

Plant Invasions: Human perception, ecological impacts and management, pp. 3-20
Edited by B. Tokarska-Guzik, J.H. Brock, G. Brundu, L. Child, C.C. Daehler & P. Pyšek
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Invasive plant problems in the Hawaiian Islands and beyond: insights from history and psychology

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Abstract

The Hawaiian Islands are recognized around the world as a unique showcase for invasive species, yet Hawai'i can also be viewed as a model for understanding invasive species problems elsewhere. Most of Hawaii's invasive plants were deliberate introductions; therefore, studies of human behaviour and attitudes towards introduced and invasive plants can help us understand current and future patterns of invasion. Historically, major motivations for plant introductions have included nostalgia, neophilia and economics. Scientists have also made deliberate introductions in the interest of restoring or improving ecosystem services. New plant introductions continue to be made each year. Although some conservation biologists recognize this as harmful, the general public does not perceive introduced plants as threats. Case studies can be used to educate about harm caused by invasive species, but education alone rarely influences public attitudes and behaviours. Some strategies for changing attitudes or behaviours include creating experiences to promote self-nature unification, appeals to fear, analysis of associative cognitive networks, and operant conditioning. Changes in attitudes and behaviours are needed to minimize invasive plant problems, and the field of psychology may offer insights into how these changes can be achieved.