

## *Short Communication*

# Wonton Waste Policy Recommendation: Stingray Bow Hunting

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### **Abstract**

*The purpose of this recommendation is to provide information that advances an improved position on a wonton waste policy in regards to stingray bow hunting in Alabama. The stingray is the oceans linchpin mesopredator and dramatic population change through excessive bow hunting extraction can push the local bays towards unanticipated environmental and economic transformations. A wonton waste law could help limit the needless disposal of dead stingrays on our beaches, increase public confidence in bay water quality and contribute to research that would aid in setting sustainable limits on stingray bow hunting.*

### **Keywords**

*wonton waste law, stingrays, bow hunting, dasyatis, extraction*

### **1. Introduction**

Currently, there are no active wonton waste laws in Alabama (Note 1). According to the Alabama Department of Conservation and Natural Resources (AL DCNR), all that is currently required is that an animal is taken into possession and counted toward bag limit (2009, p. 20, para 5). Stingray species in Alabama are unregulated and there is no stated fishing or bow hunting creel limits with the exception of the Spotted Eagle Ray (*Aetobatus narinari*), which is a prohibited species (AL DCNR, 2017). The Alabama Bow Hunting Association (ABHA) is a non-profit organization that aims to promote and protect the sport of bow hunting in Alabama. Bryan Hughes, owner of Backwater Outdoors, a sporting goods store in Gurley Alabama, started the association in 2014. The association does endorse an ethical approach to bow hunting with the following statements on its website ethics page:

*“1) Never leave your fish on the shoreline, boat ramp or deposit them in public trash receptacles. First, it is an utter waste of perfectly usable fish and second it is simply rude and offensive. Always consider the general public and leave no trace. Leaving fish is criminal littering and wonton waste and against*

*the law in Alabama.*

2) *Rotate where you bow fish and don't overfish a body of water. The goal is to help manage rough fish populations, not to eradicate the species. Have fun but consider future generations' access to the sport and always be mindful of what you take"* (ABHA, 2014).

While these are principled standards for bow hunting endeavors, there is little evidence that the bow hunters in the Gulf Shores - Orange Beach areas of Alabama are ABHA members or adhere to any type of ethical approach to stingray takes and abandonment.

## **2. Bow Hunt Fishing Stakeholder Positions**

Bow hunt fishing is a lucrative business in Alabama. The average bow hunting excursion in the Gulf Shores - Orange Beach area is \$350 to \$650 for a three to five-hour hunting trip, which accommodates up to four shooters. Cotton Bayou, Terry Cove, and Bayou St. John are the preferred areas of operation. Stingray bow hunting season starts around May and winds down around the end of September, for approximately 180 days of bow hunting extractions. However, it was noted during the November 2018 stingray tagging trip, the Atlantic stingray (*Dasyatis sabina*) was still present in Terry Cove. It is conceivable that future bow hunting takes will reflect the stingrays extended resident time frames of their preferred bays. It should also be noted that bow hunting excursions might not be charted for the entire 180 day season due to lack of clients, equipment maintenance, and weather. 150 days of stingray bow hunting is a conservative estimate of potential hunting days. The four charter companies that readily advertise bow hunt fishing in the Gulf Shores - Orange Beach area typically do one to three charters a day, usually between the hours of 1200 and 2400 (Deep South Bow Fishing, 2016; Fish Kabob Bow Fishing, 2016; Liquid Trails, 2011; Nightshift Charter Service, 2013). Nightshift Charter Service offers a red-eye bow hunting trip with hours extending from 0100 to sunrise. In addition to regularly chartered hunts, individuals regularly bow hunt and those take estimates are unknown.

## **3. Unregulated Bow Hunting Take Estimates**

By reviewing the gallery photos from each bow hunting website, the number of rays taken per bow hunter appears to be between 8 and 15 individuals. In some instances, the photographs posted on company websites reveal the number of stingray takes as high as 33. A conservative estimate of stingrays taken by four companies, hunting 150 days a year, with two excursions entertaining two shooters that each take 8 rays, is approximately 19,200 a season. A high seasonal and unlikely estimated take is 237,600 individuals. With the number of freelance bow hunters unknown, the take estimates are highly variable and subjective. The most commonly hunted species in the local bays are the Atlantic Stingray (*Dasyatis sabina*), and the Southern Stingray (*Dasyatis americana*). The occasional Cownose Ray (*Rhinoptera bonasus*) and Smooth Butterfly Ray (*Gymnura micrura*) are noted in posted hunting takes.

#### 4. Stingray Consumption

Currently, the consumption of stingrays in the Alabama coastal area is nominal. Increased awareness of artisanal fishing pressure in some regions of the United States may warrant concern in the near future, but this is not a current, epicurious trend in Alabama.

#### 5. Bow Hunting Stingray Abandonment

The bow hunting of stingray appears to be confined to the clearer waters of Cotton Bayou, Terry Cove, and Bayou St. John, of southern Alabama. The upper reaches of Bay la Launch and Wolf Bay, while good stingray habitat, lack the water clarity needed for bow hunting. This leaves a smaller area for hunting and the eventual abandonment of dead or dying specimens. Fishing these bays is a large part of the tourist revenue for the local economies. Excessive amounts of dead rays on the beaches and in bay waters can be a detriment to tourism and leaves the question to cause of death open for interpretation: chemical poisoning or oil contamination, fish diseases and poor water quality.

##### 5.1 Beach - Shoreline Abandonment

The bow hunting charters advertise their services and success via company websites with multiple photos of their charter catch. Postings reveal that they haul the stingrays onto various beaches, such as Robinson Island, for photographs. This practice also allows for take confirmation. Disposal of the rays is to either leave them in place or move them behind the dunes to decompose, regardless of littering laws. Due to website photocopy rights, photos demonstrating stingray takes are not portrayed in this recommendation.

##### 5.2 Bay Abandonment

Bow hunters will also abandon their nightly catch by putting whole dead and dying rays back into the bay. A second means of providing evidence of their catch is to sever the tail from the rays and abandon the dying ray in the water. The tails are then lined up for photographs, which is also a method of take confirmation. Not all rays die from having the tail severed. During previous stingray tagging trips, several *D.sabina* with severed tails have been recovered, tagged and released (Figure 1).



**Figure 1. Tagged Female Atlantic Stingray (*Dasyatis Sabina*) with the Tail Severed to the Pelvic Fins and Anterior to the Tail Spine. Photographed and Printed by R. Lahn, 2016**

*Note.* Reprinted with permission.

## 6. Opportunities and Challenges

A wonton waste law would clearly benefit more species in Alabama beyond the stingray. Generally, a wonton waste law defines that a person may not waste a wild animal that has been wounded or killed by that person while hunting. Waste as it applies to hunting, means to intentionally, knowingly, and recklessly leave a wounded or killed animal in the field, forest or water without making a reasonable recovery effort and make use of the kill.

### 6.1 Opportunities

A waste law would assist in decreasing the over hunting of certain species, and emphasizes the importance of good ethics by hunters. A law can reduce the over exploitation of wildlife populations by limiting markets for dead game animals and their parts by reducing the incentive to over exploit wildlife (Moseley, 2016).

### 6.2 Challenges

Enforcement of waste laws can be difficult as enforcement agents typically need to witness the abandonment or be provided with reliable proof of the violation. In the case of stingrays, they are non-regulated and have no fishing limit, which can entice over hunting with little regard for potential law enforcement.

## 7. Wonton Waste Laws and Stingrays

Wildlife is a public trust resource and proper stewardship is a benefit to public resources. Ensuring that stingrays are included in potential wonton waste policies would promote a more conservative approach to a family of animals that has received little attention in Alabama. Multiple options for addressing wonton waste and native stingray species that are the targets of bow hunting are as follows:

*Option 1.* Have waste laws include non-regulated species that are actively hunted for sport (i.e., stingrays) and are taken under state issued fishing licenses.

*Option 2.* Have waste laws that define wastefulness in terms of finning (i.e., the removal of stingray tails and then discarding the body).

*Option 3.* Regard bow hunting and dumping of alive but finned animals as animal cruelty as well as addressing them under a combination of Options 1 and/or Option 2.

## 8. Conclusions

Stingrays are a mid-trophic level mesopredator that are prey for apex predators, such as sharks and man. In turn, they prey upon species in a lower trophic level such as crustaceans and mollusks. Being both prey and predator put them in the position of being the cohesive element between trophic regimes or a “linchpin”. Extracting large numbers of rays every month from primary bays could detrimentally effect residential populations, shift the trophic regimes, and cause cascades at the local level. Over fishing of the stingray could also release the primary consumers that are held in check by the rays. Stingrays feed on various small fish, epibenthic worms (polychaetes) and mollusks (whelk and drill species) that prey on commercial oyster colonies. The stingrays keep the primary consumers under control. Once this constraint is gone, the oysters would be fair game and the industry (13 active commercial farms in Alabama) could potentially be impacted due to a ballooning of primary consumer populations (Grubbs et al., 2016).

Very little is known about the breeding timeframes, location of nursery bays, brackish water tolerances and migration routes of the various stingray species present in the Alabama bays and along the coast. Due to the uninhibited bow hunting in Terry Cove, research of the local populations has been suspended and relocated to an area that is not conducive to bow hunting (Note 2). A wonton waste policy that addresses the excessive take and unethical disposal of stingrays demonstrates good stewardship of public resources. Bow hunting of stingrays should be managed for the benefit of current and future generations.

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#### Notes

Note 1. The original document was a white paper submitted to the AL DCNR on October 27, 2017.

Note 2. The research recommenced in Terry Cove in November of 2018.