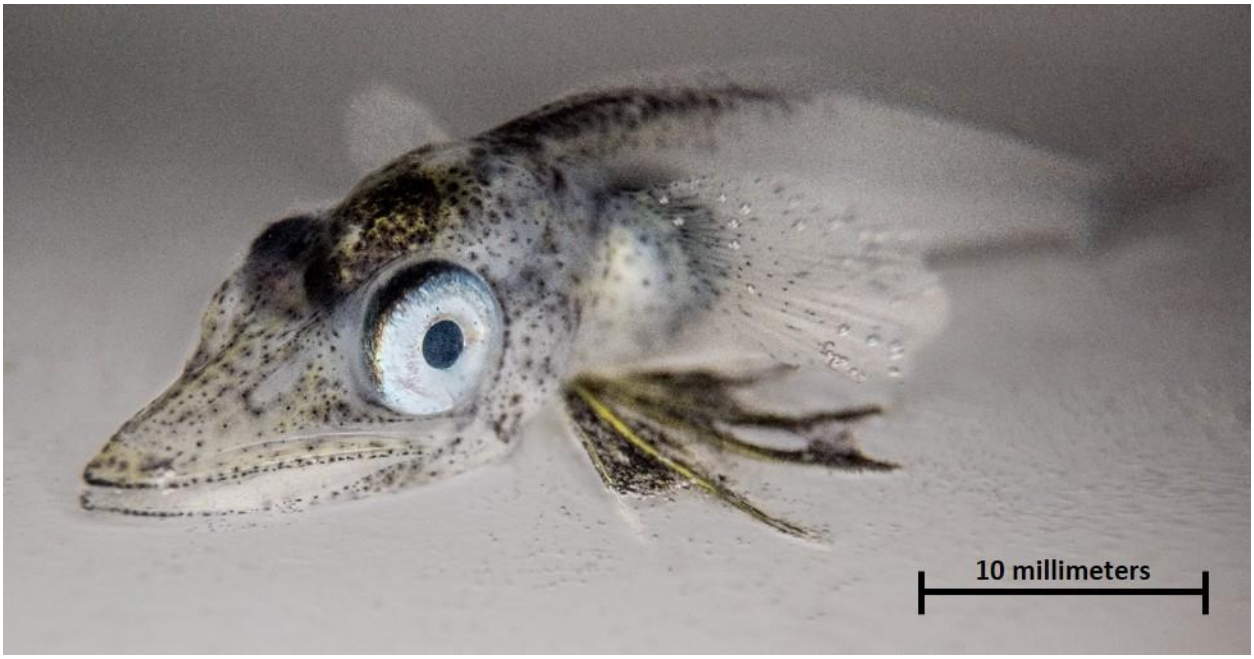
POLAR–ICE
Interdisciplinary Coordinated Education

I.D. Antarctica



Week 3 Dichotomous Identification Key
Common larval fishes of the Western Antarctic Peninsula

Always start with the first question, Q1. In this case, the questions are worded as statements. Choose the statement that best describes the organism in the photo, and then follow the instructions which will tell you which Question to go to next. Don't worry if that means you skip over a question – just follow the directions and you will get to an identification when you are done. Refer to the fish anatomy drawing on the last page of this key. Good luck!

Question 1 (Q1)

1a – The eyes of the fish are on long, tubular stalks that extend away from the skull.....***Bathylagus antarcticus*** (deep sea smelt)

1b – The eyes are not on stalks.....Go to Q2

Q2

2a – The eyes are oval, or bean shaped.……Go to Q3
2b – The eyes are circular……..Go to Q4

Q3

3a – Part of the eye extends downwards, creating a shape that resembles a tear drop……**Myctophidae** (lanternfish)
3b – There is no attached tear drop shape. The body is incredibly long and thin…… ……..……**Notolepis spp**. (barracudina)

Q4

4a – There is no pelvic fin visible……..Go to Q5
4b – A pelvic fin is visible……Go to Q10

Q5

5a – The fish is short and fat, almost bloated. The gut is massive, silver-colored, and extends to ~50% of the body length. The body is entirely covered in pigment, except for the caudal fin region.....……**Artedidraconidae** (barbeled plunderfish)
5b – The fish is long and slender. The gut is not bloated, extends to only ~30% the body length, and is not silver-colored. A variety of pigmentation patterns may be present…….Go to Q6

Q6

6a – There are two rows of short spines that go along the length of the body. One row is near the dorsal side and the other row is near the ventral side. The entire body is covered in pigment.....……***Prionodraco evansii*** (Antarctic dragonfish)
6b – There are no rows of spines present on the body…….Go to Q7

Q7

7a – The fish is mostly white, with **two**, thick vertical stripes of pigment on its body.....……***Lepidonotothen squamifrons*** (grey rockcod)
7b – There are no vertical stripes, more than two stripes, or only one stripe on the body……...Go to Q8

Q8

8a – There are dozens of thin vertical stripes that run the length of the body. There is also pigmentation above the gut, behind the head, and on the dorsal side of the body……..……..……..……***Trematomus newnesi*** (dusty rockcod)

8b – There are no vertical stripes on the body……Go to Q9

Q9

9a – The body is mostly white, with a single row of pigment on the dorsal part of the body. There is also some pigmentation directly above the gut and behind the skull.....……***Pleuragramma antarctica*** (Antarctic silverfish)

9b – The body is mostly white, with a single row of pigment that runs down the middle of the body. There is also some pigmentation directly above the gut and behind the skull……***Trematomus scotti*** (crowned rockcod)

Q10

10a – The pelvic fin is much longer than it is wide; it extends over 50% of the body. It has a length of approximately 20 millimeters (mm) or more.……. ……..… ***Cryodraco antarcticus***

10b – The pelvic fin is short; it is only as long as it is wide. It has a length of approximately 10 mm or less.……..Go to Q11

Q11

11a – The entire pelvic fin, from the part attached to the body and extending outwards to the end of the fin, is darkly pigmented.……..Go to Q12

11b – Only the outside edge of the pelvic fin is pigmented. The area of the fin connecting to the body is clear……Go to Q13

Q12

12a – There is a patch of pigmentation on the dorsal area of the body directly behind the head. The pigmentation extends only halfway down the length of the body, the remaining body and tail are white…….…***Pagetopsis macropterus*** (icefish)

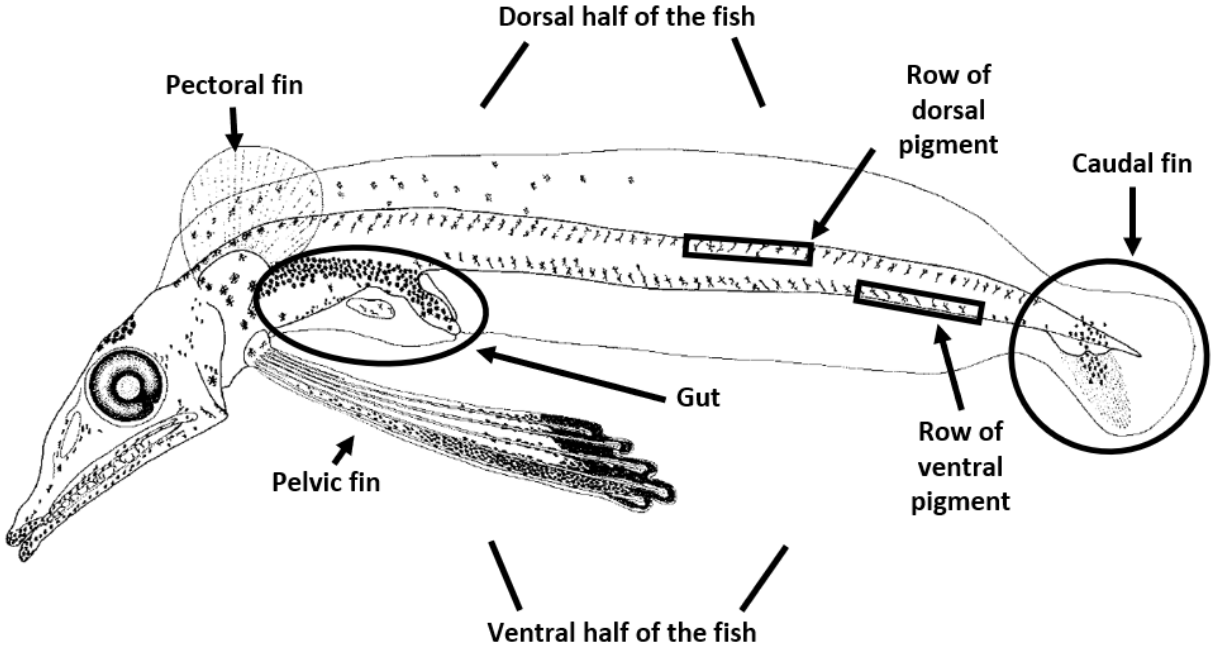
12b – There are dozens of thin vertical stripes that run the entire length of the body……***Chionodraco rastrospinosus*** (ocellated icefish)

Q13

13a – The sides of the body are white. There is a single row of pigmentation that runs along the dorsal portion of the fish……
……..……***Champsocephalus gunnari*** (mackerel icefish)

13b – There are dozens of thin vertical stripes that run the entire length of the body……***Chaeonodraco wilsoni*** (spiny icefish)

Fish Anatomy



Modified from Kellermann 1990