

# China's economic boom sparks biological invasions

April 1 2008

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The rapid growth of China's industrial and transportation infrastructure is helping to establish non-native species throughout that country and "setting the stage for potentially rampant environmental damage," according to an article in the April 2008 issue of *BioScience*. The article, by a Chinese-US team, describes how more than 400 alien plants and animals are now considered invasive in China, including some that are causing serious harm even though they were first documented in the country only a few years ago.

The authors of the article are Jianqing Ding and Mingxun Ren of the Wuhan Institute of Botany, Richard N. Mack of Washington State University, Hongwen Huang of the South China Institute of Botany, and Ping Lu of the Northeast Agricultural University, Harbin, China. Many factors are contributing to the developing problems, including an increase in the number of ports of entry, the number of travelers, and the amount of imported goods. An expanding network of express highways and more domestic air travel also make it easier for organisms to "hitch-hike" into and around the country.

Many invasive plants were brought to China as ornamental or fodder species. Canada goldenrod was brought in as an ornamental and was distributed via the domestic nursery and garden industries; it has now invaded more than 20 provinces. Insects have spread even faster: the American vegetable leaf miner, first detected in China in 1993, now occurs throughout the country.

Ecosystem disturbance around major construction projects such as the Three Gorges Dam has stimulated biological invasions of damaging plants such as broadleaf fleabane as well as alligator weed and water hyacinth, both of which were once cultivated for animal fodder with official encouragement. The recently completed Qinghai-Tibet railway is also thought likely to accelerate the spread of invasives.

Even the preparations for the 2008 Beijing “Green Olympics” pose a threat: non-native grass seed and other plants continue to be imported as part of an effort to beautify the urban landscape. These plants could serve as carriers for insect pests.

One preliminary estimate puts China's annual economic losses from invasive insects and plants at \$14.5 billion. The article includes a call for “enhanced research, public education, and governmental attention” to the problem of invasive species in China.

Source: American Institute of Biological Sciences

Citation: China's economic boom sparks biological invasions (2008, April 1) retrieved 16 July 2024 from <https://phys.org/news/2008-04-china-economic-boom-biological-invasions.html>

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