**Table S1. Summary statistics of sea surface temperatures (SSTs), including mean, minimum and maximum monthly mean, range of annual cycle, and variances in the Temperate North Pacific ecoregions.** \*

|  |  |  |
| --- | --- | --- |
|   | **Temperature (°C)** |   |
|  | **Ecoregion** | **Latitude °N** | **Longitude °E** | **29-year Mean** | **Min. Monthly Mean** | **Max. Monthly Mean** | **Range of Annual Cycle** | **29-year variance (°C2)** | **% of variance explained by annual cycle** |
| **CTNEP** | Aleutian Islands | 47.7 - 55.2 *(52.6)* | 169.6 – -163.8 *(-172.3)* | 5.7 | 3.5 | 9 | 5.4 | 4.1 | 80.5 |
|  | Gulf of Alaska | 51.0 - 64.8 *(58.0)* |  -164.7 – -136.9 *(-151.9)* | 7.4 | 3.8 | 12.6 | 8.7 | 11.5 | 83.2 |
|  | N. American Pac. Fijordland | 48.9 - 62.8 *(53.9)* |  -139.1 – -120.9 *(-131.8)* | 9.5 | 6.5 | 13.9 | 7.4 | 8.2 | 82.6 |
|  | OR, WA, Vancouver | 40.4 - 50.3 *(45.9)* |  -132.3 – -119.4 *(-124.9)* | 11.5 | 9.2 | 14.4 | 5.2 | 5.4 | 63.0 |
|  | Northern CA | 31.6 - 40.4 *(36.8)* |  -127.7 – -116.9 *(-122.1)* | 13.5 | 12 | 15.4 | 3.4 | 4.2 | 31.1 |
| **WTNEP** | S. CA Bight | 24.2 - 36.9 *(30.8)* |  -122.7 – -113.7 *(-116.6)* | 17.8 | 15.5 | 21.1 | 5.6 | 7.0 | 58.6 |
|  | Cortezian | 20.2 - 35.8 *(26.7)* |  -115.8 – -102.0 *(-110.8)* | 24.8 | 19.3 | 30.7 | 11.5 | 23.2 | 77.8 |
|  | Magdalena Transition | 22.8 - 27.5 *(24.8)* |  -115.7 – -109.8 *(-111.8)* | 22.6 | 18.8 | 27.4 | 8.6 | 12.3 | 74.1 |
| **CTNWP** | Sea of Okhotsk | 43.4 - 66.5  *(56.1)* | 131.6 – 168.4 *(148.9)* | 3.9 | -1.3 | 12.7 | 13.9 | 28.9 | 82.9 |
|  | Kamchatka Coast | 49.8 - 64.2 *(58.2)* | 157.1 – 179.9 *(166.6)* | 3.8 | -0.8 | 11.2 | 11.9 | 20.5 | 85.9 |
|  | Oyashio Current | 39.6 - 52.8 *(46.3)* | 142.7 – 160.6 *(149.9)* | 5.8 | -0.1 | 13.5 | 13.6 | 30.8 | 81.3 |
|  | Northeastern Honshu | 34.2 - 43.3 *(40.1)* | 139.6 – 145.4 *(141.4)* | 13.4 | 5.5 | 21.9 | 16.4 | 36.2 | 79.8 |
|  | Sea of Japan | 34.3 - 53.2 *(42.4)* | 125.6 – 142.9 *(136.8)* | 12.8 | 5.5 | 22.3 | 16.8 | 59.1 | 58.2 |
|  | Yellow Sea | 32.2 - 43.6 *(37.5)* | 113.1 – 128.0 *(122.2)* | 13.6 | 2.1 | 25.6 | 23.5 | 71.2 | 93.5 |
| **WTNWP** | Central Kuroshio Current | 28.3 - 36.2 *(33.4)* | 128.5 – 143.7 *(134.0)* | 21.5 | 16.7 | 27.7 | 11.0 | 17.7 | 80.6 |
|  | East China Sea | 22.7 - 35.9 *(30.3)* | 113.5 – 130.7 *(124.3)* | 20.3 | 13.6 | 27.8 | 14.2 | 31.8 | 70.7 |
|  |  |  |  |  |  |  |  |  |  |

\*The mean latitude and longitude for each ecoregion is shown in parentheses. CTNEP = Cold Temperate Northeast Pacific; WTNEP = Warm Temperate Northeast Pacific; CTNWP = Cold Temperate Northwest Pacific; WTNWP = Warm Temperate Northwest Pacific.