**Supplementary data S2: summary of available information on brachiopod specimen collection**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Specimen | Taxa | Collector or collecting mission | Additional information | Location | Depth (m) |
|  |  |  |  | New Caledonia |  |
| FNEO-N4 | *Fallax neocaledonensis* | Norfolk 1 | Station DW 1734, 06/2001 | 22°54’S - 167°13’E | 403-429 |
| FNEO-M2 | *Fallax neocaledonensis* | Musorstom 4 | Station DW 159, 09/1985 | 18°46'S - 163°16’E | 600 |
| FSAN-3 | *Frenulina sanguinolenta* | Atelier Biodiversité Lifou | 2000 | 20°52'S - 167°08'E | 05-20 |
| SCRO-1 | *Stenosarina crosnieri* | SMIB 3 | Station DW 21, 05/1987 | 22°59'S - 167°19'E | 525 |
| SCRO-3 | *Stenosarina crosnieri* | SMIB 3 | Station DW 21, 05/1987 | 22°59'S - 167°19'E | 525 |
| SGLO-S1 | *Stenosarina globosa* | SMIB 6 | Station 109, 03/1990 | 19°06'S - 163°30'E | 215-225 |
| SGLO-M1 | *Stenosarina globosa* | Musorstom 4 | Station CP 192, 09/1985 | 18°59'S - 163°24'E | 320 |
| SGLO-M2 | *Stenosarina globosa* | Musorstom 4 | Station CP 192, 09/1985 | 18°59'S - 163°24'E | 320 |
|  |  |  |  | Guadeloupe |  |
| TGAL-3 | *Tichosina cubensis* | KARUBENTHOS 2 | Station DW 4599, 06/2015 | 15°53'N - 61°25'W | 262-266 |
| TGAL-4 | *Tichosina cubensis* | KARUBENTHOS 2 | Station DW 4599, 06/2015 | 15°53'N - 61°25'W | 262-266 |
| TCUB-2 | *Tichosina cubensis* | Pr. D. Lamy | 2019 | 16°20’N - 60°57’W | 250 |
| TCUB-3 | *Tichosina cubensis* | Pr. D. Lamy | 2019 | 16°20’N - 60°57’W | 250 |
| TPLI-2 | *Tichosina cf. plicata* | KARUBENTHOS 2 | Station DW 4553, 06/2015 | 16°21'N - 60°54'W | 111-162 |
| TPLI-5 | *Tichosina cf. plicata* | KARUBENTHOS 2 | Station DW 4553, 06/2015 | 16°21'N - 60°54'W | 111-162 |
| TDES-G1 | *Tichosina sp.* | KARUBENTHOS 2 | Station DW 4553, 06/2015 | 16°21'N - 60°54'W | 111-162 |
| TDES-G3 | *Tichosina sp.* | KARUBENTHOS 2 | Station DW 4553, 06/2015 | 16°21'N - 60°54'W | 111-162 |
| TDES-B2 | *Tichosina cf. cubensis* | KARUBENTHOS 2 | Station DW 4553, 06/2015 | 16°21'N - 60°54'W | 111-162 |
| TDES-B4 | *Tichosina cf. cubensis* | KARUBENTHOS 2 | Station DW 4553, 06/2015 | 16°21'N - 60°54'W | 111-162 |
| TLAT-5 | *Terebratulina latifrons1* | KARUBENTHOS 2 | Station DW 4553, 06/2015 | 16°21'N - 60°54'W | 111-162 |

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| Specimen | Taxa | Collector or collecting mission | Additional information | Location | Depth (m) |
|  |  |  |  | New Zealand |  |
| WB5 | *Terbratella sanguinea* | R.J. Singleton | 1998, Courtesy of Dr. A. Aldridge | 45°20.86'S - 167°02.86'E | 12-20 |
| WB6 | *Liothyrella neozelanica* | Unknown | Courtesy of Pr. D. Lee and Pr. D.I. MacKinnon | 45°19'30"S - 166°59'24"E | 20-30 |
| WB8 | *Notosaria nigricans* | Pr. D. Lee |  | 45°21'36"S - 170°50'24"E | 20 |
| WB9A | *Calloria incospicua* | Unknown | Courtesy of Pr. D. Lee | 43°34'27"S - 172°40'07"E | 20 |
|  |  |  |  | Crozet Islands |  |
| WB4A | *Aerothyris kerguelenensis* | MD30 Biomass | Station 51, 02/1982 | 45°57'36"S - 50°03'24"E | 200 |
| WB4B | *Aerothyris kerguelenensis* | MD30 Biomass | Station 13, 02/1982 | 46°06'0"S - 50°38'18"E | 212-230 |
| AKER-52 | *Aerothyris kerguelenensis* | MD30 Biomass | Station 52, 02/1982 | 45°48'06"S - 49°45'45"E | 355 |
| AKER-66 | *Aerothyris kerguelenensis* | MD30 Biomass | Station 66, 02/1982 | 46°40'00"S - 51°40'30"E | 325 |
| AKER-12 | *Aerothyris kerguelenensis* | MD30 Biomass | Station 12, 02/1982 | 46°07'24"S - 50°46'18"E | 290-305 |
| AKER-73 | *Aerothyris kerguelenensis* | MD30 Biomass | Station 73, 02/1982 | 46°28'30"S - 51°35'00"E | 207-215 |
| AKER-68 | *Aerothyris kerguelenensis* | MD30 Biomass | Station 68, 02/1982 | 46°32'54"S - 51°47'00"E | 200 |
| AKER-79 | *Aerothyris kerguelenensis* | MD30 Biomass | Station 79, 02/1982 | 45°51'24"S - 50°44'00"E | 140 |
| AKER-61 | *Aerothyris kerguelenensis* | MD30 Biomass | Station 61, 02/1982 | 46°28'00"S - 51°53'12" | 105 |
|  |  |  |  | Antarctica |  |
| WB1A | *Magellania fragilis* | CEAMARC | Station 39EV141 | 66°38'S - 143°05'E | 862-875 |
| MFRA-CEA | *Magellania fragilis* | CEAMARC | Station 39EV141 | 66°38'S - 143°05'E | 862-875 |
| LUVA-PAL | *Liothyrella uva* | Unknown | Courtesy of Th. Desvignes | 67°34'S - 68°08' W | 10-30 |
|  |  |  |  | Norway |  |
| MCRA-SKA | *Macandrevia cranium* | Trondheim biological station |  | 63°52'N - 11°04'E | 40-100 |
|  |  |  |  | Offshore Angola |  |
| MAF-5 | *Macandrevia africana* | Walda Cruise | Station CY14, 1971 | 12°21.4’S - 11°02.7’E | 3431 |

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