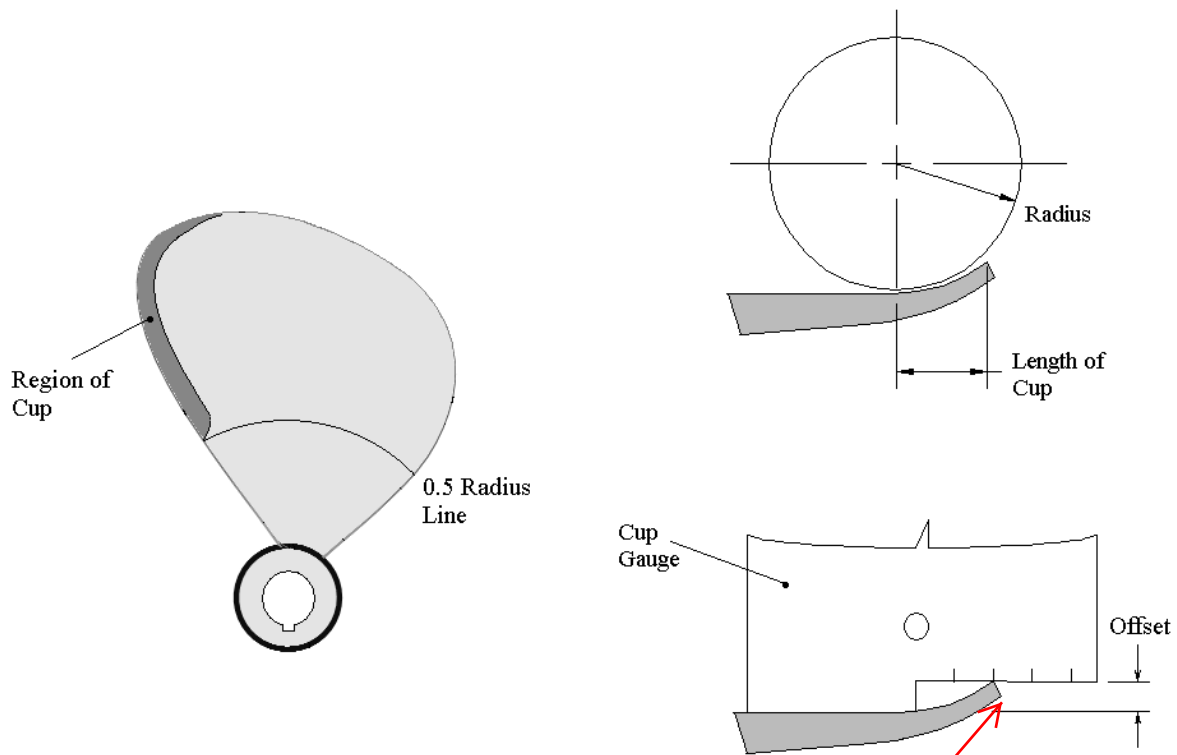


Cup

Propeller blades with cup have a small bend in the trailing edge of the blades. The amount and the location of the bend are the two main variables in cup geometry. The bend is always toward the aft of the boat, or toward the pressure face of the blades. The location of the cup can vary along the radius of the blade, but is commonly present on the outer radii. The cup can extend to and even past the blade tips. Figure 2.3B shows a typical cup location, from the 0.5 radius to the tip.

There exists no industry-wide standard on cup measurement and application. The amount of cup in a propeller blade is described using differing terminology. The adjectives light, medium, and heavy are commonly used but difficult to quantify. One method used to define cup assigns a number to represent offset of the trailing edge from the face of the blade. For example, a common value of 0.015 inches of offset per cup number would result in a “number 4” cup being an offset of  $4 \times 0.015 = 0.060$  inches. An additional method for specifying cup would be to specify a cup length along with a radius of curvature for the cupped blade to follow. Figure 2.3B shows these two methods.



**Figure 2.3B** Location and Measurement of Blade Cup

Square Trailing Edge with sharp corners