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Project history and acknowledgements

Our study of the Swedish fauna of Porricondylinae is a subproject of Svenska artprojektet, The Swedish Taxonomy Initiative (STI), itself a venture of ArtDatabanken, The Swedish Species Information Centre (<http://www.artdata.slu.se/collaborative-centres-and-projects/artdatabanken/>). The mission of STI is to identify all the multicellular fauna and flora of Sweden, an estimated 50,000 to 60,000 species. Before we began our work we expected 150–200 of these species to be Porricondylinae. In November 2007, at the time when STI had approved our research proposal, the group in question ranked at the top of a list of the most poorly known taxa in Sweden, with a published record of less than 30 species. This ranking, which designated Porricondylinae a priority group in need of fundamental taxonomic revision, determined our task for the next four years.

Cecidomyiidae are no doubt among the oldest and most diverse radiations in the order Diptera (Gagné 2010; Pape et al. 2009, 2011). And one of the most poorly known, a fact that cecidomyiologists never tire of repeating. A statement by Harris (1966: 314) that the “taxonomic treatment [of Cecidomyiidae] is still at an early stage of development” is as relevant today as it was fifty years ago. Notwithstanding all the progress made since then, most Cecidomyiidae diversity remains a great unknown and is, for the few taxonomists studying this family, a truly big challenge. Another consideration by Harris (l.c.) is still highly relevant: “Until quite recently the techniques used, even in the fundamental investigation of comparative morphology, have been inadequate and, although traditional taxonomy based on comparative morphology is now considered to be somewhat out-dated, one of the most urgent needs is for a general morphological classification of the Cecidomyiidae to serve as a framework for more advanced studies.” What in the 1960s was considered to be ‘somewhat out-dated’ is nowadays oftentimes degraded to something no longer tenable in modern science a zeitgeist that has proved to be infectious with institutions that fund scientific research as well as with taxonomists eager to participate in that funding. Such thinking ignores the fact that the kind of scientific problem determines the methods to address the problem, not *vice versa*. In other words, as long as Porricondylinae taxonomy is in its infancy, it is a matter of intellectual honesty to make morphology the method of choice in biodiversity studies of this group. The Swedish Taxonomy Initiative, which appears resistant to zeitgeist attitudes, has since 2004 played a vital role in keeping taxonomic research on Porricondylinae and other fungivorous Cecidomyiidae alive.

At the beginning of our work on the project, in November 2008, we received for study the only museum collection then existing of Swedish porricondylines: four slide-boxes of specimens that had been collected in a single locality, Tyresta in Södermanland. So, to gain knowledge of the fauna in its entirety we had to set out into the woods to collect specimens of ‘our’ midges. Our plan was to keep a manageable number of Malaise traps running during the adult flight periods of two consecutive years, 2009 and 2010, and to hand-collect specimens whenever weather permitted it. Separately, we received more study material from the Swedish Malaise Trap Project. Early in 2011, when all our specimens had been slide-mounted, labeled and identified to species, we realized that handling additional quantities of specimens, and additional species, was beyond the means of a project so limited in time like ours. At that time we stopped the processing of specimens, being aware of the consequence that we would miss a certain number of species. Now the challenge was to seek out the correct names for the taxa found and to identify the unnamed among our species. Besides the months of field work this was the most exiting period of our project, but also the most troublesome. Time to get a taste of why many consider the Porricondylinae to be among the truly demanding groups of Diptera! While some of the identification problems could be solved by studying the literature, many species