

Ray-storing Balance: Preventing the Shovelnose Dive into Extinction

Phua Ying Ying, 21 years old, Singaporean, Singapore (Singapore Institute of Management)

Stacy Lee Sze Ying, 22 years old, Singaporean, Singapore (National University of Singapore)

The Last Rays of Light: Introduction

Chinese New Year, traditionally a time of joyous gatherings, takes on a sombre tone for Shovelnose Rays. While humans celebrate with loved ones, the *Rhynchobatus Australiae* family faces the grim reality of losing members to the relentless pursuit of their fins. As humans honour familial bonds, the Shovelnose community witnesses their kind mercilessly hunted and consumed. Ironically, these creatures, not true sharks, become the main ingredient in shark fin soup - a dish symbolising auspiciousness for humans but tragedy for the rays.

Ray-markable Creature: Guardians of Ocean Harmony

The Shovelnose Ray, named for its distinctive snout, inhabits the waters of Southeast Asia, Australia, and Singapore's shores. These remarkable creatures forage on the seafloor, enjoying a diet of fish and invertebrates, especially crustaceans like shrimp and crabs.¹ Despite their playful demeanour, they pose no threat to divers and snorkelers, instinctively avoiding them upon sight.²



Picture of a Shovelnose Ray (Fishes of Australia, Photo taken by Erik Schlogl)³

¹ Shovelnose Guitarfish." Guidesly, n.d., <https://guidesly.com/fishing/fish-species/shovelnose-guitarfish>

² Western Shovelnose Ray." Sharksandrays.com, n.d., <https://www.sharksandrays.com/western-shovelnose-ray/>

³ Bray, D.J. Western Shovelnose Ray." Fishes of Australia, <https://fishesofaustralia.net.au/home/species/1836>

In 2019, the Shovelnose Ray was classified as critically endangered by the International Union for Conservation of Nature (IUCN), serving as a stark reminder of human impact on marine ecosystems.⁴ Despite this acknowledgment, it underscores the urgent need for conservation efforts. The reactive nature of IUCN classifications highlights challenges in conservation. This sentiment resonates among environmental science students like Amelia Ong, an Environmental Earth Sciences student at Nanyang Technological University. She stresses the urgency to safeguard endangered species often clashes with the weight of past ecological damage and the daunting task of reversing it.

Ray-lity Check: The Cost of Shovelnose Ray Exploitation

Despite the detrimental effects on marine ecosystems, the harsh reality remains that Shovelnose Rays are routinely sold in restaurants and local coffee shops as a delicacy, perpetuating the demand for shark fin prevalent in Asian culture, where it is still easily accessible despite the detrimental effects on marine ecosystems.



Popular Restaurant Peach Garden's menu boasts a diverse selection of shark fin soups. (Peach Garden ala carte menu)⁵

⁴ Shovelnose Ray is now Critically Endangered." Marine Stewards, n.d., <https://www.marinestewards.org/post/shovelnose-ray-is-now-critically-endangered>

⁵ Peach Garden Restaurant. "A La Carte Menu." 2023, <https://www.peachgarden.com.sg/wp-content/uploads/2023/09/A-La-Carte-Menu-MET.pdf>



Shark head dish currently sold at Chef Foong Seafood Restaurant (Burpple Singapore)⁶

This begs the question of how do we justify the continued exploitation of endangered species for cultural practices, despite the harm it causes to marine ecosystems and biodiversity. Unless significant changes are made to our regulations, anglers and fishermen will persist in hunting down these innocent rays for profit and recreational enjoyment until there are none left.

Sting-ing Issues: Underprotected and Overfished

In May 2017, a joint report by TRAFFIC and WWF highlighted Singapore's significant role in the global shark fin trade, citing data from the Food and Agriculture Organization of the United Nations covering 2005 to 2013. During 2012-2013, Singapore ranked second worldwide in both shark fin imports and exports, with imports valued at US\$51.4 million (\$67 million) and exports at US\$40 million.⁷ While Singapore enforces trade regulations under the Endangered Species Act (Import and Export) in alignment with CITES, there's a gap in local laws concerning the protection of species like the Shovelnose Ray within domestic waters.⁸ Despite CITES regulations governing international trade, local protections for Shovelnose Rays caught and sold within Singapore remain insufficient.

⁶ Loh, Alex, Steam Shark Head with superior soy, Burpple, 21 Jul, 2019, <https://www.burpple.com/f/U6L9umaj>

⁷ Focus on Demand for Shark Meat Instead." The Straits Times, n.d., <https://www.straitstimes.com/lifestyle/food/focus-on-demand-for-shark-meat-instead>.

⁸National Parks Board. "Parks and Trees Act." n.d., <https://www.nparks.gov.sg/~media/nparks-real-content/about-us/legislation/parks-and-trees-act.pdf?la=en>

Yong Tiam, an avid angler we met along the Bedok Jetty remarked, “I also want to catch this rare fish!” When asked about his concerns regarding the impact of his fishing hobbies, the angler responded, “I am just one person, one fish is enough for me, there are many in the ocean.” Many anglers like Yong Tiam consider the Shovelnose Ray as a rare trophy catch, often underestimating the ripple effect of their individual actions. Shoreangler, a popular website, even teaches other anglers how to catch threatened species such as the Leopard Whipray, Blacktip Shark, and Shovelnose Ray.⁹



Shoreangler’s tips on the type of hooks, baits, and methods to employ for a successful catch.¹⁰

While recreational fishing may seem harmless as a pastime, its collective impact on vulnerable marine species demands attention. What some anglers consider prized catches, such as Shovelnose Rays, could spell disaster for their already dwindling populations. Dr. Neil Hutchinson, a leading expert on sharks and rays at James Cook University, reveals a staggering 95 percent decline in Shovelnose Ray populations over the past two decades. He points to overfishing and habitat destruction as the primary culprits behind this alarming trend. Dr. Hutchinson further emphasises the vulnerability of rays and sharks, which predominantly inhabit shallow sandbanks—areas heavily targeted by coastal fishing activities.¹¹

⁹ Shore Angler." Shore-Angler.com, n.d., <https://shore-angler.com/>

¹⁰ *Ibid.*

¹¹ Awang , Nabilah. “Shovelnose Rays, Served as ‘shark Head’ in s’pore Eateries, Now Critically Endangered.” TODAY, 30 Aug. 2019, www.todayonline.com/singapore/shovelnose-rays-often-served-shark-head-spore-eateries-critically-endangered-cites.

Tightening Regulations and Ray-sing Awareness

Dr. Sarah Chan Hian May, an environmental psychologist and Research Fellow at the Lee Kuan Yew Centre for Innovative Cities emphasises the pivotal role of education and advocacy in promoting environmental awareness.¹² She underscores that while awareness is essential, it alone cannot guarantee action. She states, "awareness alone is never sufficient and cannot guarantee action, but it is a requirement. You cannot care for what you do not know." Dr. Chan suggests that fostering community participation in conservation efforts requires making them "personally relevant" and tangible. She elaborates, explaining that initiatives "must be about something that the majority can see, can feel, can understand and therefore can and will care about." Given the intangible nature of environmental efforts and outcomes, this approach is crucial for sustaining support. Acknowledging the challenge of prioritising environmental concerns amid competing individual interests, Dr. Chan emphasises the importance of nuanced dialogue among stakeholders to understand underlying motivations and find common ground. She notes, "there needs to be a sensitive and nuanced conversation between different stakeholders," recognising the complexity of balancing immediate needs with long-term environmental considerations.

A Ray of Hope: Conclusion

As the sun dips over the horizon, the last rays of hope shimmer for the Shovelnose Rays. Beyond mere awareness, it's time to shovel into action to safeguard these unique creatures. Making conservation initiatives as pointed as a Shovelnose snout and fostering dialogue among stakeholders are vital steps toward sustainability. Let's dive deeper into our commitment, ensuring a brighter future not just for Shovelnose rays, but for the entire marine ecosystem.

¹²Chan, Sarah. "Sarah Chan Hian May." Lee Kuan Yew Centre for Innovative Cities, 2 Nov. 2023, lkycic.sutd.edu.sg/people/researchers/sarah-chan-hian-may/.

List of interviewees:

Amelia Ong

Year 4 Environmental Earth Sciences student at Nanyang Technological University

97398196

TONG021@e.ntu.edu.sg

Yong Tiam

Avid fishermen met at Bedok Jetty

90609489

Dr. Sarah Chan Hian May

Environmental psychologist & Research Fellow at the Lee Kuan Yew Centre for Innovative Cities

Sarah_chan@sutd.edu.sg