

The following supplement accompanies the article

Contrasting effects of environmental factors during larval stage on morphological plasticity in post-metamorphic frogs

Miguel Tejedo^{1,*}, Federico Marangoni^{1,2}, Cino Pertoldi³, Alex Richter-Boix⁴, Anssi Laurila⁴, Germán Orizaola⁴, Alfredo G. Nicieza⁵, David Álvarez⁵, Iván Gomez-Mestre^{5,6}

¹Department of Evolutionary Ecology, Estación Biológica de Doñana, CSIC, Avda. Américo Vespucio s/n, 41092 Sevilla, Spain

²Laboratorio de Genética Evolutiva, FCEQyN-UnaM/CONICET, Félix de Azara 1552, 6to Piso 3300 Posadas – Misiones, Argentina

³Department of Ecology and Genetics, Institute of Biological Sciences, University of Aarhus, Denmark

⁴Department of Population Biology and Conservation Biology, Evolutionary Biology Centre (EBC), Uppsala University, Norbyvägen 18 D, 752 36 Uppsala, Sweden

⁵Ecology Unit, Department of Biology of Organisms and Systems, University of Oviedo, 33071 Oviedo, and Cantabrian Institute of Biodiversity (ICAB), Spain

⁶Department of Wetland Ecology, Estación Biológica de Doñana, CSIC, Avda. Américo Vespucio s/n, 41092 Sevilla, Spain

*Email: tejedo@ebd.csic.es

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Supplement 1

Table S1. Size-adjusted hind leg length (^T: tibio-fibula length; ^H: total hind leg length) and head width (^{SN}: size-adjusted head snout length), developmental time, mass at metamorphosis and growth rates in amphibians at the metamorphosis at different experimental conditions (resource level, temperature, predation risk, desiccation risk) during the larval phase (data are mean ± SD, N). High (first entry) and low (second entry) indicates values for high (low) levels of resources and temperatures and presence (absence) of non-lethal predators and pond desiccation. Plasticity in size-adjusted hind leg length, size-adjusted head width, time to metamorphosis, mass at metamorphosis and growth rate (plasticity index, % [first entry]; Hedges' *d* effect sizes, mean ± variance from meta-analysis [second entry]). *Plasticity index of either relative hind leg length or head width between different environmental factors reported as significant in original paper or unpublished data; effect sizes were considered significant if 95% confidence intervals did not overlap with zero. (?) information unknown or not provided. Some entries for the same species under the same treatment from the same study (e.g. *Discoglossus galganoi*/predation risk, *Pelobates cultripes*/predation risk and *Bufo calamita*/desiccation risk, *Pelophylax lessonae*/temperature) correspond to multiple experiments from the same study. Venue — M, L: mesocosm and laboratory study, respectively. Source: see numbered list below table

| Species, Venue (Source) | Hind leg (mm) | Head width (mm) | Developmental time (days) | Mass at metamorphosis (g) | Growth rate (g/day) | Plasticity | | | | |
|---------------------------------------|--|--|--|--|--|-----------------------|------------------------|------------------------|-----------------------|-----------------------|
| | | | | | | Hind leg | Head width | Time | Mass | Growth |
| | | | | | | % d ± var | % d ± var | % d ± var | % d ± var | % d ± var |
| | x ± SD, N (high/low) | x ± SD, N (high/low) | x ± SD, N (high/low) | x ± SD, N (high/low) | x ± SD, N (high/low) | | | | | |
| Resource level | | | | | | | | | | |
| <i>Xenopus laevis</i> L (1) | 27.45 ± 1.79, 30 ^H 25.95 ± 1.76, 29 ^H | 5.88 ± 0.44, 30 5.95 ± 0.44, 29 | 40.43 ± 3.29, 30 50.03 ± 3.28, 29 | 0.12 ± 0.02, 30 0.04 ± 0.02, 29 | 0.0300 ± 0.0049, 30 0.0085 ± 0.0048, 29 | 5.82* 0.84 ± 0.07 | -1.19 -0.16 ± 0.07 | -19.19 -2.88 ± 0.14 | 189.58 4.59 ± 0.25 | 252.94 4.34 ± 0.23 |
| <i>Discoglossus galganoi</i> L (2) | 5.51 ± 0.19, 5 ^T 5.55 ± 0.19, 5 ^T | 4.57 ± 0.24, 35 4.65 ± 0.24, 35 | 56.89 ± 2.68, 5 68.02 ± 4.25, 5 | 0.39 ± 0.01, 5 0.34 ± 0.03, 5 | 0.0037 ± 0.0003, 5 0.0027 ± 0.0004, 5 | -0.76 -0.21 ± 0.40 | -1.75 -0.34 ± 0.06 | -16.37 -2.83 ± 0.80 | 15.48 2.34 ± 0.67 | 40.51 2.69 ± 0.76 |
| <i>Discoglossus galganoi</i> L (2) | 5.74 ± 0.26, 5 ^T 5.81 ± 0.26, 5 ^T | 4.73 ± 0.30, 35 4.48 ± 0.30, 35 | 51.23 ± 3.95, 5 57.26 ± 4.17, 5 | 0.49 ± 0.03, 5 0.32 ± 0.01, 5 | 0.0065 ± 0.0005, 5 0.0030 ± 0.0002, 5 | -1.11 -0.22 ± 0.40 | 5.54* 0.81 ± 0.06 | -10.54 -1.34 ± 0.49 | 52.00 7.24 ± 3.02 | 118.06 7.81 ± 3.45 |
| <i>Discoglossus pictus</i> L (3) | 17.28 ± 0.18, 3 ^H 16.70 ± 0.18, 3 ^H | 4.81 ± 0.09, 3 4.82 ± 0.09, 3 | 44.36 ± 2.72, 3 48.64 ± 2.43, 3 | 0.18 ± 0.04, 3 0.17 ± 0.01, 3 | 0.0041 ± 0.0009, 3 0.0034 ± 0.0003, 3 | 3.45* 2.63 ± 1.24 | -0.22 -0.09 ± 0.67 | -8.80 -1.33 ± 0.81 | 9.00 0.36 ± 0.68 | 19.99 0.81 ± 0.72 |
| <i>Pelobates cultripes</i> M (4) | 25.30 ± 1.56, 52 ^H 23.72 ± 1.52, 79 ^H | 7.90 ± 0.49, 52 8.38 ± 0.48, 79 | 84.77 ± 22.82, 53 129.04 ± 29.79, 89 | 1.24 ± 0.47, 52 0.85 ± 0.24, 79 | 0.0147 ± 0.0037, 52 0.0072 ± 0.0029, 79 | 6.67* 1.03 ± 0.04 | -5.78* -0.99 ± 0.04 | -34.31 -1.61 ± 0.04 | 45.96 1.11 ± 0.04 | 103.50 2.32 ± 0.05 |
| <i>Pelobates cultripes</i> M (5) | 35.17 ± 1.70, 264 ^H 34.27 ± 1.70, 297 ^H | 10.20 ± 0.60, 267 10.24 ± 0.60, 297 | 157.98 ± 9.33, 270 165.57 ± 9.39, 301 | 2.14 ± 0.39, 264 1.57 ± 0.40, 297 | 0.0137 ± 0.0027, 264 0.0095 ± 0.0027, 297 | 2.62* 0.53 ± 0.01 | -0.43 -0.07 ± 0.01 | -4.58 -0.81 ± 0.01 | 36.37 1.44 ± 0.01 | 43.51 1.55 ± 0.01 |
| <i>Pelodytes punctatus</i> L (6) | 20.29 ± 1.12, 124 ^H 18.59 ± 1.11, 130 ^H | 4.01 ± 0.39, 117 4.42 ± 0.39, 123 | 51.18 ± 4.66, 131 89.43 ± 11.06, 126 | 0.25 ± 0.03, 132 0.17 ± 0.02, 124 | 0.0049 ± 0.0006, 124 0.0019 ± 0.0002, 130 | 9.15* 1.52 ± 0.02 | -9.23* -1.05 ± 0.02 | -42.77 -4.52 ± 0.06 | 49.60 3.25 ± 0.04 | 161.67 7.18 ± 0.12 |
| <i>Pelodytes punctatus</i> L (7) | 21.82 ± 0.88, 98 ^H 20.05 ± 0.91, 79 ^H | 4.88 ± 0.25, 98 4.60 ± 0.26, 78 | 38.38 ± 3.39, 100 58.51 ± 6.36, 96 | 0.21 ± 0.02, 98 0.17 ± 0.02, 79 | 0.0054 ± 0.0004, 98 0.0030 ± 0.0003, 79 | 8.82* 1.98 ± 0.03 | 6.23* 1.11 ± 0.03 | -34.40 -3.96 ± 0.06 | 21.03 1.80 ± 0.03 | 82.14 6.94 ± 0.16 |
| <i>Pelodytes ibericus</i> L (7) | 20.70 ± 0.83, 115 ^H 19.34 ± 0.83, 110 ^H | 5.17 ± 0.20, 115 5.43 ± 0.20, 110 | 44.98 ± 3.11, 115 66.24 ± 7.29, 115 | 0.18 ± 0.02, 115 0.15 ± 0.02, 110 | 0.0040 ± 0.0003, 115 0.0023 ± 0.0002, 110 | 7.00* 1.63 ± 0.02 | -4.76* -1.30 ± 0.02 | -32.10 -3.78 ± 0.05 | 19.57 1.54 ± 0.02 | 74.49 6.19 ± 0.10 |
| <i>Agalychnis callidryas</i> L (1) | 33.38 ± 2.93, 28 ^H 30.60 ± 3.59, 17 ^H | 6.86 ± 0.57, 28 6.27 ± 0.48, 17 | 36.39 ± 5.77, 28 60.93 ± 5.57, 17 | 0.09 ± 0.02, 28 0.05 ± 0.02, 17 | 0.0250 ± 0.0074, 28 0.0075 ± 0.0070, 17 | 9.06* 0.85 ± 0.10 | 9.49* 1.08 ± 0.11 | -40.28 -4.23 ± 0.29 | 94.15 1.90 ± 0.13 | 233.33 2.37 ± 0.16 |
| <i>Hyla cinerea</i> L (8) | 9.79 ± 0.69, 20 ^T 9.58 ± 0.63, 25 ^T | 6.38 ± 0.68, 27 6.74 ± 0.71, 25 | 36 ^b 64.5 ^b | 24 ^{a,b} 16 ^{a,b} | ? ? | 2.18 0.31 ± 0.09 | -5.35 -0.51 ± 0.08 | -44.19 | 50.00 | 168.75 |

| | | | | | | | | | | |
|---|--|--|---------------------------------------|--|---|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| <i>Hyla versicolor</i> M (9) | ? | ? | 43.76 ± 0.49, 5 48.08 ± 0.72, 5 | 0.38, 5 ^c 0.20, 5 ^c | 0.0088 ± 0.0003, 5 0.0042 ± 0.0002, 5 | 2.00* | ? | -8.99 -6.38 ± 2.44 | 92.51 | 111.54 17.25 ± 15.28 |
| <i>Pelophylax kl. esculenta</i> M (10) | 31.97 ± 2.05, 65 ^H 29.83 ± 1.95, 75 ^H | 8.03 ± 0.73, 49 7.82 ± 0.72, 52 | 47.75 ± 4.34, 65 48.44 ± 4.44, 75 | 0.96 ± 0.15, 65 0.41 ± 0.10, 75 | 0.0203 ± 0.0037, 65 0.0085 ± 0.0022, 75 | 7.16* 1.06 ± 0.03 | 2.58* 0.28 ± 0.04 | -1.42 -0.16 ± 0.03 | 135.96 4.51 ± 0.10 | 138.73 3.98 ± 0.09 |
| <i>Pelophylax kl. esculenta</i> M (10) | 31.01 ± 1.79, 62 ^H 28.59 ± 1.73, 68 ^H | 7.79 ± 0.75, 58 7.41 ± 0.71, 68 | 50.10 4.31, 62 51.27 ± 4.65, 68 | 0.86 ± 0.12, 62 0.34 ± 0.07, 68 | 0.0173 ± 0.0032, 62 0.0067 ± 0.0017, 68 | 8.43* 1.36 ± 0.04 | 5.09* 0.51 ± 0.03 | -2.28 -0.26 ± 0.03 | 153.98 5.33 ± 0.14 | 157.59 4.14 ± 0.10 |
| <i>Pelophylax kl. esculenta</i> M (10) | 31.78 ± 1.82, 65 ^H 29.51 ± 1.82, 65 ^H | 7.96 ± 0.57, 65 7.49 ± 0.59, 57 | 55.19 ± 3.75, 65 47.61 ± 4.66, 65 | 0.84 ± 0.13, 65 0.39 ± 0.06, 65 | 0.0153 ± 0.0026, 65 0.0082 ± 0.0017, 65 | 7.70* 1.24 ± 0.04 | 6.32* 0.81 ± 0.04 | 15.92 1.78 ± 0.04 | 117.54 4.48 ± 0.11 | 86.39 3.20 ± 0.07 |
| <i>Pelophylax lessonae</i> M (10) | 28.47 ± 2.80, 26 ^H 26.08 ± 1.83, 80 ^H | 7.66 ± 0.98, 26 7.01 ± 0.70, 58 | 54.69 ± 6.65, 26 47.61 ± 6.35, 81 | 0.89 ± 0.09, 28 0.35 ± 0.05, 82 | 0.0166 ± 0.0026, 26 0.0076 ± 0.0020, 80 | 9.15* 1.13 ± 0.06 | 9.24* 0.80 ± 0.06 | 14.89 1.10 ± 0.06 | 155-33 8.75 ± 0.40 | 119.05 4.14 ± 0.13 |
| <i>Pelophylax ridibunda</i> M (10) | 32.51 ± 2.08, 38 ^H 31.77 ± 2.17, 34 ^H | 7.78 ± 0.64, 38 7.26 ± 0.67, 34 | 60.21 ± 4.05, 38 63.83 ± 4.88, 35 | 0.93 ± 0.18, 38 0.35 ± 0.08, 35 | 0.0156 ± 0.0030, 38 0.0056 ± 0.0018, 34 | 2.30 0.34 ± 0.06 | 7.08* 0.78 ± 0.06 | -5.67 -0.80 ± 0.06 | 167.07 4.12 ± 0.17 | 178.35 3.89 ± 0.16 |
| Temperature | | | | | | | | | | |
| <i>Xenopus laevis</i> L (1) | 26.62 ± 1.39, 26 ^H 27.35 ± 1.51, 27 ^H | 5.67 ± 0.32, 26 5.55 ± 0.32, 27 | 29.58 ± 3.77, 26 53.63 ± 3.79, 27 | 0.07 ± 0.02, 26 0.06 ± 0.02, 27 | 0.0230 ± 0.0051, 26 0.0120 ± 0.0052, 27 | -2.66* -0.49 ± 0.08 | 2.15 0.37 ± 0.08 | -44.84 -6.26 ± 0.45 | 7.28 0.26 ± 0.08 | 91.67 2.10 ± 0.12 |
| <i>Scaphiopus holbrooki</i> L (11) | 25.06 ± 2.64, 47 ^H 25.63 ± 2.50, 50 ^H | 2.19 ± 0.58, 47 ^{SN} 2.19 ± 0.53, 50 ^{SN} | 16.02 ± 3.17, 47 21.90 ± 2.47, 50 | 12.41 ± 1.30, 47 ^a 13.22 ± 1.29, 50 ^a | 0.7790 ± 0.0993, 47 0.6290 ± 0.0289, 50 | -2.23* -0.22 ± 0.04 | -0.33 -0.01 ± 0.04 | -26.83 -2.06 ± 0.06 | -6.09 -0.62 ± 0.04 | 23.85 2.06 ± 0.06 |
| <i>Spea multiplicata</i> L (11) | 26.34 ± 1.02, 6 ^H 26.72 ± 1.02, 15 ^H | 2.84 ± 0.17, 6 ^{SN} 2.91 ± 0.19, 15 ^{SN} | 16.02 ± 0.53, 6 28.15 ± 1.54, 15 | 18.02 ± 1.29, 6 ^a 19.13 ± 1.29, 15 ^a | 1.2960 ± 0.0644, 6 0.7380 ± 0.0577, 15 | -1.42 -0.36 ± 0.24 | -2.35 -0.36 ± 0.24 | -43.08 -8.61 ± 2.00 | -5.80 -0.82 ± 0.25 | 75.61 9.00 ± 2.16 |
| <i>Spea intermontana</i> L (112) | 26.74 ± 1.01, 12 ^H 27.35 ± 0.97, 14 ^H | 2.60 ± 0.19, 12 ^{SN} 2.67 ± 0.21, 14 ^{SN} | 22.72 ± 1.04, 12 30.91 ± 0.98, 14 | 19.29 ± 1.29, 12 ^a 21.12 ± 1.29, 14 | 0.8340 ± 0.0520, 12 0.6730 ± 0.0569, 14 | -2.22* -0.60 ± 0.16 | -2.69 -0.34 ± 0.16 | -26.49 -7.88 ± 1.35 | -8.67 -1.37 ± 0.19 | 23.92 2.85 ± 0.31 |
| <i>Pelobates cultripes</i> L (112) | 30.14 ± 1.09, 6 ^H 30.42 ± 1.08, 9 ^H | 3.07 ± 0.25, 6 ^{SN} 3.43 ± 0.25, 9 ^{SN} | 36.13 ± 4.73, 6 42.42 ± 4.74, 9 | 24.17 ± 1.06, 6 ^a 25.17 ± 1.58, 9 ^a | 0.5610 ± 0.0414, 6 0.5520 ± 0.0749, 9 | -0.94 -0.25 ± 0.28 | -10.67* -1.38 ± 0.34 | -14.82 -1.25 ± 0.33 | -3.99 -0.67 ± 0.29 | 1.63 0.13 ± 0.28 |
| <i>Agalychnis callidryas</i> L (1) | 32.66 ± 2.54, 21 ^H 33.87 ± 2.38, 15 ^H | 6.75 ± 0.45, 21 7.15 ± 0.45, 15 | 29.21 ± 3.30, 21 49.53 ± 3.14, 15 | 0.08 ± 0.01, 21 0.07 ± 0.01, 15 | 0.0262 ± 0.0037, 21 0.0140 ± 0.0035, 15 | -3.57* -0.48 ± 0.12 | -5.58* -0.87 ± 0.12 | -41.03 -6.14 ± 0.64 | 8.39 0.59 ± 0.12 | 87.14 3.32 ± 0.27 |
| <i>Rana cascadae</i> L (12) | 8.75 ± 0.38, 24 ^T 8.49 ± 0.30, 23 ^T | 6.29 ± 0.21, 24 6.18 ± 0.21, 23 | 24.57 ± 1.56, 22 57.45 ± 2.06, 22 | 0.78 ± 0.10, 22 0.86 ± 0.11, 22 | 0.0318 ± 0.0039, 22 0.0149 ± 0.0017, 22 | 3.05* 0.74 ± 0.09 | 1.80 0.52 ± 0.09 | -57.23 -17.64 ± 3.63 | -8.70 -0.69 ± 0.10 | 114.18 5.59 ± 0.45 |
| <i>Pelophylax lessonae</i> L (13) | 7.20 ± 0.40, 75 ^T 6.80 ± 0.50, 106 ^T | 0.89 ± 0.14, 106 0.91 ± 0.04, 75 | 32.81 ± 0.60, 106 49.31 ± 0.48, 75 | 0.61 ± 0.01, 106 0.82 ± 0.02, 75 | 0.0338 ± 0.0010, 106 0.0280 ± 0.0004, 75 | 5.88* 0.86 ± 0.02 | -2.20 -0.18 ± 0.02 | -33.46 -29.68 ± 2.46 | -25.61 -13.97 ± 0.56 | 21.00 7.42 ± 0.17 |

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|---------------------------------------|--|--|--|--|--|------------------------|-------------------------|-------------------------|-------------------------|------------------------|
| <i>Pelophylax lessonae</i> L (13) | 7.50 ± 0.70, 13 ^T 6.80 ± 0.40, 77 ^T | 0.84 ± 0.05, 77 0.95 ± 0.06, 13 | 44.41 ± 0.91, 77 67.88 ± 1.31, 13 | 0.60 ± 0.02, 77 0.94 ± 0.06, 13 | 0.0240 ± 0.0005, 77 0.0228 ± 0.0008, 13 | 10.29* 1.53 ± 0.10 | -11.58* -2.12 ± 0.11 | -34.58 -23.88 ± 3.26 | -36.17 -11.66 ± 0.84 | 5.36 2.19 ± 0.12 |
| <i>Pelophylax lessonae</i> L (13) | 7.30 ± 0.60, 15 ^T 6.90 ± 0.50, 60 ^T | 0.85 ± 0.05, 60 0.98 ± 0.10, 15 | 42.95 ± 0.64, 60 62.60 ± 0.90, 15 | 0.59 ± 0.01, 60 0.98 ± 0.02, 15 | 0.0235 ± 0.0004, 60 0.0274 ± 0.0006, 15 | 5.80* 0.76 ± 0.09 | -13.27* -2.05 ± 0.11 | -31.39 -27.89 ± 5.27 | -39.80 -30.75 ± 6.39 | -14.22 -8.15 ± 0.53 |
| <i>Rana temporaria</i> L (14) | 4.84 ± 0.45, 64 ^T 4.91 ± 0.45, 61 ^T | 6.03 ± 0.54, 64 6.14 ± 0.54, 61 | 45.86 ± 3.28, 64 137.51 ± 17.23, 61 | 0.41 ± 0.06, 64 0.47 ± 0.07, 61 | 0.0090 ± 0.0012, 64 0.0035 ± 0.0006, 61 | -1.44 -0.16 ± 0.03 | -1.89 -0.22 ± 0.03 | -66.65 -7.43 ± 0.25 | -12.31 -0.90 ± 0.04 | 159.57 5.55 ± 0.16 |
| Predation risk | | | | | | | | | | |
| <i>Discoglossus galganoi</i> L (2) | 5.87 ± 0.23, 35 ^T 5.98 ± 0.23, 35 ^T | 4.78 ± 0.28, 35 4.80 ± 0.28, 35 | 56.89 ± 2.68, 5 51.23 ± 3.95, 5 | 0.39 ± 0.01, 5 0.49 ± 0.03, 5 | 0.0037 ± 0.0003, 5 0.0065 ± 0.0005, 5 | -1.83* -0.48 ± 0.06 | -0.45 -0.08 ± 0.06 | 11.05 1.51 ± 0.51 | -19.30 -4.33 ± 1.34 | -42.43 -6.09 ± 2.26 |
| <i>Discoglossus galganoi</i> L (2) | 5.32 ± 0.19, 5 ^T 5.45 ± 0.19, 5 ^T | 4.53 ± 0.22, 35 4.33 ± 0.22, 35 | 68.02 ± 4.25, 5 57.26 ± 4.17, 5 | 0.34 ± 0.03, 5 0.32 ± 0.01, 5 | 0.0027 ± 0.0004, 5 0.0030 ± 0.0002, 5 | -2.40* -0.64 ± 0.42 | 4.65* 0.92 ± 0.06 | 18.78 2.31 ± 0.67 | 6.22 0.84 ± 0.44 | -10.66 -0.80 ± 0.43 |
| <i>Pelobates cultripes</i> M (15) | 37.94 ± 1.46, 153 ^H 37.86 ± 1.61, 149 ^H | 10.24 ± 0.43, 152 10.37 ± 0.47, 146 | 201.86 ± 8.77, 161 206.78 ± 9.66, 156 | 2.09 ± 0.64, 153 2.47 ± 0.71, 149 | 0.0104 ± 0.0032, 153 0.0120 ± 0.0036, 149 | 0.22 0.06 ± 0.01 | -1.33* -0.31 ± 0.01 | -2.38 -0.53 ± 0.01 | -15.31 -0.56 ± 0.01 | -13.23 -0.47 ± 0.01 |
| <i>Pelobates cultripes</i> M (16) | 10.19 ± 0.99, 34 ^T 10.49 ± 0.77, 35 ^T | 11.36 ± 0.70, 34 11.57 ± 0.71, 35 | 166.58 ± 11.87, 34 163.22 ± 16.68, 35 | 1.58 ± 0.38, 34 1.61 ± 0.44, 35 | 0.0095 ± 0.0021, 34 0.0098 ± 0.0024, 35 | -2.85* -0.33 ± 0.06 | -1.84* -0.30 ± 0.06 | 2.06 0.23 ± 0.06 | -1.88 -0.07 ± 0.06 | -3.77 -0.16 ± 0.06 |
| <i>Pelobates cultripes</i> M (16) | 10.11 ± 0.69, 32 ^T 10.45 ± 0.88, 41 ^T | 11.90 ± 0.63, 32 11.84 ± 0.70, 41 | 180.65 ± 11.89, 32 172.40 ± 11.89, 41 | 2.02 ± 0.38, 32 2.41 ± 0.38, 40 | 0.0112 ± 0.0021, 32 0.0140 ± 0.0021, 40 | -3.31* -0.43 ± 0.06 | 0.50 0.09 ± 0.06 | 4.79 0.69 ± 0.06 | -16.09 -1.00 ± 0.06 | -20.27 -1.33 ± 0.07 |
| <i>Hyla versicolor</i> M (9) | ? | ? | 46.16 ± 0.71, 5 45.68 ± 0.49, 5 | 0.29, 5 ^c 0.30, 5 ^c | 0.0065 ± 0.0003, 5 0.0065 ± 0.0002, 5 | ? ? | ? ? | 1.05 0.71 ± 0.43 | -2.04 | 0.00 0.00 ± 0.40 |
| <i>Bufo calamita</i> M (17) | 2.57 ± 0.19, 48 ^T 2.61 ± 0.19, 43 ^T | 3.66 ± 0.19, 50 3.75 ± 0.19, 44 | 41.29 ± 5.02, 50 44.25 ± 5.02, 44 | 0.05 ± 0.01, 50 0.06 ± 0.01, 44 | 0.0013 ± 0.0003, 50 0.0015 ± 0.0003, 44 | -1.50* -0.21 ± 0.04 | -2.23* -0.43 ± 0.04 | -6.69 -0.59 ± 0.04 | -16.96 -1.13 ± 0.05 | -14.73 -0.79 ± 0.05 |
| <i>Bufo calamita</i> M (17) | 2.56 ± 0.18, 52 ^T 2.65 ± 0.18, 45 ^T | 3.66 ± 0.19, 53 3.70 ± 0.19, 47 | 44.62 ± 5.03, 53 45.72 ± 5.04, 48 | 0.06 ± 0.01, 53 0.06 ± 0.01, 48 | 0.0013 ± 0.0003, 53 0.0015 ± 0.0003, 48 | -3.43* -0.49 ± 0.04 | -1.17* -0.23 ± 0.04 | -2.41 -0.22 ± 0.04 | -11.19 -0.75 ± 0.04 | -8.69 -0.44 ± 0.04 |
| <i>Rana temporaria</i> L (18) | 5.68 ± 0.53, 7 ^T 6.01 ± 0.48, 7 ^T | 4.20 ± 0.37, 7 4.47 ± 0.37, 7 | 75.31 ± 4.86, 7 59.39 ± 5.40, 7 | 0.27 ± 0.04, 7 0.36 ± 0.04, 7 | 0.0035, 7 0.0061, 7 | -5.54* -0.62 ± 0.30 | -5.92* -0.67 ± 0.30 | 26.81 2.90 ± 0.59 | -27.00 -2.24 ± 0.46 | -42.44 |
| <i>Pelophylax ridibunda</i> M (19) | ? | ? | ? | ? | ? | -1.20* | -0.52 | ? | ? | ? |
| <i>Rana sylvatica</i> M (20) | ? | ? | ? | ? | ? | 3.40* | ? | ? | ? | ? |

Desiccation risk

| | | | | | | | | | | |
|--------------------------------------|-------------------------------|------------------|--------------------|-----------------|---------------------|--------------|--------------|--------------|--------------|--------------|
| <i>Pelobates cultripes</i> M (16) | 10.19 ± 0.99, 34 ^T | 11.36 ± 0.70, 34 | 166.58 ± 11.87, 34 | 1.58 ± 0.38, 34 | 0.0095 ± 0.0021, 34 | 0.85 | -4.53* | -7.79 | -21.72 | -15.32 |
| | 10.11 ± 0.69, 32 ^T | 11.90 ± 0.63, 32 | 180.65 ± 11.89, 32 | 2.02 ± 0.38, 32 | 0.0112 ± 0.0021, 32 | 0.10 ± 0.06 | -0.79 ± 0.07 | -1.17 ± 0.07 | -1.13 ± 0.07 | -0.80 ± 0.07 |
| <i>Pelobates cultripes</i> M (16) | 10.49 ± 0.77, 35 ^T | 11.57 ± 0.71, 35 | 163.22 ± 16.68, 35 | 1.61 ± 0.44, 35 | 0.0098 ± 0.0024, 35 | 0.37 | -2.26* | -5.32 | -33.06 | -29.83 |
| | 10.45 ± 0.88, 41 ^T | 11.84 ± 0.70, 41 | 172.40 ± 11.89, 41 | 2.41 ± 0.38, 40 | 0.0140 ± 0.0021, 40 | 0.05 ± 0.05 | -0.38 ± 0.05 | -0.64 ± 0.06 | -1.92 ± 0.08 | -1.84 ± 0.08 |
| <i>Pelodytes punctatus</i> L (21) | 5.32 ± 0.51, 36 ^T | 5.81 ± 0.42, 26 | 62.93 ± 17.75, 28 | 0.16 ± 0.04, 26 | 0.0026 ± 0.0010, 36 | -1.12* | 0.90* | -15.28 | -24.94 | -15.81 |
| | 5.63 ± 0.50, 28 ^T | 4.95 ± 0.41, 38 | 74.28 ± 17.75, 36 | 0.21 ± 0.06, 38 | 0.0031 ± 0.0010, 28 | -0.61 ± 0.07 | 2.04 ± 0.10 | -0.63 ± 0.07 | -0.93 ± 0.07 | -0.50 ± 0.07 |
| <i>Bufo calamita</i> M (17) | 2.57 ± 0.19, 48 ^T | 3.66 ± 0.19, 50 | 41.29 ± 5.02, 50 | 0.05 ± 0.01, 50 | 0.0013 ± 0.0003, 50 | 0.31 | 0.14 | -7.46 | -6.90 | -1.21 |
| | 2.56 ± 0.18, 52 ^T | 3.66 ± 0.19, 53 | 44.62 ± 5.03, 53 | 0.06 ± 0.01, 53 | 0.0013 ± 0.0003, 53 | 0.04 ± 0.04 | 0.03 ± 0.04 | -0.66 ± 0.04 | -0.41 ± 0.04 | -0.06 ± 0.04 |
| <i>Bufo calamita</i> M (17) | 2.61 ± 0.19, 43 ^T | 3.75 ± 0.19, 44 | 44.25 ± 5.02, 44 | 0.06 ± 0.01, 44 | 0.0015 ± 0.0003, 44 | -1.66* | 1.23 | -3.22 | -0.43 | 5.79 |
| | 2.65 ± 0.18, 45 ^T | 3.70 ± 0.19, 47 | 45.72 ± 5.04, 48 | 0.06 ± 0.01, 48 | 0.0015 ± 0.0003, 48 | -0.24 ± 0.05 | 0.24 ± 0.04 | -0.29 ± 0.04 | -0.03 ± 0.04 | 0.29 ± 0.04 |

^a Snout vent length (mm); ^b Only the mean could be obtained from the particular study; ^c Only the mean and sample size could be obtained from the particular study

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