# Supplementary Material

Background concentrations of mercury in Australian freshwater sediments: the role of catchment’s physico-chemical parameters on mercury deposition

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Table S1: Background mercury concentrations used to calculate median and range of background mercury concentrations, and other metals measures in 21 lake sediments in Australia.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Site** | **Core Depth (cm)** | **Approximate age** | **Mercury ng/g** | **As mg/kg** | **Cr mg/kg** | **Cu mg/kg** | **Ni mg/kg** | **Pb mg/kg** | **Zn mg/kg** |
|
| Owen Tarn | 51-53 | 6 ka | 44.3 | BDL  | BDL  | BDL  | BDL  | BDL  | BDL  |
| Owen Tarn | 67-69 | 8 ka | 27.9 | BDL  | BDL  | BDL  | BDL  | BDL  | BDL  |
| Vera | 87-90 | 2 ka | 52.4 | BDL  | 5 | BDL  | BDL  | 5 | 7 |
| Square Tarn | 27-30 | 2 ka | 48.3 | BDL  | 8 | BDL  | BDL  | 11 | 13 |
| Square Tarn | 87-90 | 6 ka | 50.1 | BDL  | 7 | BDL  | BDL  | 10 | 12 |
| Square Tarn | 131-134 | 8 ka | 52.6 | BDL  | 7 |  | BDL  | 11 | 13 |
| Rolleston | 26-29 | 2 ka | 124.0 | BDL  | 21 | 5 | BDL  | 41 | 9 |
| Rolleston | 50-53 | 4 ka | 117.4 | BDL  | 20 | 5 | BDL  | 42 | 8 |
| Osborne | 27-30 | 2 ka | 84.2 | BDL  | 41 | 34 | BDL  | BDL  | 61 |
| Osborne | 83-86 | 6 ka | 176.6 | BDL  | 26 | 31 | BDL  | BDL  | 77 |
| Nancy | 14.5-19 | 2 ka | 21.9 | BDL  | BDL  | BDL  | BDL  | BDL  | BDL  |
| Nancy | 30-34 | 6 ka | 39.9 | BDL  | BDL  | BDL  | BDL  | BDL  | BDL  |
| Nancy | 37.5-40 | 8 ka | 67.5 | BDL  | BDL  | BDL  | BDL  | BDL  | BDL  |
| Gwendolyn | 14-17 | 2 ka | 82.3 | BDL  | BDL  | BDL  | BDL  | BDL  | BDL  |
| Gwendolyn | 37-40 | 6 ka | 52.0 | BDL  | BDL  | BDL  | BDL  | BDL  | BDL  |
| Gwendolyn | 47-50 | 8 ka | 34.4 | BDL  | BDL  | BDL  | BDL  | BDL  | BDL  |
| Burgess | 34-37 | 2 ka | 98.4 | BDL  | 19 | 10 | 8 | 9 | 37 |
| Burgess | 98-100 | 4 ka | 81.0 | BDL  | 16 | 8 | 6 | 9 | 17 |
| Gaye | 30-33 | 2 ka | 42.1 | BDL  | BDL  | BDL  | BDL  | 2.5 | 2.5 |
| Gaye | 70-72 | 6 ka | 51.6 | BDL  | 6 | BDL  | BDL  | 2.5 | 2.5 |
| Isla | 17-20 | 2 ka | 122.5 | BDL  | 12 | 6 | BDL  | 22 | 8 |
| Isla | 51-54.5 | 6 ka | 145.5 | BDL  | 16 | 7 | BDL  | 33 | 7 |
| Isla | 72-75 | 8 ka | 147.2 | BDL  | 16 | 6 | BDL  | 30 | 7 |
| Hartz | 45-48 | 2 ka | 249.0 | BDL  | 22 | 37 | 11 | BDL | 48 |
| Hartz | 130-133 | 4 ka | 163.3 | BDL  | 23 | 40 | 10 | BDL | 40 |
| Julia | 10-13 | 2 ka | 23.3 | BDL  | 6 | BDL  | 2.5 | 16 | 14 |
| Julia | 45-48 | 6 ka | 29.3 | BDL  | 7 | BDL  | 2.5 | 17 | 9 |
| Julia | 52-55 | 8 ka | 26.9 | BDL  | 6 | BDL  | 2.5 | 16 | 18 |
| Perry | 53-56 | 2 ka | 150.0 | BDL  | 40 | 40 | 15 | BDL  | 48 |
| Perry | 95-98 | 6 ka | 199.3 | BDL  | 29 | 38 | 15 | BDL  | 79 |
| Perry | 150-153 | 8 ka | 145.7 | BDL  | 37 | 35 | 18 | BDL  | 88 |
| Gnotuk | 36-40 | 2 ka | 35.0 | 12 | 180 | 8 | 40 | BDL  | 26 |
| Gnotuk | 83.5-88 | 4 ka | 37.6 | 22 | 21 | 9 | 29 | BDL  | 22 |
| Tower Hill Crater Lake | 295-300 | 4 ka | 21.7 | BDL  | 9 | BDL | BDL | BDL | 5 |
| Tower Hill Crater Lake | 360-365 | 4ka | 19.7 | 7 | BDL  | BDL  | BDL  | BDL  | BDL  |
| Lake Purrumbete | 63-68 | 2ka | 42.3 | 7 | 20 | 7 | 29 |  BDL | 18 |
| Lake Modewarre | 70-75 | 2 ka | 15.8 | 8 | 60 | 11 | 40 | 9 | 28 |
| Lake Modewarre | 90-95 | 4ka | 20.5 | 12 | 91 | 14 | 52 | 11 | 46 |
| Lake Modewarre | 105-110 | 6ka | 20.7 | 16 | 58 | 14 | 47 | 7 | 26 |
| Lake Modewarre | 205-210 | 8ka | 15.6 | 26 | 59 | 9 | 41 | 9 | 28 |
| Lake Wendouree | 50-56 | 1800 | 22.4 | BDL  | 62 | 21 | 21 | 20 | 24 |
| Lake Wendouree | 90-95 | 1640 | 12.3 | 11 | 65 | 16 | 38 | 10 | 29 |
| Tareena Billabong | 275-280 | 4ka | 13.3 | 5 | 30 | 17 | 31 | 10 | 68 |
| Tareena Billabong | 325-330 | 5ka | 11.5 | BDL | 33 | 16 | 18 | 18 | 52 |
| Tareena Billabong | 420-425 | 5ka | 11.6 | 5 | 27 | 13 | 16 | 18 | 46 |
| Rexy Boy Lake | 13-16 | 2 ka | 19.6 | 10 | 38 | 2.5 | 12 | 17 | 15 |
| Rexy Boy Lake | 16-19 | 4 ka | 20.8 | 6 | 36 | 2.5 | 11 | 14 | 11 |
| Rexy Boy Lake | 23-28 | 6ka | 38.3 | BDL  | 37 | 2.5 | 10 | 16 | 8 |
| Bromfield Swamp | 650-654 | 6ka | 44.0 | BDL  | 150 | 47 | 110 | 6 | 60 |
| Mitchell River | 40-46 | 2 ka | 23.0 | BDL  | 44 | 62 | 24 | 13 | 18 |
| Mitchell River | 53-58 | 4 ka | 19.9 | BDL  | 49 | 59 | 22 | 14 | 14 |
| Mitchell River | 70-75 | 6ka | 30.0 | BDL  | 42 | 47 | 26 | 11 | 11 |

BDL: below detection limit of 5 mg/g.