

**Table S1.** Summary of OTU assignments across major taxonomic groups (prior to cleaning and filtering steps), showing the number and percentage of OTUs retained for Decapoda versus non-target sequences.

| <b>kingdom</b>    | <b>OTU</b>  |             | <b>Eukaryota<br/>phylum</b> | <b>OTU</b> |             | <b>Arthropoda order</b> | <b>OTU</b> |             |
|-------------------|-------------|-------------|-----------------------------|------------|-------------|-------------------------|------------|-------------|
|                   | <b>nb</b>   | <b>%</b>    |                             | <b>nb</b>  | <b>%</b>    |                         | <b>nb</b>  | <b>%</b>    |
| Bacteria          | 129         | 10.9        | Annelida                    | 364        | 37.5        | Araneae                 | 22         | 6.3         |
| Virus             | 1           | 0.1         | <b>Arthropoda</b>           | <b>350</b> | <b>36.0</b> | Coleoptera              | 4          | 1.1         |
| unknown kingdom   | 57          | 4.8         | Bacillariophyta             | 1          | 0.1         | Cyclopoida              | 9          | 2.6         |
| Multi-affiliation | 25          | 2.1         | Basidiomycota               | 4          | 0.4         | <b>Decapoda</b>         | <b>198</b> | <b>56.6</b> |
| Archaea           | 2           | 0.2         | Bryozoa                     | 7          | 0.7         | Diplostraca             | 10         | 2.9         |
| <b>Eukaryota</b>  | <b>971</b>  | <b>81.9</b> | Chordata                    | 3          | 0.3         | Diptera                 | 1          | 0.3         |
| <b>TOTAL</b>      | <b>1185</b> | <b>100</b>  | Gastrotricha                | 1          | 0.1         | Embioptera              | 3          | 0.9         |
|                   |             |             | Heterolobosea               | 2          | 0.2         | Entomobryomorpha        | 14         | 4.0         |
|                   |             |             | Mollusca                    | 152        | 15.7        | Ephemeroptera           | 6          | 1.7         |
|                   |             |             | Multi-affiliation           | 1          | 0.1         | Geophilomorpha          | 8          | 2.3         |
|                   |             |             | Nemertea                    | 3          | 0.3         | Hemiptera               | 23         | 6.6         |
|                   |             |             | Platyhelminthes             | 73         | 7.5         | Isopoda                 | 4          | 1.1         |
|                   |             |             | Rotifera                    | 5          | 0.5         | Mesostigmata            | 1          | 0.3         |
|                   |             |             | Tardigrada                  | 2          | 0.2         | Neuroptera              | 1          | 0.3         |
|                   |             |             | unknown phylum              | 3          | 0.3         | Odonata                 | 1          | 0.3         |
|                   |             |             | <b>TOTAL</b>                | <b>971</b> | <b>100</b>  | Orthoptera              | 7          | 2.0         |
|                   |             |             |                             |            |             | Psocoptera              | 15         | 4.3         |
|                   |             |             |                             |            |             | Scolopendromorpha       | 16         | 4.6         |
|                   |             |             |                             |            |             | Scorpiones              | 3          | 0.9         |
|                   |             |             |                             |            |             | Spirobolida             | 2          | 0.6         |
|                   |             |             |                             |            |             | unknown order           | 2          | 0.6         |
|                   |             |             |                             |            |             | <b>TOTAL</b>            | <b>350</b> | <b>100</b>  |