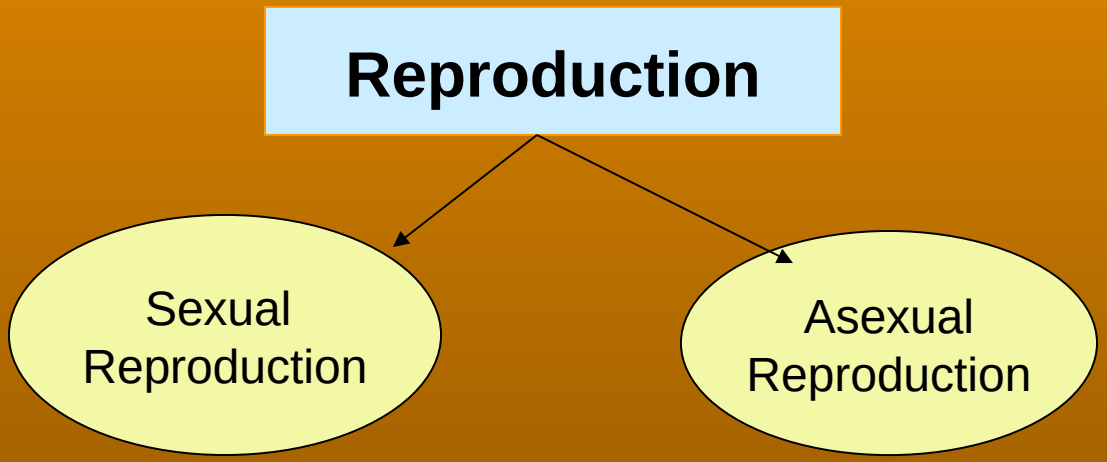
Reproduction:

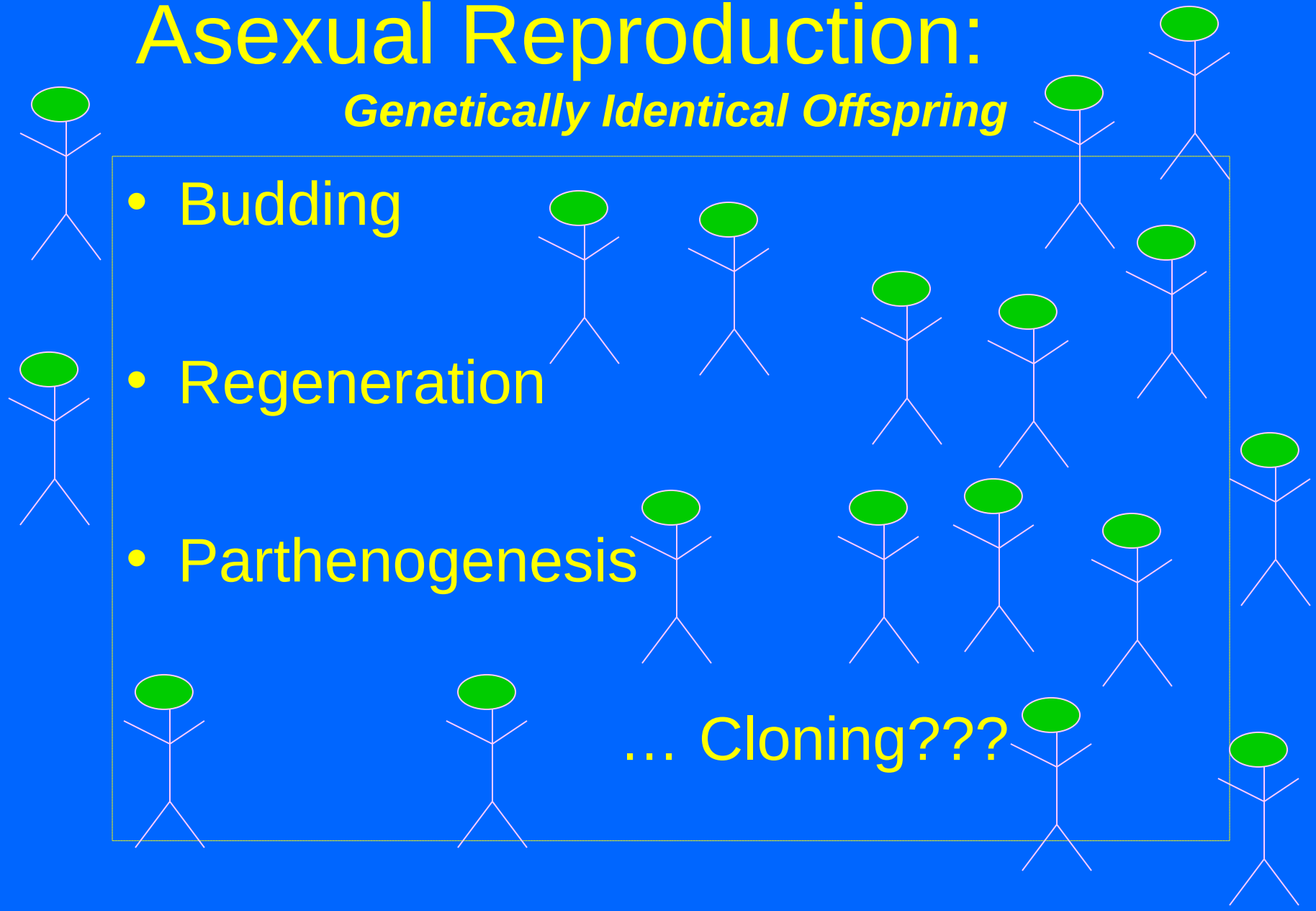
The Continuity of Life



Asexual Reproduction:

Genetically Identical Offspring

- Budding
- Regeneration
- Parthenogenesis



... Cloning???

Budding…

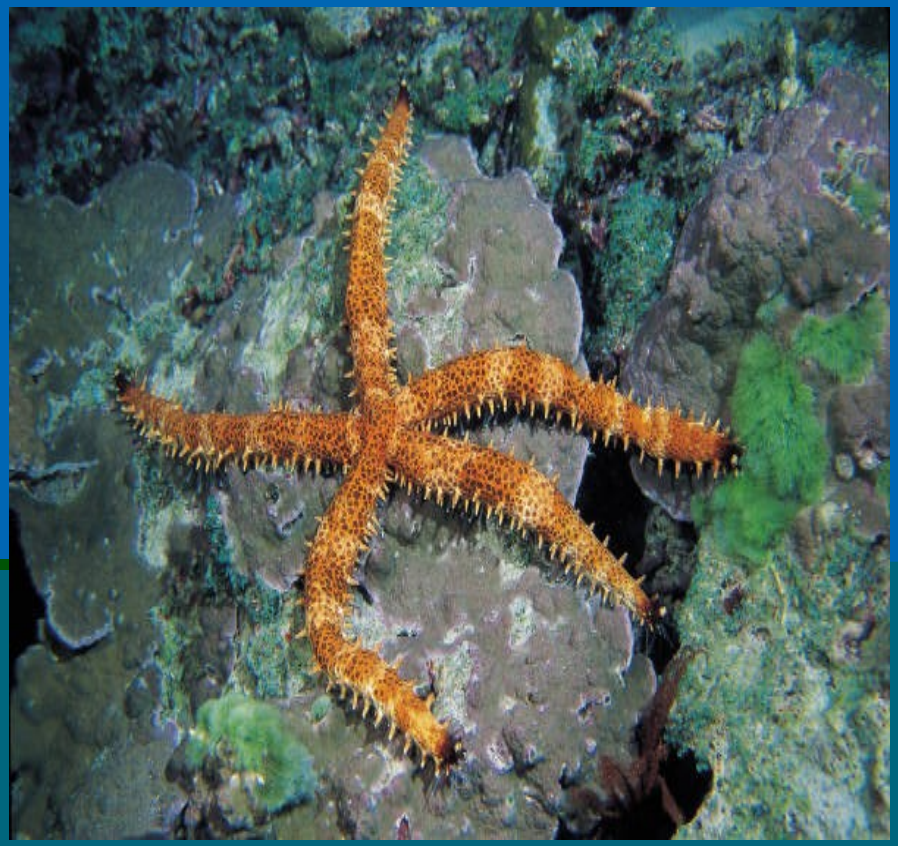
- New Organisms Arise as an Outgrowth from the Parent Organism
- Seen Mostly in Marine Animals
  - Examples Include; Sponges, Corals and Jellyfish…

Coral Polyp Photo courtesy Jeffrey N. Jeffords

http://oceanworld.tamu.edu/students/coral/coral1.htm

Regeneration…

- This refers to the ability of some animals to re-grow severed parts.
- Some of these animals can also grow new organisms from the severed pieces (Segmented Worms and Sea Stars)

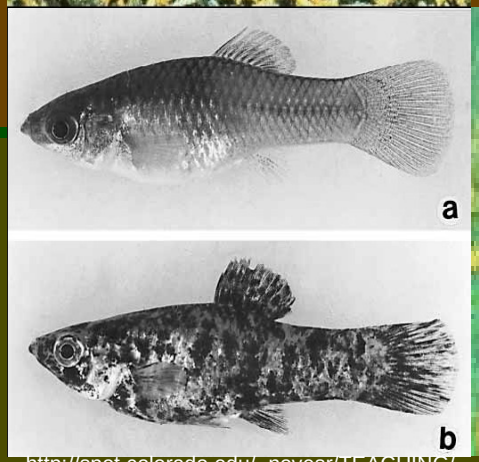


Parthenogenesis…

- Offspring can arise from unfertilized eggs.
- Includes some Fish, Reptiles, Amphibians and Aphids.
- Most of these species can switch between Sexual and Asexual Reproduction.
  (depending on conditions)

http://aolsearch.aol.com/aol/imageDetails?invocationType=imageResults&query=photos+of+parthenogenic+species&img

http://www.duke.edu/~tej5r6/Hawaiipics/



http://spot.colorado.edu/~noyesr/TEACHING/4800%20Fall%202002.%20Biology%20and%20Evolution%20of%20Sex/Gynogenesis.Poecilia.pdf

www.ag.ndsu.nodak.edu

WHY???

- Why would these organisms prefer asexual reproduction in stable conditions and sexual reproduction in more uncertain or less favorable conditions?

Imagine…

- Imagine that a particular organism within a species lacks a certain gene (or ability to express a certain gene) necessary to break down a specific type of food, yet others of the same species within the population are able to break down that food.
- ***What happens if the uncertain or less favorable conditions lead to that being the primary food source?***

Death…

- The parent organism and all of their offspring produced through parthenogenesis would die!

- But, with the genetic diversity that comes from sexual reproduction the possibility of the offspring surviving is enhanced.

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