*Eco-evolutionary dynamics in urbanized landscapes: Evolution, species sorting and the change in zooplankton body size along urbanization gradients* — Brans et al., 2016 — doi: 10.1098/rstb.2016.0030

# SUPPLEMENTARY INFORMATION B - Outliers Analysis

To detect outliers or influential points we used the Cook's distance, the outlierTest function of the car package ([1]) and visual screening by plotting the model residuals versus leverage and plotting all data points. The Cook's distance gives an estimate of the influence of a data point in regression models. The outlierTest function reports the Bonferroni corrected $p$-values for studentized residuals in linear models, based on a $t$-test. The residuals versus leverage output plot gives a combination of standardized residuals versus leverage. Based on these tests we additionally checked the outlying points visually in the data cloud before deciding to exclude them from the analysis.

Below, we provide a justification of our decisions on outlier removal:

*The set of 84 communities*
We first use the outlierTest function to detect outliers (Table SB1). Based on this test we found 3 outliers (case 74, 46 and 84) in the total set of 84 communities. We then checked the Cook's distances of these three data points (Fig. SB1a,b,c for 50 m and Fig. SB2a,b,c for 3200 m) and found that case 74 was clearly distinct from the other data points in its effect on the regression analysis for the ITV model. Despite its high effect, excluding this community from the analysis did not change significance of the regression results (comparing Table SB2 with Table SA5). Checking this outlier visually for the ITV model (Fig. SB3b), we noticed a clear distinction between this community and all other communities, and therefore decided to exclude this community from the analysis. Although this community was not the only in which only *D. magna* occurred, for unknown reasons almost no juveniles were present, resulting in a very large community body size. The second outlier, data point 46, did not seem to have an exceptionally high effect on the regression results (Fig. SB1a,b,c for 50 m and Fig. SB2a,b,c for 3200 m). However, when excluding case 74 from the analyses, data point 46 increased in its effect on the ITV model, but only for smaller spatial scales (Fig. SB1f). Also data point 84 increased in effect, being more distinct from the other data points at higher spatial scales (Fig. SB1d-i for 50 m and Fig. SB2d-i for 3200 m). Checking these points visually (Fig. SB3a,b), it seemed not to be justified to remove them from the analyses. We therefore decided to not exclude these communities from the analyses. We did check the regression results when removing these points from the analyses, and their removal did not change the significance of the regression results. Regression results with outliers included can be found in Table SB2, results with outliers excluded can be found in Table SA5.

*The subset of small-species dominated communities (50)*
Based on the outlierTest function we found 4 outliers (case 78, 4, 44 and 75; Table SB3) in the subset of small-species dominated communities. Data points 78, 4 and 75 had large Cook's distances at 50 m spatial scale (Fig. SB4), but only data point 78 had a consis-

tently large Cook's distance at all spatial scales (Fig. SB4a,b,c for 50 m and Fig. SB5a,b,c for 3200 m). Checking these outliers visually (Fig. SB3c,d), we decided to only exclude community 78 from further analyses. This exclusion resulted in a change in the significance of the ITV regression model at spatial scale of 50 m (comparing Table SB2 with Table SA5). All other results remained the same.

*The subset of large-species dominated communities (34)*
Not surprisingly, we found case 74 to be an outlier in the subset of large-species dominated communities (Table SB4; Fig. SB6a,b,c and SB7a,b,c showing Cook's distances for 50 m and 3200 m spatial scale). We excluded this community from the analysis based on the reasons given in the outlier analysis of the set of 84 communities. Performing a Cook's distance analysis on the regression models excluding data point 74 showed that data point 84 had a high effect on all regression models (SPT+ITV, SPT and ITV model), especially at larger spatial scales (Fig. SB7d,e,f). We therefore decided to check this data point visually (Fig. SB3e,f), and for larger spatial scales it clearly deviated from the general pattern. This was even clearer in the ITV model at 3200 m (Fig. SB3f). As excluding this point from the analysis results in a different outcome of the regression analyses, we give the results without removal of the outliers in Table SB2 and with removal of outliers in Table SA5.

*The integrated analysis - subset of 10 large-species dominated communities*
As we only had 10 communities, outlier analysis became more difficult. However, one of these 10 communities (community 74; PL25-red) was found to be an outlying point in the subset of large-species dominated communities and even in the full data set. It therefore seemed justified and logic to exclude this point from the analysis. A second data point (community 84; TP-Blap1-riv) was found to be a highly influential point in the subset of large species dominated communities. The results without exclusion of these communities are given in Table SB5 and the results with exclusion of these communities are given in Table SA6.

# References

1 R development core team. 2015 R: A language and environment for statistical computing.

# Tables

Table SB1: Results from the outlierTest function of the 'car' package in R for the set of (a) all 84 communities, (b) 83 communities excluding community 74 (PL25-red) and (c) 82 communities excluding community 74 and 46 (PL16-gre). Outlier analysis was performed for each of the three regression models (SPT+ITV, SPT, ITV) at each urbanization scale. *Case* gives the community number, and *Bonferroni p* gives the corrected Bonferroni $p$-value for the studentized residuals in the linear models, based on a $t$-test. Significant $p$-values ($p < 0.05$) are indicated in bold. $p$-values smaller than 0.1 are indicated with a dot.

Table SB2: Regression model output of SPT+ITV, SPT and ITV, for each scale of urbanizationn. Upper: complete dataset of all 84 communities; middle: small-species dominated subset; lower: large-species dominated subset. Significant results ($p < 0.05$) are shown in bold. $p$-values smaller than 0.1 are indicated with a dot. SSR/SST gives the variation explained by SPT (resp. ITV) to the total trait variation along the urbanization gradient. (*) Ratio ITV/SPT is calculated as $\mathrm{SSR}_{\mathrm{ITV}}/(\mathrm{SSR}_{\mathrm{ITV}} + \mathrm{SSR}_{\mathrm{SPT}})$.

Table SB3: Results from the outlierTest function of the 'car' package in R for the subset of (a) all 50 small species dominated communities, (b) 49 small species dominated communities excluding community 78 (PL26-yel) and (c) 48 small species dominated communities excluding community 78 and 4 (PL2-gre). *Case* gives the community number (as in the total set of 84 communities), and *Bonferroni p* gives the corrected Bonferroni $p$-value for the studentized residuals in the linear models, based on a $t$-test. Significant $p$-values ($p < 0.05$) are indicated in bold. $p$-values smaller than 0.1 are indicated with a dot.

Table SB4: Results from the outlierTest function of the 'car' package in R for the subset of (a) all 34 large-species dominated communities, and (b) 33 large-species dominated communities excluding community 74 (PL25-red). *Case* gives the community number (as in the total set of 84 communities), and *Bonferroni p* gives the corrected Bonferroni $p$-value for the studentized residuals in the linear models, based on a $t$-test. Significant $p$-values ($p < 0.05$) are indicated in bold. $p$-values smaller than 0.1 are indicated with a dot.

Table SB5: Regression model output of SPT+ITV, SPT, ITV, $\mathrm{ITV}_{\mathrm{PLAST\text{-}T}}$, $\mathrm{ITV}_{\mathrm{OTHER}}$ and GTV for the 10 communities in which *D. magna* is present at the urbanization scale of 3200 m. Ratio ITV (third column) is calculated as $\mathrm{SSR}_{\mathrm{ITV}}/(\mathrm{SSR}_{\mathrm{ITV}} + \mathrm{SSR}_{\mathrm{SPT}})$ and ratio GTV (fourth column) is calculated as $\mathrm{SSR}_{\mathrm{GTV}}/(\mathrm{SSR}_{\mathrm{GTV}} + \mathrm{SSR}_{\mathrm{PLAST\text{-}T}} + \mathrm{SSR}_{\mathrm{OTHER}} + \mathrm{SSR}_{\mathrm{SPT}})$ for the GTV component. Similar calculations are done for the $\mathrm{ITV}_{\mathrm{PLAST\text{-}T}}$ and $\mathrm{ITV}_{\mathrm{OTHER}}$. Significant results ($p < 0.05$) are shown in bold. $p$-values smaller than 0.1 are indicated with a dot.

Table SB1:

(a)

| | SPT+ITV | | SPT | | ITV | |
|---|---|---|---|---|---|---|
| *Scale (m)* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* |
| 50 | 45 | 0.270 | 74 | 0.421 | **74** | **7.10e-36** |
| 100 | 45 | 0.358 | 74 | 0.485 | **74** | **6.24e-36** |
| 200 | 45 | 0.655 | 74 | 0.783 | **74** | **3.31e-36** |
| 400 | 45 | 0.693 | 74 | 0.942 | **74** | **3.60e-36** |
| 800 | 84 | 0.587 | 74 | NA | **74** | **5.77e-36** |
| 1600 | 84 | 0.616 | 1 | NA | **74** | **1.20e-35** |
| 3200 | 84 | 0.601 | 74 | NA | **74** | **8.02e-36** |

(b)

| | SPT+ITV | | SPT | | ITV | |
|---|---|---|---|---|---|---|
| *Scale (m)* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* |
| 50 | 45 | 0.260 | 45 | 0.354 | **46** | **0.017** |
| 100 | 45 | 0.339 | 45 | 0.448 | **46** | **0.020** |
| 200 | 45 | 0.636 | 45 | 0.803 | **46** | **0.030** |
| 400 | 45 | 0.679 | 45 | 0.893 | **46** | **0.030** |
| 800 | 84 | 0.573 | 1 | 0.986 | **46** | **0.024** |
| 1600 | 84 | 0.585 | 1 | 0.825 | **46** | **0.019** |
| 3200 | 84 | 0.572 | 1 | 0.767 | **46** | **0.017** |

(c)

| | SPT+ITV | | SPT | | ITV | |
|---|---|---|---|---|---|---|
| *Scale (m)* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* |
| 50 | 45 | 0.272 | 45 | 0.380 | 84 | 0.070 · |
| 100 | 45 | 0.353 | 45 | 0.483 | 84 | 0.057 · |
| 200 | 45 | 0.660 | 45 | 0.859 | **84** | **0.039** |
| 400 | 45 | 0.704 | 45 | 0.966 | **84** | **0.044** |
| 800 | 84 | 0.577 | 1 | 0.968 | 84 | 0.051 · |
| 1600 | 84 | 0.588 | 1 | 0.814 | **84** | **0.038** |
| 3200 | 84 | 0.578 | 1 | 0.743 | **84** | **0.024** |

Table SB2:

| | SPT+ITV | | SPT | | | ITV | | | Ratio ITV/SPT |
|---|---|---|---|---|---|---|---|---|---|
| *Urbanization* | *Slope* | *p-value* | *SSR/SST* | *Slope* | *p-value* | *SSR/SST* | *Slope* | *p-value* | (*) |
| **Total set of communities** | | | | | | | | | |
| 50 m | **-0.076** | < **0.001** | **0.1417** | **-0.076** | < **0.001** | 0.0005 | -0.004 | 0.890 | 0.0035 |
| 100 m | **-0.058** | **0.007** | **0.0892** | **-0.058** | **0.004** | 0.0011 | -0.006 | 0.839 | 0.0119 |
| 200 m | -0.041 | 0.077 · | **0.0496** | **-0.047** | **0.032** | 0.0013 | 0.008 | 0.820 | 0.0264 |
| 400 m | -0.037 | 0.146 | 0.0343 | -0.042 | 0.076 · | 0.0030 | 0.013 | 0.733 | 0.0810 |
| 800 m | -0.019 | 0.473 | 0.0120 | -0.026 | 0.298 | 0.0159 | 0.031 | 0.434 | 0.5705 |
| 1600 m | -0.022 | 0.482 | 0.0133 | -0.032 | 0.272 | 0.0432 | 0.058 | 0.195 | 0.7652 |
| 3200 m | -0.025 | 0.528 | 0.0092 | -0.035 | 0.361 | 0.0139 | 0.042 | 0.464 | 0.6013 |
| **Small-species dominated communities** | | | | | | | | | |
| *Urbanization* | *Slope* | *p-value* | *SSR/SST* | *Slope* | *p-value* | *SSR/SST* | *Slope* | *p-value* | (*) |
| 50 m | **-0.058** | **0.001** | **0.1678** | **-0.053** | < **0.001** | 0.0041 | -0.008 | 0.384 | 0.0241 |
| 100 m | **-0.050** | **0.006** | **0.1151** | **-0.044** | **0.003** | 0.0051 | -0.009 | 0.335 | 0.0421 |
| 200 m | **-0.046** | **0.024** | **0.0870** | **-0.042** | **0.011** | 0.0013 | -0.005 | 0.631 | 0.0143 |
| 400 m | -0.039 | 0.091 · | 0.0352 | -0.030 | 0.114 | 0.0071 | -0.014 | 0.252 | 0.1685 |
| 800 m | -0.022 | 0.347 | 0.0062 | -0.013 | 0.513 | 0.0081 | -0.014 | 0.222 | 0.5675 |
| 1600 m | -0.013 | 0.637 | 0.0007 | -0.005 | 0.826 | 0.0044 | -0.012 | 0.369 | 0.8630 |
| 3200 m | -0.000 | 0.990 | 0.0001 | -0.002 | 0.953 | 0.0001 | 0.002 | 0.924 | 0.5006 |
| **Large-species dominated communities** | | | | | | | | | |
| *Urbanization* | *Slope* | *p-value* | *SSR/SST* | *Slope* | *p-value* | *SSR/SST* | *Slope* | *p-value* | (*) |
| 50 m | -0.016 | 0.606 | 0.0120 | -0.019 | 0.488 | 0.0285 | -0.029 | 0.730 | 0.7050 |
| 100 m | 0.007 | 0.806 | 0.0001 | 0.002 | 0.946 | 0.0335 | -0.029 | 0.708 | 0.9966 |
| 200 m | 0.027 | 0.335 | 0.0095 | 0.016 | 0.537 | 0.0045 | -0.000 | 0.997 | 0.0003 |
| 400 m | 0.044 | 0.149 | 0.0234 | 0.027 | 0.330 | 0.0098 | 0.017 | 0.840 | 0.2949 |
| 800 m | 0.053 | 0.113 | 0.0219 | 0.028 | 0.346 | 0.1286 | 0.068 | 0.462 | 0.8544 |
| 1600 m | 0.058 | 0.125 | 0.0182 | 0.029 | 0.392 | 0.3173 | 0.123 | 0.245 | 0.9459 |
| 3200 m | 0.054 | 0.283 | 0.0196 | 0.040 | 0.374 | 0.0490 | 0.063 | 0.651 | 0.7144 |

Table SB3:

(a)

| | SPT+ITV | | SPT | | ITV | |
|---|---|---|---|---|---|---|
| *Scale (m)* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* |
| 50 | **78** | **0.006** | 78 | 0.189 | **78** | **4.07e-04** |
| | | | | | **4** | **0.045** |
| 100 | **78** | **0.026** | 78 | 0.617 | **78** | **4.91e-04** |
| | | | | | **4** | **0.049** |
| 200 | 78 | 0.076 · | 53 | 0.657 | **78** | **0.001** |
| | | | | | **4** | **0.034** |
| 400 | 78 | 0.201 | 53 | NA | **78** | **0.001** |
| | | | | | **4** | **0.040** |
| 800 | 4 | 0.229 | 4 | NA | **78** | **0.001** |
| | | | | | **4** | **0.040** |
| 1600 | 4 | 0.203 | 4 | NA | **78** | **8.18e-04** |
| | | | | | **4** | **0.038** |
| 3200 | 4 | 0.177 | 4 | 0.961 | **78** | **0.001** |
| | | | | | **4** | **0.028** |

(b)

| | SPT+ITV | | SPT | | ITV | |
|---|---|---|---|---|---|---|
| *Scale (m)* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* |
| 50 | 4 | 0.197 | 53 | 0.333 | **4** | **0.004** |
| 100 | 44 | 0.170 | 53 | 0.447 | **4** | **0.004** |
| 200 | 4 | 0.142 | 53 | 0.395 | **4** | **0.002** |
| 400 | 4 | 0.084 · | 4 | 0.815 | **4** | **0.002** |
| 800 | 4 | 0.080 · | 4 | 0.705 | **4** | **0.002** |
| 1600 | 4 | 0.074 · | 4 | 0.652 | **4** | **0.002** |
| 3200 | 4 | 0.068 · | 4 | 0.643 | **4** | **0.001** |

(c)

| | SPT+ITV | | SPT | | ITV | |
|---|---|---|---|---|---|---|
| *Scale (m)* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* |
| 50 | 53 | 0.233 | 53 | 0.201 | 75 | 0.060 · |
| 100 | 44 | 0.086 · | 53 | 0.323 | **44** | **0.043** |
| 200 | 44 | 0.085 · | 53 | 0.260 | **75** | **0.031** |
| 400 | 44 | 0.196 | 53 | 0.575 | **44** | **0.024** |
| | | | | | **75** | **0.046** |
| 800 | 44 | 0.400 | 28 | NA | **44** | **0.022** |
| | | | | | **75** | **0.042** |
| 1600 | 44 | 0.454 | 70 | 0.958 | **44** | **0.017** |
| 3200 | 44 | 0.545 | 70 | 0.959 | **75** | **0.024** |

Table SB4:

(a)

| | SPT+ITV | | SPT | | ITV | |
|---|---|---|---|---|---|---|
| *Scale (m)* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* |
| 50 | 84 | 0.699 | 74 | NA | **74** | **1.30e-15** |
| 100 | 84 | 0.425 | 2 | NA | **74** | **9.75e-15** |
| 200 | 84 | 0.244 | 2 | 0.885 | **74** | **6.03e-15** |
| 400 | 84 | 0.193 | 2 | 0.666 | **74** | **3.38e-15** |
| 800 | 84 | 0.173 | 2 | 0.679 | **74** | **4.97e-16** |
| 1600 | 84 | 0.096 · | 2 | 0.678 | **74** | **1.33e-15** |
| 3200 | 84 | 0.061 · | 2 | 0.792 | **74** | **1.51e-15** |

(b)

| | SPT+ITV | | SPT | | ITV | |
|---|---|---|---|---|---|---|
| *Scale (m)* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* | *Case* | *Bonferroni p* |
| 50 | 84 | 0.752 | 1 | NA | 46 | 0.269 |
| 100 | 84 | 0.461 | 1 | NA | 46 | 0.217 |
| 200 | 84 | 0.271 | 2 | 0.950 | 84 | 0.190 |
| 400 | 84 | 0.216 | 2 | 0.679 | 84 | 0.167 |
| 800 | 84 | 0.195 | 2 | 0.584 | 84 | 0.187 |
| 1600 | 84 | 0.106 | 2 | 0.462 | 84 | 0.166 |
| 3200 | 84 | 0.071 · | 84 | 0.638 | 46 | 0.215 |

Table SB5:

| | *Slope* | *p-value* | *SSR/SST* | *Ratio ITV* | *Ratio GTV* |
|---|---|---|---|---|---|
| ITV | 0.206 | 0.599 | 0.8578 | 0.9727 | / |
| GTV | -0.045 | 0.054 · | 0.0409 | / | 0.6234 |
| $\text{ITV}_{\text{PLAST-T}}$ | 0.005 | 0.183 | 0.0004 | / | 0.0068 |
| $\text{ITV}_{\text{OTHER}}$ | 0.003 | 0.967 | 0.0002 | / | 0.0034 |
| SPT | -0.034 | 0.600 | 0.0241 | 0.0273 | 0.3664 |
| SPT+ITV | -0.013 | 0.872 | 1 | | |

# Figures

Figure SB1: Cook's distance plots for the three regression models (SPT+ITV, SPT and ITV) for the set of (a,b,c) all 84 communities, (d,e,f) 83 communities after excluding community 74 (PL25-red) and (g,h,i) 82 communities after excluding community 74 and 84 (TP-Blap1-riv) with urbanization assessed at the 50 m spatial scale.

Figure SB2: Cook's distance plots for the three regression models (SPT+ITV, SPT and ITV) for the set of (a,b,c) all 84 communities, (d,e,f) 83 communities after excluding community 74 (PL25-red) and (g,h,i) 82 communities after excluding community 74 and 84 (TP-Blap1-riv) with urbanization assessed at the 3200 m spatial scale.

Figure SB3: Visualization of how the outliers are situated for the SPT+ITV model, SPT model (a,c,e) and for the ITV model (b,d,f) in (a,b) the total set of communities with urbanization assessed at 50 m, (c,d) the subset of small-species dominated communities with urbanization assessed at 50 m and (e,f) the subset of large-species dominated communities with urbanization assessed at 3200 m. Outliers are indicated with a circle and with their case number in the total set of 84 communities.

Figure SB4: Cook's distance plots for the three regression models (SPT+ITV, SPT and ITV) for the subset of (a,b,c) all 50 small-species dominated communities, (d,e,f) 49 small-species dominated communities after excluding community 78 (PL26-yel) with urbanization assessed at the 50 m spatial scale.

Figure SB5: Cook's distance plots for the three regression models (SPT+ITV, SPT and ITV) for the subset of (a,b,c) all 50 small-species dominated communities, (d,e,f) 49 small-species dominated communities after excluding community 78 (PL26-yel) with urbanization assessed at the 3200 m spatial scale.

Figure SB6: Cook's distance plots for the three regression models (SPT+ITV, SPT and ITV) for the subset of (a,b,c) all 34 large-species dominated communities, (d,e,f) 33 large-species dominated communities after excluding community 74 (PL25-red) with urbanization assessed at the 50 m spatial scale.

Figure SB7: Cook's distance plots for the three regression models (SPT+ITV, SPT and ITV) for the subset of (a,b,c) all 34-large species dominated communities, (d,e,f) 33-large species dominated communities after excluding community 74 (PL25-red) with urbanization assessed at the 3200 m spatial scale.

Figure SB8: (a) Relationship between average community body size variation and percentage built-up area (3200 m, plotted on a log-scale) of 10 *D. magna* communities. The two outlying communities (PL25-red and TP-Blap1-riv) are colored in grey and indicated with a circle. Community average body size is calculated using the local trait values of *D. magna* (filled triangles; note: for all other species present in the communities we used community-wide average body size values), or the community-wide average *D. magna* body size (unfilled triangles). (b) Relationships between intraspecific trait variation (ITV, unfilled circles), genetic trait variation (GTV, filled circles), plasticity response to temperature ($ITV_{PLAST\text{-}T}$, unfilled squares), and plasticity response to other cues ($ITV_{OTHER}$, filled squares) with percentage built-up area. If a significant relationship ($p < 0.05$) was found a black colored regression line was plotted. If $p < 0.1$ a grey colored regression line was plotted. For $p > 0.1$ no regression line was plotted. $p$-values are given in Table SB5. (c) Visualization of the relative importance of SPT (dark grey), GTV (black), $ITV_{PLAST\text{-}T}$ (white), and $ITV_{OTHER}$ (not visible due to its small value) to the total amount of variation in community body size along the urbanization gradient explained by all components of ITV and SPT.

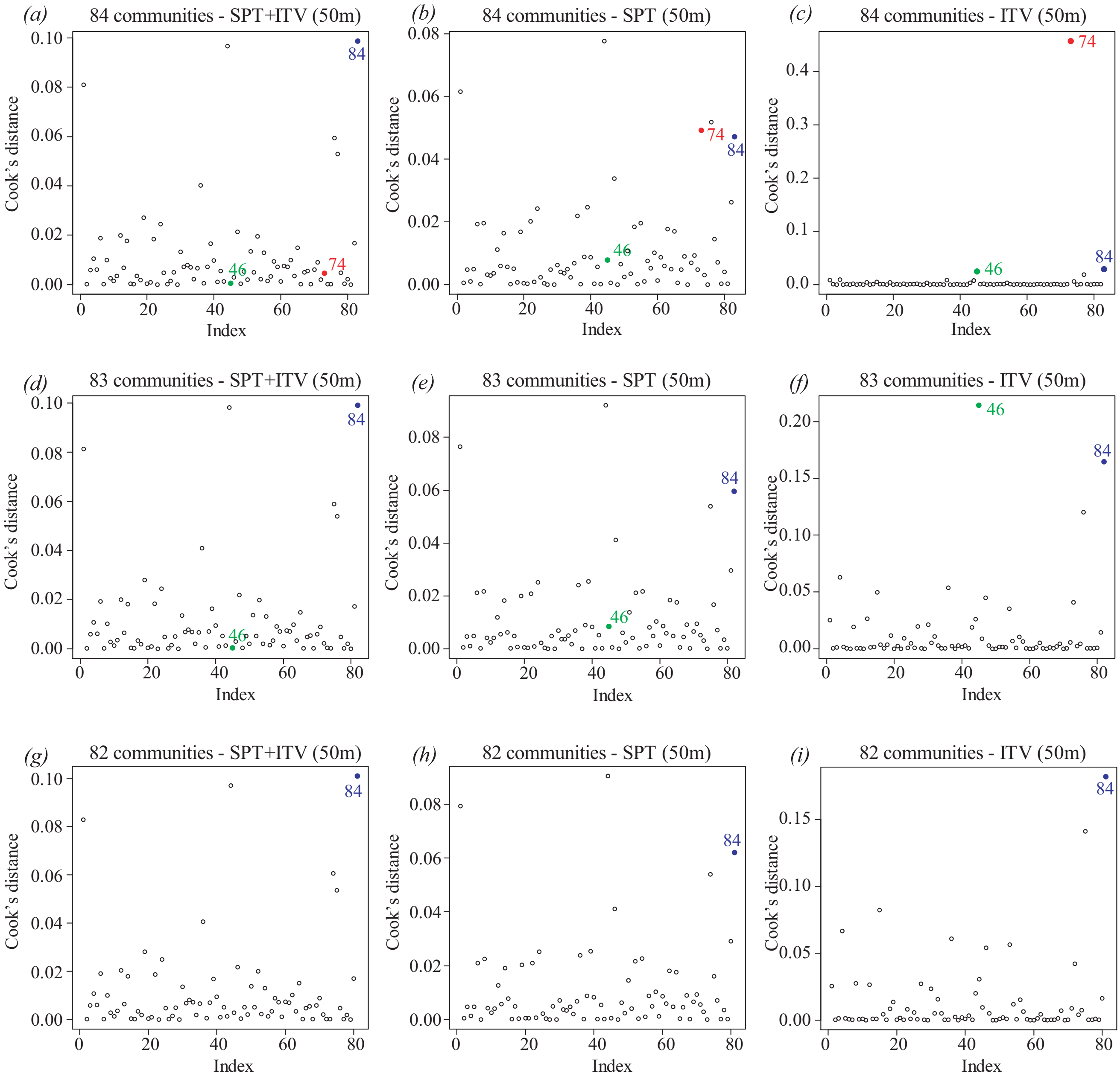
(a)
84 communities - SPT+ITV (50m)
(b)
84 communities - SPT (50m)
(c)
84 communities - ITV (50m)
(d)
83 communities - SPT+ITV (50m)
(e)
83 communities - SPT (50m)
(f)
83 communities - ITV (50m)
(g)
82 communities - SPT+ITV (50m)
(h)
82 communities - SPT (50m)
(i)
82 communities - ITV (50m)
Cook's distance
Index
84
74
46

Figure SB1:

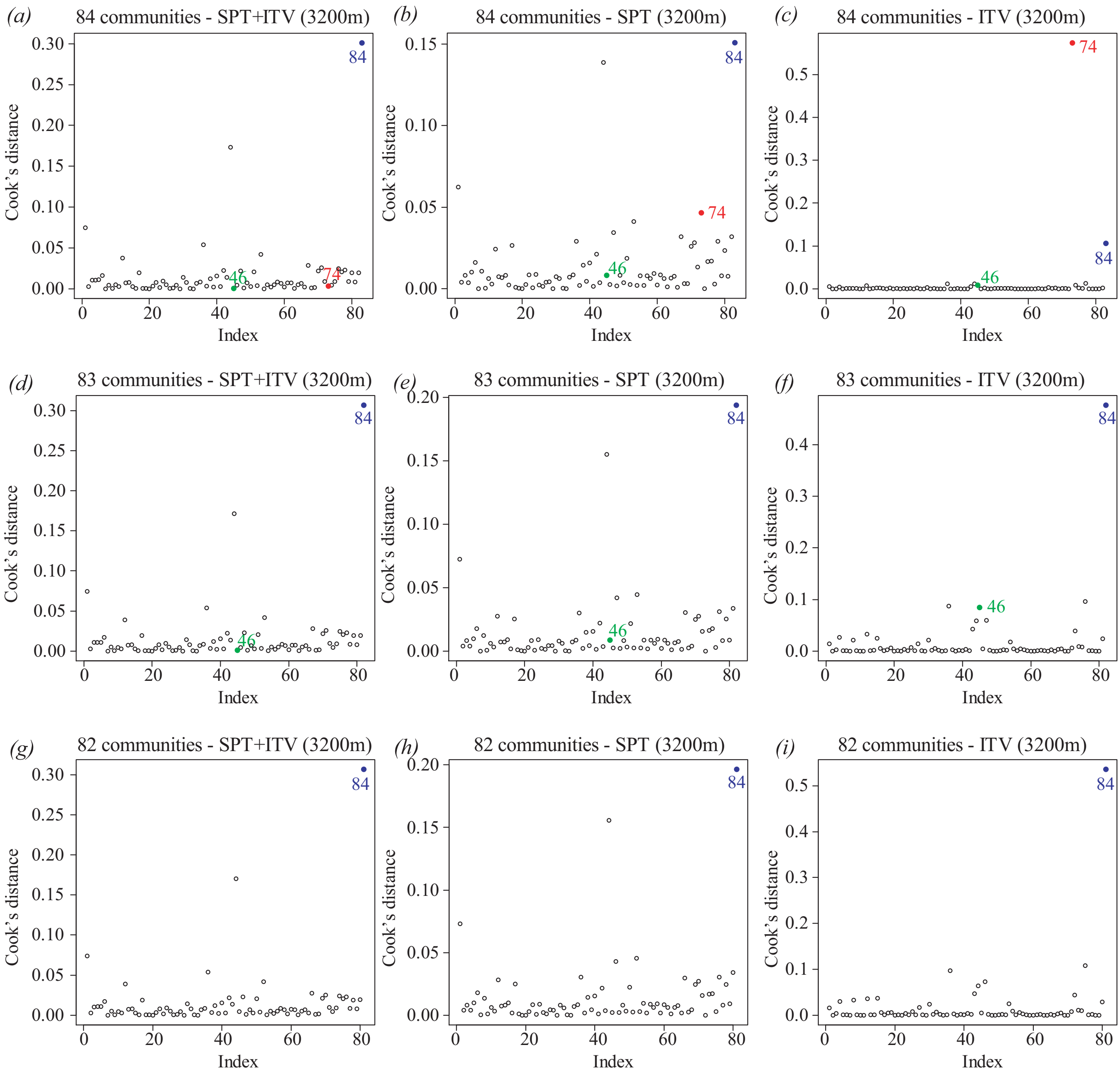
(a) 84 communities - SPT+ITV (3200m)
(b) 84 communities - SPT (3200m)
(c) 84 communities - ITV (3200m)
(d) 83 communities - SPT+ITV (3200m)
(e) 83 communities - SPT (3200m)
(f) 83 communities - ITV (3200m)
(g) 82 communities - SPT+ITV (3200m)
(h) 82 communities - SPT (3200m)
(i) 82 communities - ITV (3200m)
Cook's distance
Index
84
74
46

Figure SB2:

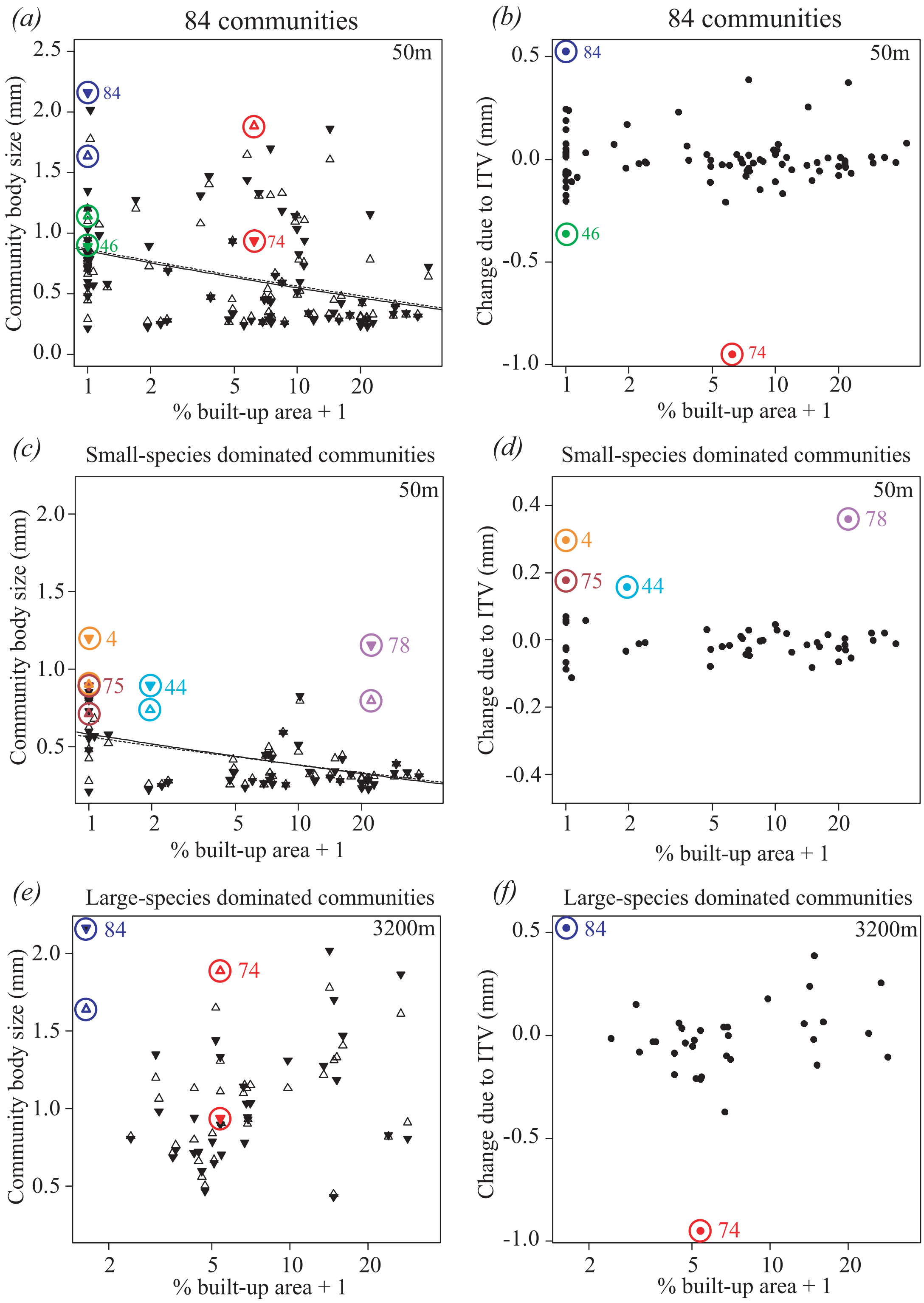
(a)
84 communities
50m
Community body size (mm)
% built-up area + 1
84
74
46
(b)
84 communities
50m
Change due to ITV (mm)
% built-up area + 1
84
46
74
(c)
Small-species dominated communities
50m
Community body size (mm)
% built-up area + 1
4
75
44
78
(d)
Small-species dominated communities
50m
Change due to ITV (mm)
% built-up area + 1
78
4
75
44
(e)
Large-species dominated communities
3200m
Community body size (mm)
% built-up area + 1
84
74
(f)
Large-species dominated communities
3200m
Change due to ITV (mm)
% built-up area + 1
84
74

Figure SB3:

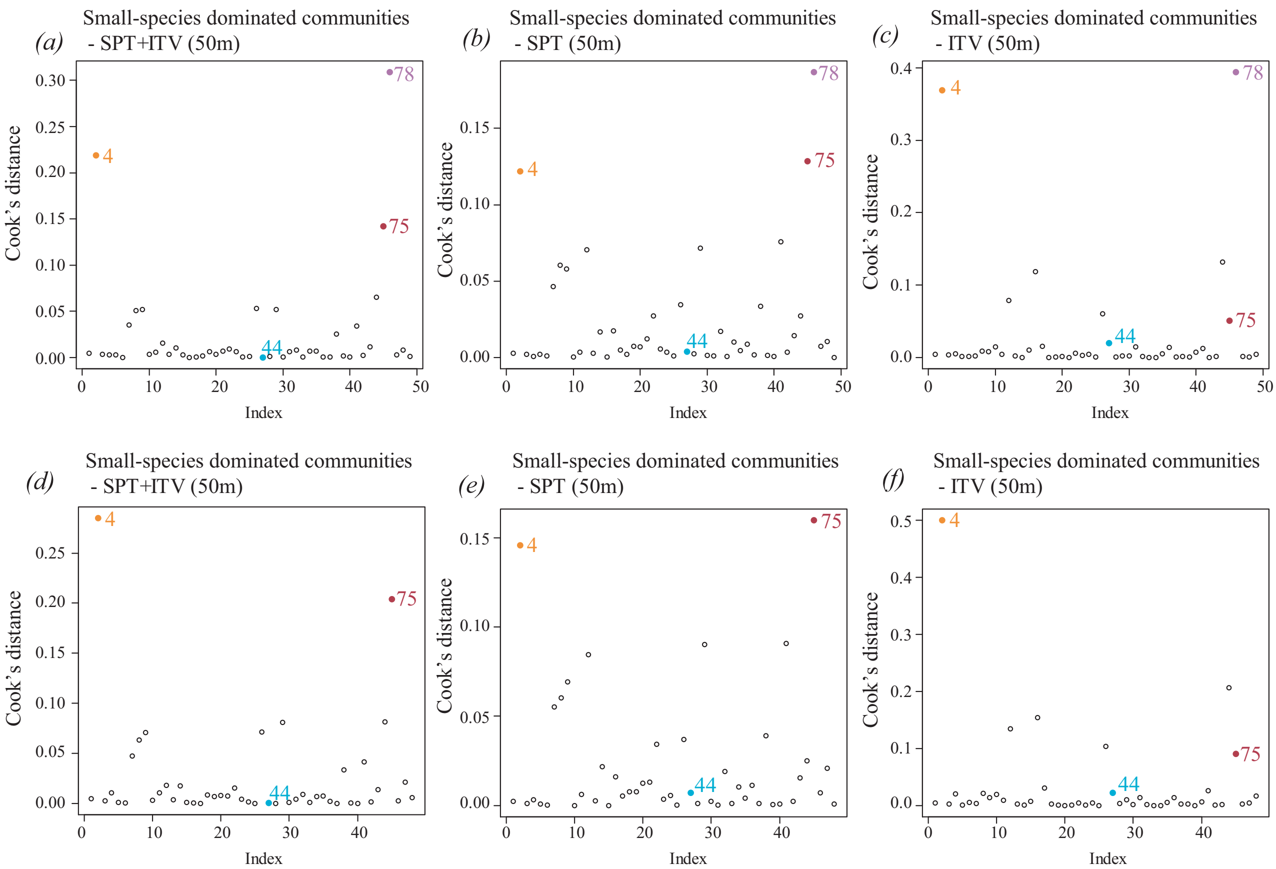
(a)
Small-species dominated communities
- SPT+ITV (50m)
(b)
Small-species dominated communities
- SPT (50m)
(c)
Small-species dominated communities
- ITV (50m)
(d)
Small-species dominated communities
- SPT+ITV (50m)
(e)
Small-species dominated communities
- SPT (50m)
(f)
Small-species dominated communities
- ITV (50m)
Cook's distance
Index
4
44
75
78

Figure SB4:

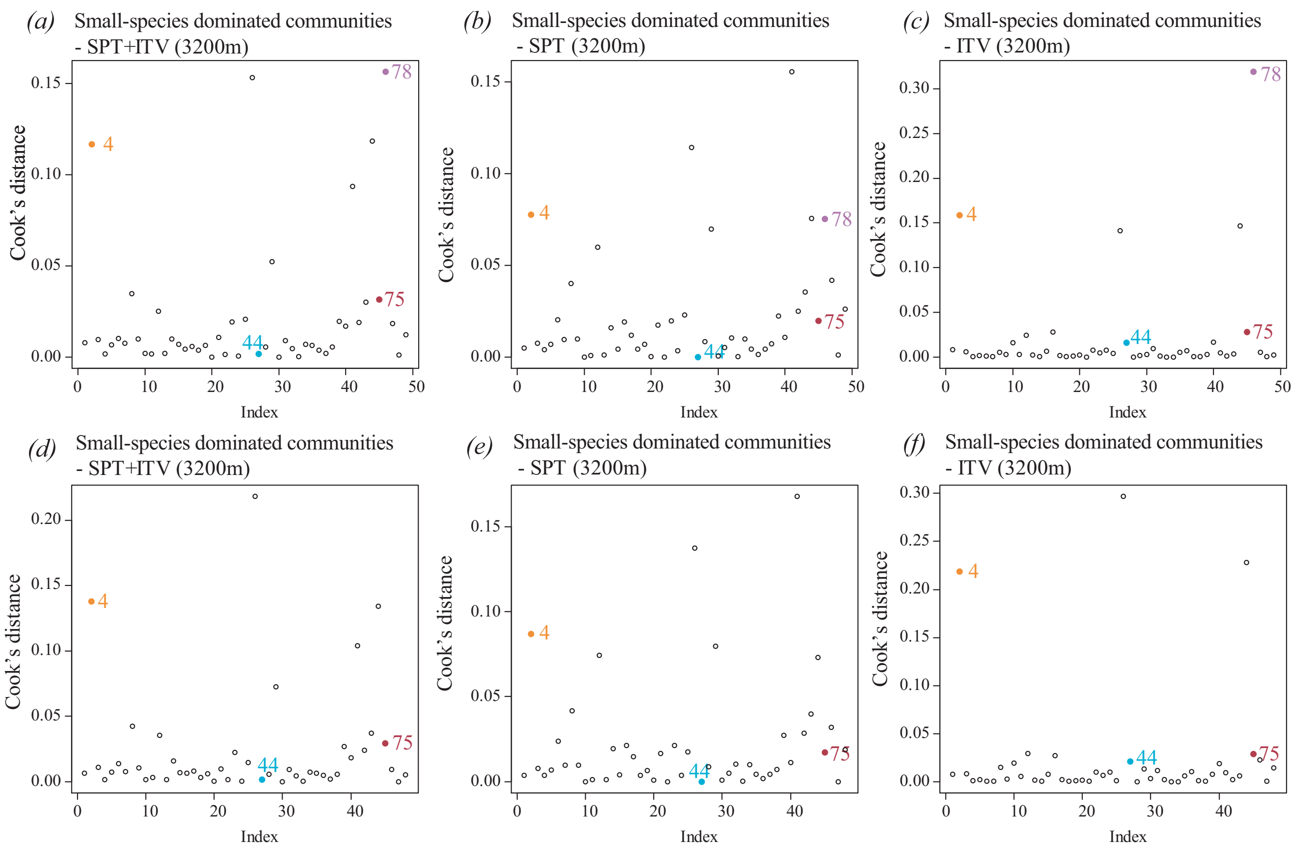
(a) Small-species dominated communities - SPT+ITV (3200m)
(b) Small-species dominated communities - SPT (3200m)
(c) Small-species dominated communities - ITV (3200m)
(d) Small-species dominated communities - SPT+ITV (3200m)
(e) Small-species dominated communities - SPT (3200m)
(f) Small-species dominated communities - ITV (3200m)
Cook's distance
Index
4
44
75
78

Figure SB5:

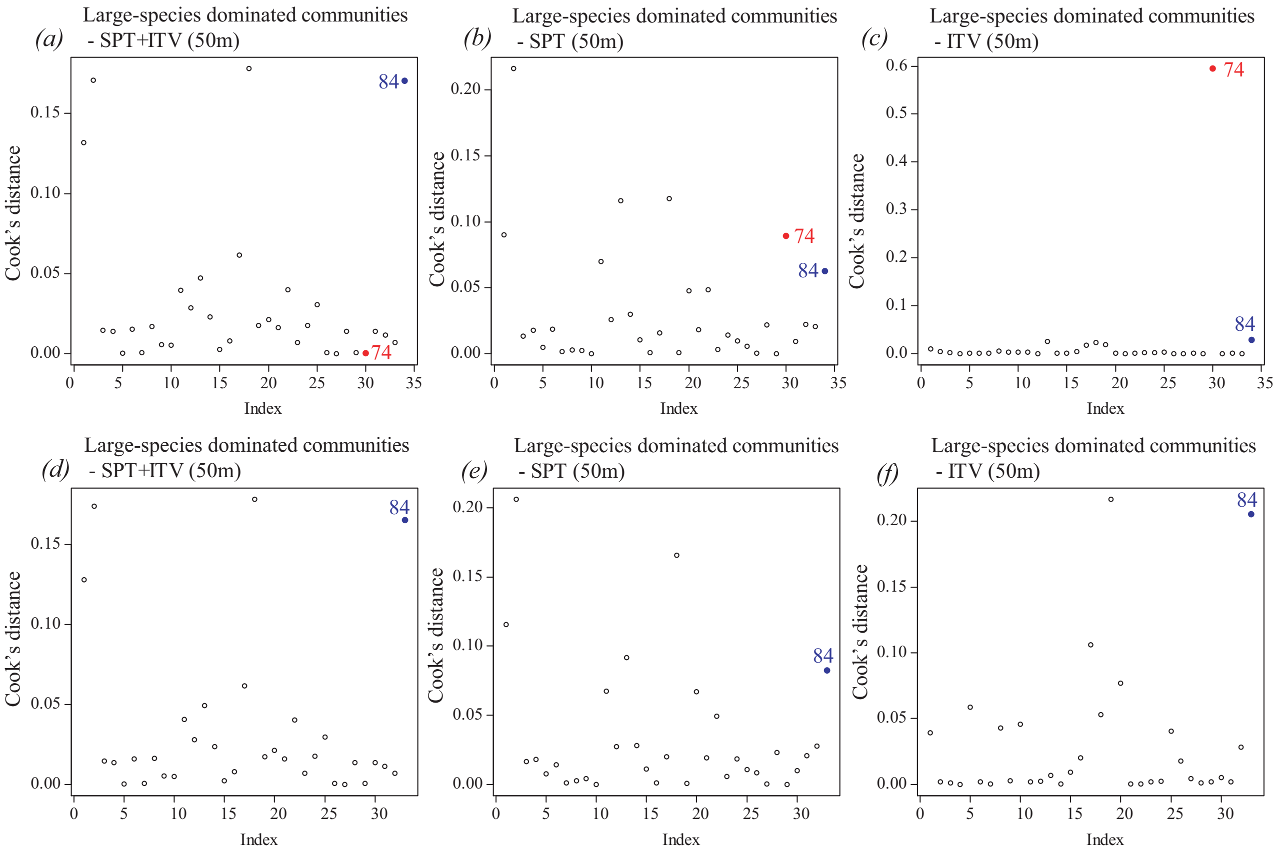
(a)
Large-species dominated communities - SPT+ITV (50m)
(b)
Large-species dominated communities - SPT (50m)
(c)
Large-species dominated communities - ITV (50m)
(d)
Large-species dominated communities - SPT+ITV (50m)
(e)
Large-species dominated communities - SPT (50m)
(f)
Large-species dominated communities - ITV (50m)
Cook's distance
Index
84
74

Figure SB6:

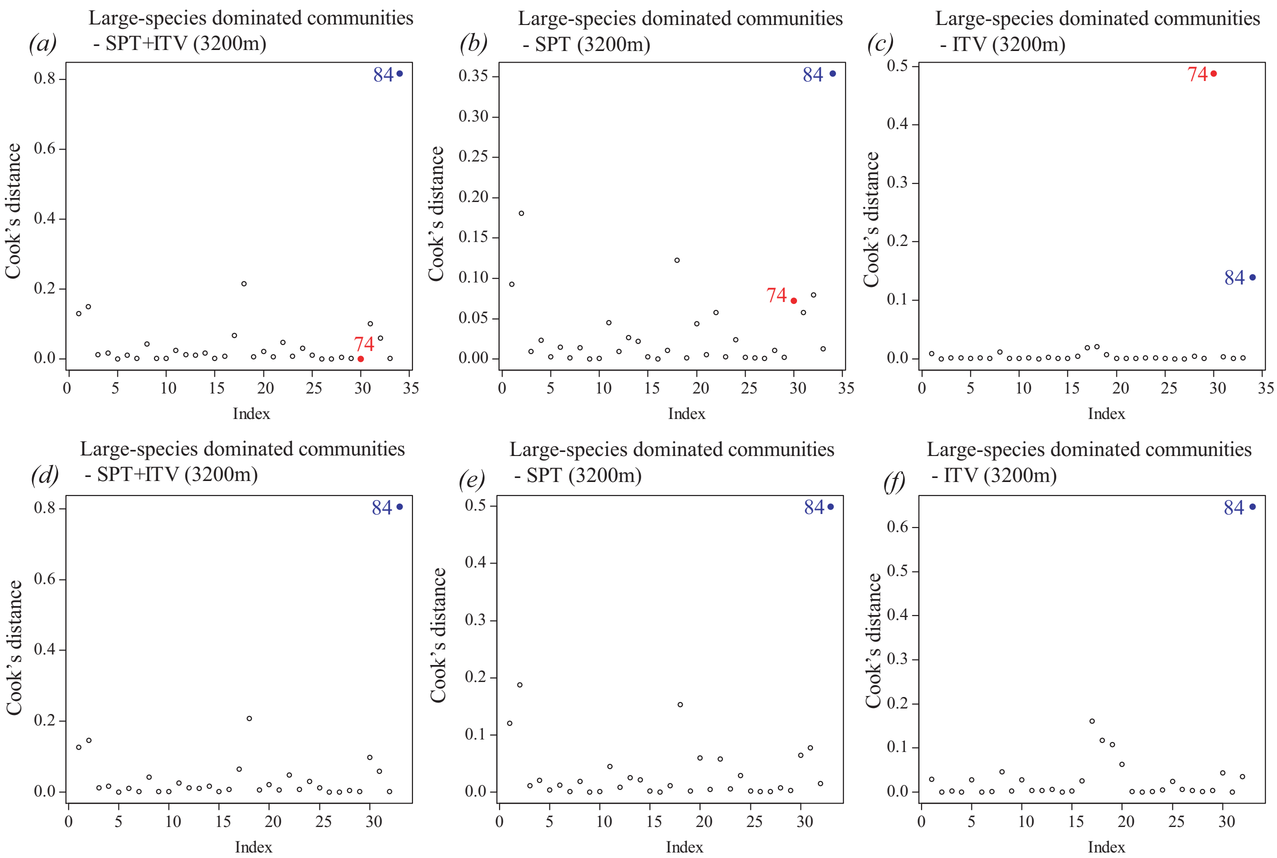
(a)
Large-species dominated communities
- SPT+ITV (3200m)
(b)
Large-species dominated communities
- SPT (3200m)
(c)
Large-species dominated communities
- ITV (3200m)
(d)
Large-species dominated communities
- SPT+ITV (3200m)
(e)
Large-species dominated communities
- SPT (3200m)
(f)
Large-species dominated communities
- ITV (3200m)
Cook's distance
Index
84
74

Figure SB7:

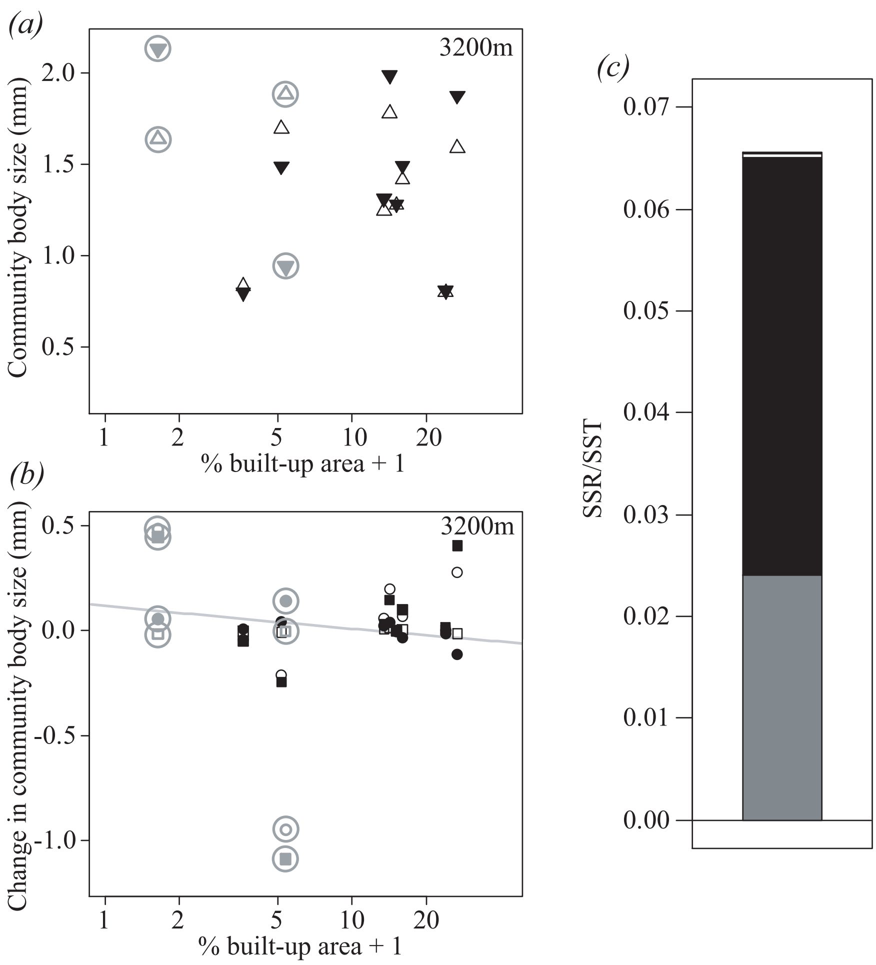
(a)
3200m
Community body size (mm)
2.0
1.5
1.0
0.5
1
2
5
10
20
% built-up area + 1
(b)
3200m
Change in community body size (mm)
0.5
0.0
-0.5
-1.0
1
2
5
10
20
% built-up area + 1
(c)
SSR/SST
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00

Figure SB8: