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# Commentary

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## Reply to Letter by B. P. Caton in Response to ESA Position Paper on Invasives

We thank Caton for his informative letter responding to our position paper (which is now in press at *Ecological Applications* [December 2006]). We would like to make it clear that the position paper was not intended to disparage directly or indirectly the PPQ scientists and other federal scientists who are working hard to improve biosecurity in the United States. We agree fully that federal scientists are valuable partners for ESA members interested in biological invasions, and the position paper is meant to encourage such interaction.

ESA wished to have federal scientists participate as authors on the position paper, but the scientists invited were denied permission by their agencies to co-author a paper that made policy recommendations. Nevertheless, during multiple rounds of written review and revision, the authors of the position paper received and responded to reviews from 17 independent experts, the ESA Public Affairs Committee (twice), and the ESA Governing Board (twice). These reviewers included at least six federal scientists representing at least three federal departments. None of those reviewers raised the objections made by Caton.

Caton's concerns give us the opportunity to clarify two foundational issues on which we based the specific recommendations of the position paper. First, existing policies (and their implementation) determine the ways in which existing scientific expertise is employed, and determine the topics and goals of research, and applications by federal scientists in particular. While we agree with Caton that there are many talented and dedicated federal scientists, the first two recommendations of the position paper emphasized that existing policies on invasive species do not focus

technical and regulatory efforts sufficiently on prevention of introductions.

For example, prohibitions of importation of particular plants and plant pests (by USDA) and animals (by USFWS) are largely reactive. This is dictated in part by policy (established by Congress) and in part by implementation (over which the agencies have some discretion). Thus U.S. practices are based largely on a blacklist approach, such that if a plant, animal, parasite, or pathogen is not specifically banned, it may be imported. Thus, despite the dedicated contributions by many talented scientists with a variety of affiliations that have dramatically increased capacity in ecological risk assessment, species not banned are allowed to enter the country. Similarly, pathways are often regulated only after they have delivered species that have established and become demonstrably dangerous. We believe that regulatory risk assessments are narrowly focused, and often so late in the invasion process that species and the damages they cause are guaranteed to spread geographically and grow over time. Therefore, we strongly support the PPQ initiatives highlighted by Caton, as small steps in the right direction. One of us, for example, has submitted official public comments in support of the proposed changes to Quarantine-37 practices, which would institute screening of some plants proposed for importation. We applaud these improvements under consideration, which would allow the application of recent scientific advances in risk assessment highlighted by the position paper. In addition, however, we re-emphasize the need for changes to higher level policy, rules, and implementation to more adequately prevent entry into the United States of species likely to be harmful. The position paper and other recent reports (NRC 2002) were motivated by this perspective.

Second, U.S. funding for biosecurity with respect to invasive species remains inadequate despite recent efforts to improve coordination and focus priorities within Homeland Security and older agencies. We share Caton's concern about Homeland Security's impact on invasive species risk assessment and management. The current inadequacies apply across the board, including research to generate new knowledge that could lead to significant changes in biosecurity policy, development of sufficient scientific support for regulatory action, and maintenance of human capital for surveillance and interdiction. Even if federal scientists had the authority and the desire to conduct more and better risk assessments, such as those advocated by the position paper, the resources are inadequate to support these activities. It is no surprise, then, that scant resources are devoted to links with traditional agricultural sciences, and resources to support collaboration with university ecologists are rarer still. The challenges are large and urgent, and partnerships among scientists in a variety of institutional settings are needed to slow the tide of invaders. ESA supports Caton and his colleagues in USDA and other federal agencies in trying to stem the tide of invasive species. We and other ESA scientists are eager to continue a dialogue with federal agency scientists in the national effort to reduce the damages from invasive species.

#### Literature cited

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