Supplementary Table 1. Genetic distance based on COI gene of *Geosesarma* spp.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | BIC\_0552\_*Geosesarma*\_*hagen* | BIC\_0553\_*Geosesarma*\_*hagen* | BIC\_0554\_*Geosesarma*\_*hagen* | BIC\_0555\_*Geosesarma\_hagen* | BIC\_0556\_*Geosesarma\_hagen* | BIC\_0559\_*Geosesarma\_dennerle* | BIC\_0560\_*Geosesarma\_dennerle* | BIC\_0561\_*Geosesarma\_dennerle* | BIC\_0563\_*Geosesarma\_*sp. 1 |
| BIC\_0552\_*Geosesarma\_hagen* |  |  |  |  |  |  |  |  |  |
| BIC\_0553\_*Geosesarma*\_*hagen* | 0,002 |  |  |  |  |  |  |  |  |
| BIC\_0554\_*Geosesarma\_hagen* | 0,006 | 0,007 |  |  |  |  |  |  |  |
| BIC\_0555\_*Geosesarma\_hagen* | 0,004 | 0,004 | 0,010 |  |  |  |  |  |  |
| BIC\_0556\_*Geosesarma\_hagen* | 0,002 | 0,003 | 0,007 | 0,004 |  |  |  |  |  |
| BIC\_0559\_*Geosesarma\_dennerle* | 0,018 | 0,018 | 0,024 | 0,021 | 0,019 |  |  |  |  |
| BIC\_0560\_*Geosesarma\_dennerle* | 0,022 | 0,020 | 0,027 | 0,024 | 0,022 | 0,006 |  |  |  |
| BIC\_0561\_*Geosesarma\_dennerle* | 0,016 | 0,017 | 0,021 | 0,020 | 0,017 | 0,003 | 0,007 |  |  |
| BIC\_0563\_*Geosesarma\_*sp. 1 | 0,020 | 0,019 | 0,025 | 0,019 | 0,021 | 0,017 | 0,022 | 0,017 |  |
| BIC\_0564\_*Geosesarma\_*sp. 1 | 0,021 | 0,021 | 0,026 | 0,021 | 0,021 | 0,019 | 0,024 | 0,018 | 0,009 |
| BIC\_0565\_*Geosesarma\_hagen* | 0,002 | 0,003 | 0,007 | 0,004 | 0,003 | 0,019 | 0,023 | 0,017 | 0,018 |
| BIC\_0566\_*Geosesarma*\_sp. 4 | 0,022 | 0,021 | 0,026 | 0,023 | 0,021 | 0,019 | 0,022 | 0,020 | 0,024 |
| BIC\_0567\_*Geosesarma\_dennerle* | 0,018 | 0,018 | 0,023 | 0,021 | 0,018 | 0,008 | 0,014 | 0,008 | 0,016 |
| BIC\_0568\_*Terrathelphusa\_chilensis* | 0,192 | 0,191 | 0,196 | 0,190 | 0,191 | 0,194 | 0,193 | 0,192 | 0,193 |
| BIC\_0569\_*Geosesarma*\_sp. 2 | 0,023 | 0,023 | 0,028 | 0,024 | 0,023 | 0,021 | 0,026 | 0,019 | 0,018 |
| BIC\_0570\_*Geosesarma*\_sp. 3 | 0,081 | 0,082 | 0,087 | 0,083 | 0,082 | 0,080 | 0,087 | 0,080 | 0,075 |
| BIC\_0571\_*Geosesarma*\_sp. 3 | 0,081 | 0,082 | 0,087 | 0,083 | 0,082 | 0,080 | 0,087 | 0,079 | 0,075 |
| *Geosesarm\_faustum* | 3,172 | 3,226 | 3,086 | 3,363 | 3,254 | 3,103 | 3,253 | 3,173 | 3,107 |
| *Geosesarma\_penangense* | 3,134 | 3,187 | 3,051 | 3,321 | 3,216 | 3,060 | 3,221 | 3,128 | 3,131 |

Supplementary Table 1. Continued…

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | BIC\_0564\_*Geosesarma\_*sp. 1 | BIC\_0565\_*Geosesarma\_hagen* | BIC\_0566\_*Geosesarm*a\_sp. 4 | BIC\_0567\_*Geosesarma\_dennerle* | BIC\_0568\_*Terrathelphusa\_chilensis* | BIC\_0569\_*Geosesarma\_*sp. 2 | BIC\_0570\_*Geosesarma\_*sp. 3 | BIC\_0571\_*Geosesarma\_sp. 3* | *Geosesarm\_faustum* | *Geosesarma\_penangense* |
| BIC\_0552\_*Geosesarma\_hagen* |  |  |  |  |  |  |  |  |  |  |
| BIC\_0553\_*Geosesarma\_hagen* |  |  |  |  |  |  |  |  |  |  |
| BIC\_0554\_*Geosesarma\_hagen* |  |  |  |  |  |  |  |  |  |  |
| BIC\_0555\_*Geosesarma\_hagen* |  |  |  |  |  |  |  |  |  |  |
| BIC\_0556\_*Geosesarma\_hagen* |  |  |  |  |  |  |  |  |  |  |
| BIC\_0559\_*Geosesarma\_dennerle* |  |  |  |  |  |  |  |  |  |  |
| BIC\_0560\_*Geosesarma\_dennerle* |  |  |  |  |  |  |  |  |  |  |
| BIC\_0561\_*Geosesarma\_dennerle* |  |  |  |  |  |  |  |  |  |  |
| BIC\_0563\_*Geosesarma\_*sp. 1 |  |  |  |  |  |  |  |  |  |  |
| BIC\_0564\_*Geosesarma\_*sp. 1 |  |  |  |  |  |  |  |  |  |  |
| BIC\_0565\_*Geosesarma\_hagen* | 0,019 |  |  |  |  |  |  |  |  |  |
| BIC\_0566\_*Geosesarma*\_sp. 4 | 0,024 | 0,023 |  |  |  |  |  |  |  |  |
| BIC\_0567\_*Geosesarma\_dennerle* | 0,018 | 0,018 | 0,021 |  |  |  |  |  |  |  |
| BIC\_0568\_*Terrathelphusa\_chilensis* | 0,187 | 0,190 | 0,194 | 0,191 |  |  |  |  |  |  |
| BIC\_0569\_*Geosesarma\_*sp. 2 | 0,021 | 0,021 | 0,031 | 0,021 | 0,192 |  |  |  |  |  |
| BIC\_0570\_*Geosesarma*\_sp. 3 | 0,078 | 0,080 | 0,092 | 0,080 | 0,221 | 0,068 |  |  |  |  |
| BIC\_0571\_*Geosesarma*\_sp. 3 | 0,078 | 0,080 | 0,092 | 0,080 | 0,221 | 0,068 | 0,000 |  |  |  |
| *Geosesarm\_faustum* | 3,033 | 3,213 | 3,210 | 3,094 | 3,473 | 3,157 | 2,897 | 2,889 |  |  |
| *Geosesarma\_penangense* | 3,000 | 3,174 | 3,130 | 3,051 | 3,316 | 3,127 | 2,882 | 2,873 | 0,543 |  |

Supplementary Table 2. Genetic Distance based on 16S rRNA gene of *Geosesarma* spp.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *Geosesarma faustum* | *Geosesarma penangense* | BIC0570\_*Geosesarma*\_sp. 3 | BIC0571\_*Geosesarma*\_sp. 3 | BIC0568\_*Terrathelphusa*\_*chilensis* | ON379433 *Geosesarma\_hagen* | BIC0569\_*Geosesarma*\_sp. 2 | BIC0563\_*Geosesarma*\_sp. 1 | BIC0564\_*Geosesarma*\_sp. 1 | BIC0566\_*Geosesarma*\_sp. 4 |
| *Geosesarma faustum* |  |  |  |  |  |  |  |  |  |  |
| *Geosesarma penangense* | 0,127 |  |  |  |  |  |  |  |  |  |
| BIC0570\_*Geosesarma*\_sp.3 | 1,176 | 1,265 |  |  |  |  |  |  |  |  |
| BIC0571\_*Geosesarma*\_sp.3 | 1,176 | 1,265 | 0 |  |  |  |  |  |  |  |
| BIC0568\_*Terrathelphusa*\_*chilensis* | 1,036 | 0,989 | 0,332 | 0,332 |  |  |  |  |  |  |
| ON379433 *Geosesarma\_hagen* | 0,88 | 0,838 | 0,209 | 0,209 | 0,191 |  |  |  |  |  |
| BIC0569\_*Geosesarma*\_sp. 2 | 0,925 | 0,863 | 0,218 | 0,218 | 0,204 | 0,017 |  |  |  |  |
| BIC0563\_*Geosesarma*\_sp. 1 | 0,885 | 0,862 | 0,211 | 0,211 | 0,197 | 0,012 | 0,019 |  |  |  |
| BIC0564\_*Geosesarma*\_sp. 1 | 0,885 | 0,862 | 0,211 | 0,211 | 0,197 | 0,012 | 0,019 | 0 |  |  |
| BIC0566\_*Geosesarma*\_sp.4 | 0,879 | 0,839 | 0,212 | 0,212 | 0,197 | 0,005 | 0,014 | 0,01 | 0,01 |  |
| BIC0559\_*Geosesarma*\_*dennerle* | 0,863 | 0,824 | 0,209 | 0,209 | 0,204 | 0,012 | 0,017 | 0,017 | 0,017 | 0,007 |
| BIC0560\_*Geosesarma*\_*dennerle* | 0,872 | 0,832 | 0,216 | 0,216 | 0,201 | 0,012 | 0,017 | 0,017 | 0,017 | 0,007 |
| BIC0561\_*Geosesarma*\_*dennerle* | 0,879 | 0,839 | 0,208 | 0,208 | 0,201 | 0,01 | 0,012 | 0,012 | 0,012 | 0,007 |
| BIC0552\_*Geosesarma*\_*hagen* | 0,885 | 0,845 | 0,212 | 0,212 | 0,194 | 0 | 0,017 | 0,012 | 0,012 | 0,007 |
| BIC0553\_*Geosesarma*\_*hagen* | 0,885 | 0,845 | 0,212 | 0,212 | 0,194 | 0 | 0,017 | 0,012 | 0,012 | 0,007 |
| BIC0554\_*Geosesarma*\_*hagen* | 0,885 | 0,845 | 0,212 | 0,212 | 0,194 | 0 | 0,017 | 0,012 | 0,012 | 0,007 |
| BIC0555\_*Geosesarma*\_*hagen* | 0,885 | 0,845 | 0,212 | 0,212 | 0,194 | 0 | 0,017 | 0,012 | 0,012 | 0,007 |
| BIC0556\_*Geosesarma*\_*hagen* | 0,885 | 0,845 | 0,212 | 0,212 | 0,194 | 0 | 0,017 | 0,012 | 0,012 | 0,007 |
| BIC0565\_Geosesarma\_*hagen* | 0,885 | 0,845 | 0,212 | 0,212 | 0,194 | 0 | 0,017 | 0,012 | 0,012 | 0,007 |
| BIC0567\_Geosesarma\_*dennerle* | 0,877 | 0,837 | 0,211 | 0,211 | 0,194 | 0,007 | 0,014 | 0,014 | 0,014 | 0,01 |

Supplementary Table 2. continued..

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | BIC0559\_*Geosesarma*\_*dennerle* | BIC0560\_*Geosesarma*\_*dennerle* | BIC0561\_*Geosesarma\_dennerle* | BIC0552\_*Geosesarma*\_*hagen* | BIC0553\_*Geosesarma*\_*hagen* | BIC0554\_*Geosesarma*\_*hagen* | BIC0555\_*Geosesarma*\_*hagen* | BIC0556\_*Geosesarma*\_*hagen* | BIC0565\_*Geosesarma*\_*hagen* | BIC0567\_*Geosesarma*\_*dennerle* |
| *Geosesarma faustum* |  |  |  |  |  |  |  |  |  |  |
| *Geosesarma penangense* |  |  |  |  |  |  |  |  |  |  |
| BIC0570\_*Geosesarma*\_sp. 3 |  |  |  |  |  |  |  |  |  |  |
| BIC0571\_*Geosesarma*\_sp. 3 |  |  |  |  |  |  |  |  |  |  |
| BIC0568\_*Terrathelphusa*\_*chilensis* |  |  |  |  |  |  |  |  |  |  |
| ON379433 *Geosesarma\_hagen* |  |  |  |  |  |  |  |  |  |  |
| BIC0569\_*Geosesarma*\_sp. 2 |  |  |  |  |  |  |  |  |  |  |
| BIC0563\_*Geosesarma*\_sp. 1 |  |  |  |  |  |  |  |  |  |  |
| BIC0564\_*Geosesarma*\_sp. 1 |  |  |  |  |  |  |  |  |  |  |
| BIC0566\_*Geosesarma*\_sp. 4 |  |  |  |  |  |  |  |  |  |  |
| BIC0559\_*Geosesarma*\_*dennerle* |  |  |  |  |  |  |  |  |  |  |
| BIC0560\_*Geosesarma*\_*dennerle* | 0,005 |  |  |  |  |  |  |  |  |  |
| BIC0561\_*Geosesarma*\_*dennerle* | 0,005 | 0,005 |  |  |  |  |  |  |  |  |
| BIC0552\_*Geosesarma*\_*hagen* | 0,015 | 0,015 | 0,01 |  |  |  |  |  |  |  |
| BIC0553\_*Geosesarma*\_*hagen* | 0,015 | 0,015 | 0,01 | 0 |  |  |  |  |  |  |
| BIC0554\_*Geosesarma*\_*hagen* | 0,015 | 0,015 | 0,01 | 0 | 0 |  |  |  |  |  |
| BIC0555\_*Geosesarma*\_*hagen* | 0,015 | 0,015 | 0,01 | 0 | 0 | 0 |  |  |  |  |
| BIC0556\_*Geosesarma*\_*hagen* | 0,015 | 0,015 | 0,01 | 0 | 0 | 0 | 0 |  |  |  |
| BIC0565\_Geosesarma\_*hagen* | 0,015 | 0,015 | 0,01 | 0 | 0 | 0 | 0 | 0 |  |  |
| BIC0567\_Geosesarma\_*dennerle* | 0,015 | 0,015 | 0,01 | 0 | 0 | 0 | 0 | 0 |  |  |
| *Geosesarma faustum* | 0,012 | 0,012 | 0,007 | 0,007 | 0,007 | 0,007 | 0,007 | 0,007 | 0,007 |  |