

IUCN SSC Horseshoe Crab Specialist Group



2016-2017 Report



Mark L. Botton



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Co-Chairs

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Number of members

79

Social networks

Facebook:

Horseshoe Crabs Group (<https://www.facebook.com/groups/142126905862143/>)

Asian Horseshoe Crabs Group (<https://www.facebook.com/groups/406285826215740/>)



Mission statement

The four extant species of horseshoe crabs are imperilled, because of overfishing for use as food, bait, production of biomedical products derived from their blood, and because of habitat loss or alteration due to shoreline development and armouring against coastal erosion. The group aims to protect horseshoe crabs in the world through collaborative effort in conservation of their populations and habitats, and in raising public awareness of their importance in evolutionary history, marine coastal ecology and biomedical uses.

Main activities by Key Priority Area (2016 & 2017)

Barometer of life

■ Red List

i. In 2016, the group completed the Red List assessment for the American horseshoe crab (*Limulus polyphemus*). The species is now listed as Vulnerable (<http://www.iucnredlist.org/details/11987/0>). (KSR #1)

Communications

■ Research activities

i. Publication of book based on papers presented at the following conferences and workshop: "International Conference on the Conservation of Asian Horseshoe Crab" (ICCA-HSC), Bangkok, Thailand (2017); "Linking Species and Habitat Conservation for Global Horseshoe Crab Populations", Providence, Rhode Island, US (2017); and "3rd International Workshop on the Science and Conservation of Horseshoe Crabs", Japan (2015). We have a publishing contract from Springer with an intended publication date in 2019. Manuscripts will be solicited from conference and workshop attendees. (KSR #43)

■ Scientific meetings

i. Organization of the "International Conference on the Conservation of Asian Horseshoe Crab" (ICCA-HSC), 2017, Bangkok, Thailand. The meeting was held in August, with participation of scientists from India, Hong Kong, China, Indonesia, Thailand, and Malaysia. There was exchange of much helpful information that will assist the Horseshoe Crab SG in its ongoing effort to update the Red List assessment of the three species of Asian horseshoe crabs. Some papers presented at this meeting may be included in the forthcoming book (see Research activities i.). (KSR #28)

ii. Organization of the conference "Linking Species and Habitat Conservation for Global Horseshoe Crab Populations," Special Session at Coastal & Estuarine Research Federation Conference, Providence, Rhode Island, US, 2017. The meeting was held in November, with participation of scientists from US, Denmark, China, Taiwan and Hong Kong. Some papers presented at this meeting may be included in the forthcoming book (see Research activities i.). (KSR #28)

Acknowledgements

We thank Ocean Park Conservation Foundation Hong Kong, which provided travel support for five participants at the Bangkok workshop, and Molloy College and Fordham University which supported our breakout session at the Coastal and Estuarine Research Federation conference. We are also grateful for the guidance of the IUCN SSC staff during the preparation the American horseshoe crab Red List assessment, particularly Caroline Pollock, who was especially helpful in the process.



Members of the Horseshoe Crab Specialist Group's Steering Committee after the Special Session on Horseshoe Crabs at the Coastal & Estuarine Research Federation Meeting, November 2017 in Providence, Rhode Island (USA). From left to right: David Smith, Ruth Carmichael, John Tanacredi, Mark Botton, Paul Shin, Siu Gin Cheung, and Jennifer Mattei
Photo: HCSG archives



American horseshoe crabs spawning in Jamaica Bay, New York
Photo: Mark L. Botton

Targets for the quadrennium 2017-2020

Barometer of life

Red List: update Red List assessments of all three Asian species of horseshoe crab.

Bolster work at national scales

Capacity building: develop best practices for adult and juvenile horseshoe crab population assessments.

Communications

Scientific meetings: coordinate the 4th International Symposium on the Science and Conservation of Horseshoe Crabs in Summer, 2019.

Projected impact for the quadrennium 2017-2020

The three species of horseshoe crabs in Asia, *Tachypleus tridentatus*, *T. gigas*, and *Carcinoscorpius rotundicauda*, are currently listed as Data Deficient, and we expect that our current activities will lead to a change in this status in the current quadrennium. While it is premature to assign a status without a formal review of the data, most studies indicate a moderate to severe threat to local populations and a lack of genetic connectivity among populations. We expect to submit a Red List assessment for each of the three Asian horseshoe crabs as an important first step in leading to greater conservation measures for these animals, including greater protection for essential spawning and juvenile nursery habitats. Our group will continue being an active advocate for these unique animals through the support of various outreach and educational programs that our members have developed.

Summary of activities (2016-2017)

Key Priority Area ratio: 2/7

Key Priority Areas addressed:

- Barometer of life (1 activity)
- Communications (3 activities)

Main KSRs addressed: 1, 28, 43

KSR: Key Species Result



Mark L. Botton with American horseshoe crabs at one of his study sites in Jamaica Bay, New York City