Angler Fish (Certias Holboelli)

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Species Description

- Behavior - Angler fish typically dot not really move at all. The reason for this is to conserve energy. Deep sea angler fish live at 1,000 to 2,000 meters where they depend on their bio-luminescent lures to attract prey into their mouths. A really interesting but unusual adaptation that angler fish have, is the reproduction and size of the males. When a male comes in contact with a female he latches on to her with his sharp teeth. The male then fuses on to the female, relying on her for nutrients and they share the same blood circulation. Eventually the males eyes disappear along with his internal organs, becoming a permanent parasitic sperm source for the female.

- Size - Angler fish come in a variety of sizes. Generally they are all small, less than a foot but

some species can grow up to 4 feet. This image should give you some idea of the size of some angler fish.

- Color - Angler fish have blackish orange skin that is soft and scaleless. Their skin can absorb and light that may be reflecting off something, and make them virtually invisible to prey. This photo is an example of some of the different species of angler fish.

Energy

- Food Web - Unable to find a food web for the deep sea species.
- Feeding - Angler fish use a bio-luminescent lure that is usually attached to a bone from their dorsal fin. They depend on the lure to catch their prey because they can only move in small amounts to conserve energy due to the scarce amounts of food at those depths. The angler fish have a very weak and pliable skin and bone structure allowing them to swallow prey almost twice their size.
  - Heterotroph
  - Consumer

Trophic Level - angler fish live at the deepest known part of the ocean that can support life. They live at up to 2,000 meters!

Population

- Size - There are over 200 species of angler fish. We really do not know the exact amounts of the species due to the extreme conditions that they live in and there is no way of accurately monitoring them.
- Limiting factors
- **Habitat**
- Biome(s) (graph)
  - Temperature range
    - The temperature stays a constant of 2 degrees Celsius, day, night and year round. At those depths the sun has little effect on the waters climate.
  - Precipitation - Just a constant temperature and extreme amounts of pressure.
  - Vegetation - There is no vegetation at those depths.
  - Animals - mostly bio-luminescent fish and squid but in very scarce amount. The conditions are extreme for life down there. Bio-luminescent squid and fish are the only animals known down there.
- Niche - The life at the deep sea was first thought to thrive from the sun until the late 1970's when hydrothermal vents were discovered. The proved to supply new life forms with

an alternative source of energy than the sun. There is practically no light at these depths so almost all life depends on the heat from the hydrothermal vents.

- Adaptations - Angler fish have really adapted to their environment. With practically no light at those depths they have developed infrared vision and their eyes are rarely used. Their body shapes have changed to allow them to hover motionless to conserve energy. and they have bio-luminescent lures to attract prey.
- Life Cycle - Angler fish have lived up to three years in labs but it their actual habitat we do not know how long they actually can live. They breed with the unusual methods of the male permanently attatching its self to the female, becoming a parasitic sperm source.
- Sexual Dimorphism - The male angler fish is much smaller in size and eventually becomes part of the female relying on her blood flow and nutrients to survive.
- Cladogram or Phylogenetic Tree - there is not enough info to retrieve or create a phylogenetic tree of this organism.
- Ancestors/Fossil Descriptions - There was a 15 million year old fossil of an angler fish found in California but we have not really retrieved any evidence that shows evidence of their ancestors.
- Conservation Status - Since humans rarely interact with them they are not really conserved by us.
- Interaction with humans - Angler fish rarely have interactions with humans due to their extreme living conditions.

Works Cited

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