

COMMENTARY

Response to Holland et al.; Biocontrol in Hawaii: More Bureaucracy is Not the Answer

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Biological control of invasive species in Hawaii is a controversial subject, but it is no longer viewed as an “agriculture vs. environment” issue. Rather, it is increasingly recognized as an essential tool for protecting beleaguered natural ecosystems (Hoddle 2004). In response to a previous article that called for a more streamlined bureaucracy for permitting new biocontrol agents, Holland et al. (this volume) argue that “*the level of public scrutiny of decisions to release biocontrol agents into Hawaii’s fragile ecosystems should be increased, not diminished.*”

Holland et al. state that the previous article (Messing 2007) presented biocontrol in an “unambiguously positive light.” However, the article did, in fact, note that serious errors were made, that conservationists were “*justifiably angered*” by previous mistakes, and that there were “*mishaps of indiscriminate introductions.*” The introduction of predatory snails to control the giant African snail has no doubt had serious non-target impacts; but the last introduction of these predators into Hawaii occurred almost 50 years ago. Introduction of generalist predators such as these would be impossible under the current regulatory structure; in fact, even host-specific parasitoids have a hard time making it through the permit system.

As stated in Messing (2007), the risks of biological control should be viewed in context, and compared with the risks of other forms of pest control, and even the risk of doing nothing. In many cases, successful biocontrol can lead to enormous reductions in the amount of pesticides that are released into Hawaii’s ecosystems, with their potential for human health effects, non-target impacts to wildlife, and groundwater contamination. These environmental and human health concerns should not be minimized. In addition, legal and economic considerations make pesticide use unacceptable in many natural areas, with biocontrol remaining the only feasible and sustainable method of pest control.

The main point of contention of Holland et al. is that additional layers of scrutiny will allow a biocontrol permitting decision to be “*better informed than if it were made without public input.*” This reflects a lack of understanding of the current regulatory system enforced by the Hawaii Dept. of Agriculture (HDOA), details of which can be found in Messing and Purcell (2001). The existing regulations already include multiple opportunities for public scrutiny and comment, including an open and advertised Plants and Animals Advisory Committee meeting; an open and advertised Board of Agriculture meeting; full public hearings with comment periods held in every county of the state; public notice in a daily or weekly publication of statewide circulation; and additional open meetings of both the Committee and the Board to set permit conditions prior to any release of a new organism.

The HDOA process already requires detailed analysis of potential environmental impacts, making the proposed additional layers of scrutiny called for by Holland et al. duplicative, and an unnecessary tax on already limited resources. We agree that public scrutiny is a necessary part of the review process for new species introductions into the state. In fact, the Messing (2007) article explicitly calls for increased transparency in the regulatory system. However, transparency and public scrutiny do not imply redundancy and inefficiency. Public input should be gathered and considered in a thorough yet efficient manner. The most comprehensive and most transparent regulatory system in the world for biological control is in New Zealand, where there is ample public input and review, yet all decisions on permitting adhere to fixed timelines mandating completion within 100 working days (Hunt et al. 2008).

Holland et al. are correct in assessing the Federal regulatory framework as “a hotchpotch of old legislation” that is not specific to biological control. However, they proceed to advocate yet another hotchpotch at the state level. Assessment of potential biocontrol impacts in Hawaii now occurs through two separate processes: first, with HDOA protocols that are more strictly tailored for evaluation of the impact of new species introductions; and second, as a result of the *Ohana Pale* court decision, via a separate review through the Office of Environmental Quality Control (OEQC). The latter is based on the Hawaii Environmental Policy Act (HEPA), which was originally written for construction, development, and land use projects (as evidenced by the language of the statute: http://luc.state.hi.us/docs/hrs_343.pdf). It is not nearly as specific or relevant to the practice of biological control as the existing HDOA regulations, which are among the most stringent in the world (Messing 2005).

Streamlining the review process would be easy. Instead of requiring a separate and redundant assessment within OEQC, the HDOA applications could be published in *The Environmental Notice* (http://oeqc.doh.hawaii.gov/Shared%20Documents/Environmental_Notice/). This would also help to ensure the continued efficacy of OEQC, which is currently provided insufficient resources to manage the growing number of applications and assessments submitted to the Office annually. Holland et al. call for additional regulations, but they do not provide any suggestions as to sources of funding for implementing those policies. It is precisely this disconnect between policy and appropriations that created the current state of regulatory inefficiency. Further, Chapter 343 (HEPA) should be amended to exempt projects that undergo thorough environmental assessment through another mandatory authorization.

Streamlining would not only benefit the applicant, but the public as well. Multiple, redundant reviews and repetitive public hearings strain the resources of applicants, and also the resources of grassroots and community groups that want to engage in the review process. There is a clear and strong need to recognize that permitting biological control agents is part of the *solution* to environmental (and economic) problems, in the same way that listing a threatened or endangered species by the US Fish and Wildlife Service is part of the solution towards saving it from extinction. Failing to issue a permit in a timely manner is analogous to failing to list an endangered species, and may be subject to similar lawsuits. Two recent examples (the invasion of Guam by the Asian cycad scale (*Aulacaspis yasumatsui*), and the invasion of Hawaii by the Erythrina gall wasp (*Quadrastichus erythrinae*)) demonstrate how a lack of timely biocontrol permitting could be a factor in irrevocable ecosystem damage.

Public scrutiny, risk analysis, and caution in the conduct of classical biological control are important elements of a technology that has great potential for environmental and economic benefits in the state of Hawaii. For these benefits to be realized, however, agricultural and conservation interests alike should encourage our state government to adopt policies and regulations that are efficient as well as transparent. Invasive pest species in the islands are occurring at an increasing rate; threatening crops, native plants and animals, and entire

ecosystems. It is essential that we retain the ability to control these pests in a timely and a safe manner. Regulations should facilitate, rather than obfuscate, these goals.

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