

Woody and aquatic plants pose greatest invasive threat to China

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Although China currently has fewer invasive woody plants than the United States, China's potential for invasion by nonnative trees and shrubs is high, according to an article in the May 2008 issue of *BioScience*.

Authors Ewald Weber, of the University of Zurich in Switzerland, and Bo Li, of Fudan University in Shanghai, China, examined the factors associated with alien plant species invasions and compared the history of alien plant species introductions in the United States and China, countries of similar size and latitudinal span.

Weber and Li posit that China has relatively few invasive plant species because the country has remained largely isolated from international trade until recent decades, unlike the United States. As Chinese economic development proceeds apace, however, so too may the number of invasions of alien species. Of the plants that are already invasive in China, annuals are more common than shrubs, trees, climbers, and aquatic plants. These less common types, which include some of the world's most pernicious invaders, could be poised for spread in the future.

The authors note that 20 familiar plant species, including elephant grass (*Pennisetum purpureum*), native to Africa, and pampas grass (*Cortaderia selloana*), native to South America, are common invasive species in the United States and elsewhere but have not yet been reported as invasive in China, which may indicate that China is vulnerable to future infestations.

Yet species that have already spread have not been adequately controlled. For example, the grass *Spartina alterniflora*, native to the United States, was introduced into China in 1979 to help curb sand erosion. This plant has since invaded China's eastern coast and estuaries, choking out the native *Scirpus mariqueter* and *Phragmites australis*, changing crucial wetlands to meadowlands, and hindering shorebirds' access to food.

The article concludes that rapid economic development and strengthening international trade in China will have a twofold effect: new species will be introduced into the country at an ever-increasing rate, and greater reliance on railway transportation will cause habitat degradation, providing alien plants with viable environments for rapid range expansion.

The authors stress the need for immediate management of invasives in China, as well as other parts of Asia, to keep this momentum from gathering speed and causing further problems for poor farmers who live on marginal land. Weber and Li further state that any developing country benefiting from economic expansion and international trade should be wary of the greater potential for invasion of alien plant species.

Source: American Institute of Biological Sciences

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