

Buosi and others
Appendix 3

| | % Gravel | % Sand | % Mud | Median | Mean | Sorting | Z (m) | C org | N | C/N |
|---------------------------------|---------------|--------------|---------------|---------------|---------------|---------|--------------|--------------|---------------|--------|
| % Gravel | 1.000 | | | | | | | | | |
| % Sand | 0.225 | 1.000 | | | | | | | | |
| % Mud | -0.004 | 0.373 | 1.000 | | | | | | | |
| Median | -0.591 | 0.250 | 0.554 | 1.000 | | | | | | |
| Mean | -0.611 | 0.274 | 0.577 | 0.972 | 1.000 | | | | | |
| Sorting | 0.292 | 0.504 | 0.418 | 0.031 | 0.025 | 1.000 | | | | |
| Z (m) | -0.006 | 0.016 | 0.312 | 0.187 | 0.118 | -0.082 | 1.000 | | | |
| C org | -0.158 | -0.129 | 0.288 | 0.193 | 0.195 | -0.122 | -0.143 | 1.000 | | |
| N | -0.351 | -0.366 | 0.401 | 0.448 | 0.444 | 0.015 | 0.034 | 0.438 | 1.000 | |
| C/N | 0.070 | -0.075 | 0.065 | -0.076 | -0.071 | -0.209 | -0.073 | 0.832 | 0.064 | 1.000 |
| Sulphur% | -0.081 | -0.116 | -0.052 | -0.206 | -0.069 | -0.046 | -0.042 | -0.021 | 0.103 | 0.051 |
| <i>Ammonia beccarii</i> | 0.133 | 0.077 | -0.087 | -0.297 | -0.244 | 0.159 | -0.042 | -0.109 | -0.140 | 0.045 |
| <i>Asterigerinata mamilla</i> | -0.305 | 0.248 | 0.587 | 0.758 | 0.747 | 0.084 | 0.128 | 0.299 | 0.319 | 0.034 |
| <i>Buccella granulata</i> | -0.043 | 0.149 | 0.075 | 0.063 | 0.105 | 0.141 | -0.354 | -0.084 | -0.117 | -0.197 |
| <i>Cassidulina laevigata</i> | -0.312 | 0.122 | 0.510 | 0.617 | 0.591 | 0.188 | 0.453 | 0.126 | 0.359 | -0.057 |
| <i>Cassidulina subglobosa</i> | -0.198 | 0.140 | 0.589 | 0.596 | 0.552 | 0.059 | 0.595 | 0.076 | 0.279 | -0.054 |
| <i>Elphidium cf. E. advenum</i> | 0.393 | 0.150 | -0.158 | -0.124 | -0.109 | -0.244 | -0.242 | -0.011 | -0.251 | 0.102 |
| <i>Elphidium complanatum</i> | -0.125 | -0.206 | 0.422 | 0.370 | 0.378 | 0.165 | 0.225 | 0.116 | 0.472 | -0.089 |
| <i>Elphidium crispum</i> | 0.527 | -0.129 | -0.583 | -0.796 | -0.827 | -0.030 | -0.207 | -0.399 | -0.526 | -0.155 |
| <i>Elphidium macellum</i> | -0.251 | 0.167 | 0.283 | 0.393 | 0.430 | -0.070 | -0.067 | 0.333 | 0.223 | 0.258 |
| <i>Eponides concameratus</i> | 0.380 | -0.252 | -0.618 | -0.609 | -0.717 | -0.182 | 0.021 | -0.312 | -0.383 | -0.135 |
| <i>Lobatula lobatula</i> | -0.003 | -0.070 | 0.255 | 0.098 | 0.180 | -0.076 | 0.236 | 0.056 | -0.017 | 0.239 |
| <i>Melonis barleanum</i> | -0.306 | 0.161 | 0.373 | 0.625 | 0.594 | 0.109 | 0.264 | -0.017 | 0.333 | -0.123 |
| <i>Miliolinella subrotunda</i> | -0.378 | 0.014 | 0.476 | 0.681 | 0.684 | -0.036 | -0.082 | 0.449 | 0.539 | 0.101 |
| <i>Neoconorbina nitida</i> | -0.441 | 0.162 | 0.469 | 0.687 | 0.702 | 0.241 | -0.071 | 0.266 | 0.515 | -0.093 |

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|--------------------------------------|---------------|--------|---------------|---------------|---------------|--------------|---------------|---------------|---------------|--------------|
| <i>Planorbulina mediterraneensis</i> | -0.113 | 0.214 | <i>0.453</i> | 0.251 | <i>0.385</i> | <i>0.356</i> | -0.074 | 0.027 | 0.262 | 0.005 |
| <i>Quinqueloculina berthelotiana</i> | 0.000 | 0.139 | 0.039 | 0.026 | 0.106 | -0.039 | -0.484 | -0.077 | -0.223 | 0.003 |
| <i>Quinqueloculina laevigata</i> | -0.277 | 0.311 | <i>0.434</i> | 0.601 | 0.620 | 0.022 | 0.058 | 0.294 | <i>0.368</i> | 0.069 |
| <i>Quinqueloculina stelligera</i> | -0.497 | 0.178 | <i>0.442</i> | 0.677 | 0.713 | 0.074 | -0.024 | <i>0.414</i> | 0.552 | 0.119 |
| <i>Rosalina globularis</i> | -0.165 | 0.071 | 0.318 | 0.253 | 0.309 | -0.008 | -0.042 | 0.541 | 0.334 | <i>0.402</i> |
| <i>Rosalina vilardeboana</i> | -0.267 | -0.110 | 0.247 | <i>0.390</i> | 0.456 | -0.282 | -0.109 | <i>0.416</i> | 0.180 | <i>0.417</i> |
| <i>Sigmoilinita costata</i> | -0.353 | 0.038 | <i>0.401</i> | 0.485 | 0.550 | 0.146 | 0.038 | 0.133 | 0.535 | -0.143 |
| <i>Spiroplectinella sagittula</i> | 0.026 | -0.172 | <i>0.422</i> | 0.338 | 0.291 | -0.085 | 0.573 | 0.030 | 0.231 | -0.015 |
| <i>Textularia agglutinans</i> | 0.463 | -0.154 | -0.534 | -0.655 | <i>-0.721</i> | 0.004 | -0.043 | <i>-0.367</i> | <i>-0.420</i> | -0.161 |
| <i>Textularia bocki</i> | -0.158 | 0.157 | 0.523 | <i>0.539</i> | 0.516 | 0.337 | -0.013 | 0.107 | 0.331 | -0.113 |
| <i>Textularia truncata</i> | -0.165 | 0.039 | 0.171 | <i>0.402</i> | <i>0.376</i> | 0.049 | 0.137 | 0.160 | 0.253 | 0.155 |
| Dominance (D) | 0.120 | 0.047 | -0.494 | -0.468 | -0.497 | -0.120 | -0.137 | -0.295 | -0.354 | -0.142 |
| Shannon (H) | -0.071 | -0.014 | 0.590 | 0.468 | 0.504 | 0.161 | 0.170 | 0.304 | <i>0.394</i> | 0.156 |
| Simpson (1-D) | -0.114 | -0.052 | 0.488 | 0.463 | 0.494 | 0.109 | 0.133 | 0.295 | 0.345 | 0.155 |
| Evenness (e ^{H/S}) | -0.109 | 0.065 | 0.528 | 0.458 | 0.497 | 0.193 | 0.049 | 0.243 | <i>0.362</i> | 0.054 |
| Equitability (J) | -0.087 | 0.017 | 0.550 | 0.461 | 0.508 | 0.146 | 0.078 | 0.276 | <i>0.366</i> | 0.125 |
| Fisher (alpha) | 0.073 | 0.040 | 0.677 | <i>0.389</i> | <i>0.400</i> | 0.222 | <i>0.388</i> | 0.353 | 0.343 | 0.241 |
| Species Diversity | -0.025 | -0.075 | 0.577 | <i>0.396</i> | <i>0.400</i> | 0.178 | 0.352 | 0.311 | <i>0.384</i> | 0.189 |
| Foraminiferal Density | -0.540 | 0.133 | 0.541 | 0.863 | 0.867 | -0.053 | 0.311 | 0.237 | 0.531 | 0.040 |

Values ($p < 0.01$, two-tailed test) in bold and ($p < 0.05$, two-tailed test) in italics.

| %Sulphur | <i>Ammonia beccarii</i> | <i>Asterigerinata mamilla</i> | <i>Buccella granulata</i> | <i>Cassidulina laevigata</i> |
|-----------------|-------------------------|-------------------------------|---------------------------|------------------------------|
| 1.000 | | | | |
| 0.261 | 1.000 | | | |
| -0.166 | -0.346 | 1.000 | | |
| -0.098 | 0.357 | 0.229 | 1.000 | |
| -0.064 | -0.171 | 0.575 | 0.108 | 1.000 |
| -0.152 | -0.212 | 0.612 | 0.185 | 0.794 |
| -0.020 | -0.064 | -0.017 | -0.014 | -0.346 |
| 0.127 | -0.112 | 0.646 | 0.154 | 0.587 |
| -0.063 | 0.212 | -0.785 | -0.019 | -0.651 |
| 0.018 | -0.013 | 0.331 | 0.286 | 0.308 |
| -0.236 | -0.049 | -0.669 | -0.360 | -0.541 |
| 0.225 | 0.008 | 0.105 | -0.146 | 0.020 |
| 0.030 | -0.080 | 0.439 | 0.129 | 0.662 |
| -0.228 | -0.318 | 0.771 | 0.122 | 0.421 |
| 0.000 | -0.029 | 0.781 | 0.431 | 0.620 |

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|--------|--------|---------------|---------------|---------------|
| 0.303 | 0.038 | 0.264 | 0.104 | 0.257 |
| 0.055 | 0.135 | 0.010 | 0.306 | -0.235 |
| 0.113 | -0.288 | 0.562 | -0.103 | <i>0.406</i> |
| 0.097 | -0.202 | 0.730 | 0.095 | 0.512 |
| 0.131 | -0.070 | 0.305 | -0.035 | 0.239 |
| 0.211 | -0.112 | <i>0.429</i> | 0.028 | 0.016 |
| 0.350 | -0.018 | 0.666 | 0.114 | <i>0.454</i> |
| 0.000 | -0.077 | 0.456 | 0.106 | <i>0.451</i> |
| -0.152 | -0.024 | -0.739 | <i>-0.389</i> | -0.562 |
| -0.113 | 0.019 | 0.488 | 0.478 | 0.573 |
| 0.017 | -0.084 | <i>0.438</i> | -0.146 | 0.142 |
| -0.187 | -0.133 | <i>-0.601</i> | -0.268 | -0.482 |
| 0.194 | 0.093 | 0.613 | 0.315 | 0.515 |
| 0.188 | 0.132 | 0.593 | 0.253 | 0.466 |
| 0.270 | 0.205 | 0.609 | 0.424 | 0.499 |
| 0.251 | 0.157 | 0.617 | 0.362 | 0.476 |
| 0.019 | -0.052 | 0.504 | 0.129 | 0.543 |
| 0.023 | -0.067 | 0.491 | 0.162 | 0.515 |
| -0.044 | -0.298 | 0.726 | -0.067 | 0.665 |

| <i>Cassidulina subglobosa</i> | <i>Elphidium cf. E. advenum</i> | <i>Elphidium complanatum</i> | <i>Elphidium crispum</i> | <i>Elphidium macellum</i> |
|-------------------------------|---------------------------------|------------------------------|--------------------------|---------------------------|
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|---------------|--------|---------------|---------------|---------------|
| 1.000 | | | | |
| -0.291 | 1.000 | | | |
| 0.546 | -0.294 | 1.000 | | |
| -0.515 | 0.272 | -0.605 | 1.000 | |
| 0.244 | -0.139 | 0.138 | -0.520 | 1.000 |
| -0.445 | 0.169 | -0.496 | 0.835 | -0.564 |
| 0.130 | 0.040 | 0.210 | -0.254 | -0.124 |
| 0.653 | -0.208 | 0.409 | -0.507 | 0.365 |
| 0.315 | -0.072 | 0.536 | -0.767 | 0.438 |
| 0.472 | -0.275 | 0.663 | -0.809 | 0.449 |

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|---------------|--------|---------------|---------------|---------------|
| 0.062 | -0.154 | 0.315 | -0.485 | 0.220 |
| -0.174 | 0.336 | -0.190 | 0.123 | -0.079 |
| 0.279 | 0.202 | 0.236 | -0.657 | 0.350 |
| 0.353 | -0.208 | 0.471 | -0.873 | 0.602 |
| 0.113 | 0.019 | 0.157 | -0.443 | 0.679 |
| 0.040 | 0.236 | 0.241 | -0.514 | 0.383 |
| 0.280 | -0.140 | 0.659 | -0.732 | 0.260 |
| 0.754 | -0.114 | 0.580 | -0.311 | -0.020 |
| -0.501 | 0.120 | -0.484 | 0.835 | -0.606 |
| 0.522 | -0.261 | 0.464 | -0.476 | 0.132 |
| 0.136 | 0.010 | 0.326 | -0.398 | -0.197 |
| -0.483 | -0.015 | -0.668 | 0.585 | -0.372 |
| 0.558 | -0.001 | 0.670 | -0.606 | 0.422 |
| 0.470 | 0.029 | 0.662 | -0.579 | 0.363 |
| 0.489 | -0.004 | 0.611 | -0.598 | 0.374 |
| 0.490 | 0.055 | 0.636 | -0.605 | 0.387 |
| 0.630 | -0.107 | 0.608 | -0.516 | 0.443 |
| 0.619 | -0.146 | 0.627 | -0.497 | 0.424 |
| 0.618 | -0.164 | 0.465 | -0.837 | 0.441 |

| <i>Eponides concameratus</i> | <i>Lobatula lobatula</i> | <i>Melonis barleanum</i> | <i>Miliolinella subrotunda</i> | <i>Neoconorbina nitida</i> |
|------------------------------|--------------------------|--------------------------|--------------------------------|----------------------------|
|------------------------------|--------------------------|--------------------------|--------------------------------|----------------------------|

| | | | | |
|---------------|--------|--------------|--------------|-------|
| 1.000 | | | | |
| -0.318 | 1.000 | | | |
| -0.480 | -0.009 | 1.000 | | |
| -0.580 | -0.093 | 0.298 | 1.000 | |
| -0.779 | -0.117 | 0.516 | 0.764 | 1.000 |

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|---------------|--------------|---------------|---------------|---------------|
| -0.682 | 0.485 | 0.160 | 0.300 | 0.384 |
| -0.204 | 0.159 | -0.181 | -0.031 | -0.024 |
| -0.529 | -0.051 | <i>0.393</i> | 0.603 | 0.572 |
| -0.768 | -0.060 | 0.475 | 0.785 | 0.842 |
| <i>-0.434</i> | -0.185 | 0.144 | 0.460 | 0.326 |
| -0.541 | 0.533 | 0.003 | <i>0.393</i> | 0.280 |
| -0.699 | 0.009 | <i>0.395</i> | 0.688 | 0.799 |
| -0.237 | 0.382 | <i>0.399</i> | 0.154 | 0.212 |
| 0.929 | -0.216 | -0.523 | -0.594 | -0.808 |
| -0.541 | 0.087 | 0.639 | <i>0.362</i> | 0.628 |
| -0.217 | 0.285 | 0.104 | <i>0.400</i> | 0.291 |
| 0.615 | -0.177 | <i>-0.436</i> | -0.569 | -0.635 |
| -0.684 | 0.271 | 0.467 | 0.522 | 0.626 |
| -0.607 | 0.202 | <i>0.426</i> | 0.563 | 0.617 |
| -0.725 | 0.110 | <i>0.425</i> | 0.502 | 0.733 |
| -0.717 | 0.244 | <i>0.422</i> | 0.515 | 0.668 |
| -0.510 | 0.285 | 0.466 | <i>0.433</i> | <i>0.418</i> |
| -0.482 | 0.260 | 0.487 | <i>0.444</i> | <i>0.427</i> |
| -0.674 | 0.188 | 0.609 | 0.681 | 0.635 |

Planorbulina mediterranensis

Quinqueloculina berthelotiana

Quinqueloculina laevigata

Quinqueloculina stelligera

| | | | |
|---------------|--------------|---------------|---------------|
| 1.000 | | | |
| 0.240 | 1.000 | | |
| 0.343 | 0.009 | 1.000 | |
| <i>0.418</i> | -0.153 | 0.740 | 1.000 |
| 0.160 | -0.103 | <i>0.393</i> | 0.531 |
| <i>0.396</i> | <i>0.363</i> | 0.346 | <i>0.374</i> |
| 0.510 | -0.096 | 0.599 | 0.808 |
| -0.080 | -0.169 | -0.040 | 0.046 |
| -0.476 | -0.093 | -0.543 | -0.814 |
| 0.285 | 0.037 | 0.202 | 0.333 |
| <i>0.365</i> | -0.040 | 0.301 | 0.291 |
| -0.303 | -0.018 | -0.463 | -0.503 |
| <i>0.396</i> | 0.030 | 0.471 | 0.502 |
| 0.307 | 0.024 | 0.460 | 0.492 |
| 0.341 | 0.145 | 0.476 | 0.535 |
| <i>0.393</i> | 0.126 | 0.484 | 0.516 |
| 0.334 | -0.202 | <i>0.385</i> | <i>0.382</i> |
| 0.323 | -0.200 | 0.353 | <i>0.381</i> |
| <i>0.408</i> | -0.044 | 0.594 | 0.735 |

Rosalina globularis

Rosalina vilardeboana

Sigmoilinita costata

Spiroplectinella sagittula

Textularia agglutinans

| | | | | | |
|--------|---------------|---------------|---------------|---------------|--|
| 1.000 | | | | | |
| 0.288 | 1.000 | | | | |
| 0.344 | 0.265 | 1.000 | | | |
| -0.025 | 0.161 | 0.193 | 1.000 | | |
| -0.448 | -0.553 | -0.689 | -0.293 | 1.000 | |
| -0.053 | 0.044 | 0.325 | 0.416 | -0.512 | |
| -0.047 | 0.323 | 0.407 | 0.242 | -0.181 | |
| -0.326 | -0.510 | -0.607 | -0.493 | 0.600 | |
| 0.333 | 0.510 | 0.583 | 0.556 | -0.658 | |
| 0.318 | 0.525 | 0.597 | 0.490 | -0.591 | |
| 0.274 | 0.453 | 0.659 | 0.467 | -0.708 | |
| 0.288 | 0.542 | 0.629 | 0.499 | -0.697 | |
| 0.403 | 0.351 | 0.347 | 0.571 | -0.469 | |
| 0.378 | 0.325 | 0.373 | 0.587 | -0.446 | |
| 0.482 | 0.376 | 0.617 | 0.391 | -0.702 | |

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|-------------------------|----------------------------|---------------|-------------|---------------|----------------------|------------------|--------------|
| <i>Textularia bocki</i> | <i>Textularia truncata</i> | Dominance (D) | Shannon (H) | Simpson (1-D) | Evenness (e^H/S) | Equitability (J) | Fisher alpha |
|-------------------------|----------------------------|---------------|-------------|---------------|----------------------|------------------|--------------|

| | | | | | | | |
|--------------|--------|---------------|--------------|--------------|--------------|--------------|--------------|
| 1.000 | | | | | | | |
| 0.259 | 1.000 | | | | | | |
| -0.392 | -0.297 | 1.000 | | | | | |
| 0.462 | 0.264 | -0.964 | 1.000 | | | | |
| 0.379 | 0.304 | -0.999 | 0.962 | 1.000 | | | |
| 0.520 | 0.215 | -0.914 | 0.923 | 0.905 | 1.000 | | |
| 0.467 | 0.254 | -0.958 | 0.976 | 0.955 | 0.974 | 1.000 | |
| 0.386 | 0.180 | -0.798 | 0.867 | 0.797 | 0.655 | 0.750 | 1.000 |
| 0.378 | 0.236 | -0.796 | 0.866 | 0.793 | 0.639 | 0.737 | 0.972 |
| 0.389 | 0.449 | -0.447 | 0.479 | 0.442 | 0.419 | 0.444 | 0.445 |

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|--------------------------|------------------------------|
| Species Diversity | Foraminiferal Density |
|--------------------------|------------------------------|

1.000

0.470

1.000

