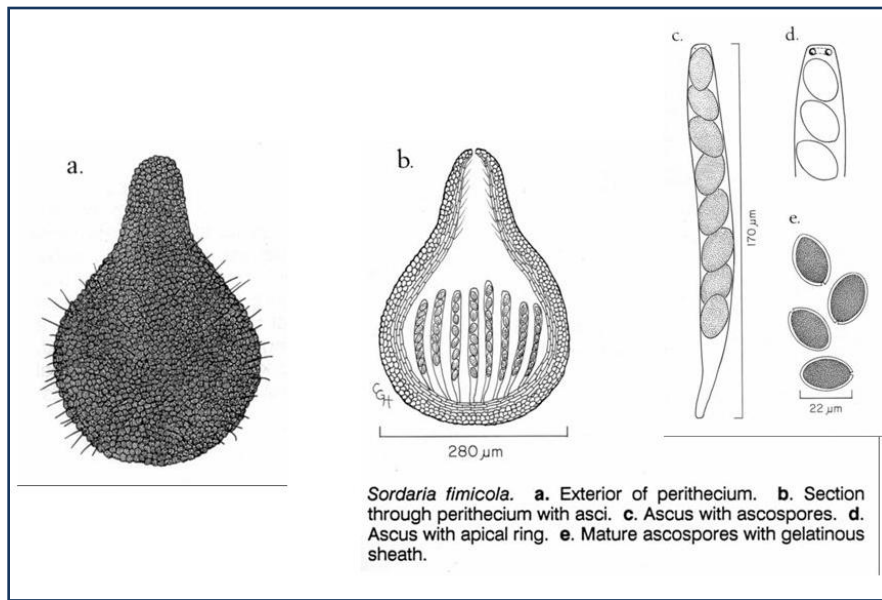


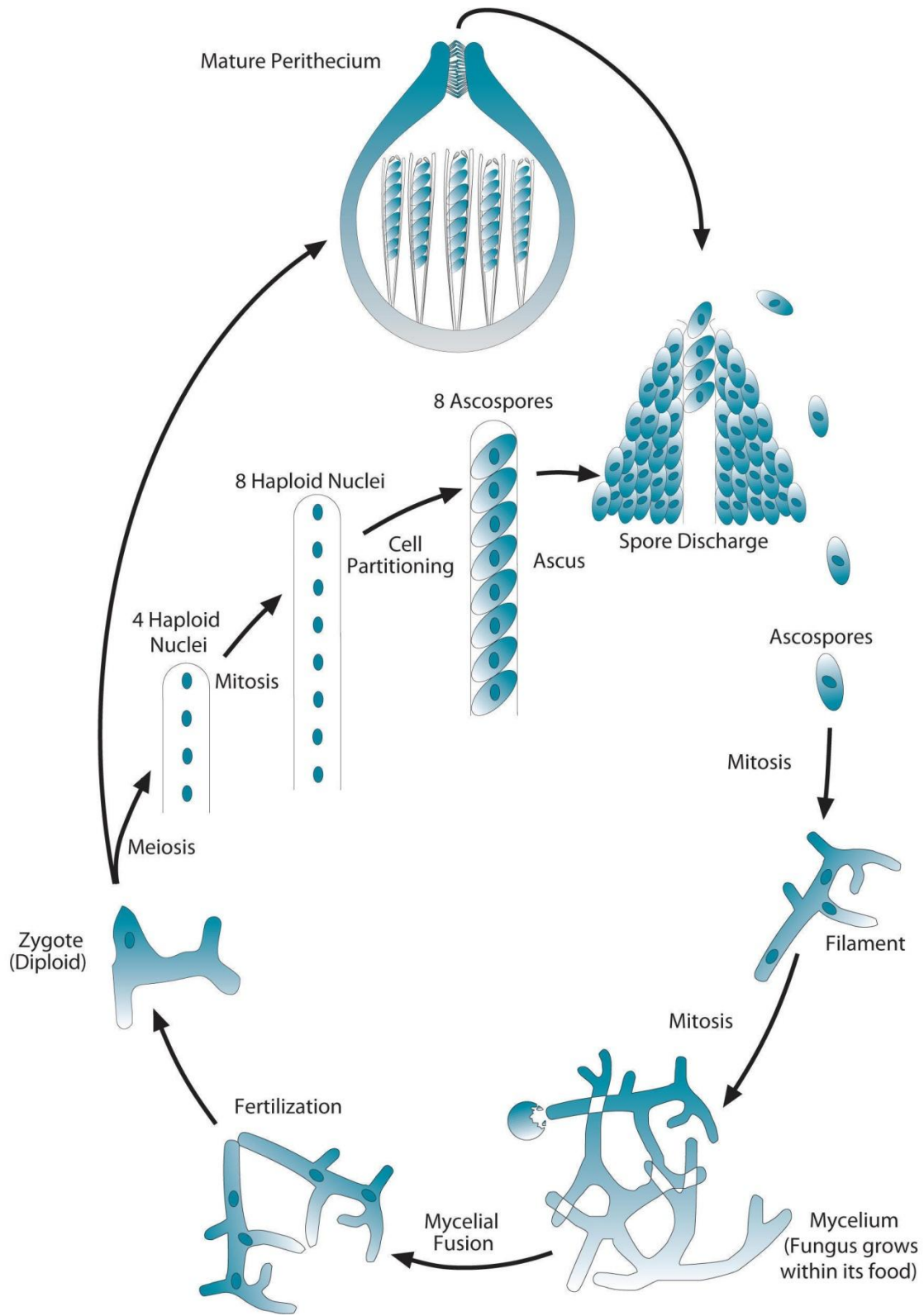
III CLASS PYRENOMYCETES

- The series Pyrenomycetes is characterized by the formation of an ascocarp called a **perithecium**.
- This ascocarp type may be variously shaped, but is **typically flasked-shaped or globose with a small ostiole** through which the ascospores are released.
- Asci are **unitunicate**
- Asci are arranged, in a single fertile layer throughout the base of the perithecium or in a fascicle. Such a fertile layer is a **hymenium**.
- Sterile filaments called **paraphyses** may also be present among the asci.
- Such filaments are **absent in the Plectomycetes**.
- As the paraphyses grow into the central cavity, it becomes enlarged and provides a space where the asci and ascospores will develop.
- Ascospores are often forcibly ejected from the ascus and perithecium when mature.
- Species in this series may produce perithecia directly on their substrate or in a stroma. A stroma is a compact mass of mycelium or mycelium with host tissue, on or in which sporulating structures may be produced.

Order: Sordariales

- The perithecia produced in this order are usually dark or pallid (colorless), with asci produced in fascicles and **paraphyses are absent** when ascospores are mature.
- *Sordaria fimicola*: This is an example of a species that does not produce a stroma. In nature, this species **grows on dung**. Such species are said to be **coprophilous**. The perithecia are small, black, flask-shaped ascocarps with an ostiole. Asci and ascospores are borne within without paraphyses.





Order Xylariales

- This order includes a very large and diverse group of Pyrenomycetes that typically produce their **perithecia in stromata**. The shape of stroma are very variable. We will look at two examples:
- *Xylaria sp.* and *Penzigia globosum*: These are examples of species that produce perithecia in stromata. Their stromata are externally black, and can be seen to be mostly white in section. The perithecia are entirely immersed in the stromata with only the ostioles opened to the surface.
- The stromata of *Xylaria* are long and tapering while those of *P. globosum* are hemispherical to globose that usually occur in clusters.
- These taxa are the most conspicuous members of the stroma producing Pyrenomycetes in Hawaii.

