

Management of Spiny Lobster in Turks and Caicos Islands

Spiny Lobster

The spiny lobster *Panulirus argus* is found throughout the Western Atlantic coast extending from North Carolina (rare) and Bermuda to Brazil including the Gulf of Mexico and Caribbean Sea. Many Caribbean countries export spiny lobster to the United States as well as Europe.



Fertilization is external and spawning occurs between March and August. Eggs are carried on females, termed Berried females – up to 500,000 eggs. These egg masses are generally spawned, incubated and hatched (3 weeks to several months after spawning) in spring and summer by females in offshore areas. Large females produce 2- 4 broods annually – eggs are orange and turn brown when they are ready to hatch - eggs hatch on female. It takes approximately 2-3 years to reach legal size.

Habitat

P. argus is oceanic as planktonic larvae and benthic intertidal to deep sea ~ 100 m as juveniles and adults. During the day they shelter in rocky outcrops, reefs, crevices, ledges, sand bottoms, algae clumps, vegetated beds. They prefer communal habitation such as dens with multiple openings, proximity to food. This lobster species is active at night in search of food and could forage over 100s of meters and return using magnetic navigation.

Current Status

The lobster fishery in the Turks and Caicos Islands is contributing significantly to the socio-economic development of the country. Due to high demand and little or no regulation for management of the fishery, there were maximum catches until the end of 1980, then drastically declining (total reported landings between 27,000 and 30,000 tons per year over the last decade) - *P. argus* stocks soon became over-exploited. Therefore, there is an urgent need to control and reduce fishing effort and a need for regional cooperation in management (other Caribbean countries) – responsibility for suitable management lies at a national level, even though the resource is shared. There is currently collaboration in management between the TCI government and scientific exchange which is channeled through a variety of workshops and proposed regulations.

Historical development of the Fishery

Before 1900 spiny lobster was used as protein but was difficult to preserve. When commercial fishery began approx. 100 years ago it was developed as a bait fishery. After WWII there was an increase in demand and was soon developed as a luxury item particularly in the tourist trade. It is presently one of the most valuable fisheries in the region and this demand has put serious pressure on some local stocks. Spiny lobster from Turks and Caicos is exported to Europe, France, Germany, Holland, Japan, and Hong Kong. Although availability is limited and there is a high demand, local fishers receive fairly low prices for this luxury item.



Future management of the TCI lobster fishery

- Collection: Closed season 1st April to 31st July, minimum size of 8.3cm or tail weight of 7 ounces, no egg bearing females and no soft-shelled (molting). Collection methods: Hook, noose, traps and no chemicals.
- Boats, licenses, quotas: Boats and divers/fisherman must be licensed, any traps must be marked with license #, cannot touch other people's traps - traps can be in water max of 48 hours.
- No lobster selling by restaurants during closed season - restaurants have to submit their quantity of lobster (frozen and fresh) 24h before season closes.
- The implementation of Marine Parks (acts as a refuge for juveniles, spawning stock).
- For better law enforcement – the use of fines with zero tolerance (especially concerning juvenile and berried females).
- The most important management tool is to educate the local population on the importance of these management tools – it is their resource and the recovery of depends entirely on them!



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