

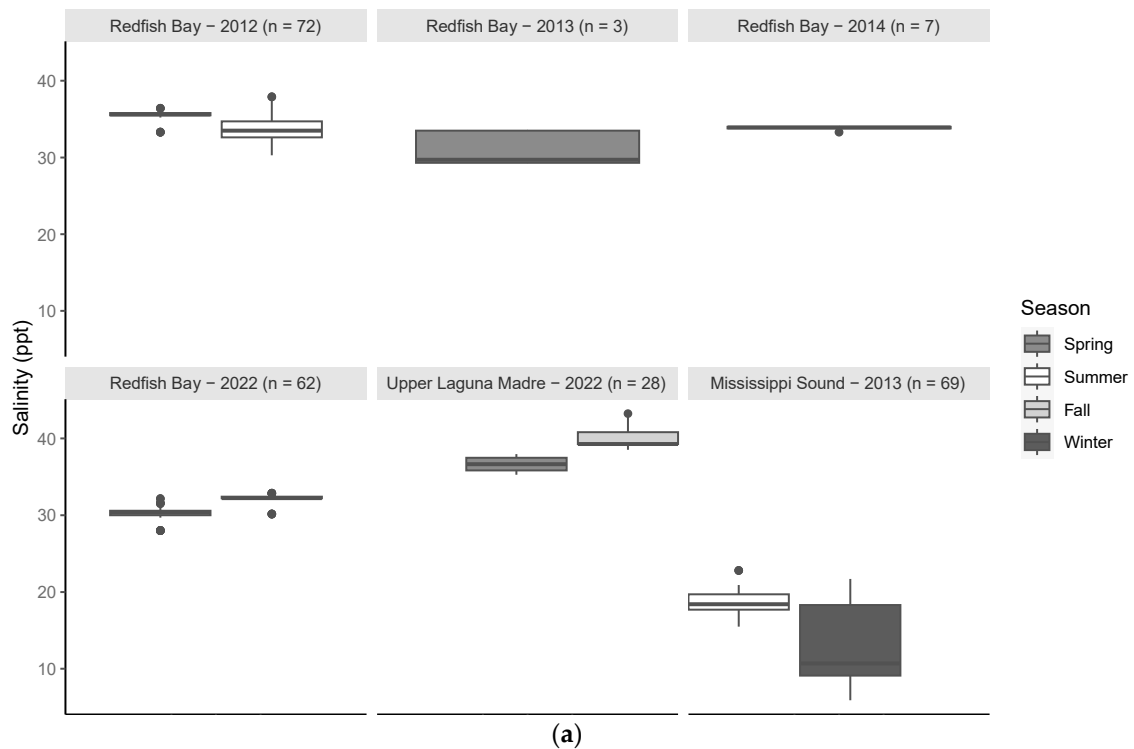
Supplemental Materials

Table S1. Primer sequences for bottlenose dolphin sex determination. Target regions of the X and Y chromosomes, as well as the gene sequence, are listed as primer and sequence, respectively. Validated reference studies for this sex identification technique in cetaceans are listed for each sequence.

| Primer | Sequence (5' – 3') | Reference |
|----------|-------------------------|----------------------------|
| SRY Gene | | |
| TtSRYR | ACCGGCTTTCCATTTCGTGAACG | Rosel (2003) |
| PMSRYF | CATTGTGTGGTCTCGTGATC | Richard et al. (1994) |
| ZFX Gene | | |
| ZFX0582F | ATAGGTCTGCAGACTCTTCTA | Berubé and Palsbøll (1996) |
| ZFX0923R | AGAATATGGCGACTTAGAACG | Berubé and Palsbøll (1996) |

Table S2. Demographic data for photographed dolphins with paired biopsy samples. Nonparenthetical values indicate the number of sexed male and female dolphins, and parenthetical values indicate the number of those sexed dolphins with observed skin lesions.

| Site | Season | # Males | # Females |
|--------------------|--------|---------|-----------|
| Redfish Bay | Spring | 12 (3) | 5 (2) |
| | Summer | 3 (1) | 0 |
| | Fall | 3 (2) | 0 |
| Upper Laguna Madre | Spring | 4 (2) | 1 (1) |
| | Fall | 2 | 2 (1) |
| Mississippi Sound | Winter | 3 (2) | 3 (2) |
| | Summer | 3 | 3 |



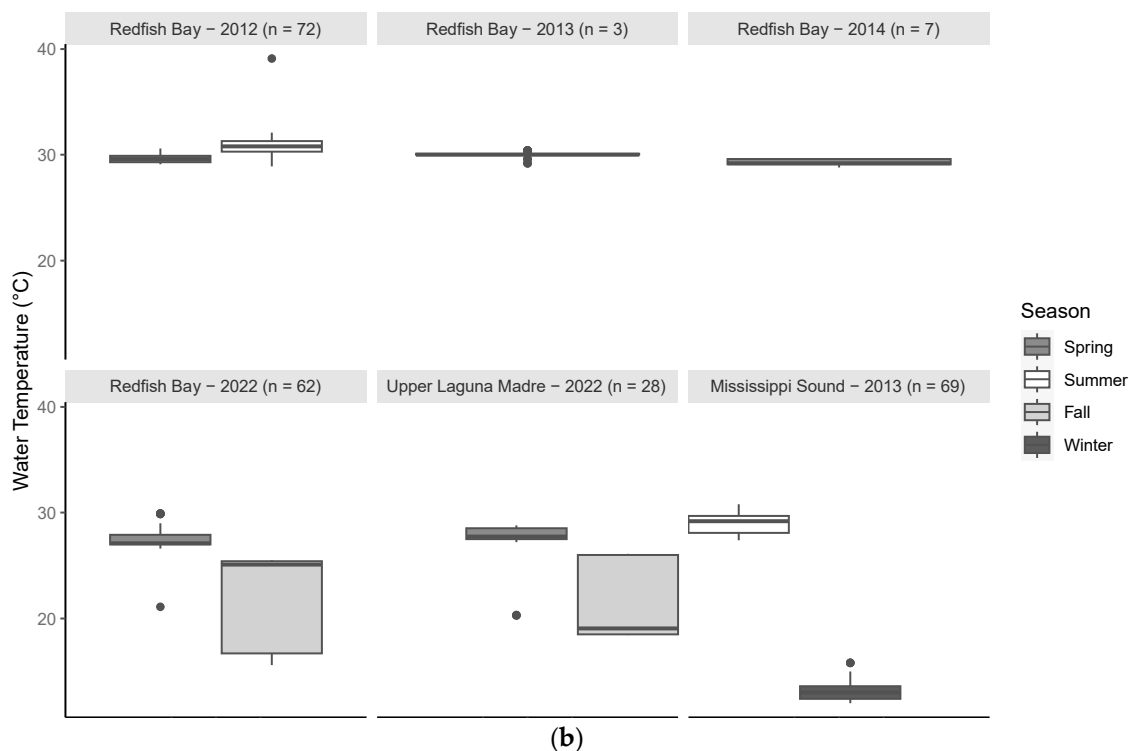


Figure S1. Box plots of the range of seasonal variation in (a) salinity (ppt) and (b) water temperature (°C) in Redfish Bay, TX (2012-2014, 2022), Upper Laguna Madre, TX (2022), and Western Mississippi Sound, MS (2013). Shades denote data collected in Spring (May and June), Summer (August), Fall (November), and Winter (January). N values represent the total number of water parameter measurements taken. Black horizontal lines within the box indicate the median value. Lines extending vertically from each box indicate minimum and maximum values. Black dots outside of the box indicate outliers.