

Coastal Wetland Ecosystem *Spartina* Salt Marsh and Its Management in China

By Guan Daoming. 2009. China Ocean Press, 8 Dahuisi Road, Beijing, 100081, P. R. China. 167 pages. ¥65 RMB Yuan.

Coastal wetlands are very ecologically important and vulnerable, located in the transition zone between land and sea. They have both upland and aquatic characteristics, and thus, they often have a richer flora and fauna than other environments, and are tidally influenced. A salt marsh is characterized by being frequently or continuously flooded by relatively shallow, high salinity water, and dominated by halophytic or salt tolerant herbaceous plants. Salt marshes are believed to be one of the most biologically productive habitats on the planet, rivalling tropical rainforests. However, plant species diversity is relatively low, since the flora must be tolerant of salt, complete or partial submersion, and anoxic mud substrate. The ecological features of salt marshes are dependent on precisely coordinated cycles of tides or immersion and exposure, sediment deposition, and erosion. Many of the salt marsh plants are usually not grazed at all by higher animals, but die off and decompose, to become food for microorganisms, which in turn become food for fish and, in turn, birds. Salt marshes can export nutrients to coastal waters, slow erosion along the shoreline and buffer stormy seas. They also help to filter pollutants before they enter oceans and estuaries, either by settling of sediments or by microbial and plant removal of nutrients and other substances. They serve as depositories for a large amount of organic matter, and are full of decomposition products, which feeds a broad food chain of organisms, from bacteria to mammals. Salt marshes provide tremendous ecological benefits, as well as economic, social, and cultural values to the large region.

China has a coastline of roughly 18,000 km, which extends from the Bohai Gulf to the tropical waters of the South China Sea. The Chinese coastal salt marshes serve as fuel stops for waterfowl on the migratory road between Siberia and Australia. The estimated total area of coastal salt marshes and mudflats in China is about 2.2 million hectares. Whereas, in the recent decades, salt marshes in many areas have been subjected to numerous human stresses, especially the alternation for agricultural or residential purposes, and also have undergone changes in species composition, including the colonization of invasive species. Degraded salt marshes have a reduced capacity to assimilate pollutants, buffer storm damage, support native biota, to provide opportunities for human use and enjoyment, to respond to sea level rise and so on. Hopefully the present growing interest in protecting and restoring salt marshes is not too late. We are sure that once the eco-

logical processes of salt marsh ecosystem have been better understood, more sound and practical management and restoration efforts can be suggested and used to preserve these valuable marshes and put them back to healthy state.

In North America, the most common salt marsh plants are glassworts (*Salicornia* spp.) and the cord-grass (*Spartina* spp.), which have worldwide distribution. They are often the first plants to take hold in a mudflat and begin its ecological succession into a salt marsh. However, in China, *Spartina* grasses are introduced species. Since introduction, *Spartina* grasses not only have played important and positive roles in shoreline protection, erosion prevention, silt promotion and land formation, but also have produced some negative impacts. In 2003, the State Environmental Protection Administration of China released its first list of alien invasive species, in which *Spartina* grasses as the only coast salt marsh plant species was listed. However, the severeness of the so called negative impacts of *Spartina* grasses have long been argued.

To show the comprehensive information of *Spartina* species and provide reference or guidance for management of *Spartina* salt marsh ecosystem, the book Coastal wetland ecosystem *Spartina* salt marsh and its management in China was recently published. The main contents of the book is Chapter 1 The ecological and biological characteristics of *Spartina* species; Chapter 2 The composition and biodiversity of *Spartina* salt marsh ecosystem; Chapter 3 The nutrient cycling and energy flow of *Spartina* salt marsh ecosystem; Chapter 4 Impacts of *Spartina* species on coastal wetland ecosystems; Chapter 5 The comprehensive utilization of *Spartina* species; Chapter 6 The distribution of *Spartina* species in the coastal wetlands of China; Chapter 7 Management strategies of *Spartina* species.

The book is well written with few errors. It can serve as reference for persons who are engaged in botany, wetland ecology, environmental science, shoreline protection and restoration.

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Erratum The Canadian Field-Naturalist 126(4)

In response to the review of *Contributions to the History of Herpetology*. CFN 126(3): 344-345, the book's editor Kraig Adler pointed out (personal communication to FRC 12 May 2013): "Only one small correction. Mrs. Martof used a kitchen knife, not a gun. She told the police she slipped while cutting some pizza. But Bernie was stabbed up under his rib cage several times!"

Erratum The Canadian Field-Naturalist

It has come to our attention that sections of many of the book reviews by Li Dezhi and Qin Aili were copied from sources without attribution. The journal and the authors apologize for this oversight.