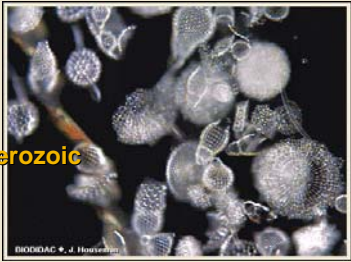


Proterozoic Eon



Proterozoic

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Geological time scale and building height
(1 floor – 60Ma, 72 floors, 12 feet/floor)

- **Major Eons (Ma)**
 - **Phanerozoic**
 - (550 Ma to present time, top 9 floors*)
 - **Proterozoic**
 - (2,500 – 550 Ma, 33rd -63rd)
 - **Archaean**
 - (3,800 – 2,500 Ma, 12th – 33rd)
 - **Hadean**
 - (4,500 – 3,800 Ma, 0-12th)



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Domains of life

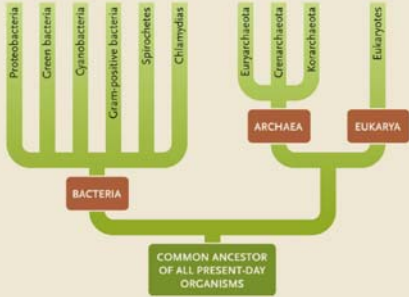


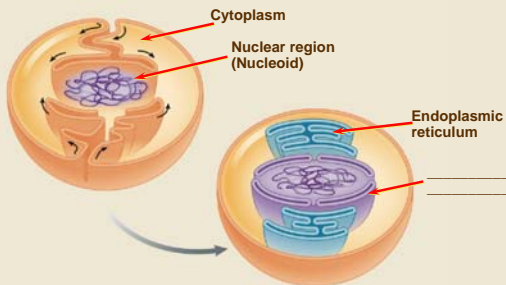
Figure 21.15

Proterozoic Eon

Archaea, Eubacteria & Eukarya
(Table 21.1)

	Archaea	Eubacteria	Eukarya
Cell Wall	No peptidoglycan	Peptidoglycan	Cellulose, chitin or none
Plasma membrane	Branched chain fatty acids	Unbranched chain fatty acids	Unbranched chain fatty acids
Flagella	Yes; spins	Yes spins	Yes, doesn't spin
Translation	Complex RNA polymerase	Simple RNA polymerase	Complex RNA polymerase
Nuclear envelope	No	No	Yes
Circular Chromosome	Yes	Yes	No
DNA/histones	Yes	No	Yes

Origin of the



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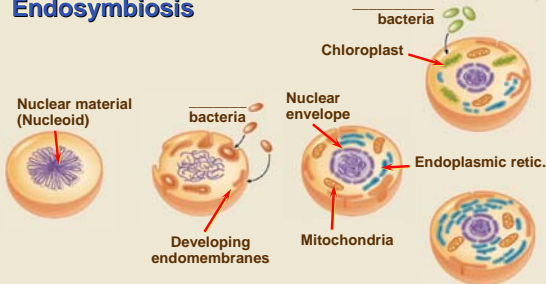
Figure 2.19

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Endosymbiosis



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Figure 2.21

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Proterozoic Eon



Proterozoic Eon

Protist locomotion

- Amoeboid
- Flagellar
- Ciliary

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Protist locomotion

Amoeboid movement (Pseudopods)

Ectoplasm

Endoplasm

Hyaline cap

Direction of movement

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Protist locomotion

Flagellar and ciliary movement

9+2 organization

Dynein arms

Microtubules

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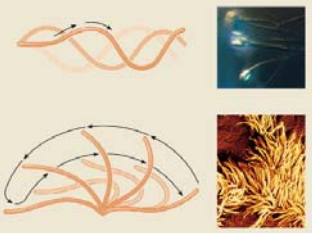
Figure 2.25 & 26

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Proterozoic Eon

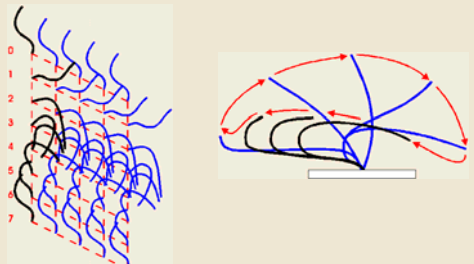
Protist locomotion
Flagellar and ciliary movement



BIO1130 Organismal Biology **Figure 2.26**

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Protist locomotion
Ciliary movement



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Nutritional strategies

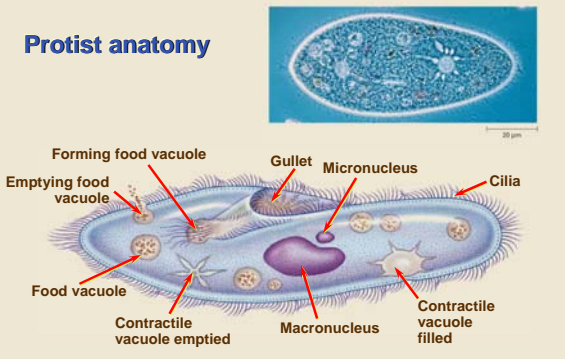
- Ingestive - Animal-like protists
- Absorptive - Fungal-like protists
- Photosynthetic - Plant-like protists

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Proterozoic Eon

Protist anatomy



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Figure 23.4

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Types of life cycles

- Haplontic
- Alternations of generations
- Diplontic
- Parasitic

Some key terms:

- Diploid (2n)
- Haploid (n)
- Mitosis
- Meiosis
- Zygote

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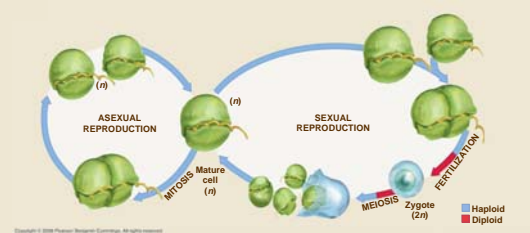
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Types of life cycles

Haplontic

Dinoflagellate *Gyrodinium fuscum*



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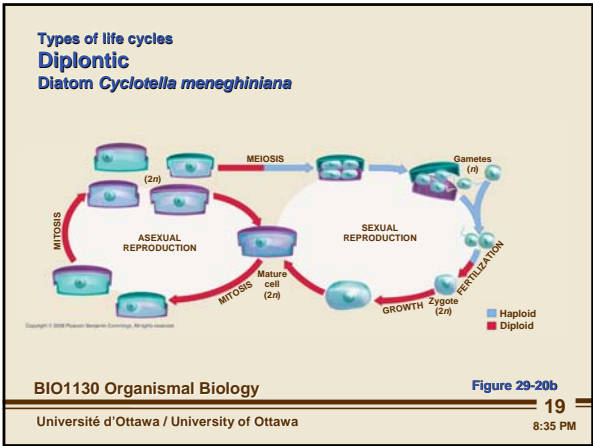
Figure 29-30a

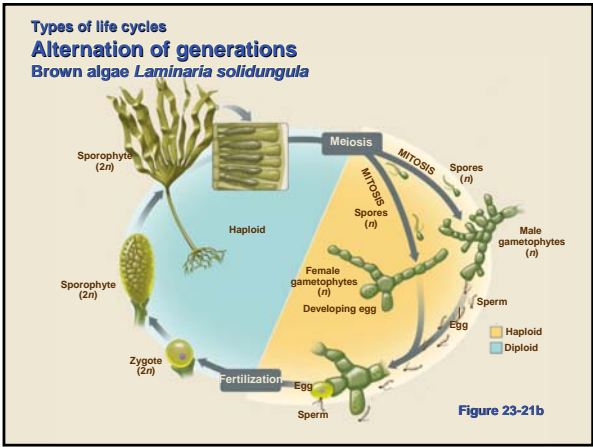
18

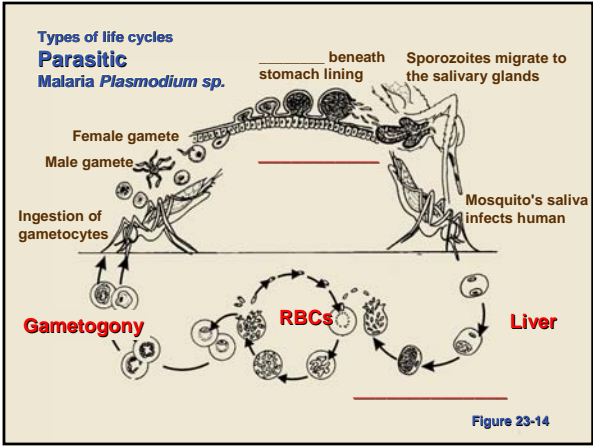
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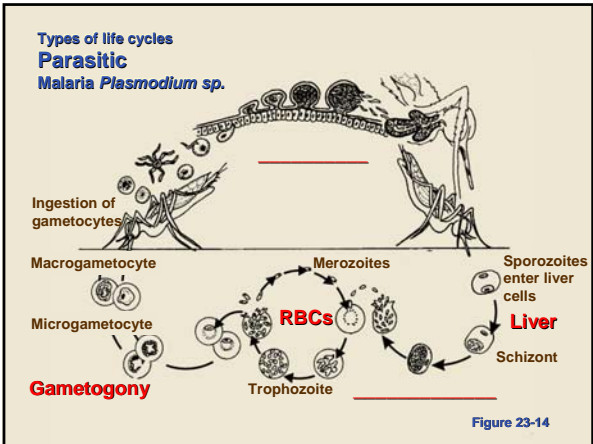
Proterozoic Eon

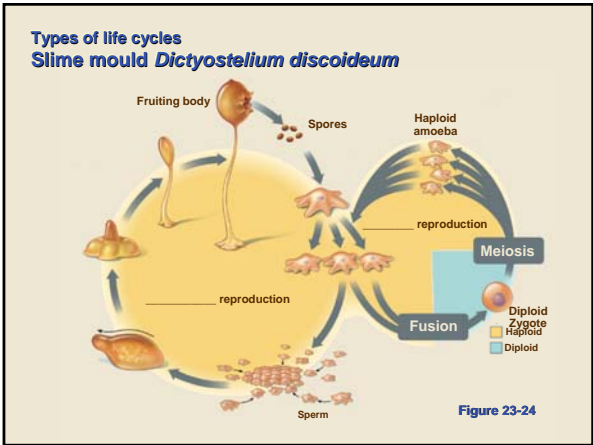






Proterozoic Eon





Types of life cycles

- Haplontic - Fungal-like protists
- Alternations of generations - _____-like protists
- Diplontic - _____-like protists
- Parasitic

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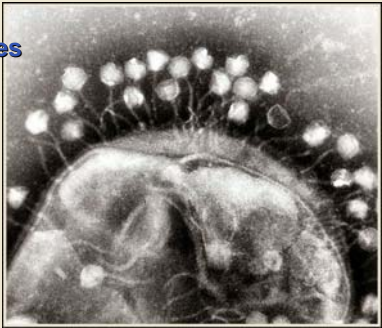
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Proterozoic Eon

Viruses



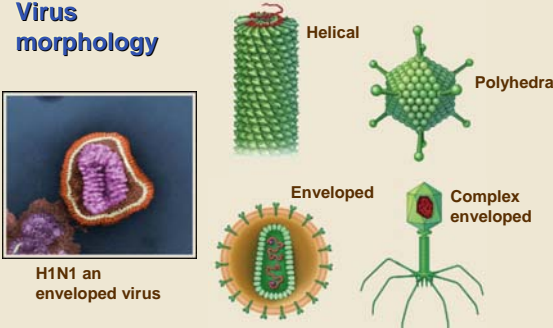
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Virus morphology



H1N1 an enveloped virus

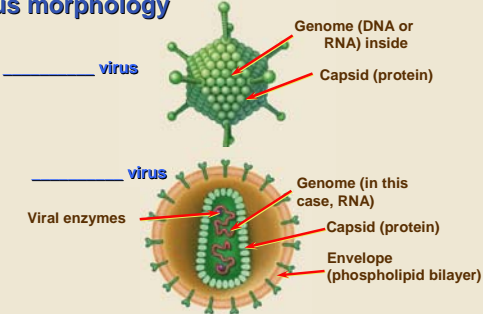
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Virus morphology



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Virus morphology

BIO1130 Organismal Biology Figure 22.1 & 3

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Viruses – Replication

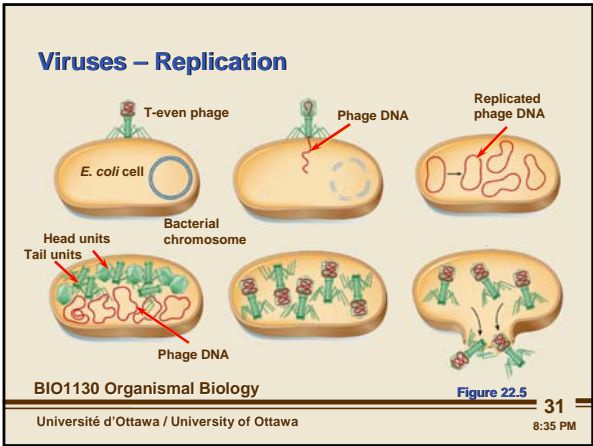
Figure 22.5

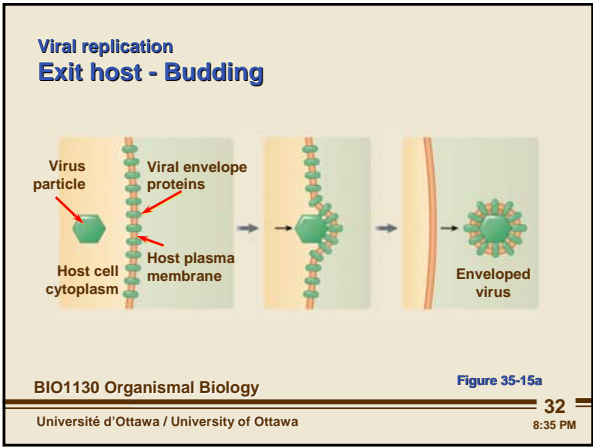
Viral phases in replication

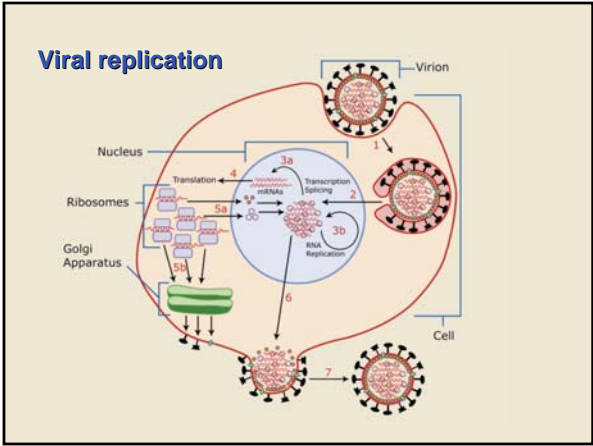
- Entry
- Transcription and viral protein production
- Replication of viral genome
- Assembly of virions
- Exit
- Transmission to new host

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Proterozoic Eon

Viruses aren't cells?

- No cell membrane
- No ribosomes
- No mitochondria
- DNA (RNA) wrapped in a protein coat

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