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

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### Article

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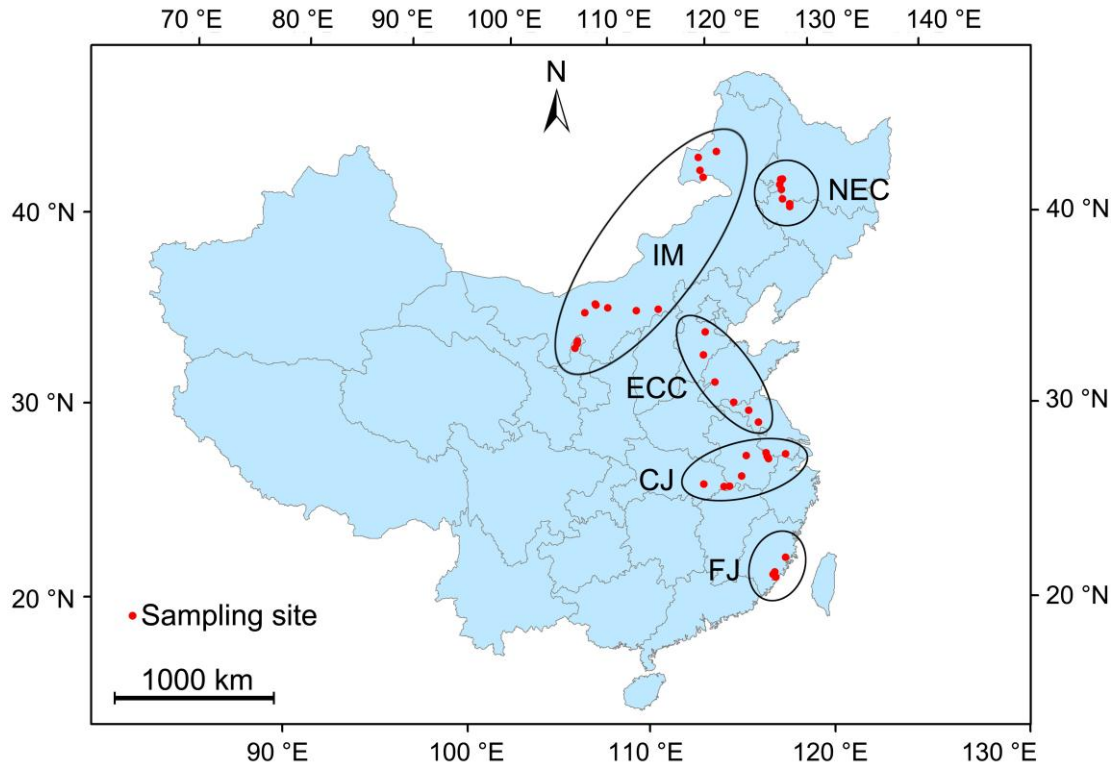
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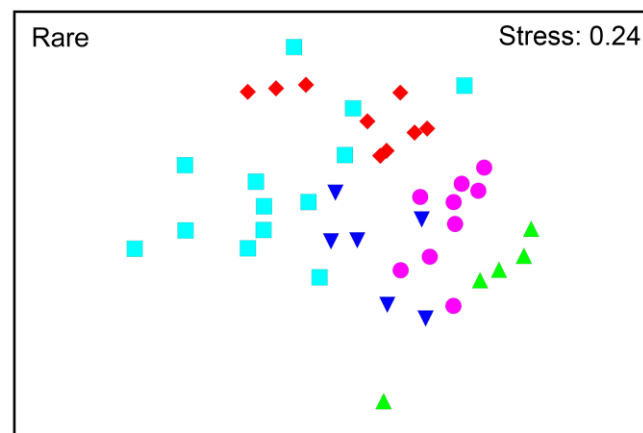
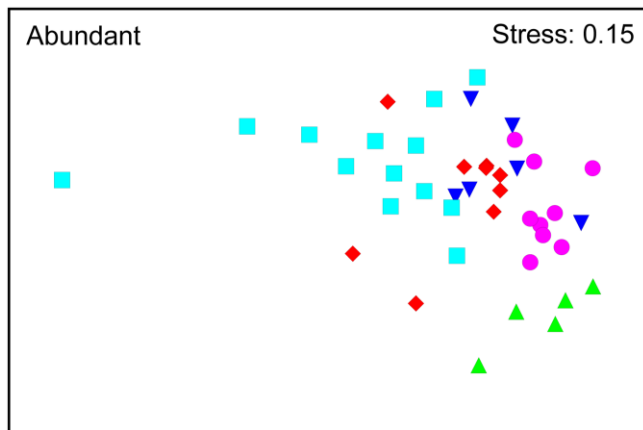
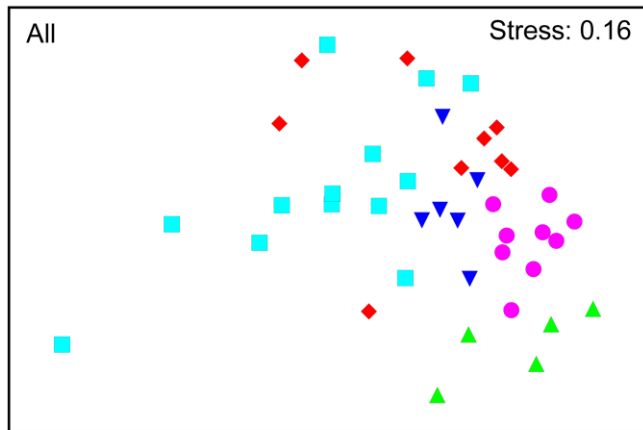
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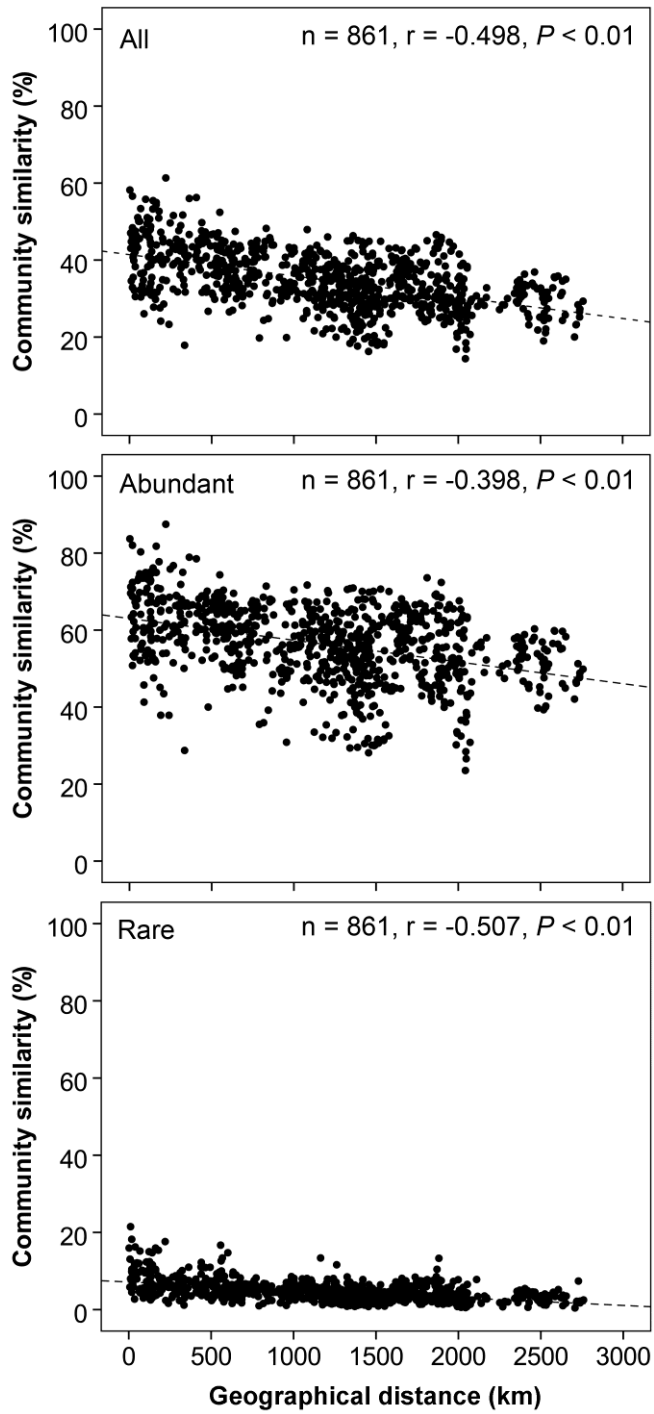


**Figure 1** Location of the 42 sampling sites in China. FJ (included 5 reservoirs) – Fujian Province, southeast China; CJ (9 lakes) – the lower and middle reaches of Changjiang River, China; ECC (6 lakes) – east central China, IM (13 lakes) – Inner Mongolia, north China; NEC (9 lakes) – northeast China.

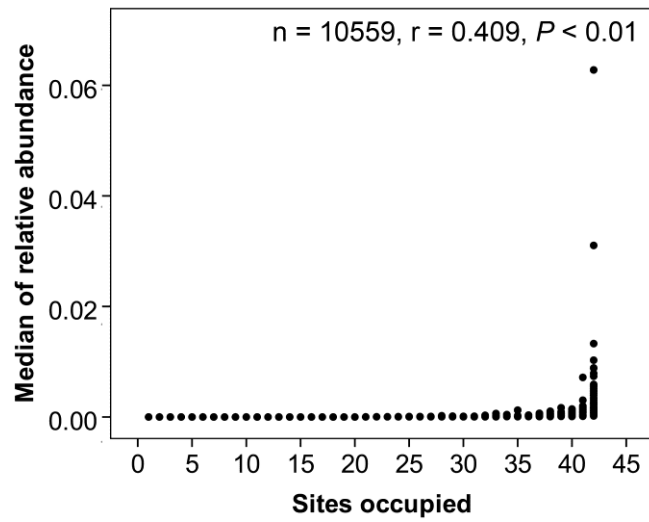


▲ FJ    ● CJ    ▼ ECC    ◆ NEC    ■ IM

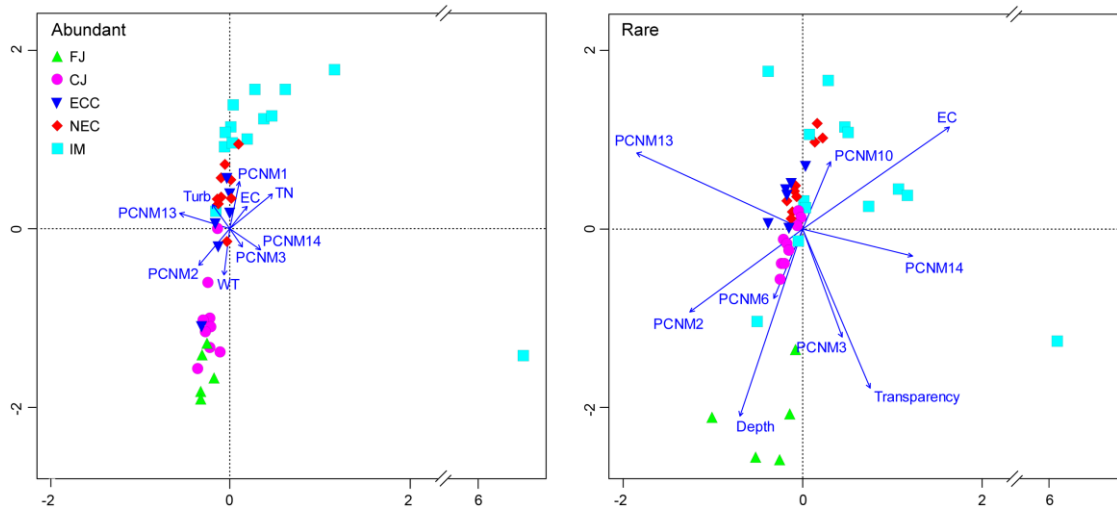
**Figure 2** MDS ordination for bacterioplankton communities from 42 lakes and reservoirs of China. All – all bacterial taxa, abundant – abundant taxa, rare – rare taxa. For region abbreviations see Figure 1.



**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

Effects of	Controlling for	Abundant bacteria	Rare bacteria
Local		0.383**	0.470**
Regional		0.402**	0.325**
Local	Regional	0.331**	0.401**
Regional	Local	0.353**	0.190*

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