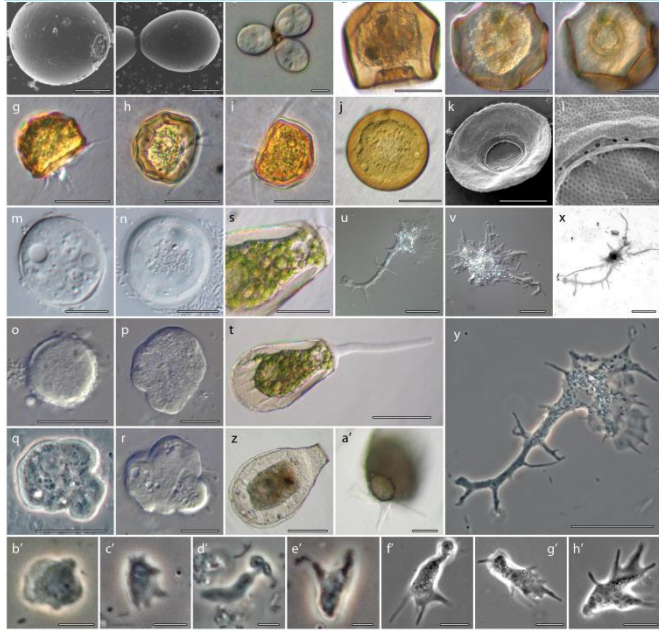
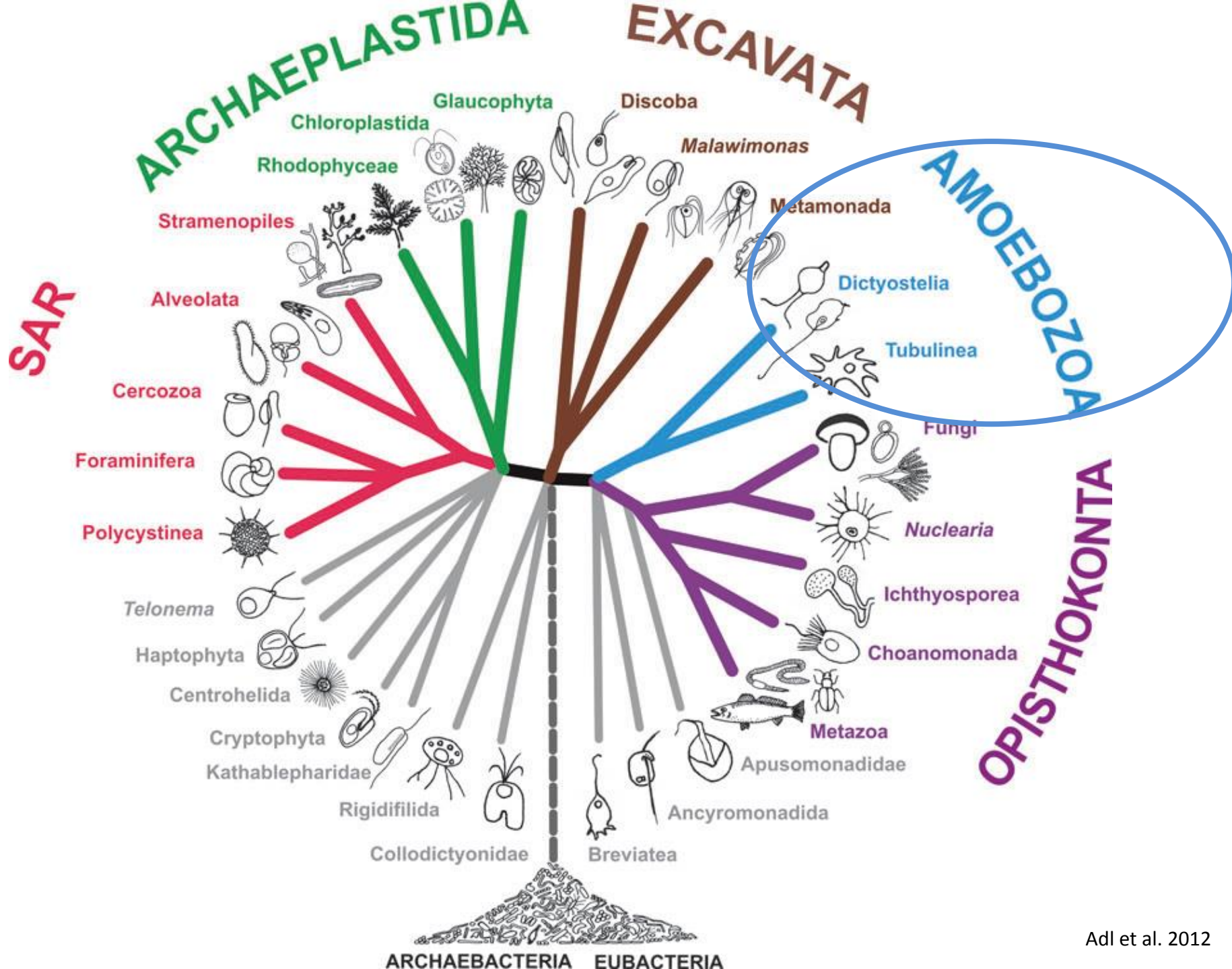
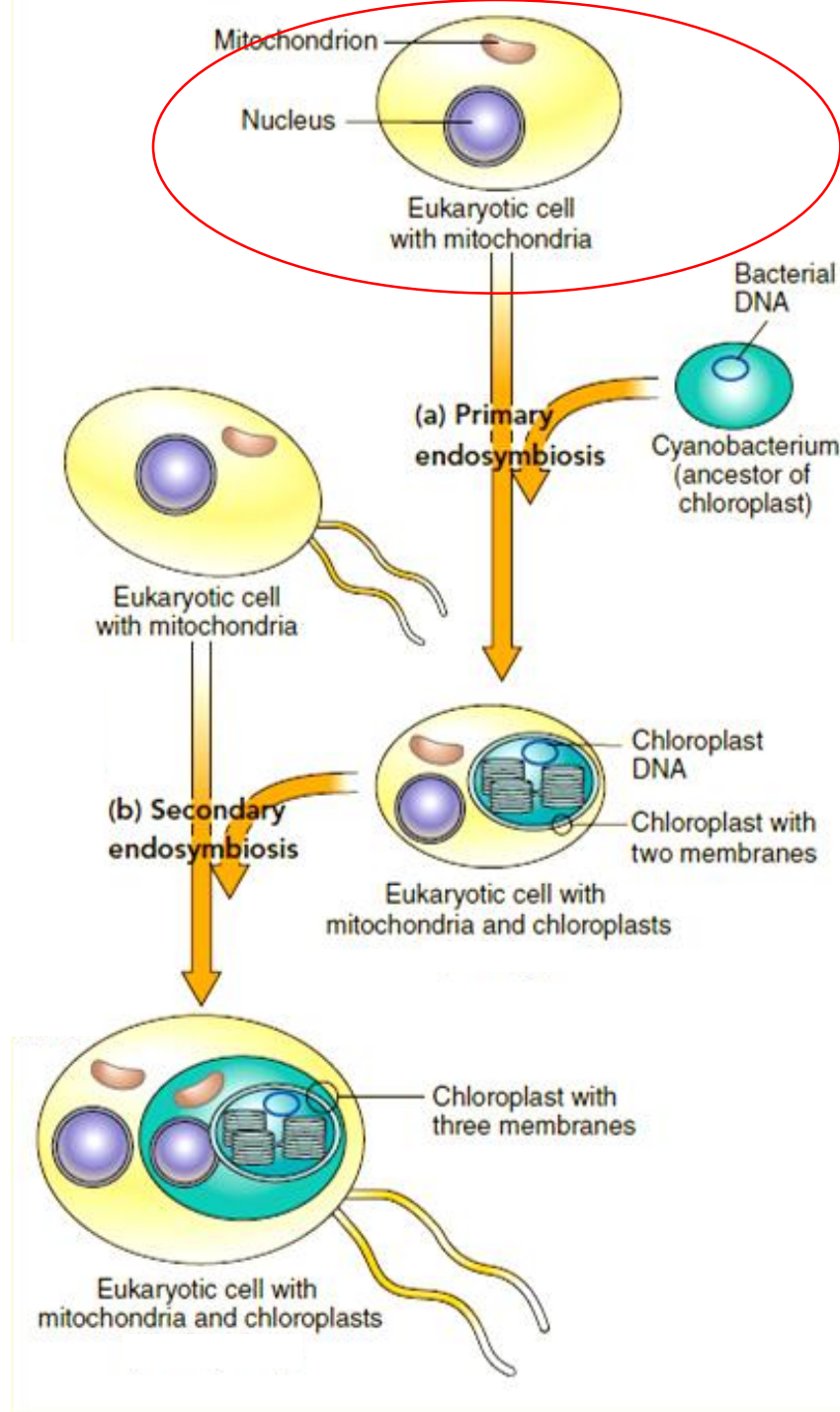


Amoebozoa





Teoría endosimbiótica serial



Supergrupo Amoebozoa



Schilde and Schaap 2013

Primeros Fósiles de Amoebozoa (1041-1224 mill. de años)

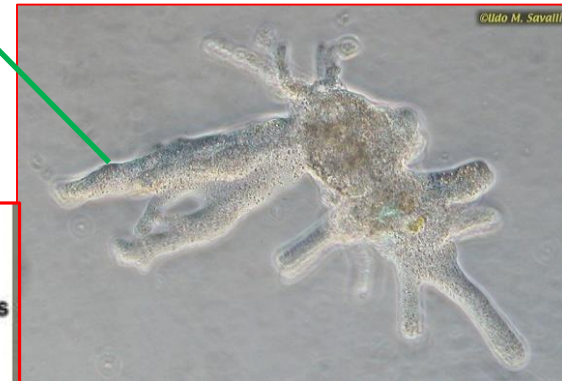
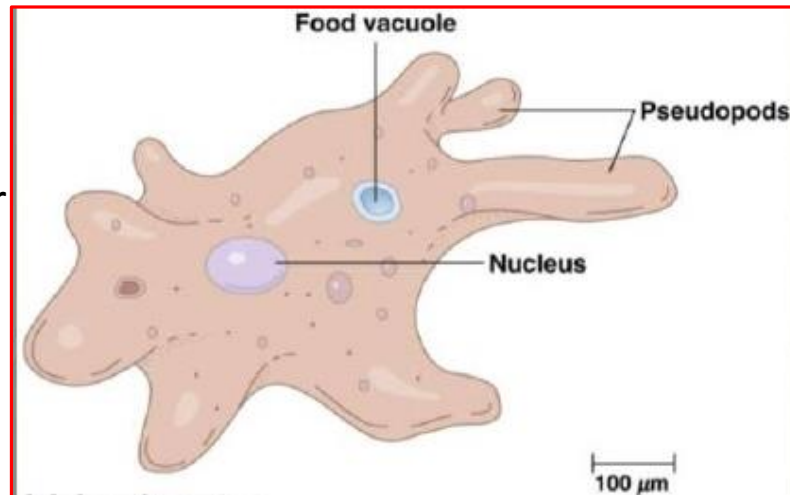
Supergrupo Amoebozoa

→ Tubulinea
Mycetozoa } viven en ambientes ricos en MO → Mejoran la fertilidad del suelo a través de la mineralización de los nutrientes.

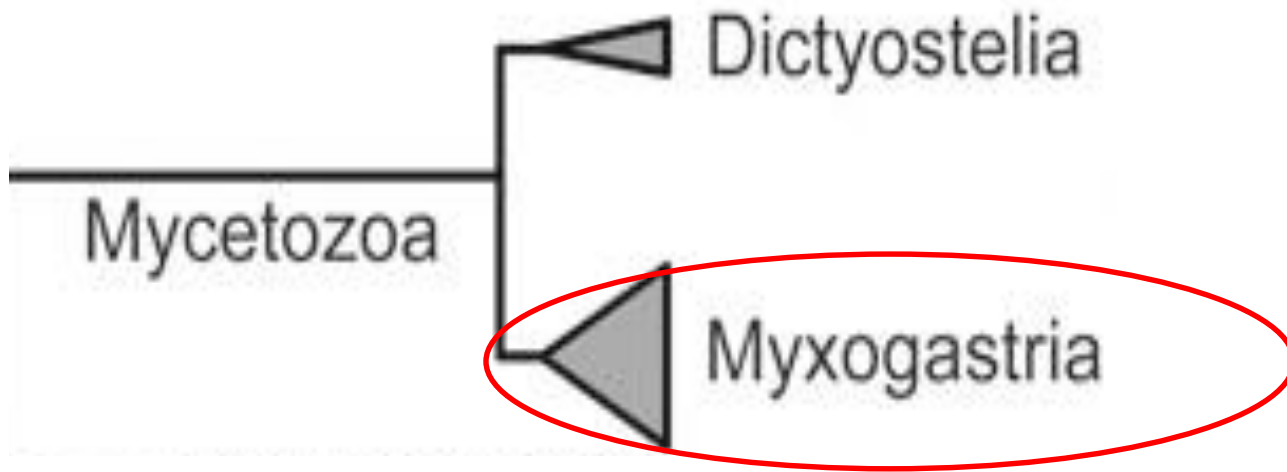
→ Constituido por amebas lobosas, pelobiontes, entamoebidos y mohos gelatinosos

→ Organismos con locomoción ameboide, con **pseudopodios** (citoplasma que se extiende y retrae).

→ Sin pared celular



Amoebozoa



Myxogastria (“mohos” mucilaginosos - slime mold: mohos deslizantes)



Plasmodiales

Características generales

Myxogastria

→ aprox. 1000 spp. en el mundo, 160 spp. en Argentina

Hábitat

Materia muerta en descomposición
Suelo húmedo
Corteza de los árboles



Nutrición

Fagocitosis

→ Bacterias, levaduras, otras amebas, etc.

En fase plasmodial, mixamebas

Sustancia de reserva: glucógeno

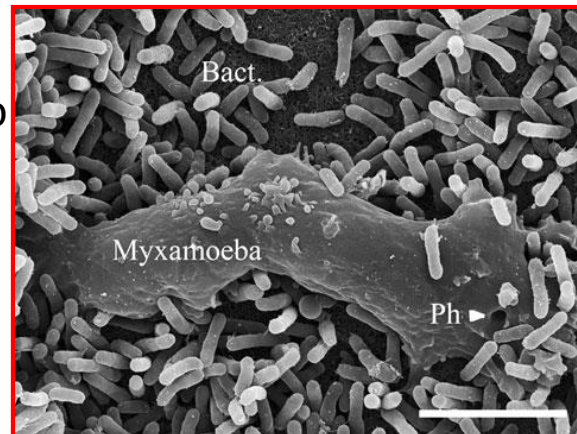
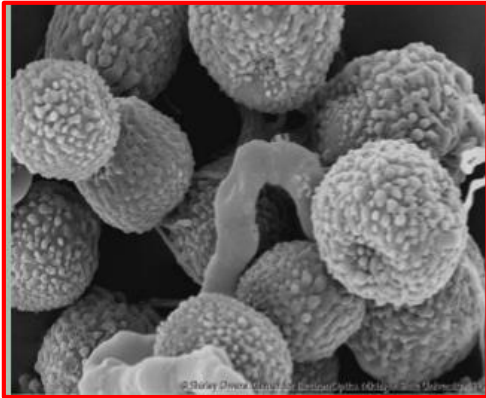


Fig. 5 Scanning electron micrograph of a haploid myxamoeba that feeds on methylotrophic bacteria (*Methylobacterium mesophilicum*). The cells were cultivated on agar plates and show membrane bodies with unknown function. Ph phagocytosis ('mouth pore'). The samples were fixed before microscopical examination. Bar = 10 μ m

Estados en el ciclo de vida

→ 3 tipos de células uninucleadas, 1 flageladas

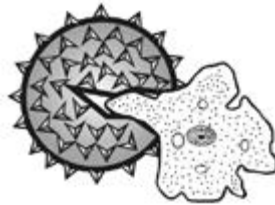


**Espora
madura**

Dispersadas
por el
viento, agua
o animales



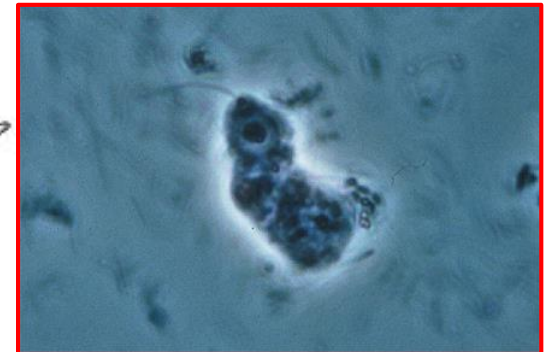
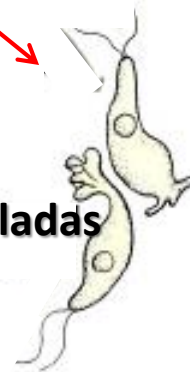
Germina
/rompe



**Células
ameboflageladas**



Mixamebas



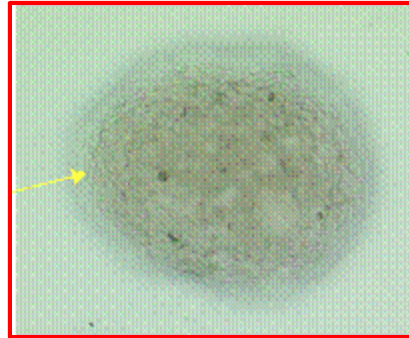
Estados en el ciclo de vida

→ **Plasmodio** → Masa de protoplasma, multinucleada, sin septos (cenocítico)



Tipos de Plasmodios

Protoplasmodio



Microscópico, cuando germina origina sólo 1 esporangio

Afanoplasmodio



Venas transparentes, ramificadas, forman una red. Stemonitiales.

Faneroplasmodio



Grandes redes de venas. Ramificadas. Se puede diferenciar el fluido que circula. Physarales.

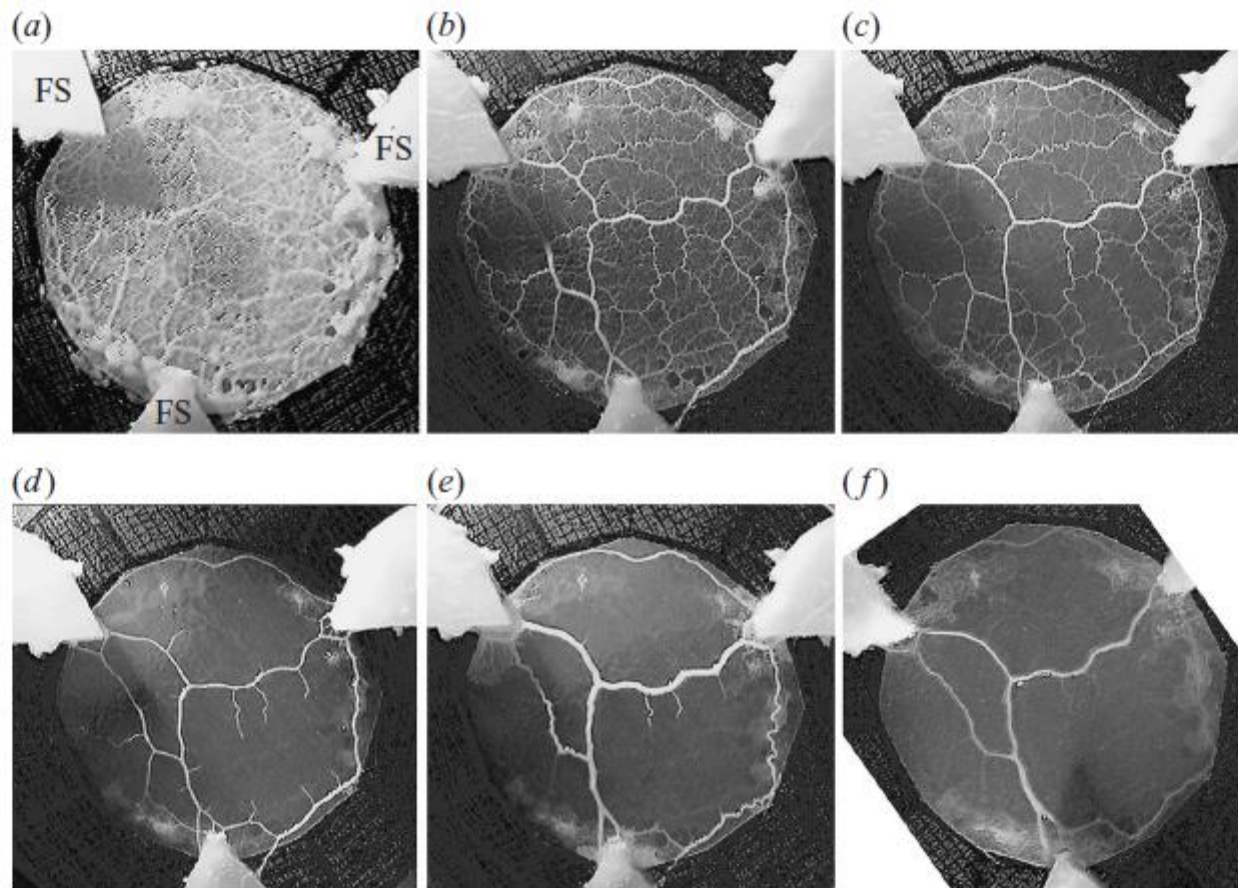


Figure 2. Time series of changes in network shape (top view) after the presentation of three food sources located at the vertices of an equilateral triangle. The diameter of the initial circular organism was 3 cm. The outer black section of each panel is the plastic film covering the agar surface. The network pattern is illustrated: (a) 0, (b) 6, (c) 9, (d) 13, (e) 26 and (f) 33 hours after food source presentation. FS, food source.

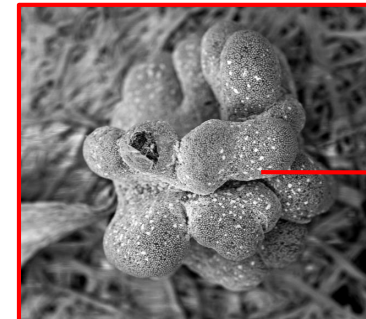
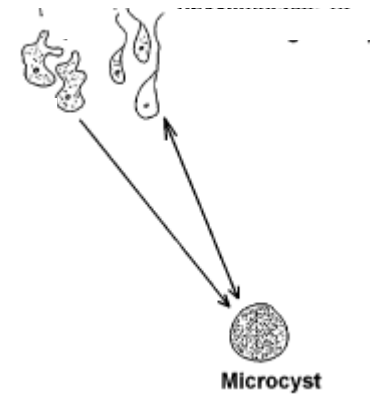
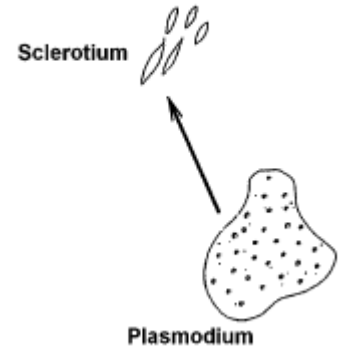
Estados en el ciclo de vida

→ Condiciones adversas (falta de humedad, baja Tº)

Plasmodio → **esclerocio**

Myxameba
Cél. flagelada → **microcisto**

Plasmodio → **Esporóforos**



peridio



Ciclo de Vida

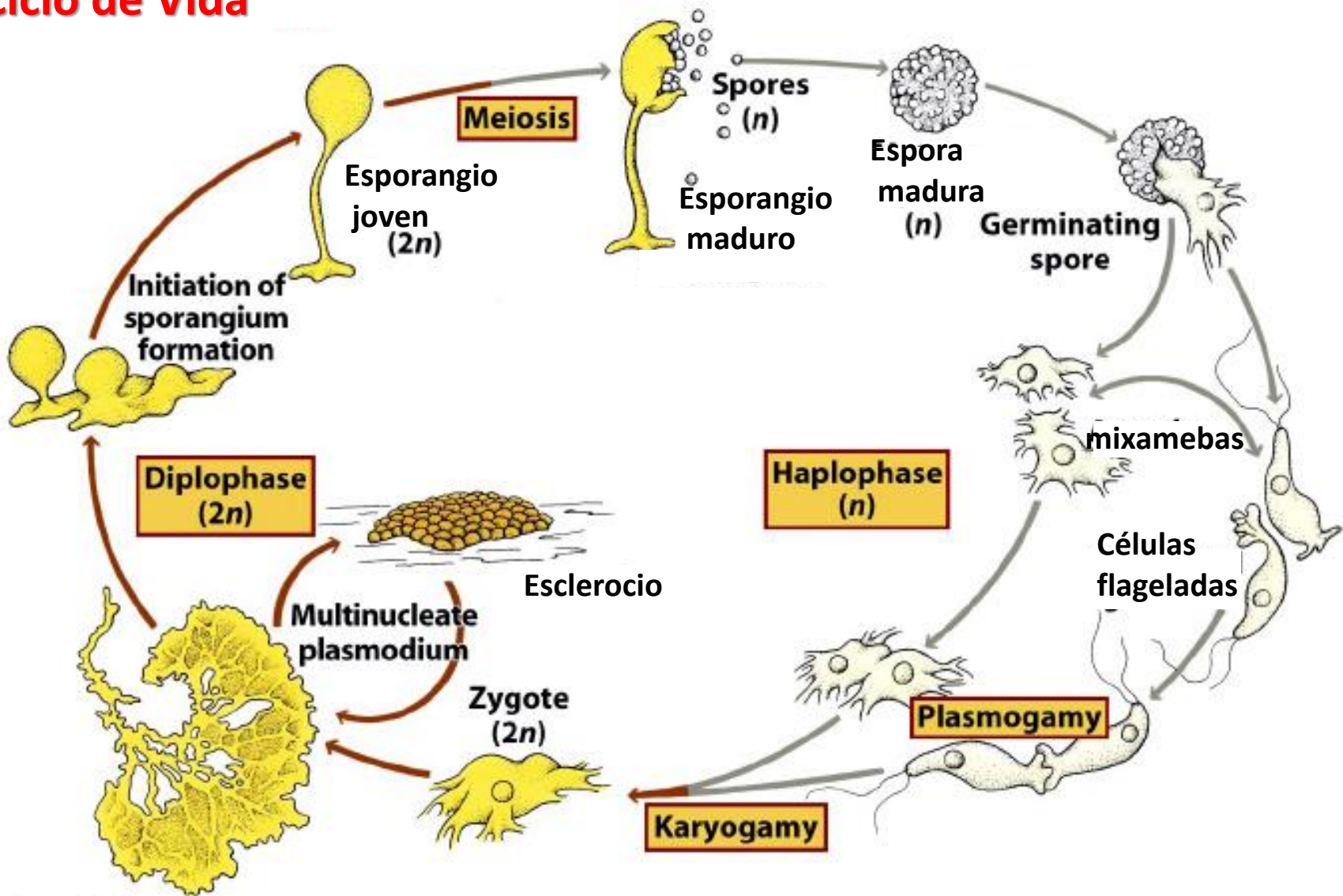
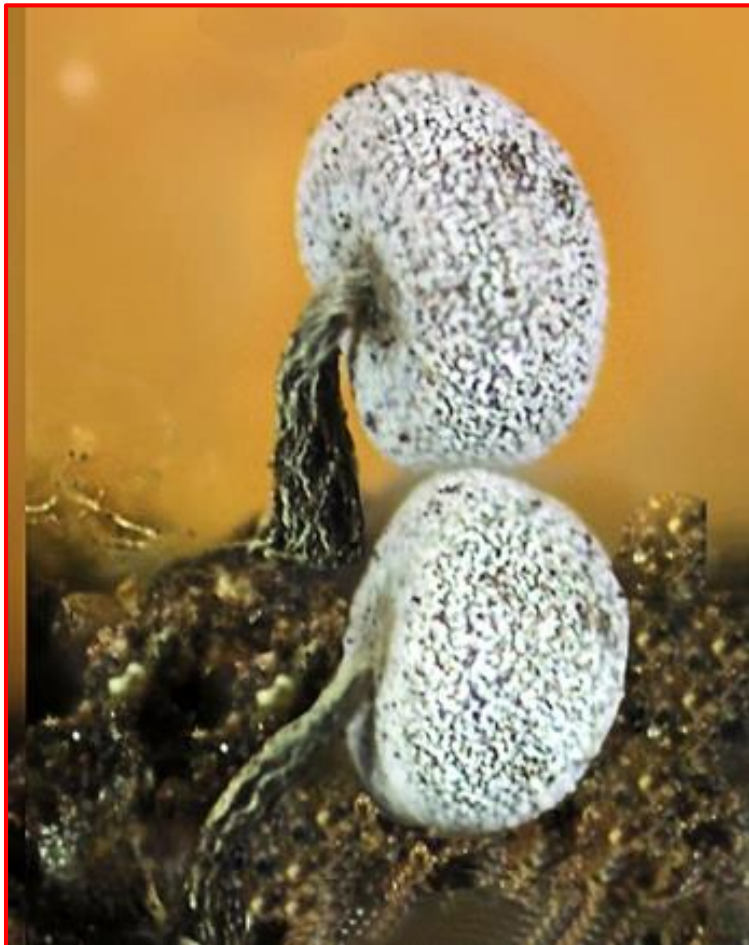


Figure 15-58
Biology of Plants, Seventh Edition
© 2005 W. H. Freeman and Company

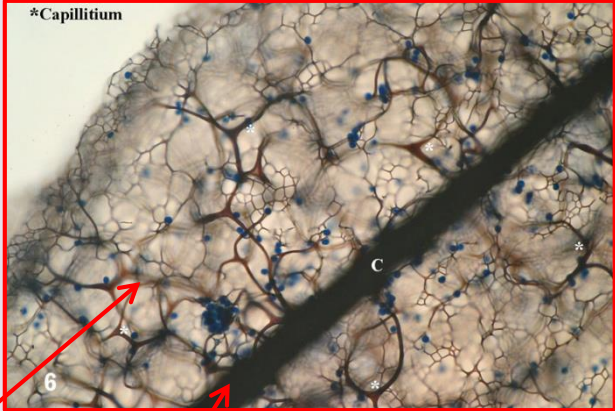
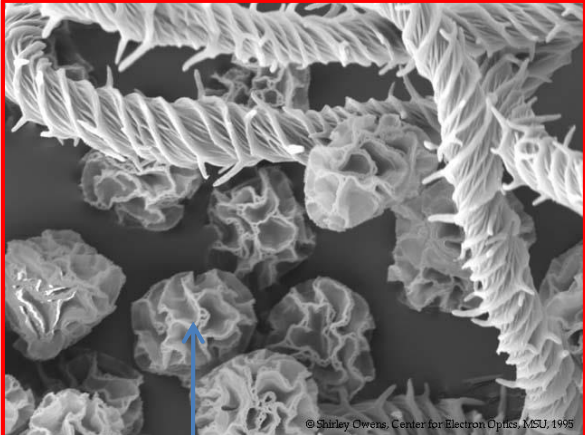
Esporóforos



Esporangio

- El más común.
- Un plasmodio puede formar más de un esporangio

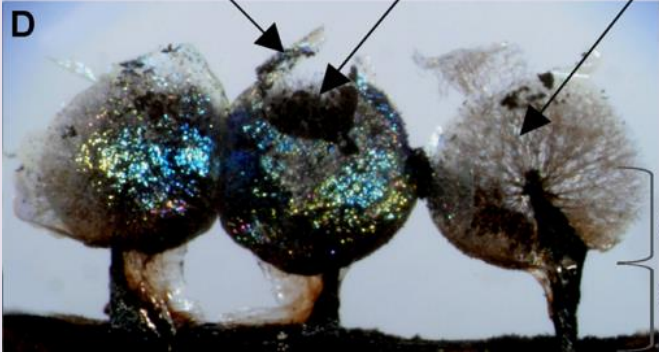
Partes del esporangio



Peridio

Esporas

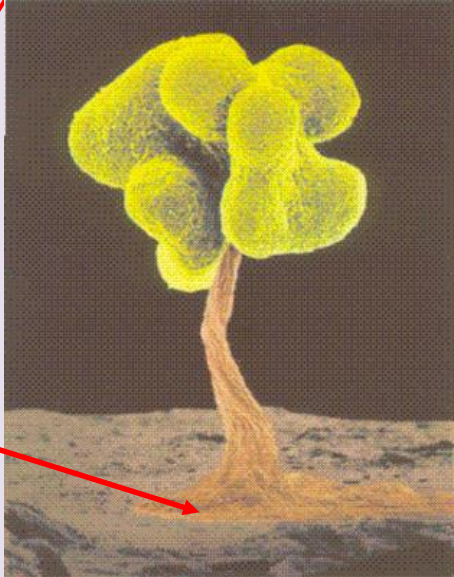
Capilicio



Columela

Pie

Hipotalo



Esporóforos



Etalio



Pseudoetalios



Plasmodiocarpo

Myxogastria

Liceales

Trichiales

Physarales

Echinosteliales

Stemonitales

Physarales

Gran plasmodio (miles de núcleos), faneroplasmodio

Esporangios, etalios

Madera muerta, MO



Stemonitales



Grupos de esporangios con pie, afanoplasmodio

Madera en descomposición

Liceales



La mayoría faneroplasmodio

Varios tipos de esporóforo
(etelio mas común)

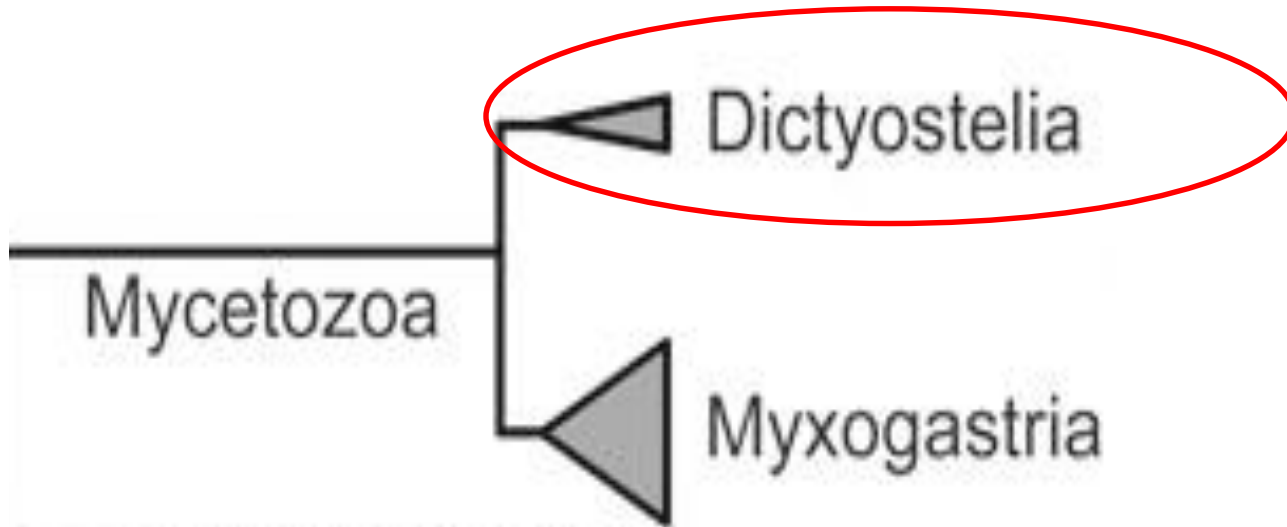
Trichiales



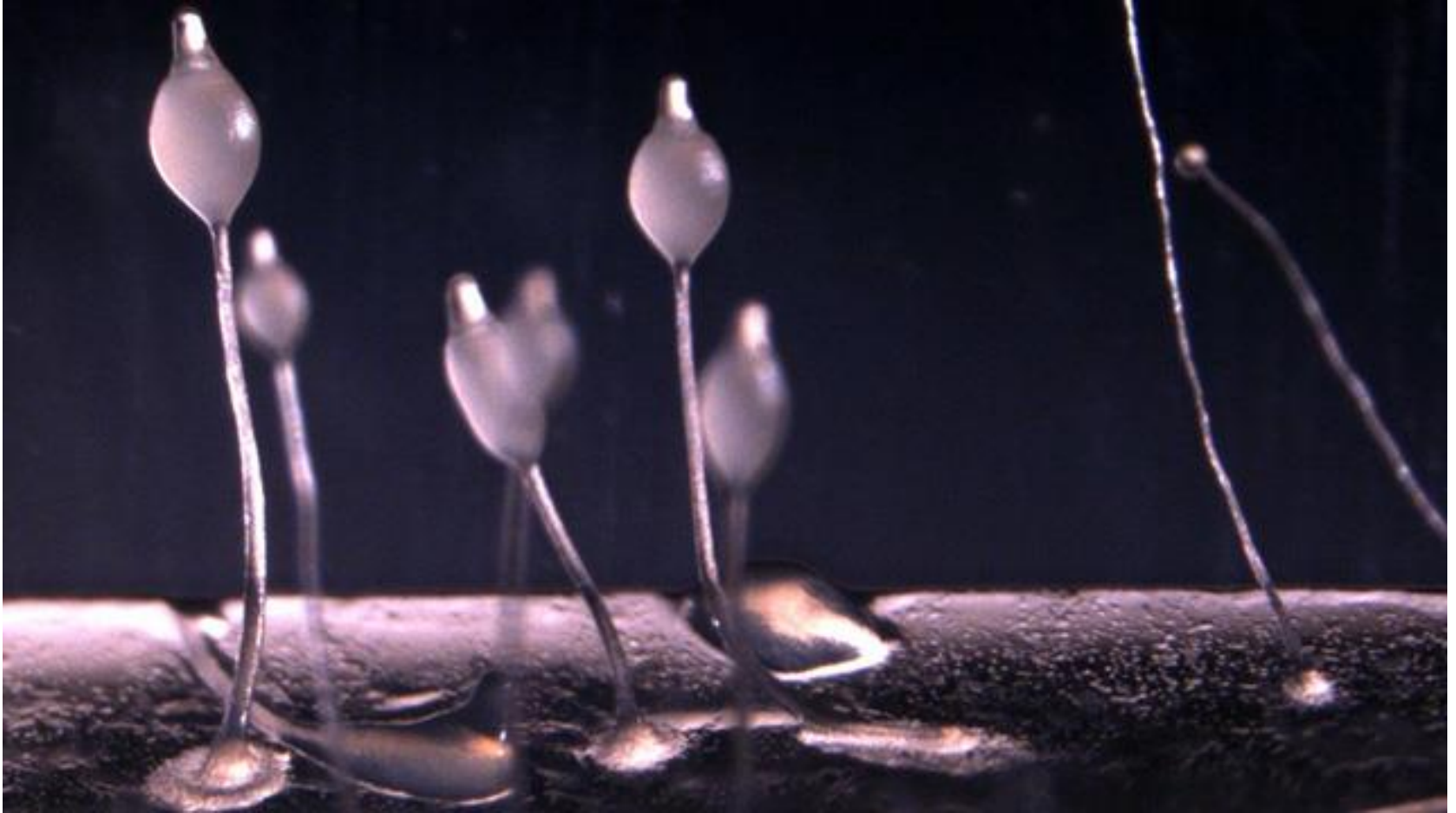
Plasmodio intermedio (entre afanoplasmodio y faneroplasmodio)

Esporangios

Amoebozoa



Dictyostelia (“mohos” mucilaginosos celulares–cellular slime mold-amebas sociales)



Celulares

Características generales

Dictyostelia → 150 spp., pequeños (< 1 cm)



Hábitat

Suelos boscosos, campos agrícolas

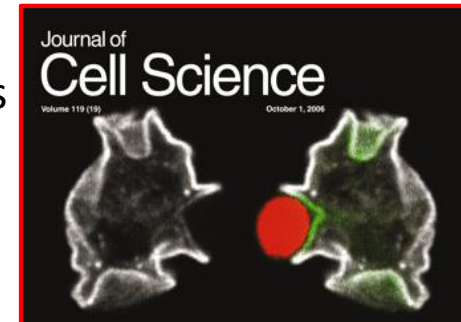
Material vegetal en descomposición

Excrementos



Alimentación

→ Fagocitosis → Bacterias y levaduras



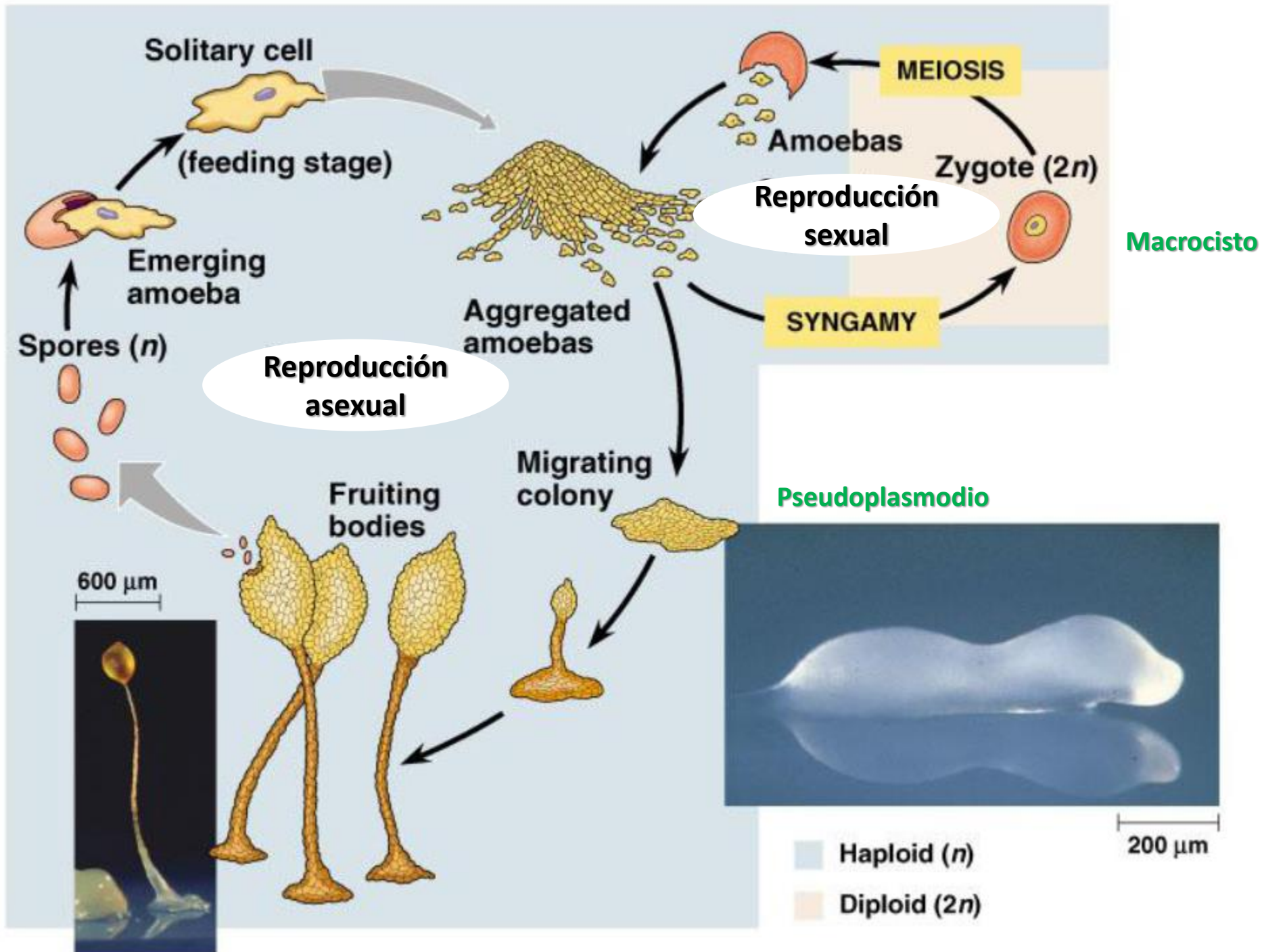
Reproducción

Asexual → Fisión binaria

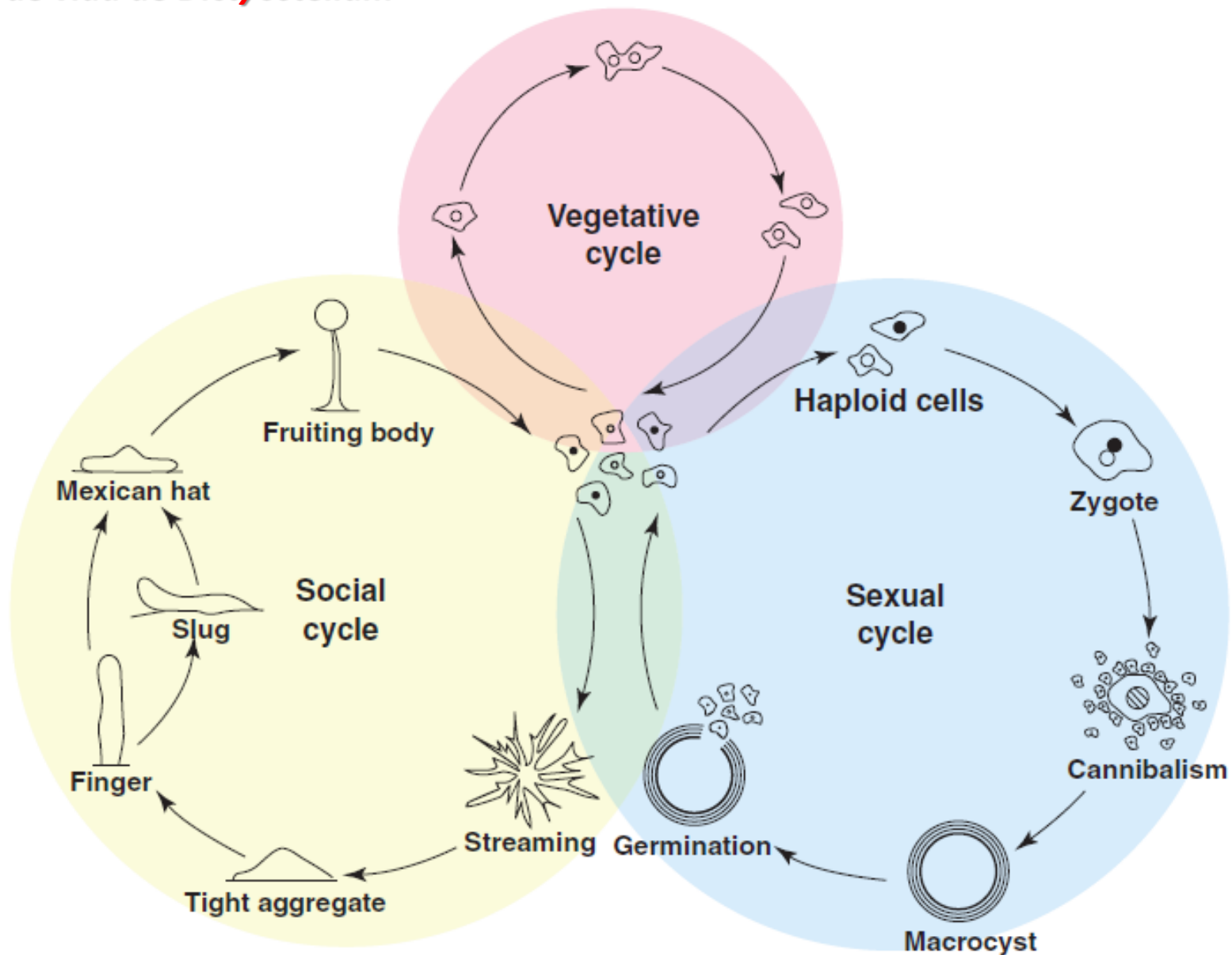
Sexual → 3 Fases: **fructificaciones multicelulares**
(pseudoplasmodio)

macrocistos

microcistos



Ciclo de vida de Dictyostelium



number of species
cells: flagellate - amastigote

Dictyostelia

> 100

amastigote



cellular, macroscopic

composed of aggregating amoebae
asexual



from ~10'000 aggregated amoebae
photos: M.J. Grimson & R.L. Blanton



cellular (except *Acytostelium*)

zygote

leads to the formation of a
macrocyt

flagella



when pre

tro

(Schaez



macro



macro



always

plasmodu



macro



macro



macro



macro



macro



macro



macro



macro

teratofony

3

Myxogastria

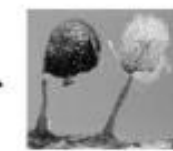
> 900

biflagellate



multinucleate giant amoeba

from a zygote (sexuality involved)
from microscopic to very large



from a plasmodium

spores in a membranous sheath



if present, acellular
secreted and hollow (A,B) or not (C)

zygote

leads to the formation of a
plasmodium

plasmodium or
pseudoplasmodium

sporophore development

stalk

presence of sexuality