Table S1 Directivity calibration using 2 cycle 100 kHz clicks projected from a TC2130 hydrophone.

Incoming angle, °	Range m	EPR cm	DI dB	BW_{-3dB} °	N
0	2	3.12 [3.19-3.27]	23.1 [23.3-23.1]	12.9 [12.6-12.9]	103
0	5	3.03 [2.98-3.07]	22.7 [22.8-22.5]	13.6 [13.5-13.9]	22
0	10	3.88 [3.80-4.10]	24.8 [25.3-22.6]	10.7 [10.1-10.9]	43
30	2	3.26 [3.21-3.31]	23.1 [23.0-23.2]	12.9 [12.7-13.1]	70
30	5	2.76 [2.58-2.91]	21.6 [21.1-22.1]	15.3 [14.5-16.4]	11
30	10	3.10 [2.94-3.26]	22.7 [22.2-23.1]	13.6 [12.9-14.3]	2
60	2	2.55 [2.51-2.62]	20.5 [20.3-20.7]	17.5 [17.1-17.8]	9
60	5	-	-	-	0
60	10	-	-	-	0

Fig. S1. Photo showing the star array conformation. During trials a GoPro camera was mounted on the wooden stick seen in the bottom of the photo immediately above the black centre disc. Note that one of the TC4013 hydrophones is outside the frame in the bottom right corner. Note also that on the PVC cylinder to the left where two hydrophones are attached only the outermost one was in use during the recordings of this study.

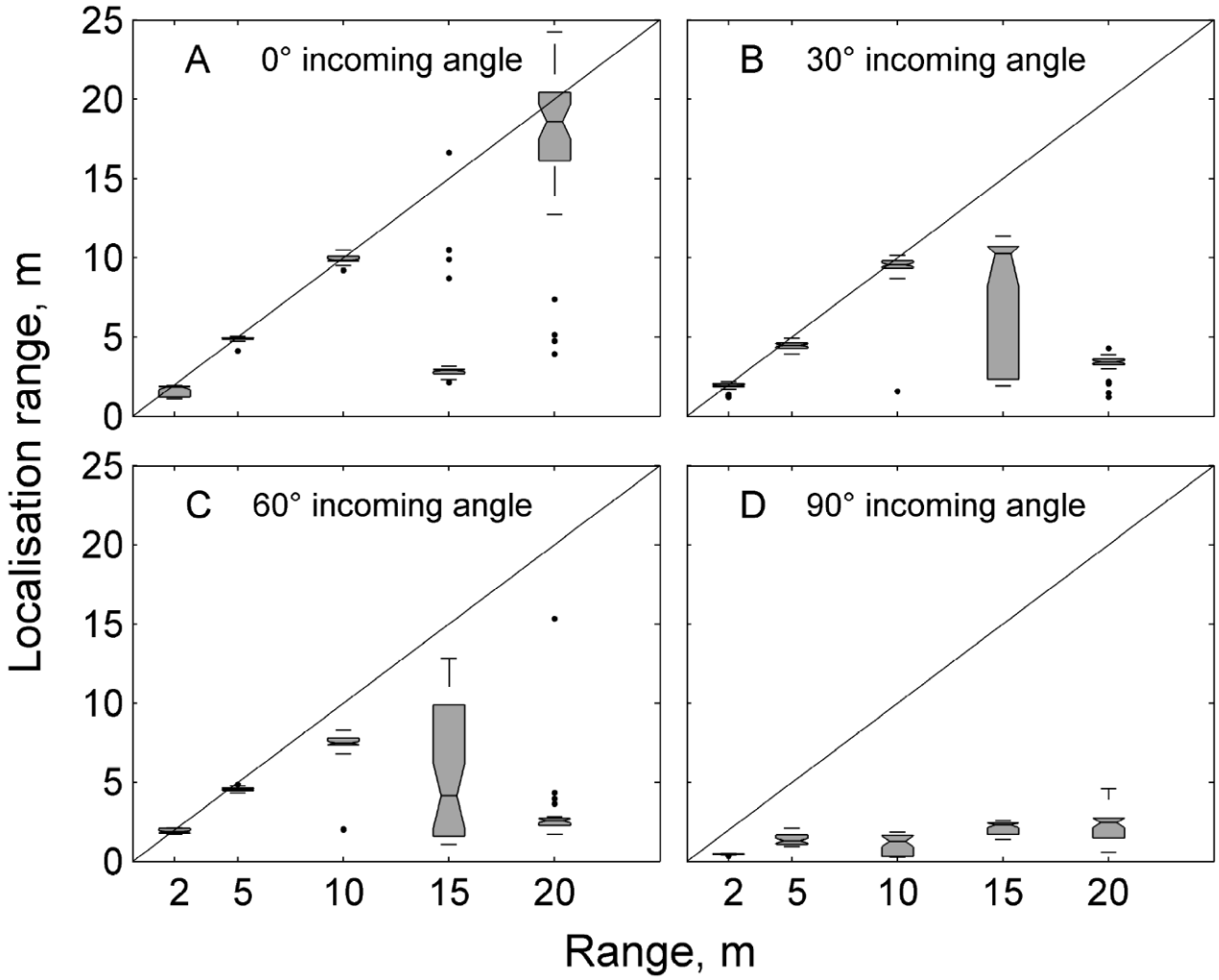


Fig. S2. Calibration of acoustic localisation performance. Calibration was performed with the plane of the array perpendicular to the sound source (incoming angle of 0°) (A) or angled by 30° (B), 60° (C), or 90° (D). (A-D) Box plots show localisation range distributions of 2-cycle clicks (90 kHz peak frequency) played out at ranges of 2, 5, 10, 15, and 20 metres. The black horizontal line within each box plot indicates the median (n=39) localisation range estimated at each actual range. Diagonal lines show expected localisation range when performance is perfect.

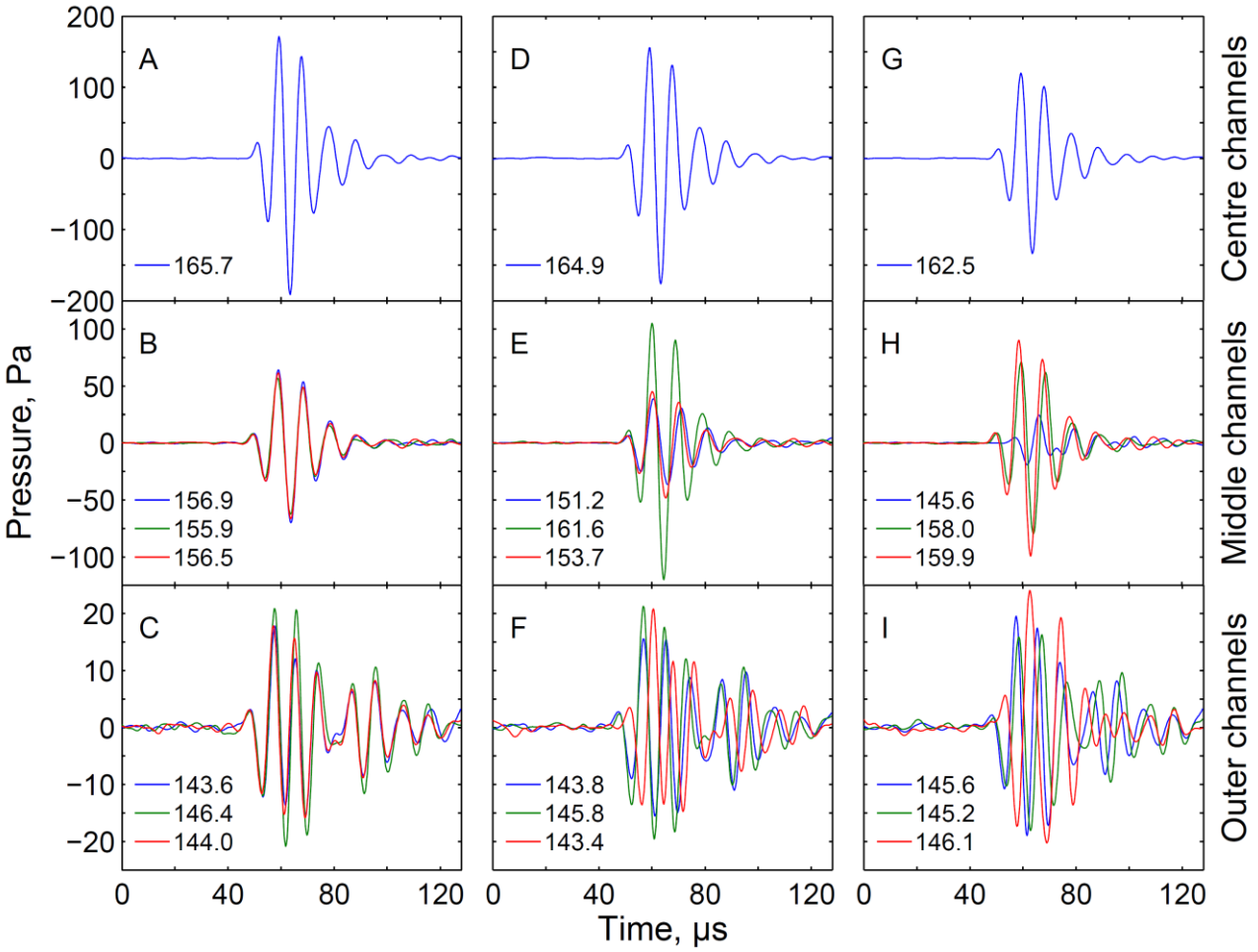
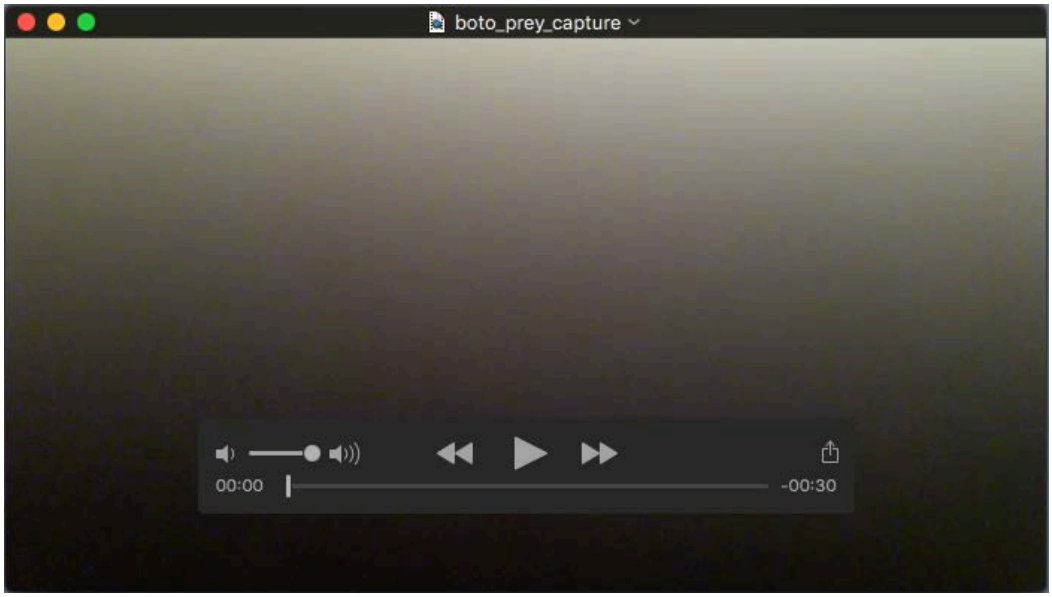


Fig. S3. Example waveforms of three calibration signal recordings. The subplots in (A-C), (D-F), and (G-I) each show a single click as recorded on different hydrophones. The waveforms in the upper row (A, D, G) are the signals recorded on the centre hydrophone. The middle row (B, E, H) shows signals recorded on the three hydrophones 37.5 cm from the centre hydrophone, and the bottom row (C, F, I) shows signal recorded on the three hydrophones 77.5 cm from the centre hydrophone. All waveforms within the same column correspond to individual recordings of the same signal. Legends show measured ASL_{pp} (dB re. 1 µPa) values at each channel. Note that ASL_{pp} may vary by >10 dB on the middle hydrophones even though the acoustic axis of the click has been estimated to be centred closest to the centre hydrophone. All three clicks were recorded from a range of 2 metres and 0° incoming angle.



Movie 1. Example of boto prey capture. The prey hydrophone and an attached fish is lowered into the water before the fish is grabbed shortly after by a boto. The movie is filmed from a GoPro camera mounted close to the centre of the star array.