Offenbar gibt es eine Diskussion darüber ob Larssonia ein eigenständiges Taxon sein sollte oder nicht. Dazu habe ich ein Ausschnitt aus Vávra et al. 2018 (<https://doi.org/10.1016/j.jip.2018.10.003>) kopiert. Die Probe, welche Dieter von Finnland gebracht hat, hat die gleiche ITS Sequenz wie die von Refardt et al 2002. Die genomischen Daten weisen zudem auf Polyploidy hin, würden also das Diplokaryon unterstützen.

4.3. Why not the genus *Larssonia*?

*Larssonia obtusa* was proposed as replacement for Moniez’s *Microsporidia obtusa* by [Widtman and Sokolova (1994)](https://www.sciencedirect.com/science/article/pii/S0022201118302441" \l "b0175). The distinguishing character of the genus *Larssonia* was the presumed presence of a diplokaryotic nucleus in the cell (late meront or early sporont) initiating the spore formation ([Widtman and Sokolova, 1994](https://www.sciencedirect.com/science/article/pii/S0022201118302441#b0175)). There is a single micrograph showing the presumed “diplokaryon” in *Larssonia* (Fig. 3 in [Widtman and Sokolova, 1994](https://www.sciencedirect.com/science/article/pii/S0022201118302441#b0175)). However, this photograph is not convincing, the quality of preservation is low and our interpretation suggests a monokaryotic nucleus with a dividing nucleolus. [Jírovec (1936)](https://www.sciencedirect.com/science/article/pii/S0022201118302441" \l "b0050) never mentioned diplokaryotic nuclei in his detailed study of *P. obtusa*, and diplokarya were not found during examination of the three existing slides of *P. obtusa* made by Jírovec (only one of those is well stained). In our study we never encountered diplokaryotic nuclei in the numerous ACPS microsporidia we studied. So, either *Larssonia obtusa* exists and is indeed different from Jírovec’s *P. obtusa* (which we find unlikely), or the authors proposing *Larssonia* wrongly interpreted, due to the low quality of their TEM photographs, the dividing nuclei of the sporont (likely option), and the genus *Larssonia* should be treated as a *nomen dubium*. Having no access to the habitat in which *Larssonia* was found, we cannot decide between these two alternatives, but it is probable that *Larssonia* is a wrongly described genus and the organism should be reinvestigated and its name eventually abolished. It must be stressed here that there exists in GenBank the ssu rDNA sequence with the name *Larssonia obtusa* (AF394527). This sequence was not obtained from infected *D. pulex*, from which *Larssonia obtusa* was described (a pond in the Zoological Garden in Kaunas, Lithuania), but from *D. pulex*, collected by [Refardt et al. (2002)](https://www.sciencedirect.com/science/article/pii/S0022201118302441" \l "b0105) in a geographically somewhat distant area (Tvärminne, Finland). So, in conclusion, *Larssonia obtusa* is probably a doubtful taxon (*nomen dubium*) in need of reexamination, and it is not supported by proper molecular sequencing. This makes *P. obtusa* (renamed by Sprague in 1977 as *Microsporidium obtusum*) a name available for taxonomy consideration.

Chart

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