# Both Direct and Vicarious Experiences of Nature Affect Children's Willingness to Conserve Biodiversity

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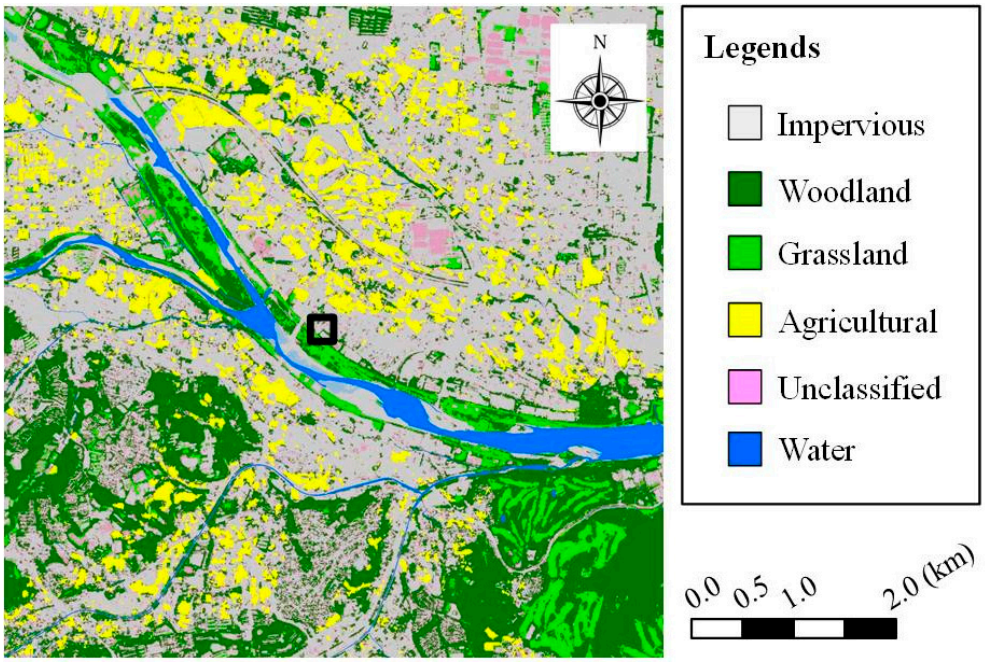


**Figure S1.** Land use map of the region around the study school (**black square**). In the middle of the map is the Tama River, the biggest river in Tokyo.

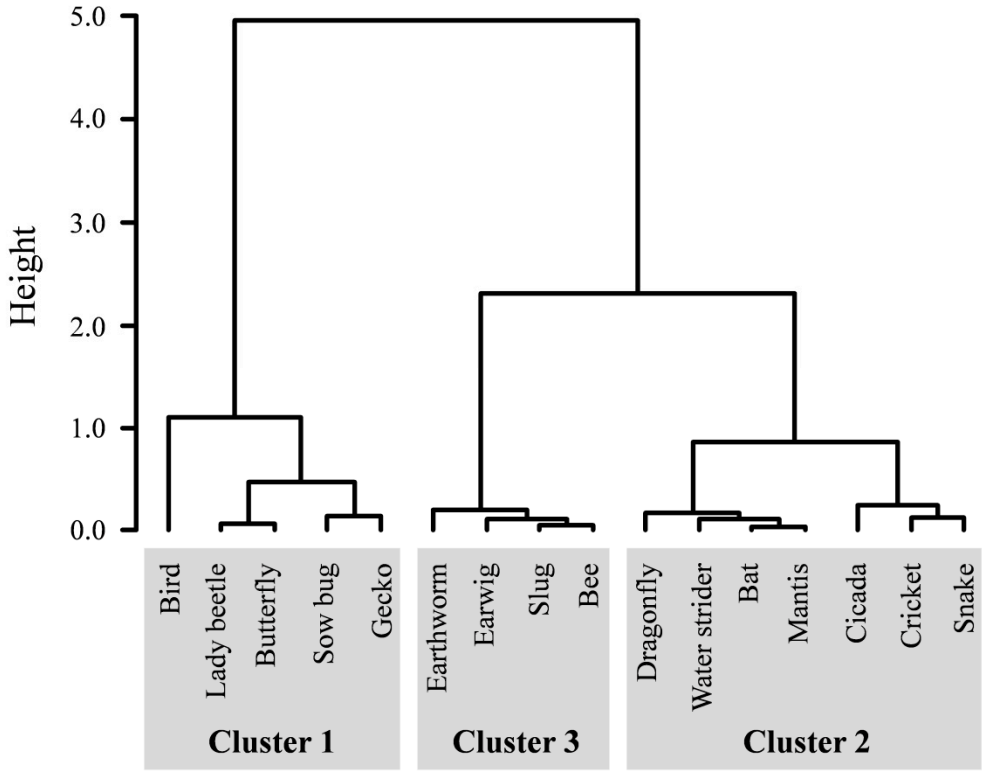


**Figure S2.** Ward's dendrogram of a hierarchical cluster analysis conducted on 16 animal species.

**Table S1.** Summary of Tukey's HSD (honestly significant difference) test (see Figure 2 in the main text).

| Combination | *t* Value | *p* Value |
|---|---|---|
| Watching TV or reading books about nature | | |
| Attitude scores | | |
| Never *vs.* Seldom | 2.47 | 0.07 |
| Never *vs.* Sometimes | 4.85 | <0.001 |
| Never *vs.* Often | 9.76 | <0.001 |
| Seldom *vs.* Sometimes | 3.04 | 0.01 |
| Seldom *vs.* Often | 9.64 | <0.001 |
| Sometimes *vs.* Often | 7.80 | <0.001 |
| Willingness scores | | |
| Never *vs.* Seldom | 2.88 | 0.02 |
| Never *vs.* Sometimes | 5.14 | <0.001 |
| Never *vs.* Often | 8.42 | <0.001 |
| Seldom *vs.* Sometimes | 2.83 | 0.02 |
| Seldom *vs.* Often | 7.28 | <0.001 |
| Sometimes *vs.* Often | 5.32 | <0.001 |
| Talking about nature | | |
| Attitude scores | | |
| Never *vs.* Seldom | 2.99 | 0.02 |
| Never *vs.* Sometimes | 8.16 | <0.001 |
| Never *vs.* Often | 6.93 | <0.001 |
| Seldom *vs.* Sometimes | 6.09 | <0.001 |
| Seldom *vs.* Often | 5.13 | <0.001 |
| Sometimes *vs.* Often | 0.67 | 0.91 |
| Willingness scores | | |
| Never *vs.* Seldom | 3.77 | 0.001 |
| Never *vs.* Sometimes | 8.80 | <0.001 |
| Never *vs.* Often | 7.47 | <0.001 |
| Seldom *vs.* Sometimes | 5.99 | <0.001 |
| Seldom *vs.* Often | 5.12 | <0.001 |
| Sometimes *vs.* Often | 0.72 | 0.89 |

**Table S2.** Unstandardized and standardized parameter estimates for mediated relationships in the model (see Figures 3 and 5 in the main text).

| Path | Estimate | 95% CI | | Standardized Estimate |
|---|---|---|---|---|
| | | Lower | Upper | |
| **All species (16 species)** | | | | |
| Direct experience → Affective attitudes → Willingness to conserve | 2.60 | 1.54 | 3.75 | 0.20 |
| Reading and watching → Affective attitudes → Willingness to conserve | 1.40 | 0.78 | 2.08 | 0.14 |
| Talking → Affective attitudes → Willingness to conserve | 0.62 | 0.05 | 1.14 | 0.06 |
| Gender → Affective attitudes → Willingness to conserve | 2.76 | 1.82 | 3.77 | 0.15 |
| **Cluster 1 (5 species)** | | | | |
| Direct experience → Affective attitudes → Willingness to conserve | 0.99 | 0.64 | 1.36 | 0.25 |
| Reading and watching → Affective attitudes → Willingness to conserve | 0.36 | 0.15 | 0.58 | 0.12 |
| Talking → Affective attitudes → Willingness to conserve | 0.11 | −0.10 | 0.31 | 0.04 |
| Gender → Affective attitudes → Willingness to conserve | −0.04 | −0.38 | 0.24 | −0.01 |
| **Cluster 2 (7 species)** | | | | |
| Direct experience → Affective attitudes → Willingness to conserve | 1.22 | 0.70 | 1.73 | 0.19 |
| Reading and watching → Affective attitudes → Willingness to conserve | 0.75 | 0.43 | 1.10 | 0.15 |
| Talking → Affective attitudes → Willingness to conserve | 0.37 | 0.04 | 0.69 | 0.07 |
| Gender → Affective attitudes → Willingness to conserve | 2.11 | 1.62 | 2.76 | 0.22 |
| **Cluster 3 (4 species)** | | | | |
| Direct experience → Affective attitudes → Willingness to conserve | 0.32 | 0.11 | 0.52 | 0.09 |
| Reading and watching → Affective attitudes → Willingness to conserve | 0.26 | 0.12 | 0.41 | 0.09 |
| Talking → Affective attitudes → Willingness to conserve | 0.13 | −0.01 | 0.28 | 0.05 |
| Gender → Affective attitudes → Willingness to conserve | 0.69 | 0.43 | 0.98 | 0.13 |