

Table S1

Depth, coordinates, and concentrations ($\mu\text{g g}^{-1}$) of the main lipids of interest^a in the different surface sediments investigated.

| Station | Depth | Latitude | Longitude | Brassicasterol | 24-Methylene Cholesterol | Sitosterol | Palmitoleic acid | Vaccenic acid ^c |
|---------|-------|----------|-----------|-----------------|-----------------------------|------------|---------------------|-------------------------------|
| | (m) | (°N) | (°W) | | | | | |
| 719 | 1948 | 69.51 | 63.23 | 0.16 | 0.11 | 0.07 | 3.20 | 0.68 |
| 600 | 2106 | 70.51 | 62.01 | 1.09 | 0.62 | 0.89 | 1.82 | 0.74 |
| 605 | 2017 | 70.49 | 61.58 | 0.65 | 0.37 | 0.44 | 5.47 | 0.91 |
| 615 | 617 | 70.50 | 58.47 | 1.06 | 0.43 | 0.69 | 3.47 | 0.91 |
| 713 | 1892 | 69.50 | 61.58 | 0.09 | 0.06 | 0.08 | 1.93 | 2.93 |
| 707 | 1419 | 69.51 | 59.81 | 1.66 | 0.87 | 0.89 | 8.11 | 1.73 |
| Qik | 360 | 67.47 | 63.79 | 0.11 | 0.11 | 0.08 | 57.07 | 26.98 |
| 403 | 1672 | 68.03 | 60.40 | 0.36 | 0.28 | 0.27 | 0.30 | 0.18 |
| 409 | 1404 | 68.10 | 58.00 | 1.07 | 0.46 | 0.47 | 2.39 | 1.40 |
| 418 | 380 | 68.11 | 56.23 | 2.37 | 0.75 | 0.38 | 2.76 | 0.53 |
| 680 | 115 | 69.61 | 138.21 | 0.50 | 0.30 | 1.10 | 1220.85 | 149.06 |
| 110 | 385 | 71.70 | 126.48 | 3.00 | 1.50 | 6.20 | 30.70 | 80.49 |
| 3 | 811 | 74.48 | 79.75 | 0.12 | 0.03 | 0.07 | 6.87 | 1.89 |
| 4 | 347 | 74.27 | 91.77 | 0.28 | 0.45 | 0.37 | 30.36 | 1.76 |
| NOW | 703 | 77.84 | 74.68 | 0.02 | tr | 0.23 | 6.90 | 1.14 |
| 111 | 608 | 76.30 | 73.11 | 0.76 | 0.40 | 0.23 | 65.87 | 11.20 |
| 115 | 615 | 76.30 | 71.67 | 0.20 | 0.21 | 0.08 | 16.28 | 5.29 |
| 6 | 61 | 69.18 | 100.70 | 1.20 | 0.86 | 1.11 | 18.54 | 1.11 |
| 7 | 112 | 69.00 | 106.57 | 0.03 | 0.04 | 0.03 | 0.32 | 0.99 |
| 314 | 93 | 69.07 | 106.57 | 0.11 | 0.15 | 0.13 | 1.99 | 3.04 |
| 1000 | 362 | 70.60 | 120.92 | 0.02 | 0.01 | 0.02 | 5.88 | 1.49 |
| 405b | 513 | 70.57 | 123 | tr ^b | tr | 0.14 | 3.37 | 1.13 |
| 408 | 168 | 71.32 | 127.65 | tr | tr | 0.01 | 2.62 | 1.72 |
| 12 | 219 | 69.92 | 122.98 | 0.04 | 0.06 | 0.09 | 1.65 | 1.70 |
| 1116 | 184 | 70.05 | 126.29 | 0.01 | 0.01 | 0.02 | 6.94 | 2.33 |
| 1122 | 15 | 70.48 | 127.59 | 0.01 | 0.01 | 0.10 | 13.55 | 1.00 |
| 434 | 7 | 70.17 | 133.59 | 0.70 | 0.33 | 0.49 | 426.67 | 34.89 |
| 1214 | 223 | 70.73 | 127.36 | 0.02 | 0.02 | 0.03 | 0.24 | 0.82 |
| 428 | 43 | 70.79 | 133.74 | 0.05 | 0.03 | 0.06 | 65.33 | 3.83 |
| 1800 | 352 | 72.20 | 127.82 | 0.16 | 0.16 | 0.17 | 4.36 | 6.06 |

^a Unspecific lipids (such as saturated fatty acids, oleic acid and cholesterol) were not quantified.

^b tr = traces (concentrations $< 0.01 \mu\text{g g}^{-1}$).

^c Total (*cis* + *trans*)

Table S2

Trans-vaccenic acid/*cis*-vaccenic acid ratio and percentage of 10*S*-DOX product of the different surface sediments investigated.

| Station | <i>Trans</i> -vaccenic acid/ <i>cis</i> -vaccenic acid | 10 <i>S</i> -DOX (%) ^a |
|---------|--|-----------------------------------|
| 719 | 0.02 | 1.0 |
| 600 | 0.02 | 5.6 |
| 605 | 0.02 | 6.4 |
| 615 | 0.01 | 3.0 |
| 713 | 0.01 | 0.0 |
| 707 | 0.05 | 12.4 |
| Qik | 0.23 | 26.8 |
| 403 | 0.06 | 6.2 |
| 409 | 0.06 | 20.0 |
| 418 | 0.02 | 22.1 |
| 680 | 0.22 | 5.2 |
| 110 | 0.46 | 2.2 |
| 3 | 0.12 | 22.8 |
| 4 | 0.15 | 29.0 |
| NOW | 0.16 | 29.7 |
| 111 | 0.04 | 18.3 |
| 115 | 0.13 | 24.8 |
| 6 | 0.20 | 9.4 |
| 7 | 0.22 | 26.2 |
| 314 | 0.18 | 13.9 |
| 1000 | 0.11 | 15.0 |
| 405b | 0.12 | 6.3 |
| 408 | 0.12 | 17.0 |
| 12 | 0.35 | 18.3 |
| 1116 | 0.24 | 17.5 |
| 1122 | 0.20 | 10.0 |
| 434 | 0.07 | 10.0 |
| 1214 | 0.12 | 6.6 |
| 428 | 0.36 | 14.0 |
| 1800 | 0.09 | 20.5 |

^a Percentage of 10*S*-hydroxyhexadec-8(*trans*)-enoic acid relative to residual palmitoleic acid and its abiotic oxidation products.