

ENVIRONMENT

Biological Invasions in China

By Wan Fanghao, Guo Jianying, Zhang Feng. 2010. Science press, Beijing. 312 pages. 180.00 CNY.

An invasive species is a non-indigenous species that crosses a barrier with or without the direct aid of humans, and establishes itself and expands its range on the other side. Biological invasion has become more and more popular, and the aggressive invaders play more and more disastrous effects in virtually all major ecoregions on Earth. Especially in recent years, such events keep rising steeply, since the patterns of global commerce and globalization keep changing fast, resulting in more and more people and goods moving frequently from one place to another, and leading to the breakdown of biogeographic barriers that have historically kept the floras and faunas of different continents separate, and meanwhile the international law regulating the unintentional introduction of harmful alien species through trade is also weak. Global change further exacerbates the biological invasion, implying the proper need of considering the problem in global change scenarios.

Invasive species usually can affect the natural patterns and ecological processes of native species through a variety of direct and indirect mechanisms occurring at genetic, individual, population, and community or ecosystem levels. Bio-invasion is fast becoming one of the world's most costly ecological problems, as it disrupts agriculture, drastically alters ecosystems, spreads disease, and interferes with shipping. Although the full extent and cumulative impact of bio-invasion can only be approximated, it has been regarded as the second worst threat to the ecosystems after habitat destruction. It is regarded as a potent force of global change, contributing to a wide range of deleterious effects including loss of biodiversity, soil erosion, water loss, disease outbreaks, habitat alteration and loss, damaging or decline of native biota and entire landscapes, increased frequency of fires, and shifts in nutrient cycling, jeopardizing endangered species and so on. Invasive species is often referred to as alien "pests" or "weeds" imposing high costs on agriculture, forestry, and causing damage to ecosystems or the environment. Although an invasive species is often defined as an introduced species that has spread widely and caused harm, some species native to a particular area can, under the influence of natural events, increase in numbers and become invasive. Invasive species often coexist with native species for an extended time, and gradually the superior competitive ability of an invasive species becomes apparent as its population grows larger and denser and it adapts to its new location. If the arms races between natives and invaders keep continuing to balance in favour of invaders, and the trend is out of control, a global homogenization

of our planetary biota may become the case in the future. Biological invasions will continue to be an ongoing problem in the future given human population growth, its increased needs, and its movement throughout the world. It is time for us to pay more attentions on the ecological impact of biological invasion both at the species and ecosystem levels.

China is a country whose territory spans a vast area and covers diversified types of ecosystems, but for a long time, the problems of biological invasions in China had not become very obvious in the period of self-confinement. Along with implementing an open-door policy for more than 30 years, Chinese economy has increase rapidly, and at mean time, the phenomenon of biological invasion has also become more and more widespread and serious. Having recognized the situation, Chinese ecologists have carried out extensive long-term studies on biological invasions. The newly published comprehensive book *Biological Invasions in China* systematically summarizes the results in this field. Hopefully it will provoke more international attention on the seriousness of the problems of invasive species in China.

The main contents of the book included; Introduction, Chapter 1 Invasive alien species in China: the current status and trends of occurrence; Chapter 2 Occurrence, damage and expansion of major invasive alien species in China; Chapter 3 Extrinsic factors affecting biological invasions in China; Chapter 4 Economic, ecological and social impacts of biological invasions in China; Chapter 5 Development of invasion biology discipline in China; Chapter 6 Progress of basic theoretical research on biological invasions in China; Chapter 7 Progress of applied research on technologies for prevention and management of invasive alien species in China; Chapter 8 Development strategy of the research and management of biological invasions in China; Chapter 9 Demands for innovation research on biological invasions in China.

This book is a timely and essential reference for researchers engaging in biological invasion, biodiversity, ecological safety, animal and plant quarantine, plant protection and environmental protection, and administrative personnel or policy makers in these fields or other related fields.

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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!"

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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.