

Canadian Aquatic Invasive Species Network

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NSERC CAISN II

Participants:

- 33 faculty in 8 provinces
 - 11 universities
 - 6 federal and 2 provincial (ON, BC) labs

Funding: NSERC (\$4.8 million)

- Fisheries and Oceans (\$1 million)
- Transport Canada (\$0.75 million)
- University of Windsor/Alberta (\$300K)
- Fednav Inc. (~\$300K)

Partners:

- Shipping Industry (Shipping Federation of Canada, Fednav Inc., ports of Halifax, Vancouver, Great Lakes, Arctic)
- Outreach and education: Ontario Federation of Anglers and Hunters and its sister organizations

NSERC CAISN II (2011-2016) Research Themes

1. Early detection and identification of AIS – 5 projects
2. Rapid response to new AIS – 2 projects
3. AIS as part of multiple stressors – 3 projects
4. Reducing uncertainty in management of AIS – 6 projects

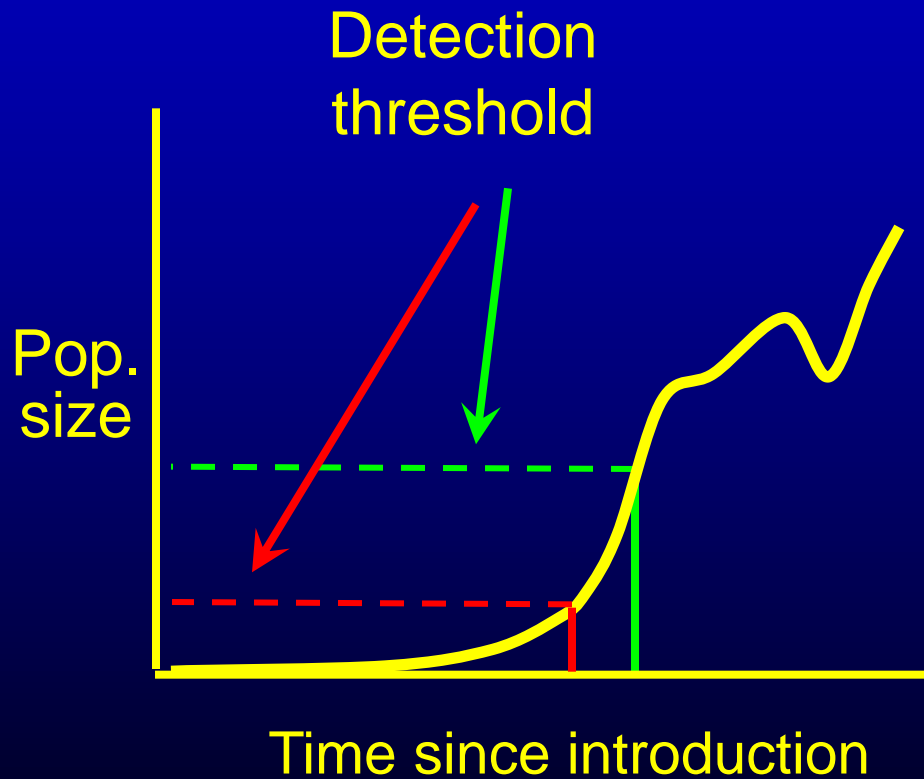
Geographic Distribution of Sampling Sites



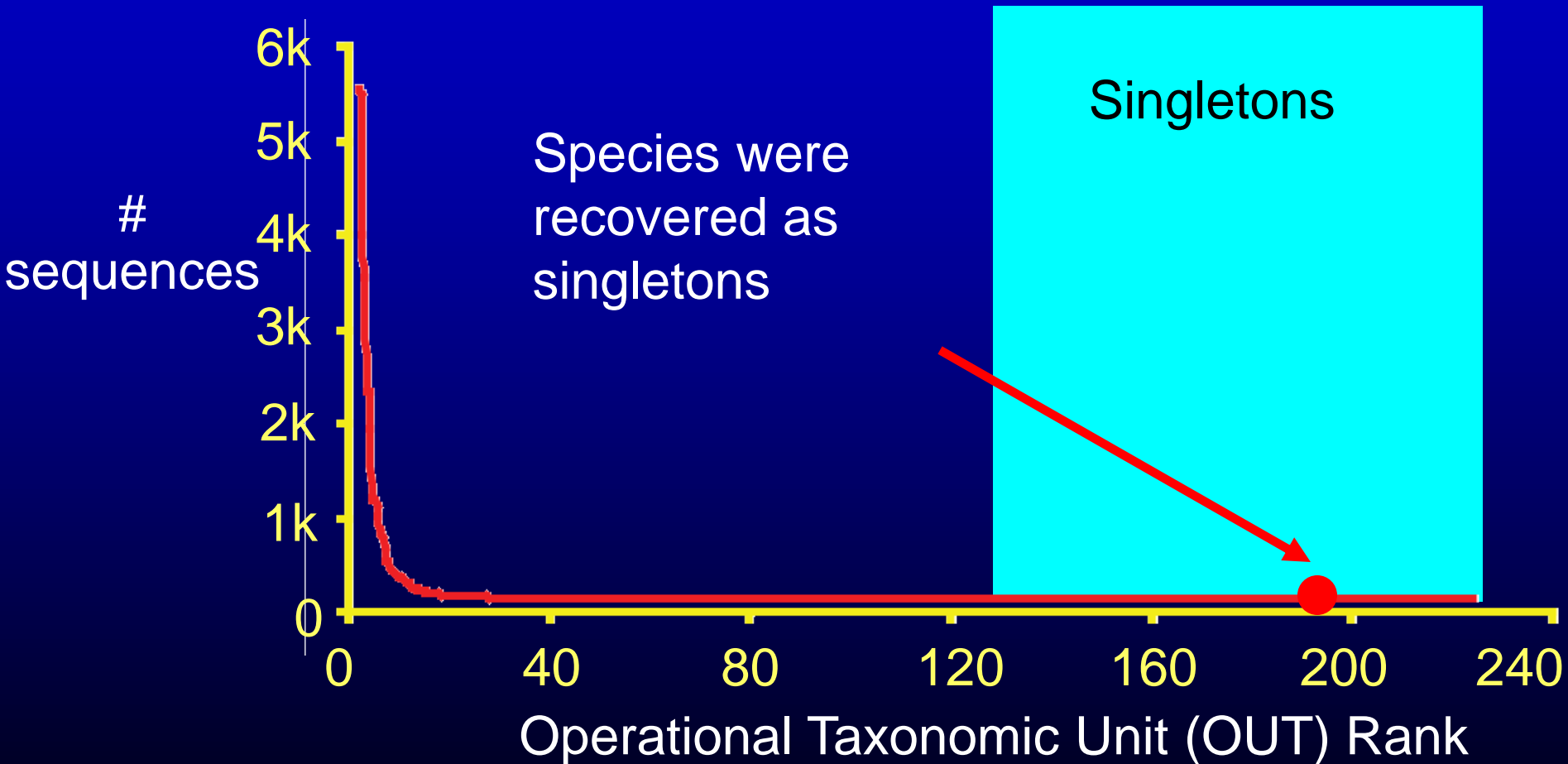
Most port sampling completed in 2011, remainder in 2012

Detection of rare species has long plagued ecologists

New aquatic invasive species

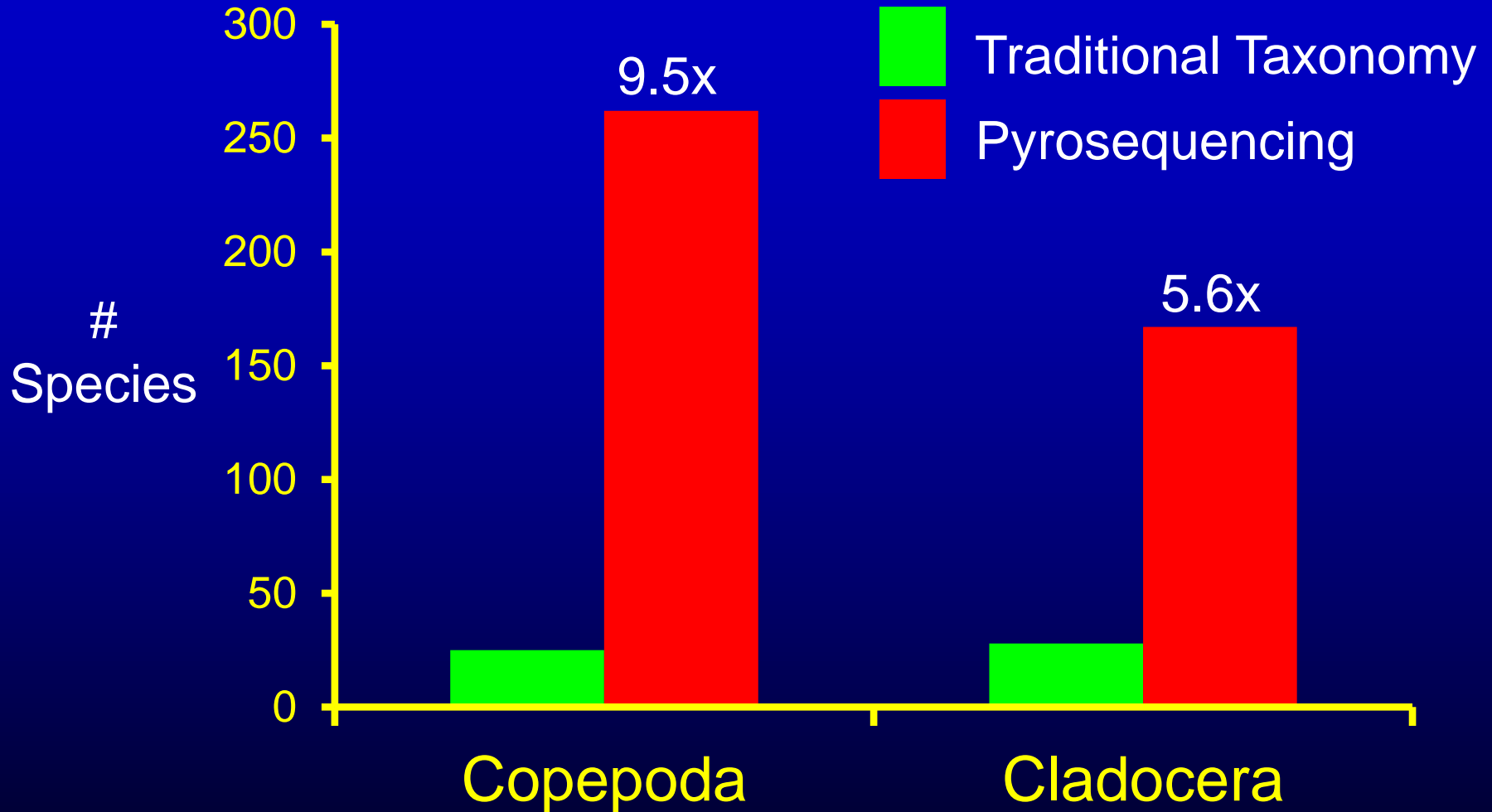


Detection thresholds for rare species using next generation sequencing



Pyrosequencing vs Traditional Taxonomy

Species Richness in Hamilton Harbour



Technique seems to offer real advance in detecting rare species