

Lower Zambezi

Catch & Release Initiative

GUIDELINES

Measuring and weighing fish

MEASURING AND WEIGHING FISH

Many catch-and-release anglers will want to know just how big their catch really was before releasing it. This means that they will either need to weigh or measure the fish before releasing it. Details such as length and weight are important for record keeping and can provide valuable data for analysis of fish health and population status. However, measurement does entail further handling of fish and increases the time they spend outside of the water, which can affect the fish's post-release survival. As with any handling of fish before release, time is of the essence and it is important to work quickly, and get the fish back in the water as soon as possible.

This sheet explains some of the commonly used measures of length and gives some basic guidelines on handling fish for weighing and measuring that can help ensure the best chance of the fish surviving after its release.

Tips for weighing and measuring a fish

Be prepared

- Make sure that all the necessary equipment for measuring the fish and recording data is ready and accessible
- Be ready to measure the fish before you remove it from the water

Make a space

- Have a clear space on the boat in which to do all your measurements.
- Do not lay the fish down on a hot deck, rather have a wet towel or thick plastic sheet laid down to protect the fish from hot or abrasive surfaces

Work together

- It is easier and more efficient if one person handles the fish while another acts as a scribe/ data recorder to make notes and record the measurements
- The time the fish spends out of the water should be kept to a minimum

Use the right equipment

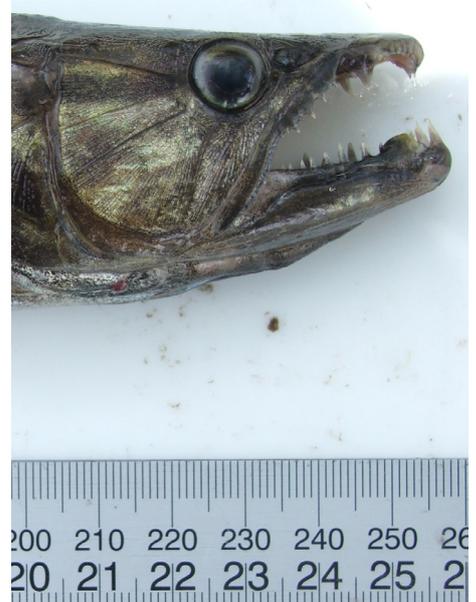
- A fish measuring board with a stopper at one end will make measuring length quicker and easier
- Using a weigh bag or sling to weigh large fish can help minimise the risk of injury caused by vertical suspension

Use the right measure

- Length is generally a better measure to use than weight as it is less stressful on the fish

Measuring length

Length is often quicker and easier to measure than weight. For many species the relationship between length-and weight is well established, so weight can be estimated quite accurately for a known length using a length-weight relationship equation. If you are reporting or submitting catch records, it is important to stick to a standard measure of length or state which measure was used.



In the bag

Avoid the temptation to use the inbuilt scale on your lip-gripper to weigh the fish by suspending it from its jaw as this can cause permanent damage to the jaw and spine, especially for large fish. Using a weigh bag or sling can minimise the chance of injury



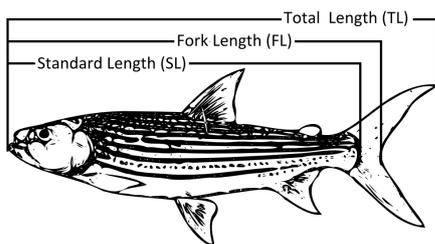
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Conventional measures of fish length are Standard Length (SL) Fork Length (FL) and Total Length (TL). In the field TL and FL are generally easier to measure than SL and so are commonly used by fish biologists. LZCRI uses FL as a standard length measurement.

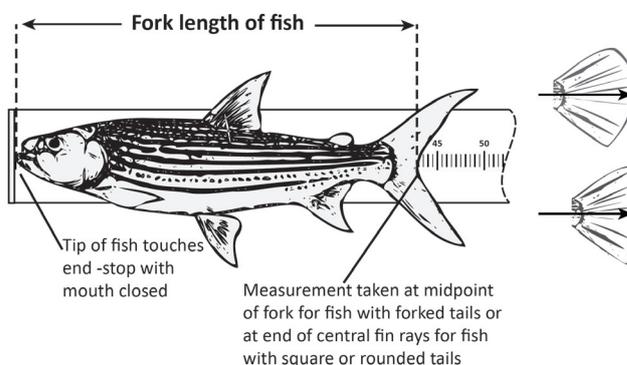
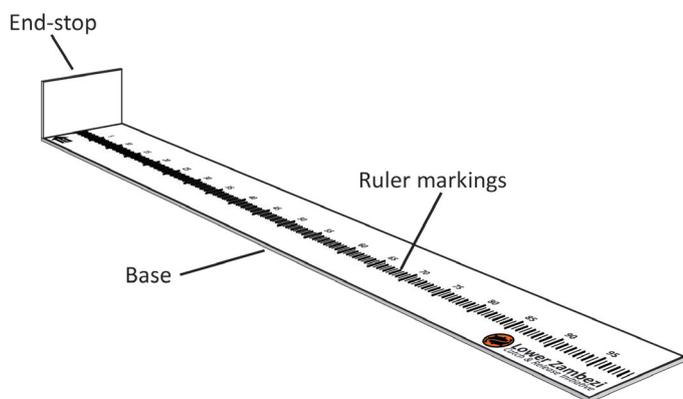


Standard length (SL): the length of a fish measured from the tip of the snout to the posterior end of the last vertebra and excludes the length of the caudal fin.

Total length (TL): the straight line length from the tip of the snout to the tip of the longer lobe of the caudal fin, usually measured with the lobes compressed along the midline.

Fork length (FL): the length from the tip of the snout to the end of the middle caudal fin rays and is used in fishes in which it is difficult to tell where the vertebral column ends.

Length is best measured using a ruler, preferably one with a stopper at one end to rest the nose of the fish against. If you use a tape to measure length, you should measure the flat length beneath the fish rather than the curved length along the body of the fish. Length is often quicker and easier to measure than weight. For many species the relationship between length and weight is well established, so weight can be estimated quite accurately for a known length using a length-weight relationship equation.



Measuring weight

- Conventional scales and those built in to lip-grippers generally involve suspending the fish by the jaw. This should be avoided as there is the potential to permanently damage to jaw or spine, particularly in large or heavy fish.
- If you need to weigh a fish rather use a weigh-bag or sling to support the weight of the fish horizontally. The weigh-bag can then be suspended from a conventional scale or lip-gripper with a built in scale.
- Weigh-bags should be made of a non-abrasive material and should be wet before placing the fish inside.
- A wet weigh bag also makes a useful, non-abrasive surface to work on should you need to lay a fish down for measurement or to remove difficult hooks
- Don't forget to tare (zero) your scale to account for the weight of the bag, or weigh the empty bag and subtract it's weight if your scale lacks a tare function.

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