

Distribution of harbour porpoises from visual-acoustic yacht surveys



Clare Embling, Wendy Edwards, Alistair Macallien, Simon Ingram

clare.embling@plymouth.ac.uk



[@ClareEmbling](https://twitter.com/ClareEmbling)



[@MarineVerts](https://twitter.com/MarineVerts)

**BIOLOGICAL &
MARINE SCIENCES**
WITH
PLYMOUTH
UNIVERSITY

Small cetaceans in SW UK – main species:



Harbour porpoise (*Phocoena phocoena*)

- Most common UK cetacean species
- Small, shy, difficult to see
- Vocalise continuously



Common dolphin (*Delphinus delphis*)

- Found in very large schools
- Often bow-ride, gregarious



Bottlenose dolphin (*Tursiops truncatus*)

- Very small coastal population
- Gregarious, demonstrative

Small cetaceans in SW UK – main species:



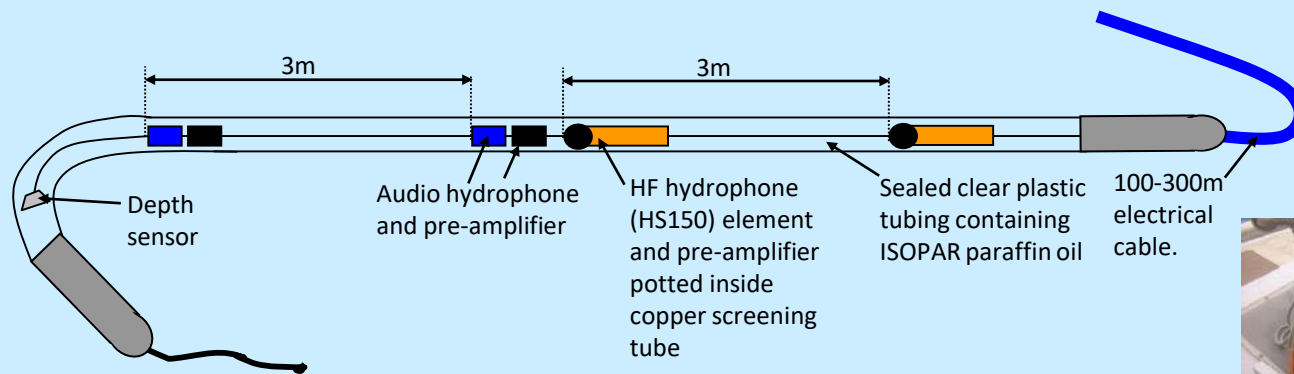
Harbour porpoises & bottlenose dolphins are protected under Annex II of the EU Habitats Directive & all cetaceans are protected under Annex IV of the Habitats Directive

The southwest UK has the highest cetacean bycatch rates in the UK – most at risk are the harbour porpoise & common dolphin

...but we have little knowledge of cetacean distributions and abundance in the SW UK

Survey techniques

- Passive acoustic yacht surveys:
 - detect >3 times as many porpoises as visual methods (Embling, 2008)



Previous work:

Visual & acoustic surveys for harbour porpoises to help define MPAs in Scotland

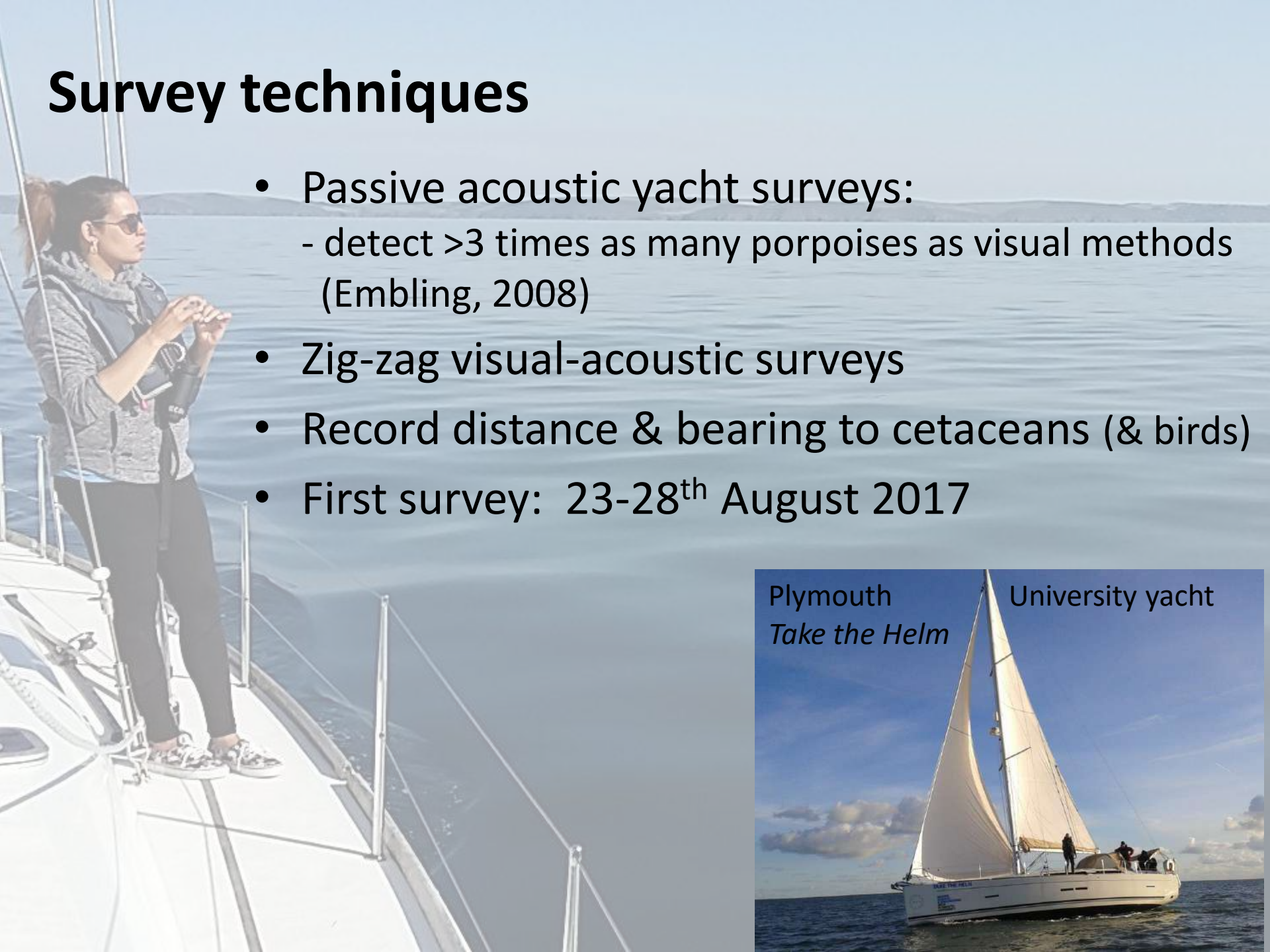
Embling et al (2010) Biological Conservation
Booth et al (2013) Marine Ecology Progress Series

Plymouth University yacht
Take the Helm



Survey techniques

- Passive acoustic yacht surveys:
 - detect >3 times as many porpoises as visual methods (Embling, 2008)
- Zig-zag visual-acoustic surveys
- Record distance & bearing to cetaceans (& birds)
- First survey: 23-28th August 2017

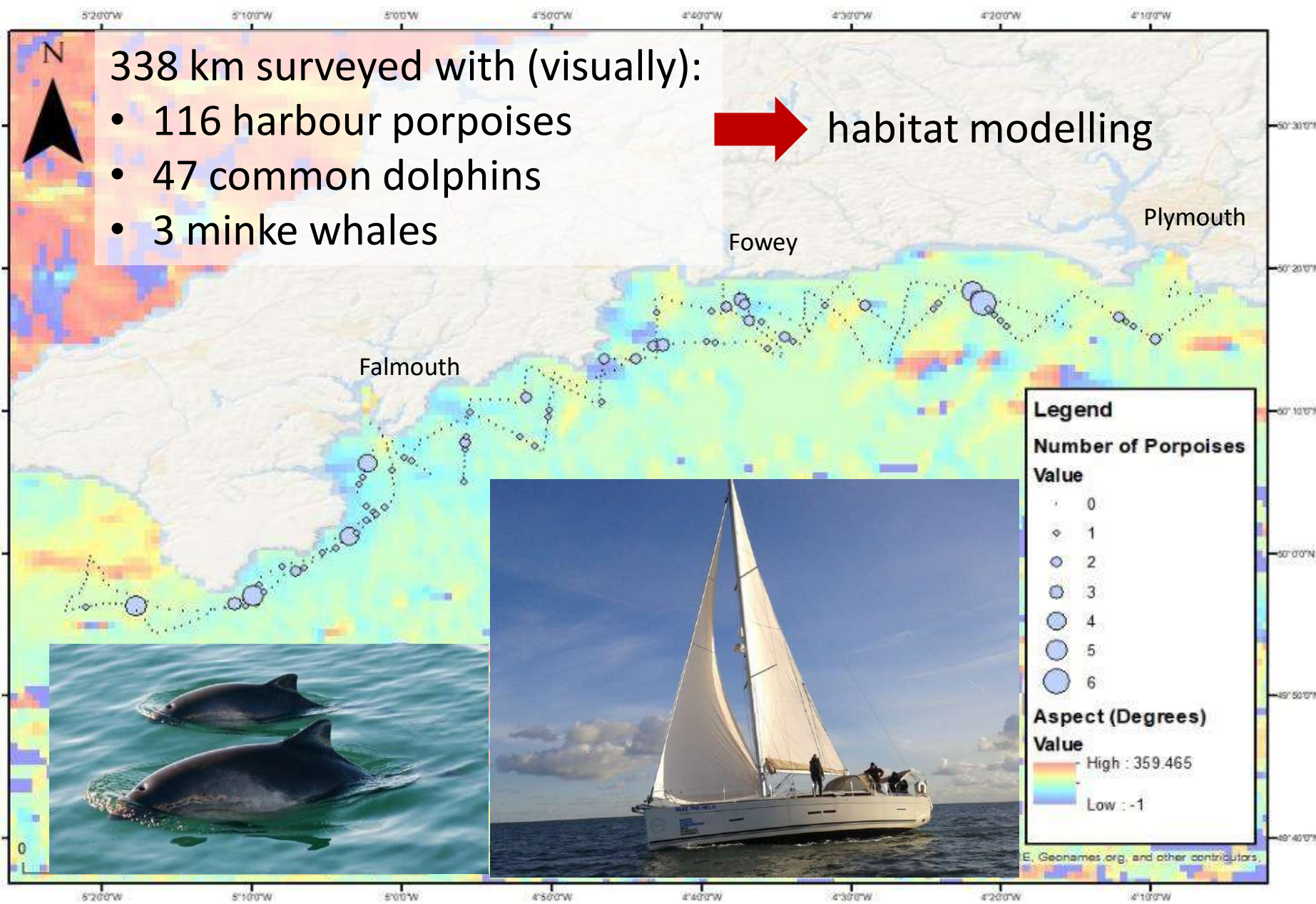


Plymouth

Take the Helm

University yacht

Survey results



Future directions

- First of series of surveys (another this summer)
- Will provide data on *distribution, abundance* and *habitat preferences* of cetaceans in SW UK
- Important for understanding impacts of bycatch
- Combined with shipping noise propagation models can highlight areas of concern



Thank you to all the students who volunteered

Funded by: **BIOLOGICAL & MARINE SCIENCES**
WITH
PLYMOUTH UNIVERSITY