- The bacterial cell went through a series of changes to ultimately become a 0 mitochondrion
- The eukaryote helped the bacteria by providing protection and carbon compounds
- 0 The bacteria became able to provide the eukaryote with ATP
- ➤ Evidence to support the theory:
  - Mitochondria: 0
    - Are about the size of most bacterial cells -
    - Divide by fission, as do most bacterial cells
    - Divide independently of the host cells
    - Have their own DNA, which resembles more the DNA of a prokaryote than a eukaryote
    - Have their own ribosomes, which allows them to produce their own proteins
    - Have 2 membranes on the exterior, which is consistent with an engulfing process
  - Chloroplasts:
- plasts: Hatena (protist) ingest organic mater 21 h can also behave as a predator and ingest gr

fal in site nutritional peeds by photosynthesizing Hatena and grash al rae thrive in a symbiotic relationship Elysia chloroticanas juvenile stage is brown and ingest nutrients from its environment. When it comes in contact with a specific type of green algae, it enters the adult stage, in which chloroplasts from the ingested algae are retained in its digestive tract

- Its colour becomes green
- It can carry out photosynthesis

## The 64 codons

- > All genetic molecules include *codons* that code for different parts of the proteins
  - 3-letter combination of DNA coding for a specific amino acid
- > Inj nearly all organisms the same codon makes the same amino acid
  - Slight variations, due to evolution 0
- > Mitochondria have a DNA code that resembles more bacteria than eukaryotes
  - The more DNA two organisms have in common the more closely related 0 they are to one another