

Social participation provides a solution for endangered species conservation

Qing Chen¹, Lili Sun¹, Baohua Yan¹, Yifei Jia², Guangchun Lei^{1,2}

1 Mangrove Conservation Foundation (MCF)

2 Center for East Asian-Australasian Flyway Studies, Beijing Forest University

* Qing Chen, chenqing@mcf.org.cn

Spoon-billed sandpiper (*Calidris pygmaea*) is a global endangered species undergoing an extremely rapid decline with an extremely small population. Action is now urgently required to prevent the extinction of this species. Scientists and conservationists have developed numerous projects to learn about its status and improve its situation. In 2018, Mangrove Conservation Foundation (MCF) and Center for East Asian-Australasian Flyway Studies, Beijing Forest University jointly initiated a project for the conservation of spoon-billed sandpiper:

- (1) organize and coordinate the SBS winter census for better understanding of this species;
- (2) establish the first SBS conservation Alliance, involve protected areas, research institutes, NGOs, environmental activists and enterprises in conservation activities, as well as developing CEPA activities for the public;
- (3) promote the management of key habitat like Tiaozini, Leizhou Peninsula. For example, in Leizhou Peninsula, we cleared spartina and evaluate its effectiveness, and involve local communities in the conservation work
- (4) support the monitoring and conservation work on EAAF, especially key regions like Russia and Myanmar

Social participation, from scientist to local communities, may arouse the systematic change of nature conservation.

Theme: Conservation Management

Preferred Option: Oral Presentation

Citizen science improve the knowledge and help conservation of global threatened species in China

Yifei Jia¹, Qing Chen², Lili Sun², Hebo Peng¹, Sicheng Ren¹, Guangchun Lei^{1,2}

1 Center for East Asian-Australasian Flyway Studies, Beijing Forestry University

2 Mangrove Conservation Foundation (MCF)

* Yifei JIA, jiayifei@bjfu.edu.cn

Spoon-billed sandpiper (*Calidris pygmaea*, SBS) is a global Critical Endangered species, and the flag species of East Asian-Australasian Flyway. Recent years the SBS are undergoing an extremely rapid decline with an extremely small population. From 2019, Center for East Asian-Australasian Flyway Studies (CEAAF), Beijing Forestry University and Mangrove Conservation Foundation (MCF) jointly initiated a project for the conservation of spoon-billed sandpiper. We carried out the simultaneously census of SBS and food resources survey along the coast wetland in China. We invite over 30 organizations of SBS conservation in China, including governments, NGOs, research institutes, reserves, and birdwatching societies to work together. Base on the result of the census, we learn about its status and improve its situation. We found new several stopover sites and wintering site. Citizen science could greatly improve the knowledge of SBS in China.

Citizen power – shorebird monitoring by the public

Eugene Cheah¹, Sunjeong Nam², and Tomoko Ichikawa³

1 Asian Waterbird Census Sabah Supporters

2 Director, Incheon Black-faced Spoonbill Network

3 Chair, Wetland Guide Chiba

*Tomoko Ichikawa, tomoko.sophia.ichikawa@gmail.com

Consistent monitoring of shorebird populations is vital for detecting early signs of changes and developing conservation decisions. The Asian Waterbird Census (AWC) and national monitoring programmes are conducted in many countries. However, the resources are not always sufficient to fully cover the range and frequency of counts required. To fill the gap, citizens with some basic skills can be strong contributors to important monitoring schemes. Working together with other stakeholders, notably researchers and scientists, citizens can both support monitoring and contribute to conservation proposals.

In Sabah, Malaysia, the AWC has not been conducted. In 2015, local photographers and nature guides were invited to participate in the AWC with an NGO, the main implementing organisation there. The photographers and nature guides constituted a significant resource, armed with basic identification skills and equipment. Lectures about shorebirds served to increase awareness and interest. In Incheon, the RoK, a citizen group started monitoring shorebirds in 2009 to better understand species, population sizes and distribution in local wetlands. The group comprises local science teachers and general citizens. After 10 years of regular monitoring, they were able to use the information to convince the local government to modify its development plan, which would have destroyed an important shorebirds habitat, to instead provide a roosting site.

Common factors identified to encourage the participation of citizens in monitoring include: understanding of the need for regular monitoring, feeling a sense of contribution, encouraging participants' interest or enjoyment, and a coordinator to provide necessary information and encourage participation. The presentation would like to invite people who are trying to involve

citizens in monitoring, to share experiences and ideas to promote sustainable citizen monitoring and encourage more citizens to participate in shorebird conservation.

Theme: Monitoring

Preferred Option: Oral Presentation

Survival of long-distance migrants evaluated from 40 years of Australian banding data

Marcel Klaassen^{1,2,3*}, Clive Minton^{2,3}(deceased), Chris Hassell^{3,4}, Danny Rogers^{2,3}

¹*Deakin University*

²*Victorian Wader Study Group*

³*Australasian Wader Studies Group*

⁴*Global Flyway Network*

*marcel.klaassen@deakin.edu.au

Many long-distance migratory waders along the East Asian Australasian Flyway, spend their non-breeding season in Australia. Forty years of count data has revealed that a large proportion of these species have been experiencing population declines and notably so in the southern half of their non-breeding range. Whether these declines are due to decreased survival and/or decreased reproductive success remains largely unresolved. Using up to 40 years of catching and metal banding data from northwest and southeast Australia from the Australasian Wader Studies Group and the Victorian Wader Studies Group, respectively, we present a first survival analysis for a large number of waders that call Australia “home” during the non-breeding season. Although providing important insights in the potential mechanisms explaining the observed population declines, studies relying on catching and metal-band data suffer from (1) the fact that local rather true survival is being estimated, (2) the impossibility to study seasonal variations in survival (e.g. survival during northward versus southward migration and during the breeding and non-breeding season) and (3) low recovery rates requiring banding many individuals. To address these issues, leg-flag data may provide an alternative, requiring a revitalization of leg flagging and, notably, of leg-flag reading. Important steps to facilitate leg-flagging are currently being taken on which we will also report.

Theme: Monitoring

Preferred option: Oral Presentation

Assessing the Local Ecological Knowledge (LEK) on Migratory Birds and Shorebirds with notes on its Local Threats in Lianga Bay and Agusan Marsh Wildlife Sanctuary, Mindanao Island, Philippines

Rainer Sularte^{1,2}, Chilou Roble², Nilo Zolina², Eve Gamalinda^{1,3}, and Gregie Tampon⁴

¹Graduate School, Caraga State University, Ampayon, Butuan City, Philippines

²Sibagat National High School of Home Industries, Sibagat, Agusan del Sur, Philippines

³Department of Biology, College of Arts and Sciences, Caraga State University, Ampayon, Butuan City

⁴ Philippines, Philippine Normal University- Mindanao, Prosperidad, Agusan del Sur, Philippines

*Rainer Sularte, rainersularte2011@gmail.com

Abstract

Agusan marsh is one of the most ecologically significant wetland ecosystems with international importance in the country. Incorporating local ecological knowledge with the conventional scientific data is significant in conservation management of migratory and shore birds to enhance the practices on sustainable use of the natural resources both in coastal and marshlands areas. The study aimed to determine the knowledge, perception and attitude of the local villagers living adjacent to coastline areas of Lianga Bay and Agusan Marsh on migratory birds and shore birds including its local threats. Data were collected from June to November 2019 through interviews using a semi-structured questionnaire and focus group discussion from local villagers. Key informants in the villages were identified also to gather reliable information regarding migratory birds and shorebirds. Results showed that most of the local villagers in the community are aware on the presence of migratory birds and shorebirds including its laws and protection from the government. However, a large proportion of the local villagers revealed that migratory birds and shorebirds are hunted for bush meat and trade. As perceived by the local villagers, migratory birds and shorebirds are hunted for bush meat and trade (55 %), food (30 %), medicine (10 %) and ritual (5 %). Migratory birds and shorebirds were mostly observed starting August and considerably increased thereafter reaching its peak in November every year. Also, most of the information was not significantly associated to the respondent's demographic profile and length of stay in the village. At present, changes in the structural and floristic composition brought about by forest degradation such as conversion of *Terminalia* forest and *Sago* palm into agriculture, timber poaching, human encroachment and hunting were seen as threats to the migratory birds and shorebirds in the areas. Thus, proper monitoring, regular information, education and dissemination of information regarding migratory and shorebirds including the local villagers to be empowered in the protection and conservation of Lianga Bay and Agusan Marsh Wildlife Sanctuary.

Theme: Conservation Management

Preferred Option: Poster Presentation