

## Slide Notes for Power Point Presentation: What Makes Invasive Species So Successful?

Slide number	Notes	Additional Notes
1	Ask students: What tends to make invasive species so successful? Definitions in the next slide.	
2	<ul style="list-style-type: none"> <li>-Non-native species are organisms that originated from a completely different ecosystem. Also called exotic, introduced, weedy, non-indigenous.</li> <li>-They have been introduced, often through accidental or deliberate human activity, from some place else. They now occur outside their native range in established, breeding populations.</li> <li>-Not all non-native species survive. EPA estimates that only 10% of introduced species survive and of these, only 10% become invasive</li> <li>-No/few predators, competitors or diseases in new environment.</li> <li>-Populations may grow very rapidly, taking over habitats, out-competing native species</li> </ul>	
3	<ul style="list-style-type: none"> <li>-Review the characteristics, adding to the students' answers anything they missed, or adding correct answers to this incomplete list.</li> <li>-“Pioneer species” are those that are first to establish themselves in an environment after a disturbance (e.g. bulldozing).</li> <li>** Remember that this list is more of a guideline of <u>tendencies</u>. Most invasive species demonstrate some-many but not all of these characteristics.</li> </ul>	
4	<ul style="list-style-type: none"> <li>-Invasive species introductions cost you money. Pimentel 's 2000 study estimated it costs the U.S. \$137 billion/year to “fix” or at least mitigate their negative impacts and in attempts to control these species</li> <li>-Brown marmorated stink bugs (in picture) are a relatively recent threat to NY (and other northeast &amp; midwest) orchards. They cause tremendous damage to fruit tree crops, though they also attack other fruit and vegetable crops.</li> </ul>	
5	<p>Example of invasives in the Hudson River:</p> <p>Water chestnut (bottom left): form dense floating mats of vegetation limiting light available to other aquatic vegetation.</p> <p>Carp (bottom right): several Asian carp species are considered invasive. They consume large amounts of plankton. They also</p>	

	<p>have been known to strike boaters when they leap out of the water.</p> <p>Zebra Mussel (upper right): We'll talk extensively about these.</p>	
6	<p>Extent of zebra mussel invasion in the United States. Zebra mussels most likely entered the Hudson River via the Great Lakes.</p>	
7	<p>Life History of ZM -Gametes shed into water.</p> <ul style="list-style-type: none"> <li>- The immature form settles on and affixes itself to hard surfaces.</li> <li>-Mature quickly and live 6-7 years</li> <li>-Prey item for few species in Hudson River (further discussed later)</li> </ul>	

Lesson 1- Notes for Powerpoint presentation: Introduction to Invasive Species