CETSET:
NEXT GEN DNA BARCODING PANEL FOR WHALES, DOLPHINS AND PORPOISES

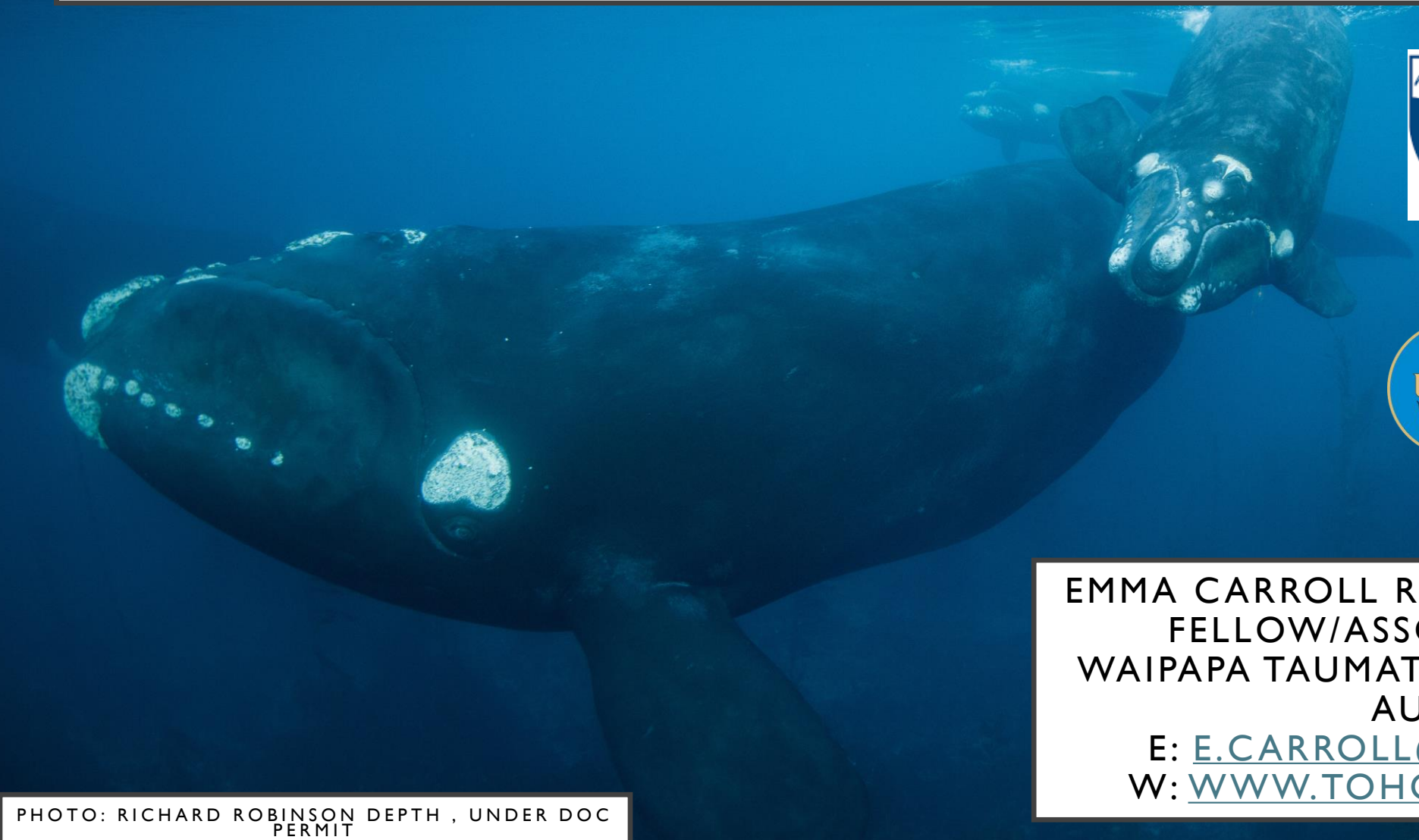

PHOTO: RICHARD ROBINSON DEPTH , UNDER DOC PERMIT

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New Zealand Cetacean Tissue Archive
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Office of Naval Research
Science & Technology

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MARINE MAMMALS AS ECOSYSTEM SENTINELS

Becky Lindsay University of Auckland photo

CETACEAN SPECIES ID VIA MTDNA CONTROL REGION

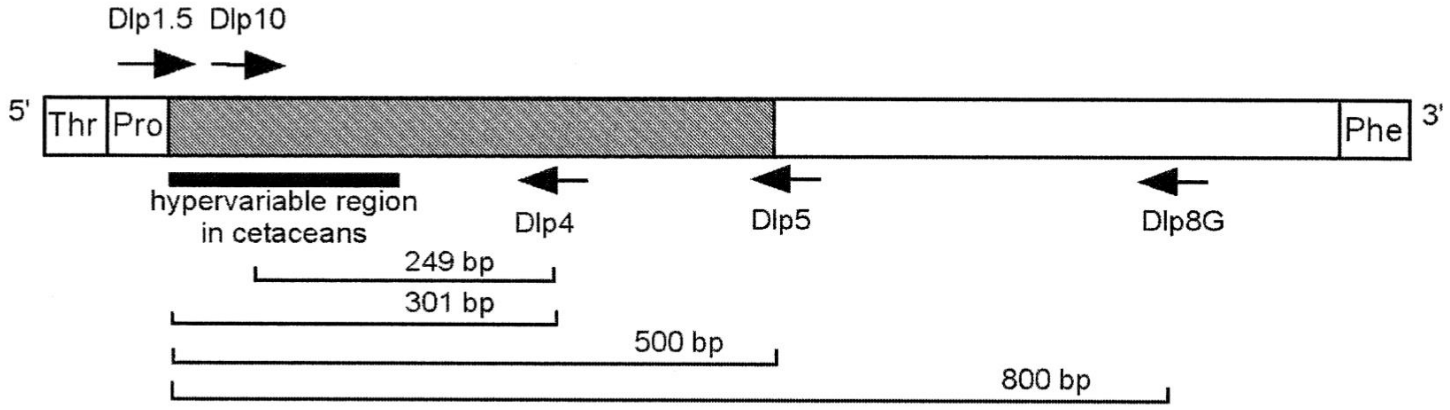
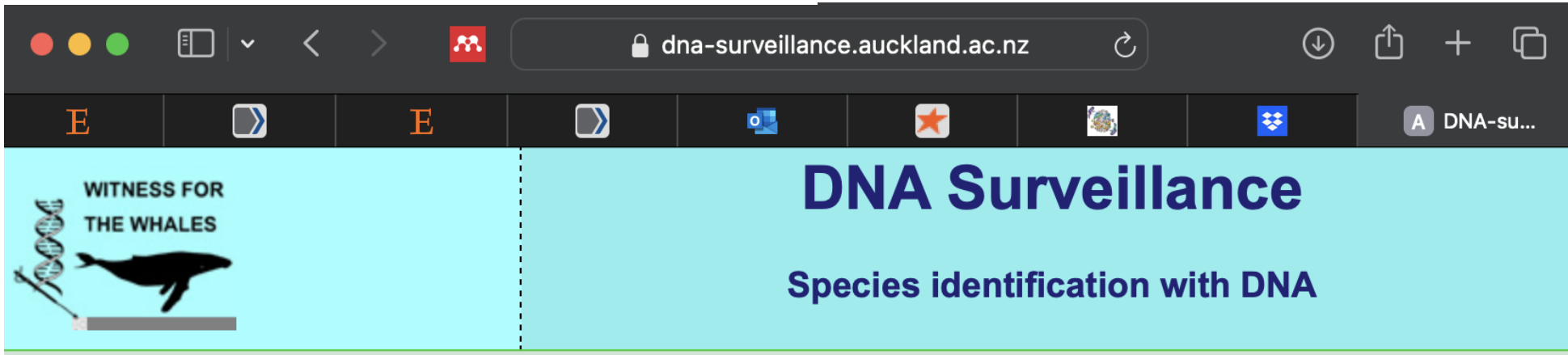


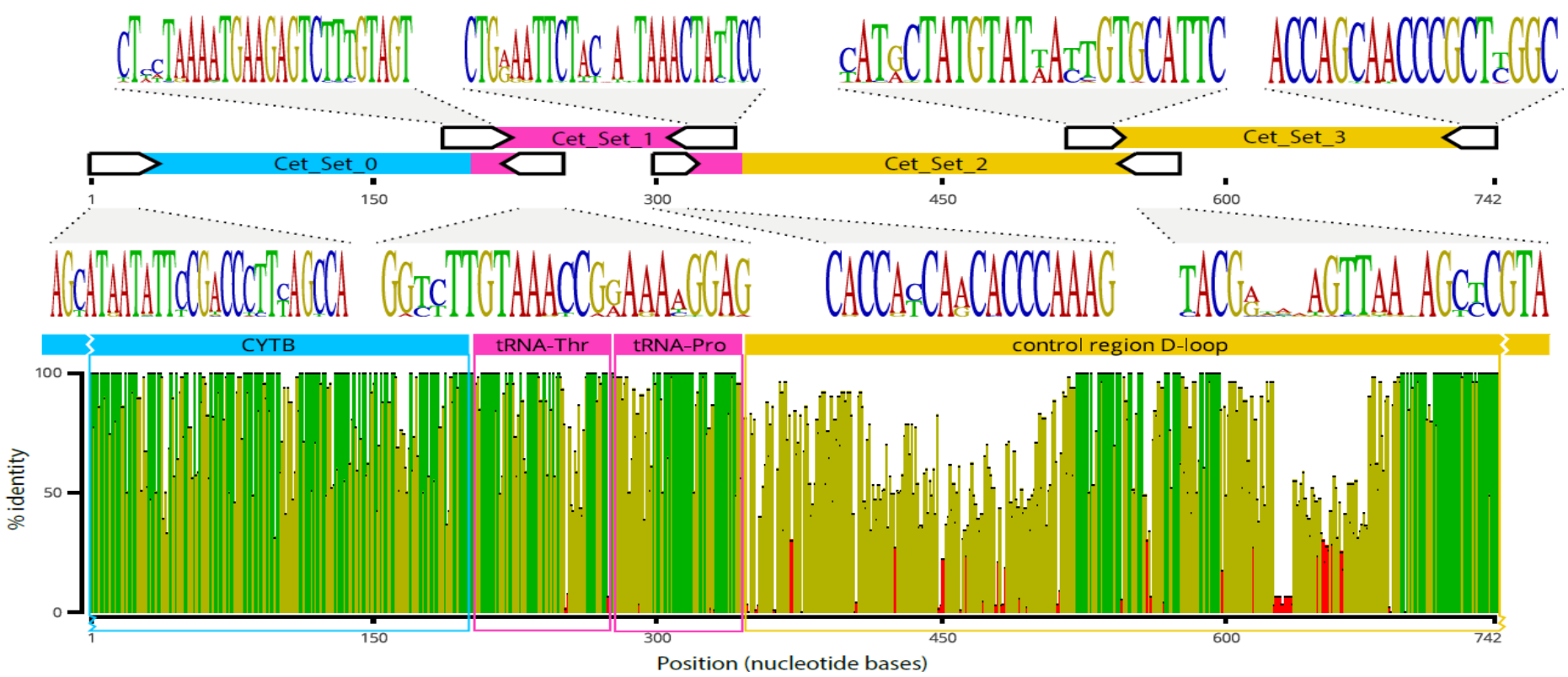
Figure 1. A schematic map of the mtDNA control region and the binding sites and orientation of the primers used in sequencing cetacean DNA. The shaded region represents the portion of the control region covered by most sequences in the reference data sets. Position 1 of the control region alignment corresponds to position 15891 of the fin whale (*Balaenoptera physalus*) mtDNA genome (Arnason et al. 1991).

Ross et al (2003)

Best resolution with mtDNA CR (not 16S), curated dataset available through DNA Surveillance



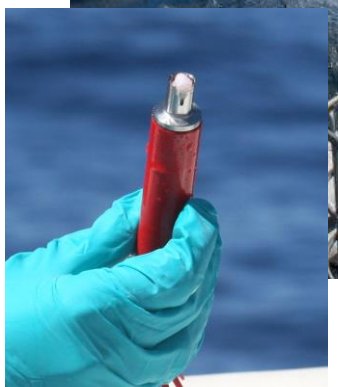
CETSET: AMPLICON PANEL TARGETING HYPERVARIABLE REGION



- 4 x 100-200 bp loci
- Minimally degenerate primers
- Optimised for Illumina

SUCCESSFULLY APPLIED TO WIDE VARIETY OF SAMPLE TYPES

VALIDATION – SKIN BIOPSY SAMPLES & FRESH BEACHCAST



APPLICATION

EDNA
DEGRADED TISSUE
BONE
ADNA

PHOTOS: NAT GEO, THOMPSON ET AL 2013, ULL