Liu, L, Yang, J, Yu, Z and Wilkinson, DM

The biogeography of abundant and rare bacterioplankton in the lakes and reservoirs of China.

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Figure 1 Location of the 42 sampling sites in China. FJ (included 5 reservoirs) – Fujian Province, southeast China; CJ (9 lakes) – the lower and middle reaches of Changjiang River, China; ECC (6 lakes) – east central China, IM (13 lakes) – Inner Mongolia, north China; NEC (9 lakes) – northeast China.
Figure 2 MDS ordination for bacterioplankton communities from 42 lakes and reservoirs of China. All – all bacterial taxa, abundant – abundant taxa, rare – rare taxa. For region abbreviations see Figure 1.
Figure 3 Spearman’s rank correlations between the Bray-Curtis similarity of bacterioplankton community and geographical distance (n is the number of comparison).
Figure 4 Spearman’s rank correlation between median of bacterial OTU relative abundance and number of sites occupied (n is the number of OTUs).
Figure 5 CCA ordination showing the bacterial community composition in relation to significant local environmental variables and regional geographical factors (P < 0.05). WT – water temperature, EC – electrical conductivity, Turb – turbidity, TN – total nitrogen.
Table 1 Mantel and partial Mantel tests for the correlation between community similarity and local environmental and regional factors using Spearman’s coefficient

<table>
<thead>
<tr>
<th>Effects of</th>
<th>Controlling for</th>
<th>Abundant bacteria</th>
<th>Rare bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>0.383**</td>
<td>0.470**</td>
<td></td>
</tr>
<tr>
<td>Regional</td>
<td>0.402**</td>
<td>0.325**</td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td>Regional</td>
<td>0.331**</td>
<td>0.401**</td>
</tr>
<tr>
<td>Regional</td>
<td>Local</td>
<td>0.353**</td>
<td>0.190*</td>
</tr>
</tbody>
</table>

The significances are tested based on 999 permutations. ** P < 0.01, * P < 0.05.