



## Bahamas Initiative Update August 2017

The goal of Bonefish & Tarpon Trust in the Bahamas is to ensure that the flats fishery remains healthy. To achieve this goal, BTT has been working with guides, lodges, anglers, and many scientific and education collaborators to gather the information needed for effective conservation. This includes:

- Identifying bonefish home range habitats, spawning migration pathways, and spawning locations so these habitats can be protected; this has already contributed to the creation of national parks on Grand Bahama and Abaco to protect bonefish habitats.
- Educating guides and anglers about best practices for catch and release so that bonefish survive after being released.
- Educating Bahamians about the importance of the fishery to the economy and culture.
- Documenting the economic value of the flats fishery.
- Working with guides and lodges to ensure their concerns are addressed by resource managers.

The information BTT gathers in the Bahamas is not only used in outreach and education efforts, it is provided to Bahamas National Trust, The Nature Conservancy, other non-profits, and Bahamas government resource management agencies for inclusion in conservation.

### Habitat Identification

**Tag-recapture Program.** Since 2009, BTT and collaborators have been tagging bonefish to identify habitat use and movements.

- So far, we have tagged 12,590 bonefish on Abaco, Andros, Eleuthera, Exuma, Grand Bahama, and Long Island.
- Recapture data shows bonefish have small home ranges, but will travel long distances to spawn.



**Spawning Site Identification.** Thus far, six major pre-spawning aggregation sites have been identified and confirmed on the islands of Abaco, Andros, Eleuthera, and Grand Bahama.

- These sites were identified through a combination of Traditional Ecological Knowledge from fishing guides, tagging, observations, and acoustic tracking.
- Spawning sites are highly vulnerable to development and illegal fishing.



**Juvenile Bonefish Habitat Identification.** Through BTT's efforts with collaborators, juvenile bonefish habitats have been identified on Abaco, Eleuthera, Grand Bahama, and Inagua. Research showed that juvenile bonefish use shallow protected bays as a nursery ground, and juveniles co-occur with mottled mojarra, as a defensive strategy called social mimicry.

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and outreach. We work with lodges, guides and anglers on:

- Education about proper catch and release handling practices. It's essential for the future of the fishery that most bonefish survive after being released.
- Education about the importance of healthy habitats to the health of the fishery. Because they understood the importance of habitat protection, guides were lead advocates for new national parks on Grand Bahama and Abaco.

### The Conservation Impact of Habitat Identification.

Already, information from this work has contributed to the establishment of six new national parks on Grand Bahama and Abaco.

- These parks protect bonefish home ranges, spawning migration pathways, and pre-spawning sites from development.
- The next step is to help Bahamas National Trust design management plans for these parks.
- We are currently working with Bahamas National Trust, The Nature Conservancy and others to provide similar information on other islands to guide recommendations for additional national park protections.
- Without healthy habitats there can't be a healthy fishery, so habitat protection is Goal #1.



BTT also gives regular presentations and conducts field trips with primary schools, high schools, and citizen groups. Many Bahamians are not aware of the significance of their bonefish fishery. Once they learn about it, they become advocates for conservation. To instill these values at an early age, BTT is collaborating with the Bahamas National Trust to develop a flats ecosystem curriculum for schools, non-profits, and other community groups.



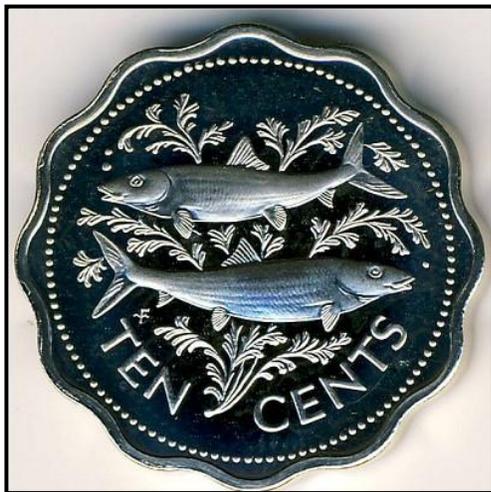
### Education

We believe that the more people understand about the fishery, the more likely they will work to protect it. Therefore, we put considerable effort into education

## Economics and Culture

The economic and cultural value of the flats fishery provides leverage for conservation. An economics study completed in 2009, revealed that the Bahamas flats fishery has an annual economic impact of \$141 million. Most importantly, the flats fishery is an essential source of income for the out islands.

- A second economic study is in the works now to update the value of the flats fishery.
- BTT also has funded a study to gather the Traditional Ecological Knowledge of Bahamian fishing guides, including historical and cultural perspectives on the fishery, and important information on bonefish habitats and spawning locations.



## Understanding Connectivity

We know that adult bonefish have small home ranges, but what happens once they spawn? Are the larvae that hatch from the eggs carried by currents to other islands? Do some larvae from Cuba drift to the Bahamas? To address these questions, BTT is working with collaborators on numerous studies.

- A nearly-complete study used genetics to address these important questions.
- Fin clips were collected by anglers, guides and scientists from 9,014 bonefish in the Bahamas, and many thousands of bonefish throughout the Caribbean for analysis by collaborators. The results will tell us how much management should focus on local issues (like habitat protection) and regional issues (whether harvest of spawning bonefish in one location will impact the bonefish population in another).



## Priorities and Next Steps

BTT's commitment to the conservation of the Bahamas' flats fishery has never been greater! Our priorities, programs and ongoing work underscore that commitment.

- BTT is conducting research to help guide future recommendations for habitat protection and national parks. To complete this work, we will continue to work with guides, tag and track bonefish to identify important habitats and spawning sites, and join with partners to get these habitats protected.
- BTT is developing a new catch and release education campaign specific to the Bahamas to ensure the fishery remains healthy. This work is informed by our collaborations with guides, anglers, and partner scientists. BTT will continue to develop and expand its education and outreach campaign, including support of the implementation of a new education curriculum funded by BTT through Bahamas National Trust.
- BTT will continue to work with Bahamas National Trust, The Nature Conservancy, other non-profits, Bahamas resource management agencies, and science partners to improve conservation of the flats fishery.
- BTT will continue to support fishing guides and lodges in their efforts to secure reasonable regulations for the flats fishery.

### For more information:

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