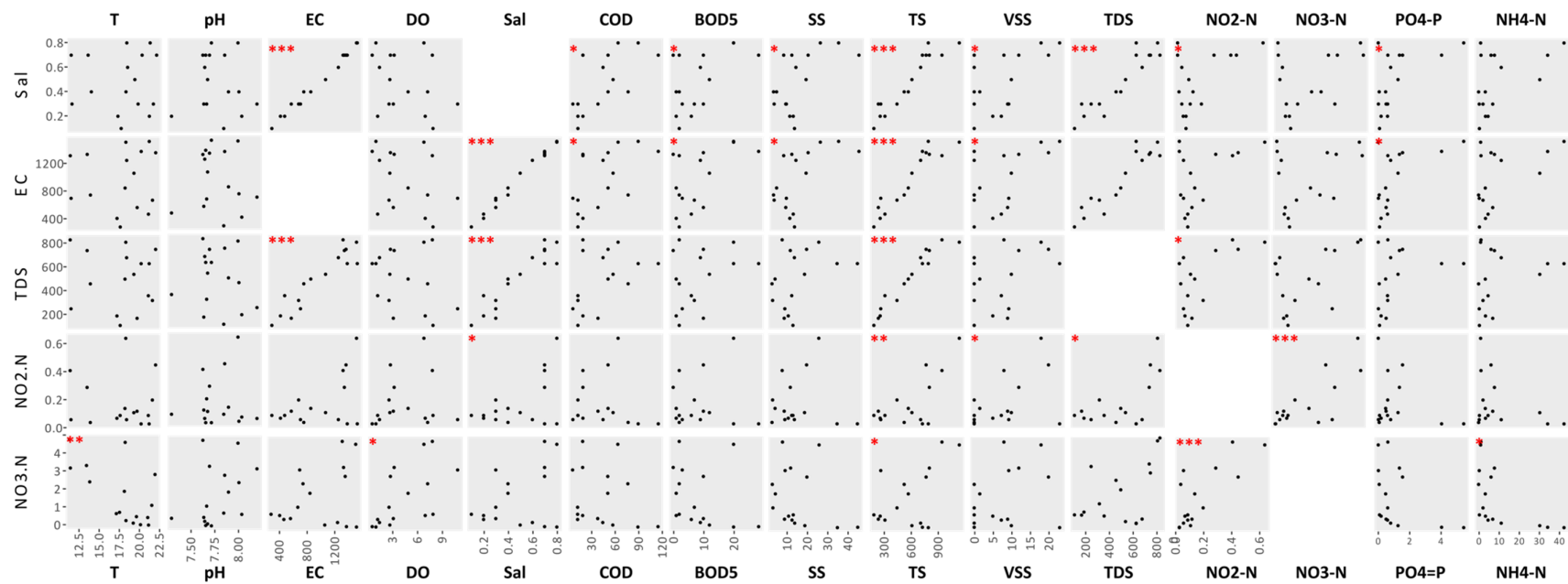**Figure S1**. The relative contribution of different types of substrates per site and season in River Laspias during sampling campaign.

Figure S2. Summary plot depicting the pairwise relationships between physicochemical parameters and nutrients across sites. The significance of the relationship was explored by GLMM analysis (Gaussian error distribution, identity function). Significance levels are indicated as follows: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$, while absence of asterisks indicates non-significant relationship.