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Cover images — Top to bottom: Giant oarfish, Mirrorbelly barreleye, Slender Snipe eel and Gulper eel. All images in the public domain.

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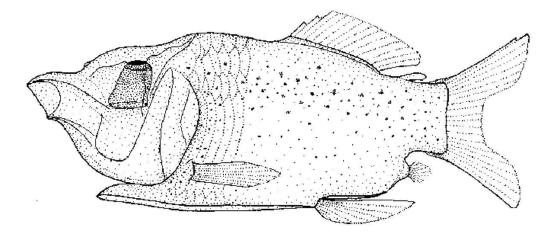
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A Crested oarfish. Image in the public domain.

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A Mirrorbelly by Dr. Tony Ayling.

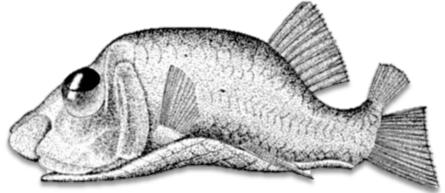
Introduction to the Deep Sea Fish II: Gulper eel, Slender Snipe Eel, Barreleye, and Oarfish

The four fish in this unit study are all varying and unique in their own bazaar ways. There is one major similarity among the Gulper eel, Snipe eel and oarfish – they are all quite long! All three are long, but the Gulper eel and Slender Snipe eel are quite skinny, although all differ in body proportions from one another.

The Gulper eel is known for it's amazingly huge pelican-like mouths and ability to swallow prey larger than itself. The Slender Snipe eels, simply sweep their curved beak-like mouths through the water while tiny shrimp and other zooplankton get caught in their tiny hooked teeth. The Slender Snipe eels, little feather weights weighing in at around 5 oz. as adults, currently hold the world record of having the most vertebrae of any vertebrate with a staggering number of 750 bones!

The barreleyes are unique fish with transparent heads and large eyes that point upward. Scientists believe the barreleyes can also swivel their eyes forward while capturing prey.

Lastly, the silvery, long oarfish, sometimes seen in shallow waters, takes away the record for being the longest bony fish in the world, with a recorded length of 36 feet! Now that's a record breaker!



A Mirrorbelly barreleye fish. Image in the public domain.

PowerPoint Review - Deep Sea Fish II

Directions: Print out this study guide and handwrite the answers into it, or download and use the free Adobe Acrobat Reader to type the answers into the pdf file. Read through NatureGlo's eScience PowerPoint, Deep Sea Fish II: Gulper eel, Slender Snipe Eel, Barreleye, Oarfish. Answer the questions below with either multiple choice, filling in the blanks or giving a short answer.

Slid	e #4 The Gulper Eel or Pelican eel, Eurypharynx pelecanoides
1.	Pelecanoides refers to pelican for the Gulper fish's large
	similar to a pelican's.

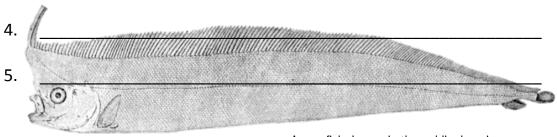
- Slide #5 Gulper Eel Characteristics2. How big is the Gulper eel's mouth compared to it's body size?
- a. Smaller b. bigger c. same size

Slide #6 Gulper Eel Diet & Eating

3. Gulper eels swim into a large groups of ______ or other crustaceans with their mouth wide open, scooping them up while floating/swimming along.

Slide #8 - The Slender Snipe Eel, Nemichthys scolopaceus

List two facts about the Slender Snipe eel below.



An oarfish. Image in the public domain.

<u>PowerPoint Review – Deep Sea Fish II</u>

 Slide #9 Slender Snipe Eel Characteristics 6. The Slender Snipe eel has the most vertebrates of any vertebrate worldwide with around
Slide #11 The Barreleye Fish Describe the appearance of the barreleye's unique head. Include three facts in your description. 7.
Slide #13 Barreleye Eyes & Transparent Heads
8 eyes accurately track and home in on small zooplankton such as hydroids, copepods, and other pelagic crustacean.
a. Binocular b. Small c. Giant
Slide #'s 15 & 16 Oarfish Introduction & Anatomy
List two facts about the oarfish from slide #'s 15 and 16 below.
9.
10

Background transparency: Gulper eels. Image in the public domain.

Journal Entry: Deep Sea Fish II Name:_____ Date: _____ Make a sketch in the box below of any deep sea Fish species of your choice including any from NatureGlo's eScience PowerPoint, Deep Sea **Description** – Describe what Fish II: Gulper eel, Slender Snipe Eel, Barreleye, kind of deep sea fish you drew Oarfish. Fill in the information on the right (size, color, shape about your sketch. etc.)_____ **Geographic range** – Where it lives? **Diet** – What it eats. **<u>Habitat</u>** – What marine zone it lives in and such places as coral reef, Mariana trench etc.

Deep Sea Fish II - Quiz

Directions: Print out this study guide and handwrite the answers into it, or download and use the free Adobe Acrobat Reader to type the answers into the pdf file. Read through NatureGlo's eScience PowerPoint, Deep Sea Fish II: Gulper eel, Slender Snipe Eel, Barreleye, Oarfish. Answer the questions below with either multiple choice, filling in the blanks or giving a short answer.

Slide #4 The Gulper Eel or Pelican eel, Eurypharynx pelecanoides
1. Pelecanoides refers to pelican for the Gulper fish's large
similar to a pelican's.
Slide #5 Gulper Eel Characteristics
2. How big is the Gulper eel's mouth compared to it's body size?
a. Smaller b. bigger c. same size
Slide #6 Gulper Eel Diet & Eating
3. Gulper eels swim into a large groups of or
other crustaceans with their mouth wide open, scooping them up
while floating/swimming along.
Slide #8 - The Slender Snipe Eel, Nemichthys scolopaceus
List two facts about the Slender Snipe eel below.
4.
5

Deep Sea Fish II - Quiz

 Slide #9 Slender Snipe Eel Characteristics 6. The Slender Snipe eel has the most vertebrates of any vertebrate worldwide with around
Slide #11 The Barreleye Fish Describe the appearance of the barreleye's unique head. Include three facts in your description. 7.
Slide #13 Barreleye Eyes & Transparent Heads 8 eyes accurately track and home in on small zooplankton such as hydroids, copepods, and other pelagic crustacean.
a. Binocular b. Small c. Giant
Slide #'s 15 & 16 Oarfish Introduction & Anatomy List two facts about the oarfish from slide #'s 15 and 16 below.
9
10

Deep Sea Fish II: Review Questions & Quiz Answer Key

Directions: Print out this study guide and handwrite the answers into it, or download and use the free Adobe Acrobat Reader to type the answers into the pdf file. Read through NatureGlo's eScience PowerPoint, Deep Sea Fish II: Gulper eel, Slender Snipe Eel, Barreleye, Oarfish. Answer the questions below with either multiple choice, filling in the blanks or giving a short answer.

Slide #4 The Gulper Eel or Pelican eel, Eurypharynx pelecanoides

1. Pelecanoides refers to pelican for the Gulper fish's large **mouth** similar to a pelican's.

Slide #5 Gulper Eel Characteristics

- 2. How big is the Gulper eel's mouth compared to it's body size? b.
- a. Smaller b. bigger c. same size

Slide #6 Gulper Eel Diet & Eating

3. Gulper eels swim into a large groups of **shrimp** or other crustaceans with their mouth wide open, scooping them up while floating/swimming along.

Slide #8 - The Slender Snipe Eel, Nemichthys scolopaceus

List two facts about the Slender Snipe eel below. Answers will vary but can include any two of the following:

- Other names Deep sea duck, Threadfish
- A deep sea fish
- Range midwater (1,000-13,000 feet, or 300-4,000 meters)
- Weight a few ounces
- Length can reach 5 feet or 1.5 m in length

<u>Deep Sea Fish II –</u> Review Questions & Quiz Answer Key

Slide #9 Slender Snipe Eel Characteristics

6. The Slender Snipe eel has the most vertebrates of any vertebrate worldwide with around **750**.

Slide #11 The Barreleye Fish

Describe the appearance of the barreleye's unique head. Include three facts in your description.

Answers will vary but should include the following:

- Barrel-shaped, tubular eyes, generally directed upwards to detect prey silhouettes but capable of directing eyes forward
- Eyes set in large, dome-shaped, soft tissue transparent head

Slide #13 Barreleye Eyes & Transparent Heads

- **8.** <u>a.</u> eyes accurately track and home in on small zooplankton such as hydroids, copepods, and other pelagic crustacean.
- a. Binocular b. Small c. Giant

Slide #'s 15 & 16 Oarfish Introduction & Anatomy

List two facts about the oarfish from slide #'s 15 and 16 below.

Answers will vary but can include any two of the following facts from slide #'s 15 & 16:

- Order Lampriformes, including: crestfishes, opahs & ribbonfishes
- Large, greatly elongated, pelagic
- ray-finned fish
- Four species, two genera
- Range epipelagic to mesopelagic, all temperate to tropical ocean layers, from 1,000 meters (3,300 ft.)
- Giant oarfish (Regalecus glesne) longest bony fish alive, growing to up to 11 m (36 ft.); some cartilaginous fish, basking shark & whale shark longer
- Common name perhaps references highly compressed, elongated bodies, or discredited belief of "rowing" themselves through water with pelvic fins
- Family name Regalecidae Latin regalis, meaning "royal"
- Beachings occasional; occur after storms or from sick or dying lingering at surface

Slide #16 facts:

- Dorsal fin originates from above eyes and & runs entire top length of fish
- Approximately 400 dorsal fin rays; first 10 to 13 elongated to varying degrees, forming trailing crest embellished with reddish spots and flaps of skin at ray tips
- Pelvic fins similarly elongated and adorned, reduced to 1 5 rays each
- Pectoral fins greatly reduced & situated low on body
- Anal fin completely absent
- Fine point body tapering at end
- All fins lack true spines
- Small, protrusible oblique mouth with no visible teeth
- Scale less; skin covered with easily abraded, silvery guanine
- Lack gas bladders
- Color variable; flanks commonly covered with irregular bluish to blackish streaks, black dots, and squiggles; markings quickly fade following death