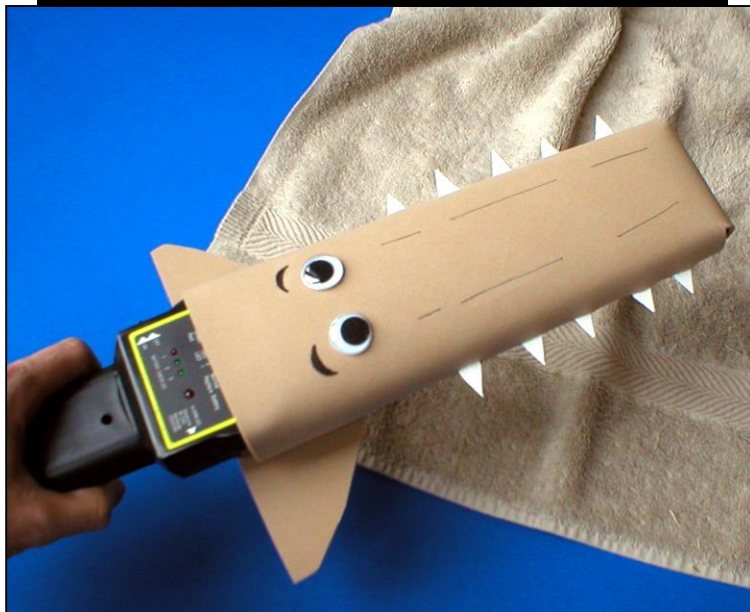


# Sawfish Outreach Concepts



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# Introduction

In teaching children about the life history and anatomy of sawfishes, I have found certain demonstrations particularly effective in fostering interest and excitement about these unique rays.

First, an explanation about why many people do not know what a sawfish is can be useful. This shows children that although sawfishes are not important symbols in our culture (like eagles or tigers), they deserve our attention and protection. Presented thoughtfully, this section can lend an air of mystery to the animals and spark interest in learning more about these enigmatic and charismatic animals.

Second, a demonstration of what the rostrum is used for is both exciting and instructive. The long toothy saw is the most prominent and fascinating part of the sawfish, and children will have many questions about what sawfishes use them for. Slashing at schooling fishes is easily demonstrated with a rostrum (or replica). However, the sensory role of sawfish rostra is poorly known, and fascinating to kids. Instructors can imitate a sawfish locating buried prey using a hand-held metal detector and a prey item made of (or filled with metal), “buried” beneath a towel substrate.

The largest threat which led to the decline of sawfishes is accidental entanglement in nets. This vulnerability is easily replicated using a section of gill-net and a sawfish rostrum.

Finally, sawfish snout cookies can be used to promote interest in sawfish rostra, allowing children to visualize this unique structure and imagine its uses. In my experience, children will inevitably hold the snout-cookies in their mouths, seeing what it looks like to have a sawfish rostrum.... This is a powerful tool, encouraging kids to identify with an animal lacking the warmth and familiarity of mammals.

# Why You Don't Know What a Sawfish Is. . . .

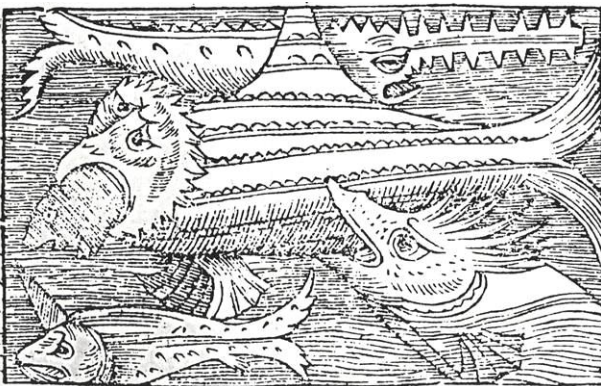


**Sawfishes do not inhabit cold European waters (West Africa & the Red Sea are closest)**

- thus, Europeans only encountered sawfishes when traveling
- they occasionally received sawfish snouts in trade, but did not know what whole animal looked like (sawfish snouts were popularly believed to be the tongues of vanquished dragons until the mid Renaissance)
- This lack of familiarity led sawfishes to be confused with other animals, including killer whales and swordfish

## Sparking long-held myths that:

- *sawfishes attack boats (like swordfishes)*
- *sawfishes attack whales (like orcas)*



In the Renaissance, sawfishes were confused with other “swordfish”: the orca, the narwhal, and the swordfish. . . (1555)



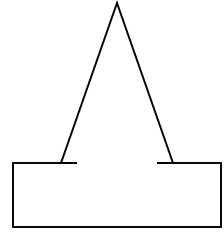
Europeans did not know what a sawfish looked like because they only saw their toothy snouts. Here is a sawfish as a sea-unicorn - *note the horse head.* (1613)

# Sawfish Snout Sensory Demo

**Purpose:** to demonstrate how sawfishes use their electro - & motion - sensitive snout to find prey

## Materials:

- \* one small plush crab or fish
- \* handful of small metal nuts & bolts
- \* 1 sheet beige craft foam
- \* 1 sheet white craft foam
- \* 2 plastic google eyes
- \* 1 handheld metal detector wand
- \* 1 beige towel or thin blanket



Shape of teeth cut from white foam



## Assembly:

### The Crab/Fish

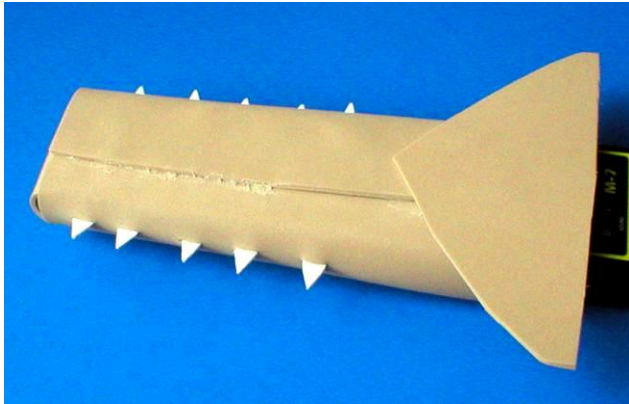
1. Remove stuffing from plush crab
2. Fill crab with nuts & bolts, and sew-up hole

### The Sawfish

1. Cut beige foam to wrap around front of metal detector
2. Cut tab in foam to cover tip of wand
3. Cut 10 triangular teeth from white foam, leaving tabs at base to hold teeth in place
4. Insert teeth into slits cut through foam on sides of wand
5. Hot-glue foam edges to cover wand
6. Hot-glue eyes on foam sawfish
7. Draw spiracles on sawfish with *Sharpie* pen
8. Draw thin lines along saw to mimic indentations
9. Glue triangular pectoral fin to underside

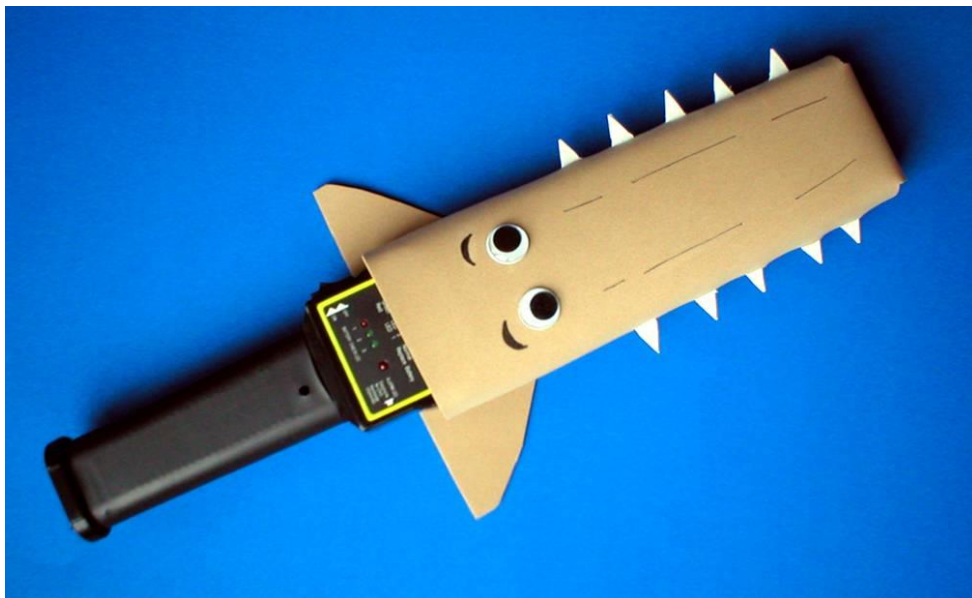
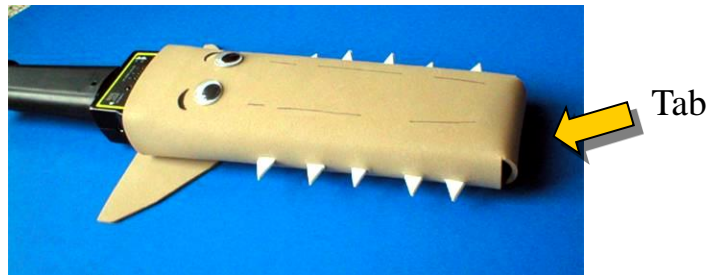






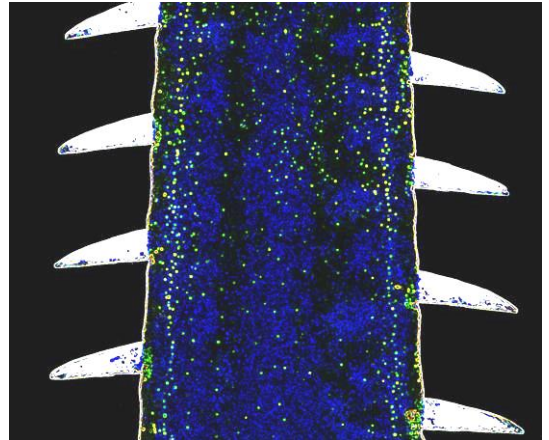
**Note:** glued seam along underside & triangular pectoral fin

**Note:** teeth fed through slits in sides of foam & tab which is tucked into bottom to cover tip



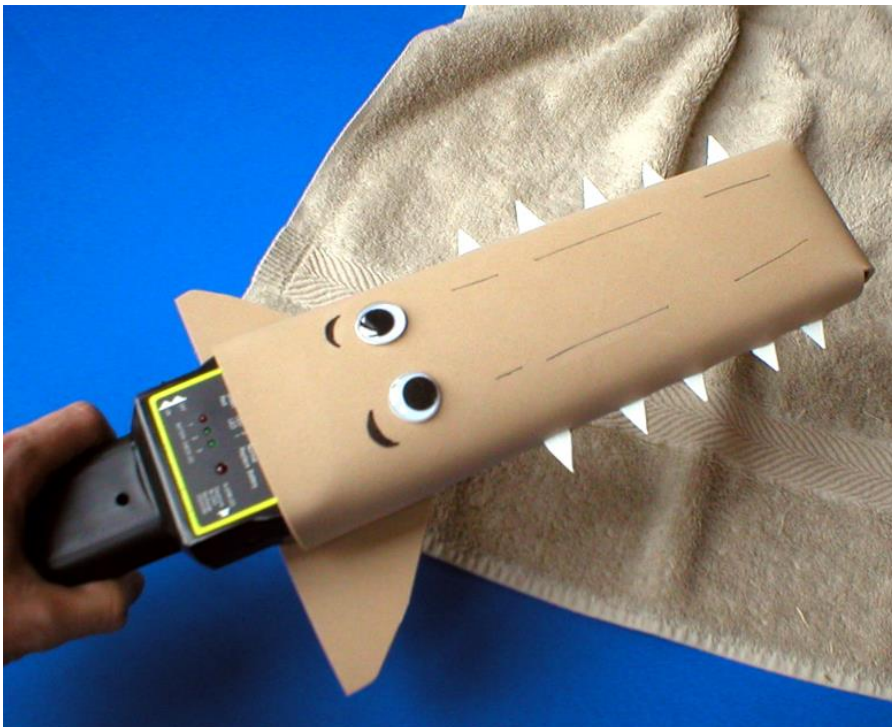
The finished foam cover can be easily slipped on or off the metal detector wand

# Sawfish Snout Sensory Demo



## Find the Hidden Crab!

1. Turn metal detector on
2. Hide crab under towel (to simulate prey buried in substrate)
3. Make the “sawfish” swim slowly over the towel, moving its saw side to side
4. Once the hidden crab is located, the metal detector alarm will sound, demonstrating how a sawfish can locate buried prey
5. Re-hide the crab, and allow students to try it. . . .



# Sawfish Snout Entanglement Demo

**Purpose:** to demonstrate why sawfishes are so vulnerable to net-fishing

## Materials:

- \* one sawfish rostrum (or a replica)
- \* one small section of gill-net (or other net)

## Instructions:

1. Have two volunteers hold gill net stretched-out
2. Have sawfish swim into the net (represented by your sawfish snout)
3. Have students notice that the rostrum quickly becomes hopelessly entangled





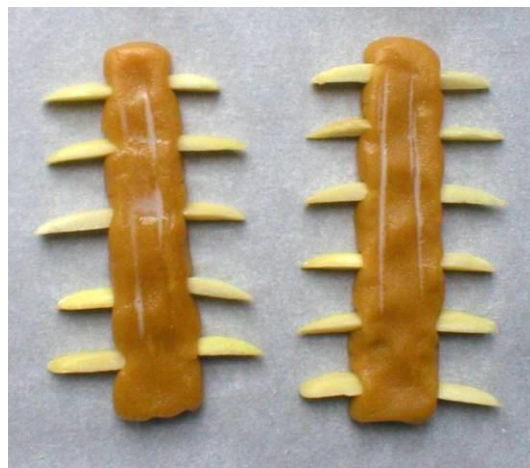
# Sawfish Snout Cookies

## Observation:

- An easy way to get children's attention is with food.
- Sawfish snout-shaped cookies are thought-provoking, as they allow kids to visualize what a sawfish snout looks like (as when they invariably hold it in their mouths)
- *This stimulates conversation about what sawfishes use their rostrum for. . . .*

## Ingredients:

- \* 1 box cookie mix
  - plus ingredients needed (egg, oil)
- \* 3/4 cup slivered almonds
- \* Small amount of milk



Uncooked dough shaped into sawfish rostra

## Instructions:

1. Make your favorite boxed cookie mix dough
2. Form 1 inch balls
3. Roll each ball by hand into a cylinder
4. Flatten cylinder on cookie sheet to form a thin rectangle, approx. 4 inches long, 1/2 inch wide, and 1/4 inch thick
5. Insert 5 slivered almonds into either side, allowing 3/4 of the almond to stick out (because dough will spread during baking)
6. Dip a butter knife in milk, then press two shallow parallel lines along each snout
6. Bake using recommended time & temperature

**Yield:** approximately 30 cookies

