



**Figure S7.** Comparison of principal environmental parameters in the upstream tributaries, the Kaidu River and Lake Bosten. Horizontal bars in the box plots indicate median proportional values. Lower and upper edges of the boxes represent the approximate 1<sup>st</sup> and 3<sup>rd</sup> quartiles, respectively. The upper and lower whiskers extend to data no more than 1.5 times the interquartile range from the upper edge and lower edge of the box, respectively. Kruskal-Wallis test was performed to examine differences among the three sampling types with P-value presented at the top of each panel. WT, water temperature; EC, electrical conductivity; TDS, total dissolved solids; DO, dissolved oxygen; DOC, dissolved organic carbon; TN, total nitrogen; TP, total phosphorus; Chl-*a*, chlorophyll-*a*; TSS, total suspended solids; BA, bacterial abundance.