Bottomfish

There are several key things to look out for when telling the difference between Opakapaka and Kalekale:

1. **Horizontal Line Across Fish**

   ![Image 1](image1.png)  ![Image 2](image2.png)

   Opakapaka  Kalekale

   When drawing a horizontal line from the front of the upper lip to the fork of the tail of each fish, the line goes **beneath the eye** for Opakapaka and **through the eye** for Kalekale.

2. **Fin Coloration**

   ![Image 3](image3.png)

   Opakapaka  Kalekale  Opakapaka

   The pectoral fin of Opakapaka is **yellow or brown** in color, while the pectoral fin of Kalekale is more **orange** in color.

   ![Image 4](image4.png)

   Opakapaka  Kalekale

   The pectoral fin of Opakapaka is **yellow or brown** in color, while the pectoral fin of Kalekale is more **orange** in color.

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1) Opakapaka, 2) Kalekale, 3) Kalekale/Opakapaka 3-fish photo, 4) Kalekale/Opakapakag 2-fish photo courtesy of Kurt Kawamoto
**Bottomfish**

3. Eye coloration

Similar to the pectoral fin color difference between the two species (see part 2 on the previous page), the eye of Opakapaka is more yellow in color, while the eye of Kalekale is more orange in color.

![Opakapaka](image1)

![Kalekale](image2)

4. Snout countershading

The dark brown coloration on the snout of Opakapaka fades gradually down beneath the eye of the fish; this same dark brown coloration on the snout of Kalekale changes color abruptly.

![Opakapaka](image3)

![Kalekale](image4)

5. Eye-to-body ratio

Kalekale has a larger eye for the size of its body compared to Opakapaka.

![Opakapaka](image5)

![Kalekale](image6)

1) Kalekale/Opakapaka 2-fish photo, 2) Kalekale/Opakapaka 2-fish photo 3) Opakapaka, 4) Kalekale photo courtesy of Kurt Kawamoto