Pink Hibiscus Mealybug

The Threat

The pink hibiscus mealybug (*Maconellicoccus hirsutus Green*; PHM) is a tropical and subtropical insect capable of infesting more than 125 ornamental, agricultural and forest plants. It was discovered in the Caribbean island of Grenada in 1993 and, despite containment efforts, spread to several Caribbean territories in the following years. By 1999, it threatened to reach the U.S. mainland.

The Response

Proactive collaboration between the United States Department of Agriculture and the Ministries of Agriculture in Trinidad and Tobago and Guyana, as well as research partnerships between several institutions, including the International Institute of Biological Control, allowed the agencies to build an understanding of the threat posed by the pest and of its unique biology. These partnerships led to the identification, testing, and successful release of two biocontrol agents - wasps that kill individual PHM as part of their life cycle. The wasps were raised in large numbers at contained facilities in the U.S. Virgin Islands. The knowledge gained of the pest's potential impact, its interaction with natural enemies, and of effective management techniques was instrumental in preparing the U.S. for PHM arrival.

PHM was detected for the first time in the continental U.S. in Imperial Valley, California in 1999, and the experience in the Caribbean helped facilitate the early release of two parasitoid wasp species. Subsequently, a breeding program for the wasps was established in El Centro, California. PHM was next discovered in Florida's Broward and Miami Dade counties in 2002, and biological control using the wasps was quickly implemented. Given that PHM can infest a large number of food and vegetable crops, as well as ornamental plants, and has a high reproductive rate and efficient dispersal abilities, serious economic and environmental damage was averted in both cases.

This program provides clear evidence of the value and success of a proactive plan to counter an invasive pest with biological agents at first detection. Critical elements in managing PHM include early detection, rapid response, and the use of a proven management strategy.

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Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org

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Pink hibiscus mealybug infestation

ELEMENTS OF SUCCESS!

- Effective early detection of PHM
- Advanced determination of the pest's potential impact
- Sufficient funds to better understand pest ecology
- Partnerships with foreign governments and research institutions
- Successful identification and mass culture of the pest's natural enemies

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Newly hatched PHM crawler

Today PHM remains present in Hawaii, California, Florida, Louisiana and Texas, but its impact has been limited by a successful biological control effort.

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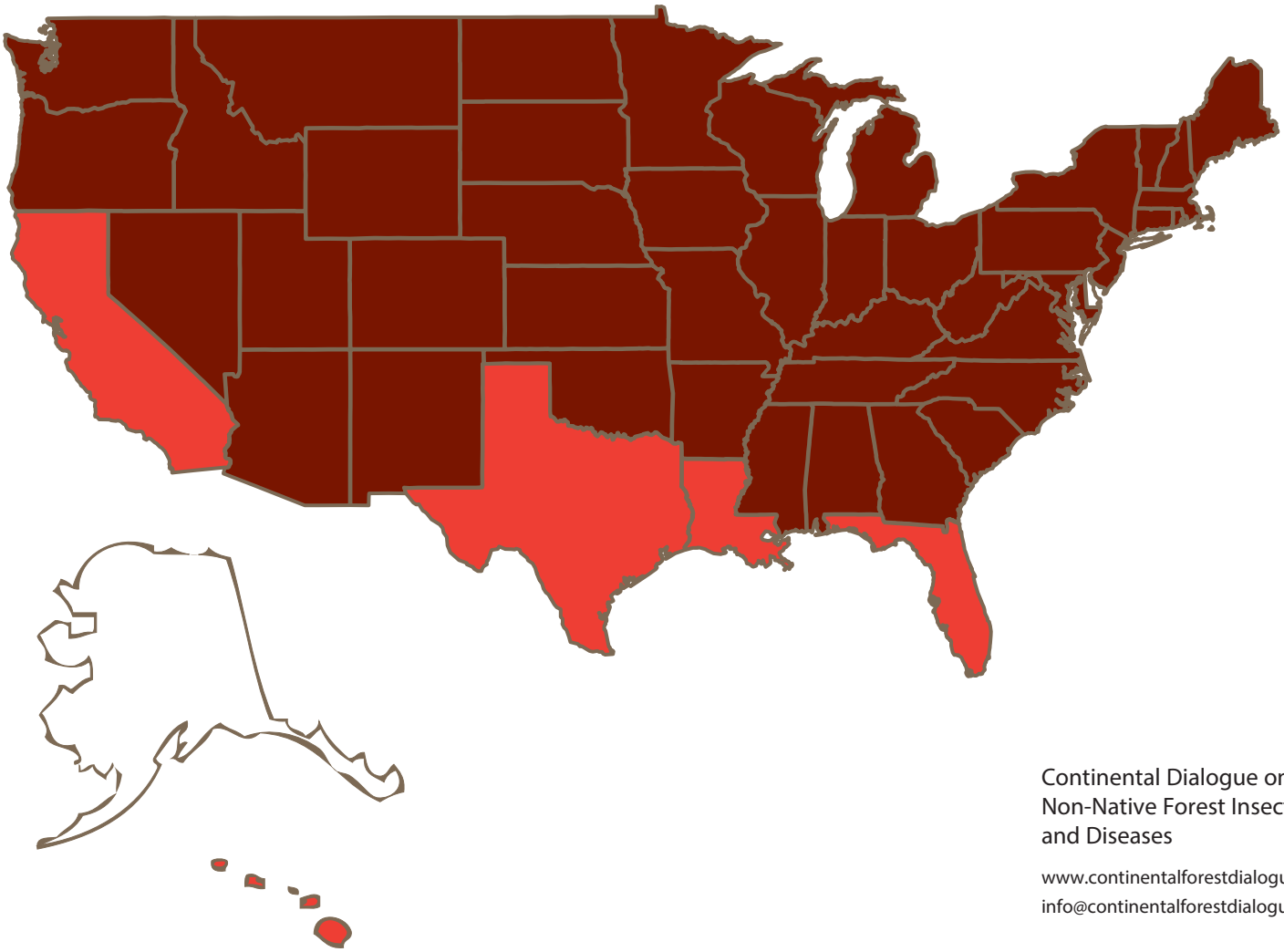
The pink hibiscus mealybug is a high risk pest of numerous ornamentals, forest trees and agricultural crops and could potentially have a wide distribution in the United States.



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