

Supplementary Material

Root-mean-squared sound pressure level (SPL) calculations were repeated operating on linear units for comparison between methods. Overall SPL averages per site were less than 1 dB difference using arithmetic methods versus statistical methods. For each site, median and interquartile range are also reported, as a more appropriate measure of spread (Table 1). The reconstruction of Figure 7B with arithmetic averages is also provided here for comparison, although only very slight changes were noted (Fig 1).

	Overall Mean	Median & IQR	Night mean	Dawn mean	Day mean	Dusk mean
Tektite	96.75 re 1μPa	96.22 re 1μPa 94.55 – 97.91	94.35 re 1μPa	99.79 re 1μPa	97.77 re 1μPa	98.93 re 1μPa
Yawzi	90.01 re 1μPa	89.68 re 1μPa 88.09 – 91.18	88.00 re 1μPa	90.11 re 1μPa	91.14 re 1μPa	90.82 re 1μPa
Cocoloba	89.25 re 1μPa	89.02 re 1μPa 88.11 – 89.84	88.37 re 1μPa	89.64 re 1μPa	89.70 re 1μPa	90.13 re 1μPa

Table 1. Values for overall mean, median and interquartile range (25% - 75% of all values), and average for each daily period calculated on the linear units of root mean squared sound pressure level. Overall means are less than 1dB difference from their statistical average counterpart.

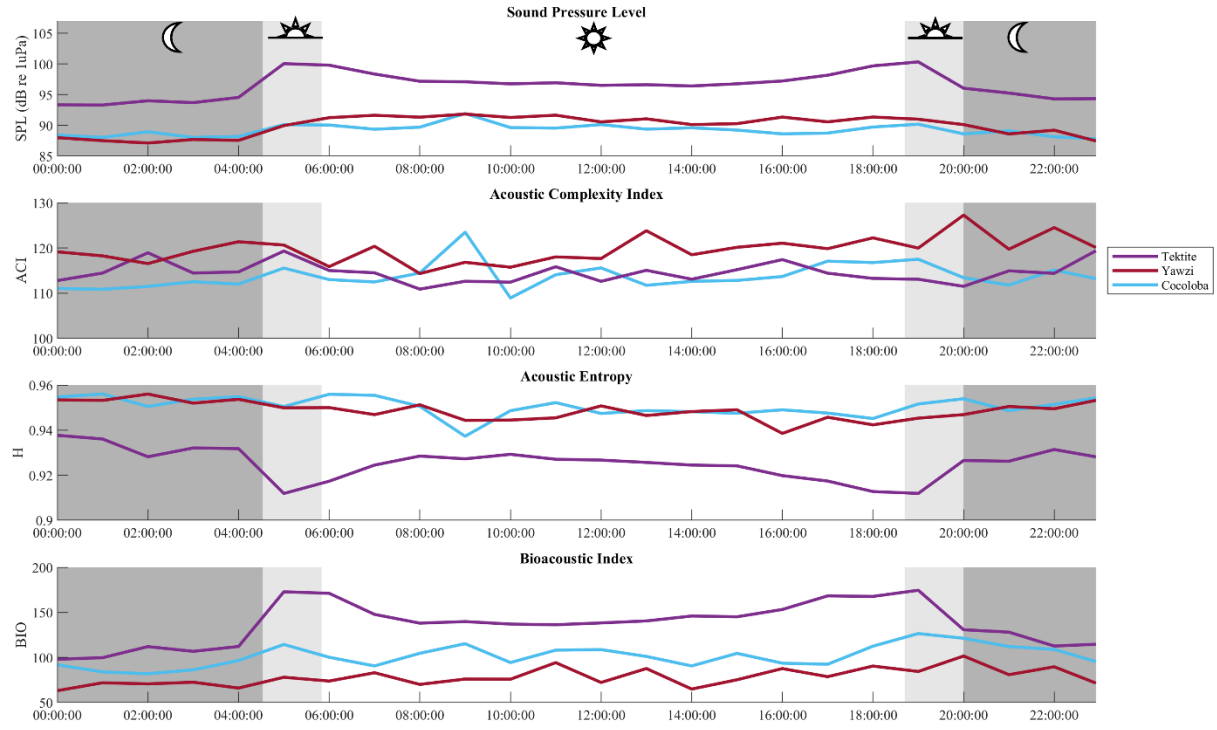


Figure 1. Reconstruction of Figure 7B with SPL hourly averages calculated on the linear units. Overall daily trends match up with those reported using statistical averaging, although some slight variations may be noted between the plots. ACI, H, and BIO are all identical plots to those in Figure 7B of the main text.

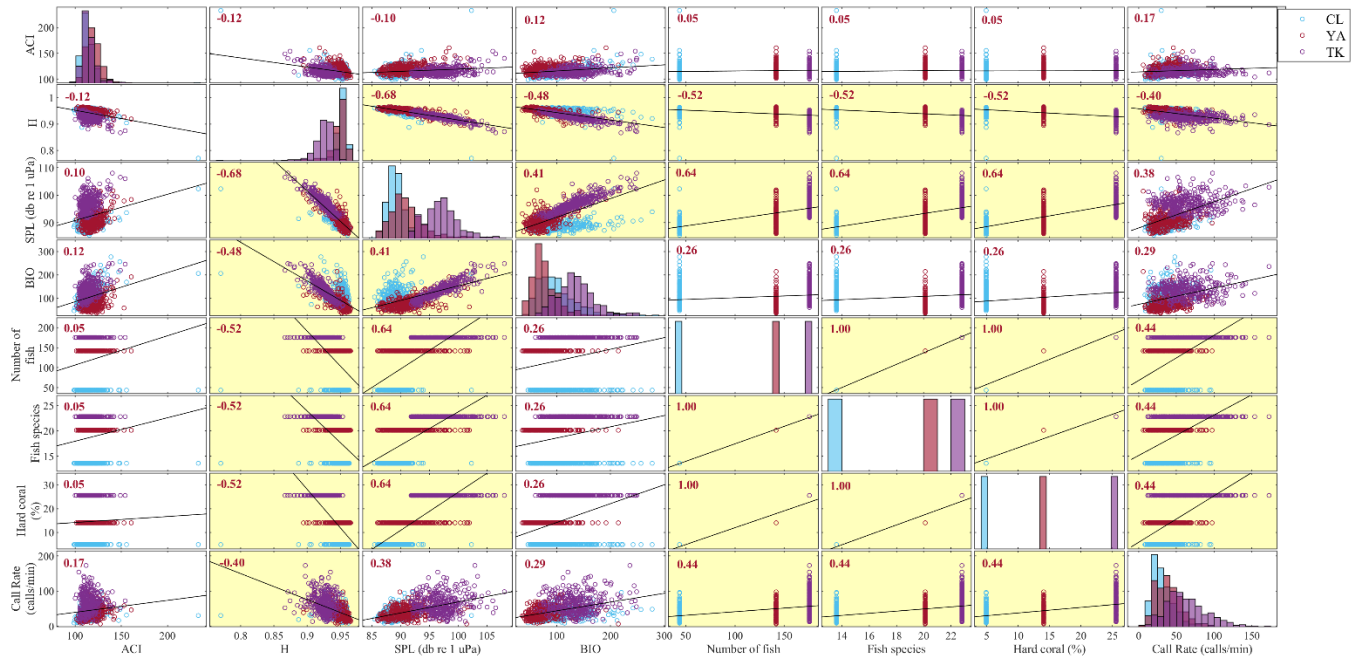


Figure 2. Entire correlation matrix between acoustic indices, visual health metrics, and fish call rates using Kendall rank correlation. Sites are delineated with colors: Cocoloba (CL) in light blue, Yawzi (YA) in red, and Tektite (TK) in purple. Kendall's tau (τ) coefficient is printed for each relationship, with red numbers indicating the relationship is significantly different than zero. Significant correlations stronger than ± 0.4 are highlighted with a yellow background. Histograms contain distribution of each variable. Strong positive correlations are visible between fish counts and coral cover (as expected), as well as between visual measures, and fish call rates, SPL and H. Three of the four acoustic indices (RL, H, BIO) show a fairly strong relationship to each other as well.