**Table S2.** MtCOI intra- and inter-specific Kimura 2-Parameter genetic distance for of *Clytia*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **N** | **Intra** | **Inter** | | | | | | | | | | | | | | | | | | |
| *Clytia gulangensis* sp. nov | 15 | 0.001 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia elsaeoswaldae* | 1 | / | 0.074 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia folleata* | 6 | 0.001 | 0.087 | 0.094 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia gracilis* | 1 | / | 0.126 | 0.126 | 0.100 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia* cf. *gracilis* sp.A | 2 | 0.005 | 0.080 | 0.084 | 0.088 | 0.120 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia* cf. *gracilis* sp.B | 2 | 0.011 | 0.062 | 0.072 | 0.092 | 0.113 | 0.079 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia* cf. *gracilis* sp.C | 1 | / | 0.125 | 0.110 | 0.115 | 0.130 | 0.125 | 0.122 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia* cf. *gracilis* sp.D | 1 | / | 0.193 | 0.198 | 0.162 | 0.187 | 0.200 | 0.178 | 0.196 |  |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia hemisphaerica* NS | 1 | / | 0.099 | 0.097 | 0.121 | 0.141 | 0.081 | 0.085 | 0.136 | 0.203 |  |  |  |  |  |  |  |  |  |  |  |
| *Clytia hemisphaerica* CYS | 5 | 0.003 | 0.083 | 0.098 | 0.086 | 0.132 | 0.007 | 0.086 | 0.132 | 0.209 | 0.092 |  |  |  |  |  |  |  |  |  |  |
| *Clytia hummelincki* | 2 | 0.006 | 0.158 | 0.159 | 0.162 | 0.172 | 0.153 | 0.168 | 0.172 | 0.217 | 0.167 | 0.172 |  |  |  |  |  |  |  |  |  |
| *Clytia languida* | 2 | 0.004 | 0.131 | 0.137 | 0.109 | 0.103 | 0.135 | 0.130 | 0.139 | 0.180 | 0.135 | 0.141 | 0.179 |  |  |  |  |  |  |  |  |
| *Clytia linearis* | 1 | / | 0.165 | 0.172 | 0.149 | 0.159 | 0.167 | 0.177 | 0.183 | 0.206 | 0.178 | 0.158 | 0.209 | 0.138 |  |  |  |  |  |  |  |
| *Clytia paulensis* | 1 | / | 0.123 | 0.115 | 0.095 | 0.103 | 0.127 | 0.107 | 0.139 | 0.164 | 0.131 | 0.133 | 0.137 | 0.107 | 0.156 |  |  |  |  |  |  |
| *Clytia xiamenensis* | 8 | 0.001 | 0.071 | 0.087 | 0.085 | 0.116 | 0.005 | 0.074 | 0.123 | 0.198 | 0.079 | 0.002 | 0.157 | 0.130 | 0.166 | 0.124 |  |  |  |  |  |
| *Clytia* sp. | 3 | 0.000 | 0.110 | 0.127 | 0.091 | 0.105 | 0.114 | 0.108 | 0.143 | 0.178 | 0.136 | 0.120 | 0.157 | 0.118 | 0.158 | 0.109 | 0.111 |  |  |  |  |
| *Clytia* sp. 1 | 15 | 0.006 | 0.099 | 0.101 | 0.117 | 0.147 | 0.083 | 0.089 | 0.137 | 0.200 | 0.011 | 0.089 | 0.171 | 0.143 | 0.168 | 0.135 | 0.078 | 0.133 |  |  |  |
| *Clytia* sp. 2 | 4 | 0.003 | 0.133 | 0.135 | 0.106 | 0.102 | 0.129 | 0.133 | 0.141 | 0.178 | 0.134 | 0.135 | 0.177 | 0.003 | 0.139 | 0.107 | 0.125 | 0.115 | 0.142 |  |  |
| *Clytia* sp. 701AC | 1 | / | 0.087 | 0.049 | 0.108 | 0.124 | 0.099 | 0.065 | 0.115 | 0.200 | 0.106 | 0.111 | 0.180 | 0.130 | 0.184 | 0.125 | 0.100 | 0.136 | 0.110 | 0.131 |  |
| *Clytia* sp. KC | 10 | 0.000 | 0.095 | 0.093 | 0.100 | 0.127 | 0.110 | 0.097 | 0.142 | 0.214 | 0.114 | 0.123 | 0.180 | 0.128 | 0.170 | 0.128 | 0.110 | 0.120 | 0.120 | 0.127 | 0.102 |

N: numbers of sequences

NS: North Sea

CYS: China Yellow Sea