**Supplementary Table S1.** Imposex indices (I%: Percentage of imposex-affected females; RPSI: Relative Penis Size Index; VDSI: Vas Deferens Sequence Index) for samples of *Nucella lapillus* collected along 4 surveys, including summary statistics. VDSI values were first published by Ruiz *et al.* (2017).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **1996 (n = 37)** |  | **2003 (n = 36)** |  | **2006 (n = 35)** |  | **2009 (n = 34)** |
| **Code** | **Site** |  | **I%** | **RPSI a**  | **VDSI** |  | **I%** | **RPSI** | **VDSI** |  | **I%** | **RPSI** | **VDSI** |  | **I%** | **RPSI** | **VDSI** |
| 1 | Ribadeo | b | 100 | 9.24 | 3.22 |  | 100 | 18.33 | 4.00 |  | 82 | 14.02 | 3.08 |  | 29 | 0.00 | 0.65 |
| 2 | Foz |  | 100 | 10.28 | 4.18 |  | 100 | 9.06 | 4.00 |  | 88 | 2.00 | 2.79 |  | 34 | 0.00 | 0.45 |
| 3 | Viveiro |  | 86 | 10.66 | 3.57 |  | 100 | 19.32 | 4.02 |  | 32 | 0.27 | 1.18 |  | 69 | 0.99 | 2.31 |
| 4 | Barqueiro |  | 100 | 30.01 | 4.04 |  | 64 | 1.96 | 2.41 |  | 42 | 2.07 | 1.65 |  | 47 | 0.90 | 1.53 |
| 5 | Cariño |  | 100 | 19.08 | 4.17 |  | 100 | 15.13 | 4.00 |  | 48 | 0.05 | 1.76 |  | - | - | - |
| 6 | Cedeira |  | 100 | 20.63 | 4.07 |  | 100 | 26.52 | 4.03 |  | 71 | 5.97 | 2.71 |  | 61 | 0.09 | 1.78 |
| 7 | Prior |  | 95 | 7.49 | 3.03 |  | 100 | 11.34 | 3.88 |  | 59 | 0.06 | 2.14 |  | 55 | 0.03 | 1.42 |
| 8 | Mugardos | b | 100 | 20.21 | 4.30 |  | 100 | 32.54 | 4.12 |  | 90 | 14.57 | 3.55 |  | 69 | 4.08 | 2.62 |
| 9 | Centroña | b | 90 | 5.36 | 3.40 |  | 84 | 11.97 | 3.42 |  | 50 | 0.47 | 1.88 |  | 75 | 0.14 | 2.41 |
| 10 | Perbes |  | 77 | 4.25 | 2.77 |  | 88 | 4.64 | 3.38 |  | 31 | 0.03 | 1.19 |  | 42 | 0.00 | 0.89 |
| 11 | Sada |  | 100 | 27.47 | 4.05 |  | 79 | 4.50 | 3.05 |  | 94 | 9.65 | 3.65 |  | 67 | 6.32 | 2.07 |
| 12 | Veigue |  | 90 | 18.82 | 3.68 |  | 94 | 21.26 | 3.77 |  | 57 | 1.50 | 2.13 |  | 48 | 0.02 | 1.43 |
| 13 | Mera | b | 100 | 36.85 | 4.18 |  | 100 | 34.07 | 4.02 |  | 76 | 0.43 | 2.86 |  | 60 | 0.01 | 1.40 |
| 14 | Bastiagueiro | b | 100 | 58.78 | 4.50 |  | 95 | 33.63 | 3.79 |  | 65 | 0.20 | 2.35 |  | 59 | 0.07 | 1.45 |
| 15 | Sta. Cristina | b | 100 | 39.98 | 4.27 |  | 100 | 44.99 | 4.07 |  | 84 | 6.25 | 3.37 |  | 67 | 0.55 | 2.14 |
| 16 | Dique | b | 100 | 18.76 | 4.30 |  | 100 | 15.11 | 4.00 |  | 50 | 0.01 | 1.42 |  | 0 | 0.00 | 0.00 |
| 17 | Langosteira | b | 100 | 9.31 | 3.33 |  | 76 | 1.98 | 2.94 |  | 43 | 0.00 | 1.61 |  | 25 | 0.00 | 0.40 |
| 18 | Malpica | b | 100 | 5.64 | 3.57 |  | 100 | 5.57 | 3.74 |  | 12 | 0.00 | 0.44 |  | 6 | 0.00 | 0.06 |
| 19 | Laxe |  | 100 | 31.91 | 4.09 |  | 100 | 35.27 | 4.10 |  | 60 | 0.59 | 2.05 |  | 58 | 0.01 | 1.42 |
| 20 | Muxía |  | 100 | 29.05 | 4.04 |  | 100 | 42.21 | 4.05 |  | 24 | 0.00 | 0.88 |  | 6 | 0.00 | 0.06 |
| 21 | Corcubión | b | 100 | 17.63 | 4.28 |  | 100 | 19.39 | 4.03 |  | 83 | 0.72 | 2.97 |  | 76 | 0.00 | 1.43 |
| 22 | Louro |  | 100 | 14.96 | 3.89 |  | 100 | 30.87 | 4.06 |  | 64 | 0.33 | 2.20 |  | 54 | 0.00 | 1.23 |
| 23 | Muros |  | 100 | 28.38 | 4.25 |  | 94 | 19.78 | 3.59 |  | 60 | 5.17 | 2.20 |  | 53 | 0.00 | 1.33 |
| 24 | Creo |  | 100 | 55.41 | 4.58 |  | 100 | 5.31 | 3.64 |  | - | - | - |  | - | - | - |
| 25 | Ribeira | b | 100 | 38.95 | 4.29 |  | 96 | 15.04 | 3.87 |  | 75 | 1.32 | 2.75 |  | 23 | 0.00 | 0.36 |
| 26 | Vilagarcía | b | 100 | 13.14 | 4.46 |  | 100 | 38.83 | 4.19 |  | 94 | 12.93 | 3.72 |  | 80 | 0.05 | 1.50 |
| 27 | Cambados |  | 100 | 18.49 | 4.00 |  | 100 | 20.68 | 3.84 |  | 71 | 7.21 | 2.90 |  | 52 | 0.05 | 1.26 |
| 28 | A Toxa | b | 100 | 34.35 | 4.33 |  | 100 | 54.15 | 4.21 |  | 86 | 5.00 | 3.29 |  | 53 | 0.00 | 0.95 |
| 29 | Sanxenxo |  | 82 | 15.08 | 3.09 |  | 76 | 45.31 | 3.09 |  | 50 | 1.12 | 1.86 |  | 48 | 0.00 | 0.93 |
| 30 | Poio |  | 89 | 2.65 | 3.44 |  | - | - | - |  | - | - | - |  | - | - | - |
| 31 | Marín |  | 100 | 19.99 | 4.05 |  | 94 | 14.80 | 3.78 |  | 75 | 1.85 | 2.65 |  | 84 | 0.65 | 2.32 |
| 32 | Rande | b | 100 | 47.79 | 4.68 |  | 100 | 30.15 | 3.93 |  | 86 | 21.21 | 3.36 |  | 83 | 4.30 | 3.02 |
| 33 | Bouzas | b | 87 | 7.50 | 3.23 |  | 100 | 27.62 | 4.09 |  | 82 | 6.80 | 3.00 |  | 68 | 0.03 | 1.96 |
| 34 | Samil | b | 38 | 1.25 | 1.16 |  | 100 | 12.34 | 3.93 |  | 41 | 0.09 | 1.26 |  | 50 | 0.00 | 1.00 |
| 35 | Canido |  | 82 | 11.08 | 3.15 |  | 86 | 2.67 | 3.50 |  | 58 | 5.46 | 2.31 |  | 54 | 1.13 | 1.86 |
| 36 | Baiona |  | 100 | 34.71 | 4.00 |  | 100 | 36.50 | 4.09 |  | 27 | 0.02 | 0.86 |  | 36 | 0.00 | 0.68 |
| 37 | A Garda | b | 100 | 42.62 | 4.39 |  | 100 | 33.44 | 4.09 |  | 90 | 10.92 | 3.50 |  | 67 | 0.00 | 1.54 |
| Mean |  | 95 | 22.10 | 3.84 |  | 95 | 22.12 | 3.80 |  | 63 | 3.95 | 2.33 |  | 52 | 0.57 | 1.35 |
| Standard deviation |  | 12 | 14.93 | 0.67 |  | 9 | 14.08 | 0.40 |  | 22 | 5.33 | 0.88 |  | 22 | 1.43 | 0.76 |
| Maximum |  | 100 | 58.78 | 4.68 |  | 100 | 54.15 | 4.21 |  | 94 | 21.21 | 3.72 |  | 84 | 6.32 | 3.02 |
| Minimum |  | 38 | 1.25 | 1.16 |  | 64 | 1.96 | 2.41 |  | 12 | 0.00 | 0.44 |  | 0 | 0.00 | 0.00 |

a : RPSI values for this 1996 survey were first published by Ruiz *et al.* (1998). They are recalculated here for homogeneity with other surveys, see text for full details.

b : Butyltin tissue concentrations were repeatedly determined in these 17 sites, see Ruiz *et al.* (2015).