

Sporogenesis & gametogenesis

Definitions

- Mega
- Micro
- Spore
- Gamete
- Genesis
- Phyte

Overview of floral organs

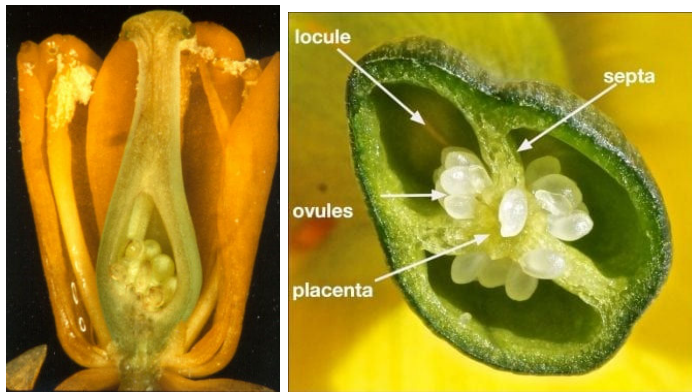
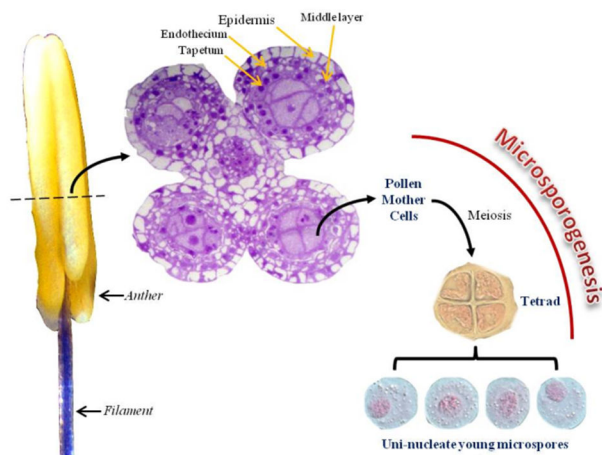


Figure 1.

http://courses.washington.edu/bot113/family_pages/Berberidaceae/berberidaceae.html

<https://www.treeguideuk.co.uk/ovules-and-placentas/>



Franchi, Pacini, Rottoli, 1984

Microsporogenesis

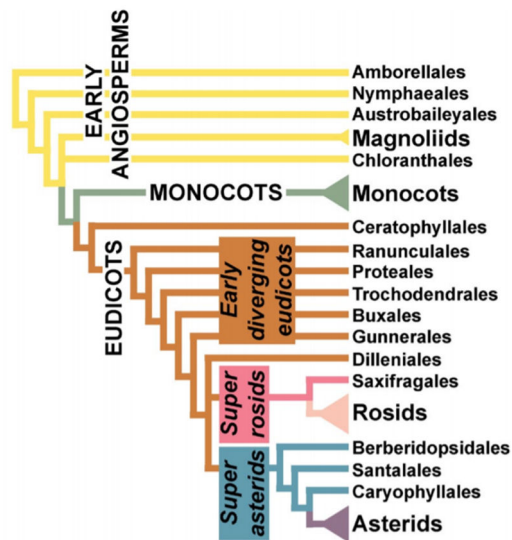


Figure 3. Byng et al 2018. The phylogeny of angiosperms poster: a visual summary of APG IV family relationships and floral diversity.
<http://www.plantgateway.com/globalflora/>

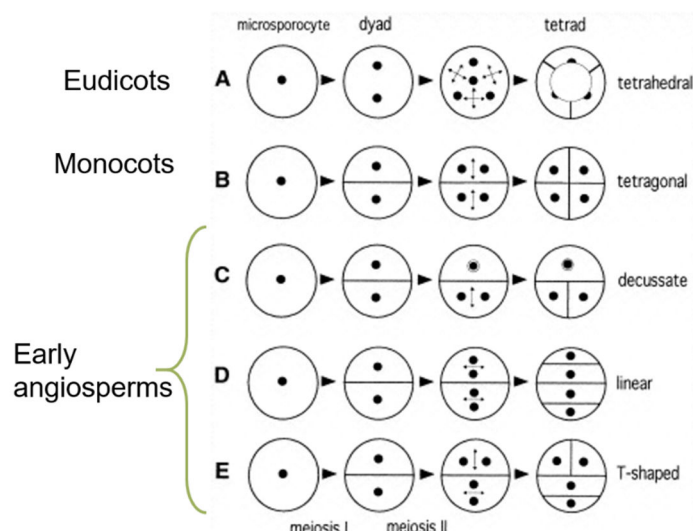
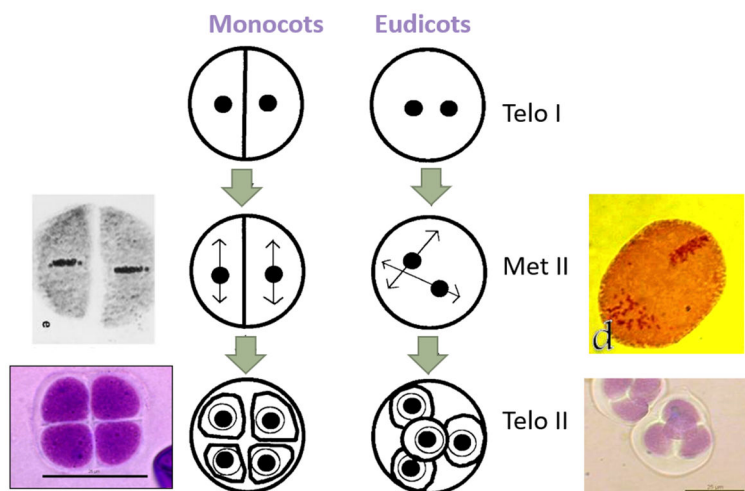


Figure 2. Furness et al., 2002

Monocots vs Eudicots



Top: Cell Biology International 32: 1459-1463.
 Bottom: Class alum Doug Heckart

Top: Caryologia 65:258-262.
 Bottom: Class alumna Rebecca Tashiro

Microgametogenesis

Maheshwari, 1950

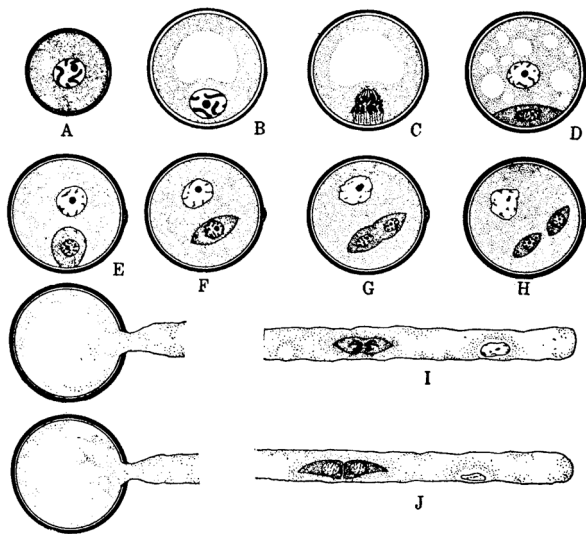


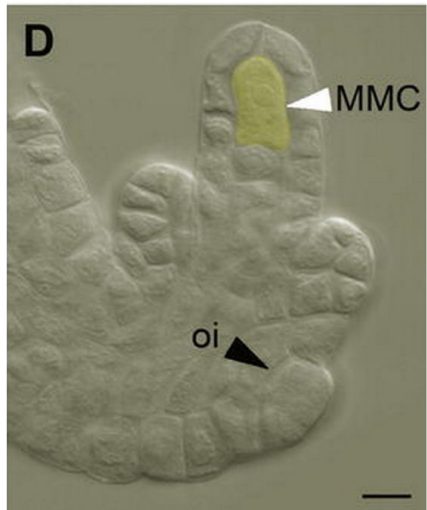
Figure 4. Panchanan Maheshwari, 1904 – 1966.
<https://royalsocietypublishing>.

The male germ unit

Morgensen, 1992



Megasporogenesis



Megaspore mother cell. *Sexual Plant Reproduction* 24:47-61

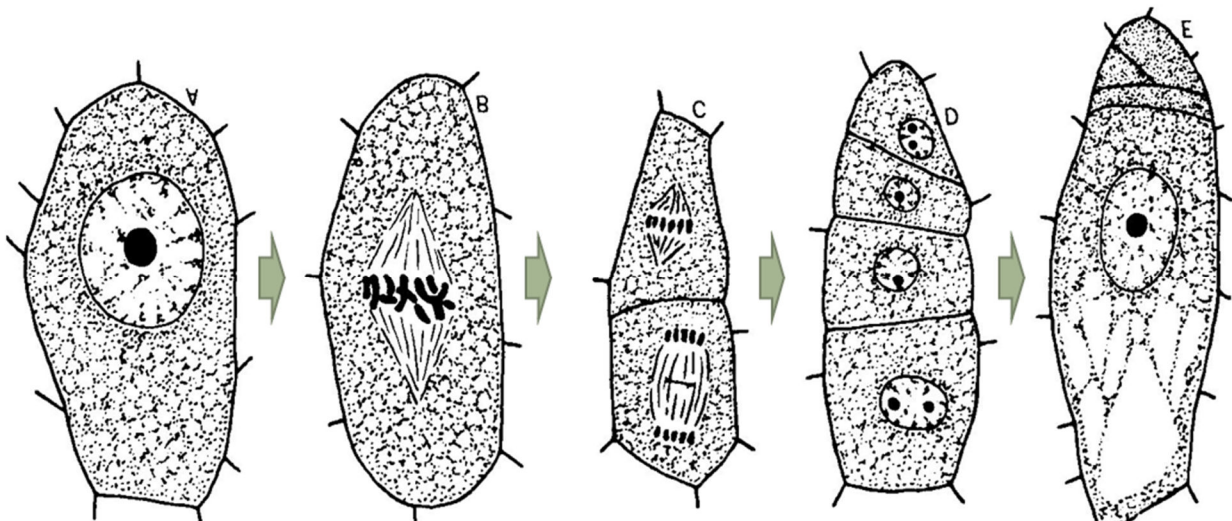
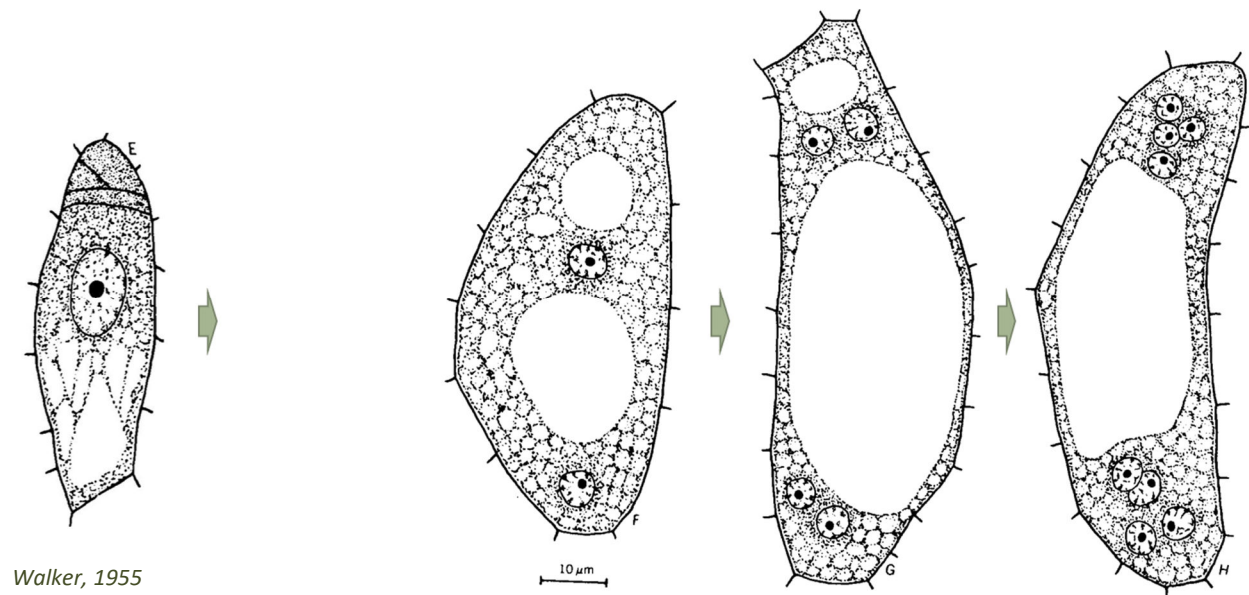


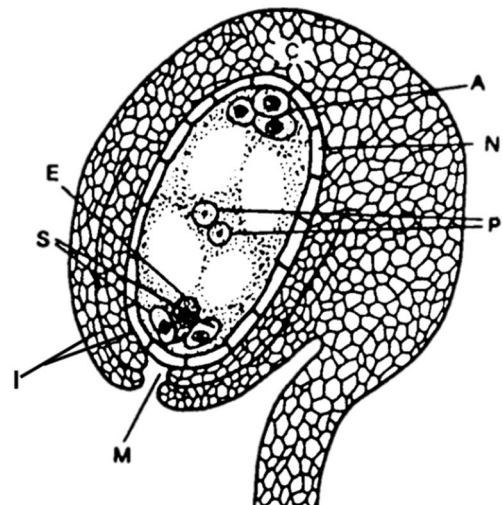
Figure 5. Walker, 1955

Megagametogenesis

Review by Yadegari & Drews, 2004



Megagametophyte



Maheshwari, 1950

- Monosporic
- Bisporic
- Tetrasporic

Type:	Megasporogenesis			Megagametogenesis			
	MMC	Meiosis I	Meiosis II	Mitosis 1	Mitosis 2	Mitosis 3	Egg sac
Monosporic 8-celled Polygonum type							
Monosporic 4-celled Oenothera type							
Bisporic 8-celled Allium type							
Tetrasporic 16-celled Peperomia type							
Tetrasporic 16-celled Penea type							
Tetrasporic 16-celled Drusa type							
Tetrasporic 8-celled Fritillaria type							
Tetrasporic 8-celled Plumbagella type							
Tetrasporic 8-celled Plumbago type							
Tetrasporic 8-celled Adoxa type							