

Chapter 8 Discussion Topics:

Figure 8.1. is a graphical representation of invasion pressure on a system with the various points illustrating management efforts to reduce invasibility. While it theoretically makes the most sense to start at point F, the effectiveness of management at this stage is often difficult to prove. What are the positives and negatives of implementing management schemes at the different points along the invasion surface? How does public perception of invasion affect where, on the surface, management occurs?

Do you agree with the statement from Gollasch and Leppakoski (1999) that the only environmentally sound approach to introductions is that non-native species should be treated as “guilty until proven guilty”? What about economically valuable species? Does your answer differ for species that we create such as GMOs and/or horticultural varieties of species? Who should be able to weigh-in on these types of decisions (scientists, government, industry, the general public, etc.)?

Management by directed evolution can be achieved in two ways: via the invader or the native species (see page 144). Do you think that altering the genetic composition of either population will “fix” the invasive problem? What are the issues in using this type of management? The American chestnut, though not invasive has benefited from directed evolution. Does your view on directed evolution differ if the species is endangered or an invasive one?

Davis discusses the use of citizen scientists in management efforts on page 148. He specifically highlights the Invasive Plant Atlas of New England (IPANE) housed here, at UCONN. With the recent lack of professional taxonomists and the amount of money and time needed for professionals to accomplish a wide-ranging survey, volunteers are the latest tool for mapping and databasing large scale distributional data. As a group of academics/students, what do you think about the use of volunteers and amateurs to collect scientifically meaningful data? How does the use of citizen scientists affect public perceptions of non-native species and their management?

All of these questions about management rely heavily on the idea of the non-native species as a negative. Is there room in invasion management for the “LTL” approach? Is it society, the scientific community, or both that would need to change their attitude(s) when adopting this approach? Since ecological systems are not static, what amount of change should we be able to live with? Are expectations for eradication unreasonable?

Since this group is base in academia, I'd like us to weigh in on the relevance of invasion research to invasion management, Davis's last section. Figure 8.12 illustrates the benefits to managers with the increase of invasive theory (top) or species-specific research (bottom). Do you agree with where the “X” marks are? How would you adjust these marks on their respective lines considering a) where theory and research are currently and b) where they should be?