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Coralita (*Antigonon leptopus*) growing along a fence on St. Eustatius.
Photo credit: Elizabeth Haber

Invasive species in the Dutch Caribbean: foreign foes or alien allies?

By Elizabeth Haber and Jetske Vaas (University of Utrecht, the Netherlands)

Invasive alien species, such as the lionfish or Coralita, have far-reaching ecological and economic impacts. The EU estimates the yearly costs of damage caused by and control of invasive species to be 12 billion euros (European Commission 2013; Shine et al. 2010).

The ecological impacts of invasive species can be especially detrimental on islands because 1) on islands plants and animals have evolved in partial isolation from other areas, and may thus be vulnerable to an introduced predator or competitor, and 2) a high proportion of endemic species, which may be displaced by invasive species, are found on islands. The Caribbean region is considered one of the top hotspots of biodiversity in the world because of the high number of endemic species found in the region as compared to its geographic area (Baillie, Hilton-Taylor, and Stuart 2004). Invasive species therefore pose an even greater potential threat to the Caribbean region because of its importance as a center of biodiversity.

Sometimes the ecological perspective is the only one presented when evaluating different invasive species management options. Combining multiple perspectives while including input from a variety of stakeholders can provide scientifically sound and socially relevant tools to help natural resources managers make decisions (Ostrom 2009). The challenge remains to reach agreement amongst all

stakeholders on how to manage invasive species, since everyone perceives the impact of invasive species differently. Whereas to an ecologist Coralita might be solely a menace, bee keepers may appreciate the nectar-producing flowers of the vine. The aim of Utrecht University's recently started NWO-funded research project "Invasive species in the Dutch Caribbean: foreign foes or alien allies?" is to build on these different views and provide possible management scenarios, indicating their costs and impacts. To that aim, Dr. Maarten Eppinga, Elizabeth Haber and Jetske Vaas visited the Caribbean Netherlands last autumn to conduct fieldwork and get a grasp of the local context, so we can optimise the value of our research to the Dutch Caribbean.

Since this project began, Elizabeth has conducted two field campaigns in the BES islands. Her first visit was to St. Eustatius in July 2015. There, she and her research team collected geolocation information to build a vegetation classification model specifically focusing on two invasive plant species: Coralita (*Antigonon leptopus*), and Tan Tan (*Leucaena leucocephala*). The team also collected environmental



Jetske Vaas (left) and Elizabeth Haber (right) at the CIEE research station in Bonaire before their public presentation on 12 November.

Photo credit: Ben Oyserman



Rubber vine (*Cryptostegia grandiflora*) young leaves and old seed pod on Klein Bonaire.

Photo credit: Elizabeth Haber



Dr. Maarten Eppinga collecting GPS coordinates for a patch of Coralita near St. John's, Saba.

Photo credit: Elizabeth Haber

data at each GPS location with the aim of elucidating the environmental preferences of those two invasive plants. In October and November, Elizabeth returned to the Caribbean to continue her research. For Elizabeth, the aim of the second research trip was split equally between field data collection and outreach. She collected geolocation and environmental data for Coralita on Saba, and Neem (*Azadirachta indica*) and Rubber vine (*Cryptostegia grandiflora*) on Bonaire.

Jetske focuses on governance, i.e. political, administrative, and sociological aspects of invasive alien species management. In addition to the three BES islands, Jetske also visited Guadeloupe and Anguilla. Guadeloupe is highly integrated into France and the EU, complying to the exact same laws and regulations, and receiving a lot of funding. Opposed to this, Anguilla has very few ties to the United Kingdom, having its own laws and receiving funding only on project-basis. Nevertheless, Anguilla has very effectively dealt with invasive alien species, e.g. in the case of the Giant African snail and rats. Guadeloupe is steadily developing a policy framework, but appears to be slowed down by debates about which part of government is responsible for what. However, France is increasingly recognizing the need for policy, which might help Guadeloupe catch up.

Next to these fieldwork activities, the research team also used their time on the islands for giving multiple presentations, coordinating outreach activities, and meeting with stakeholders. We have received very valuable input so far and are grateful for the time people took to help us start up the project. Throughout the project we will strive

to continue the involvement of local stakeholders, to make sure our research is of value to them. Currently, we are busy analysing the preliminary results and thinking of the next steps to work towards tools to support decision-making in the Caribbean Netherlands regarding invasive alien species. We hope that the engagement of everyone involved so far will continue, so our research can contribute to pragmatic solutions!

References

Baillie, J. E. M., C. Hilton-Taylor, and S. N. Stuart. 2004. 2004 IUCN red list of threatened species. A global species assessment. Switzerland and Cambridge, UK: IUCN

European Commission. 2013. Commission staff working document impact assessment. accompanying the document proposal for a council and european parliament regulation on the prevention and management of the introduction and spread of invasive alien species. Brussels: SWD(2013) 321 final

Ostrom, E. 2009. A general framework for analyzing sustainability of social-ecological systems. *Science* 325 (5939): 419-22

Shine, C., M. Kettunen, P. Genovesi, F. Essl, S. Gollasch, W. Rabitsch, R. Scalera, U. Starfinger, and P. ten Brink. 2010. Assessment to support continued development of the EU strategy to combat invasive alien species. Final report for the European commission. Institute for European Environmental Policy (IEEP)

