

Acoustic Monitoring of Cetaceans in the SouthWest

What are the long term trends in numbers of cetaceans in our waters?

Nick Tregenza



Harbour porpoise *Phocoena phocoena*



Bottlenose dolphin *Tursiops truncatus*



photo Colin Speedie

Risso's dolphin *Grampus griseus*



photo Colin Speedie

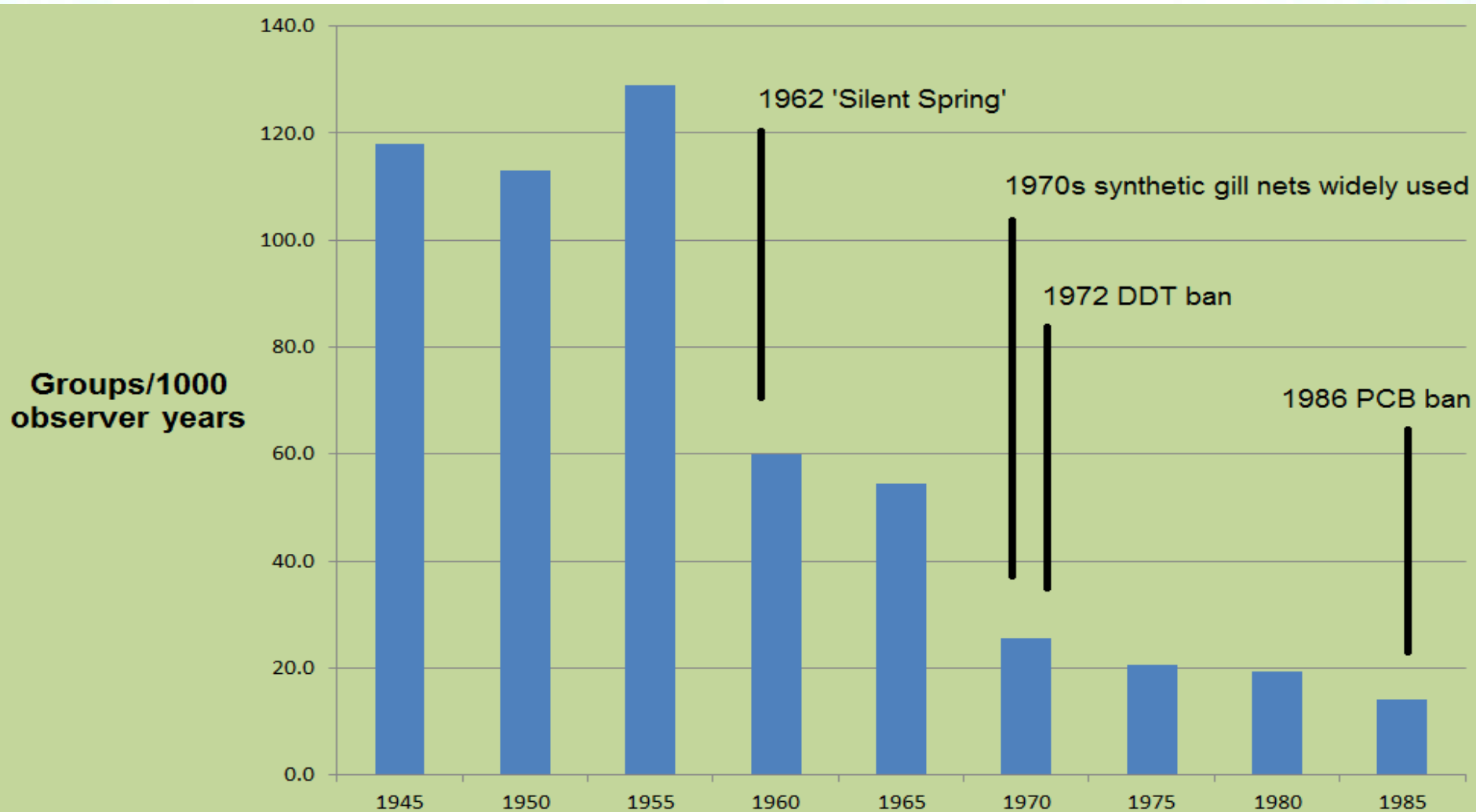
Common dolphin *Delphinus delphis*



photo Paul Semmens

Current knowledge

Sightings:



Orca *Orcinus orca*



photo Stephen Westcott

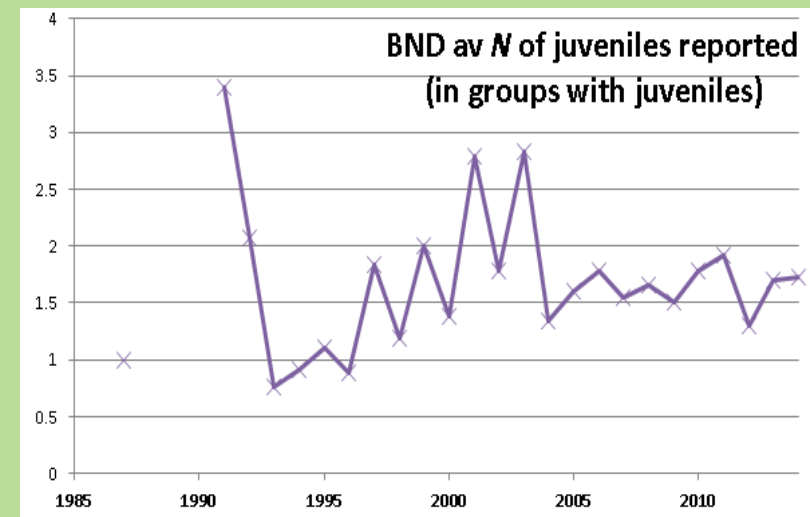
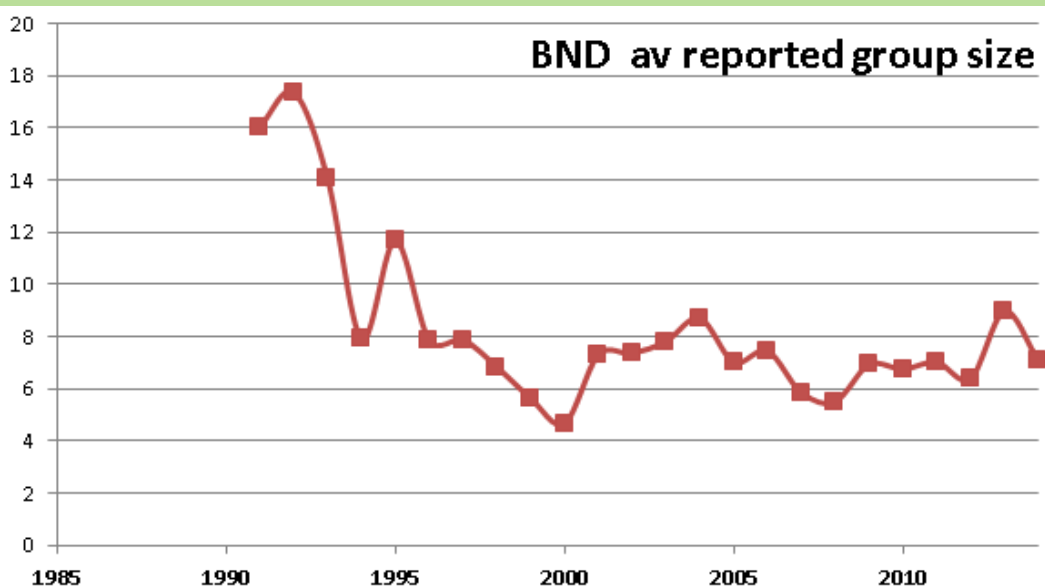
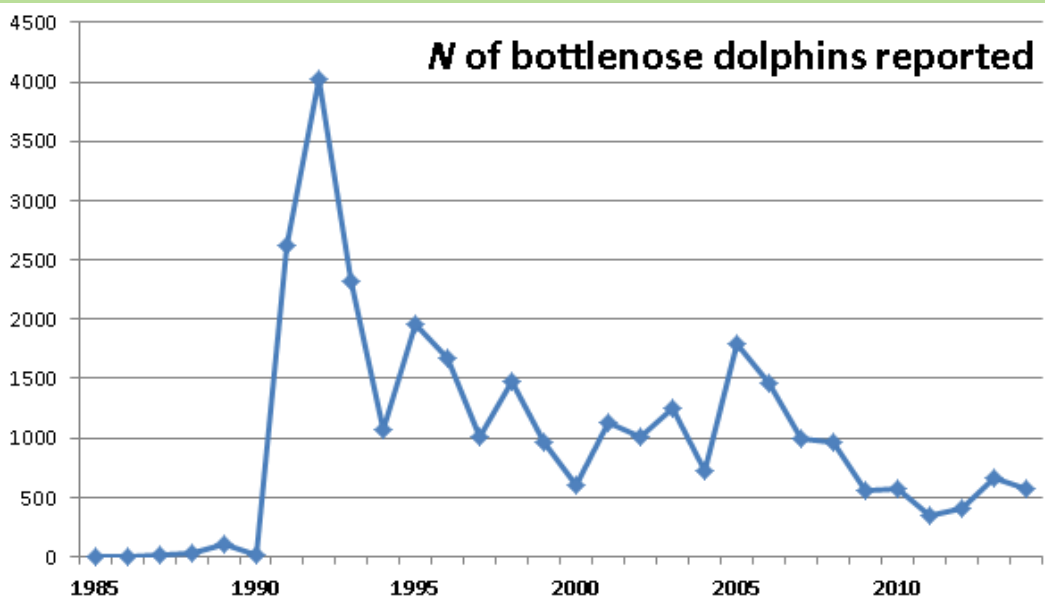
Can we see recovery from an organo-chlorine disaster?



Bottlenose dolphins - Hooe Lake

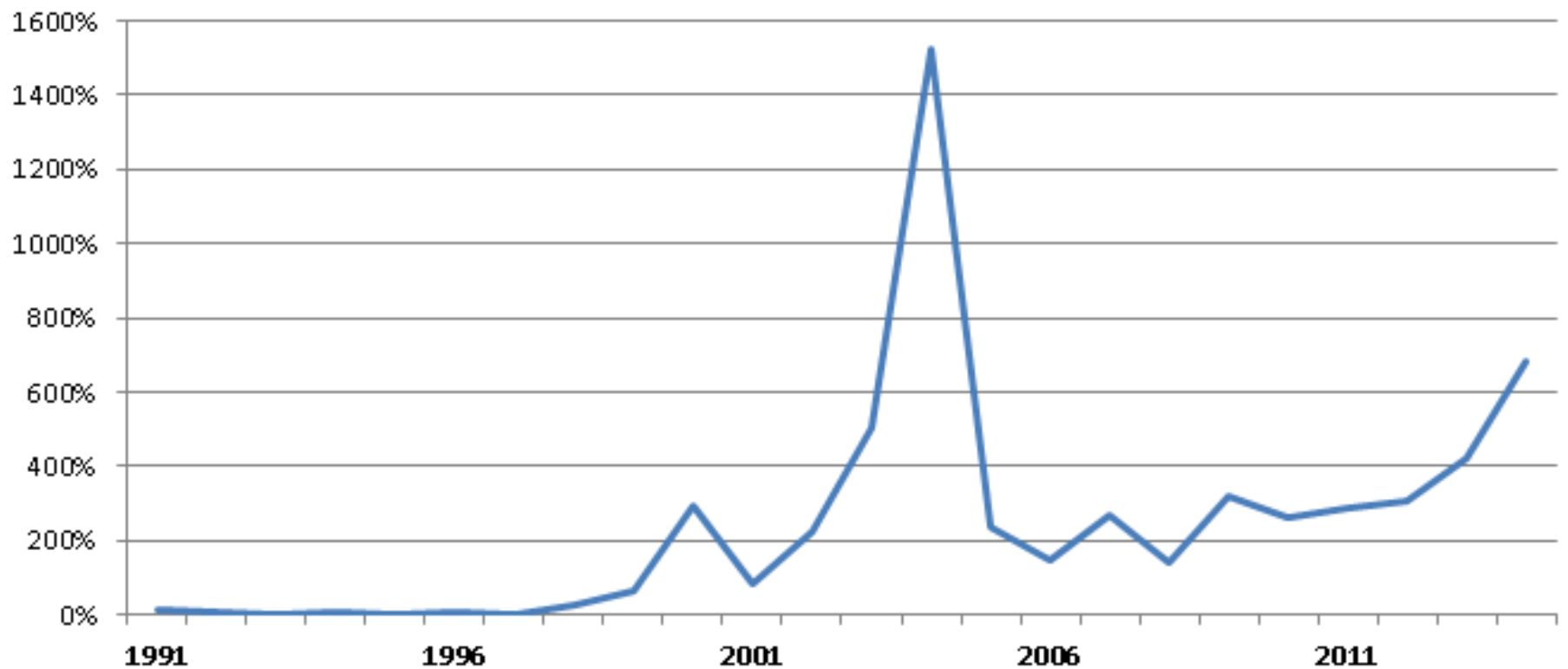


Bottlenose dolphins



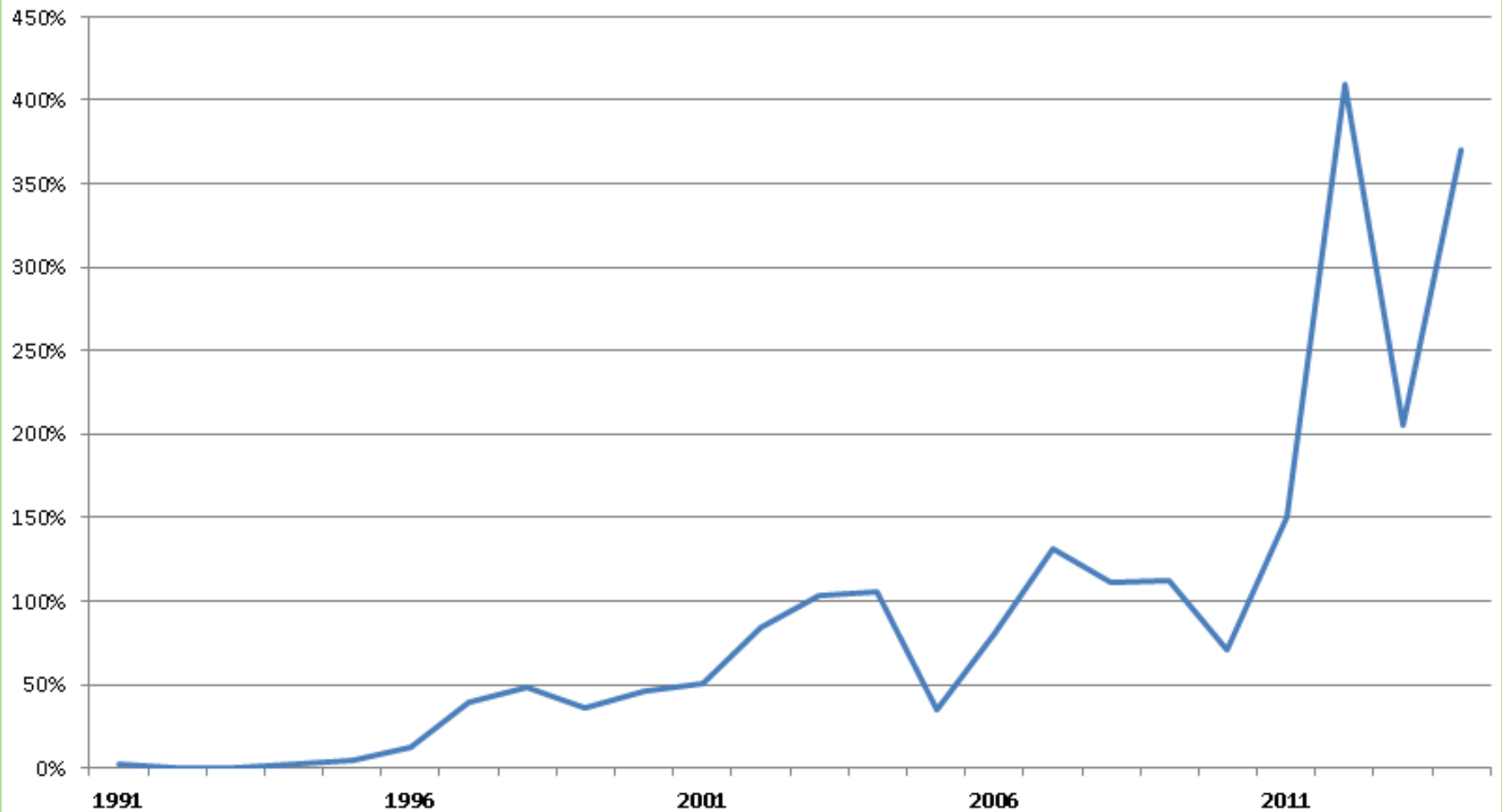
Common dolphins

**Common Dolphins reported
as a fraction of Bottlenose dolphins reported**



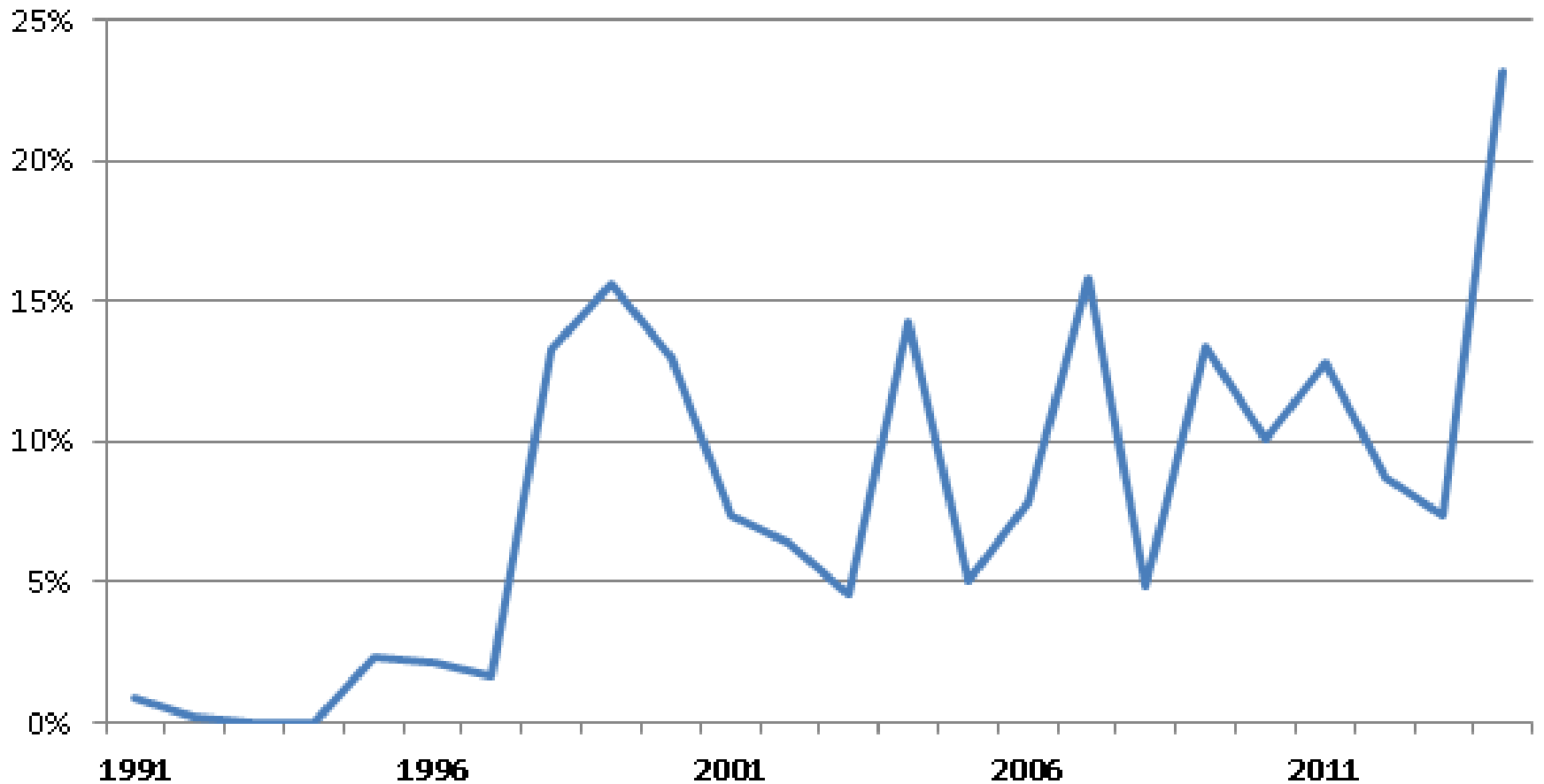
Harbour porpoises

**Harbour porpoises reported
as a fraction of Bottlenose Dolphins reported**



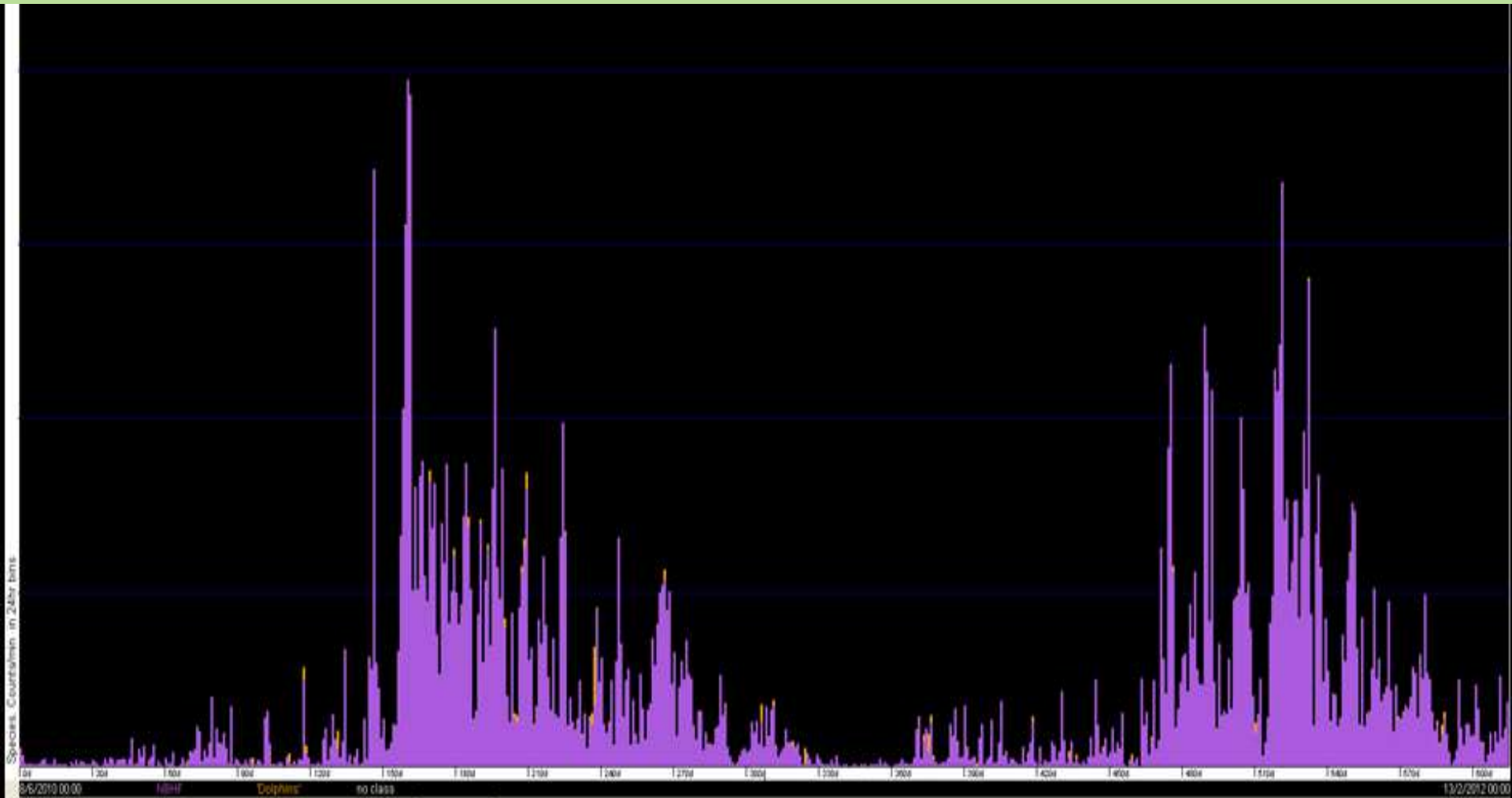
Risso's dolphins

Risso's Dolphins reported as a fraction of Bottlenose Dolphins reported



Static Acoustic Monitoring at the Runnelstone

... data from Matt Witt, University of Exeter



2 years of data, with Nov – March peaks in porpoise activity



C-POD-F click record

Duration

Amplitudes:

Max

Max+1

Max+2

preMax

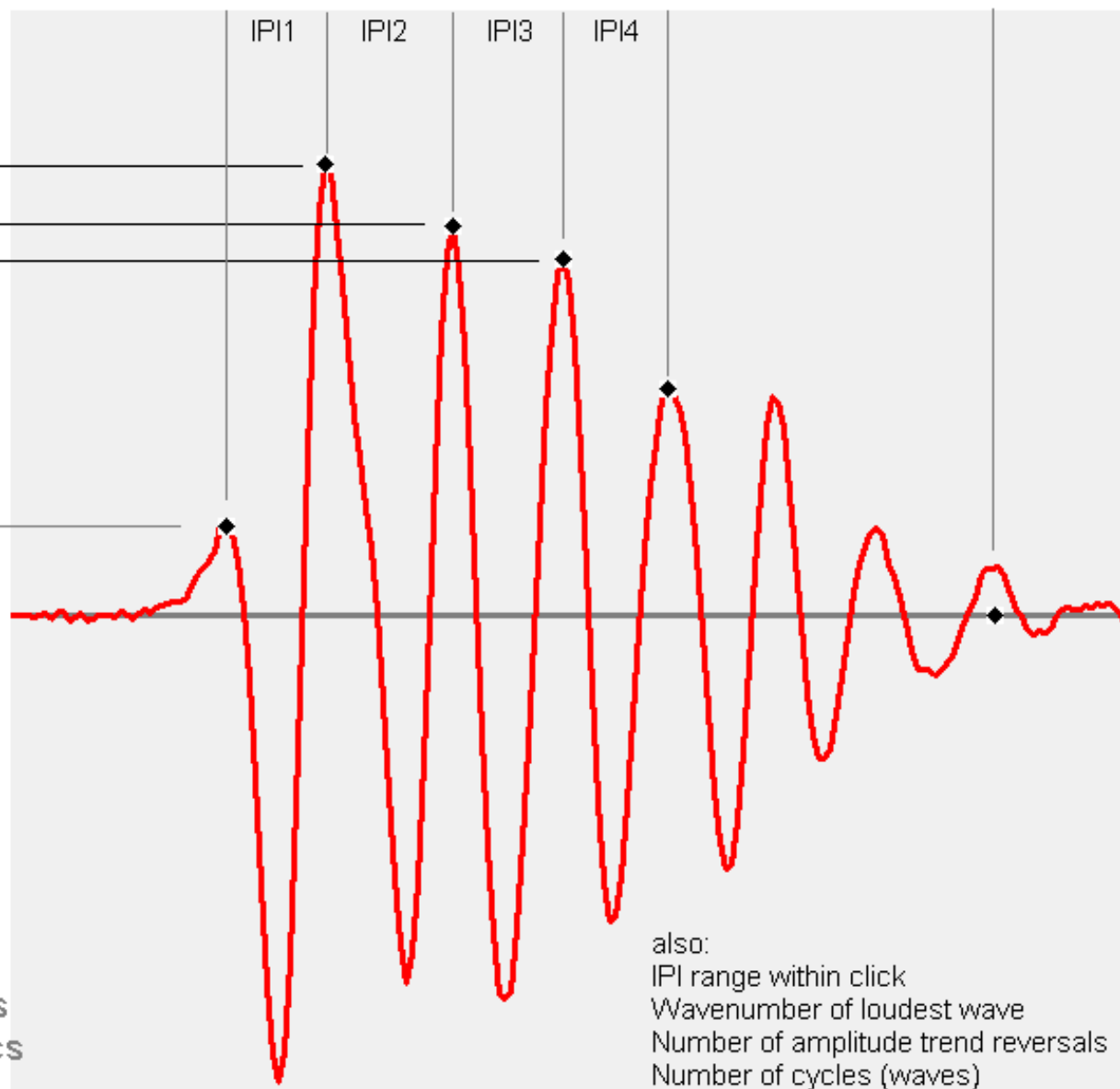
Derived values:

Frequency
Bandwidth

Resolution:

Time: 5microsecs

IPIs: 250nanosecs



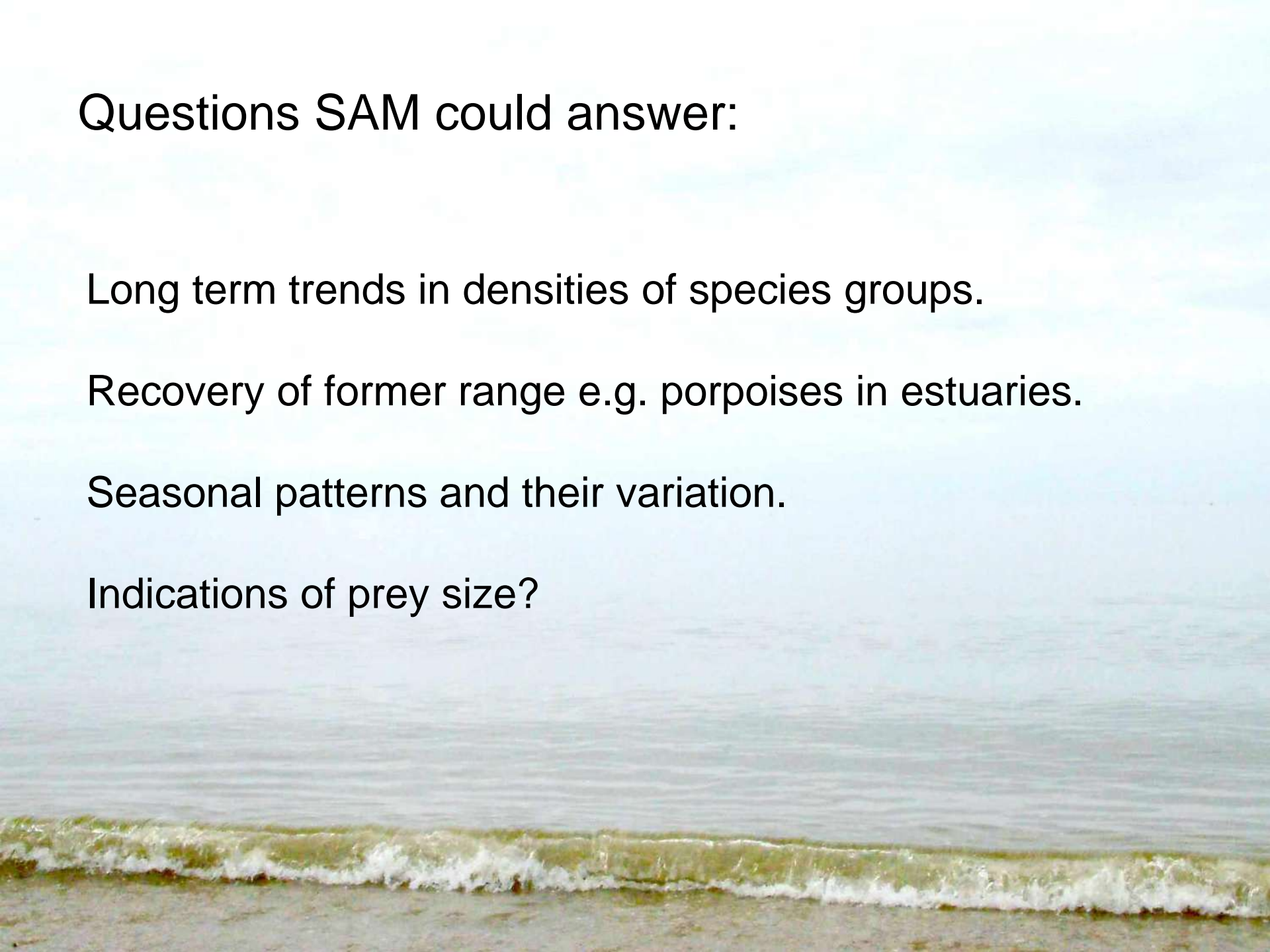
Questions SAM could answer:

Long term trends in densities of species groups.

Recovery of former range e.g. porpoises in estuaries.

Seasonal patterns and their variation.

Indications of prey size?



A citizen science project?



Summary:

- There have been large recent changes in cetacean populations.
- Changes continue.
- Casual sightings data are useful but weak.
- Dedicated sightings data are limited or expensive.
- Static Acoustic Monitoring could add valuable precision.
- Dive clubs and others might be able to make it relatively cheap.



thank you