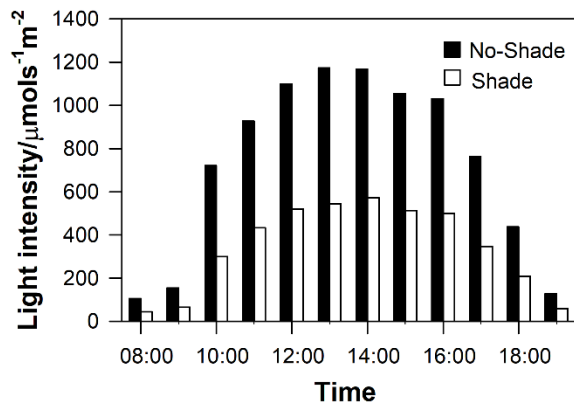
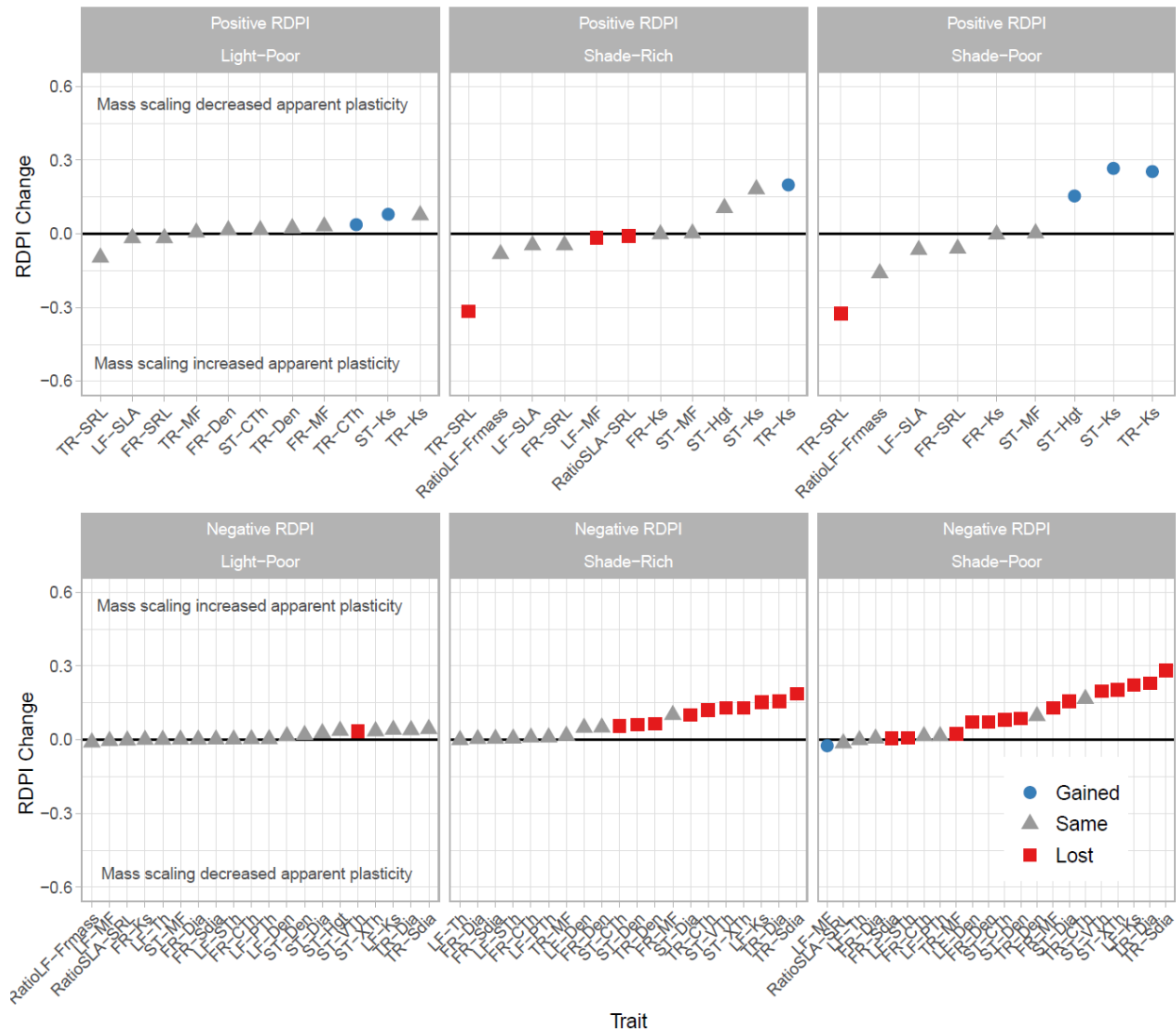


**Table S1.** List of genotypes used in this study, it's common name, the corresponding plant ID from the USDA GRIN Database for each genotype, and the market type of each genotype.

Genotype ID	USDA GRIN ID	Common name	Market Type
8	PI 552943	RHA 280	RHA-NonOil
11	PI 561920	HA 380	HA-NonOil
12	PI 561921	RHA 381	RHA-Oil
16	PI 578011	RHA 389	RHA-Oil
31	PI 607921	R-188	RHA-Oil
98	PI 664201	RHA 326	RHA-NonOil
126	PI 549006	HA GERMPLASM POOL III-L	Oil introgressed
227	PI 650753	HA-R2	HA-Oil
231	PI 509051	HA 341	HA-Oil
252	PI 618727	HA 423	HA-Oil

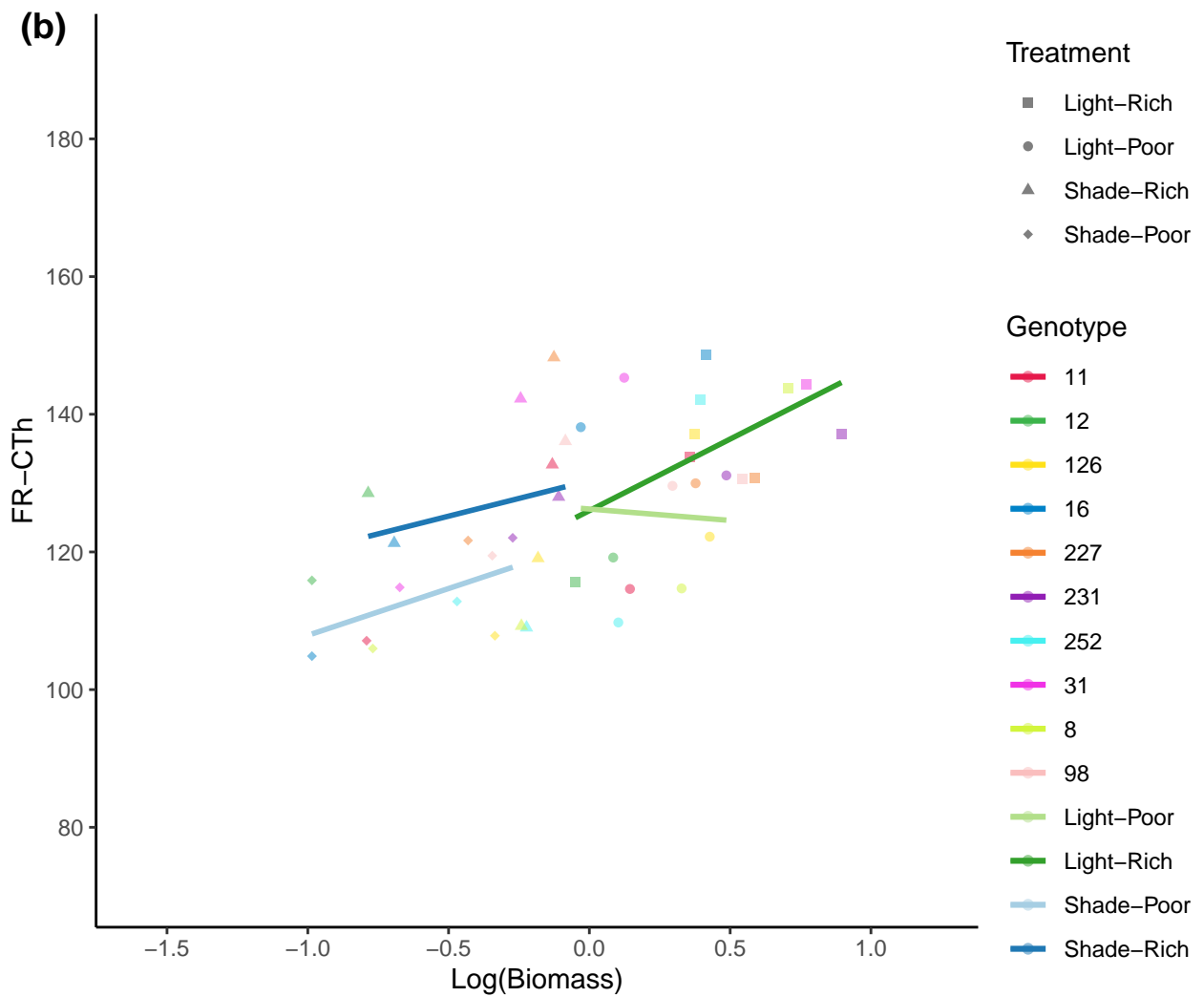
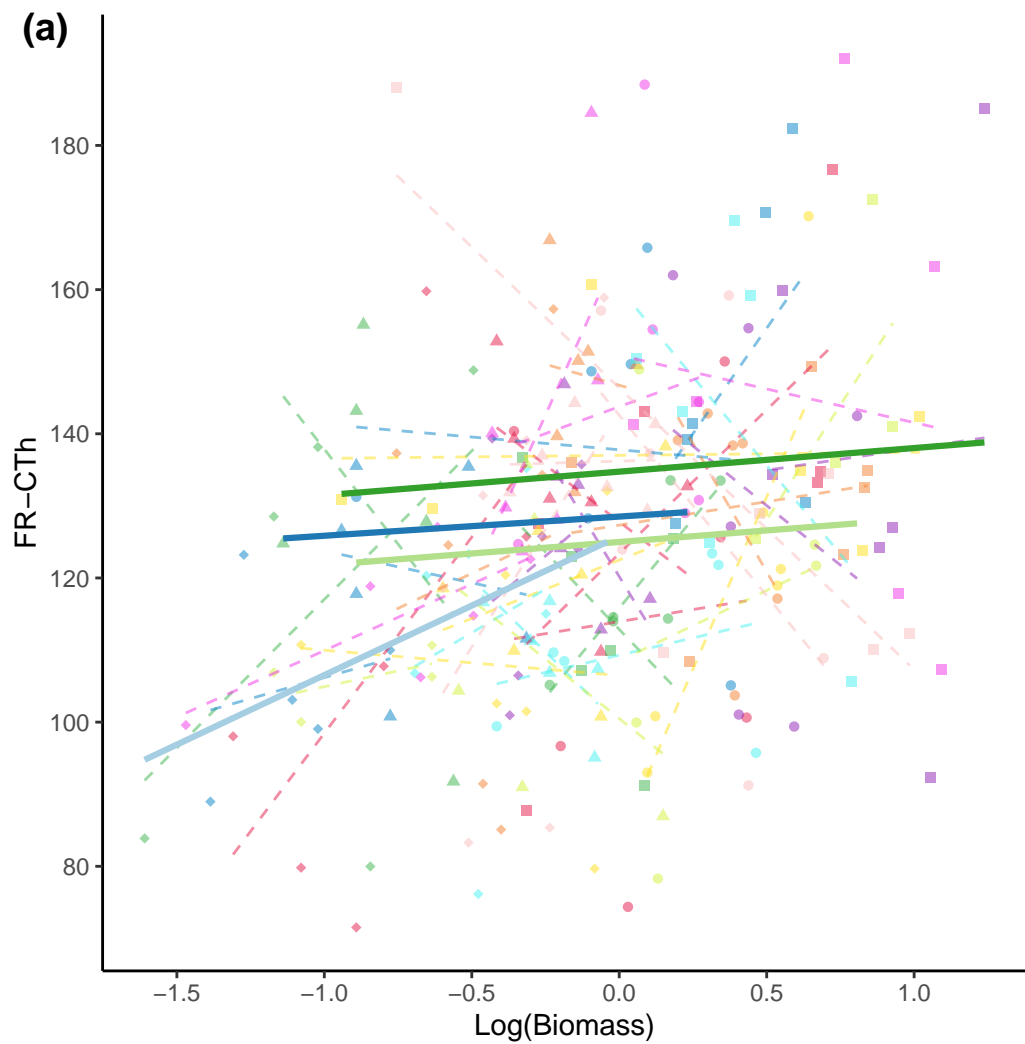


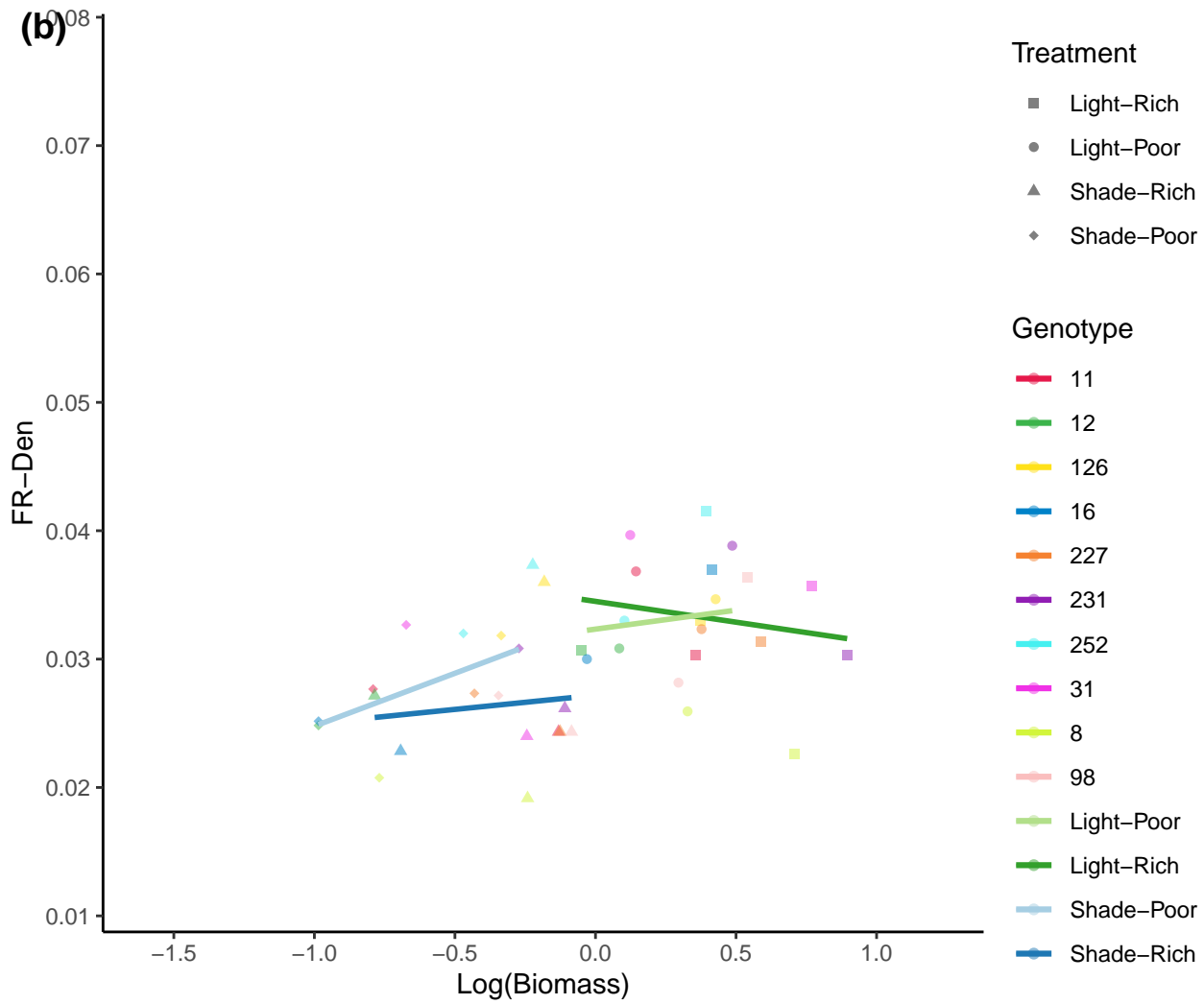
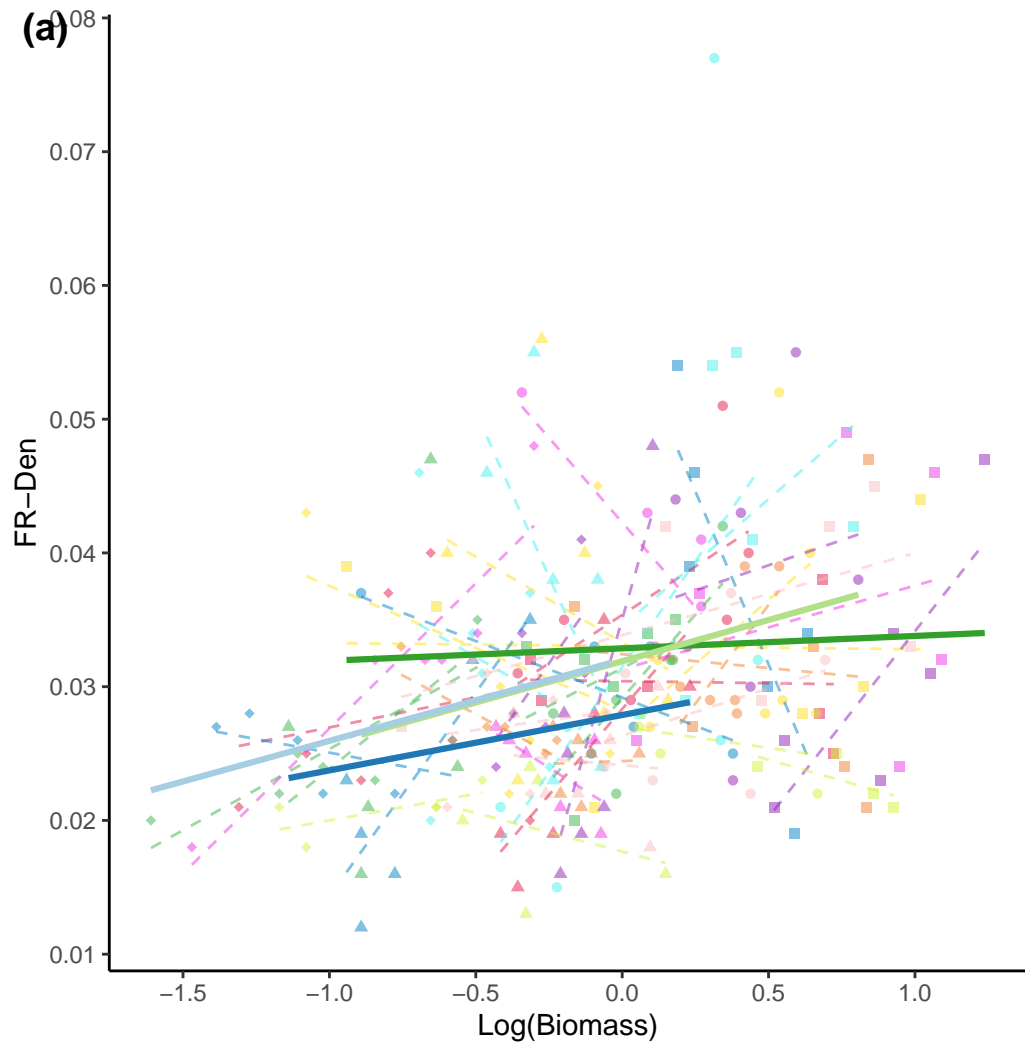
**Fig S1.** Comparison of light levels between shaded and unshaded treatment. On average the low-light treatment received 50% of the photon flux density of the high-light treatment. Light intensities in each treatment were measured with a handheld light meter (LI-189; LI-COR, Lincoln, NE). Readings were taken from 8:00 AM to 7:00 PM. The light sensor was held near the sand level in each plot. We presented representative data from May 15th, a cloud-free day.

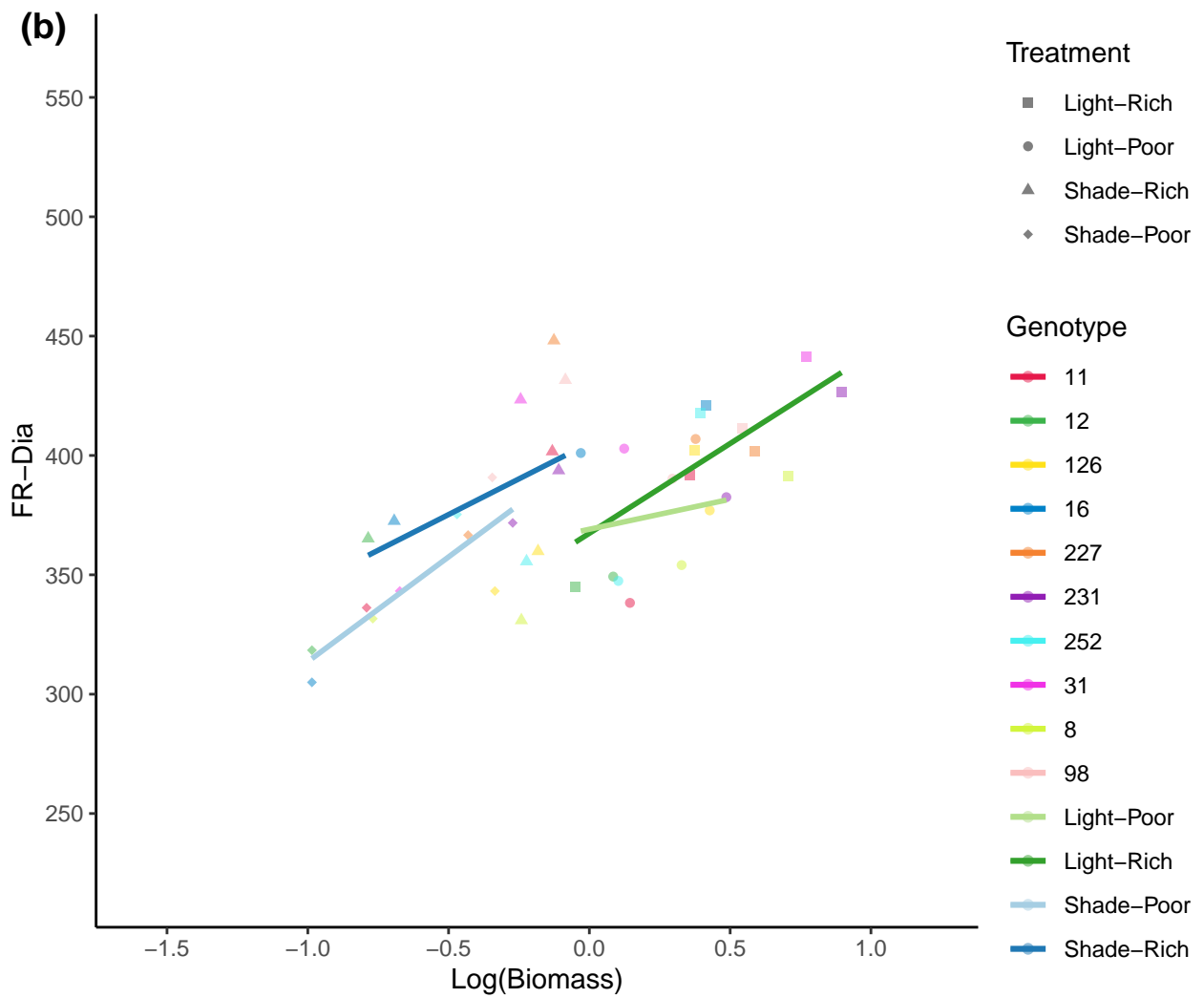
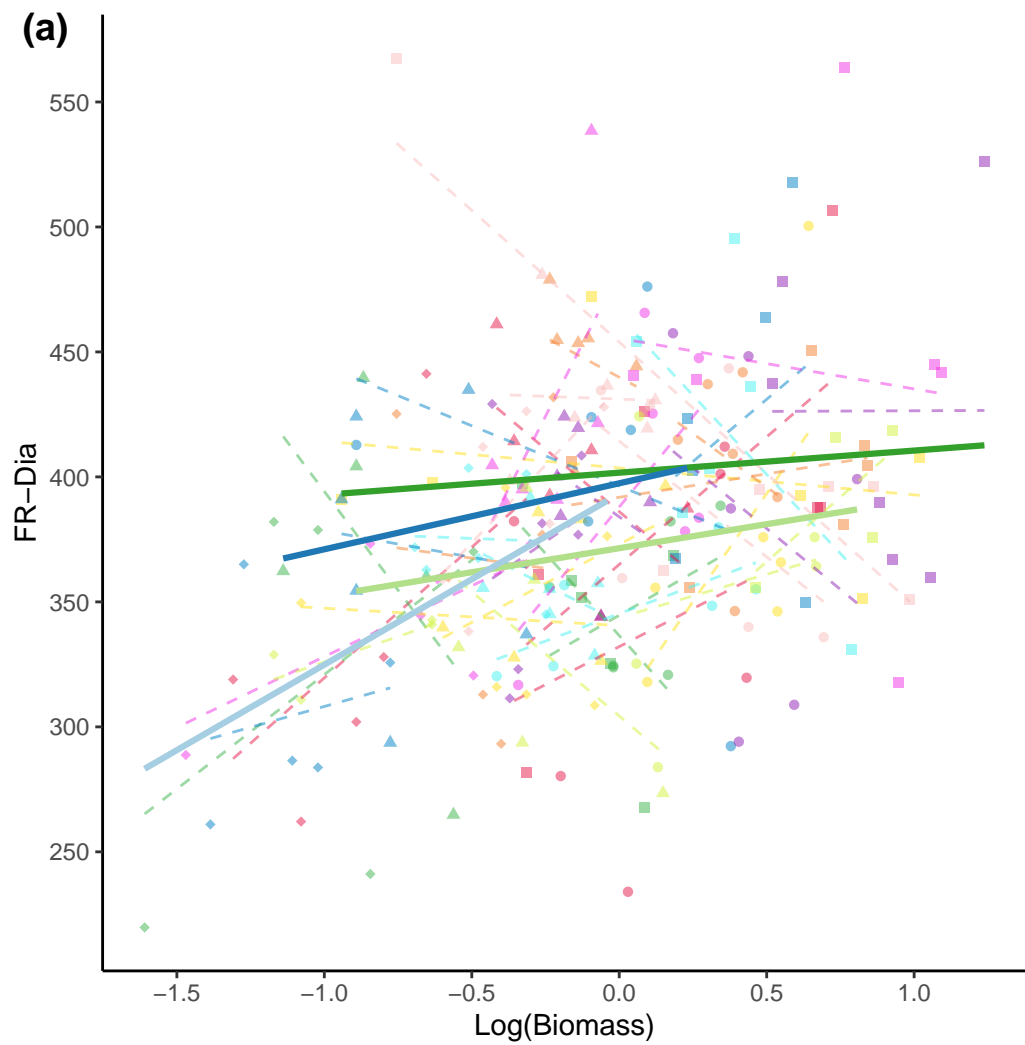


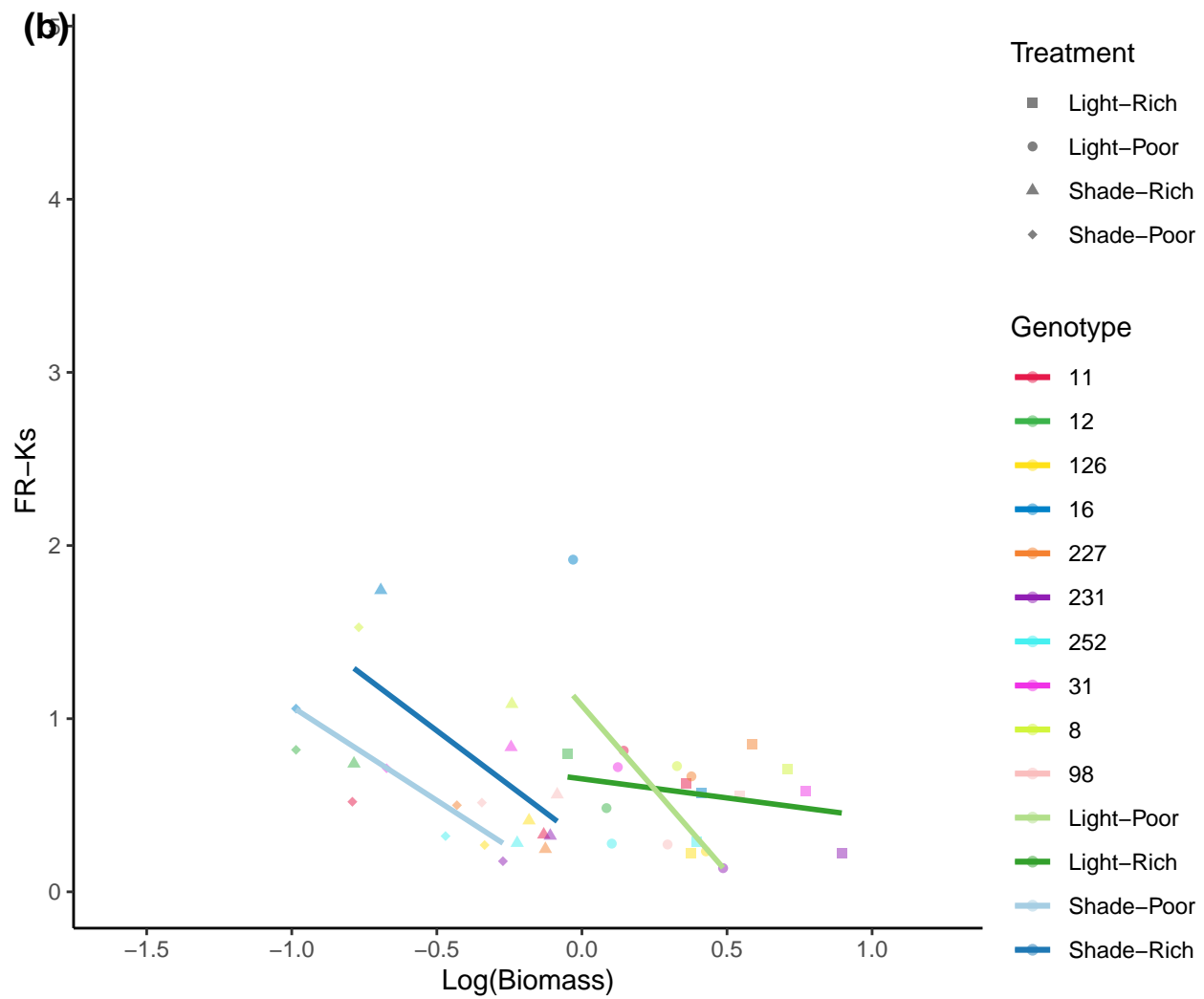
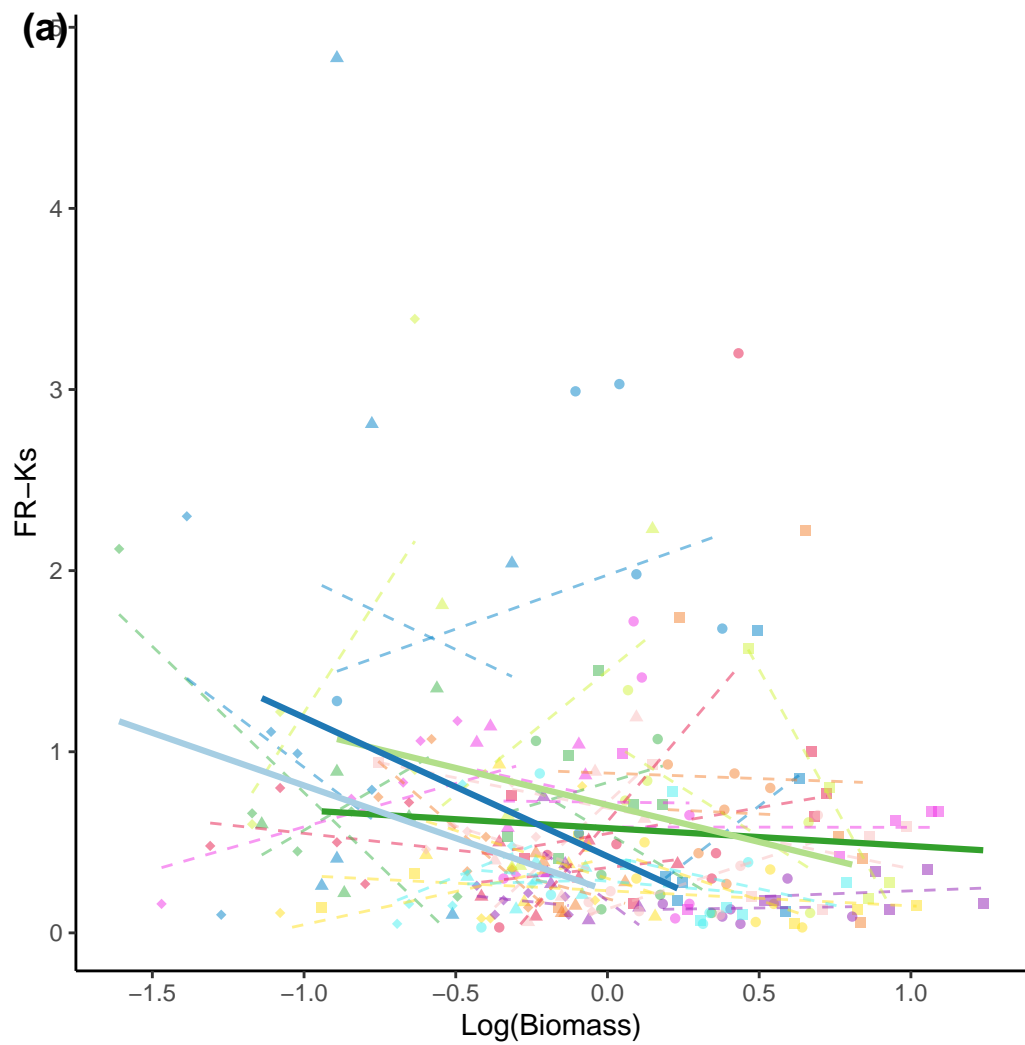
**Fig S2.** Effect of accounting for mass scaling in traits when calculating relative distance plasticity index (RDPI). RDPI changes are shown per treatment (Light/Shade, full sun/50% shade; Rich/Poor, full nutrients/10% nutrients) and whether RDPI measures were positive or negative when initially compared to control (Light-Rich). For positive RDPI values (traits that increase in trait value with stress) a positive change when taking mass scaling into account shows that mass scaling decreased apparent (as measured initially) plasticity (i.e taking size scaling into account shows increased plasticity). A negative change on the other hand shows that the apparent plasticity was enhanced by mass scaling (i.e taking size scaling into account shows decreased plasticity). For negative RDPI values (traits that decrease in trait value with stress) the effect of the sign of change is reversed. Symbols indicate whether RDPI significance (different from zero) is gained (circles), lost (squares), or remains unchanged (triangles, when taking biomass into account).

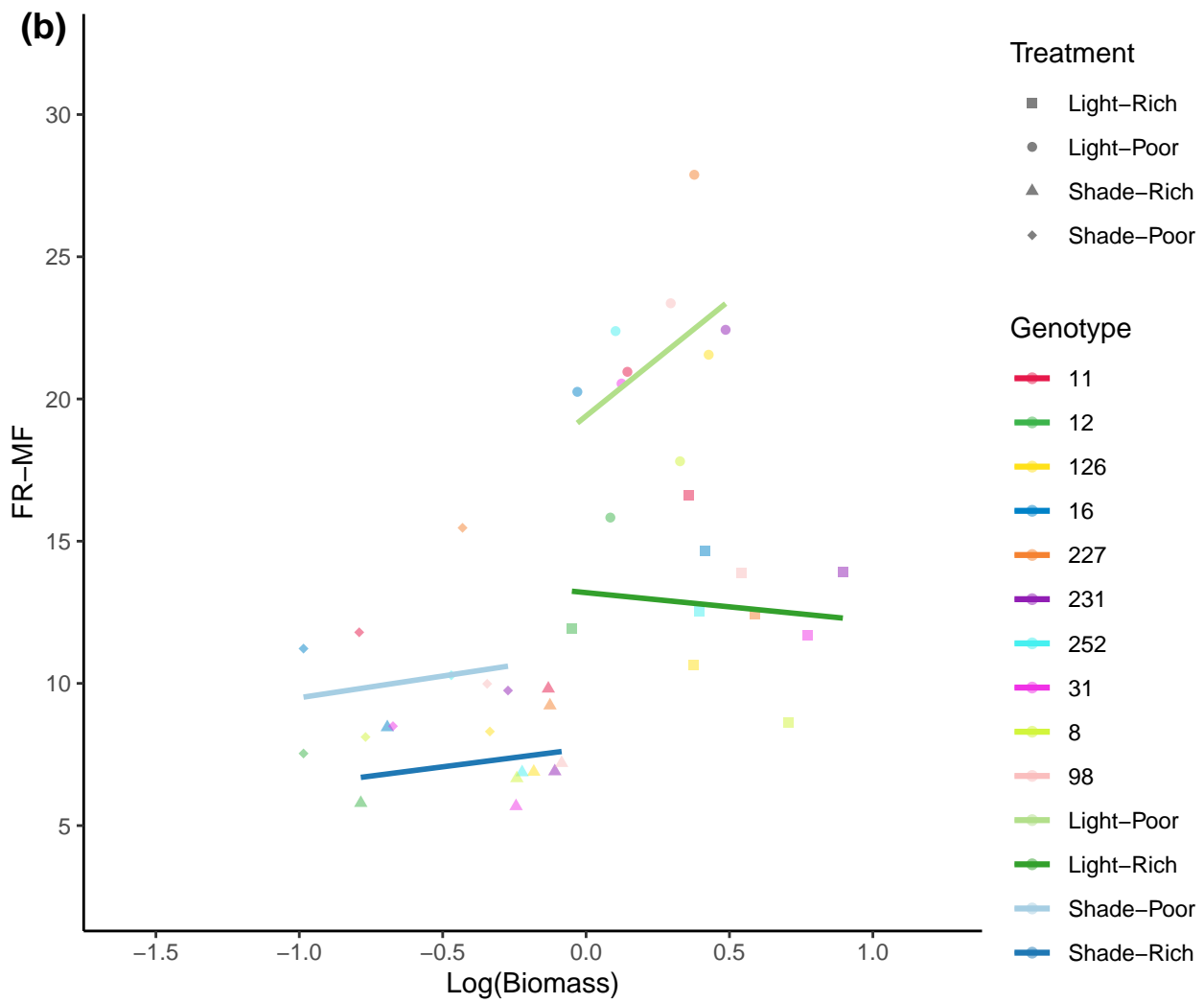
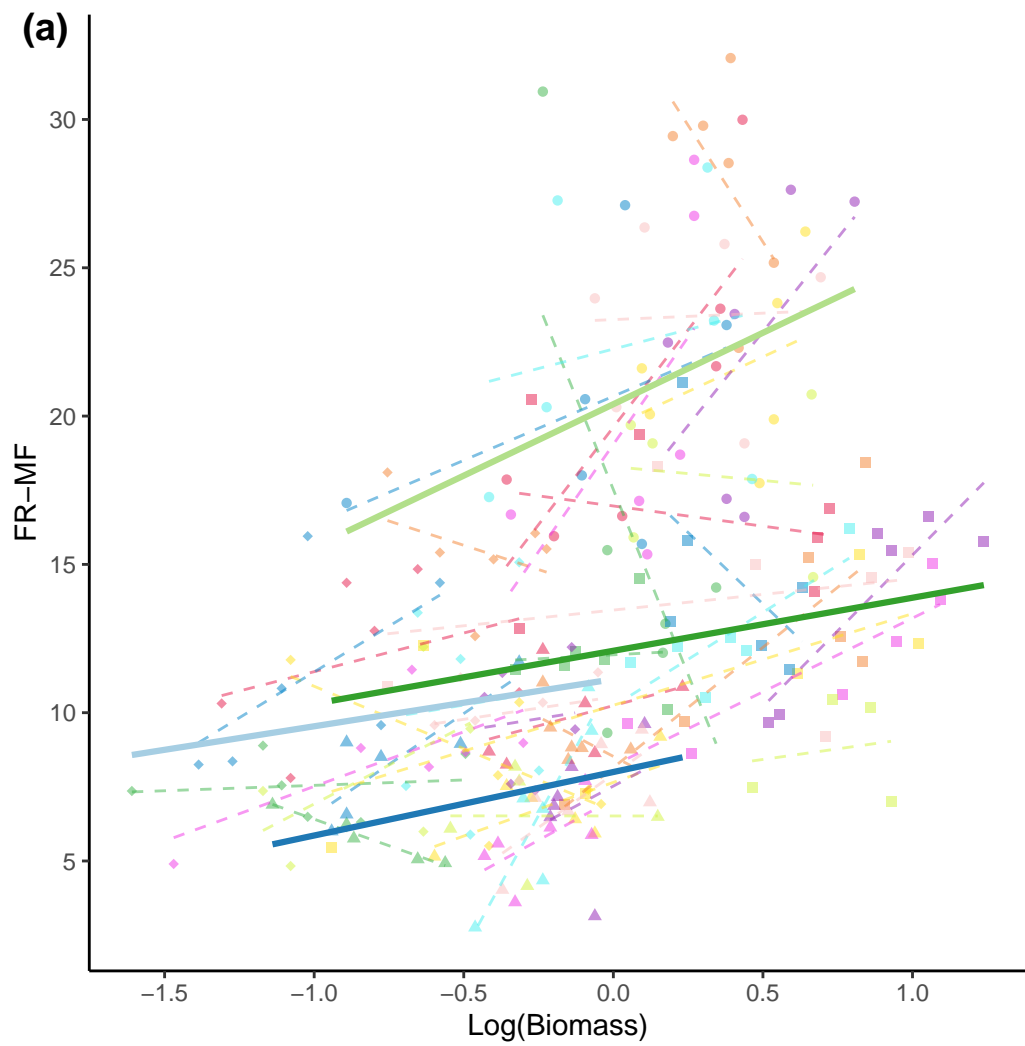
**Fig S3.** Mass scaling relationship between biomass and trait value within genotypes and across genotypes per treatments. (a) Mass scaling relationships per genotype (dotted lines) based on individual plants (points) with treatment fit line (solid lines) (b) Mass scaling relationship across genotypes (points) per treatment (solid lines) .



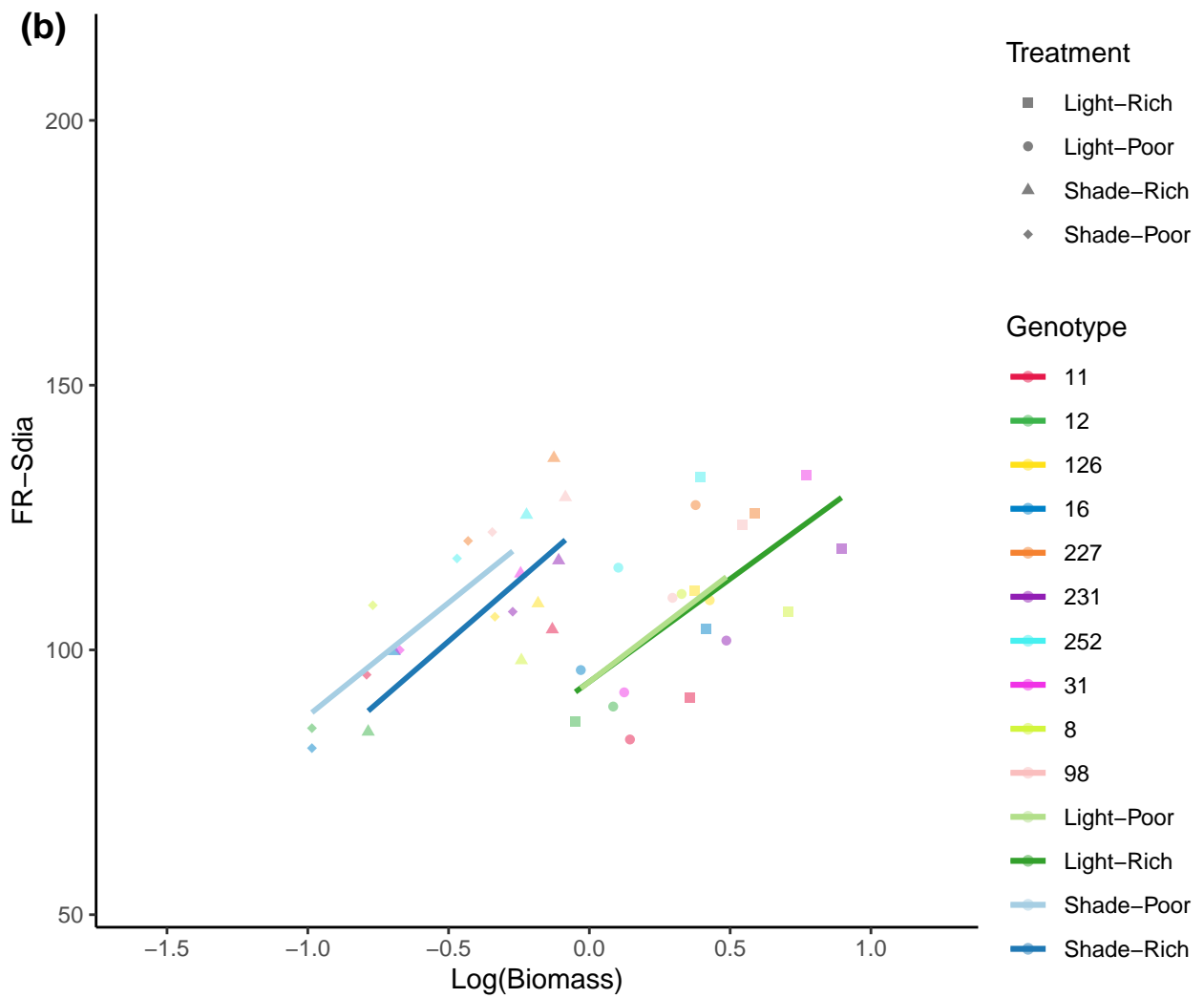
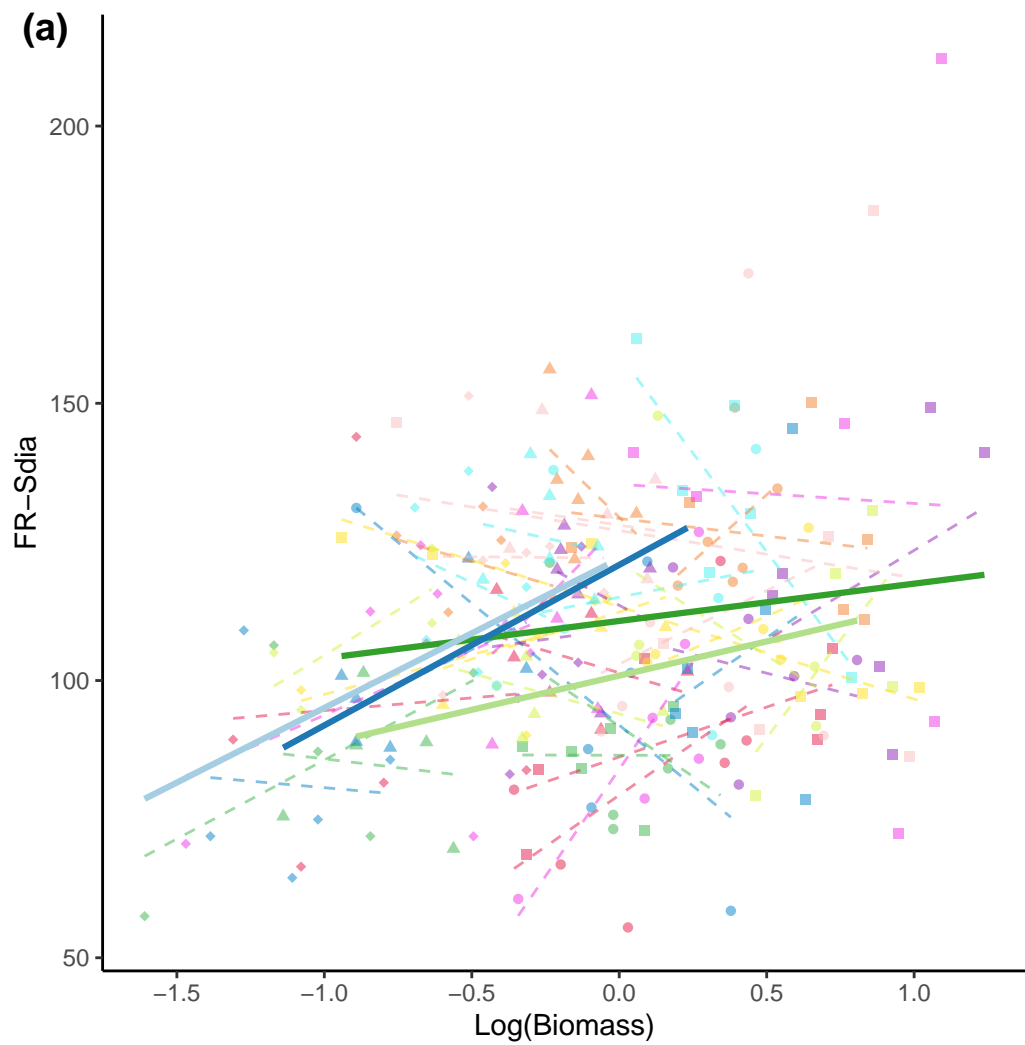


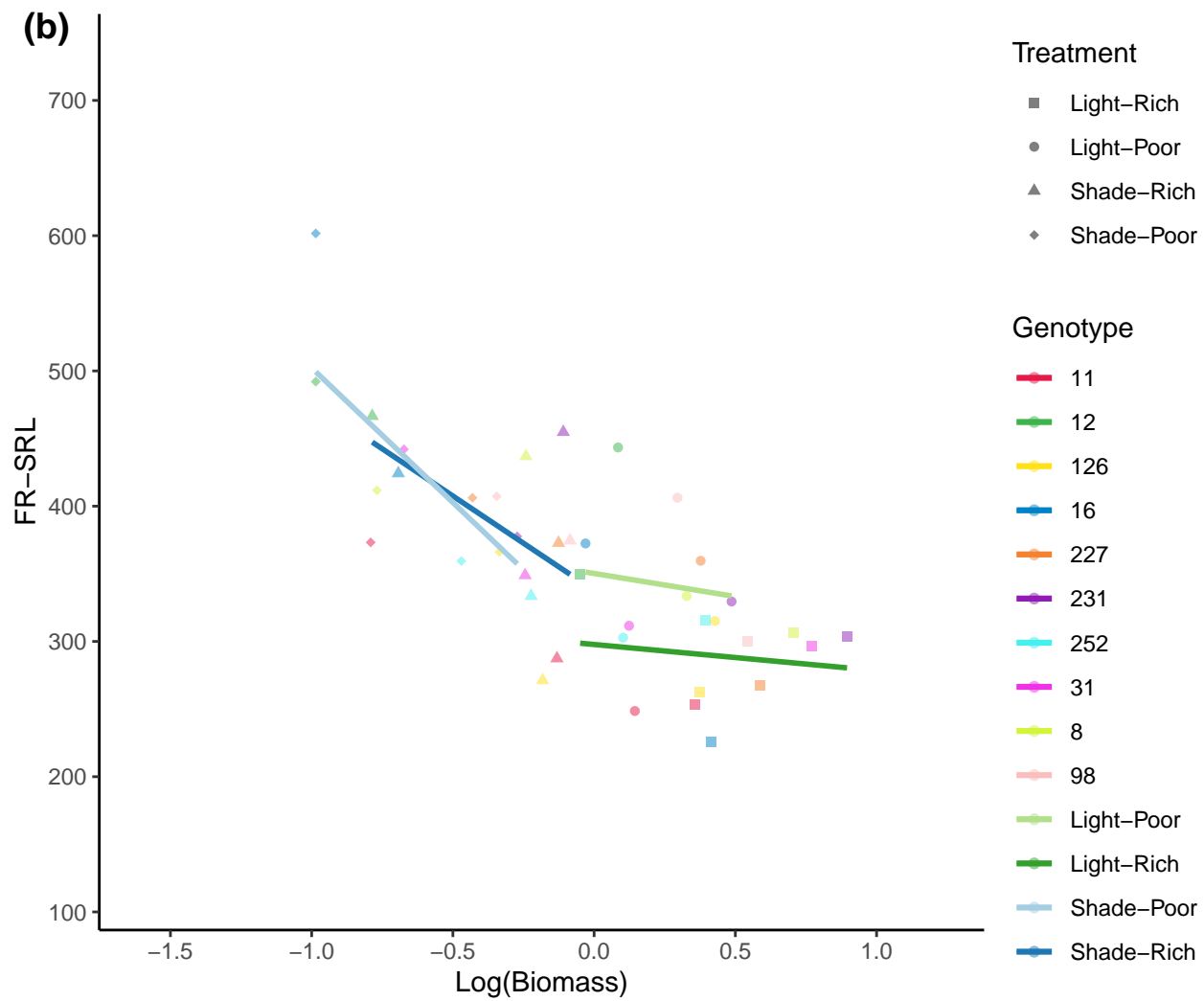
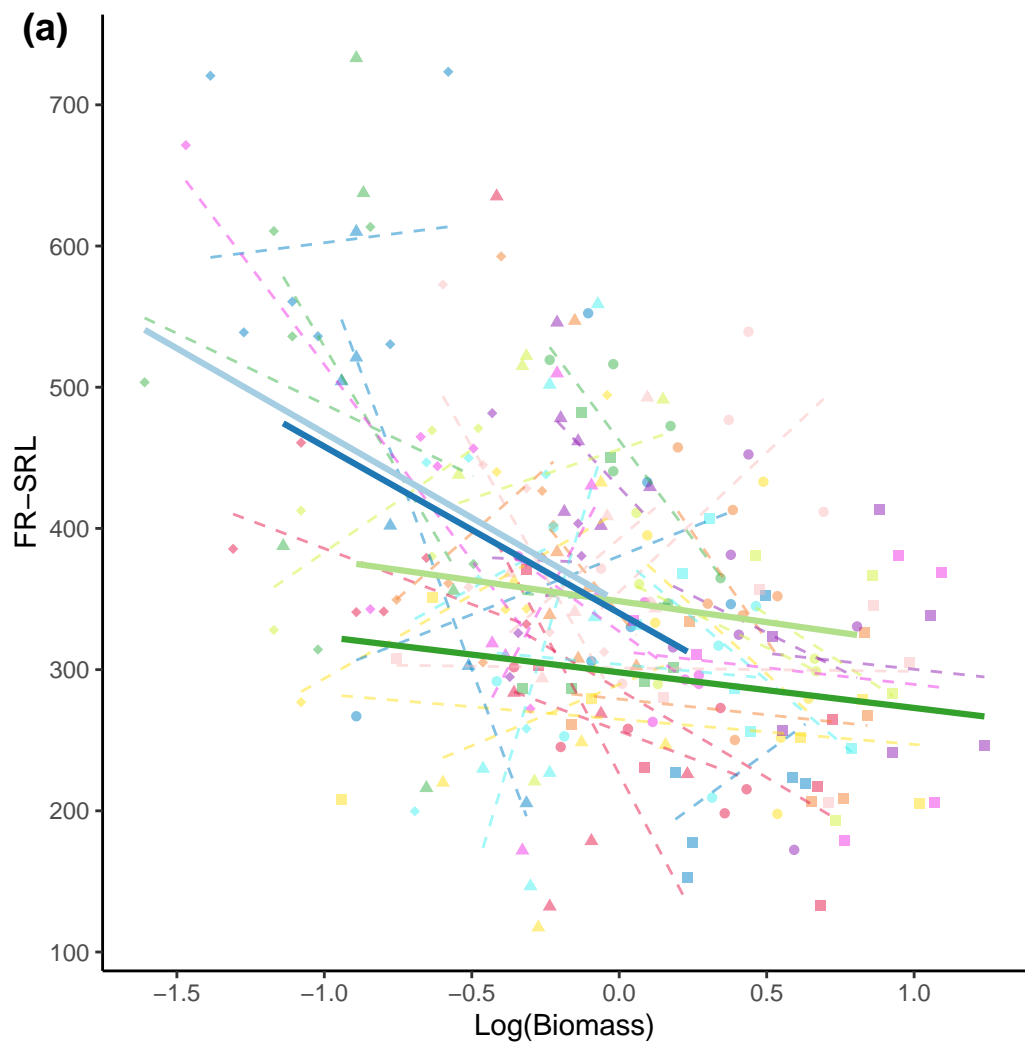


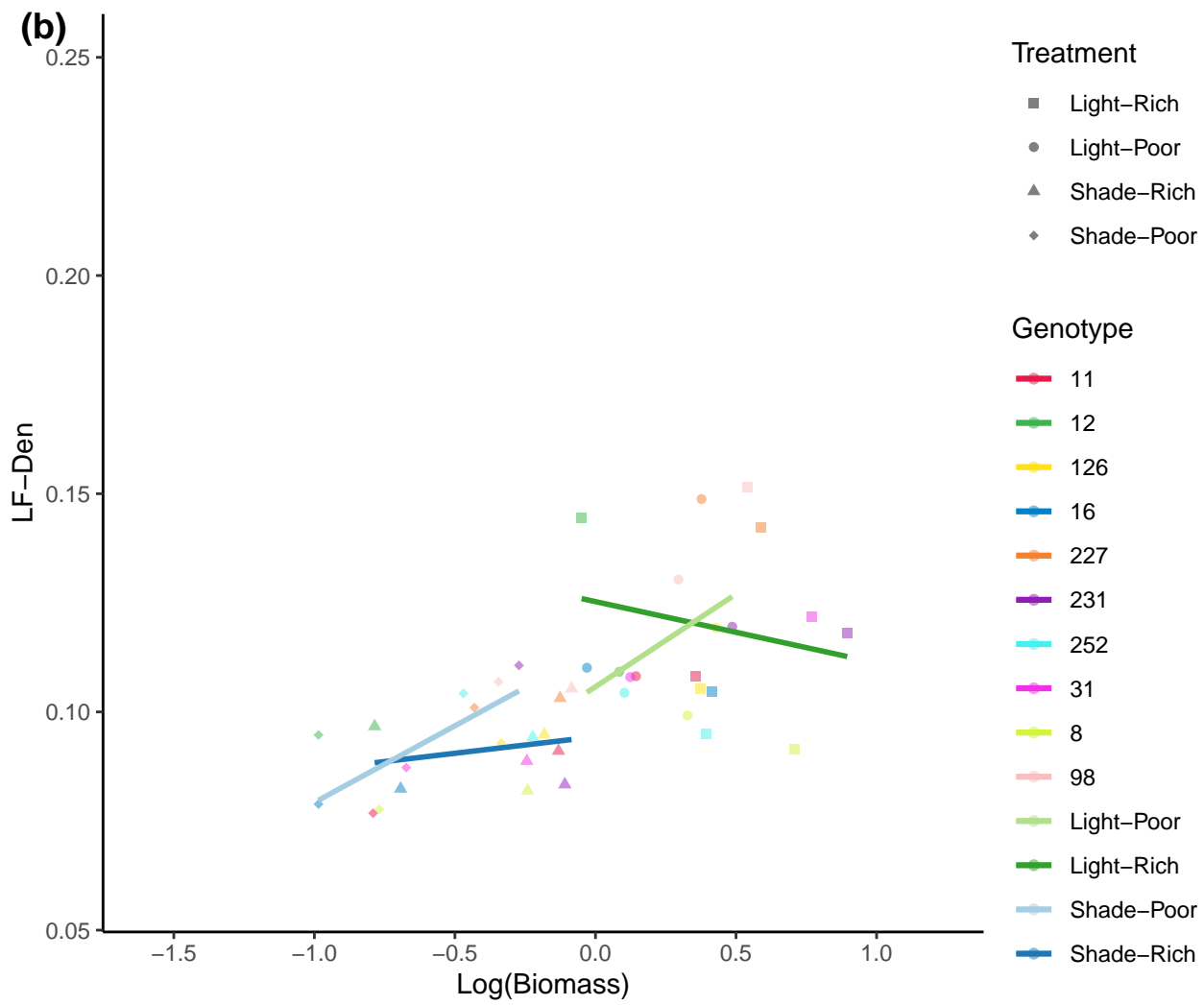
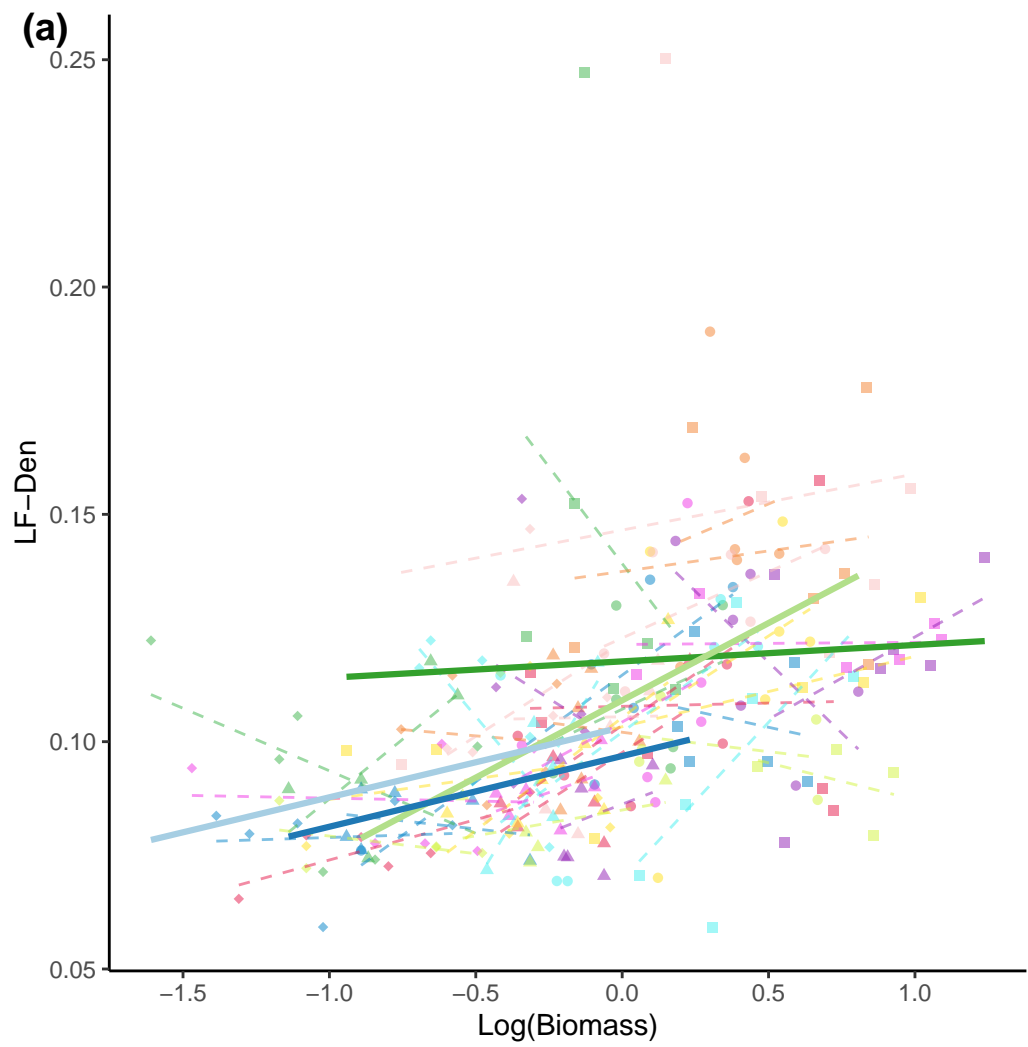


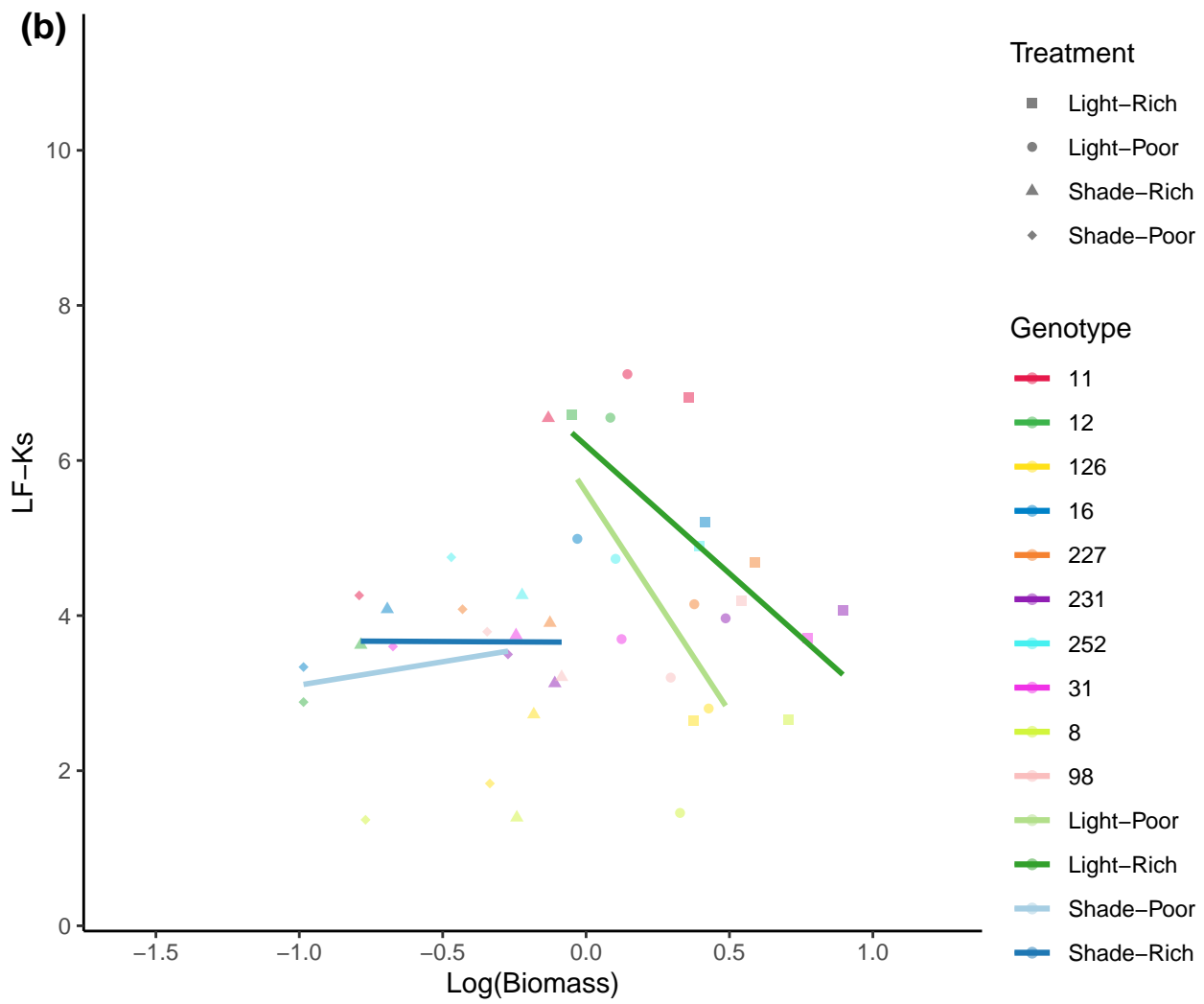
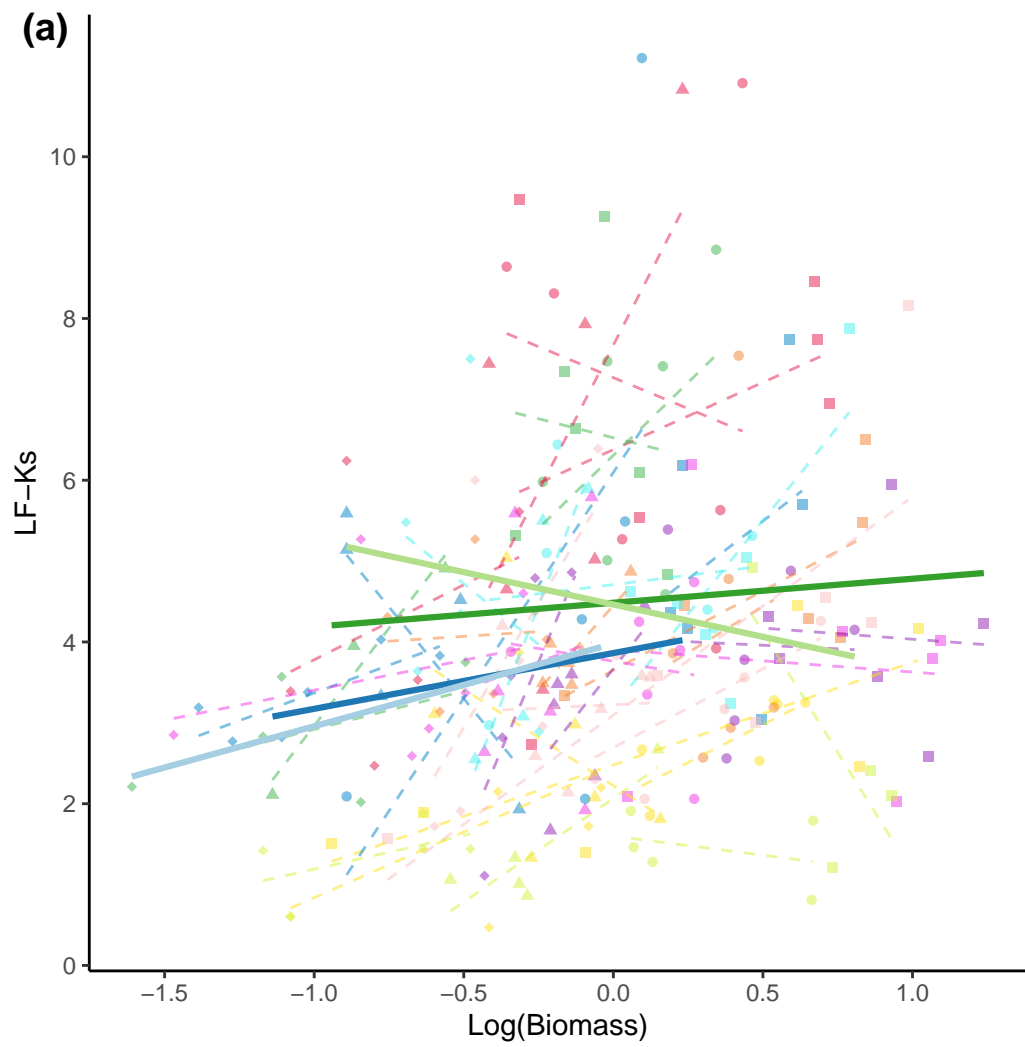


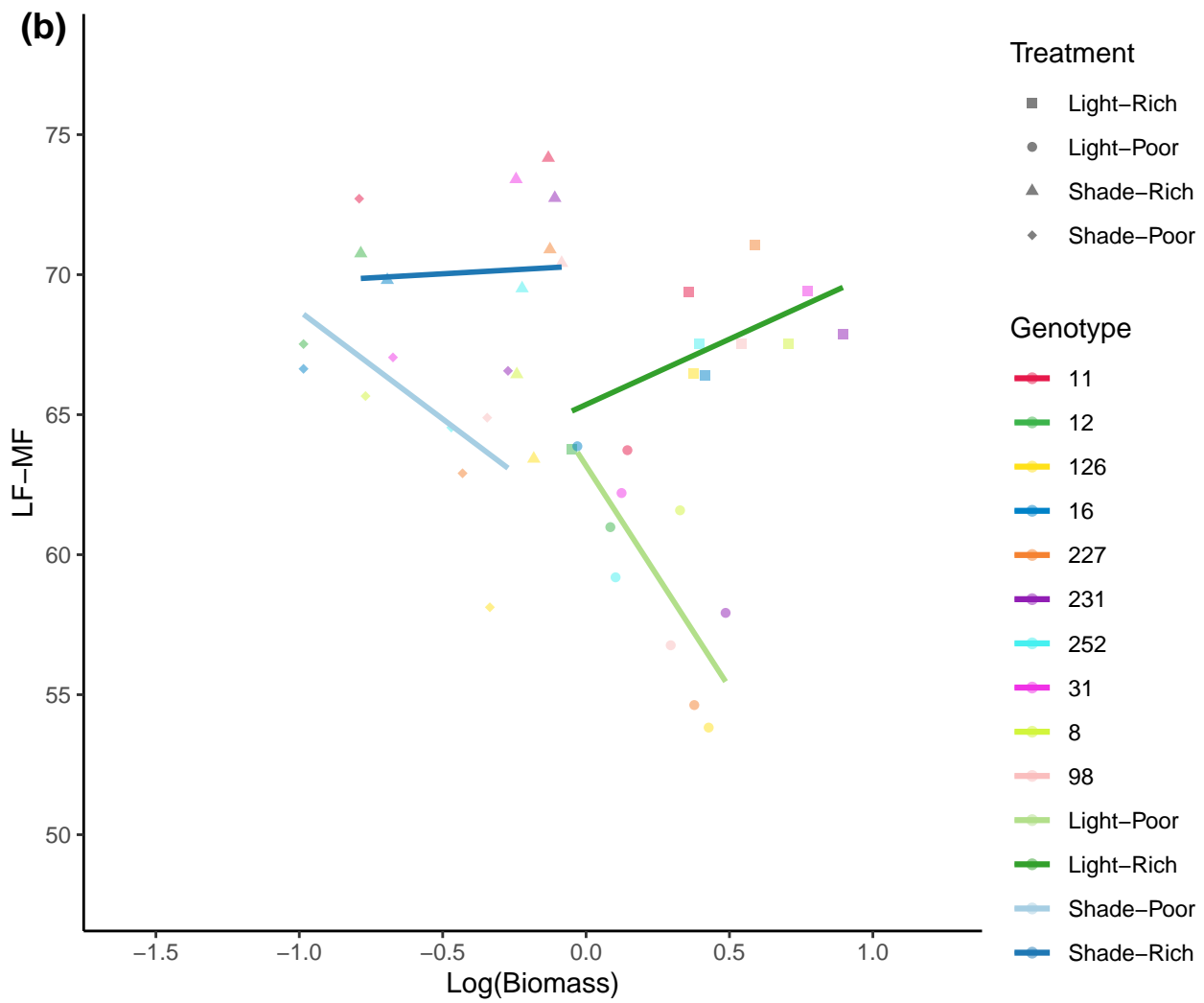
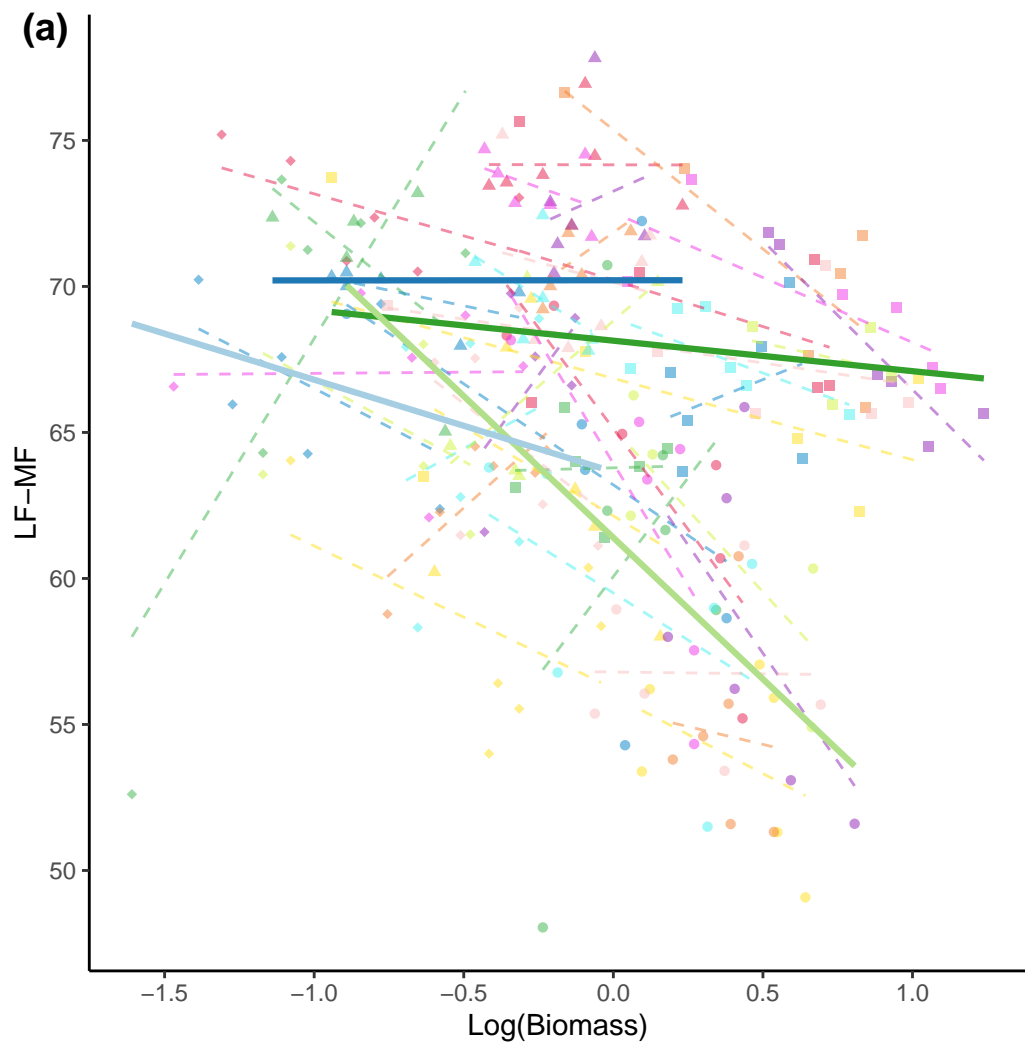


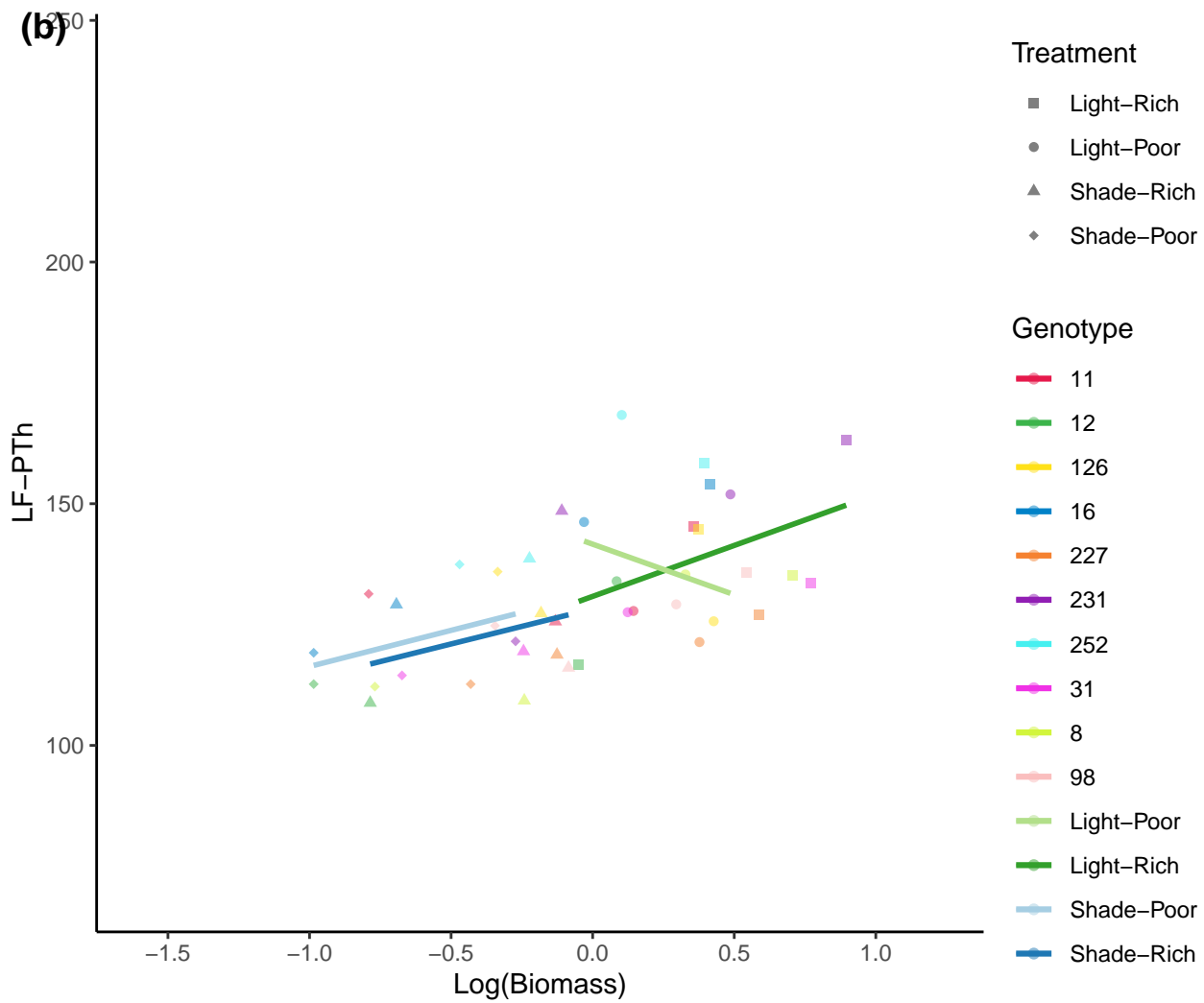
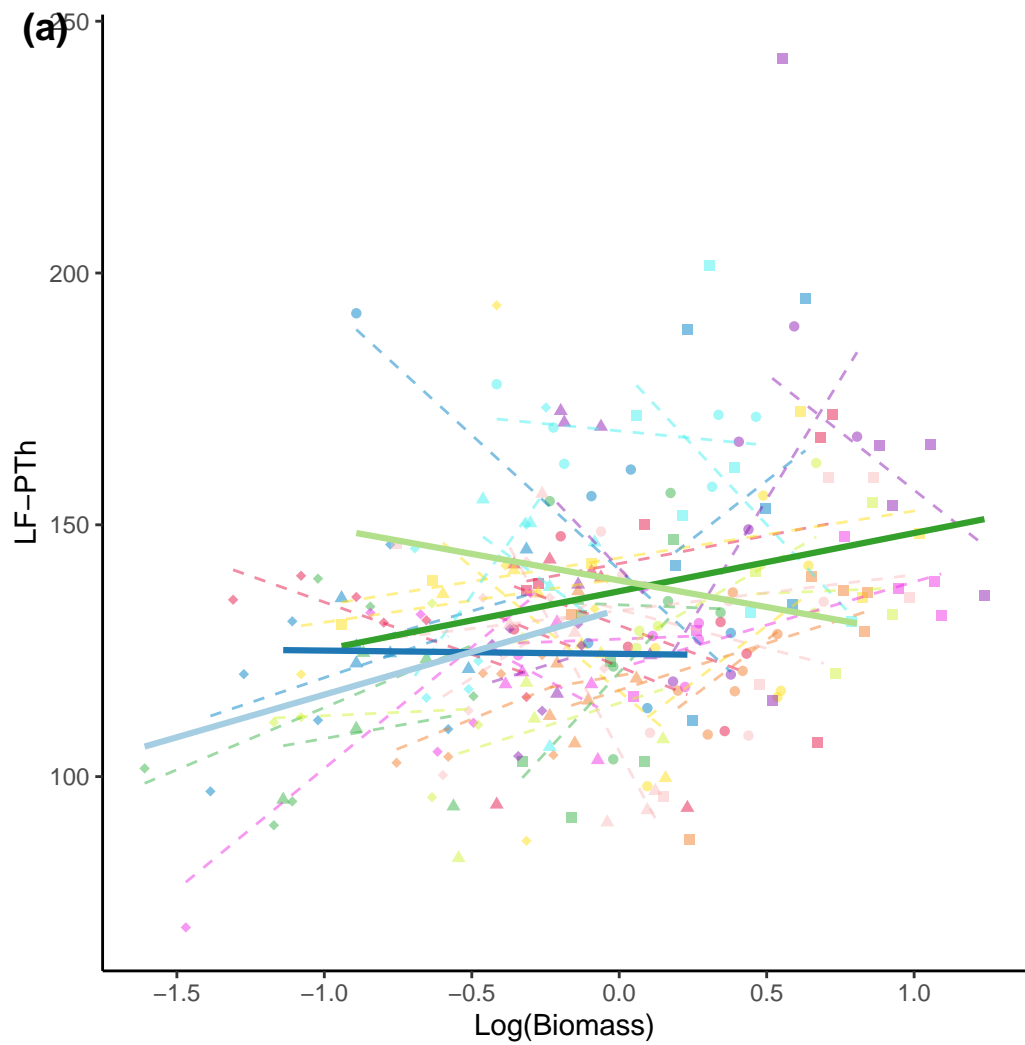


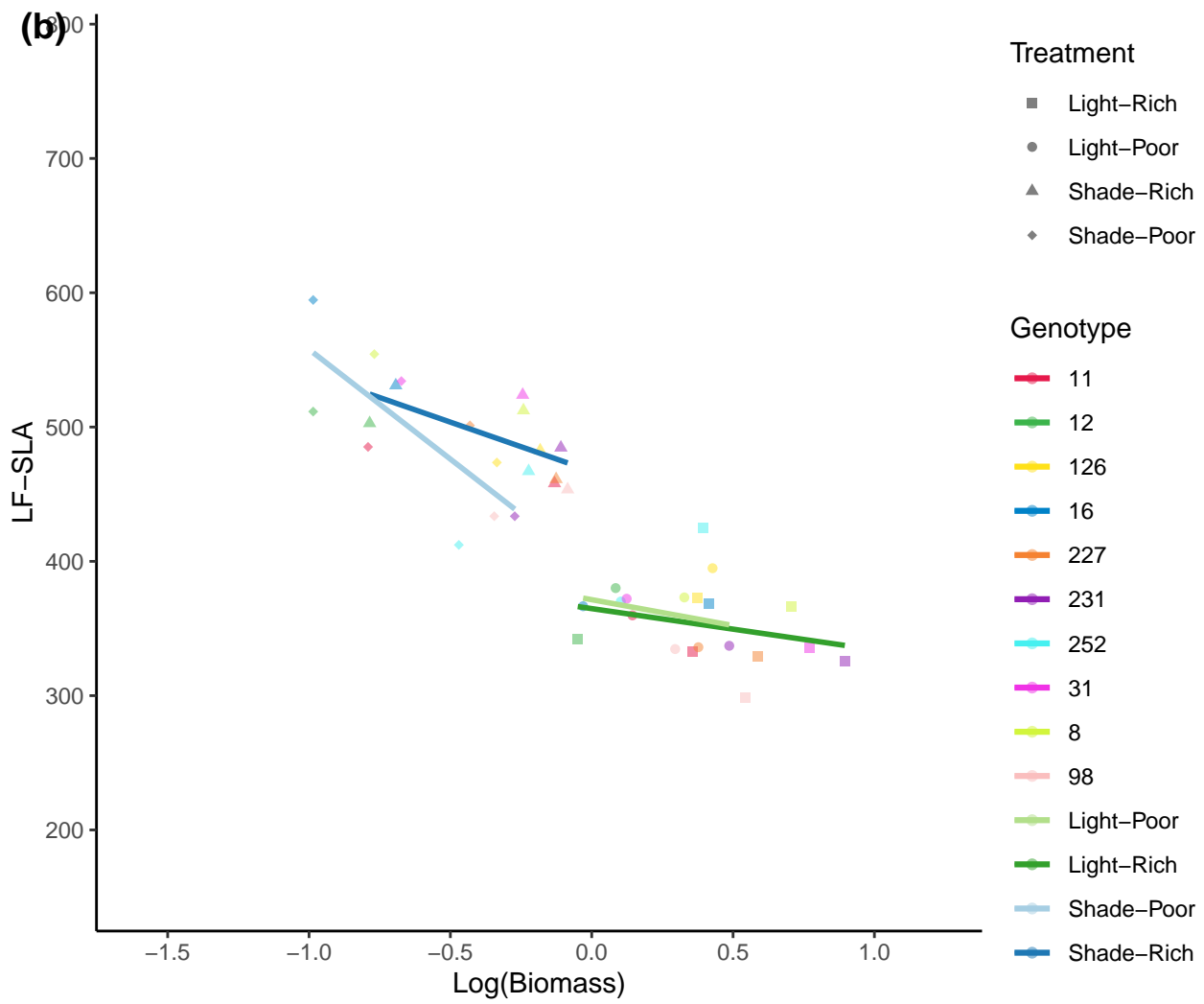
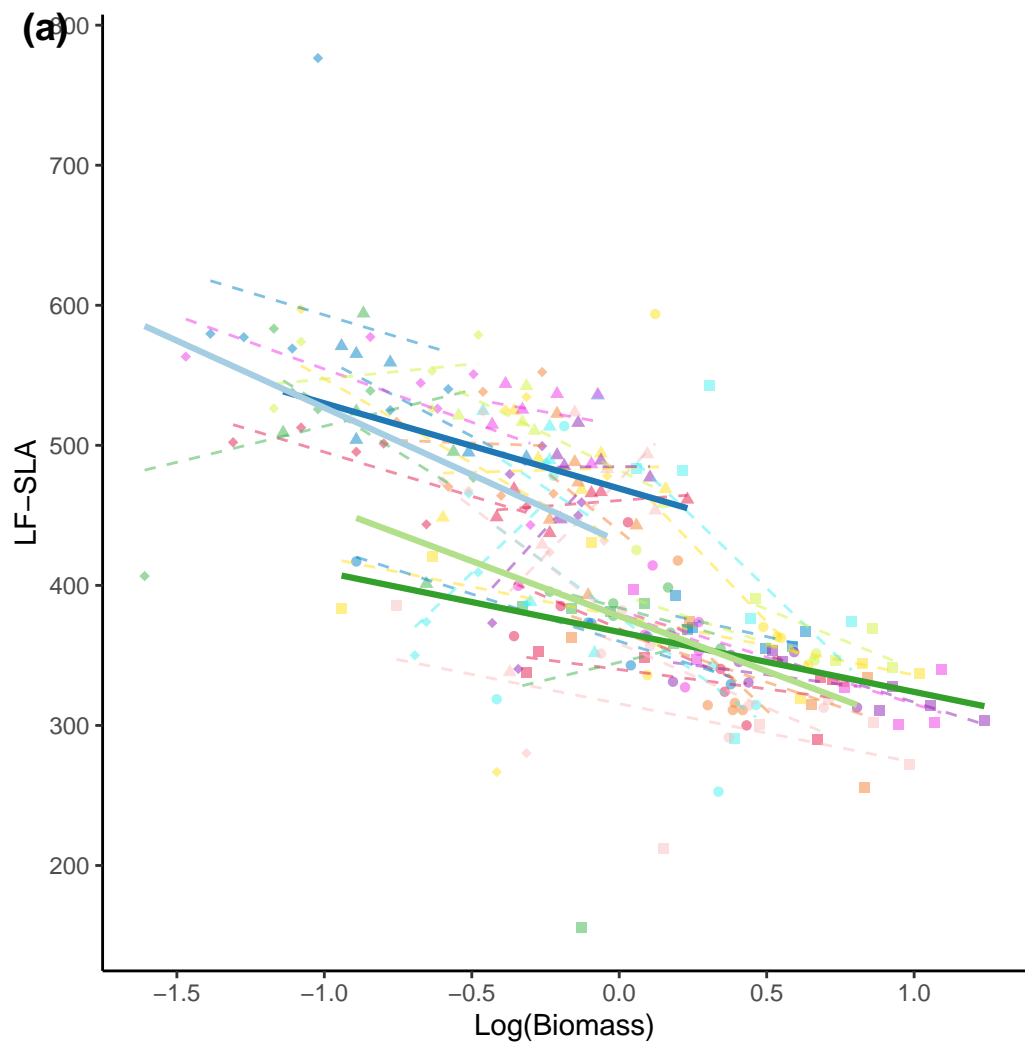


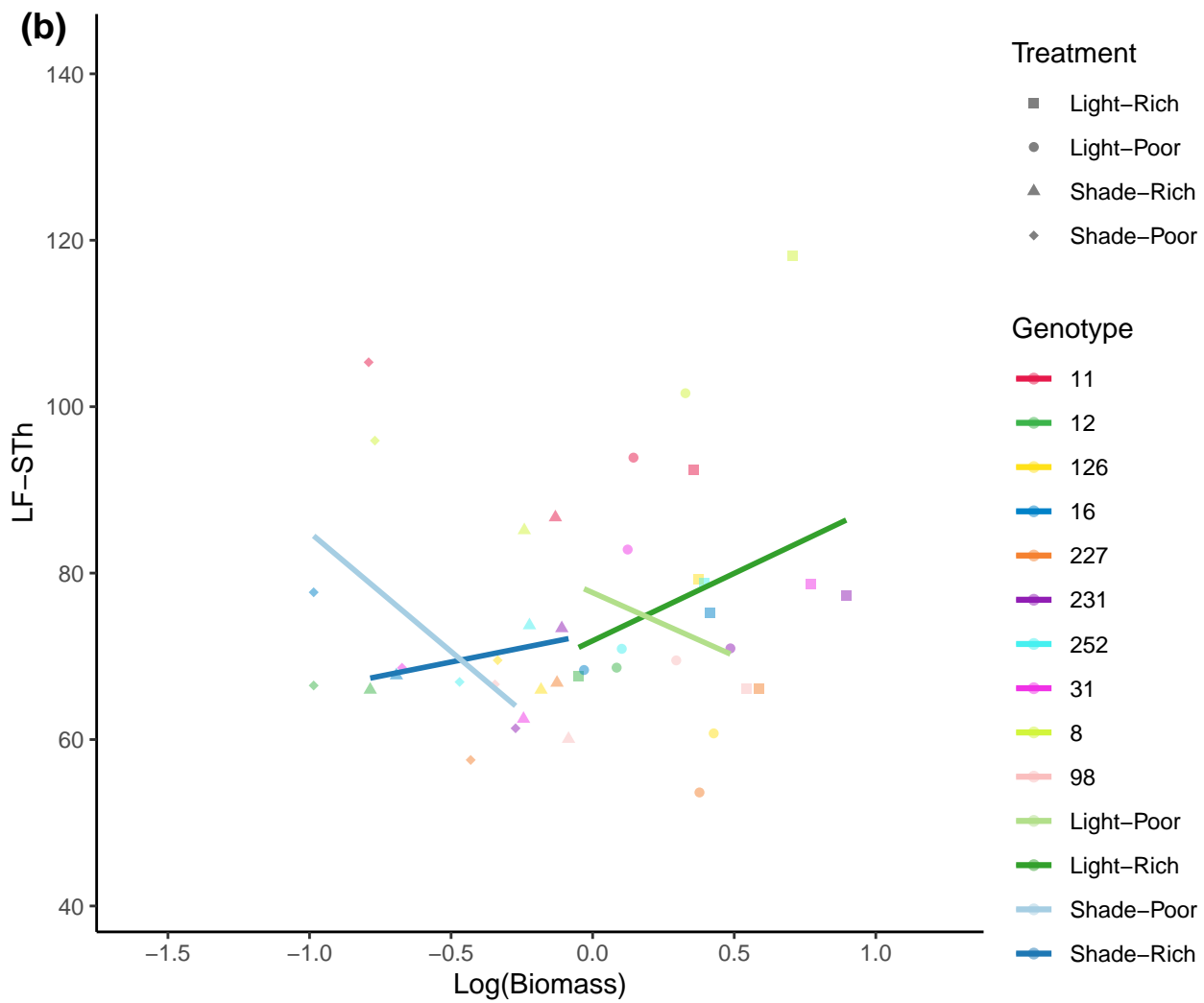
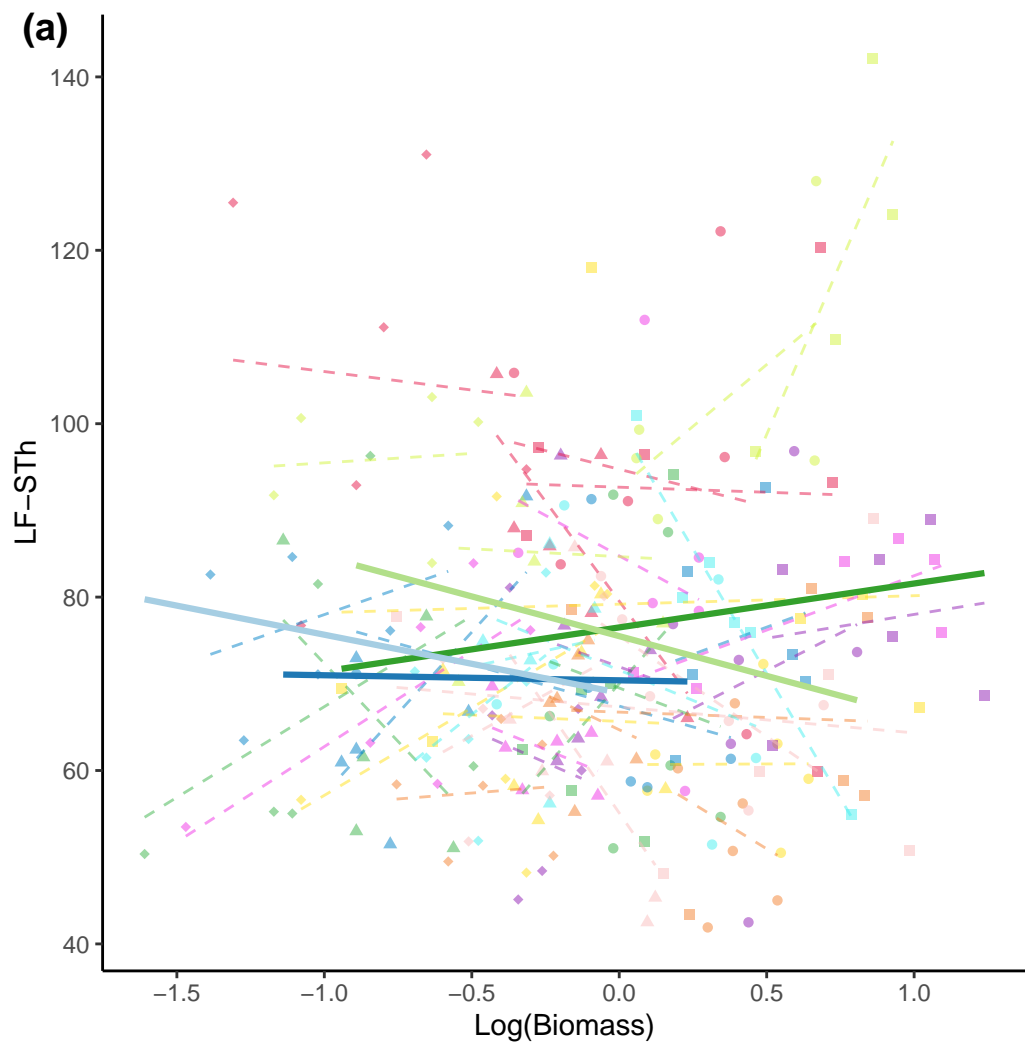




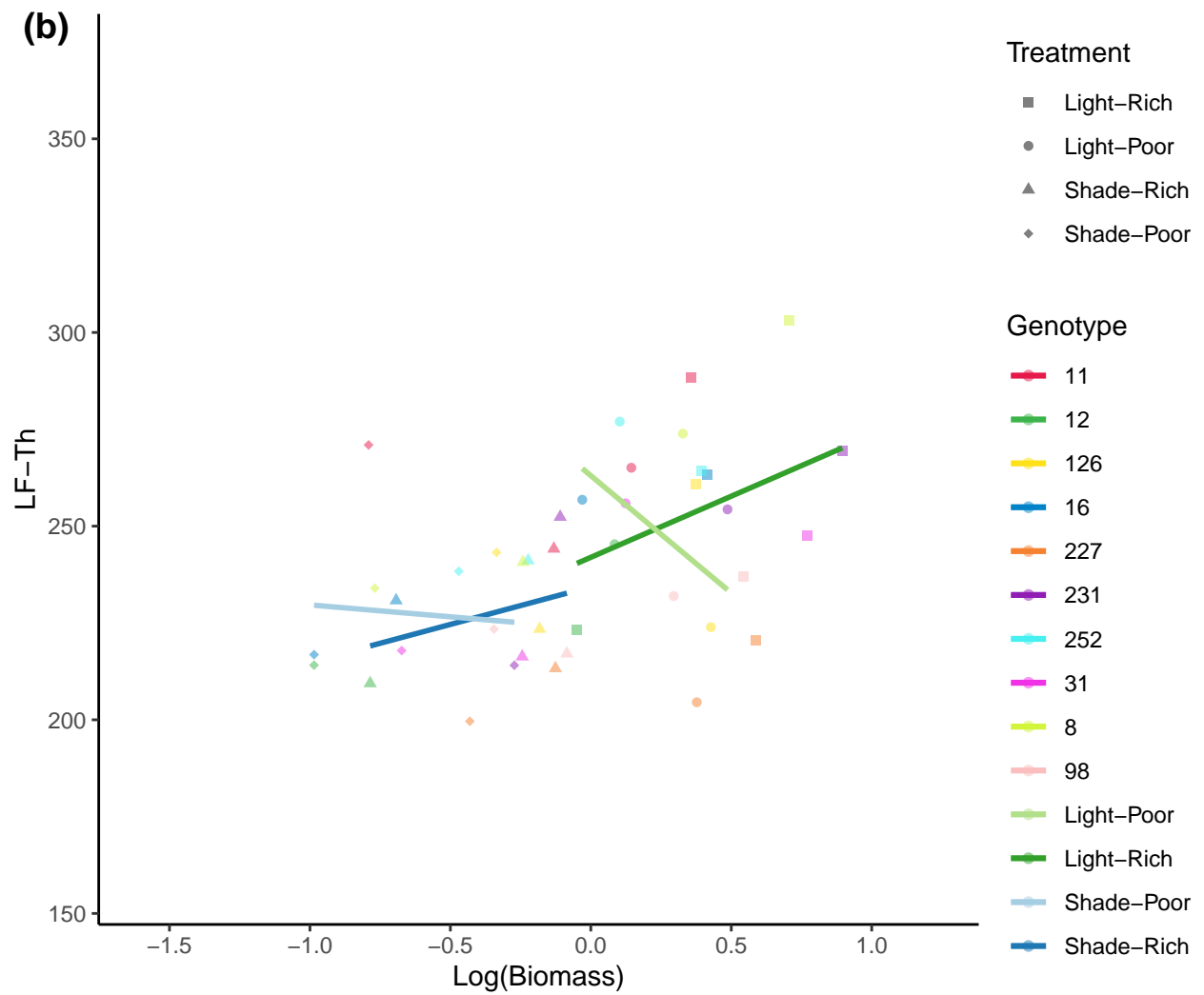
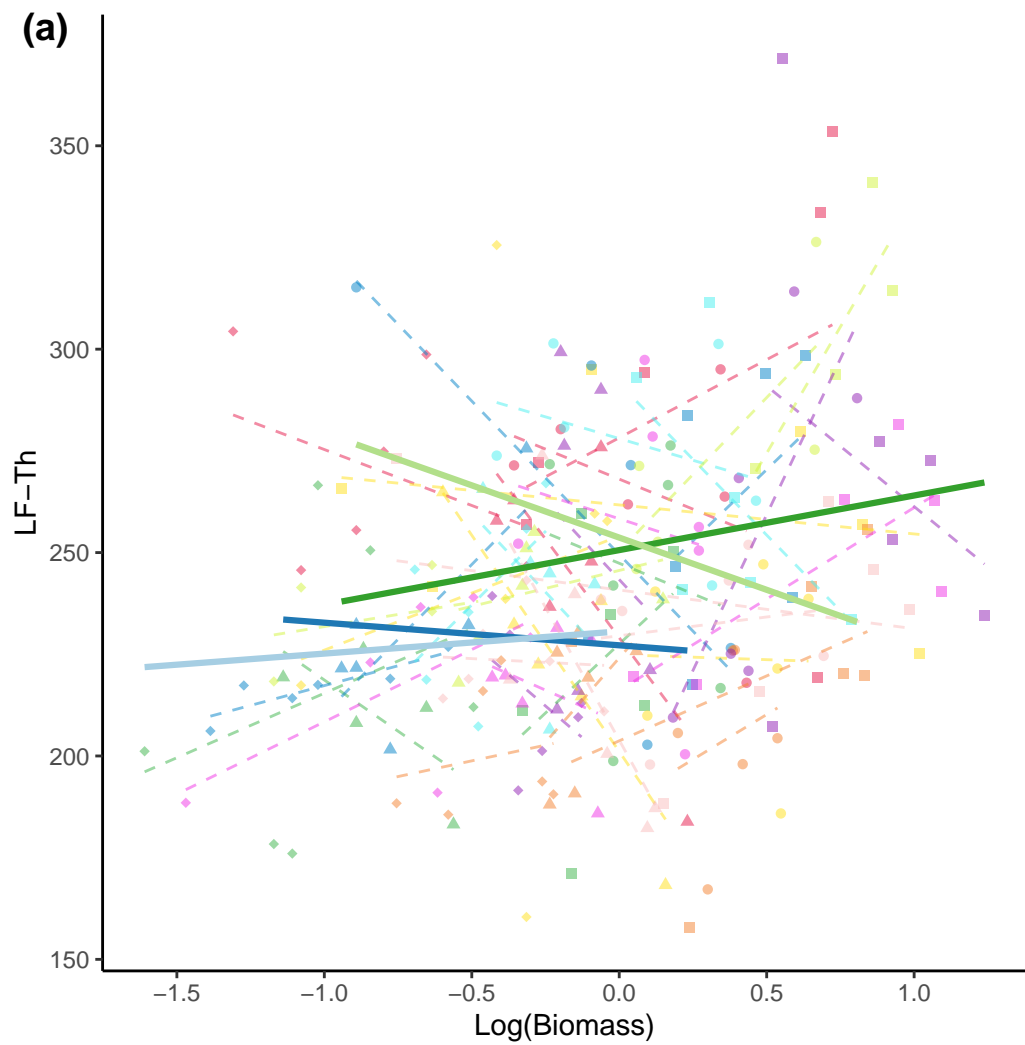


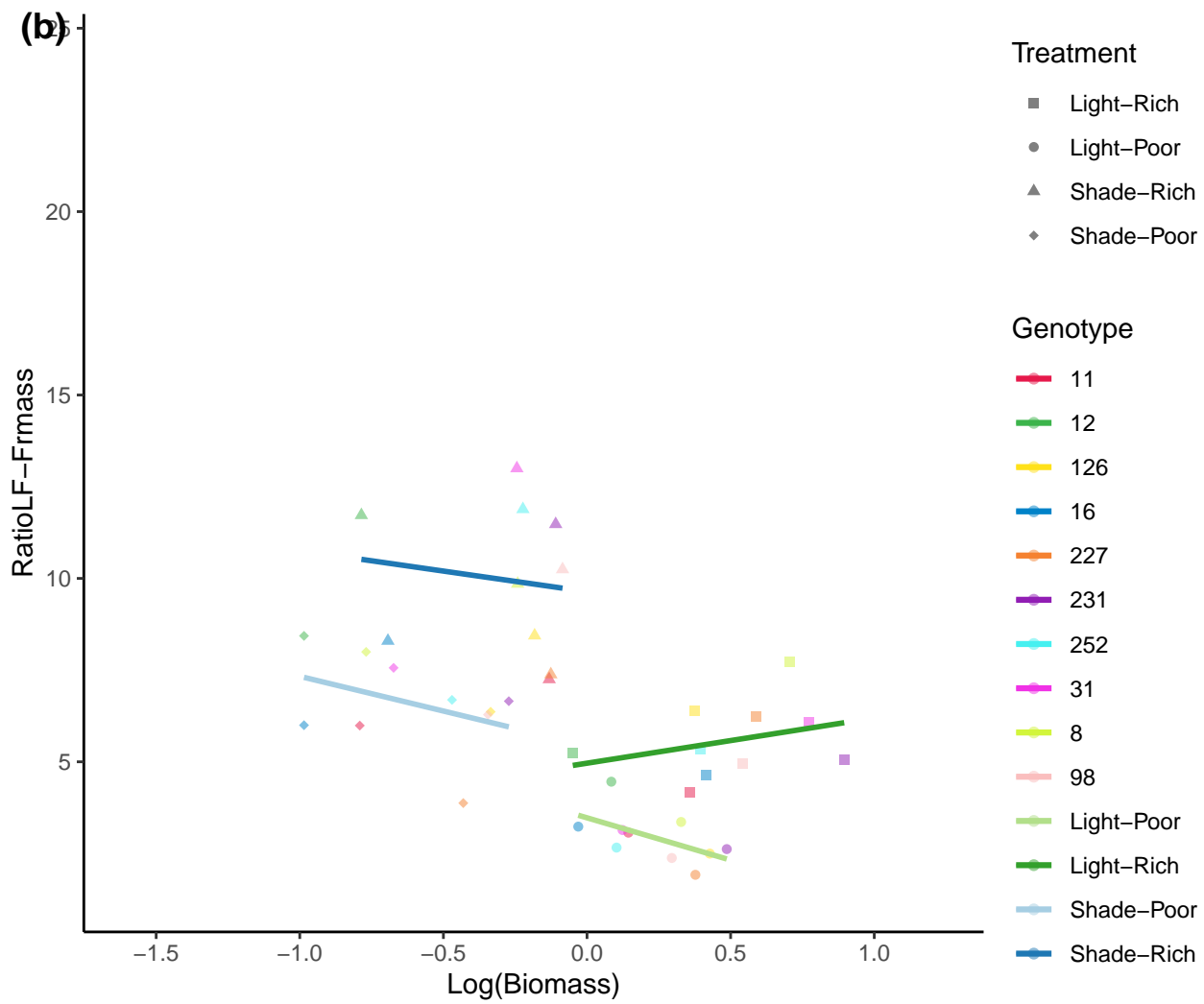
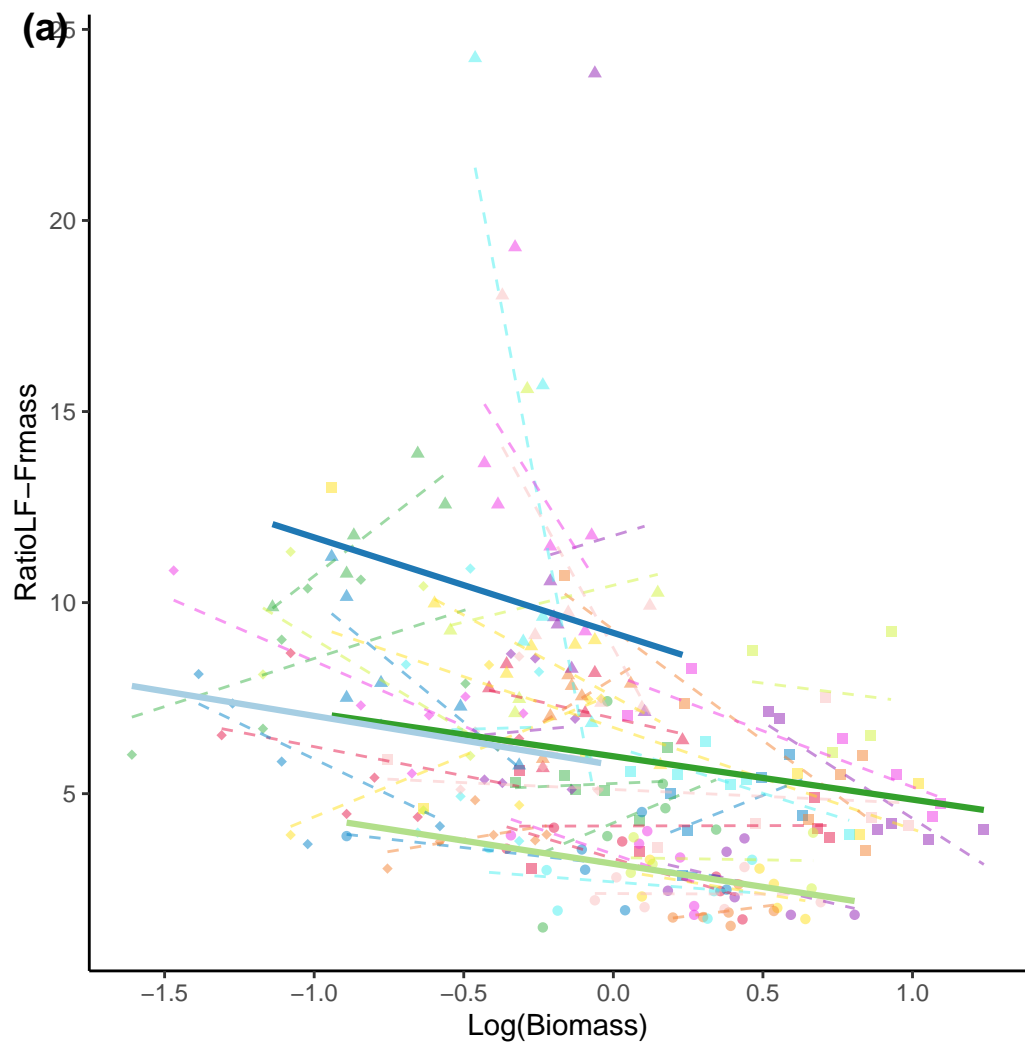


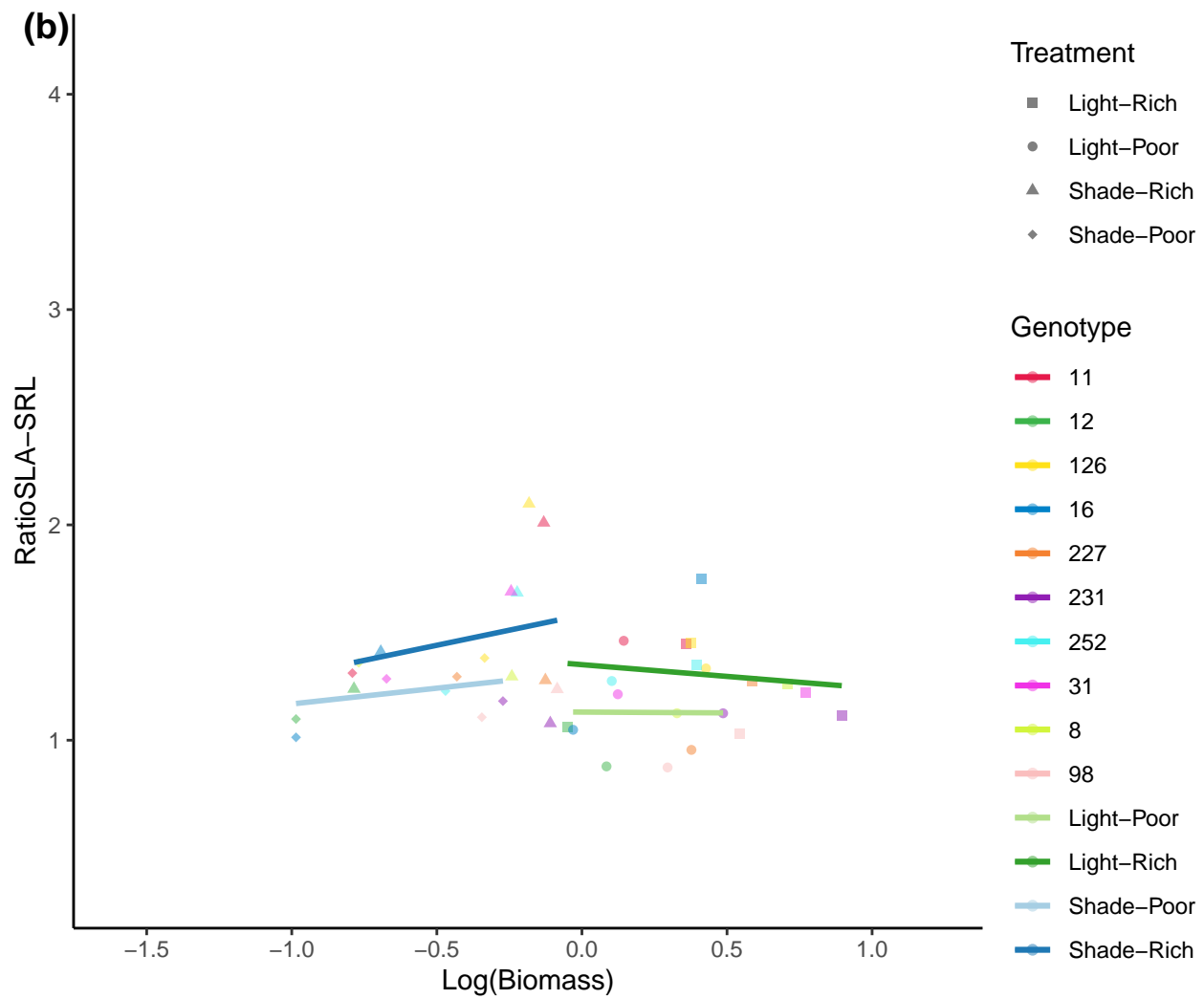
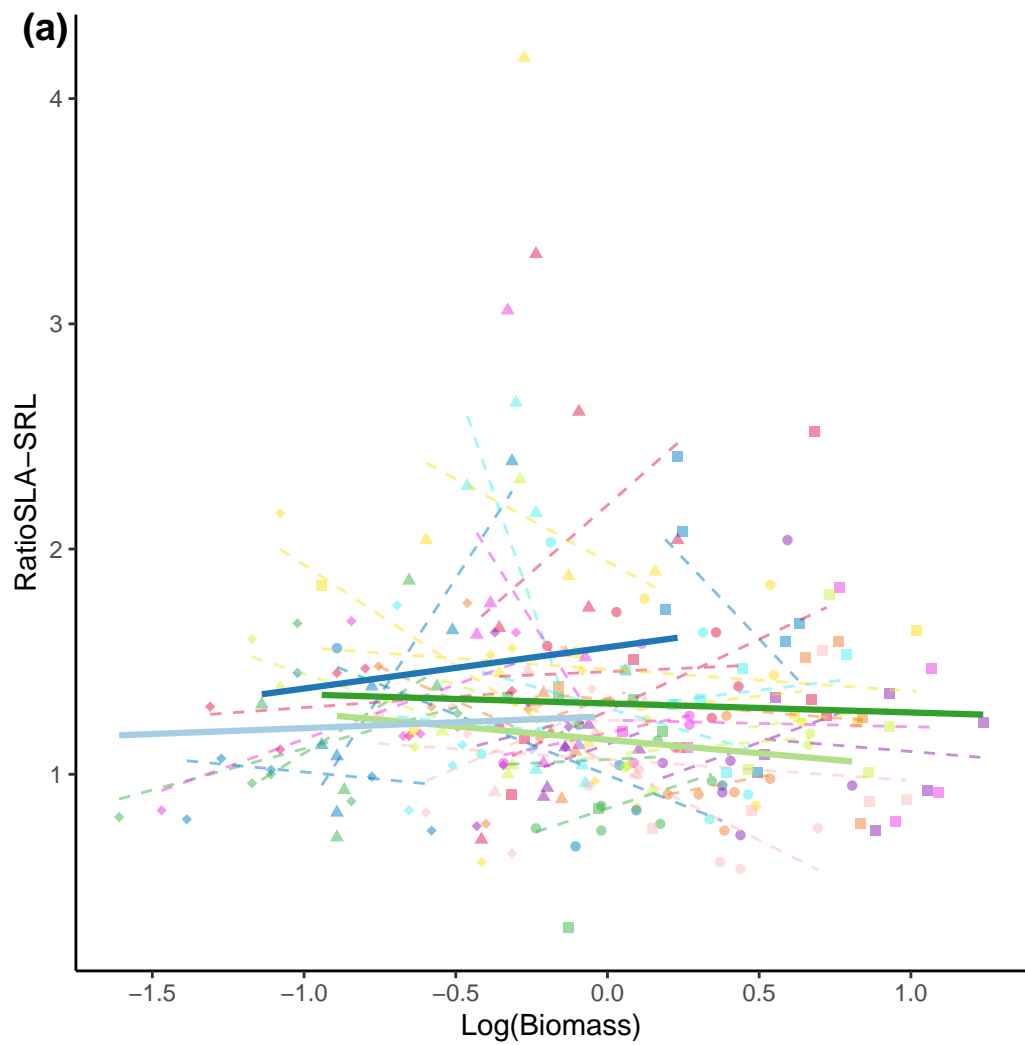


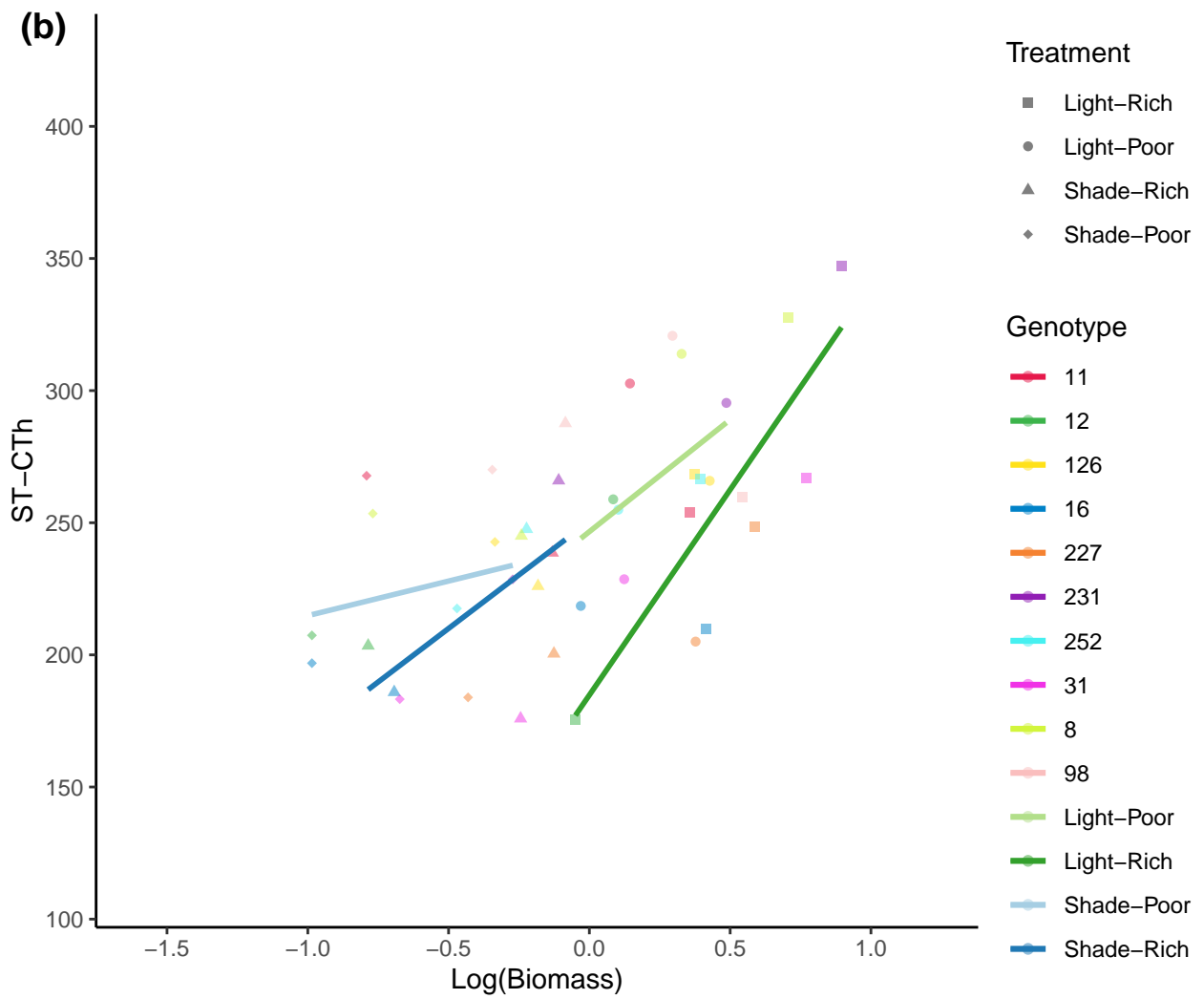
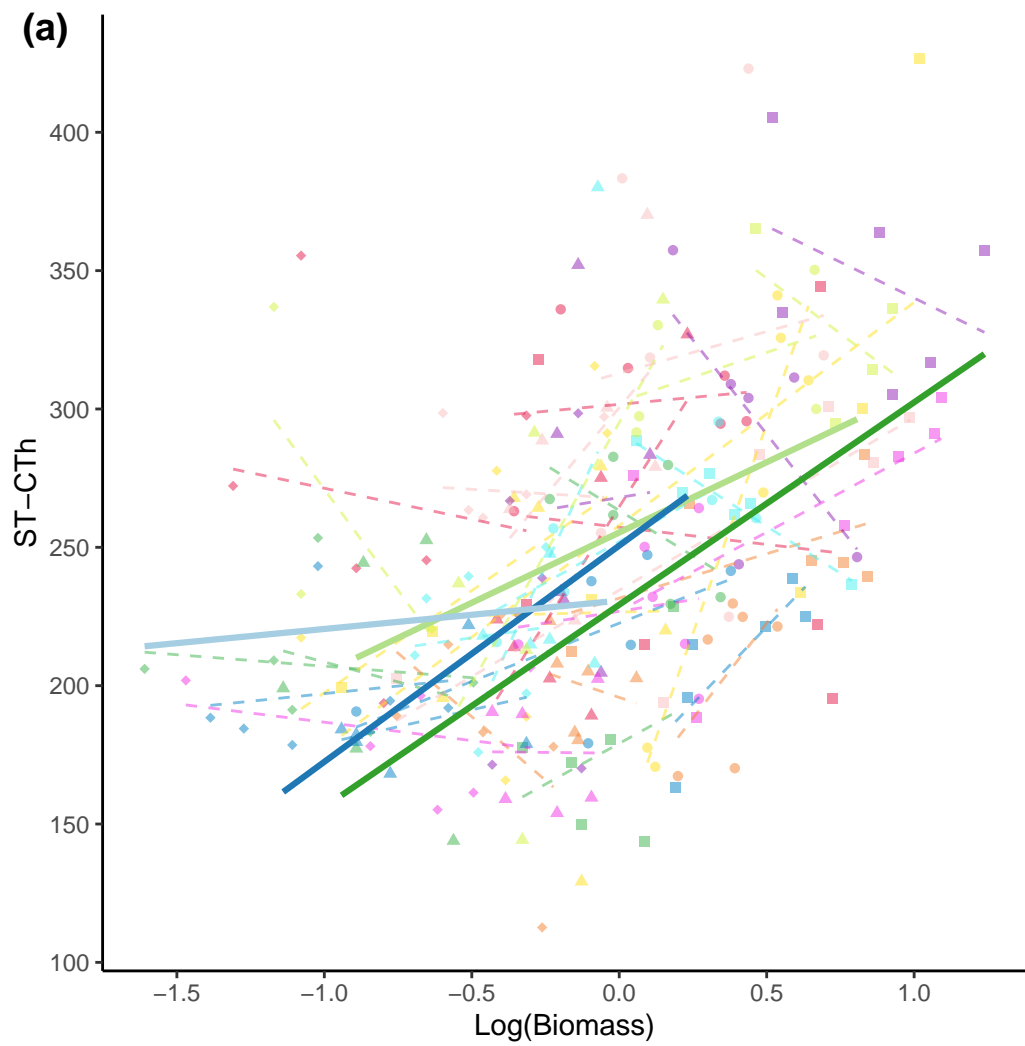


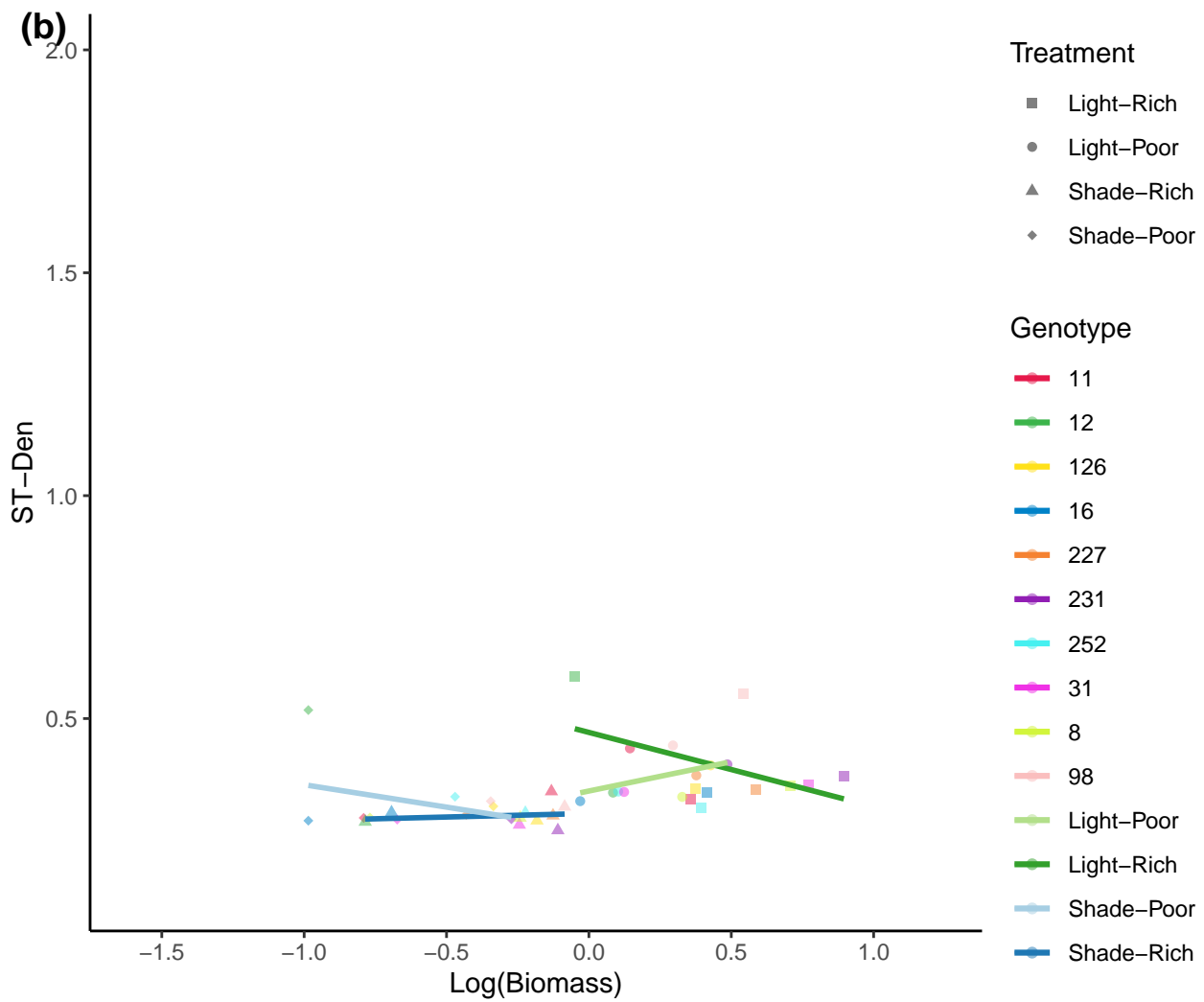
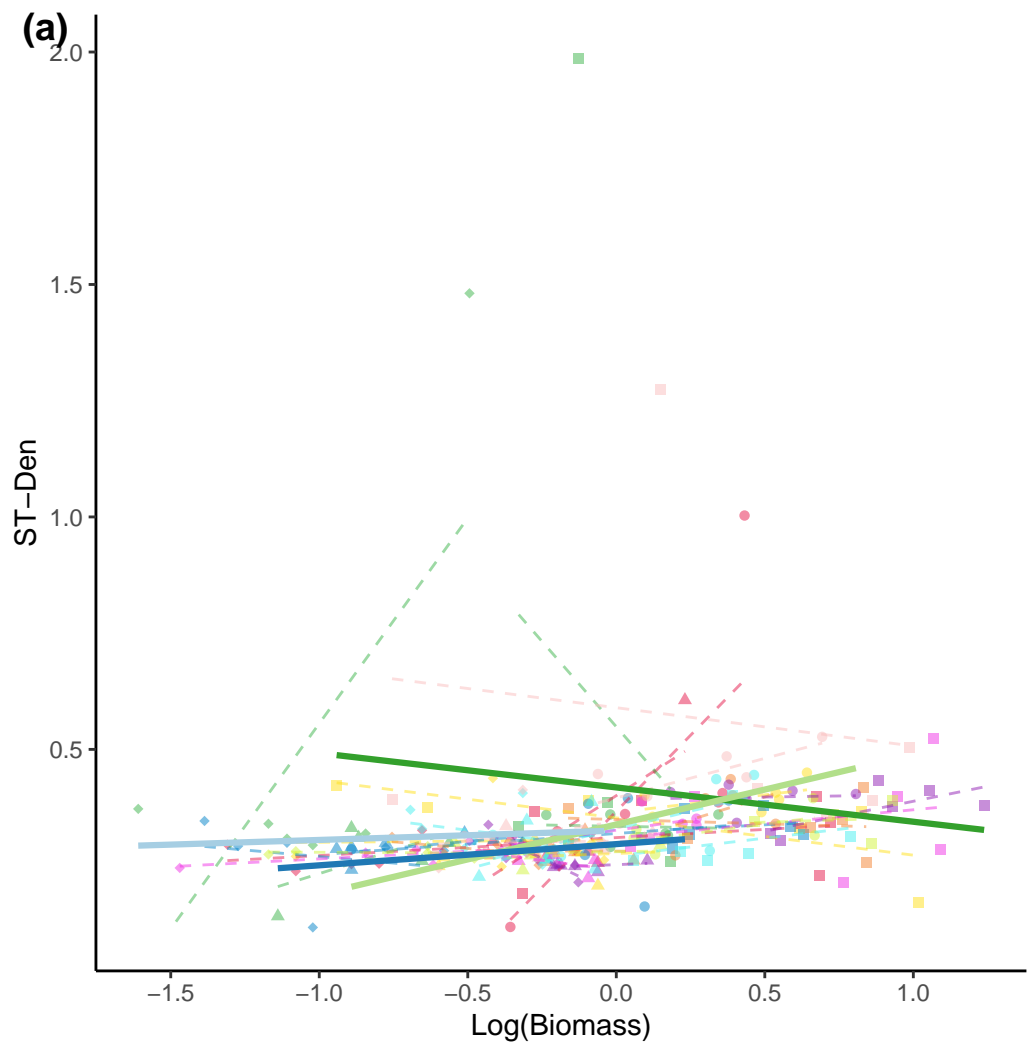


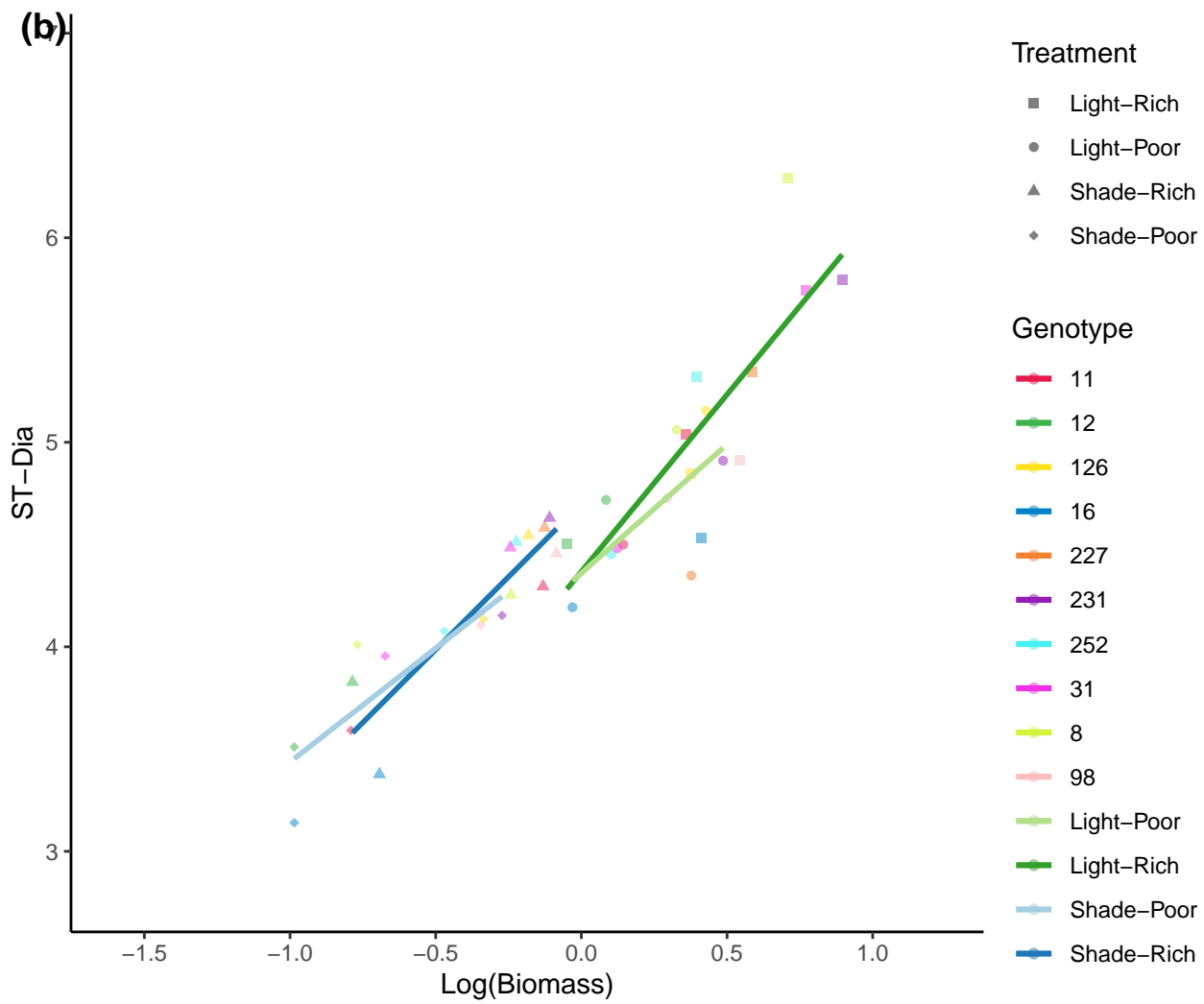
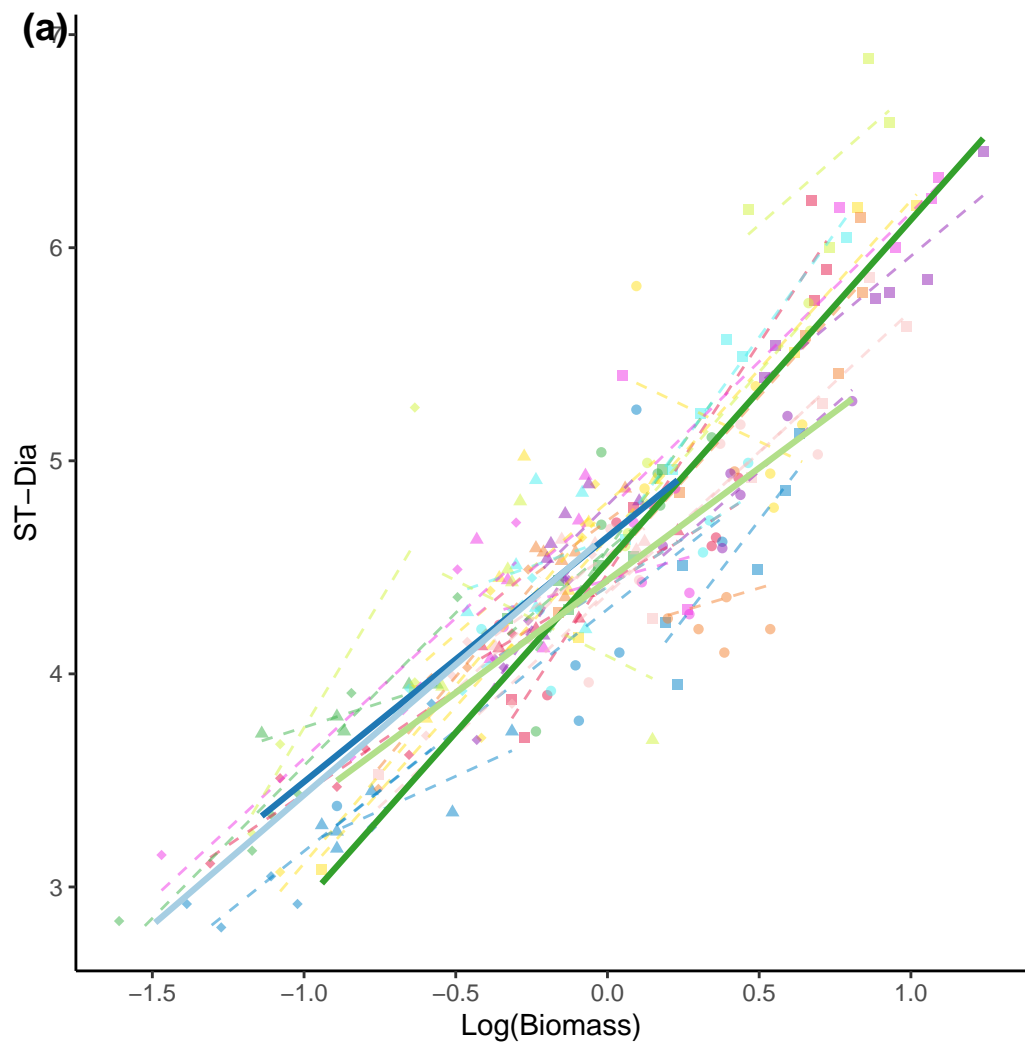


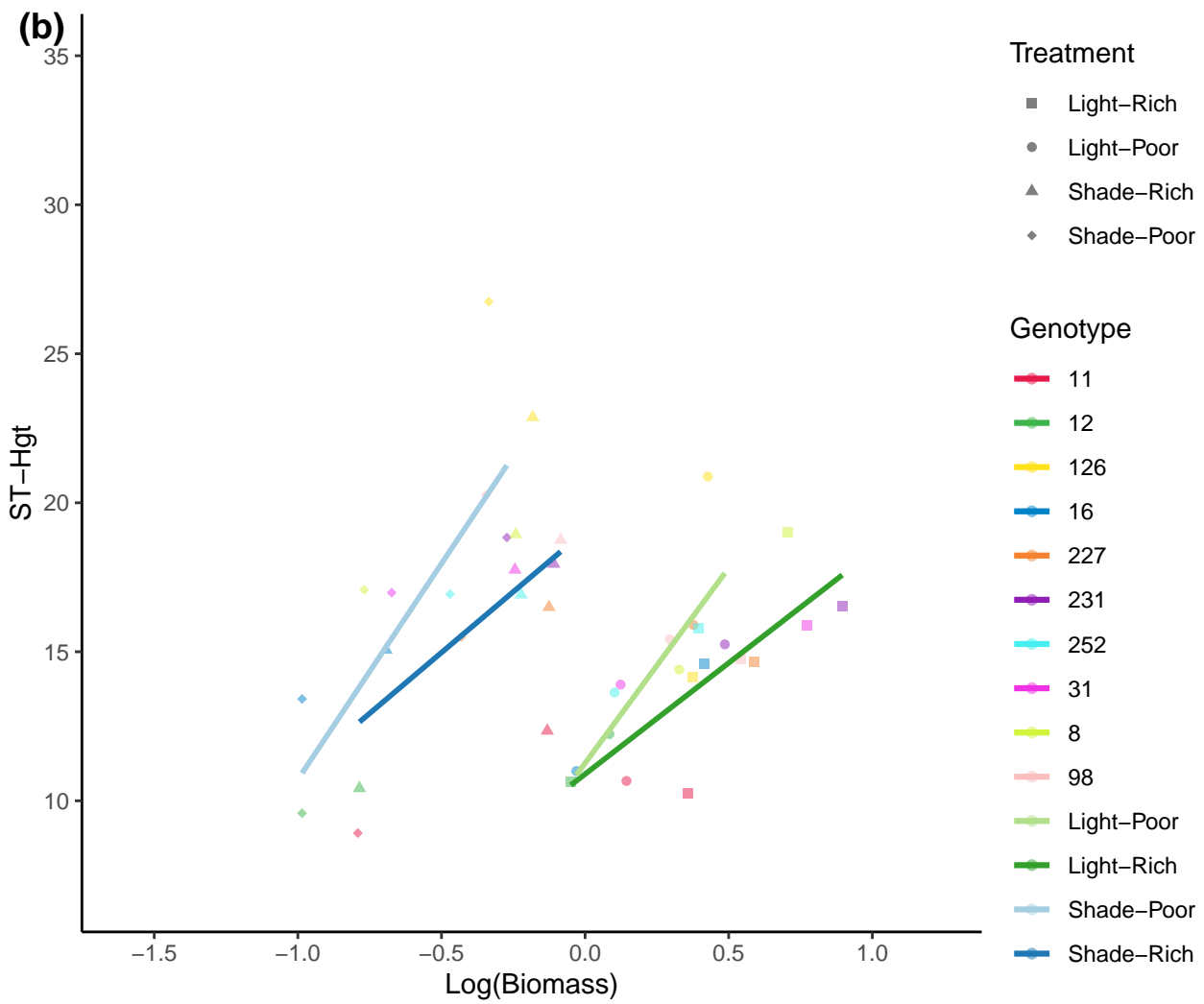
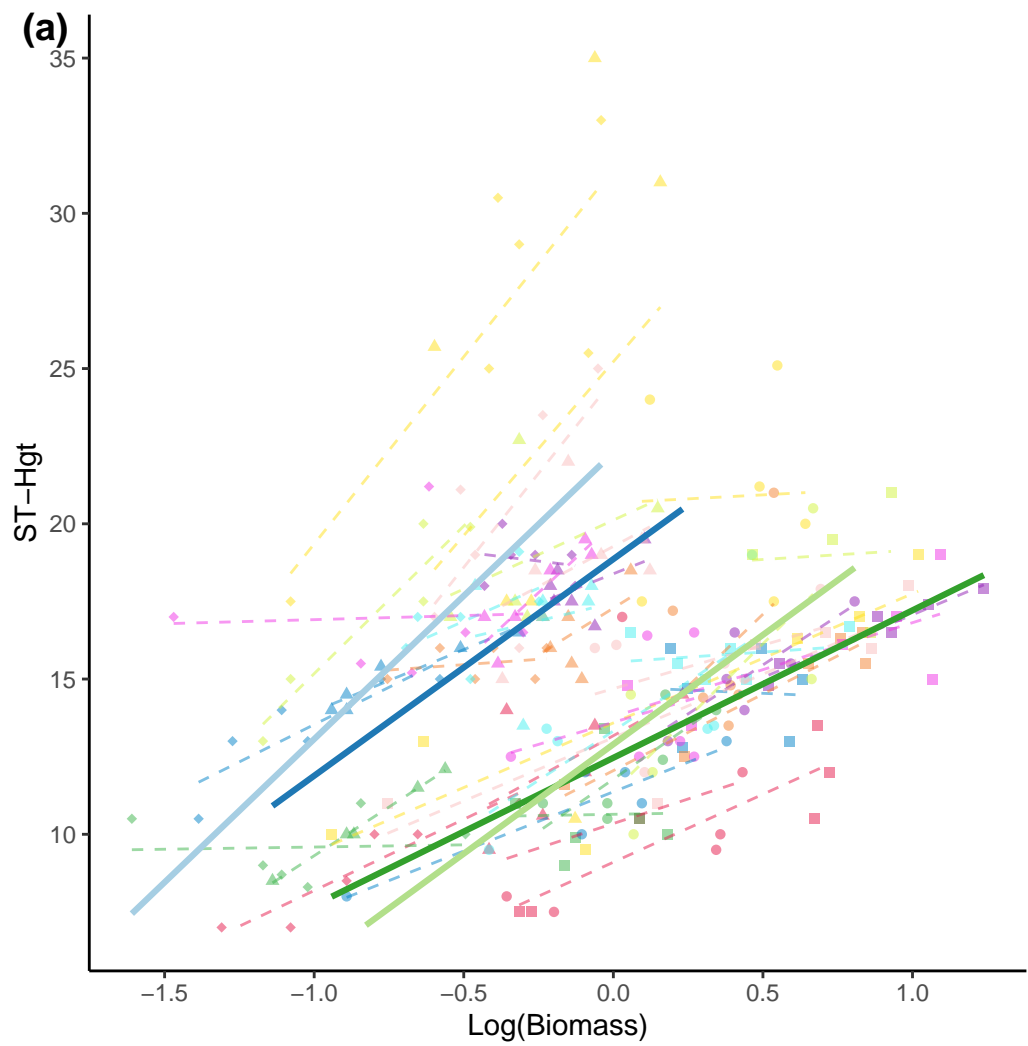


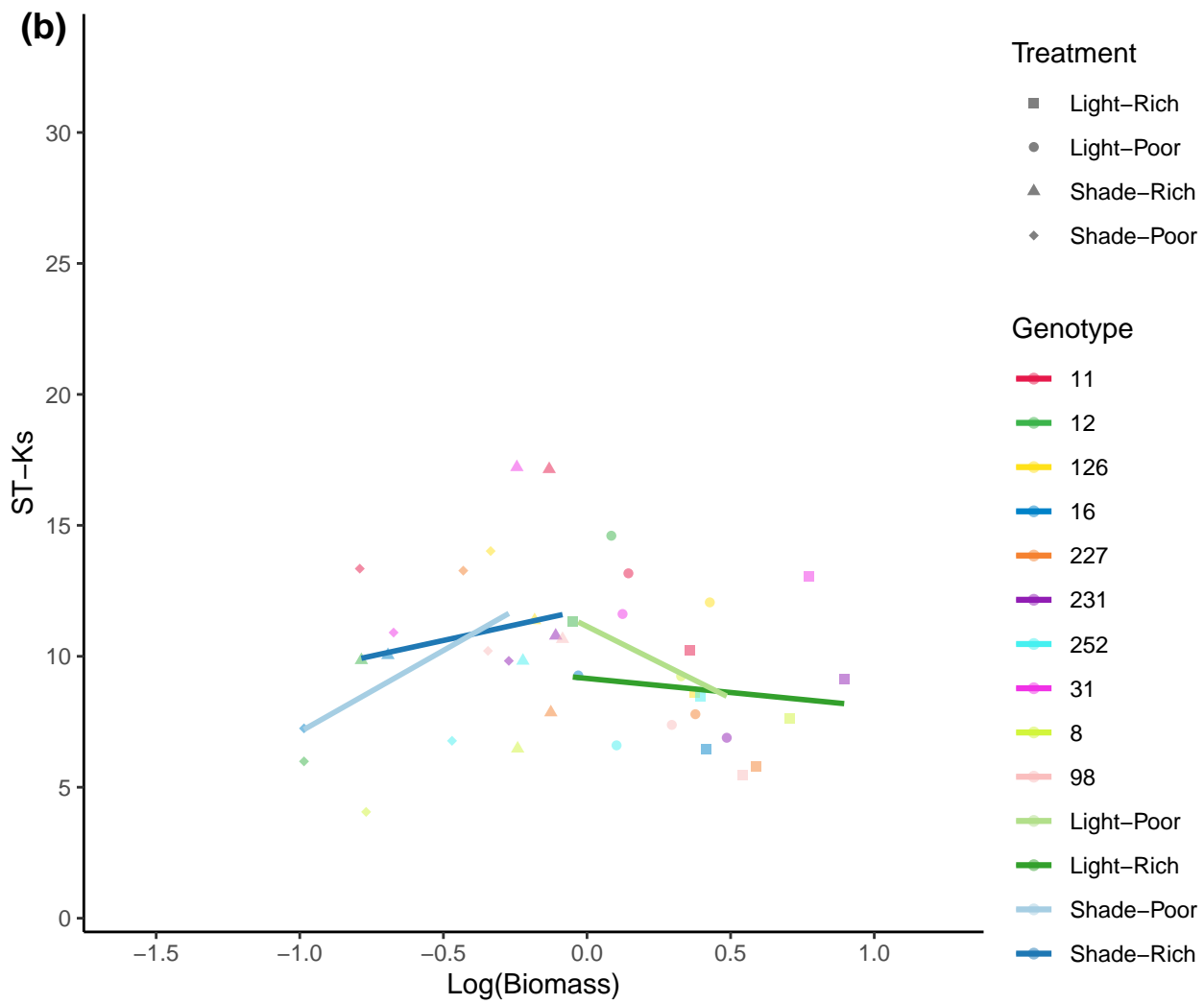
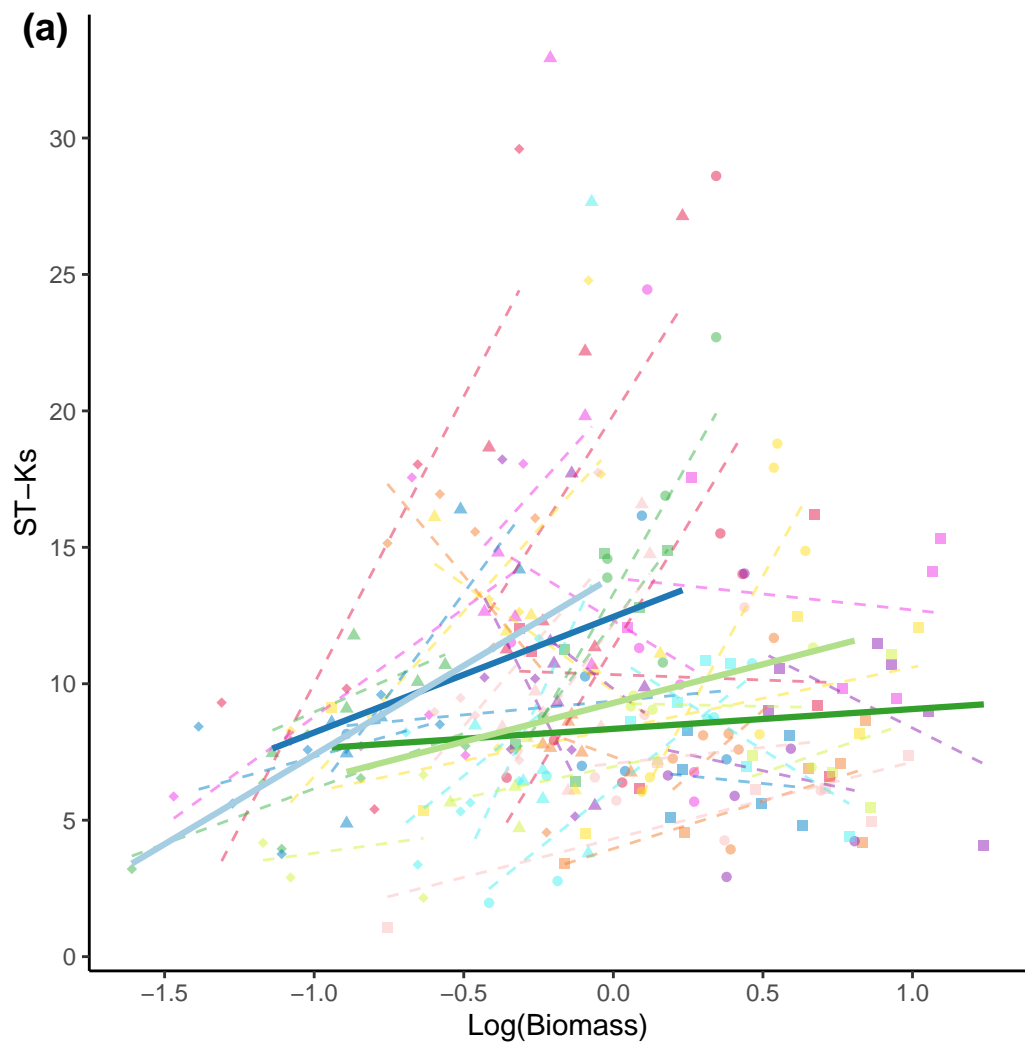




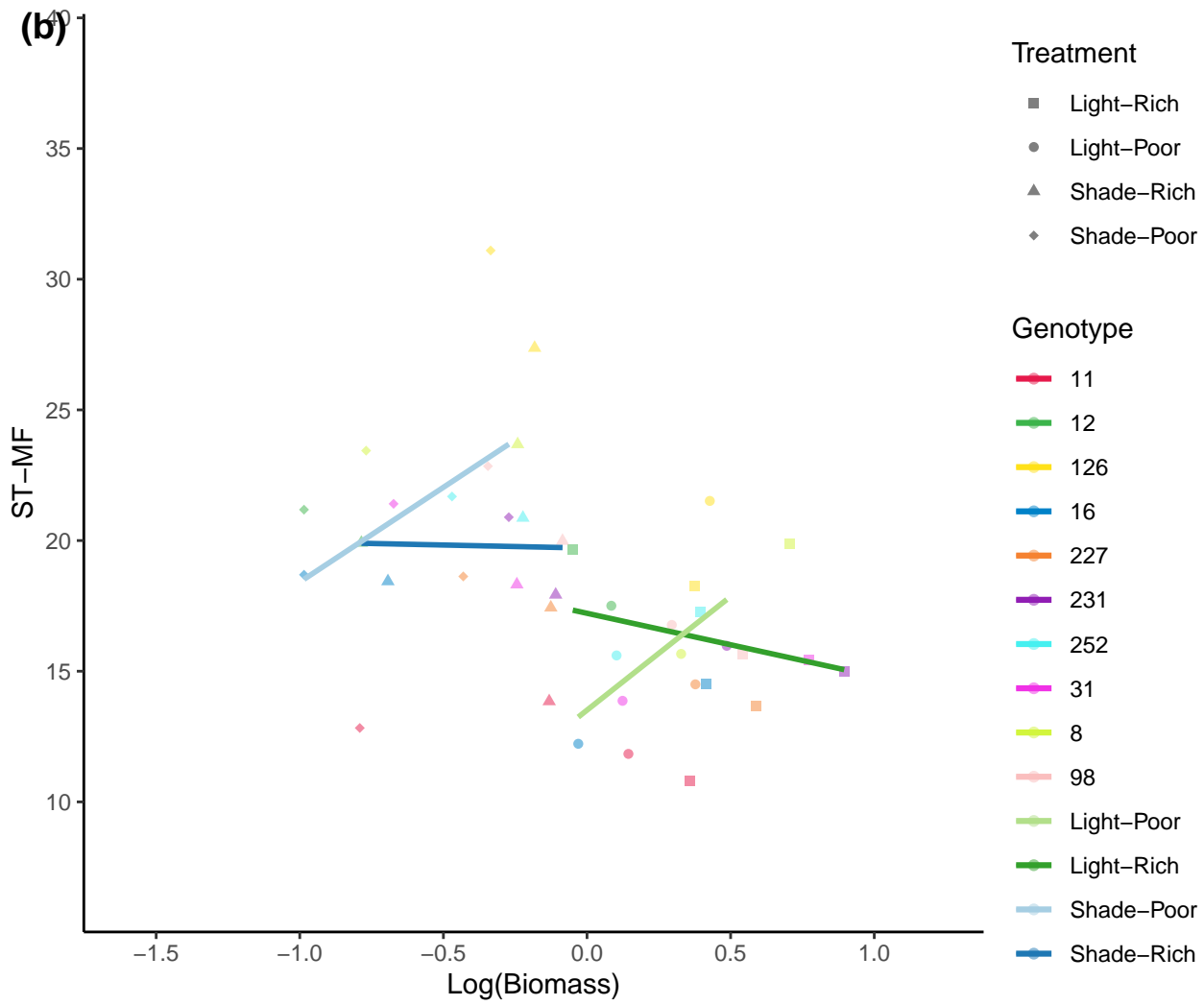
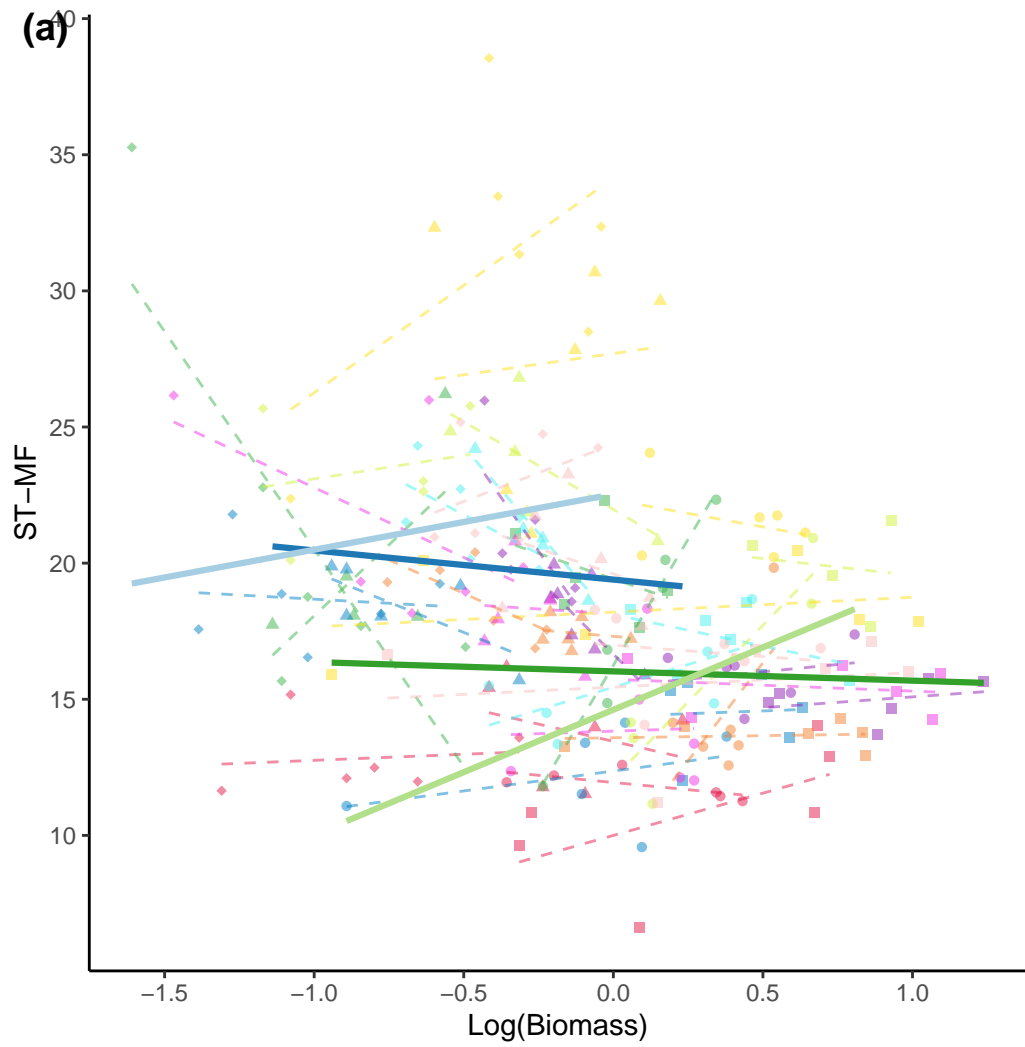


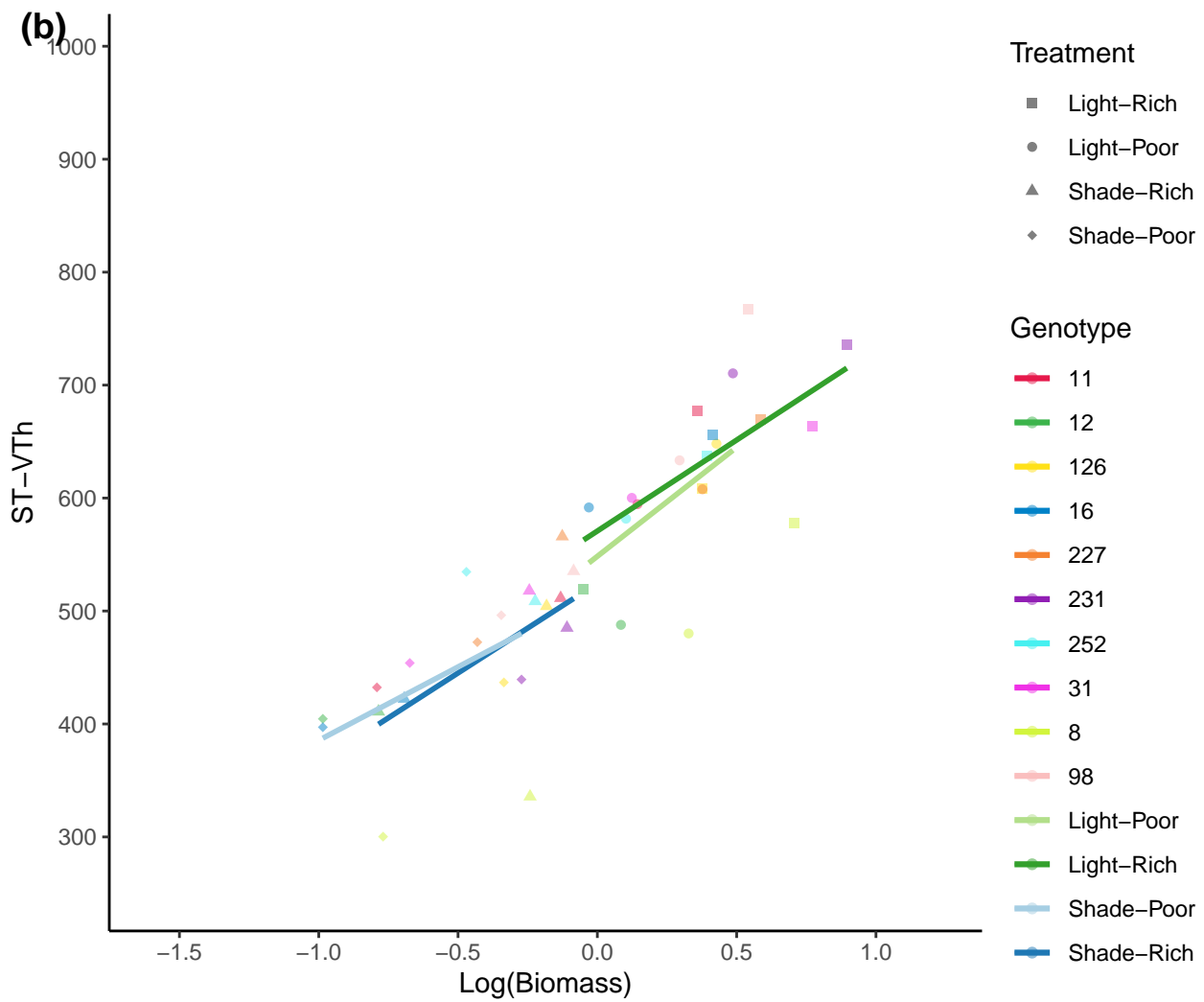
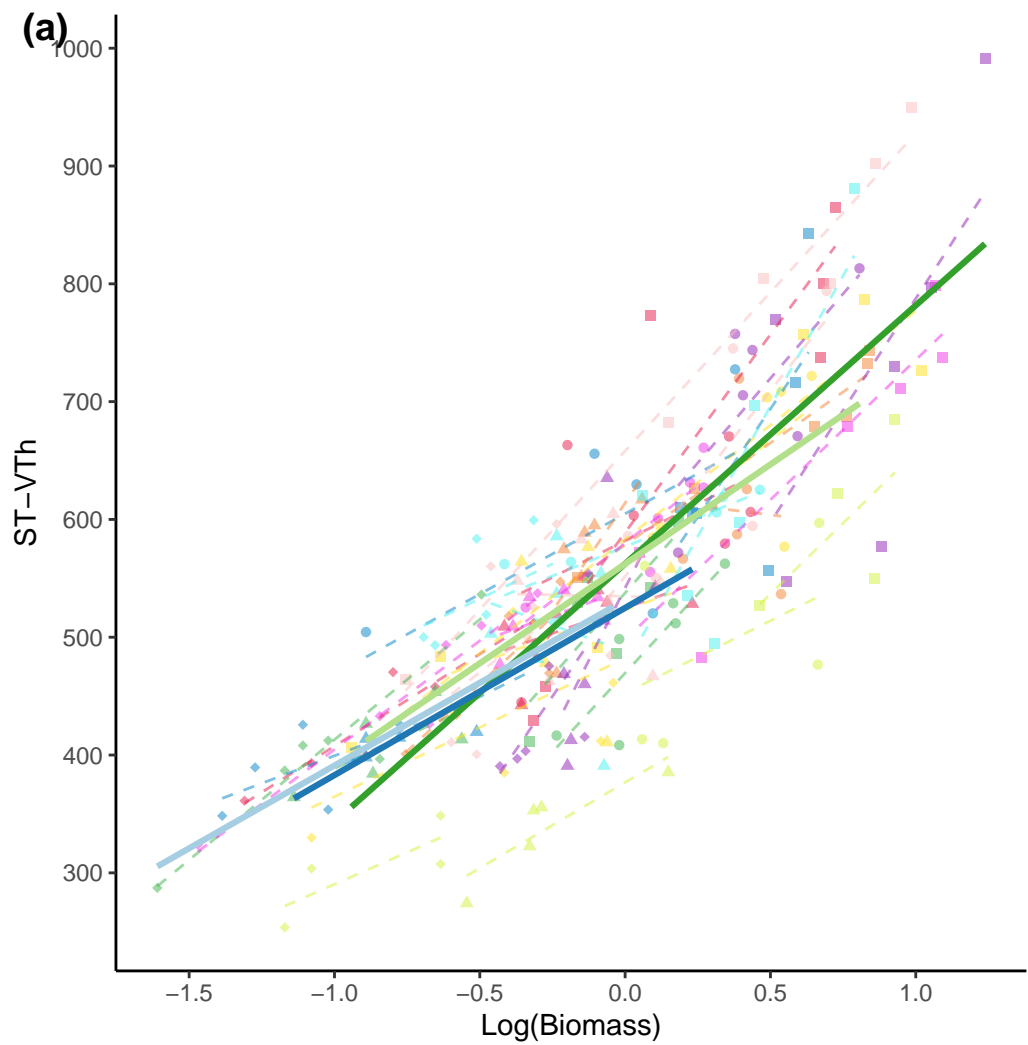


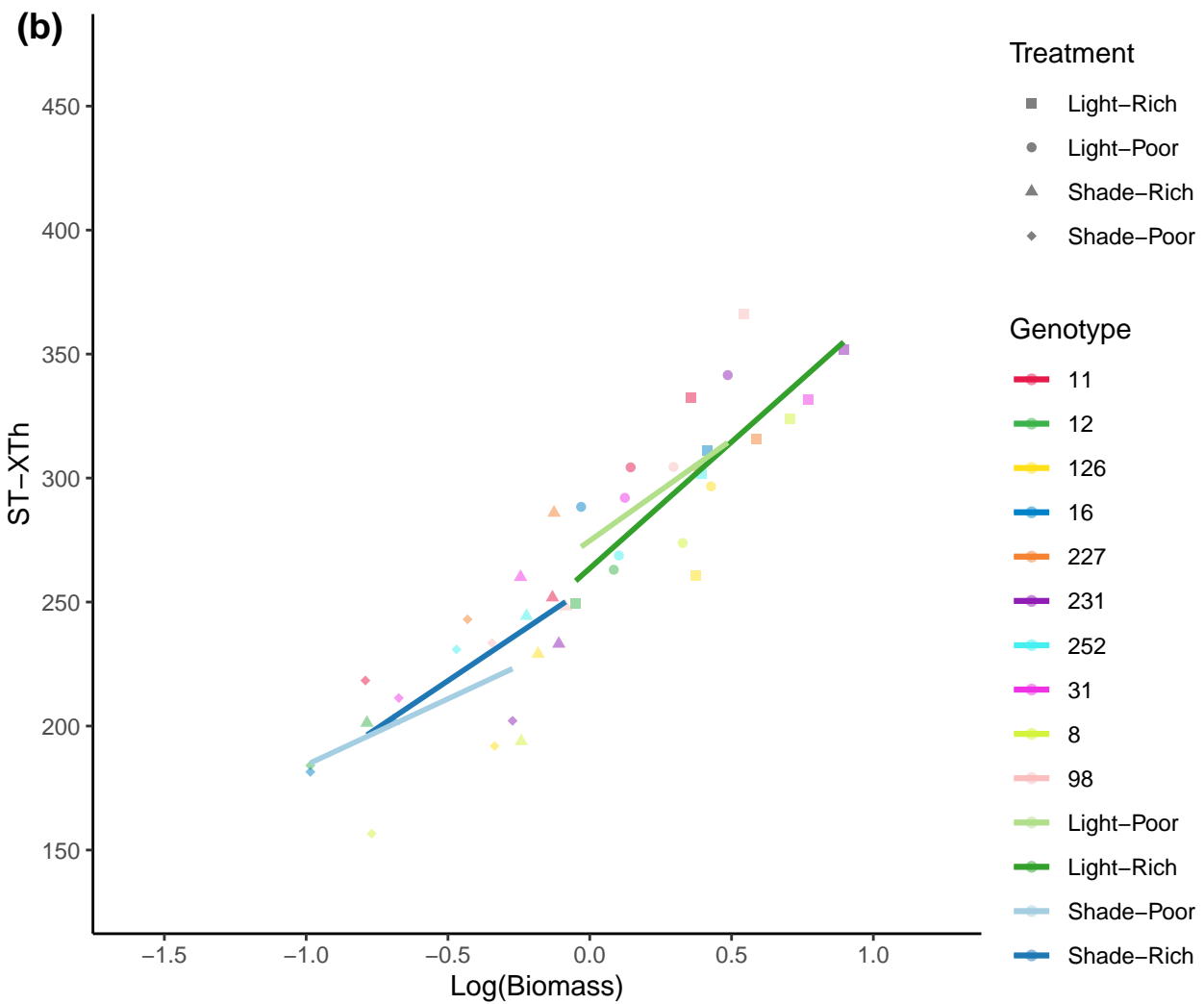
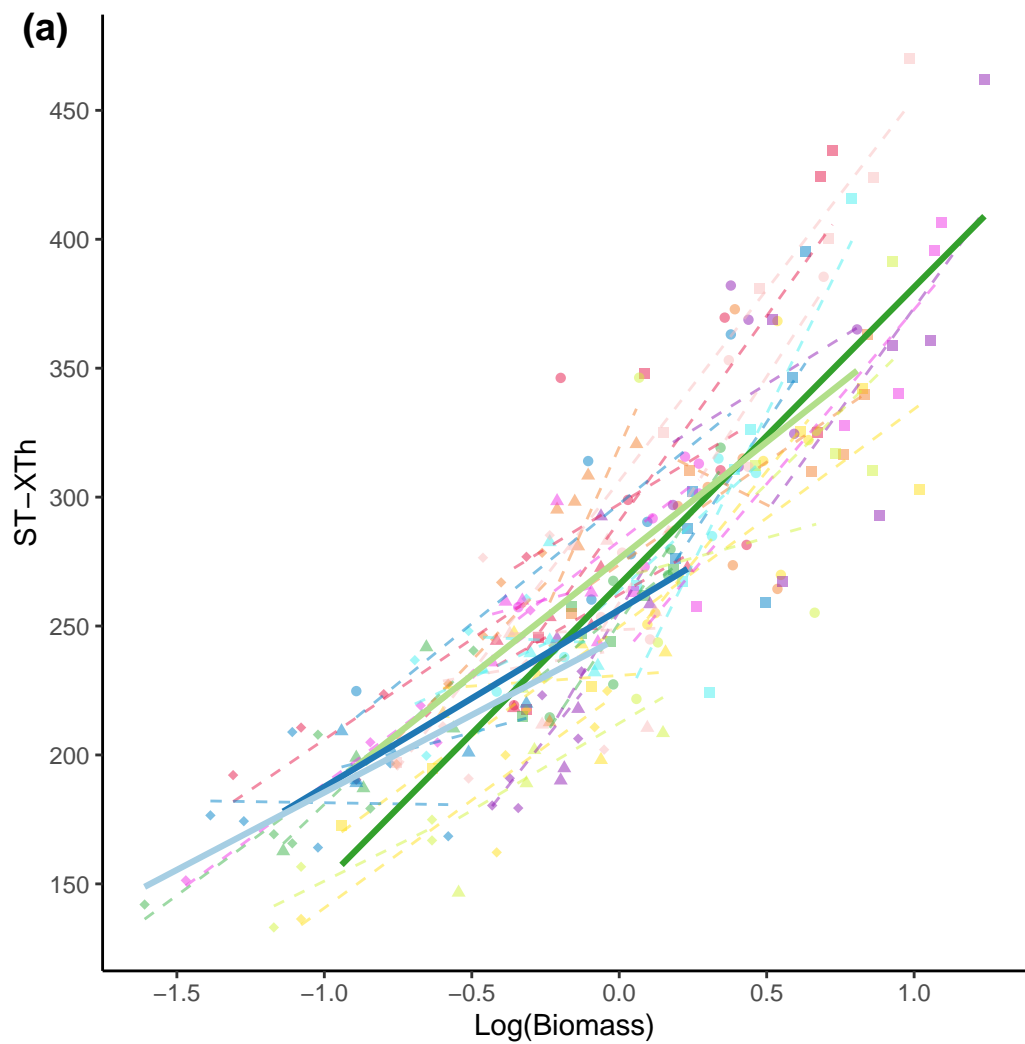


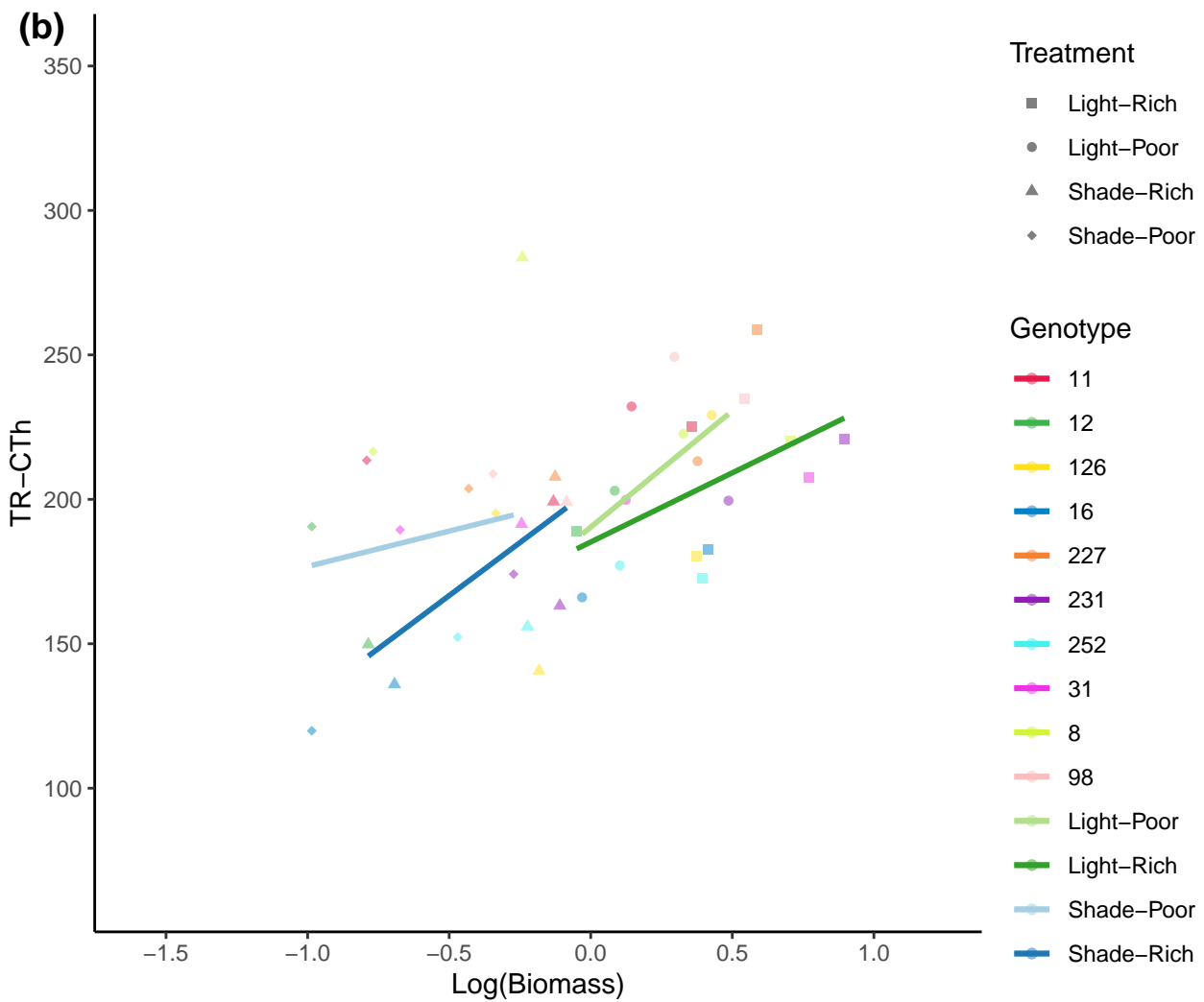
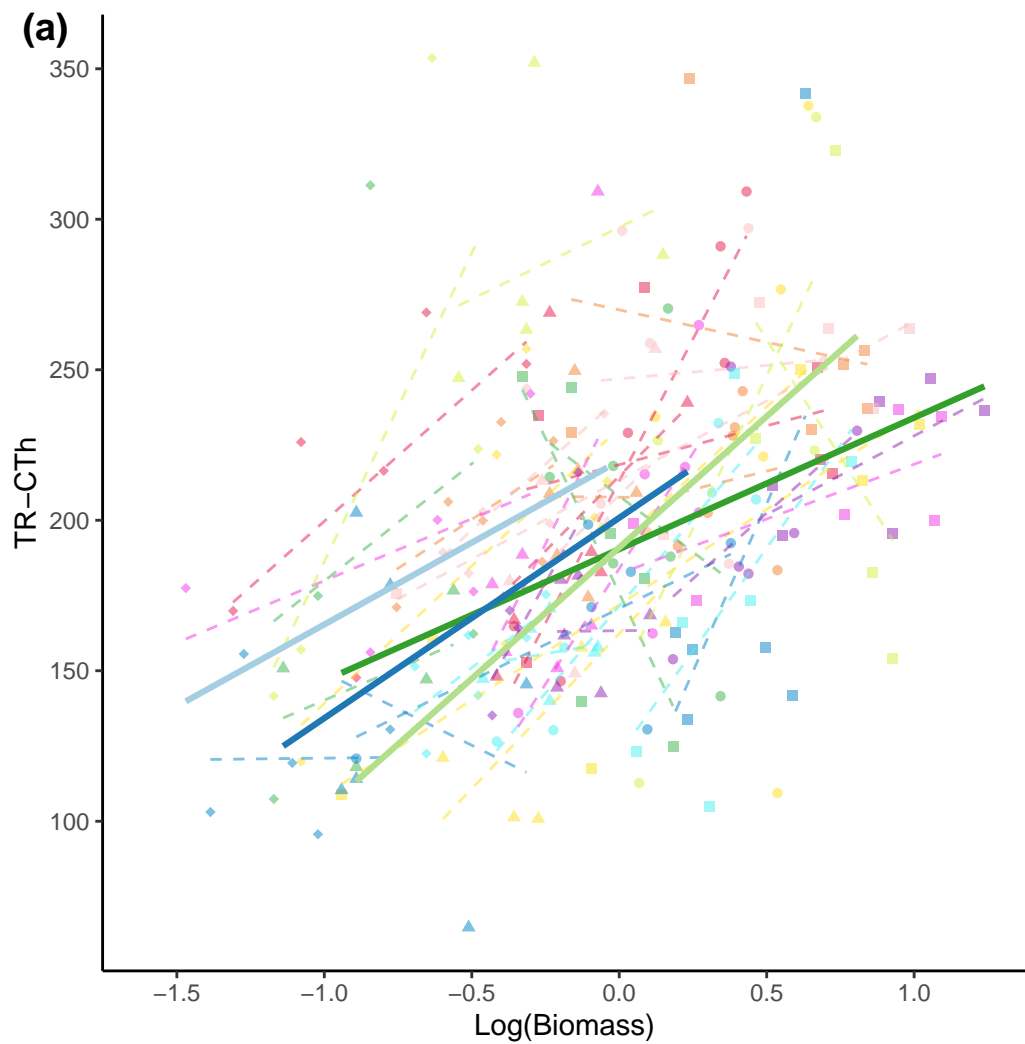


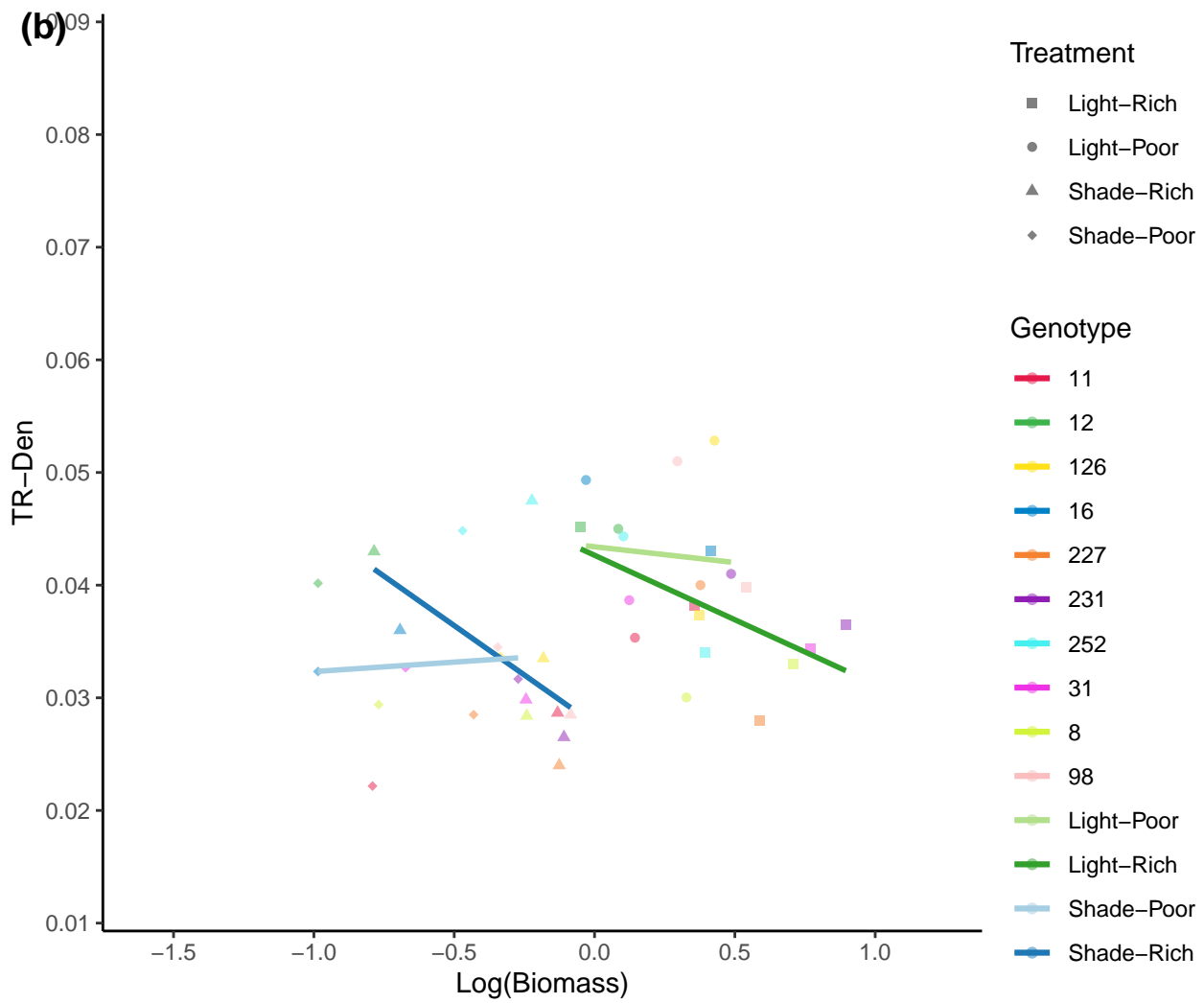
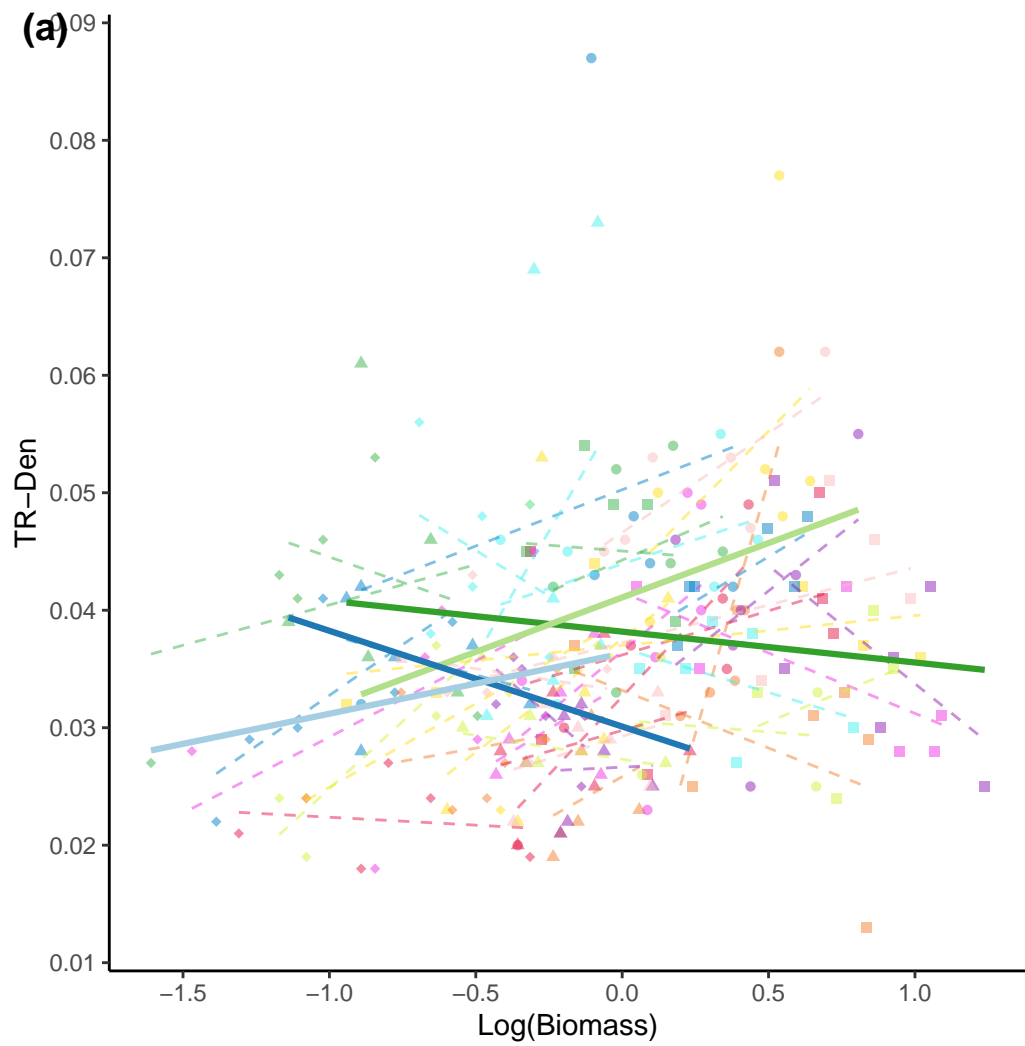


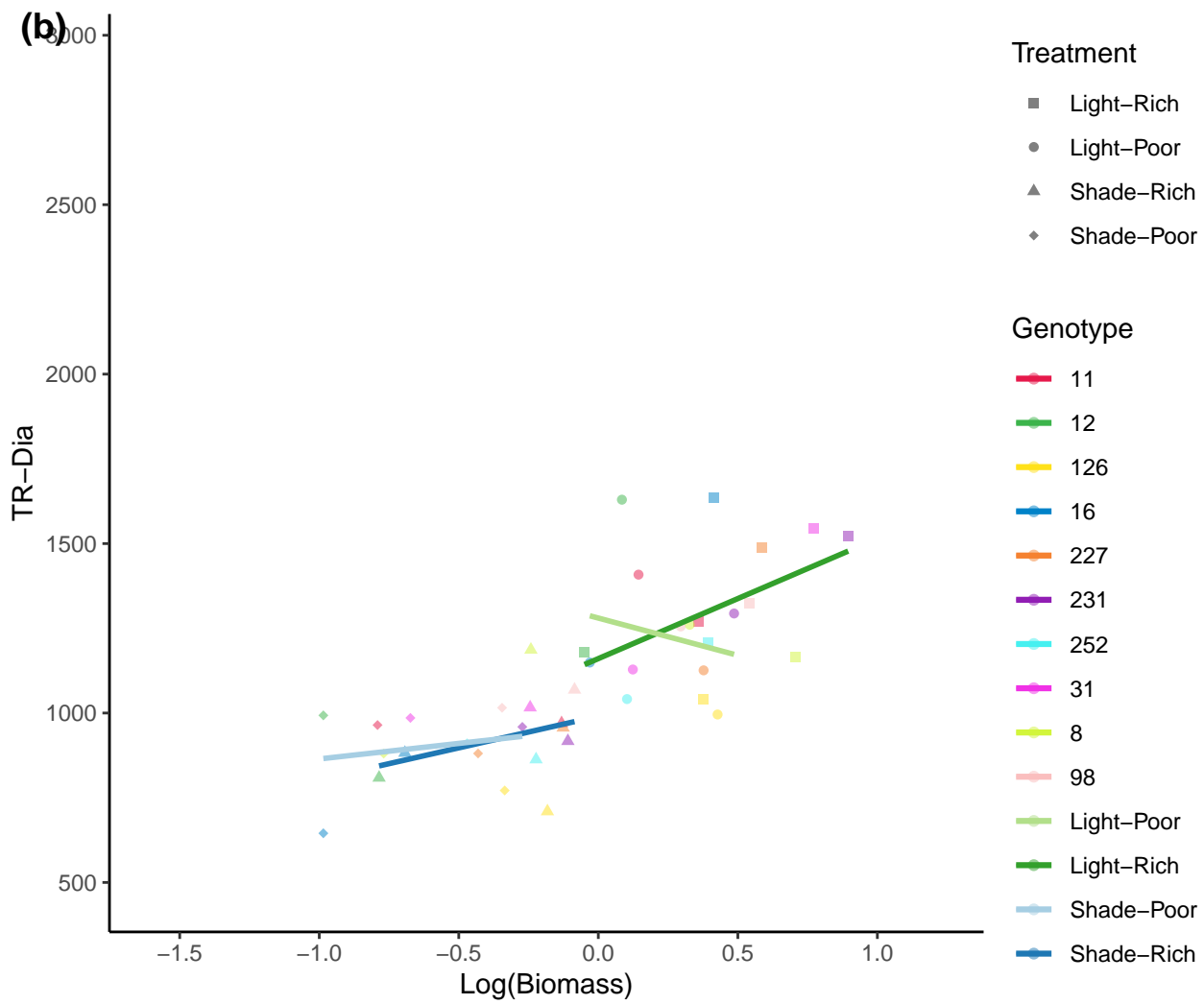
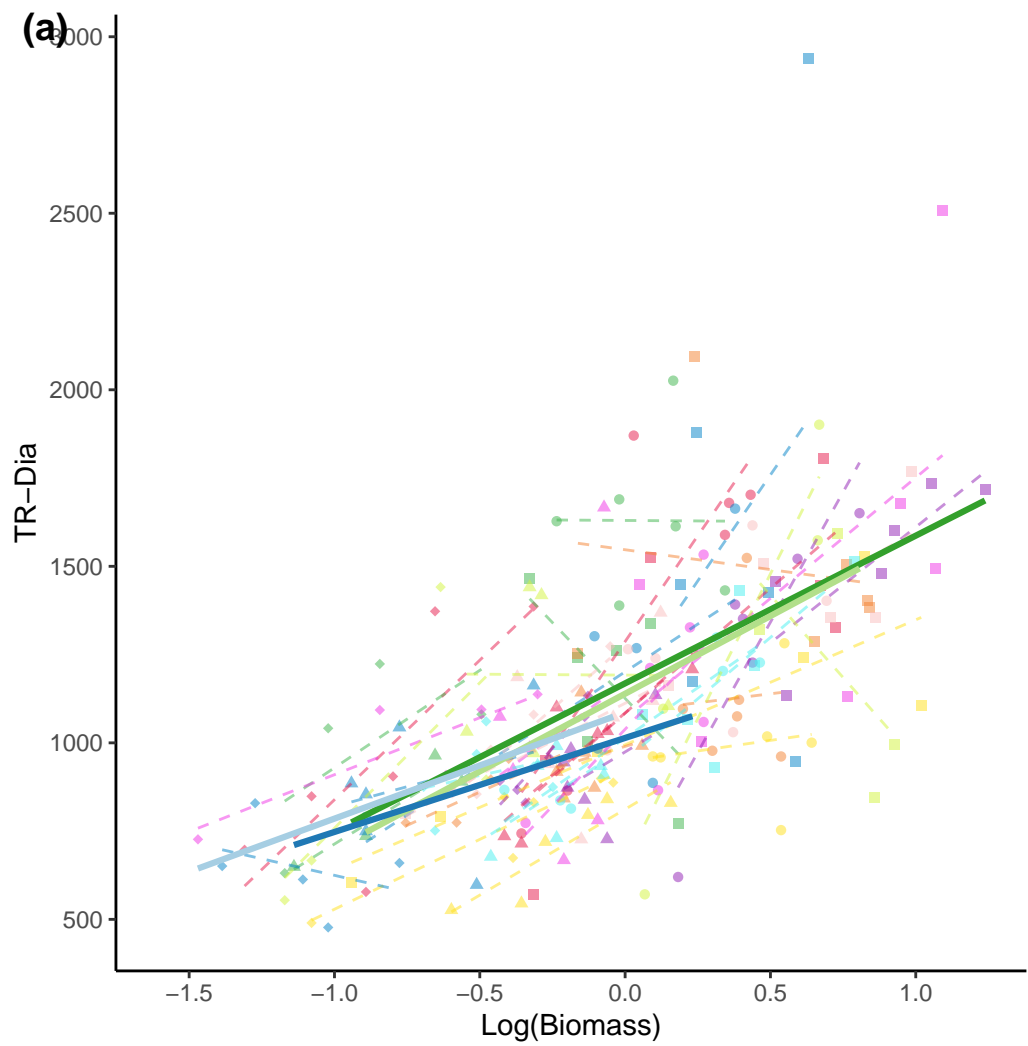


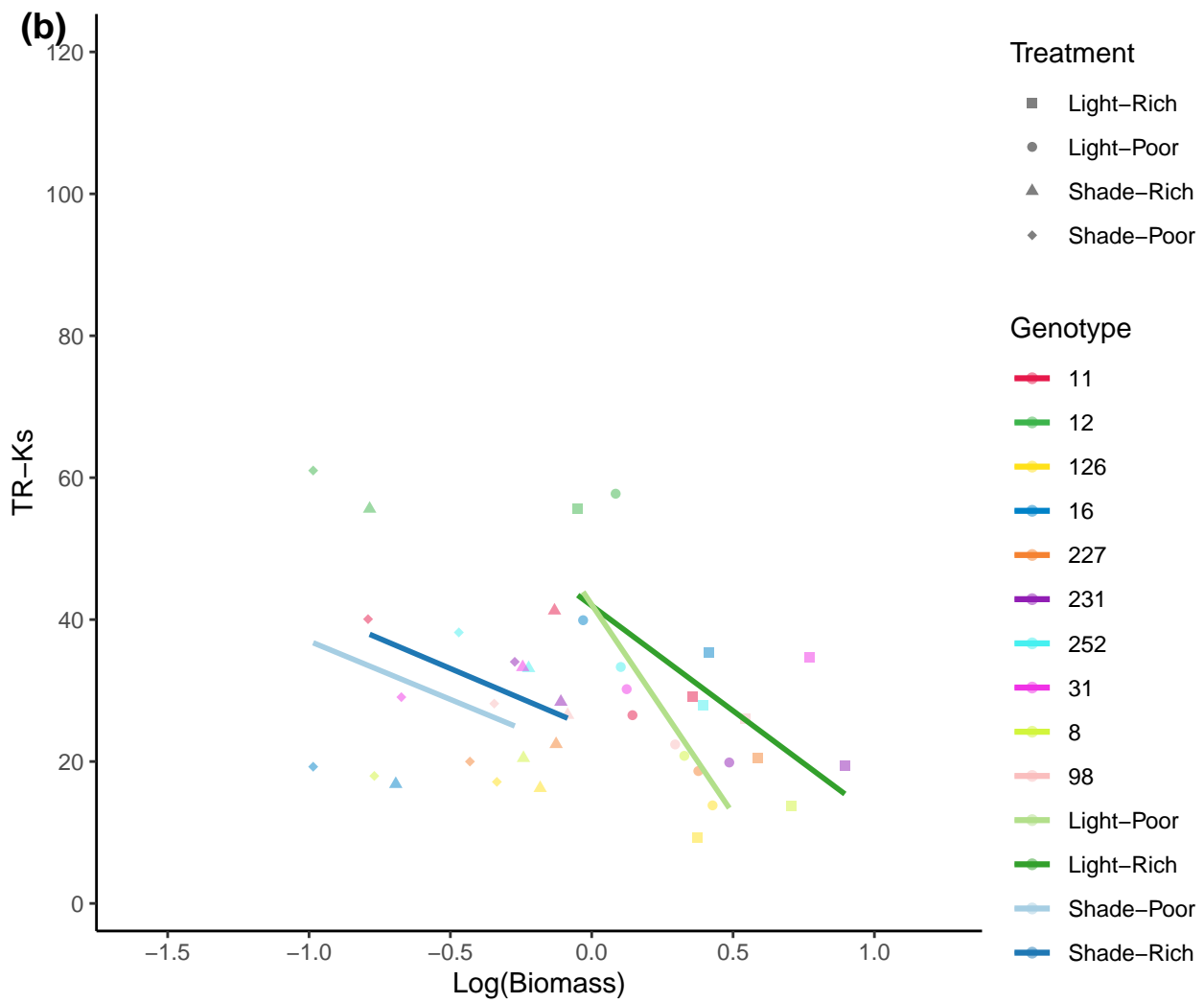
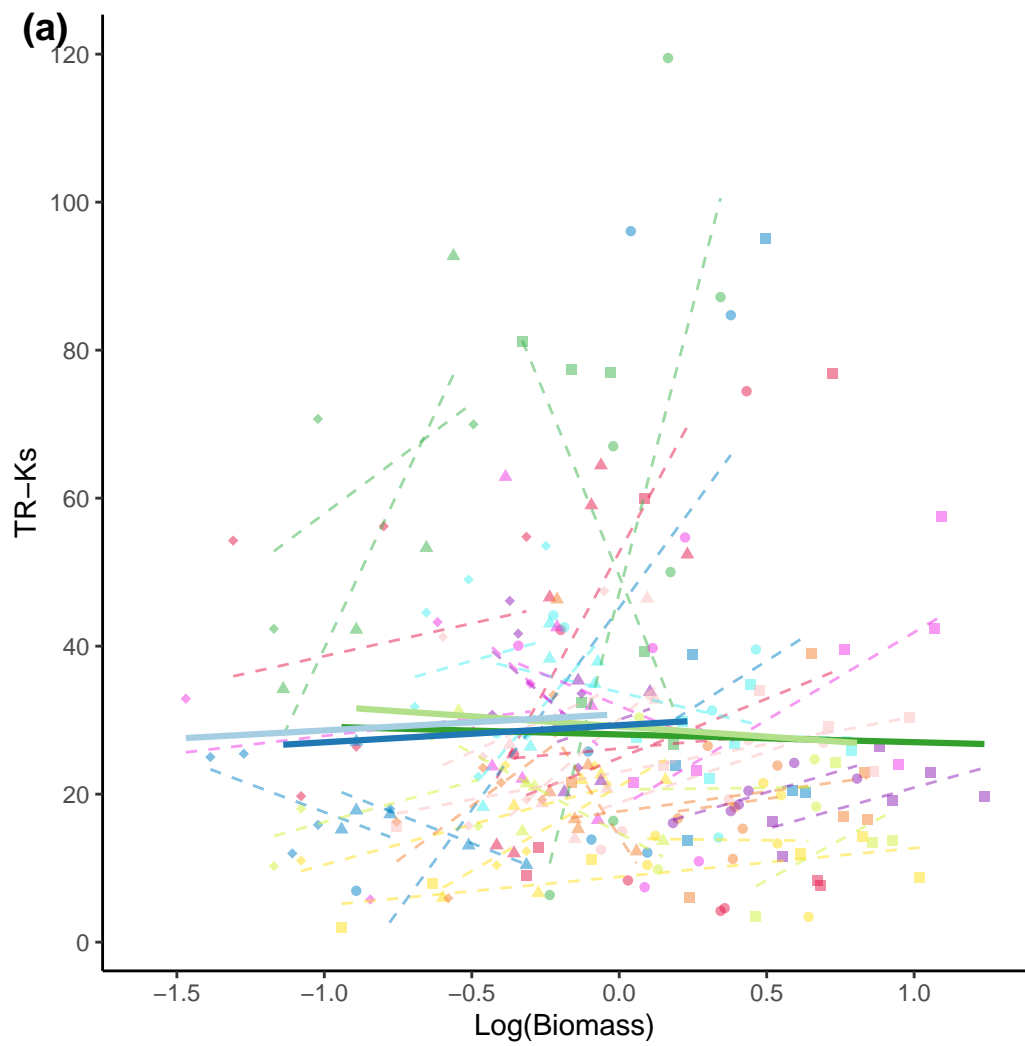


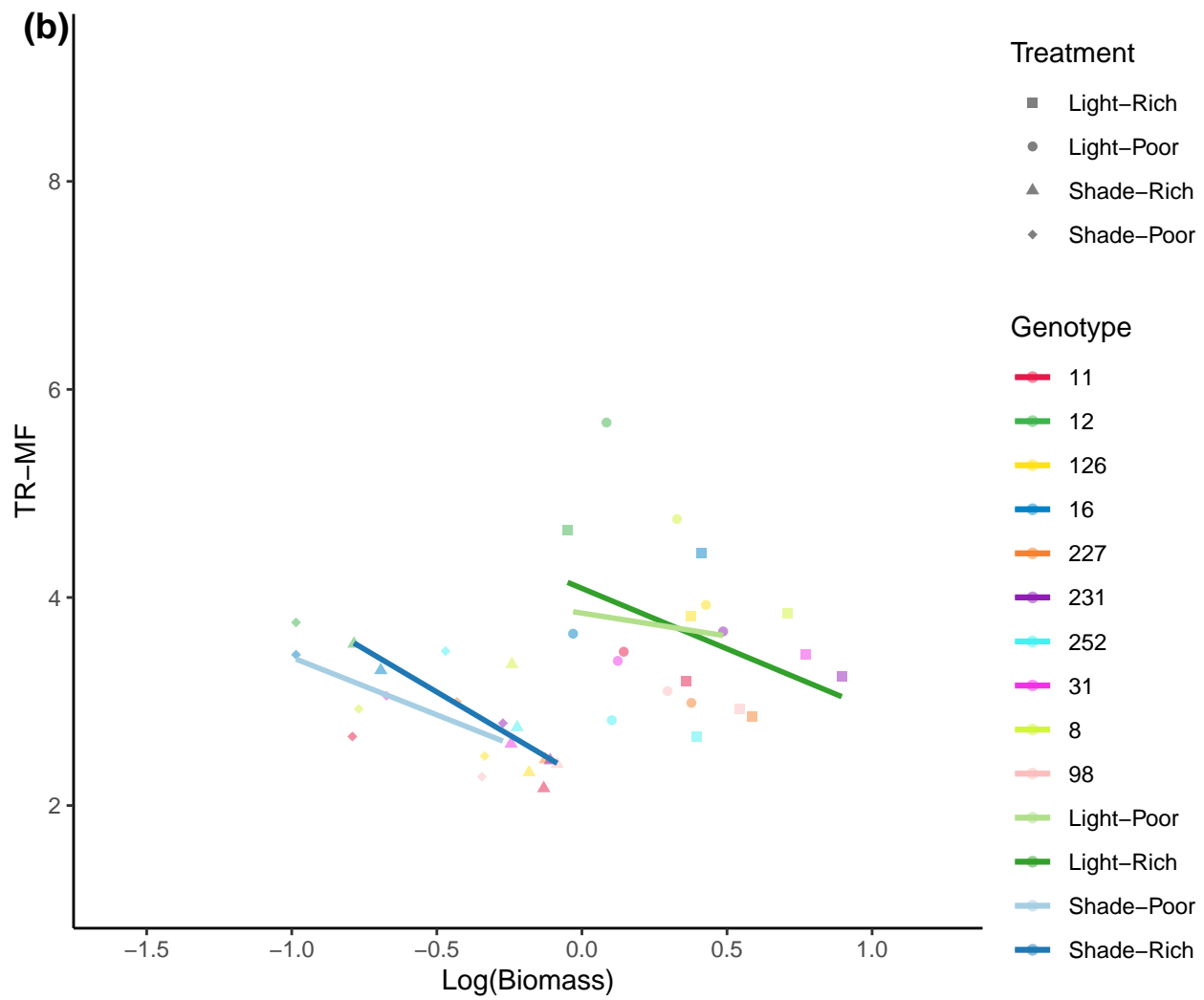
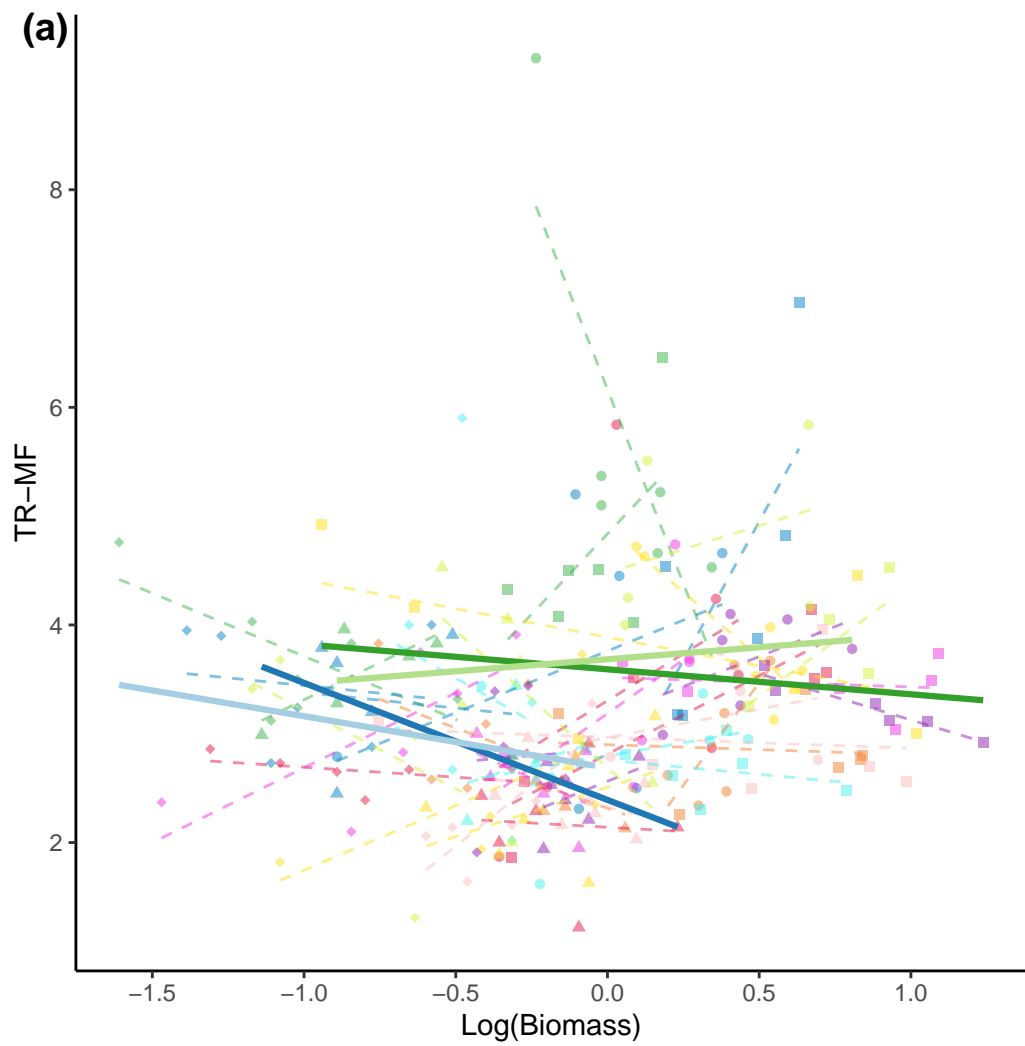




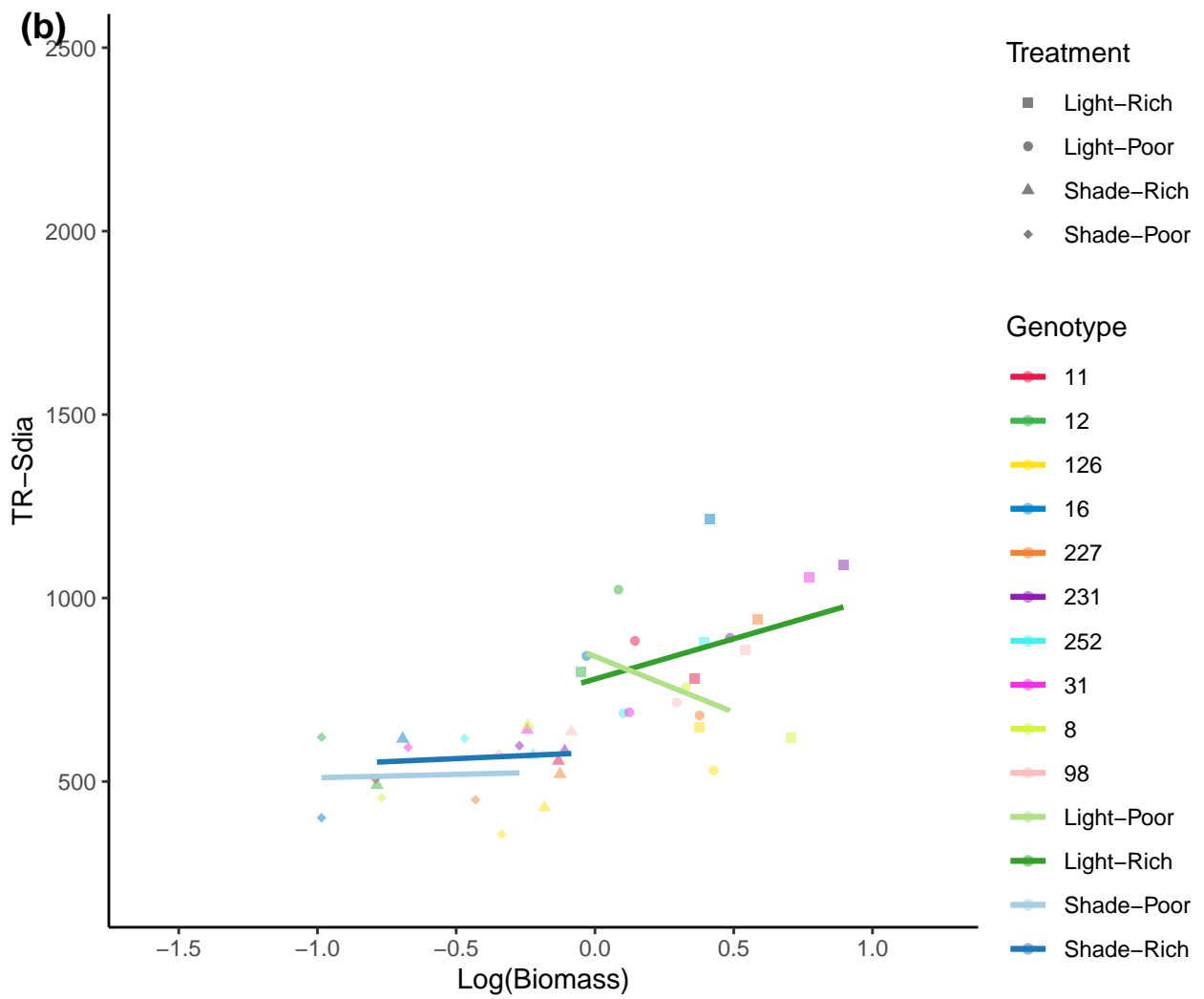
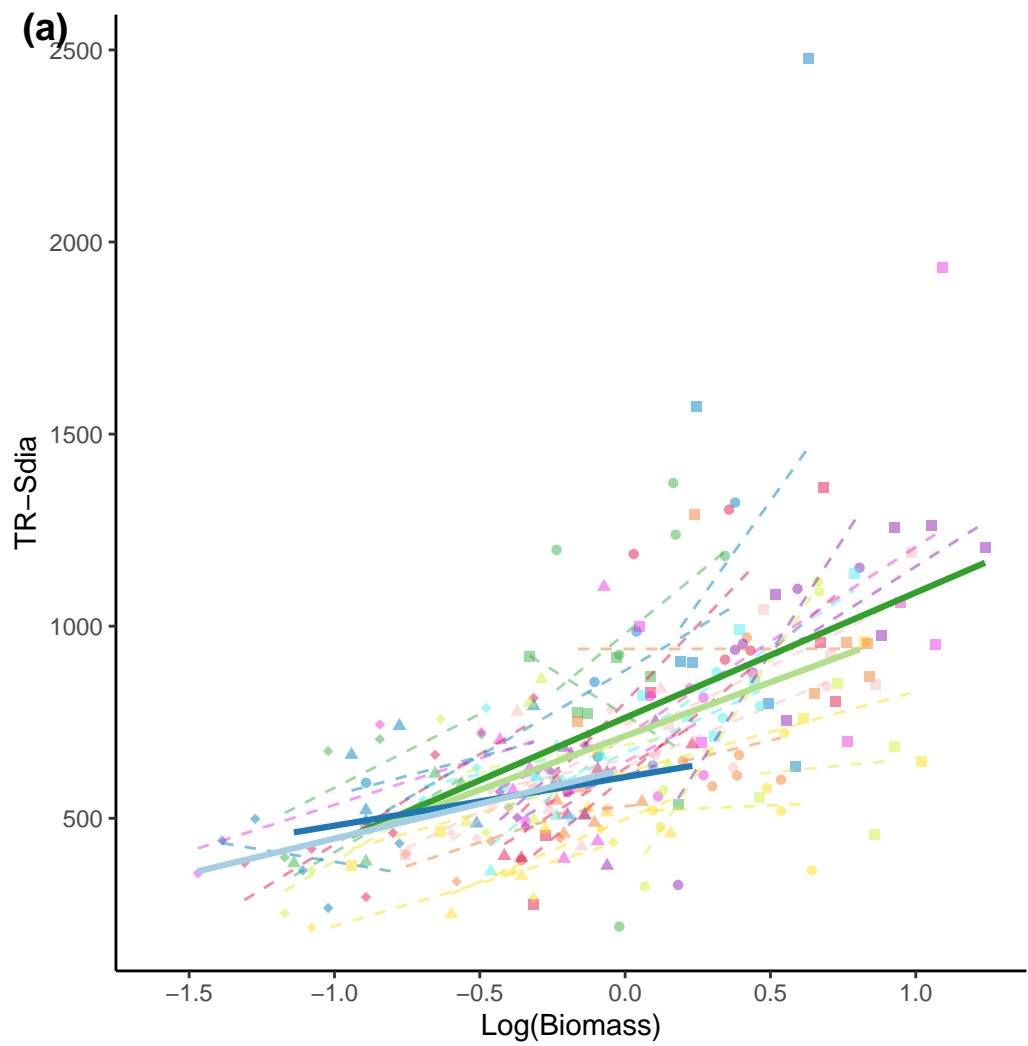


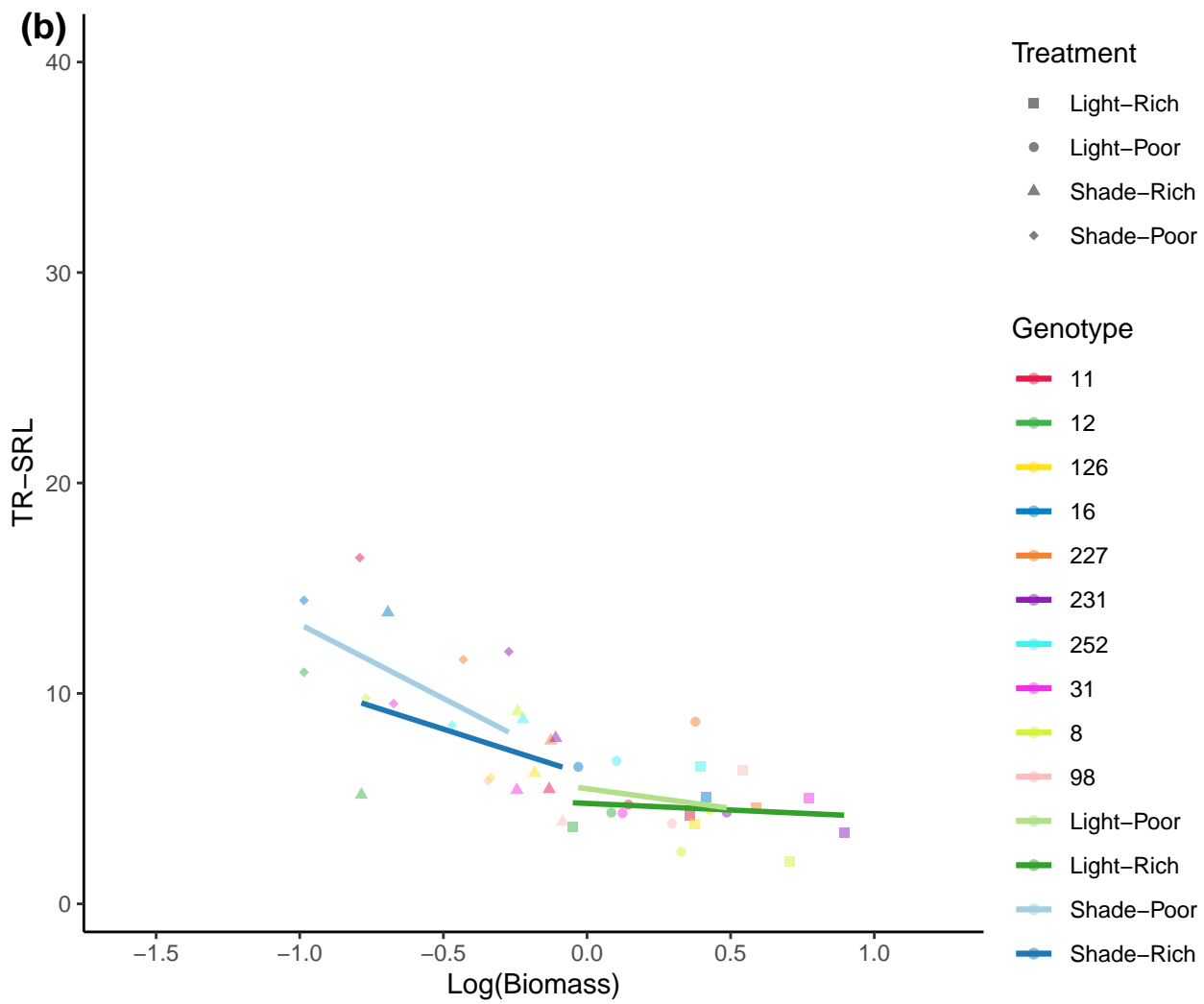
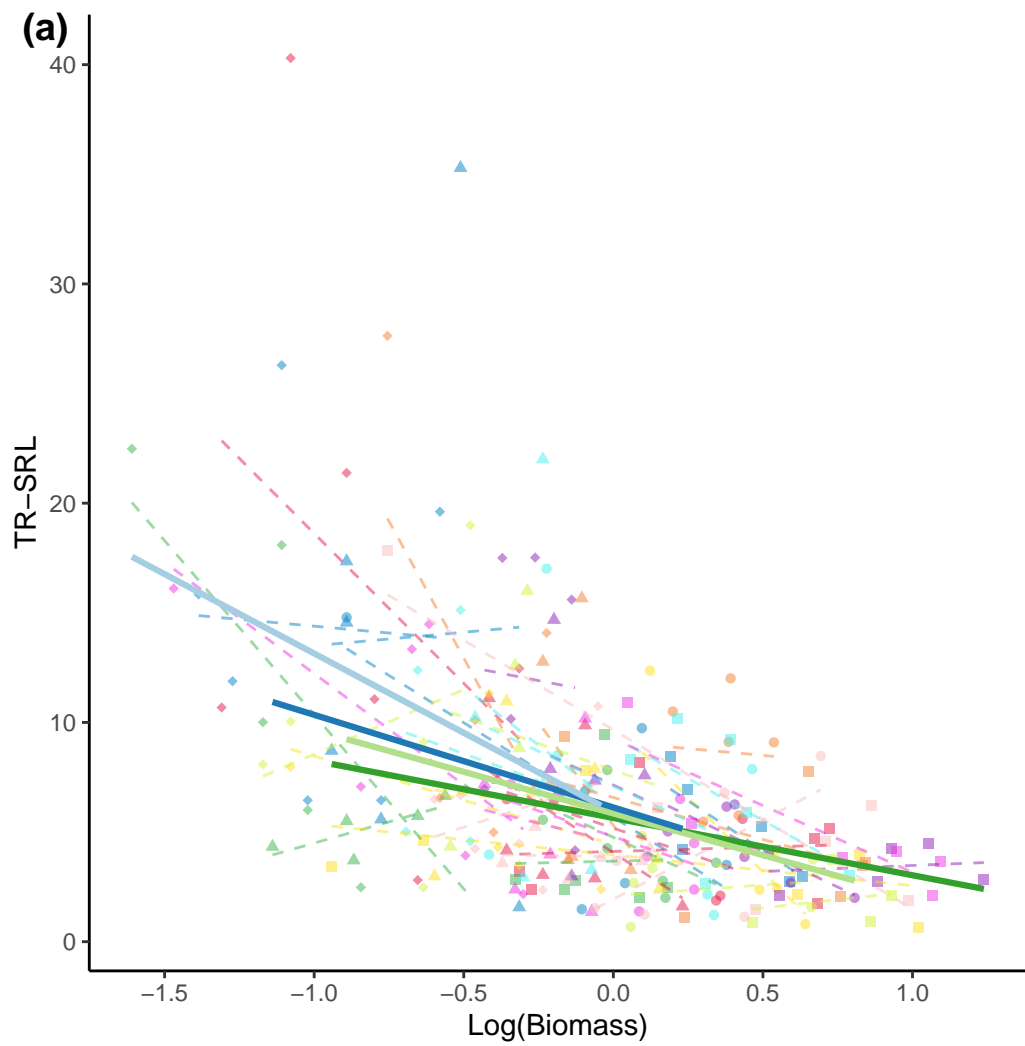






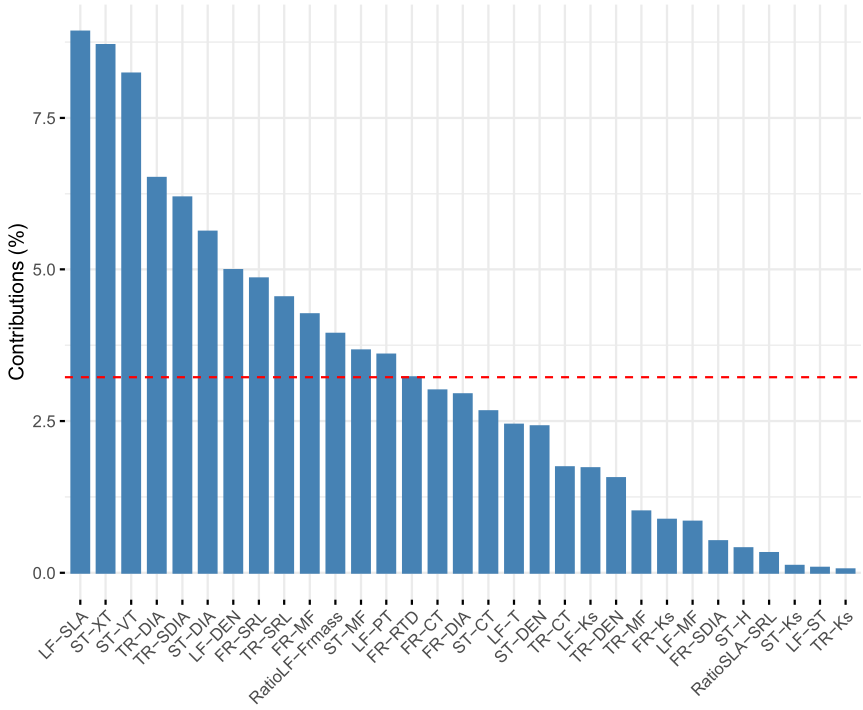




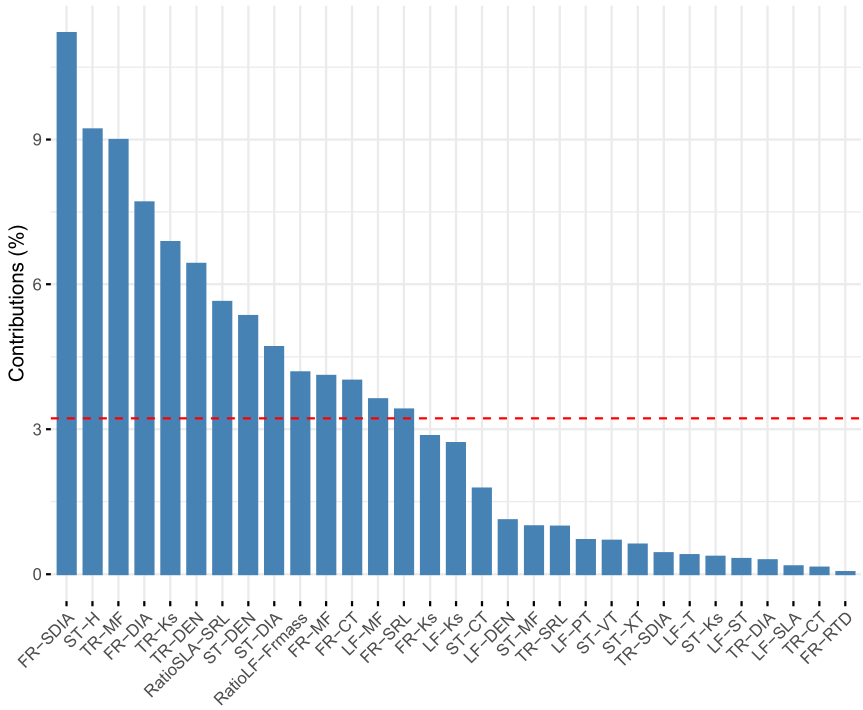


**Supplemental Figure S4.** Trait contributions to principal components of figure 5.

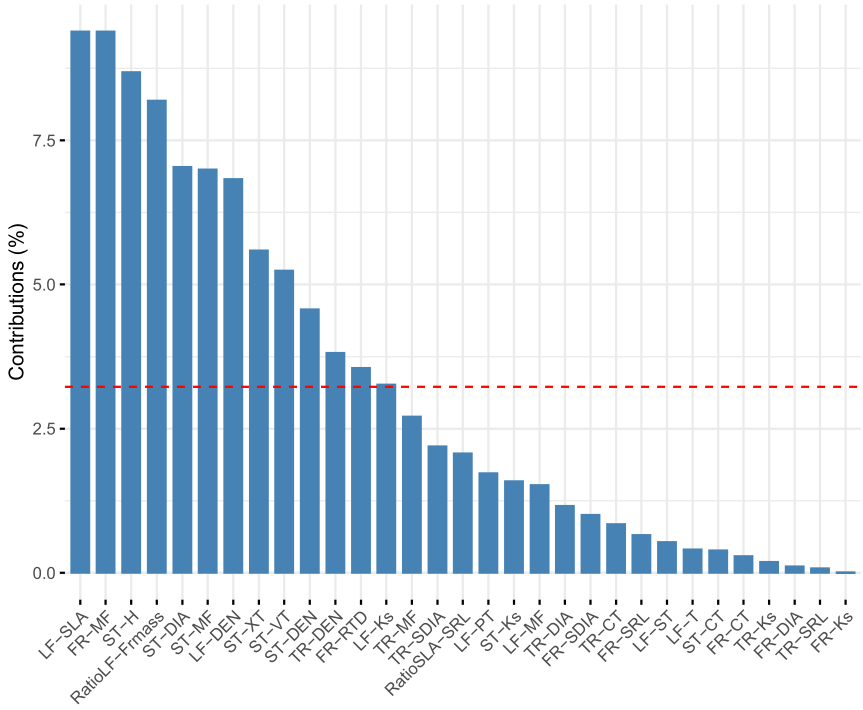
Trait contributions PC1 Fig 5a



Trait contributions PC2 Fig 5a



Trait contributions PC1 Fig 5b



Trait contributions PC2 Fig 5b

