

Husbandry of scalloped hammerhead sharks *Sphyrna lewini* (Griffith & Smith, 1834) at Reef HQ Aquarium, Townsville, Australia



Zur Haltung des Bogenstirn-Hammerhais *Sphyrna lewini* (Griffith & Smith, 1834) im Reef HQ Aquarium, Townsville, Australia

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Abstract

Reef HQ Aquarium (Townsville, Australia) has successfully hosted two scalloped hammerhead sharks (*Sphyrna lewini*) in captivity in its 2.5 ML Coral Reef Exhibit since late 2011. Here we document this experience after 2.5 years including collection and period of acclimation to captivity, transport, introduction into display, husbandry issues encountered, behavioural observations, health and growth observations, and management considerations.

Keywords: Scalloped hammerhead shark; *Sphyrna lewini*; Husbandry; Reef HQ Aquarium

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Introduction

Sphyrna lewini is currently listed as endangered by the IUCN (International Union for Conservation of Nature). Its status specifically in Australia is not well known, though the IUCN red list of threatened species reports a large increase in the illegal, unregulated and unreported fishing trade in Northern Australia in the last decade. Scalloped hammerhead sharks are known to feature as a by-product of net fisheries catches, and juveniles are extremely common on the East Coast of Northern Queensland (Australia) at certain times of the year (Lyle Squire pers. com.). According to the IUCN assessment done in 2007 they are suspected targets for their large valuable fins, although no specific data are available (Baum et al., 2007). Their conservation is thus becoming a critical part of the more general efforts towards shark protection around the world, and educating the general public about threats to the shark population is a key part of Reef HQ Aquarium's activity.

Scalloped hammerhead sharks in captivity

As the National Reef Education Centre for the Great Barrier Reef (GBR) Marine Park Authority, Reef HQ Aquarium (Townsville, Australia) aims at displaying species of the GBR environment. Here we describe the introduction and display of the scalloped hammerhead shark *Sphyrna lewini*. With between 10 and 15 aquaria displaying scalloped hammerhead sharks in total around the world in 2014 (see most common captive conditions summarised in Table 1), it remains a “non-average shark” in captivity (Choromanski, 2004) and a rare species for the general public to observe. There is no record of any other successful public display of scalloped hammerhead shark in Australia to date.

Decision to host scalloped hammerhead sharks at Reef HQ Aquarium

Reef HQ Aquarium had been contemplating hosting hammerhead sharks in its 2.5 million liters (ML) Coral Reef Exhibit (CRE) for many years but had not had access to healthy juvenile sharks. Prior to the introduction of the two hammerhead sharks, no other large fish or elasmobranch species had been hosted in the CRE, which is a tank aimed at displaying live corals and compatible reef fish, with only young turtles been hosted in that tank from time to time in the past. There was some concern that the extra nutrient loading the sharks would bring to the tank could be detrimental to the live corals but the potential benefits of displaying a very interesting and iconic shark species in terms of public experience were

Table 1. Most common conditions under which scalloped hammerhead sharks are held in captivity in aquaria (census done by authors in June 2014).

Tank depth	Tank volume in million liters	Number of <i>S. lewini</i> in tank	Duration in captivity	Size of <i>S. lewini</i>
2.5 to 10 m	Most around 3 Smallest 0.6 Largest 12	Most 1 to 3 Max 10	Most around 3 years Max 11.5 years	Most at 1.5 to 2 m Max 2.5 m

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