An Idea for Our Data Project

Lowe et al. (2000) listed the 100 worst invasive species from a global database
This work is commonly cited (Google Scholar ~ 3700 citations) *per species* (e.g., our subject species is one of the worst…). But what patterns exist **among** this list of species? Results may be interesting because: (a) 100 is a strong sample of known invasive species; (b) comparative approaches seek common patterns and reasons for variation in those patterns. Thus we may find themes in spatial, temporal, dispersal histories, and traits that could help predict and thus mitigate other invasions.

First, a definition from Lowe et al (2000): An invasive species is in that meets two criteria: "their serious impact on biological diversity and/or human activities, and their illustration of important issues surrounding biological invasion."

Our Goal: To find general trends among leading invaders by answering fundamental questions *across* species:
1. Where are they most reported?
2. When are they most reported?
3. How do they most often invade?
4. What traits do they share?

Our Methods:
a) For 1. & 2. above: Obtain and clean occurrence data from online databases, using repeatable R code available now
b) For 3. above: Dig into literature for each species to find how they were introduced and how they spread
c) For 4. above: Obtain traits data from online databases, using repeatable R code already available now and otherwise (e.g., TRY); supplement with literature searches as needed

Then:
d) For 1 above: map occurrences and compare records to anthromes and country GDP, population
e) For 2 above: plot temporal trends, evaluate average and scatter relative to GBIF total records trend
f) For 3. above: tally reported pathways
g) For 4. above: compare results of 2. to traits suites; plot and analyze trait suites for common patterns