

MISSION TOOLS



CLAW

The claw for Triggerfish was created with **two goals for improvement** from last year.

1. The first was **removing the usage of gears**. Over the past few seasons, we attempted to use gears in the water, but they always backfired - slipping or rusting. To proactively avoid this issue, we removed gears and moved the fingers by pushing them outwards via two poles connected to a Servo motor.

2. The second goal has to do with **strengthening the grip**. Because this year's tasks require a wider variety of objects to grab, we created a 3-prong design that closes when the object within the claw is secure, along with a ½ inch PVC slot at the bottom for clearance.

This new claw was specifically built for WarriorTides to complete certain missions. It allows Triggerfish to **irradiate diseased coral** by positioning UV light sources. The unique shape of the claw grants a **greater carrying capacity** for flashlights with wide diameters. This is especially important when Triggerfish must conduct tasks like placing tents over diseased regions of coral using strings. In previous years we have had trouble dealing with lines as they tended to slip out of our manipulators. This year, however, our claw pinches at the top, leaving **no openings** for string or other objects to slip out.



Fig 24. Assembled claw