A phylogenetic re-evaluation of *Dothideomycetes*

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DEDICATION

This volume of *Studies in Mycology* is dedicated to the memory of Josef Adolf von Arx (1922–1988), Emil Müller (1920–2008) and Margaret Elizabeth Barr Bigelow (1923–2008), each of whom spent a significant part of their careers doing research on “pyrenomycetous” and “loculoascomycetous” fungi. Their numerous publications brought these fungi from long obscurity, and in the process they proposed taxonomic hypotheses that provide the basis for “modern” phylogenetic analyses. “Die Gattungen der amerosporen Pyrenomyceten (Genera of the amerosporous Pyrenomycetes, 1954)” followed by “Die Gattungen der didymosporen Pyrenomyceten (Genera of didymosporous Pyrenomycetes, 1962),” from Müller and von Arx are unparalleled in scope and completeness. Of special significance to the present volume of *Studies in Mycology* is their treatment of the bitunicate ascomycetes, “A re-evaluation of the bitunicate ascomycetes with keys to families and genera” (von Arx & Müller 1975). Margaret Barr did not always agree with her friends, “Ascus” and von Arx. But, like them her knowledge of ascomycetous fungi was vast and during the last quarter of her career she summarised some of that knowledge in two major and provocative publications, the self published “Prodromus to class Loculoascomycetes” (Barr 1987), followed by others on Melanommatales, Pleosporales and Hymenoascomycetes (Barr 1990a–c), to name but a few.

As a result of being born and raised in Switzerland, von Arx studied natural sciences at the Swiss Federal Institute of Technology (ETH), Zürich. After receiving his diploma as a biologist he started a PhD at the ETH on the ascomycete genus *Mycosphaerella* under the supervision of Prof. Ernst Gäumann and worked there as a research assistant. In the summer of 1948 Emil Müller started a PhD, also under prof. Gäumann’s supervision at the ETH on *Leptosphaeria*. During part of that time he worked under the direct supervision by von Arx, who was already an advanced PhD student. Both students also spent some time with Dr F. Petrak (then editor of *Sydowia*), who further encouraged their interest in ascomycetous fungi (see Müller 1989, Petrini et al. 2009).

Von Arx and Müller became close friends, and remained so after Dr von Arx took up a position in 1949 at the Phytopathological Institute "Willie Commelin Scholten" in Baarn, under the directorship of Prof. Johanna Westerdijk. Prof. Westerdijk was also the director of the Centraalbureau voor Schimmelcultures (CBS), which was housed on the same premises at Baarn. Several years later, in 1963, Dr von Arx became director of CBS, which by then was an independent institute. In the meanwhile Dr Müller became curator of the herbaria at ETH, and dedicated himself fully to taxonomic research.

Margaret E. Barr Bigelow grew up in western Canada and spent her mycological career in the United States. She was a Ph.D. student of L.E. Wehmeyer at the University of Michigan, and oddly enough, like von Arx, also did her doctorate on the genus *Mycosphaerella*. She was appointed as instructor at the University of Massachusetts in 1957, as part of a “women’s auxiliary” fund, which allowed her to teach and do research for many years for a modest compensation. Eventually she progressed to the Ray Ethan Torrey Professorship. Her numerous books and other publications on the loculoascomycetes and pyrenomycetes continue to be important references for others working on these groups of fungi as will be evident from papers in this volume. In addition to her research Barr volunteered time and money to mycology, serving as programme chairwoman for the MSA and AIBS meetings and establishing several endowments. The bulk of her extensive collections were transferred to the New York Botanical Garden and her unpublished notes are at the Field Museum in Chicago (see Blackwell et al. 2008). After her retirement she returned to live and work in her home on Vancouver Island, British Columbia, Canada.

Late in 1949, von Arx visited Müller in Switzerland to discuss future collaboration, which eventually led to the publication of the two major works on ascomycetous fungi (von Arx & Müller 1954, Müller & von Arx 1962). This collaboration, together with the works

[Image of Josef Adolf von Arx (1922–1988), Photo from the CBS Archive.]

[Image of Emil Müller (1920–2008). Photo by Orlando Petrini.]
published by Barr provided much of what we know to date about loculoascomycetous fungi. We have used their work as the crucial hypotheses to be tested with molecular phylogenetic data. We hope that our work, using the firm base provided by the three earlier mycologists we honour here, will extend our understanding of these fascinating fungi.

REFERENCES

Barr ME (1987). Prodromus to class Loculoascomycetes. Amherst, Massachusetts: Published by the author.