

Ocean Park Conservation Foundation, Hong Kong **Summary for Seahorse Survey Project Report 2011-2012**

Background

Ocean Park Conservation Foundation, Hong Kong (OPCFHK) has been supporting wildlife conservation in Asia since its establishment in 1993, and has allocated over \$34 million to fund over 290 research projects on cetaceans, giant pandas and many other species since its expansion in 2005.

Seahorses are typically threatened by overexploitation for uses in Traditional Chinese Medicine (TCM), curios and aquarium trade, loss or degradation of natural habitats and bycatch in fisheries. As a result, 11 out of the 55 recognized species are being listed as Vulnerable or Endangered in the IUCN (International Union for Conservation of Nature) Red List of Threatened Species.

Hong Kong is one of the major trade centres of the dried seafood products in the region, and seahorses represent one of the most important components in this trade. Despite all the seahorses in the genus *Hippocampus* being listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and its trade being monitored and regulated by 177 signatory parties, the global trade volume is still huge. In 2011, about 7.1 tonnes of dried seahorses, equivalent to over 2.2 million of seahorse individuals, were imported into Hong Kong from two major source countries (Census and Statistics Department). Resultantly, there is a need to assess the status of wild seahorses and to raise public concerns over these vulnerable species.

Starting from 2011, we have established our own seahorse survey in the eastern waters of Hong Kong, with the aims to document the number, species diversity, size and distribution of seahorses (*Hippocampus* species) in shallow coral communities and adjacent areas.

Methodology

Previous sighting records of seahorses from Hong Kong Reef Check were obtained from Agriculture, Fisheries and Conservation Department (AFCD) and Reef Check Foundation Hong Kong as reference for the site selection. A total of 31 sites (24 Hong Kong Reef Check sites and 7 additional sites) were visited during September 2011 and October 2012, and an underwater visual census with GPS density survey was conducted at the selected sites. Upon sighting of a seahorse, time and GPS location, generated by a synchronised watch with GPS, were recorded. The species, body measurements, sex and the substrate to which the seahorse was attached were also noted.

Researchers took photos for record. These provide useful biological and ecological information of the seahorses inhabiting the local waters.

Divers' sighting records were also collected to supplement the survey results on the distribution of seahorses in Hong Kong waters. Photos of seahorses from recreational divers were collected as a proof of the sightings, whilst sighting records without photos were disregarded.

Results

A total of six individual seahorses, comprising one male and five females belonging to one species, yellow seahorse (*Hippocampus kuda*), were observed at two diving sites in Sai Kung waters during the survey. Their overall height (from "crown" to tip of the tail) ranged from 40 to 154mm. As the survey will be continued in 2013, more information on distribution, number and density of seahorses in the local waters will be collected and analysed.

Divers' records suggested seahorses were seen in 6 other sites in Hong Kong waters. Seahorses were not found in 3 of these, and the remaining 3 sites are planned to be surveyed in 2013.

Summary & next plan

As the number of seahorses found in this study was very low, we would continue the survey in 2013 to cover more sites within the eastern waters of Hong Kong. More surveys are needed for sites with previous to verify their presence.

Further in-depth studies are in plans for 2013 to understand the survivorship, growth, home range, and site fidelity of the seahorses by tagging each individual seahorse found in the survey. Through regular monitoring of the tagged individuals, more information on the biology and ecology of local seahorses could be revealed.

Figure 1 The photos of the seahorses found in this survey period

