**Appendix S1.** Spider samples used in the present study. See Figs. 13–15 for *C. simoni* localities.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Order/family** | **Genus** | **Species** | **Country** | **Locality** | **Coordinates** | **Registration number** | **COI** | **ITS** |
| Araneae : Actinopodidae | *Actinopus* | sp. | Argentina | Funke, Tornquist | -38.0722 S, -62.0531 W | LZI0551 | TBS | TBS |
| Araneae : Idiopidae | *Aganippe* | sp. | Australia | Serpentine NP, WA |  | T129362 | KY295228 | KY294976 |
| Araneae : Idiopidae | *Euoplos* | sp. | Australia | Serpentine NP, WA |  | T54389 | KY295272 | KY295017 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Coyanarup Peak | 34 24'08"S, 118 14'38"E | 63168 (1) | JF749905‡ | JF749949 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Coyanarup Peak | 34 24'05"S, 118 14'38"E | 63169–70, 72–3 (4) | JF749902 | JF749959 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Coyanarup Peak | 34 24'02"S, 118 14'37"E | 63174 (1) | JF749905 |  |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Ellen Creek | 34 22'54"S, 118 17'25"E | 57975–7 (3) | JF749906 | JF749951 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Ellen Creek | 34 22'54"S, 118 17'23"E | 63134–9 (6) | JF749880, 906‡ | JF749932–3, 35, 53 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Isongerup Track | 34 22'25"S, 118 16'59"E | 57978, 63126–7 (3) | JF749907 | JF749947, JF749955 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Isongerup Track | 34 22'24"S, 118 16'58"E | 57979–80 (2) | JF749880 |  |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Isongerup Track | 34 22'28"S, 118 16'58"E | 63128–31 (4) | JF749906‡ |  |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Isongerup Track | 34 22'29"S, 118 16'59"E | 63132–3 (2) | JF749906‡ |  |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Pyungorup Peak | 34 22'09"S, 118 19'40"E | 63176–8 (3) | JF749890, JF749903, 10 | JF749930, 38 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, The Cascades | 34 22'32"S, 118 14'33"E | 57957–8 (2) | JF749908 | JF749950 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Wedge Hill | 34 25'12"S, 118 10'58"E | 58044–5 (2) | JF749909 | JF749931 |
| Araneae : Migidae | *Bertmainius* | *colonus* | Australia | Stirling Range NP, Wedge Hill | 34 25'13"S, 118 10'58"E | 58046 (1) | JF749881 | JF749934 |
| Araneae : Migidae | *Bertmainius* | *monachus* | Australia | Stirling Range NP, Talyuberlup | 34 24'51"S, 117 57'22"E | 57952, 63124–5 (3) | JF749911, JF749891 | JF749948, 72, 76 |
| Araneae : Migidae | *Bertmainius* | *mysticus* | Australia | Keystone State Forest | 34 58'55"S, 116 37'51"E | 60315–7, 18, 63079–82, 89–92, 98 (13) | JF749901, 15, JF749893–5 | JF749952, 54, 60, 77–8 |
| Araneae : Migidae | *Bertmainius* | *mysticus* | Australia | Keystone State Forest |  | T132978 | KT598259 | KT598260 |
| Araneae : Migidae | *Bertmainius* | *mysticus* | Australia | Stirling Range NP, Coyanarup Peak | 34 24'10"S, 118 14'40"E | 57971, 63165–7 (4) | JF749883, JF749904 |  |
| Araneae : Migidae | *Bertmainius* | *mysticus* | Australia | Walpole-Nornalup NP | 35 00'23"S, 116 38'37"E | 63096 (1) | JF749896 | JF749961 |
| Araneae : Migidae | *Bertmainius* | *mysticus* | Australia | Walpole-Nornalup NP | 34 59'36"S, 116 38'51"E | 63101 (1) | JF749916 | JF749962 |
| Araneae : Migidae | *Bertmainius* | *opimus* | Australia | Boyanup | 33 30'57"S, 115 45'19"E | 63121–2 (2) | JF749918 | JF749969–70 |
| Araneae : Migidae | *Bertmainius* | *opimus* | Australia | E. of Wellington Mill | 33 27'04"S, 115 55'42"E | 63107, 109–112, 114–9 (11) | JF749897–9, JF749917 | JF749939–45 |
| Araneae : Migidae | *Bertmainius* | *opimus* | Australia | S. of Gracetown | 33 54'32"S, 115 00'24"E | 57945–6, 63108 (3) | JF749919, JF749900 | JF749966–8 |
| Araneae : Migidae | *Bertmainius* | *opimus* | Australia | Shannon NP | 34 42'47"S, 116 21'47"E | 63179 (1) | JF749920 | JF749971 |
| Araneae : Migidae | *Bertmainius* | *opimus* | Australia | Stirling Range NP, Coyanarup Peak (SE) | 34 23'34"S, 118 16'04"E | 63083–4, 86, 160 (4) | JF749884–7 |  |
| Araneae : Migidae | *Bertmainius* | *opimus* | Australia | Stirling Range NP, Coyanarup Peak (SE) | 34 23'31"S, 118 16'04"E | 63087, 63161–2, 3, 175 (4) | JF749878–9, JF749888–9 | JF749946 |
| Araneae : Migidae | *Bertmainius* | *opimus* | Australia | Stirling Range NP, Coyanarup Peak (SE) | 34 23'33"S, 118 16'04"E | 63088 (1) | JF749878 |  |
| Araneae : Migidae | *Bertmainius* | *pandus* | Australia | Stirling Range NP, Toolbrunup | 34 23'27"S, 118 03'31"E | 45115, 57954–5 (3) | JF749912 | JF749973–5 |
| Araneae : Migidae | *Bertmainius* | *tingle* | Australia | Walpole-Nornalup NP, Valley of the Giants | 34 58'47"S, 116 52'44"E | 63102–4 (3) | JF749921 | JF749956–8 |
| Araneae : Migidae | *Bertmainius* | *tumidus* | Australia | Stirling Range NP, Coyanarup Peak | 34 24'06"S, 118 14'37"E | 57974 (1) | JF749882 |  |
| Araneae : Migidae | *Bertmainius* | *tumidus* | Australia | Two Peoples Bay Nature Reserve | 34 58'32"S, 118 12'00"E | 78552, 78779 (2) | JF749922 | JF749979–80 |
| Araneae : Migidae | *Bertmainius* | *tumidus* | Australia | WA: Porongurup NP | 34 40'57"S, 117 50'56"E | 57960–61, 67–9 (5) | JF749913–14, JF749892 | JF749936–7 |
| Araneae : Migidae | *Bertmainius* | *tumidus* | Australia | Waychinicup Nature Reserve | 34 54'29"S, 118 15'56"E | 63105–6, 23 (3) | JF749923 | JF749963–5 |
| Araneae : Migidae | *Calathotarsus* | *fangioi* sp.n. | Argentina | Tandilia range, Paititi, General Pueyrredón | -37.9197 S, -58.8225 W | LZI0547 | TBS | TBS |
| Araneae : Migidae | *Calathotarsus* | *fangioi* sp.n. | Argentina | Tandilia range, Paititi, General Pueyrredón | -37.9197 S, -58.8225 W | LZI0559 | TBS | TBS |
| Araneae : Migidae | *Calathotarsus* | *fangioi* sp.n. | Argentina | Tandilia range, Sierra La Barrosa, Balcarce | -37.8769 S, -58.2611 W | LZI0557 | LZI0558 | TBS |
| Araneae : Migidae | *Calathotarsus* | *fangioi* sp.n. | Argentina | Tandilia range, Sierra La Barrosa, Balcarce | -37.8769 S, -58.2611 W | LZI0558 | TBS | TBS |
| Araneae : Migidae | *Calathotarsus* | *simoni* | Argentina | Ventania range, Abra del Hinojo, Saavedra | -37.7594 S, -62.1408 W | LZI0548 | TBS | TBS |
| Araneae : Migidae | *Calathotarsus* | *simoni* | Argentina | Ventania range, Abra del Hinojo, Saavedra | -37.7594 S, -62.1408 W | LZI0553 | TBS\* | TBS |
| Araneae : Migidae | *Calathotarsus* | *simoni* | Argentina | Ventania range, Abra del Hinojo, Saavedra | -37.7972 S, -62.1406 W | LZI0554 | TBS\* | TBS |
| Araneae : Migidae | *Calathotarsus* | *simoni* | Argentina | Ventania range, Abra del Hinojo, Saavedra | -37.7972 S, -62.1406 W | LZI0555 | TBS\* | TBS |
| Araneae : Migidae | *Calathotarsus* | *simoni* | Argentina | Ventania range, Funke, Tornquist | -38.0722 S, -62.0531 W | LZI0545 | TBS | TBS |
| Araneae : Migidae | *Calathotarsus* | *simoni* | Argentina | Ventania range, Funke, Tornquist | -38.0722 S, -62.0531 W | LZI0546 | LZI0552 | TBS |
| Araneae : Migidae | *Calathotarsus* | *simoni* | Argentina | Ventania range, Funke, Tornquist | -38.0722 S, -62.0531 W | LZI0552 | TBS | TBS |
| Araneae : Migidae | *Calathotarsus* | *simoni* | Argentina | Ventania range, Funke, Tornquist | -38.0722 S, -62.0531 W | LZI0556 | TBS | TBS |
| Araneae : Migidae | *Migas* | sp | New Zealand | North Is., Northland, Waipoua |  | CG247 | KY017792 |  |
| Araneae : Migidae | *Moggridgea* | *australis* | Australia | Western River, Kangaroo Island, SA | 35 41'46"S, 136 54'34"E | ABTC110307–9 (3) | JF749924 | JF749981–3 |
| Araneae : Migidae | *Moggridgea* | *intermedia* | South Africa | Western Cape Province | 33 58'13"S, 23 32'20"E | MY361 | JF749928 | JF749984 |
| Araneae : Migidae | *Moggridgea* | *mordax* | South Africa | Northern Cape Province Hwy N14 | 28 01'30"S, 22 39'48"E | MY371 | JF749929 |  |
| Araneae : Migidae | *Moggridgea* | *peringueyi* | South Africa | Northern Cape Province Hwy N14 | 28 01'30"S, 22 39'48"E | MY372 | JF749927 | JF749985 |
| Araneae : Migidae | *Moggridgea* | *rainbowi* | Australia | American River, Kangaroo Island, SA |  | NN25429 | MF169530 | MF169534 |
| Araneae : Migidae | *Moggridgea* | *rainbowi* | Australia | American River, Kangaroo Island, SA |  | NN28257 | MF169531 | MF169535 |
| Araneae : Migidae | *Moggridgea* | *rainbowi* | Australia | American River, Kangaroo Island, SA |  | NN28345 | MF169532 | MF169536 |
| Araneae : Migidae | *Moggridgea* | *rainbowi* | Australia | American River, Kangaroo Island, SA |  | NN28346.1 | MF169533 | MF169537 |
| Araneae : Migidae | *Moggridgea* | *rupicoloides* | South Africa | Eastern Cape Province | 33 23'26"S, 26 26'11"E | MY360 | JF749925 |  |
| Araneae : Migidae | *Moggridgea* | *terrestris* | South Africa | Eastern Cape Province | 33 07'31"S, 26 36'40"E | MY357 | JF749926 | JF749986 |