SUPPLEMENTARY DATA

**Figure S1:** Log transformed data plotted over time for all sites in Arabian Gulf (A) and Kuwait Bay (B).





**Table S1.** List of the most abundant taxa in Kuwait Bay and the Gulf, over the period 2007 - 2016, and associated cell carbon content and references.

|  |  |  |
| --- | --- | --- |
| **Taxon** | **Cell carbon (pg C cell L-1)**  | **Reference** |
| *Asterionellopsis glacialis* | 46.2 | Harrison et al. 2015 |
| *Bacillaria paxillifer* | 177 | Al-Kandari et al. 2009 (size range)Edler 1979 (shape - parallelepiped)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Bacteriastrum delicatulum* | 302 | Al-Kandari et al. 2009 (size range)Edler 1979 (shape - cylinder)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Bacteriastrum hyalinum* | 536 | Harrison et al. 2015 |
| *Ceratium furca* | 3046 | Al-Kandari et al. 2009 (size range)Thomsen 1992 (relationship diameter to volume)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Chaetoceros affinis* | 161 | Harrison et al. 2015 |
| *Chaetoceros atlanticus* | 46.2 | Tabassum and Saifullah 2010 (size range)Edler 1979 (shape - oval cylinder)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Chaetoceros brevis* | 173 | Harrison et al. 2015 |
| *Chaetoceros compressus* | 105 | Harrison et al. 2015 |
| *Chaetoceros curvisetus* | 201 | Harrison et al. 2015 |
| *Chaetoceros denticulatus* | 460 | Al-Kandari et al. 2009 (size range)Edler 1979 (shape - oval cylinder)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Chaetoceros diversus* | 38.7 | Harrison et al. 2015 |
| *Chaetoceros laciniosus* | 177 | Harrison et al. 2015 |
| *Chaetoceros lorenzianum* | 389 | Harrison et al. 2015 |
| *Chaetoceros pseudocurvisetus* | 201 | Harrison et al. 2015 (same as *C. curvisetus*) |
| *Chaetocerso tortissimum* | 95.9 | Harrison et al. 2015 |
| *Coscinodiscus* spp. | 6983.9 | Harrison et al. 2015 (median volume)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Eucampia zodiacus* | 441 | Harrison et al. 2015 |
| *Guinardia flaccida* | 4870 | Harrison et al. 2015 |
| *Guinardia striata* | 1290 | Harrison et al. 2015 |
| *Hemiaulus indicus* | 1390 | Tomas 1994 (size range)Edler 1979 (shape - oval cylinder)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Hemiaulus sinensis* | 924 | Harrison et al. 2015 |
| *Karenia brevis* | 432 | Al-Kandari et al. 2009 (size range)Edler 1979 (shape - flattened ellopsoid)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Karenia selliformis* | 304 | Al-Kandari et al. 2009 (size range)Edler 1979 (shape - flattened ellopsoid)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Lauderia annulata* | 1010 | Harrison et al. 2015 |
| *Leptocylindrus danicus* | 123 | Harrison et al. 2015 |
| *Leptocylindrus minimus* | 19.9 | Harrison et al. 2015 |
| *Pleurosigma elongatum* | 2233 | Al-Kandari et al. 2009 (size range)Edler 1979 (shape - half parallelepiped)Menden-Deuer and Lessard 2000 (volume to carbon)  |
| *Prorocentrum micans* | 1200 | Harrison et al. 2015 |
| *Pseudo-nitzschia seriata* | 95.9 | Harrison et al. 2015 |
| *Rhizosolenia hebetata* | 2540 | Harrison et al. 2015 |
| *Rhizosolenia imbricata* | 1620 | Harrison et al. 2015 |
| *Rhizosolenia setigera* | 536 | Harrison et al. 2015 |
| *Thalassionema fraunfeldii* | 106 | Harrison et al. 2015 |
| *Thalassionema nitzschioides* | 63.4 | Harrison et al. 2015 |