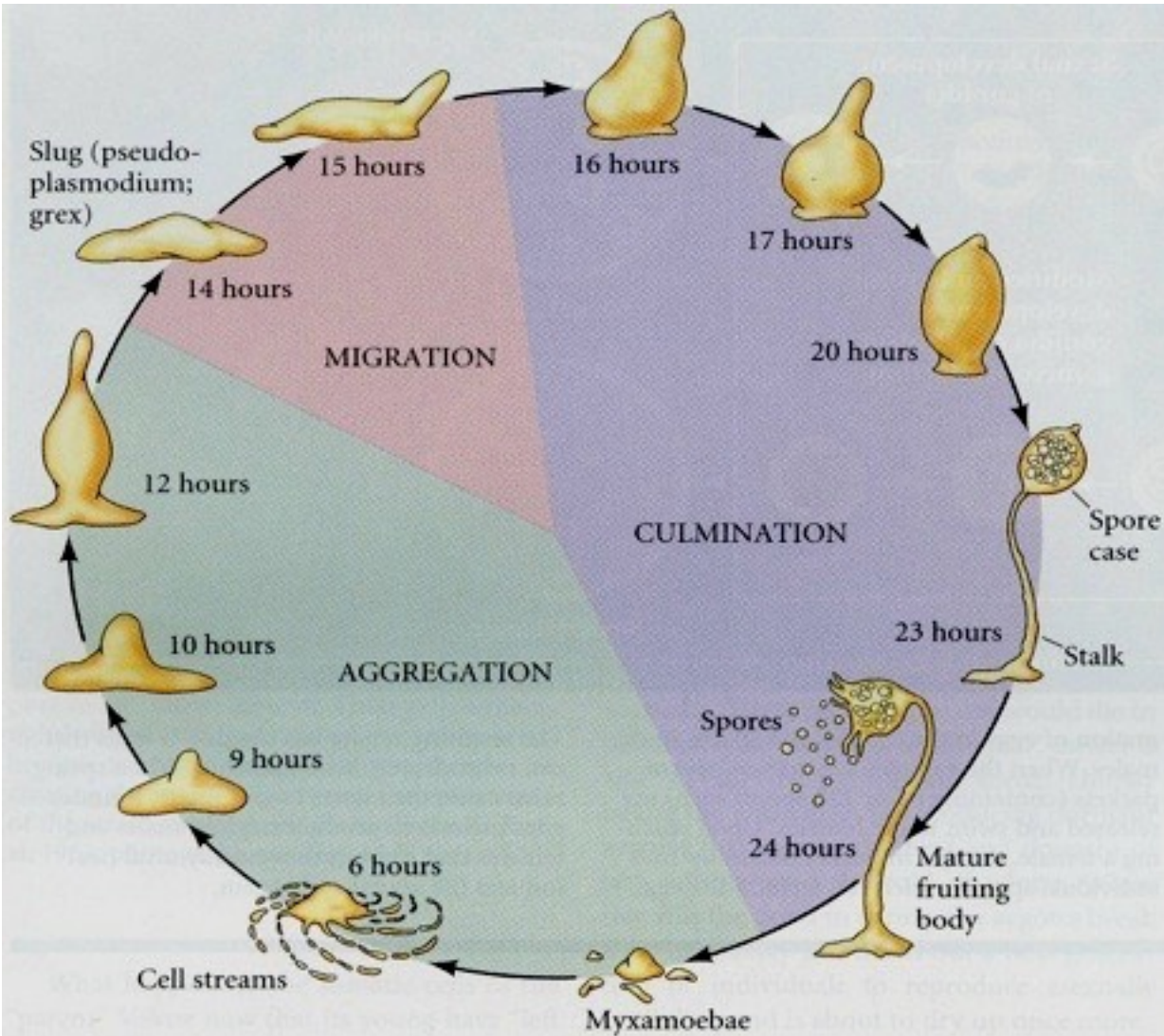


Radboud University Nijmegen





1. Free living myxamoebae feed on bacteria and divide by fission.

2. When food is exhausted they aggregate to form a mound, then a multicellular slug.

3. Sugar migrates towards heat and light.

4. Differentiation then ensues forming a fruiting body, containing spores.

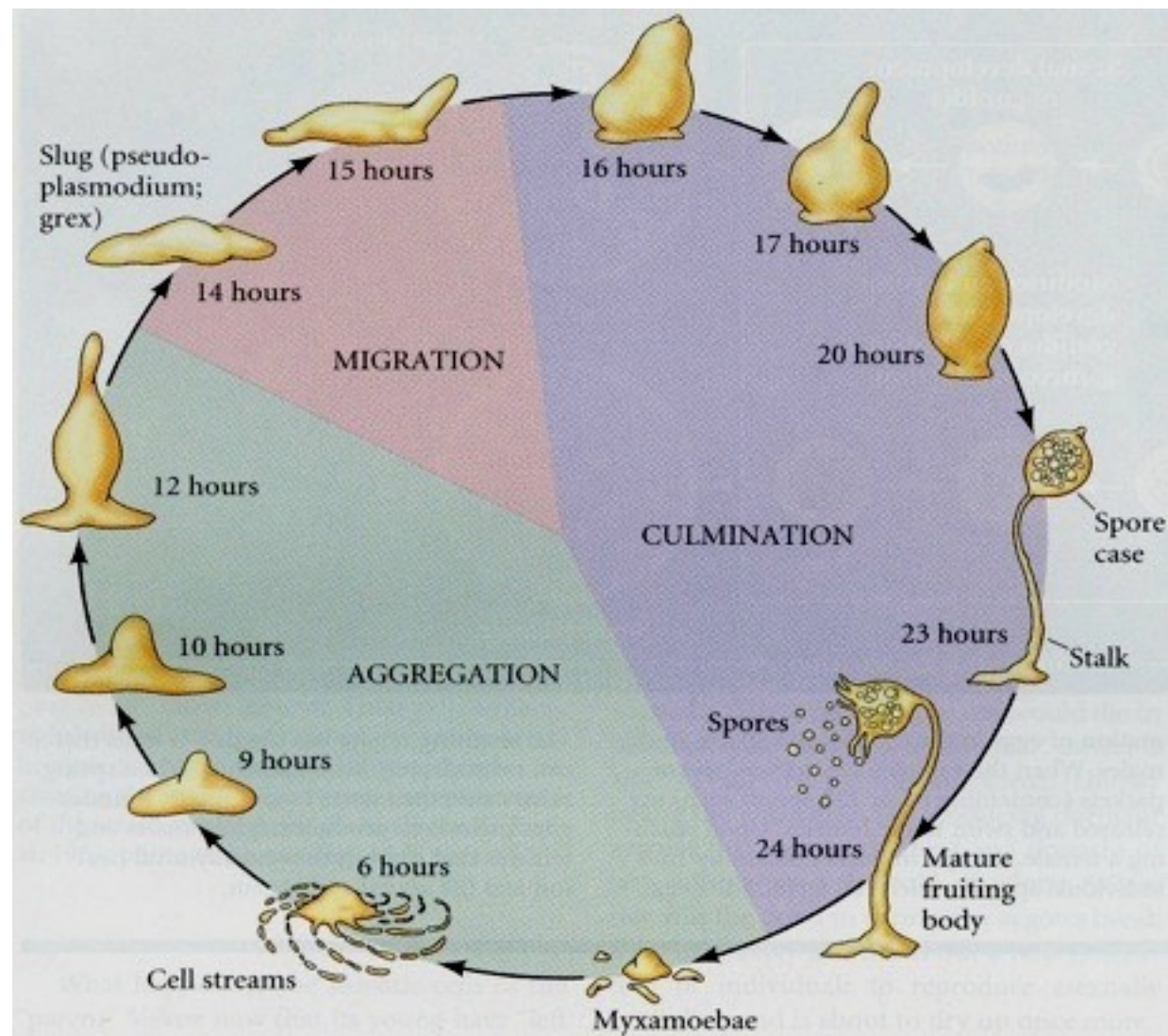
5. It takes just 24 hrs.

6. Released spor from new amebae.

Emergence and Self-Organization:

The life-cycle of *Dictyostelium*

Emergence and Self-Organization: The life-cycle of *Dictyostelium*



1. Free living myxamoebae feed on bacteria and divide by fission.
2. When food is exhausted they aggregate to form a mound, then a multicellular slug.
3. Slug migrates towards heat and light.
4. Differentiation then ensues forming a fruiting body, containing spores.
5. It all takes just 24 hrs.
6. Released spores form new amoebae.

Order parameter: Labelling states of a complex system

Forms are emergent,
self-organised:

Arise from interactions
between components
→ reduction of degrees
of freedom

