

Supplementary Material

Microbial signatures can help distinguish moon sponges (family Tetillidae) from Darwin Harbour, Australia

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Table S1. Sponge samples collected in Darwin Harbour, Northern Territory, Australia showing reference numbers, collection dates and sites

Numbers 1 and 2 refer to morph types 1 (larger, brown, globular) and 2 (smaller, pink, pedunculate)

| Sample reference number | Sample type | Collection date | Collection site |
|-------------------------|----------------------------|-----------------|-----------------|
| SM48 | <i>Paratetilla</i> morph 1 | 22.04.09 | Larrakeyah |
| SM51 | <i>Paratetilla</i> morph 1 | 22.04.09 | Larrakeyah |
| SM63 | <i>Paratetilla</i> morph 1 | 22.04.09 | Larrakeyah |
| SM73 | <i>Paratetilla</i> morph 2 | 14.05.09 | Stevens Rock |
| SM81 | <i>Paratetilla</i> morph 2 | 14.05.09 | Stevens Rock |
| SM82 | <i>Paratetilla</i> morph 2 | 14.05.09 | Stevens Rock |
| SM83 | <i>Paratetilla</i> morph 2 | 14.05.09 | Stevens Rock |
| SM107 | <i>Paratetilla</i> morph 2 | 14.05.09 | East Point |
| SM108 | <i>Paratetilla</i> morph 2 | 14.05.09 | East Point |
| SM109 | <i>Paratetilla</i> morph 2 | 14.05.09 | East Point |
| SM110 | <i>Paratetilla</i> morph 2 | 14.05.09 | East Point |
| SM129 | <i>Paratetilla</i> morph 2 | 07.06.10 | Stevens Rock |
| SM130 | <i>Paratetilla</i> morph 2 | 07.06.10 | Stevens Rock |
| SM131 | <i>Paratetilla</i> morph 2 | 07.06.10 | Stevens Rock |
| SM157 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM158 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM172 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM173 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM174 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM175 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM183 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM184 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM185 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM186 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM187 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |

| | | | |
|-------|----------------------------|----------|--------------|
| SM188 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM189 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM201 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM202 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM203 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM204 | <i>Paratetilla</i> morph 1 | 27.07.10 | Larrakeyah |
| SM216 | <i>Paratetilla</i> morph 1 | 15.10.10 | Stevens Rock |
| SM217 | <i>Paratetilla</i> morph 1 | 15.10.10 | Stevens Rock |
| SM218 | <i>Paratetilla</i> morph 1 | 15.10.10 | Stevens Rock |
| SM219 | <i>Paratetilla</i> morph 2 | 15.10.10 | Stevens Rock |

Table S2. Sequence names, Genbank accession numbers and Northern Territory museum (NTM) voucher numbers from sponges used in this study

| Original sequence name | New sequence name | Genbank accession number | NTM No. | | |
|-----------------------------|---------------------------|--------------------------|---------|---------|---------|
| <i>Paratetilla</i> morph 1A | <i>Cinachyrella</i> sp. 1 | JQ236881 | Z005914 | Z005929 | Z006014 |
| | | | Z006015 | Z006068 | Z006005 |
| | | | Z006006 | | |
| <i>Paratetilla</i> morph 1B | <i>Cinachyrella</i> sp. 2 | JQ236882 | Z005917 | | |
| <i>Paratetilla</i> morph 2 | <i>Paratetilla</i> sp. | JQ236883 | Z005951 | Z005952 | Z005953 |
| | | | Z005971 | Z005972 | Z005974 |
| | | | Z006071 | | |

Table S3. Genbank COI sequences from tetillid sponges used in this study

| Species | Genbank accession number | Location* |
|---------------------------------|--------------------------|------------|
| <i>Tetilla leptoderma</i> | HM032749 | Antarctica |
| <i>Cinachyrella kuekenthali</i> | EU237479 | not listed |
| <i>Cinachyrella alloclada</i> | HM032738 | Bahamas |
| <i>Cinachyrella</i> sp. | HM032739 | Bahamas |
| <i>Cinachyrella</i> sp. | HM032740 | Tanzania |
| <i>Paratetilla</i> sp. | HM032744 | Australia |
| <i>Cinachyrella</i> sp. | HM032741 | Australia |
| <i>Cinachyrella schulzei</i> | HM032746 | Australia |
| <i>Cinachyrella schulzei</i> | HM032745 | Australia |

*Geographic origin as listed in Genbank.