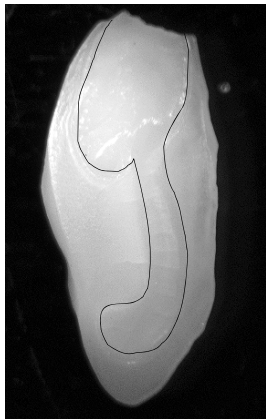
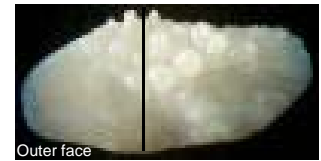


Weakfish Otolith Cutting and Reading Protocol

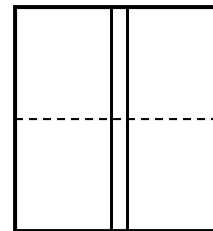


1. Determine which otolith is the right otolith by looking at the succal groove on the inner face. The tail of the groove will curl to the left when the head is anterior (and to the right on the left otolith).



2. Mark nucleus with a pencil by holding the otolith up to a light. The nucleus will be a dark dot seen through the outer face. Draw a line through this area. If a dot cannot be seen, draw a line through the most protruding area.

3. Mount otolith on an otolith cutting sheet with the outer face outward (groove facing sheet) and the line you have drawn through the nucleus on one of the double lines in the middle.



Example of an otolith cutting sheet, with correct orientation. Place otolith on sheet so that the line you drew through the nucleus on one of the two center lines.

4. Cut using 3 or 4" Buehler Diamond Wafering Blades. Take a thin section through the center of the otolith. Mount this section on a microscope slide using crystal bond and cover section with crystal bond. Weakfish are fairly easy to cut, the section should be thin enough to allow light to pass easily and annuli to be seen clearly. A good section will have a clear defined "triangle" (see pictures below).



5. Otoliths are read by counting each annulus, or dark ring. Spawning and annuli deposition overlap allowing for easy age assignment. Weakfish will have an annulus forming in the spring to early summer months.

6. All otoliths should be read by 3 independent readers. The mode of the 3 reader is evaluated by a senior reader to establish the final age assignment.

Age 4 otolith (above)

