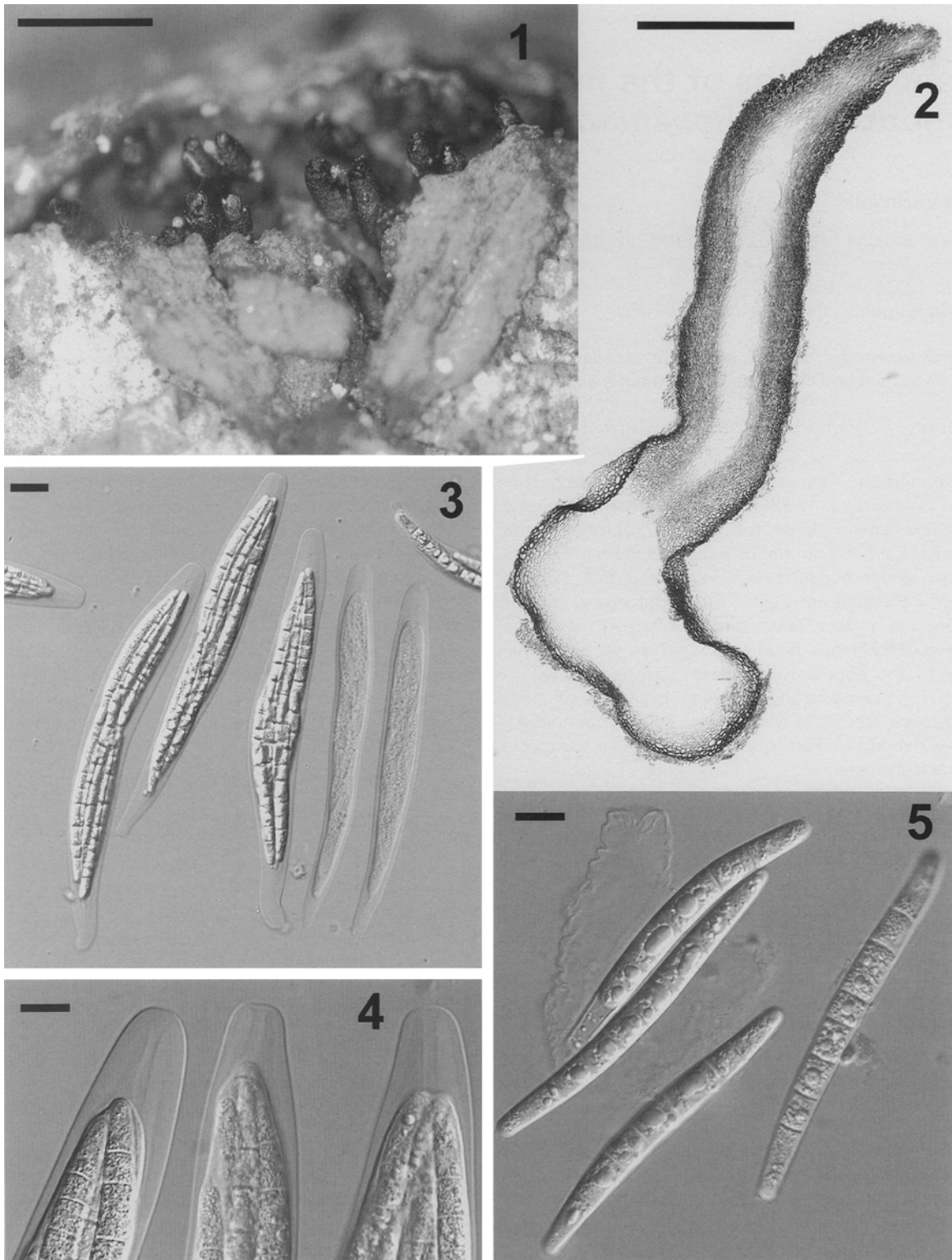
The fungus under consideration was found in 1983 for the first time. Since then it has not been collected again on other species of *Acer* or in any other place where the host plant occurs. The host is of rather limited distribution, known from Korea, Japan, some north and north-eastern provinces of China, and the south of the Russian Far East. The fungus seems to be restricted to this species of *Acer*, which was also described from Khabarovsk Territory: “In montibus Ukurundu, ad sinem Ulbanensem, E. Trautvetter, 1844” (cf. Nedoluzhko, 1987: 187). It should be noted that the place where the fungus was collected was covered by rather dense populations of *Acer ukurunduense*, suggesting the center of its distribution. Such populations of host plants often conceal very unique fungi.

The same fungus was found again in 2000 in the same Bolshekhkhtsirsky reserve. It is similar to *Diaporthe* Nitschke in its clusters of perithecia with long beaks that are not united by ectostromatic discs but differs in its elongated ascospores, which are similar to those in *Winterella* Kuntze and seem to be septate after treatment with iodine.

The phragmosporous counterpart of *Diaporthe* is believed to be *Phragmodiaporthe* Wehm. (Vasilyeva, 1994, 1998), and stromata, asci and ascospores in our fungus are very similar to those in *P. aculeata* (Petch) Wehm. (Figs. 5–7 in Wehmeyer, 1941). That species is figured

as having one-celled ascospores, in contrast to the 5–7-septate ascospores of *Phragmodiaporthe* species on *Acer*, but the specimens of the latter often demonstrate immature spores without septa while, according to Wehmeyer (l. c.: 57), Petch describes the spores of *P. aculeata* as finally 7- to 11-septate. The range of variation of ascospore length in Wehmeyer’s and Petch’s specimens of *P. aculeata* (88–95 μm and 90–105 μm , respectively) falls within that of a species on *Acer* (76–130 μm). Consequently, there is no difference in length of ascospores between the two species, but the former has wider ascospores (9–11 μm versus 7–9 μm) in addition to differences in host plants (*Thea* and *Acer*) and areas (*P. aculeata* is known only from Ceylon). It seems that both Asiatic species are closely related but should be treated separately.

Actually, the genus *Phragmodiaporthe* is not particularly suitable for *P. aculeata* and its relative on *Acer* from the Russian Far East. One may compare Wehmeyer’s (1941: 58) illustrations of the type-species of *Phragmodiaporthe*, namely, *P. caryae* (Peck) Wehm., with true phragmospores, and *P. aculeata* with *Winterella*-like asci and ascospores. It seems that the tribe Diaportheae (within the family Valsaceae) containing *Diaporthe* and *Phragmodiaporthe* (cf. Vasilyeva, 1994, 1998) may be expanded at the expense of a new genus, and, then, the usual series of genera (amerosporous-didymosporous-phragmosporous-scolecosporous) in almost each tribe of the Valsaceae (for example, *Wuestneia* Auersw.—*Melanconis* Tul.—*Calosporella* J. Schröt.—*Winterella* in the Valseae, or *Pseudocryptosporella* J. Reid—*Diaporthella* Petr.—*Pseudovalsa* Ces. et De Not.—*Sillia* P. Karst. in the Pseudovalseae) will be also repeated in the Diaportheae, at least partly. Consequently, I would incline to establish a new genus for *Phragmodiaporthe aculeata* and the fungus on *Acer* and to name it *Rossmania* in honour of Dr. Amy Rossmann, the distinguished mycologist, who is well known for her studies of hypocrealean fungi and is engaged in diaporthealean ones today.



Figs. 1–5. *Rossmania ukurunduensis*, Isotype BPI 747566: 1. Emerging ascomatal beaks erumpent through periderm. 2. Longitudinal section of ascomata showing very long beak and multi-layered ascomatal wall. 3. Mature and immature asci. 4. Ascus apices. 5. Mature and immature ascospores. Scale bars: 1 = 1 mm; 2 = 200 μm ; 3 = 20 μm ; 4, 5 = 10 μm .

Rossmania, gen. nov.

Perithecia cortice immersa, gregaria, circinata, ostioli longis convergentibus, sine disco ectostromatico. Asci longe clavati vel cylindracei; apparatus apicalis invisibilis; paraphyses evanescentes. Ascosporeae elongatae cylindricae, curvatae, plerumque non septatae sed aliquot septa aetate expositae, hyalinae vel parum coloratae.

Typus: *Rossmania ukurunduensis*, sp. nov.

Habitu *Diaporthe* vel *Phragmodiaporthe* similis est, sed ascosporis longis (ac *Winterella*) differt.

Perithecia immersed under the bark, erumpent with clusters of convergent, long and stout beaks, without ectostromatic disc. Asci long and clavate or cylindrical, without any hint of apical apparatus, paraphyses evanescent. Ascospores long-fusoid cylindrical and slightly curved, mostly one-celled, becoming septate later or after iodine treatment, hyaline or slightly coloured.

Type: *Rossmania ukurunduensis*, sp. nov.

This genus is superficially similar to *Diaporthe* or *Phragmodiaporthe* but differs in elongated ascospores of *Winterella* type.

Rossmania ukurunduensis, sp. nov. Figs. 1–5

Perithecia cortice immersa, gregaria, circinata, ostioli longis convergentibus, sine disco ectostromatico. Asci longe clavati vel cylindracei, 190–230 × 24–26 (–28) μm; apparatus apicalis invisibilis; paraphyses evanescentes. Ascosporeae elongatae cylindricae, curvatae, 76–125(–130) × 7–9 μm, hyalinae, plerumque non septatae sed 5–7 septa post iodo colorationem expositae.

Holotypus: ad corticem ramorum emortuorum *Aceris ukurunduensis* Trautv. et Mey., reservatio Major Chechzir, regio Chabarovsk, Russia, Lar. N. Vassiljeva, 17. 06. 2000, in Herbario Institutionis Edapho-Biologicae Vladivostokensis (VLA) conservatus.

Perithecia immersed under the bark, erumpent with clusters of convergent, long and stout beaks, without

ectostromatic disc. Asci long and clavate or cylindrical, 190–230 × 24–26(–28) μm, without any hint of apical apparatus, paraphyses evanescent. Ascospores long-fusoid cylindrical and slightly curved, 76–125(–130) × 7–9 μm, hyaline, mostly aseptate, 5–7 septa becoming clear after iodine treatment.

Holotype: on the bark of *Acer ukurunduense* Trautv. et Mey., reserve Bolshekhkhehtsirsky, Khabarovsk Territory, Russia, Lar. N. Vasilyeva, 17. 06. 2000, VLA. Isotype BPI 747566.

Rossmania aculeata (Petch) Lar. N. Vassiljeva, comb. nov.
≡ *Agalasporea aculeata* Petch, Ann. Bot. Gard. Perad. 3: 3, 1906.

≡ *Phragmodiaporthe aculeata* (Petch) Wehm., Mycologia 33: 57, 1941.

Key to known species

1. Ascospores 76–125(130) × 7–9 μm, becoming 5–7-septate; on *Acer* *R. ukurunduensis*
2. Ascospores 88–95(105) × 9–11(12–15) μm, becoming 7–11-septate; on *Thea* *R. aculeata*

Acknowledgements—I gratefully acknowledge Dr. David Farr, USDA, ARS, USA for the photographs made with the help of digital technique.

Literature cited

- Nedoluzhko, V. A. 1987. Aceraceae. In: Vascular plants of the Soviet Far East, vol. 2, (ed. by Kharkevich, S. S.), pp. 181–191. Leningrad. (In Russian.)
- Vasilyeva, L. N. 1994. Pyrenomycetes of the Russian Far East. II. Valsaceae. Vladivostok.
- Vasilyeva, L. N. 1997. *Ostropella luxurians* sp. nov. from the Russian Far East. Mycoscience 38: 341–342.
- Vasilyeva, L. N. 1998. Pyrenomycetes and Loculoascomycetes. In: Lower plants, fungi, and bryophytes of the Russian Far East, vol. 4, (ed. by Azbukina, Z. M.), pp. 1–419. Nauka, Saint-Petersburg (In Russian.)
- Wehmeyer, L. E. 1941. *Pseudotrachia* and the new genus *Phragmodiaporthe*. Mycologia 33: 54–63.