

# Alpha and Environmental predictors

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## Alpha

### Tables

##	FarmType	variable	mean	SE	min	max
## 1	Monoculture	div_all	3.519	0.029	2.211	4.313
## 2	Polyculture	div_all	3.520	0.030	1.596	4.409
## 3	Monoculture	div_amf	1.040	0.057	0.000	3.142
## 4	Polyculture	div_amf	1.519	0.068	0.000	3.663
## 5	Monoculture	div_par	1.457	0.034	0.253	2.373
## 6	Polyculture	div_par	1.369	0.031	0.358	2.428
## 7	Monoculture	div_path	1.912	0.029	0.640	2.730
## 8	Polyculture	div_path	1.874	0.029	0.202	3.054
## 9	Monoculture	div_sap	3.100	0.034	1.604	3.928
## 10	Polyculture	div_sap	3.077	0.032	1.005	3.824
## 11	Monoculture	obs_all	167.894	2.116	116.000	259.000
## 12	Polyculture	obs_all	176.161	2.592	104.000	272.000
## 13	Monoculture	obs_amf	5.145	0.352	0.000	30.000
## 14	Polyculture	obs_amf	9.896	0.653	0.000	53.000
## 15	Monoculture	obs_par	12.475	0.250	3.000	20.000
## 16	Polyculture	obs_par	13.438	0.269	5.000	26.000
## 17	Monoculture	obs_path	20.698	0.409	9.000	36.000
## 18	Polyculture	obs_path	22.042	0.346	11.000	34.000
## 19	Monoculture	obs_sap	95.196	1.368	60.000	161.000
## 20	Polyculture	obs_sap	96.000	1.346	52.000	138.000

##	FTBL	variable	mean	SE	min	max
## 1	Monoculture_F	div_all	3.543	0.040	2.314	4.268
## 2	Monoculture_N	div_all	3.495	0.042	2.211	4.313
## 3	Polyculture_F	div_all	3.551	0.034	2.577	4.241
## 4	Polyculture_N	div_all	3.488	0.050	1.596	4.409
## 5	Monoculture_F	div_amf	1.060	0.085	0.000	3.142
## 6	Monoculture_N	div_amf	1.020	0.077	0.000	2.192
## 7	Polyculture_F	div_amf	1.521	0.098	0.000	3.322
## 8	Polyculture_N	div_amf	1.517	0.095	0.000	3.663
## 9	Monoculture_F	div_par	1.487	0.052	0.253	2.373
## 10	Monoculture_N	div_par	1.427	0.045	0.498	2.268
## 11	Polyculture_F	div_par	1.434	0.038	0.454	2.263
## 12	Polyculture_N	div_par	1.304	0.049	0.358	2.428
## 13	Monoculture_F	div_path	1.918	0.045	0.640	2.730
## 14	Monoculture_N	div_path	1.906	0.038	0.763	2.582
## 15	Polyculture_F	div_path	1.929	0.041	0.730	3.054

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## 16 Polyculture_N div_path 1.819 0.041 0.202 2.513
## 17 Monoculture_F div_sap 3.091 0.048 1.733 3.722
## 18 Monoculture_N div_sap 3.109 0.048 1.604 3.928
## 19 Polyculture_F div_sap 3.134 0.037 1.889 3.824
## 20 Polyculture_N div_sap 3.020 0.053 1.005 3.768
## 21 Monoculture_F obs_all 171.787 2.947 120.000 259.000
## 22 Monoculture_N obs_all 164.044 2.996 116.000 257.000
## 23 Polyculture_F obs_all 180.104 3.582 113.000 272.000
## 24 Polyculture_N obs_all 172.219 3.722 104.000 260.000
## 25 Monoculture_F obs_amf 5.629 0.585 0.000 30.000
## 26 Monoculture_N obs_amf 4.667 0.390 0.000 16.000
## 27 Polyculture_F obs_amf 9.833 0.918 0.000 36.000
## 28 Polyculture_N obs_amf 9.958 0.933 0.000 53.000
## 29 Monoculture_F obs_par 12.899 0.339 5.000 20.000
## 30 Monoculture_N obs_par 12.056 0.364 3.000 20.000
## 31 Polyculture_F obs_par 13.635 0.374 5.000 25.000
## 32 Polyculture_N obs_par 13.240 0.388 6.000 26.000
## 33 Monoculture_F obs_path 20.843 0.578 10.000 32.000
## 34 Monoculture_N obs_path 20.556 0.580 9.000 36.000
## 35 Polyculture_F obs_path 22.979 0.510 12.000 34.000
## 36 Polyculture_N obs_path 21.104 0.450 11.000 32.000
## 37 Monoculture_F obs_sap 96.135 1.937 60.000 150.000
## 38 Monoculture_N obs_sap 94.267 1.939 66.000 161.000
## 39 Polyculture_F obs_sap 98.854 1.745 56.000 137.000
## 40 Polyculture_N obs_sap 93.146 2.018 52.000 138.000
```

```
## Block variable mean SE min max
## 1 F div_all 3.547 0.026 2.314 4.268
## 2 N div_all 3.491 0.033 1.596 4.409
## 3 F div_amf 1.299 0.067 0.000 3.322
## 4 N div_amf 1.277 0.064 0.000 3.663
## 5 F div_par 1.459 0.032 0.253 2.373
## 6 N div_par 1.364 0.034 0.358 2.428
## 7 F div_path 1.924 0.030 0.640 3.054
## 8 N div_path 1.861 0.028 0.202 2.582
## 9 F div_sap 3.113 0.030 1.733 3.824
## 10 N div_sap 3.063 0.036 1.005 3.928
## 11 F obs_all 176.103 2.351 113.000 272.000
## 12 N obs_all 168.263 2.419 104.000 260.000
## 13 F obs_amf 7.811 0.573 0.000 36.000
## 14 N obs_amf 7.398 0.551 0.000 53.000
## 15 F obs_par 13.281 0.254 5.000 25.000
## 16 N obs_par 12.667 0.270 3.000 26.000
## 17 F obs_path 21.951 0.391 10.000 34.000
## 18 N obs_path 20.839 0.364 9.000 36.000
## 19 F obs_sap 97.546 1.299 56.000 150.000
## 20 N obs_sap 93.688 1.398 52.000 161.000
```

## Model output

```
## $obs_all
## $obs_all[[1]]
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: Negative Binomial(69.1401) ( log )
```

```

## Formula: round(obs_all, 0) ~ FarmType * Block + FocalCrop + scale(pH) +
##      scale(P) + scale(NP_ratio) + scale(TOC) + scale(N) + (1 |      farmCode)
## Data: alphaDF
##
##      AIC      BIC    logLik deviance df.resid
##  3515.9   3562.9  -1746.0   3491.9     359
##
## Scaled residuals:
##      Min       1Q   Median       3Q      Max
## -3.06474 -0.64248  0.02015  0.64189  3.02828
##
## Random effects:
##  Groups Name      Variance Std.Dev.
## farmCode (Intercept) 0.01643  0.1282
## Number of obs: 371, groups: farmCode, 31
##
## Fixed effects:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)    5.140868   0.025902 198.472 < 2e-16 ***
## FarmType1      -0.014742   0.025037  -0.589 0.555978
## Block1         0.025224   0.007581   3.327 0.000877 ***
## FocalCrop1     -0.002372   0.026010  -0.091 0.927348
## scale(pH)       0.050302   0.018600   2.704 0.006842 **
## scale(P)        -0.020118   0.014017  -1.435 0.151219
## scale(NP_ratio) -0.013869   0.008737  -1.587 0.112437
## scale(TOC)      0.025018   0.021214   1.179 0.238268
## scale(N)        -0.006835   0.019866  -0.344 0.730823
## FarmType1:Block1 -0.000339   0.007533  -0.045 0.964113
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation of Fixed Effects:
##              (Intr) FrmTy1 Block1 FclCr1 scl(H) scl(P) s(NP_) s(TOC) scl(N)
## FarmType1    0.030
## Block1       0.001  0.025
## FocalCrop1   -0.357  0.003 -0.004
## scale(pH)    -0.012  0.098  0.048  0.023
## scale(P)     0.028  0.159 -0.059 -0.061 -0.146
## scal(NP_rt) -0.013 -0.016 -0.047  0.035 -0.120  0.228
## scale(TOC)   0.024  0.104  0.111 -0.059 -0.159 -0.021  0.042
## scale(N)    -0.023 -0.160 -0.165  0.052  0.144 -0.200 -0.130 -0.767
## FrmTyp1:B11  0.007  0.016  0.019 -0.014 -0.045  0.147 -0.016  0.004  0.018
##
##
## $obs_amf
## $obs_amf[[1]]
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: Negative Binomial(3.7651) ( log )
## Formula: round(obs_amf, 0) ~ FarmType * Block + FocalCrop + scale(pH) +
##      scale(P) + scale(NP_ratio) + scale(TOC) + scale(N) + (1 |      farmCode)
## Data: alphaDF
##
##      AIC      BIC    logLik deviance df.resid

```

```

##    2081.6    2128.6   -1028.8    2057.6        359
##
## Scaled residuals:
##      Min       1Q   Median       3Q      Max
## -1.6305 -0.7801 -0.1583  0.5043  5.6709
##
## Random effects:
##   Groups   Name      Variance Std.Dev.
## farmCode (Intercept) 0.7551   0.869
## Number of obs: 371, groups: farmCode, 31
##
## Fixed effects:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)    1.65490    0.17223   9.609 < 2e-16 ***
## FarmType1     -0.32754    0.16387  -1.999 0.045628 *
## Block1         0.03028    0.03658   0.828 0.407702
## FocalCrop1     0.02266    0.17233   0.131 0.895400
## scale(pH)       0.29814    0.08301   3.592 0.000329 ***
## scale(P)       -0.30883    0.06892  -4.481 7.44e-06 ***
## scale(NP_ratio) -0.06608    0.04485  -1.473 0.140642
## scale(TOC)       0.06665    0.10389   0.642 0.521163
## scale(N)       -0.14400    0.10157  -1.418 0.156269
## FarmType1:Block1 0.03522    0.03644   0.967 0.333751
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation of Fixed Effects:
##              (Intr) FrmTy1 Block1 FclCr1 scl(H) scl(P) s(NP_) s(TOC) scl(N)
## FarmType1    0.037
## Block1       0.000  0.019
## FocalCrop1   -0.353  0.010 -0.004
## scale(pH)    -0.017  0.065  0.004  0.008
## scale(P)      0.033  0.106 -0.014 -0.040 -0.206
## scal(NP_rt)  -0.007 -0.019 -0.043  0.029 -0.124  0.193
## scale(TOC)    0.016  0.090  0.138 -0.045 -0.044 -0.066  0.025
## scale(N)     -0.009 -0.123 -0.206  0.037  0.112 -0.164 -0.110 -0.711
## FrmTyp1:B11  0.004  0.018  0.120 -0.018 -0.005  0.157 -0.034  0.021  0.027
##
##
## $obs_path
## $obs_path[[1]]
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: Negative Binomial(1432997) ( log )
## Formula: round(obs_path, 0) ~ FarmType * Block + FocalCrop + scale(pH) +
##       scale(P) + scale(NP_ratio) + scale(TOC) + scale(N) + (1 | farmCode)
## Data: alphaDF
##
##      AIC      BIC    logLik deviance df.resid
##   2157.7   2204.7  -1066.9   2133.7      359
##
## Scaled residuals:
##      Min       1Q   Median       3Q      Max
## -2.51655 -0.55195  0.00538  0.46670  2.28030

```

```

##
## Random effects:
##   Groups   Name      Variance Std.Dev.
## farmCode (Intercept) 0.01787  0.1337
## Number of obs: 371, groups: farmCode, 31
##
## Fixed effects:
##               Estimate Std. Error z value Pr(>|z|)
## (Intercept)    3.071883   0.028319 108.474 <2e-16 ***
## FarmType1     -0.030515   0.027807  -1.097  0.2725
## Block1         0.024515   0.011452   2.141  0.0323 *
## FocalCrop1    -0.061779   0.028514  -2.167  0.0303 *
## scale(pH)      0.009570   0.022818   0.419  0.6749
## scale(P)       0.001003   0.019743   0.051  0.9595
## scale(NP_ratio) -0.006096   0.012710  -0.480  0.6315
## scale(TOC)     0.045626   0.029752   1.534  0.1251
## scale(N)      -0.004603   0.027812  -0.165  0.8686
## FarmType1:Block1 -0.015722   0.011407  -1.378  0.1681
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation of Fixed Effects:
##           (Intr) FrmTy1 Block1 FclCr1 scl(H) scl(P) s(NP_) s(TOC) scl(N)
## FarmType1  0.039
## Block1     -0.006  0.027
## FocalCrop1 -0.347 -0.007 -0.003
## scale(pH)  -0.014  0.079  0.029  0.026
## scale(P)    0.032  0.187 -0.072 -0.080 -0.179
## scal(NP_rt) -0.016 -0.022 -0.057  0.047 -0.115  0.226
## scale(TOC)  0.025  0.125  0.088 -0.068 -0.169 -0.075  0.029
## scale(N)   -0.029 -0.192 -0.131  0.062  0.188 -0.149 -0.118 -0.786
## FrmTyp1:B11 0.014  0.013  0.048 -0.016 -0.040  0.134 -0.025 -0.007  0.015
##
##
## $obs_sap
## $obs_sap[[1]]
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: Negative Binomial(97.3248) ( log )
## Formula: round(obs_sap, 0) ~ FarmType * Block + FocalCrop + scale(pH) +
##       scale(P) + scale(NP_ratio) + scale(TOC) + scale(N) + (1 | farmCode)
## Data: alphaDF
##
##      AIC      BIC    logLik deviance df.resid
## 3089.5   3136.5  -1532.8   3065.5     359
##
## Scaled residuals:
##      Min       1Q   Median       3Q      Max
## -3.1150 -0.6292 -0.0218  0.6678  3.1870
##
## Random effects:
##   Groups   Name      Variance Std.Dev.
## farmCode (Intercept) 0.0154   0.1241
## Number of obs: 371, groups: farmCode, 31

```

```

##
## Fixed effects:
##           Estimate Std. Error z value Pr(>|z|)
## (Intercept)  4.558783   0.025185 181.010 < 2e-16 ***
## FarmType1    0.004154   0.024362   0.171  0.86460
## Block1       0.021369   0.007662   2.789  0.00529 **
## FocalCrop1   -0.018570   0.025296  -0.734  0.46288
## scale(pH)     0.035275   0.017654   1.998  0.04571 *
## scale(P)      -0.003436   0.014033  -0.245  0.80656
## scale(NP_ratio) -0.008257   0.008691  -0.950  0.34209
## scale(TOC)     0.024580   0.021239   1.157  0.24715
## scale(N)      -0.009129   0.019860  -0.460  0.64578
## FarmType1:Block1 -0.010007   0.007622  -1.313  0.18925
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation of Fixed Effects:
##           (Intr) FrmTy1 Block1 FclCr1 scl(H) scl(P) s(NP_) s(TOC) scl(N)
## FarmType1  0.030
## Block1     0.000  0.027
## FocalCrop1 -0.356  0.002 -0.004
## scale(pH)  -0.012  0.089  0.047  0.025
## scale(P)    0.028  0.162 -0.057 -0.064 -0.158
## scal(NP_rt) -0.013 -0.013 -0.049  0.035 -0.111  0.232
## scale(TOC)  0.024  0.107  0.107 -0.059 -0.166 -0.024  0.038
## scale(N)   -0.023 -0.167 -0.162  0.053  0.141 -0.197 -0.132 -0.765
## FrmTyp1:B11 0.008  0.015  0.016 -0.014 -0.050  0.148 -0.019  0.005  0.017
##
##
## $obs_par
## $obs_par[[1]]
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: Negative Binomial(712849.3) ( log )
## Formula: round(obs_par, 0) ~ FarmType * Block + FocalCrop + scale(pH) +
##          scale(P) + scale(NP_ratio) + scale(TOC) + scale(N) + (1 | farmCode)
## Data: alphaDF
##
##           AIC          BIC    logLik deviance df.resid
##        1971.5        2018.5    -973.7   1947.5        359
##
## Scaled residuals:
##           Min           1Q       Median           3Q           Max
## -2.52846 -0.61645 -0.07117  0.57656  2.91475
##
## Random effects:
## Groups Name Variance Std.Dev.
## farmCode (Intercept) 0.009714 0.09856
## Number of obs: 371, groups: farmCode, 31
##
## Fixed effects:
##           Estimate Std. Error z value Pr(>|z|)
## (Intercept)  2.553468   0.024620 103.715 <2e-16 ***
## FarmType1    -0.038565   0.024689  -1.562  0.1183

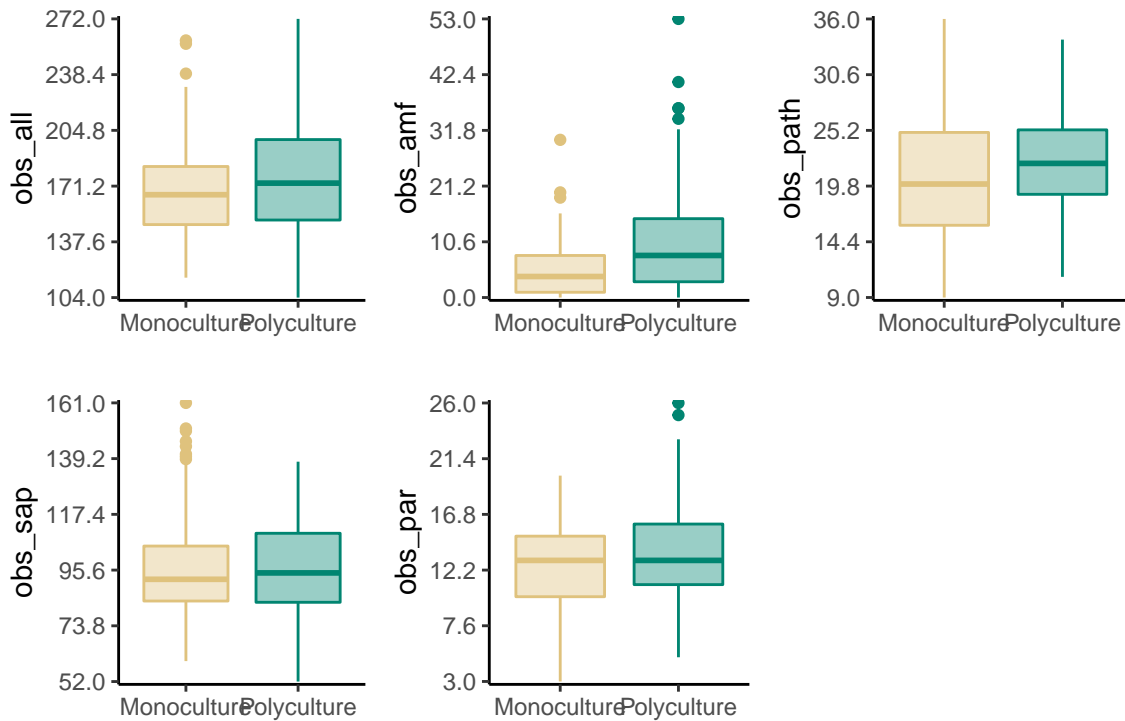
```

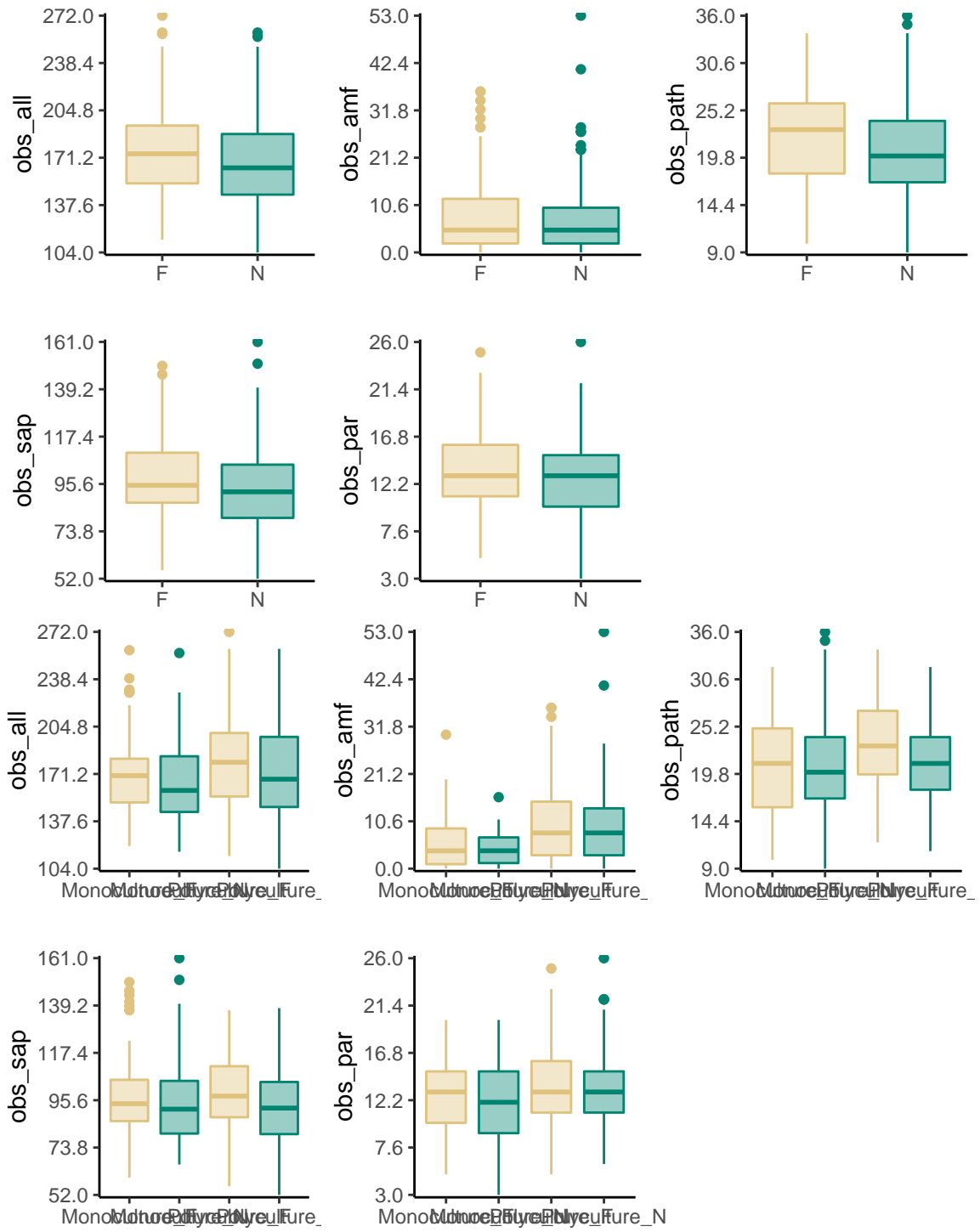
```

## Block1          0.024856   0.014673   1.694   0.0903 .
## FocalCrop1      0.002158   0.024829   0.087   0.9307
## scale(pH)       0.040925   0.023717   1.726   0.0844 .
## scale(P)        -0.012118   0.022504  -0.538   0.5903
## scale(NP_ratio) -0.016663   0.018055  -0.923   0.3561
## scale(TOC)      -0.069421   0.033565  -2.068   0.0386 *
## scale(N)        0.034692   0.032455   1.069   0.2851
## FarmType1:Block1 0.007317   0.014610   0.501   0.6165
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation of Fixed Effects:
##              (Intr) FrmTy1 Block1 FclCr1 scl(H) scl(P) s(NP_) s(TOC) scl(N)
## FarmType1    0.056
## Block1       -0.008  0.022
## FocalCrop1   -0.361 -0.031 -0.011
## scale(pH)    -0.033  0.091  0.027  0.024
## scale(P)      0.045  0.207 -0.073 -0.086 -0.262
## scal(NP_rt)  -0.024 -0.050 -0.050  0.082 -0.083  0.216
## scale(TOC)    0.050  0.172  0.109 -0.080 -0.044 -0.148 -0.025
## scale(N)     -0.043 -0.244 -0.137  0.068  0.131 -0.082 -0.078 -0.775
## FrmTyp1:B11  0.006  0.009  0.058 -0.022 -0.044  0.119 -0.023 -0.005  0.019

```

## Plots







# Alpha x Environment

## Tables

##	FarmType	variable	mean	SE	min	max
## 1	Monoculture	N	0.046	0.002	0.017	0.159
## 2	Polyculture	N	0.039	0.001	0.019	0.124
## 3	Monoculture	NP_ratio	0.958	0.269	0.020	38.529
## 4	Polyculture	NP_ratio	0.144	0.007	0.041	0.666
## 5	Monoculture	P	24.374	1.517	0.172	108.662
## 6	Polyculture	P	37.331	1.568	5.706	121.241
## 7	Monoculture	pH	7.168	0.070	4.780	8.640
## 8	Polyculture	pH	7.481	0.053	4.560	8.290
## 9	Monoculture	TOC	0.495	0.014	0.181	1.185
## 10	Polyculture	TOC	0.509	0.011	0.217	1.118

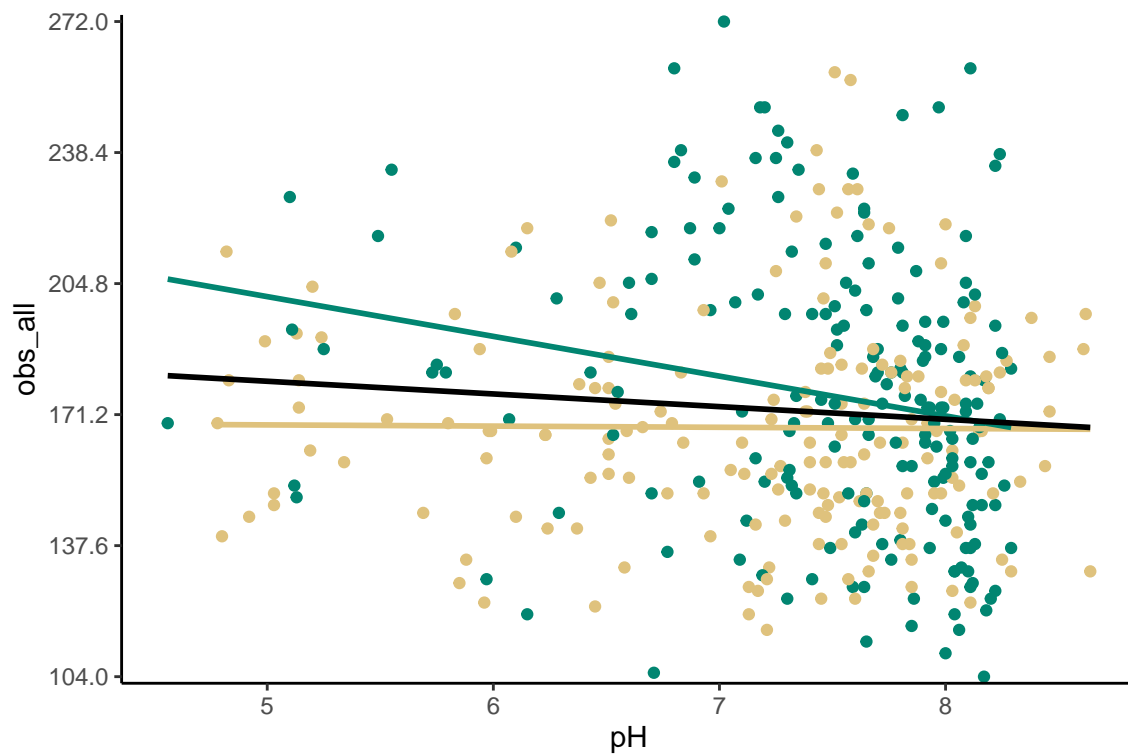
##	FTBL	variable	mean	SE	min	max
## 1	Monoculture_F	N	0.047	0.003	0.018	0.133
## 2	Monoculture_N	N	0.045	0.002	0.017	0.159
## 3	Polyculture_F	N	0.042	0.002	0.019	0.093
## 4	Polyculture_N	N	0.036	0.002	0.019	0.124
## 5	Monoculture_F	NP_ratio	1.194	0.474	0.039	38.529
## 6	Monoculture_N	NP_ratio	0.724	0.258	0.020	22.680
## 7	Polyculture_F	NP_ratio	0.148	0.012	0.043	0.666
## 8	Polyculture_N	NP_ratio	0.140	0.008	0.041	0.383
## 9	Monoculture_F	P	23.255	1.979	0.220	64.761
## 10	Monoculture_N	P	25.480	2.300	0.172	108.662
## 11	Polyculture_F	P	40.565	2.416	5.706	121.241
## 12	Polyculture_N	P	34.097	1.957	6.527	92.802
## 13	Monoculture_F	pH	7.160	0.102	4.780	8.460
## 14	Monoculture_N	pH	7.177	0.096	4.800	8.640
## 15	Polyculture_F	pH	7.457	0.082	4.560	8.260
## 16	Polyculture_N	pH	7.504	0.069	5.490	8.290
## 17	Monoculture_F	TOC	0.493	0.021	0.210	1.151
## 18	Monoculture_N	TOC	0.497	0.018	0.181	1.185
## 19	Polyculture_F	TOC	0.520	0.016	0.225	1.118
## 20	Polyculture_N	TOC	0.497	0.015	0.217	0.938

##	Block	variable	mean	SE	min	max
## 1	F	N	0.044	0.002	0.018	0.133
## 2	N	N	0.040	0.001	0.017	0.159
## 3	F	NP_ratio	0.651	0.231	0.039	38.529
## 4	N	NP_ratio	0.423	0.127	0.020	22.680
## 5	F	P	32.237	1.695	0.220	121.241
## 6	N	P	29.928	1.532	0.172	108.662
## 7	F	pH	7.314	0.066	4.560	8.460
## 8	N	pH	7.346	0.060	4.800	8.640
## 9	F	TOC	0.507	0.013	0.210	1.151
## 10	N	TOC	0.497	0.012	0.181	1.185

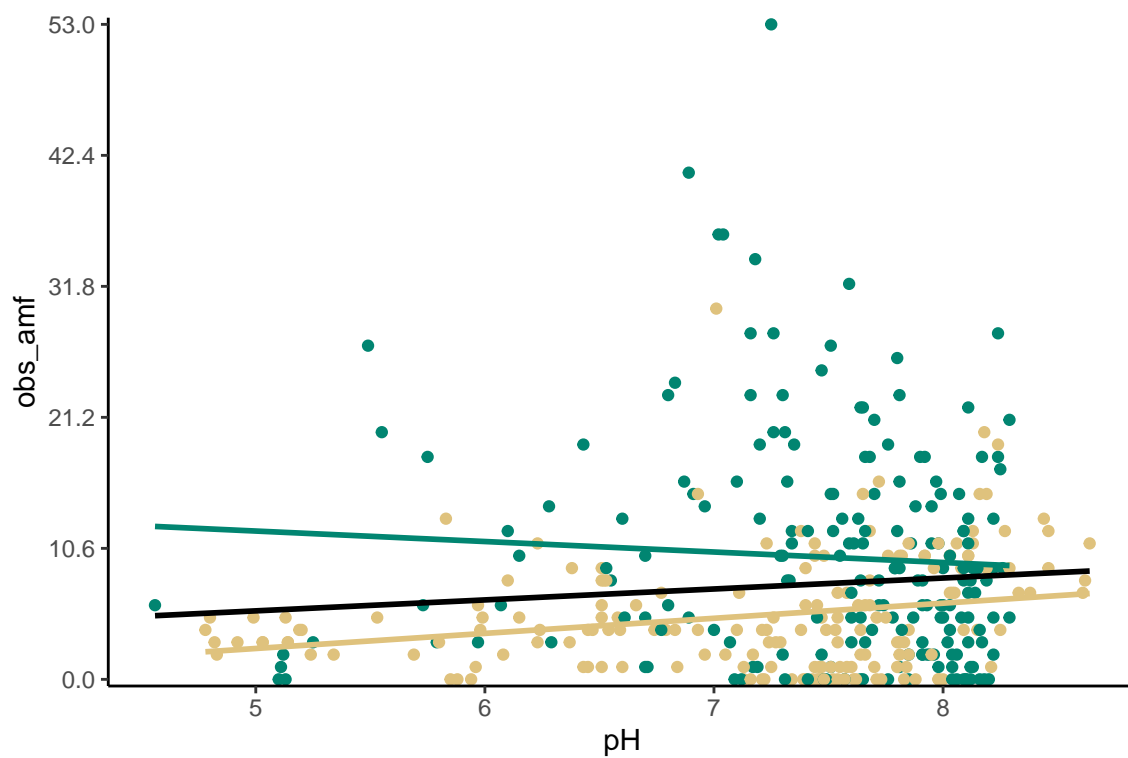
## Model output

## Plots

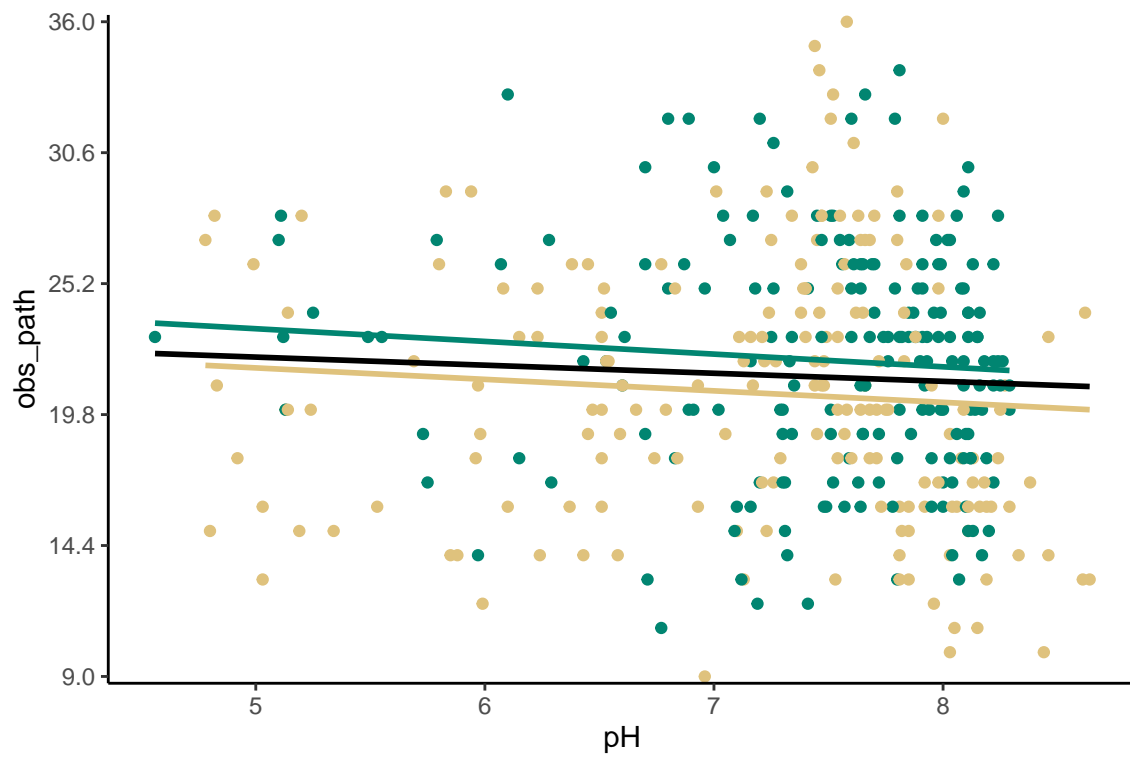
## \$obs\_all



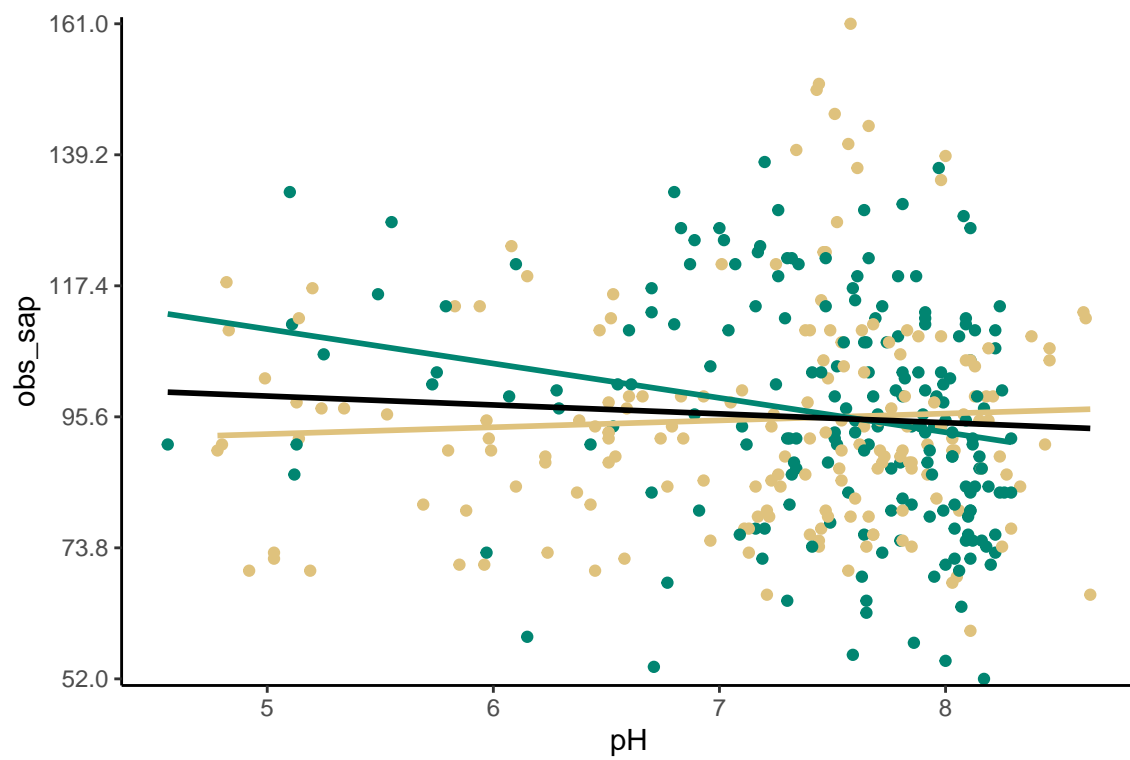
##  
## \$obs\_amf



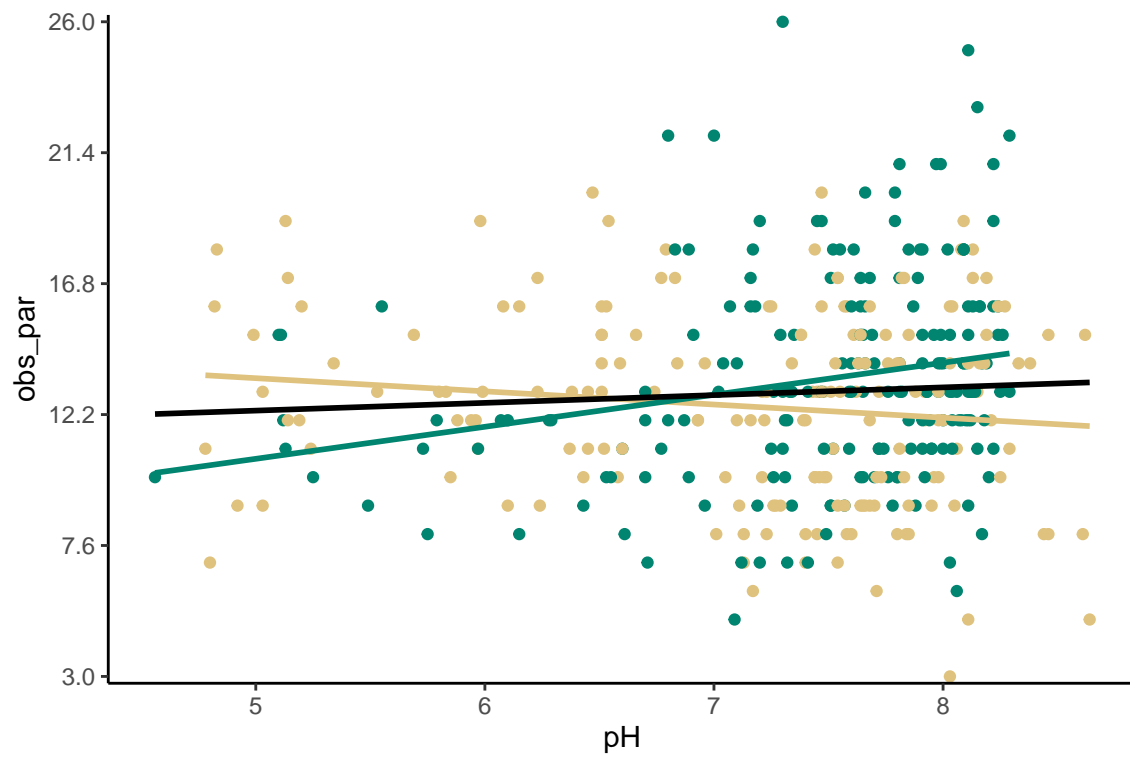
##  
## \$obs\_path



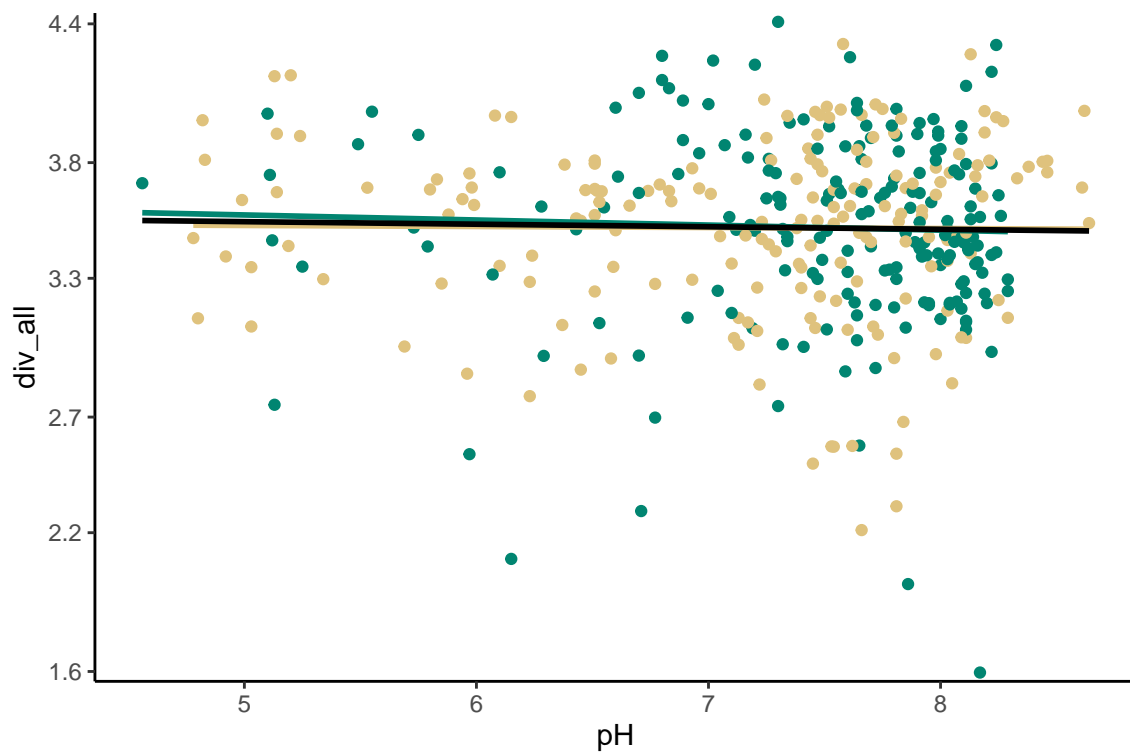
##  
## \$obs\_sap



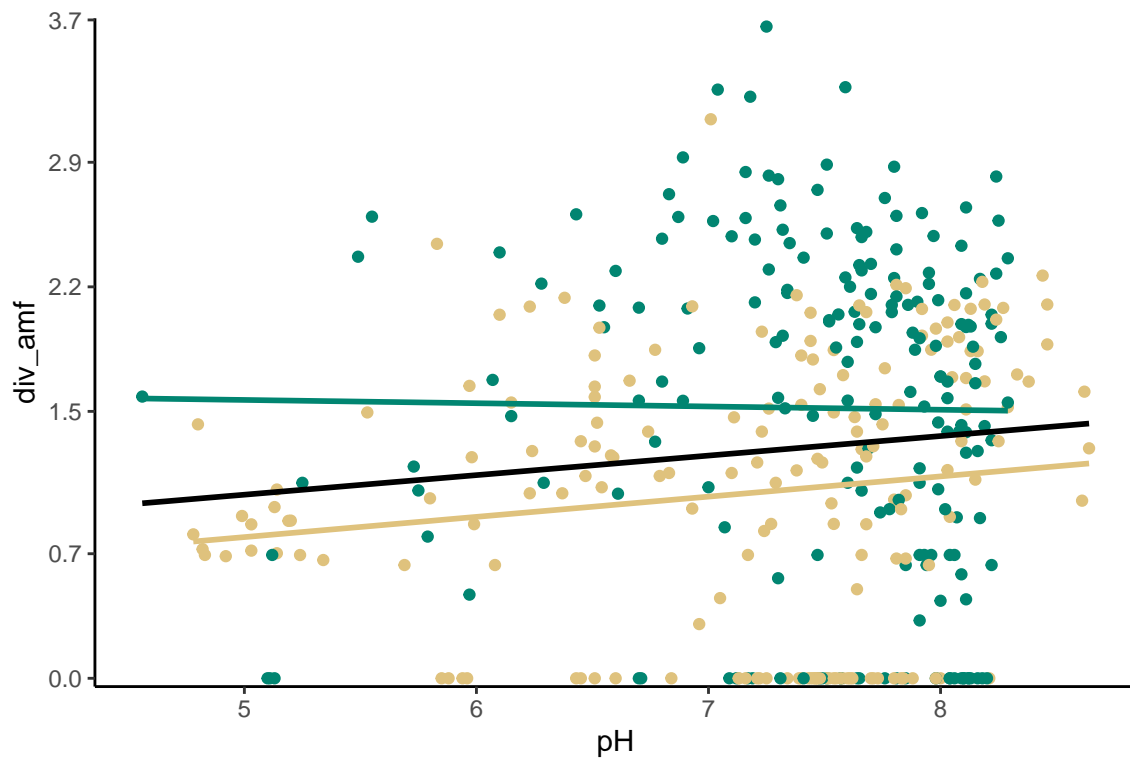
##  
## \$obs\_par



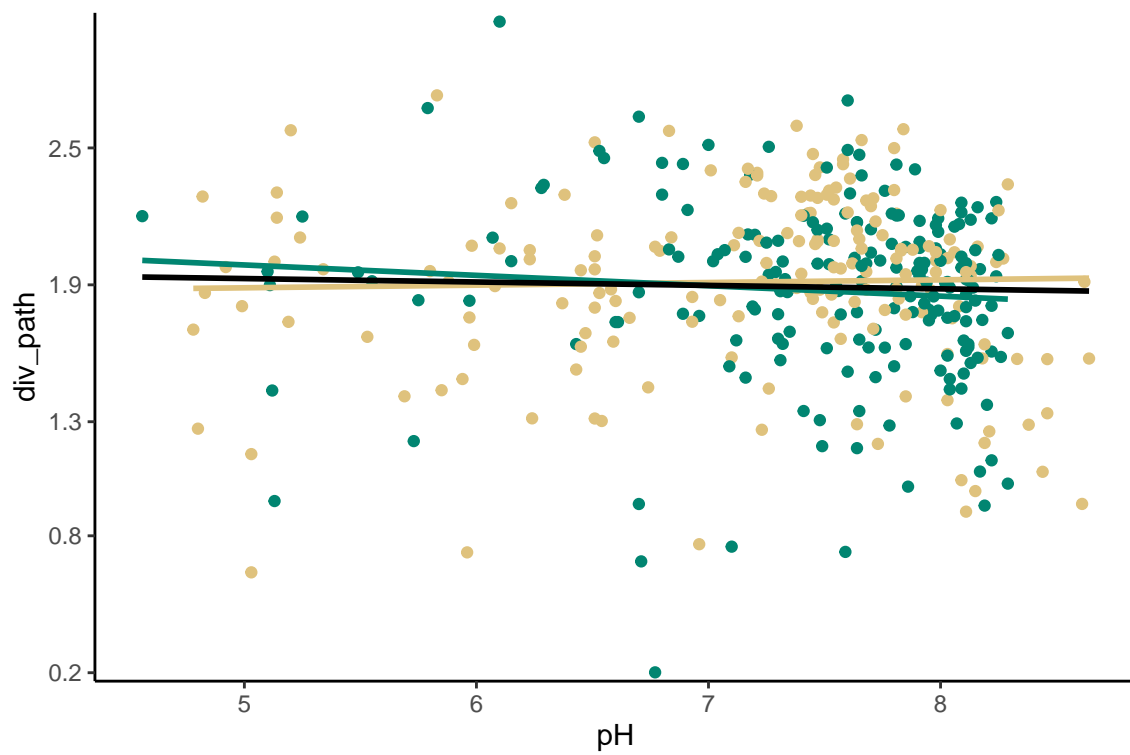
##  
## \$div\_all



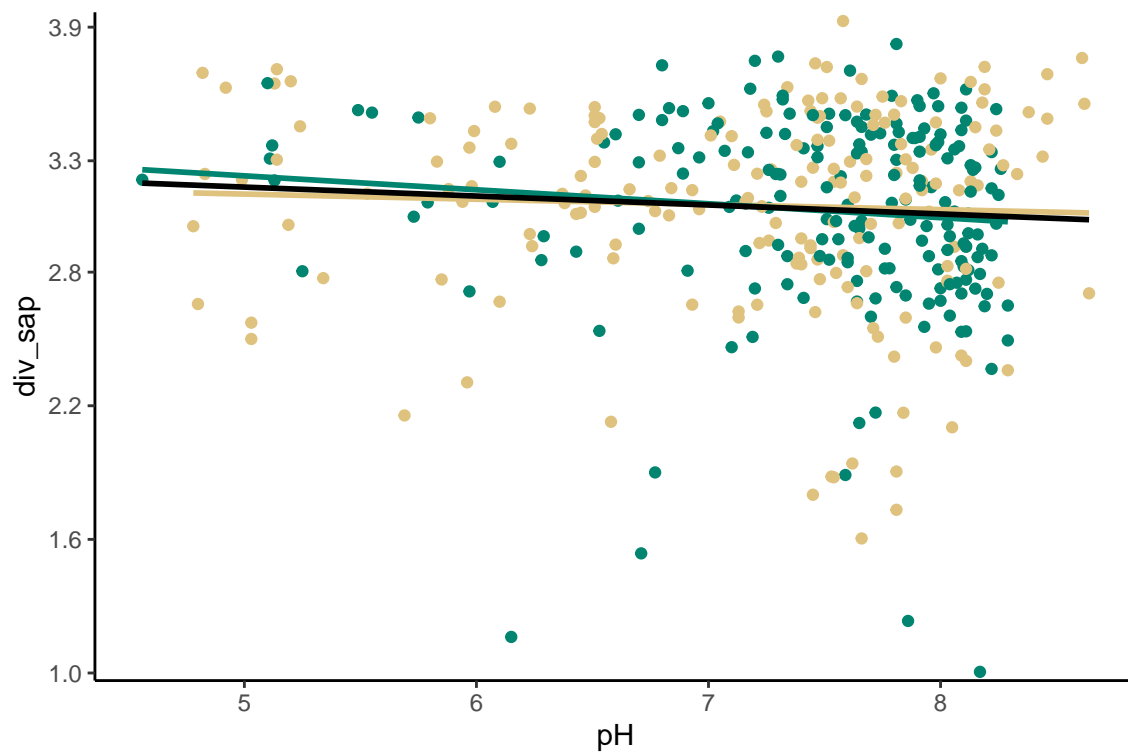
##  
## \$div\_amf



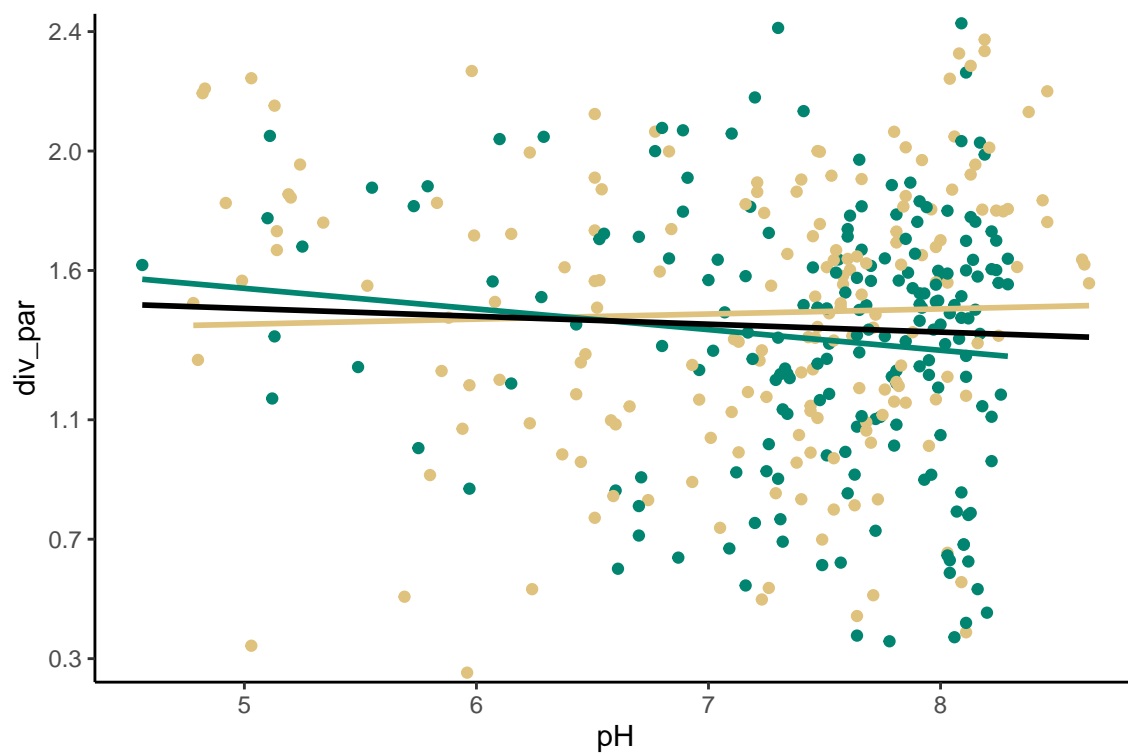
```
##
## $div_path
```



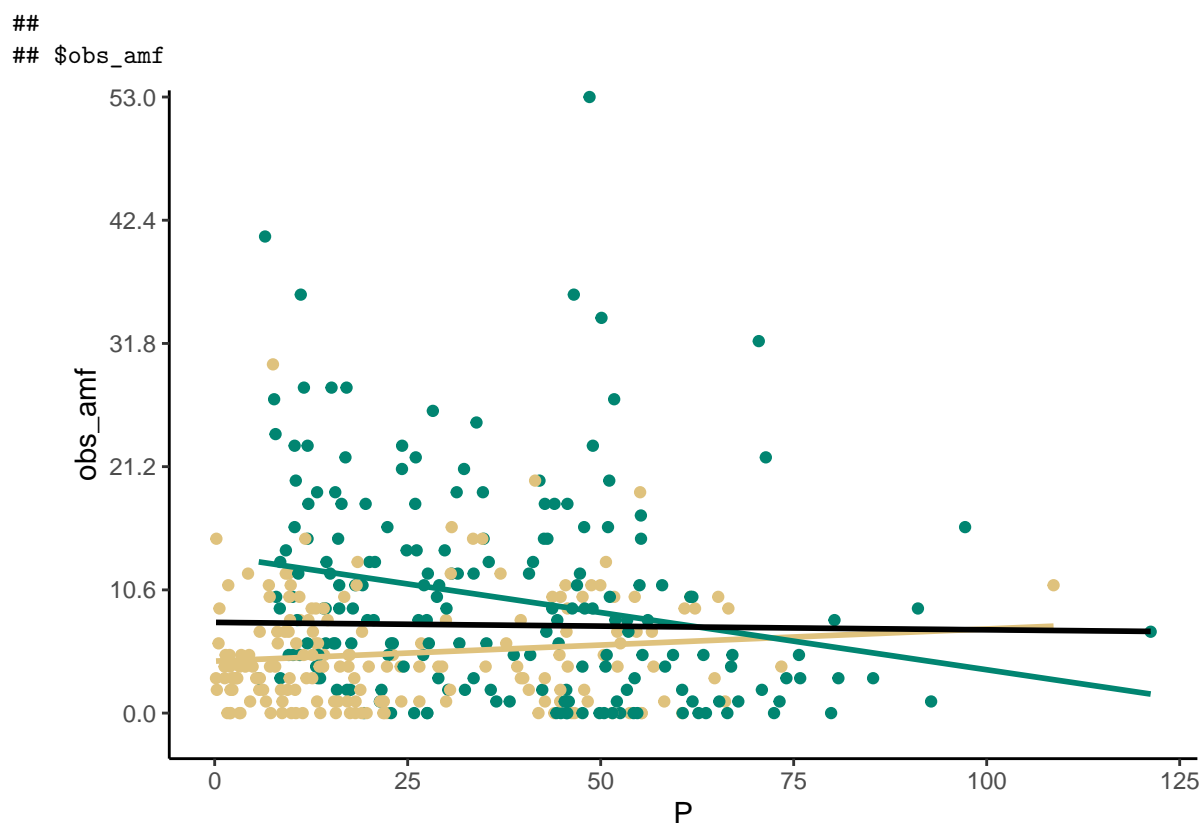
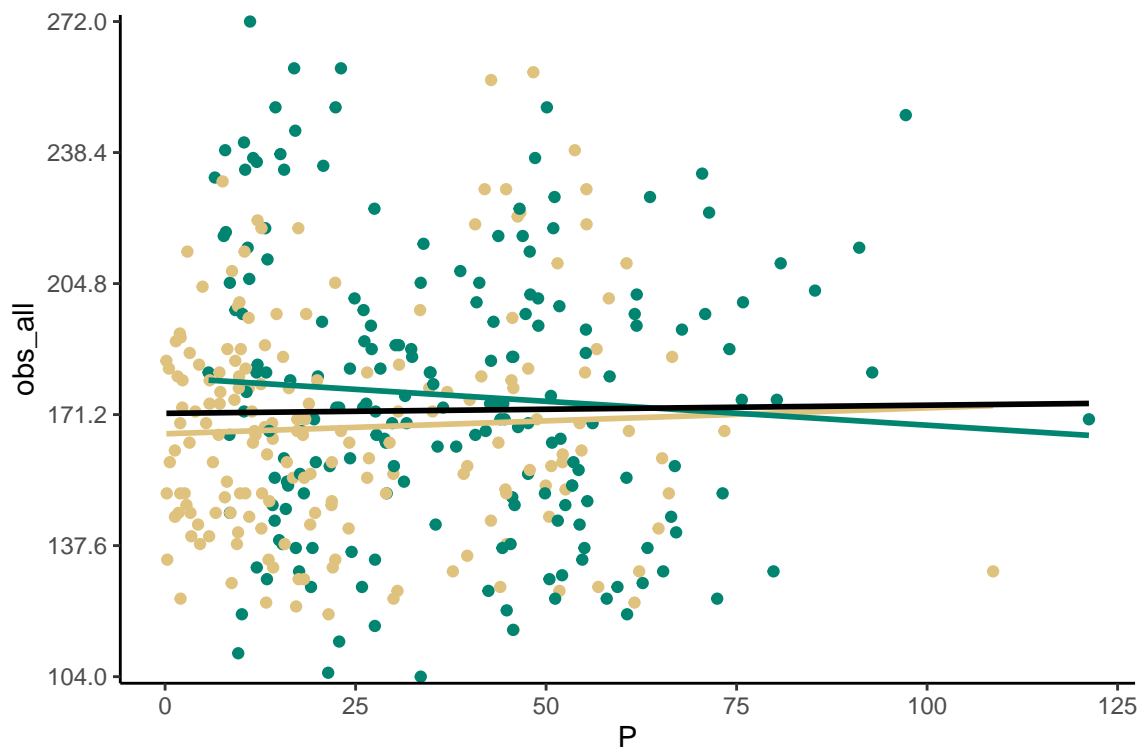
```
##
## $div_sap
```



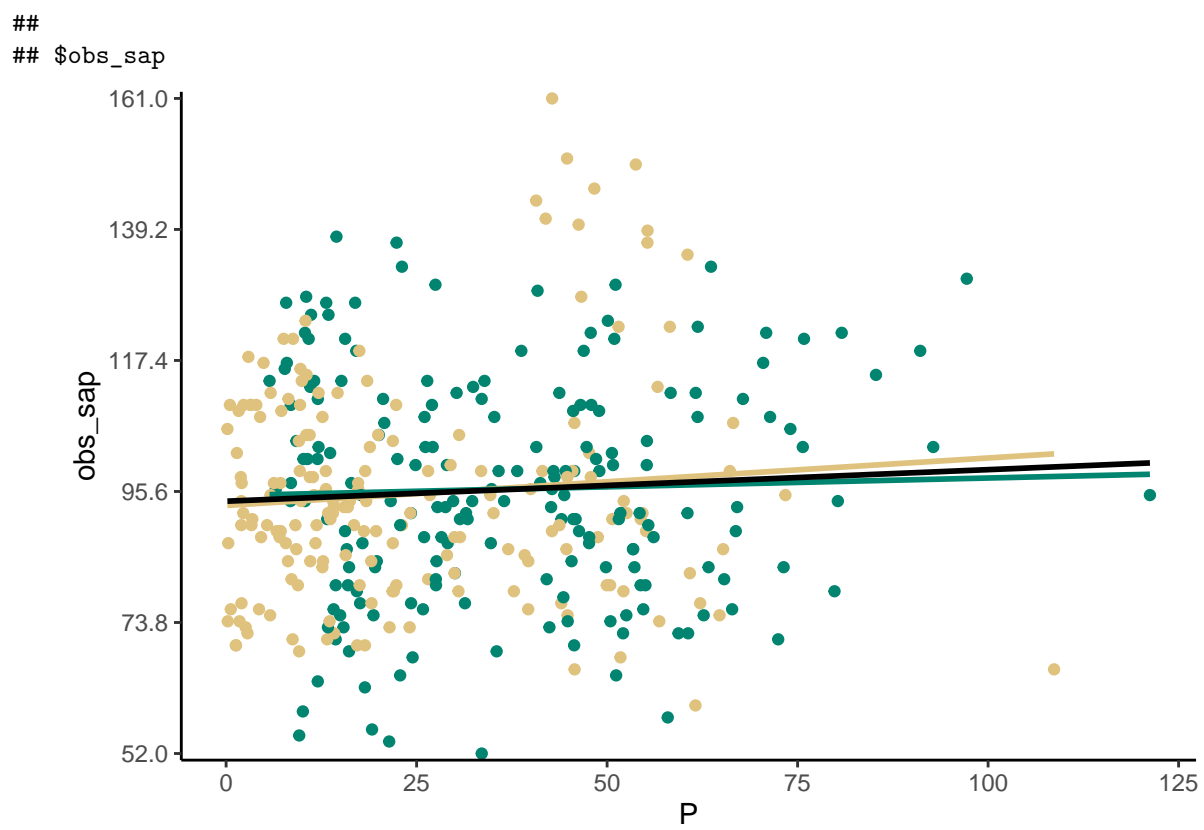
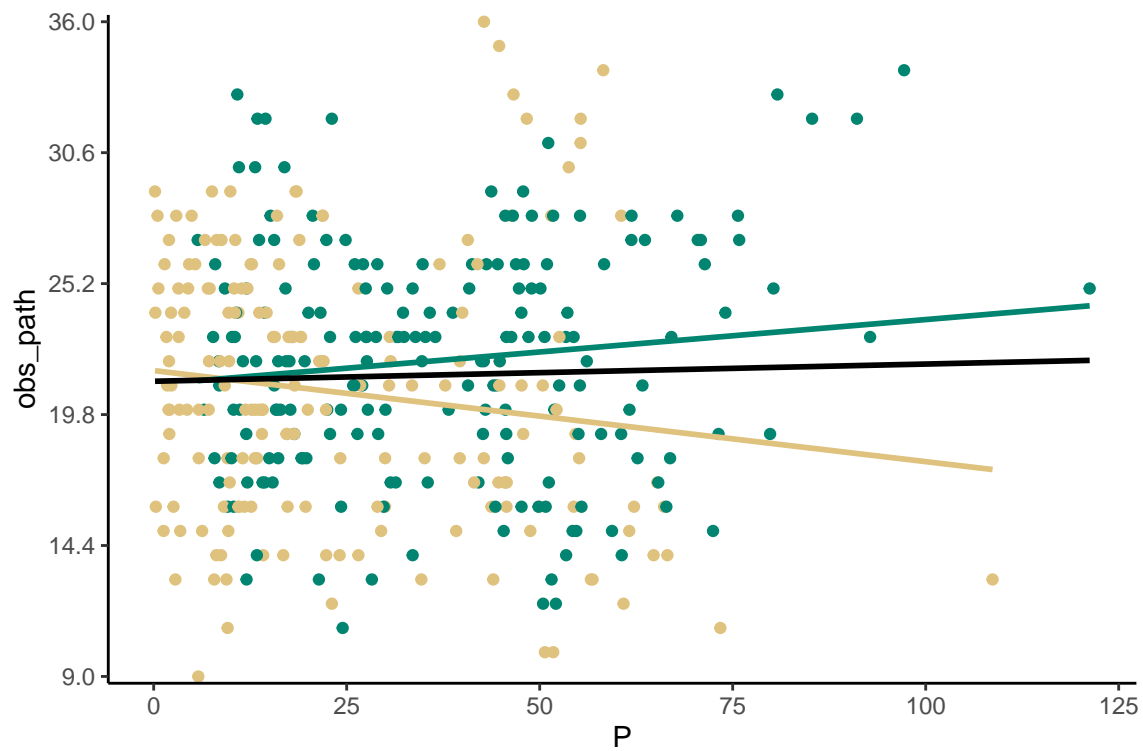
```
##
## $div_par
```



```
## $obs_all
```

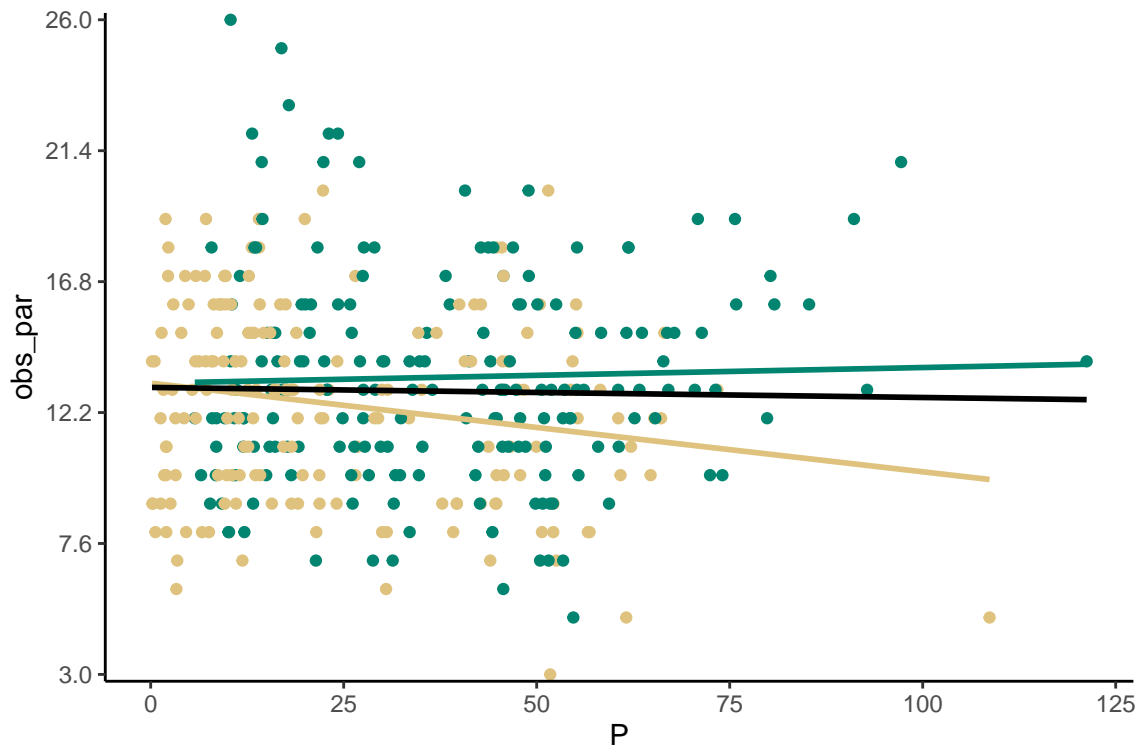


```
##
## $obs_path
```

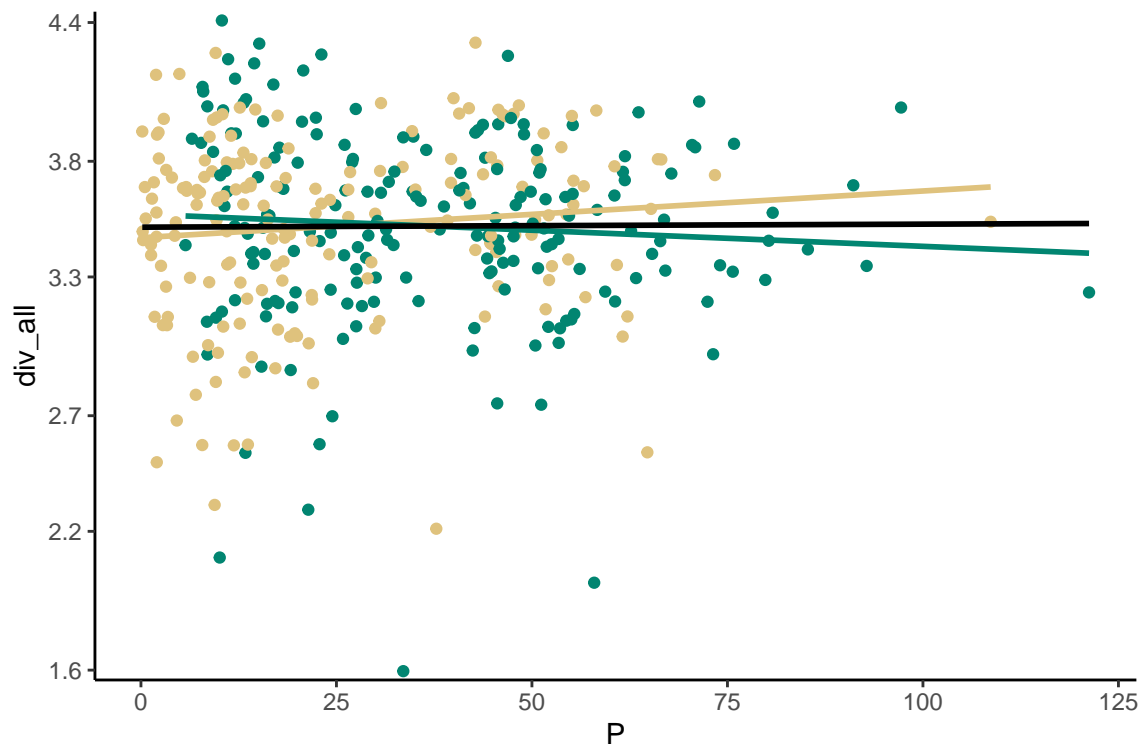


##  
## \$obs\_par

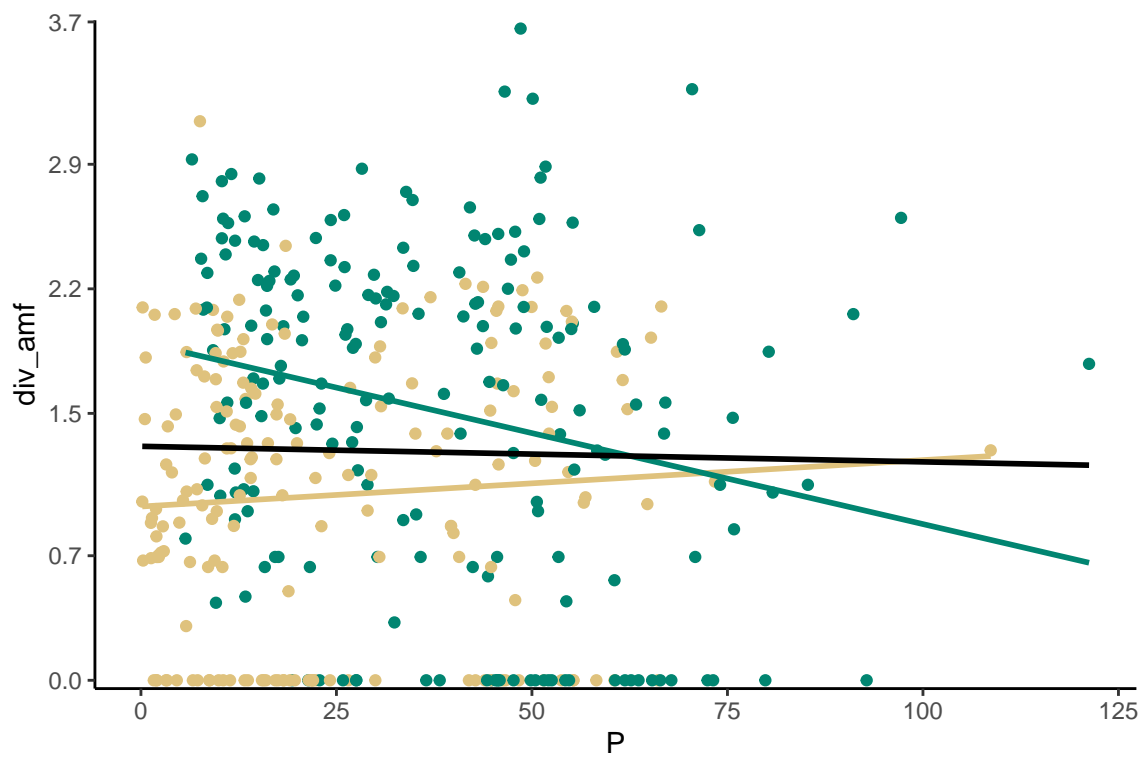




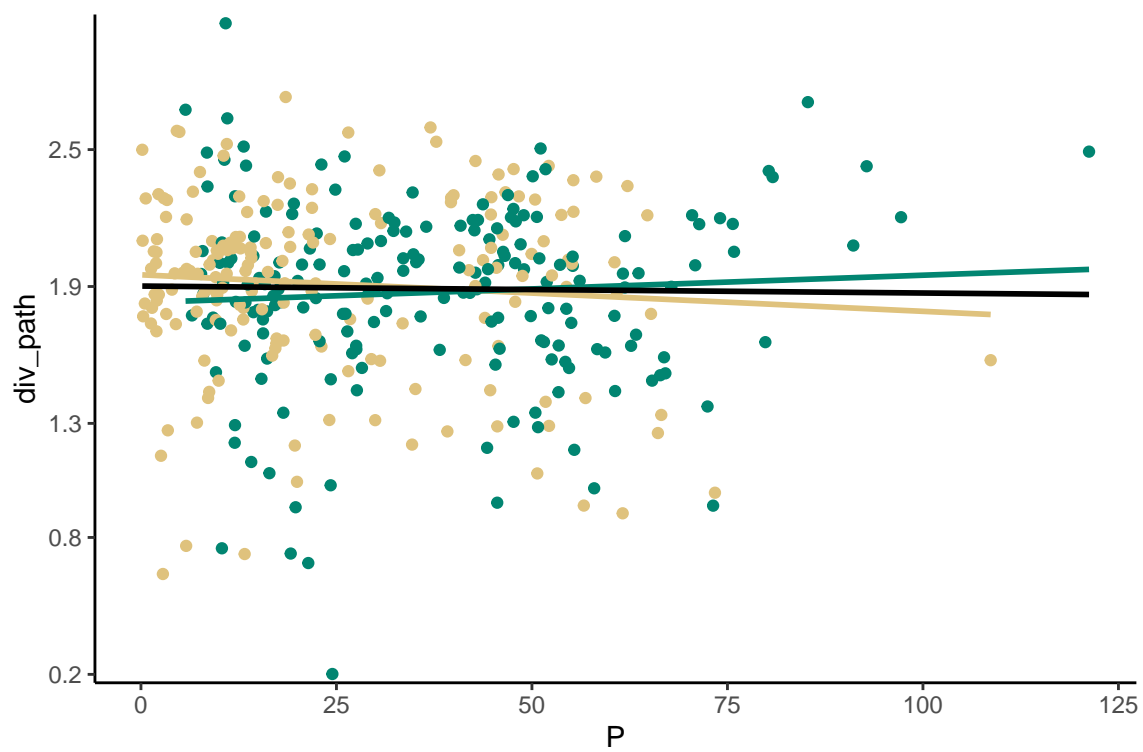
```
##
## $div_all
```



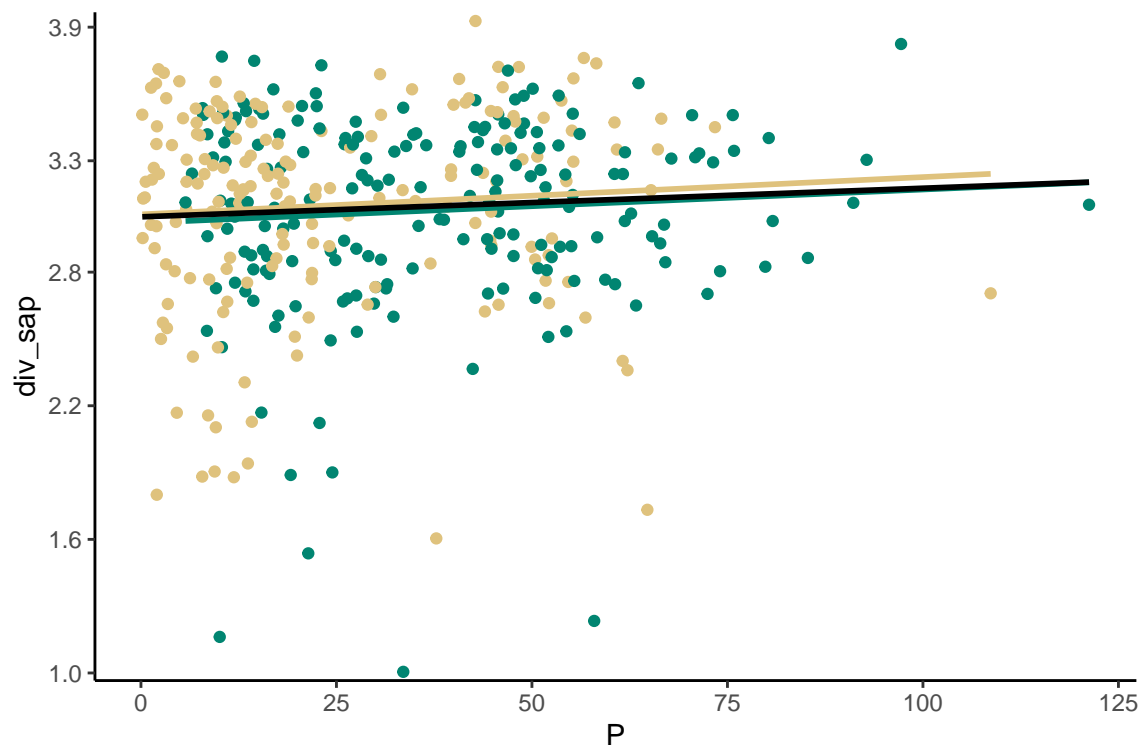
```
##
## $div_amf
```



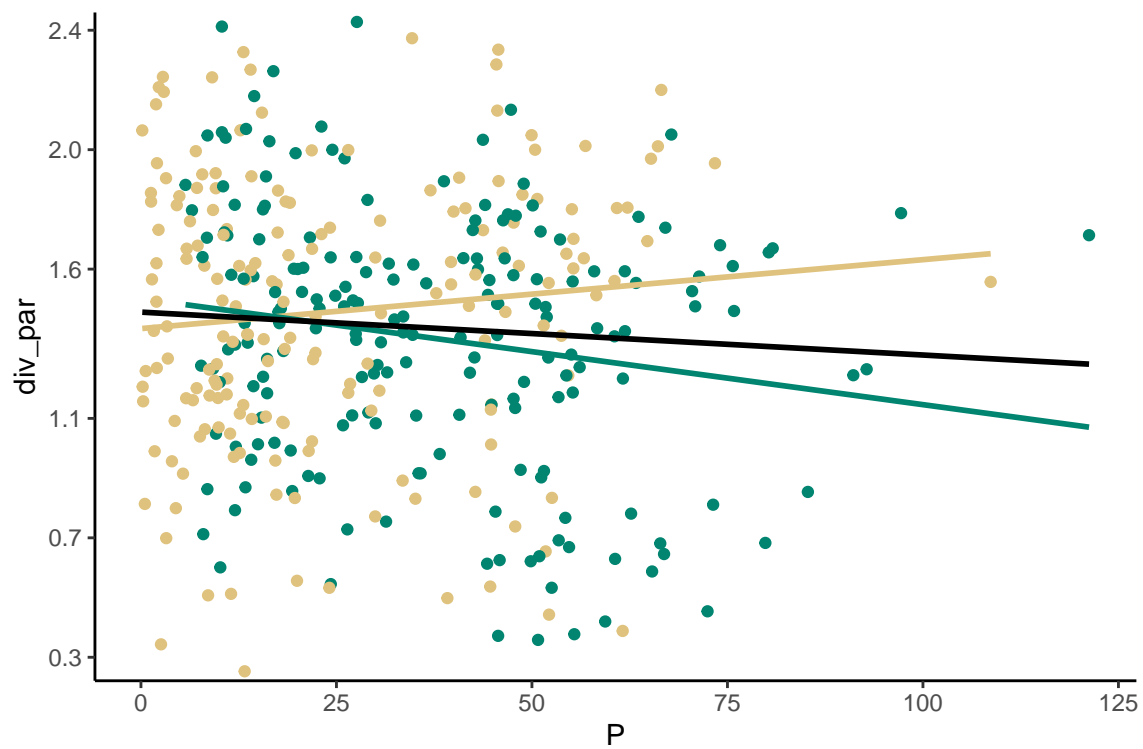
```
##
## $div_path
```



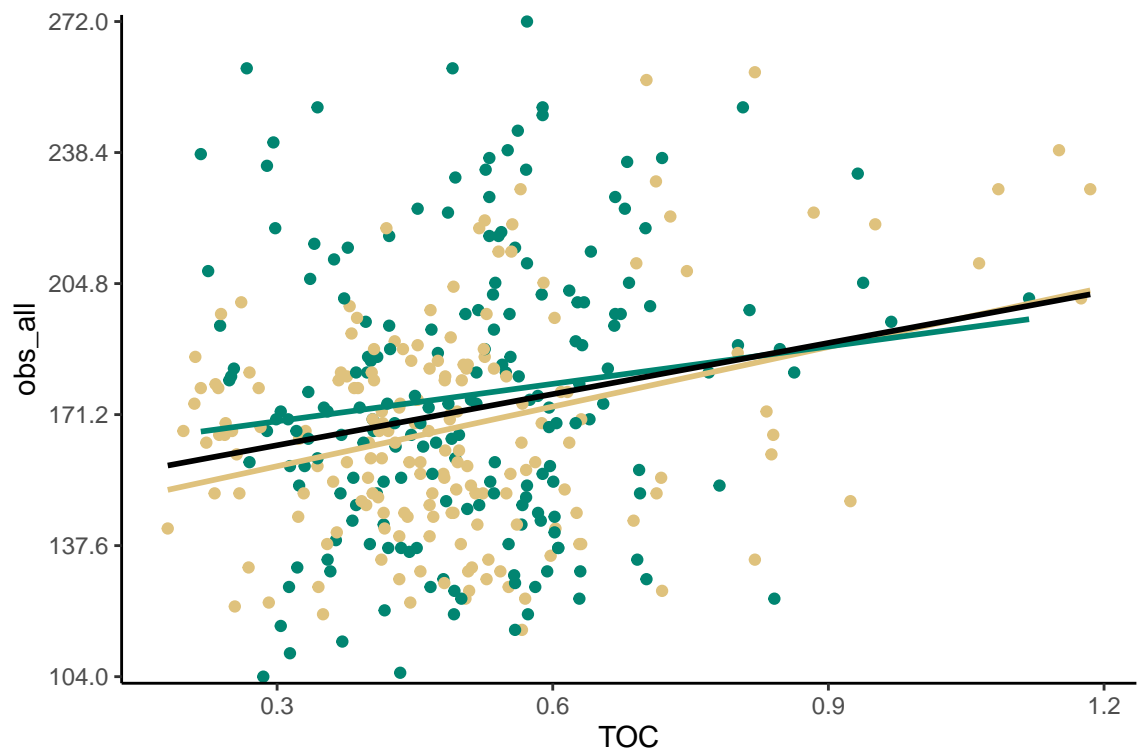
```
##
## $div_sap
```



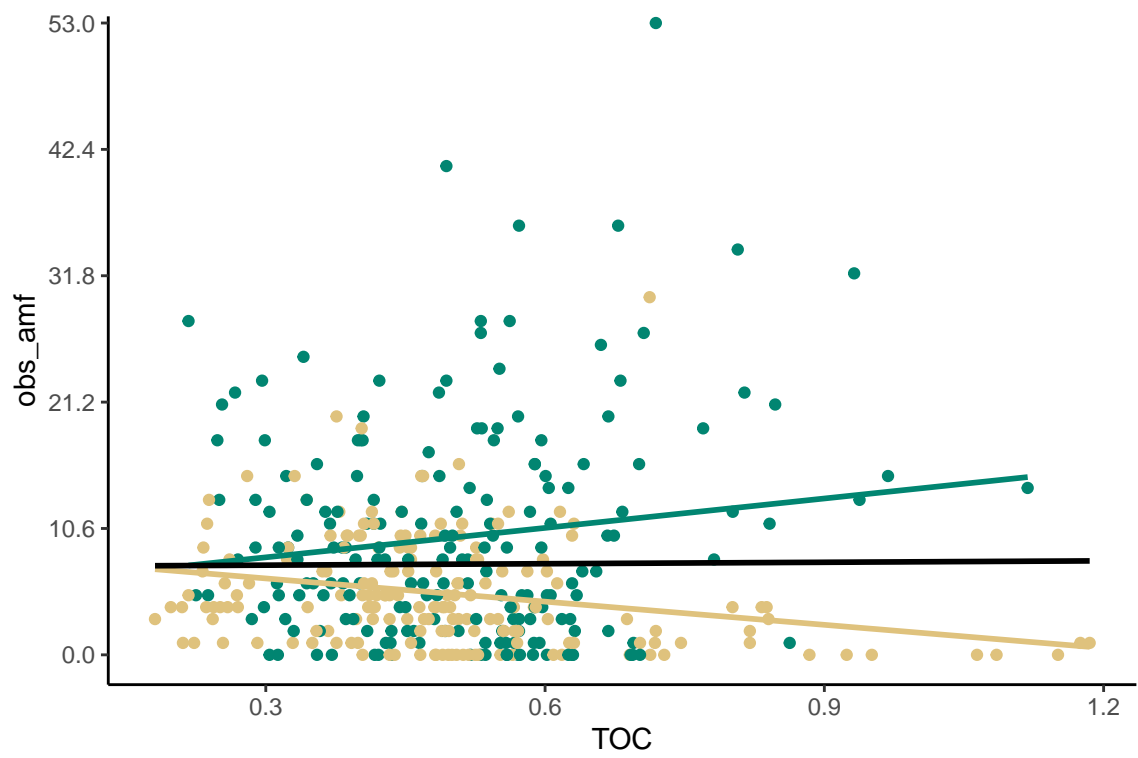
```
##
## $div_par
```



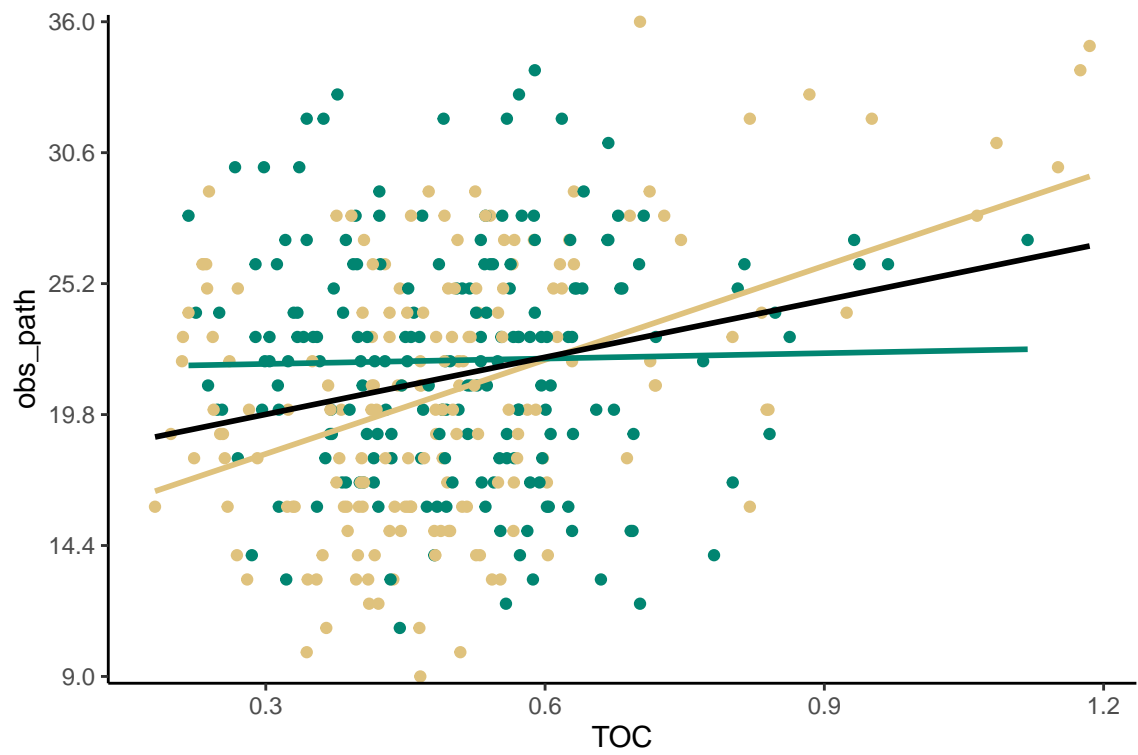
```
## $obs_all
```



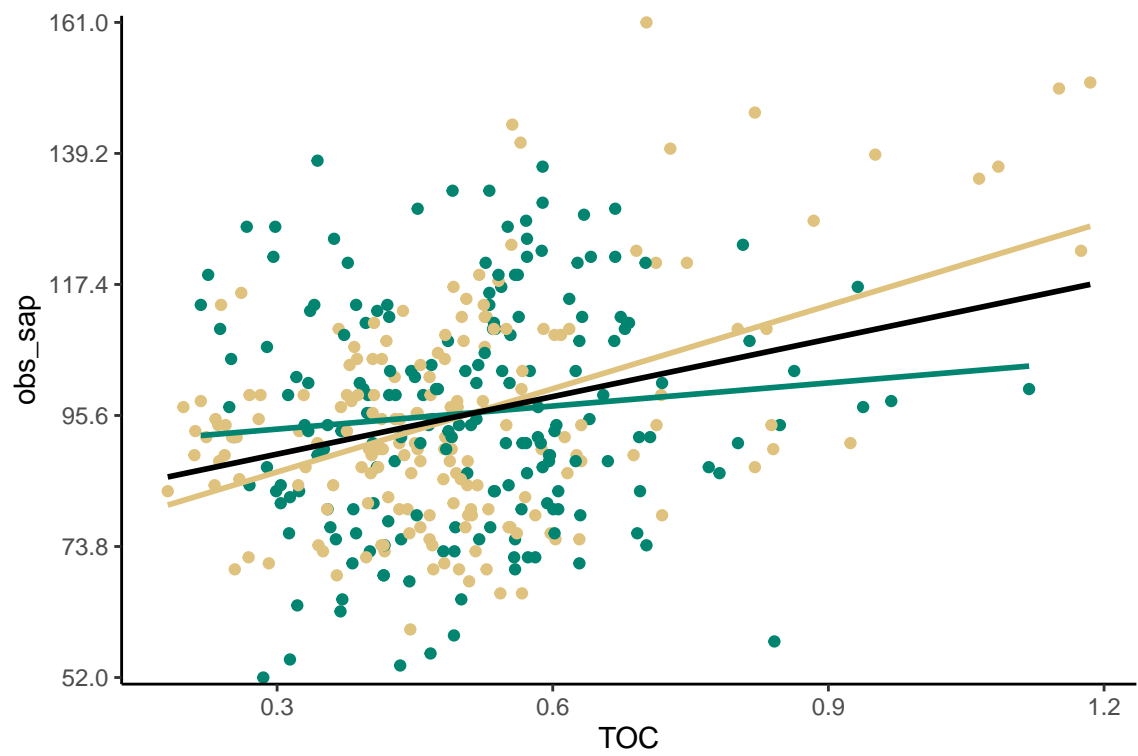
```
##
## $obs_amf
```



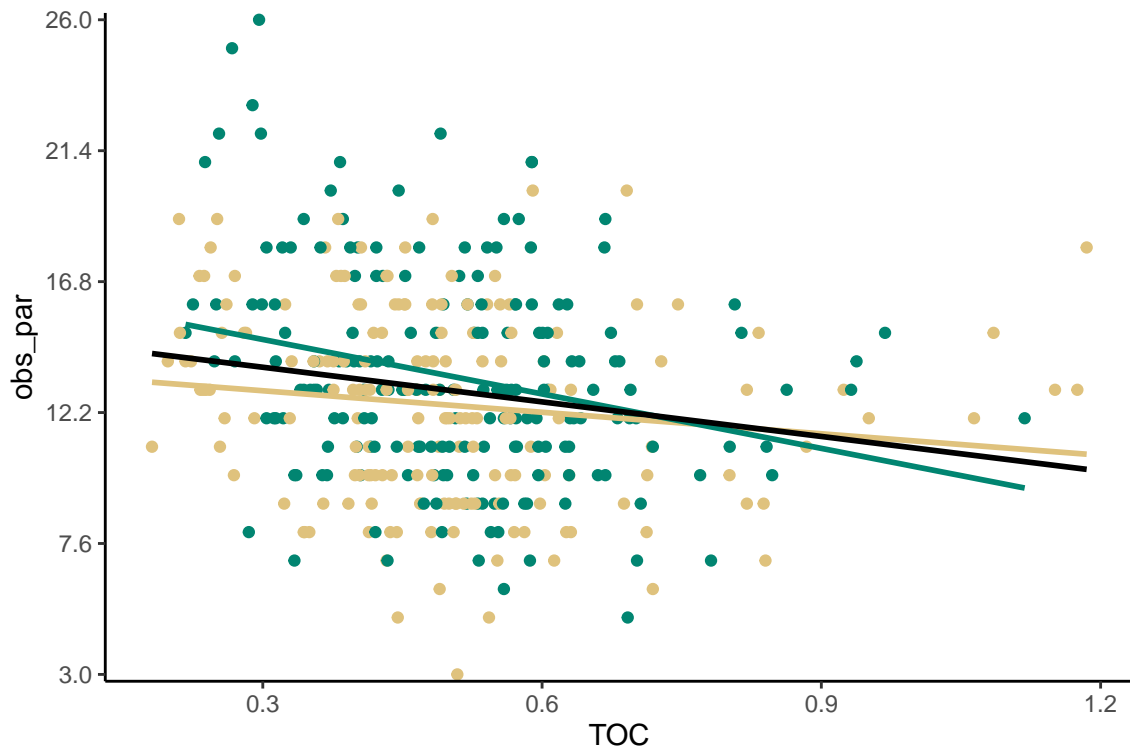
```
##
## $obs_path
```



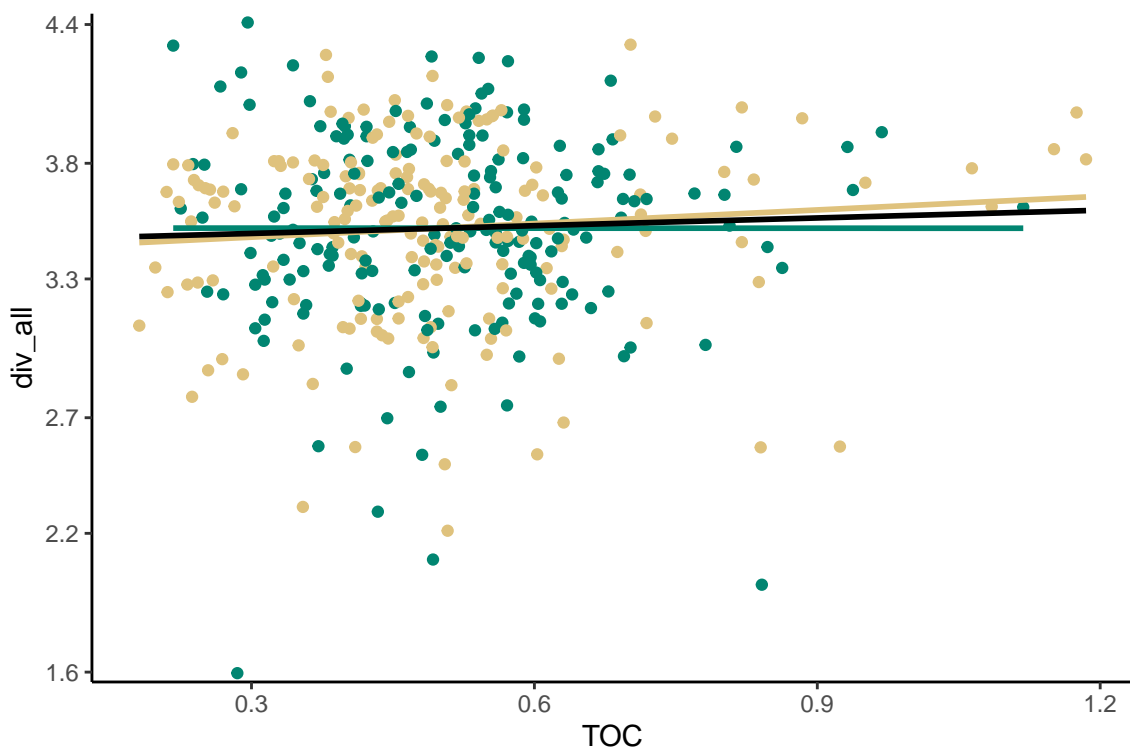
```
##
## $obs_sap
```



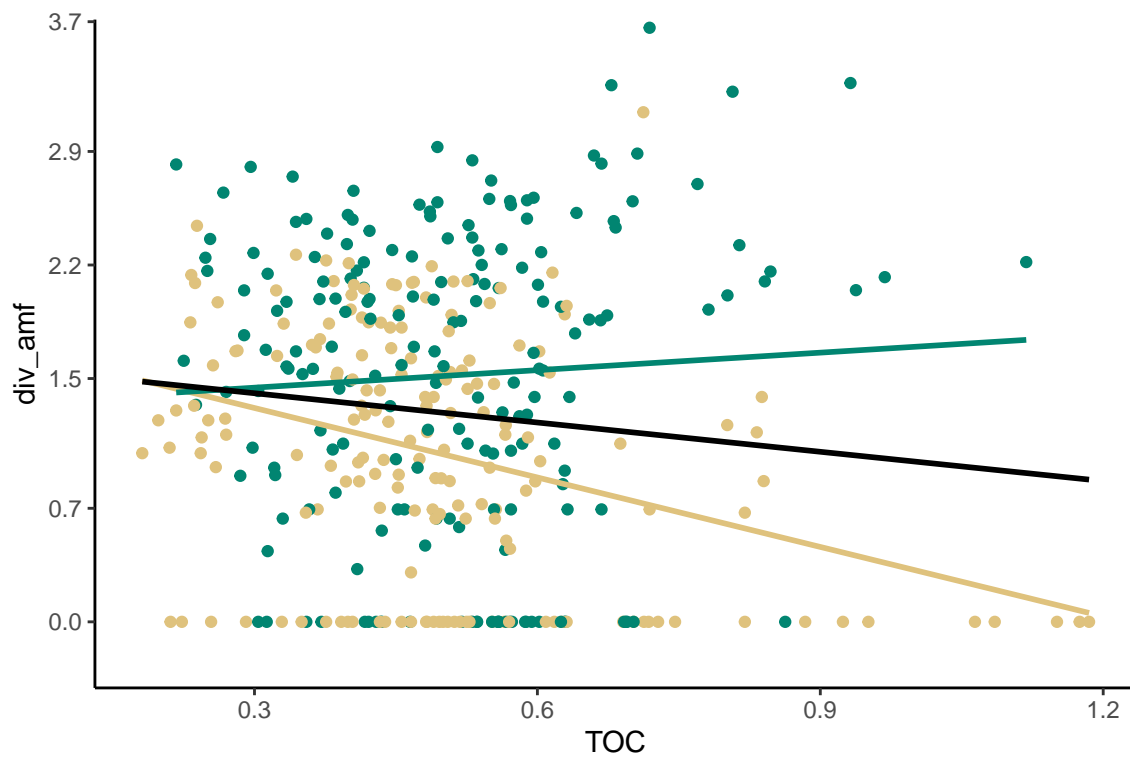
```
##
## $obs_par
```



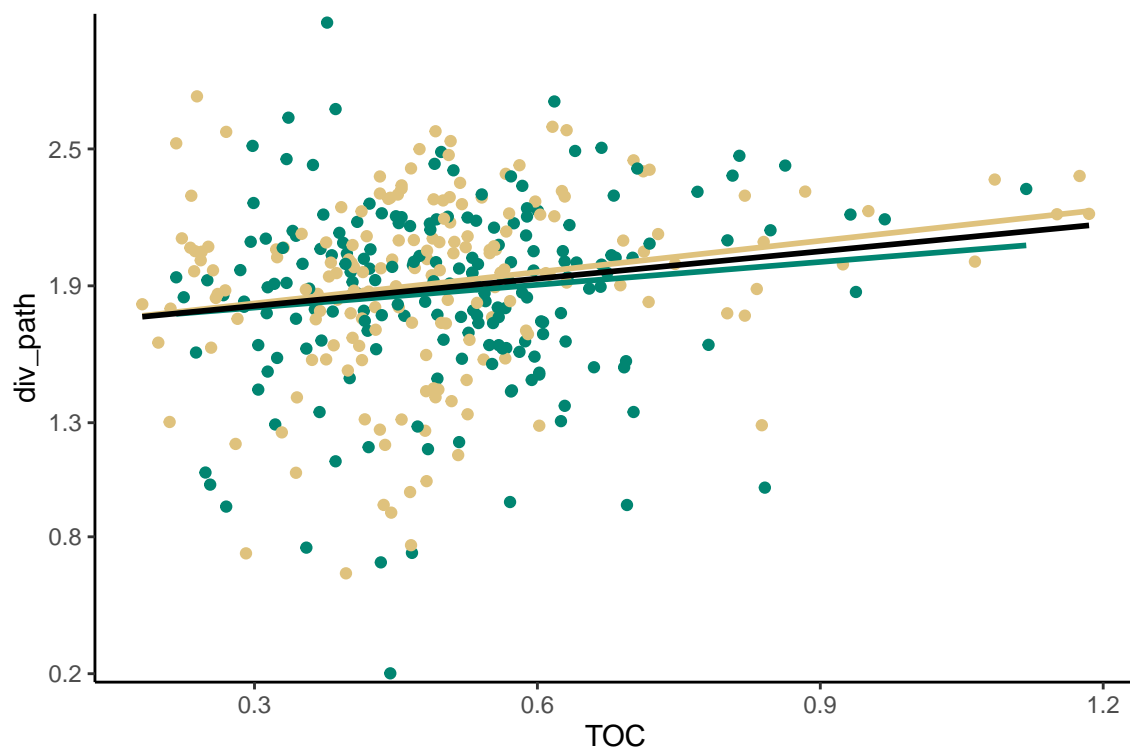
```
##
## $div_all
```



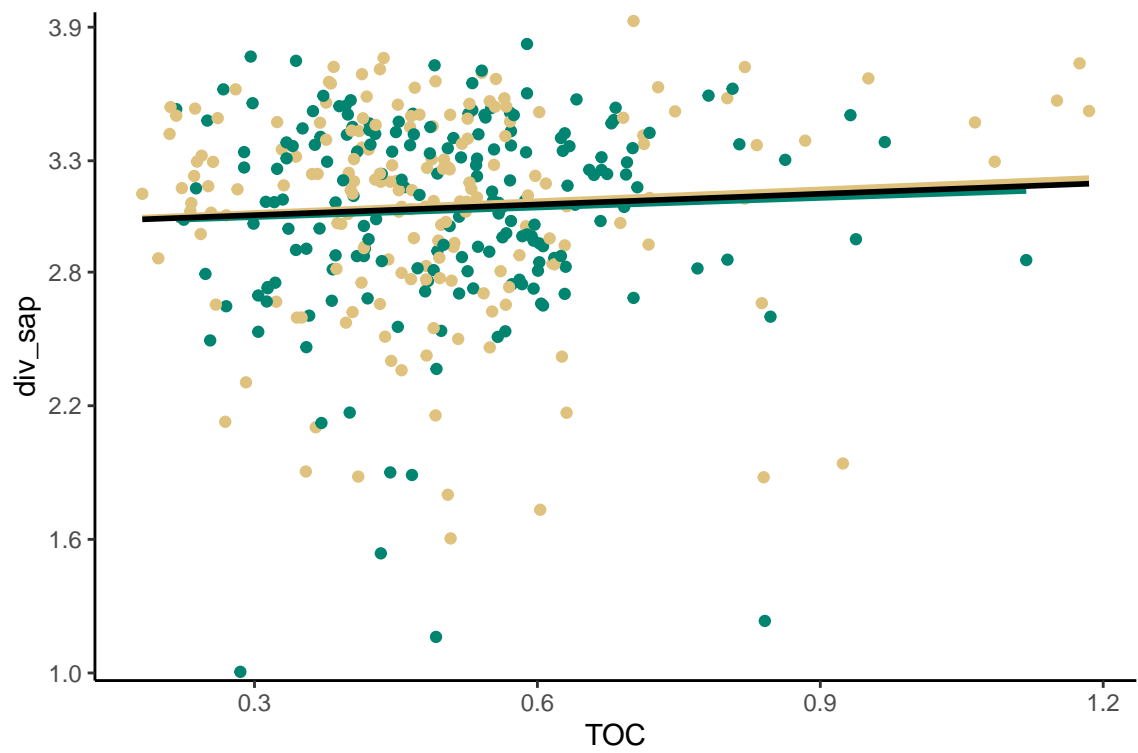
```
##
## $div_amf
```



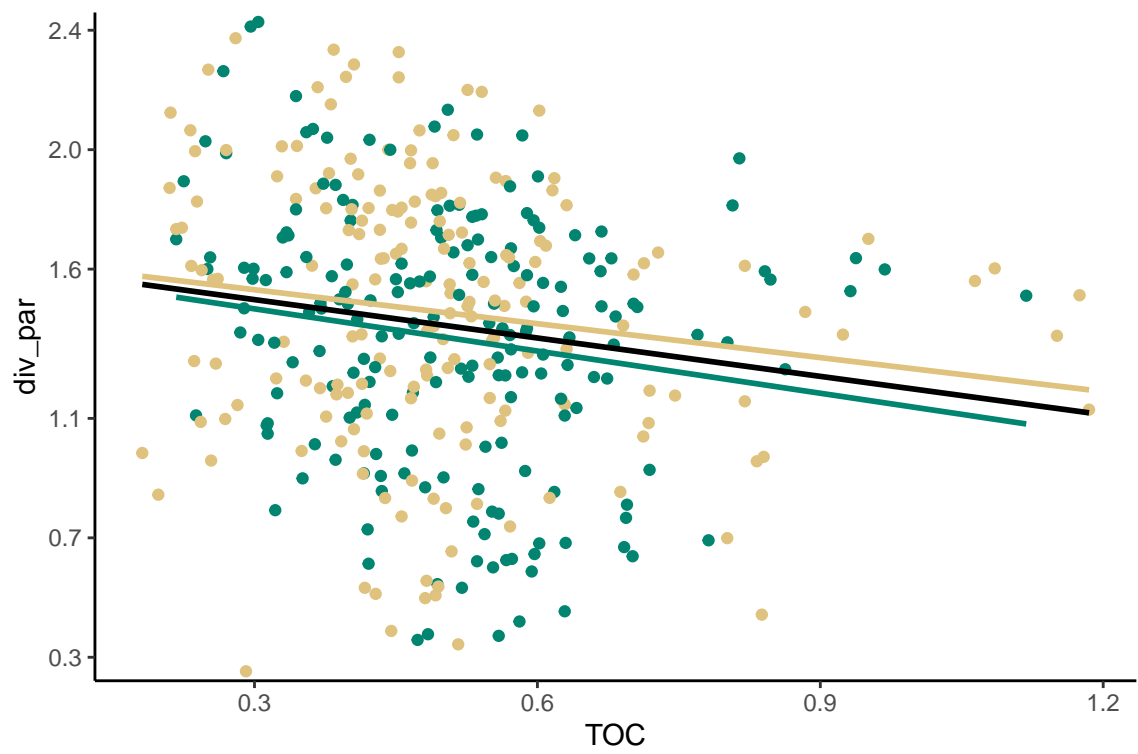
```
##
## $div_path
```



```
##
## $div_sap
```

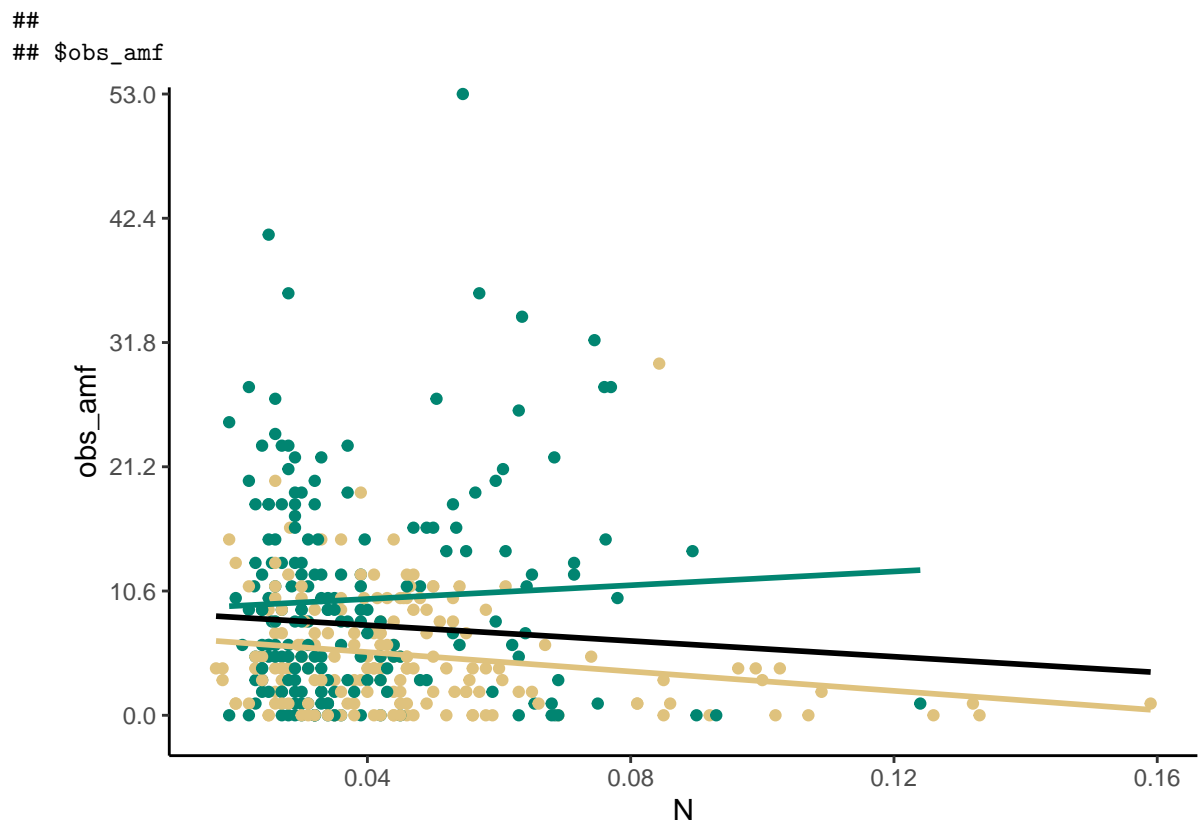
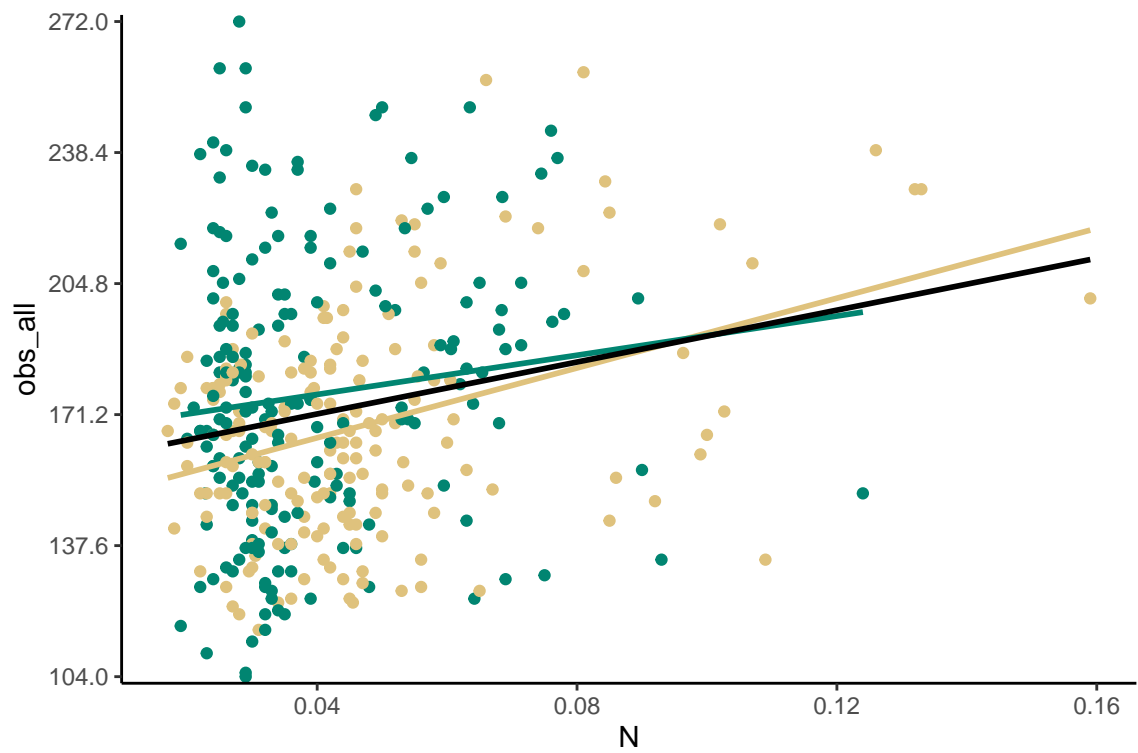


```
##
## $div_par
```

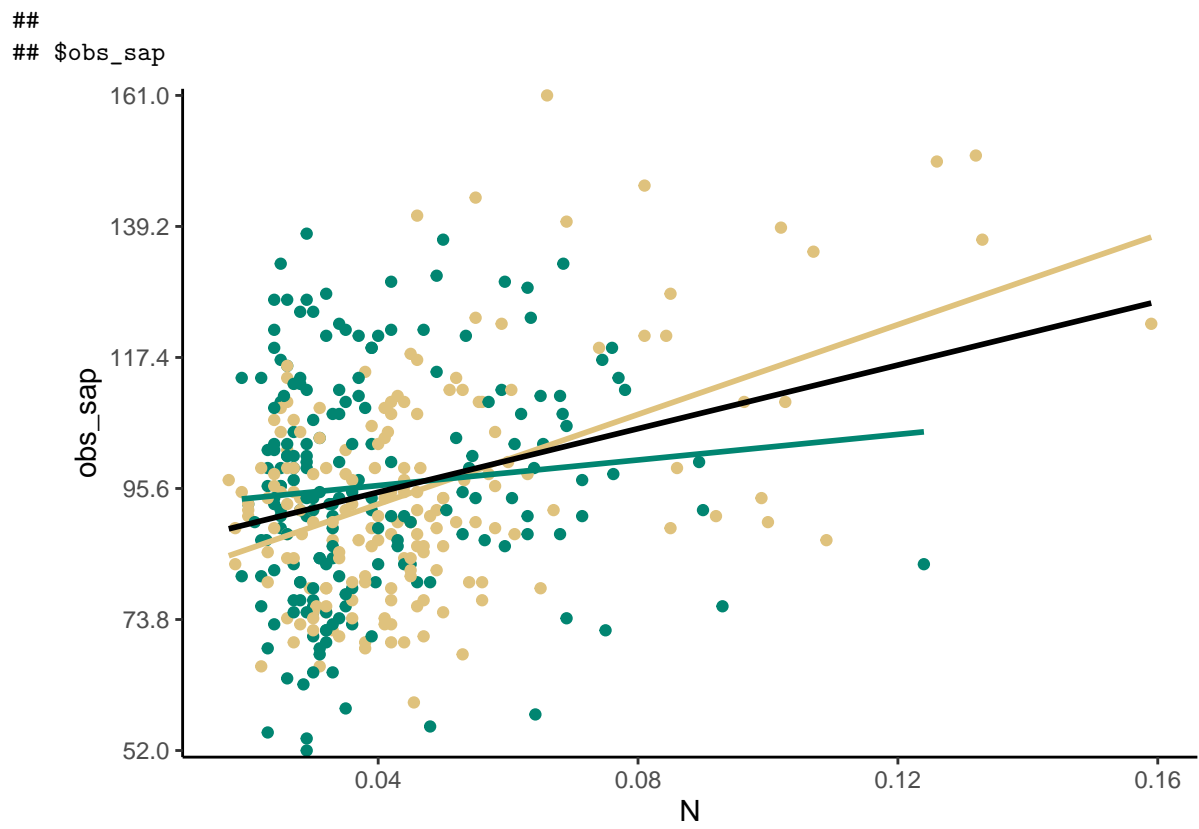
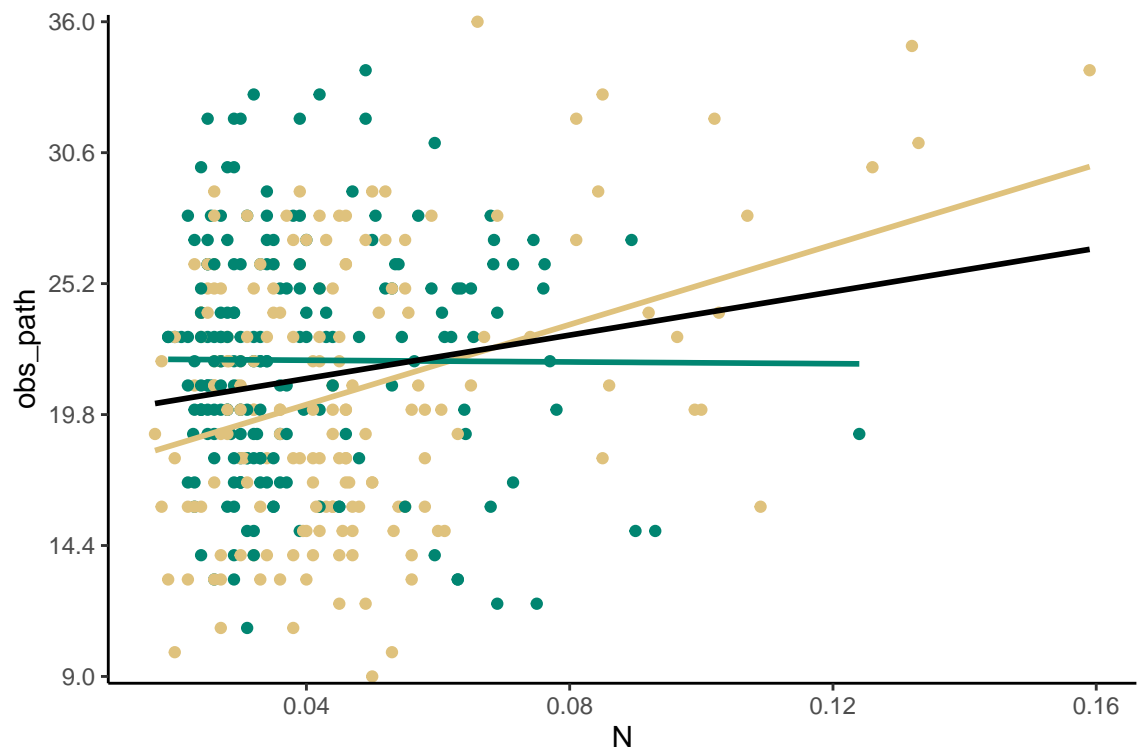


```
## $obs_all
```

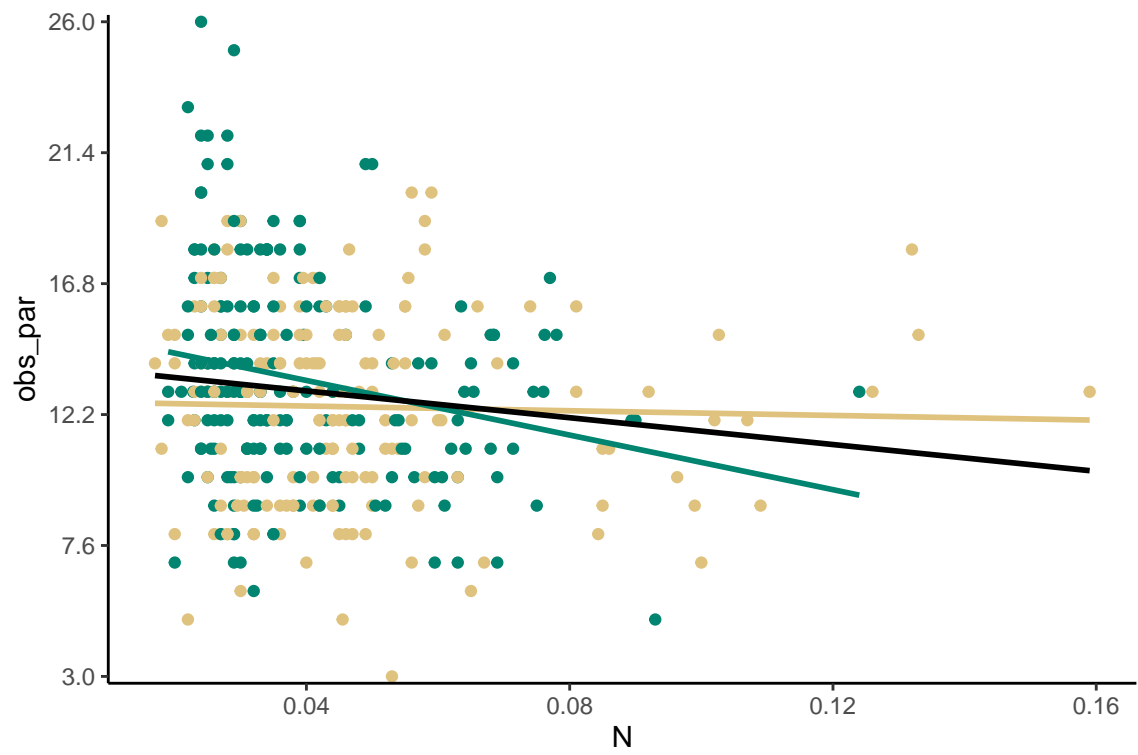




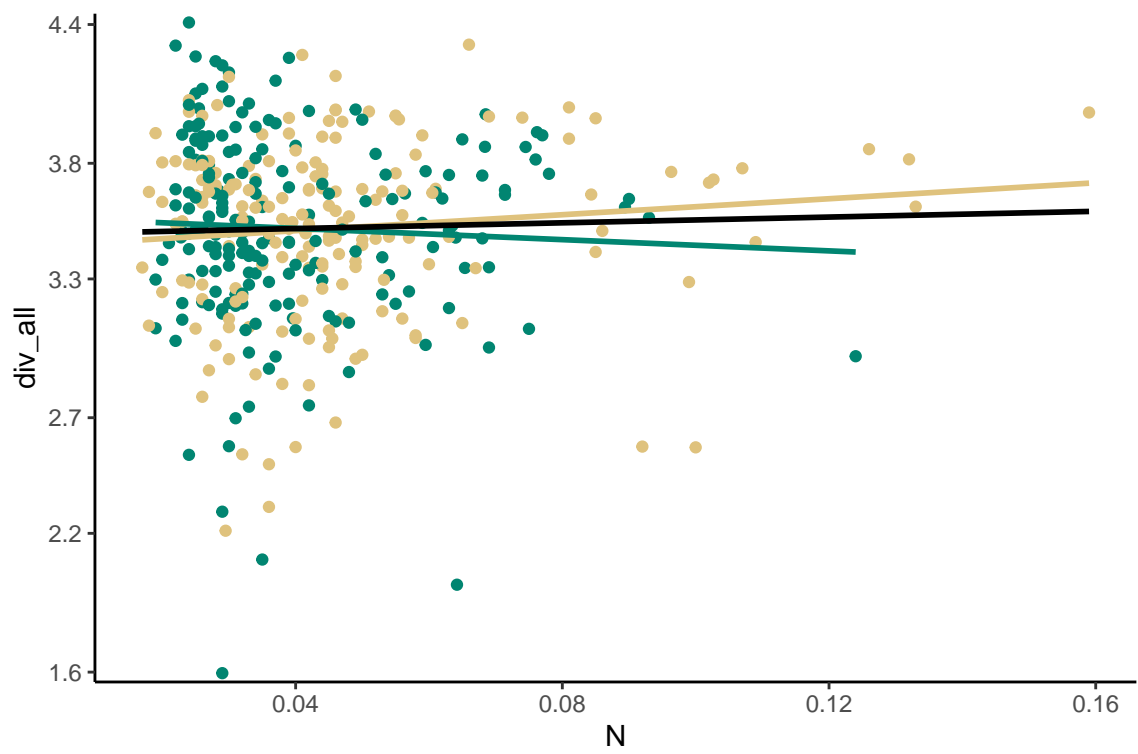
```
##
## $obs_path
```



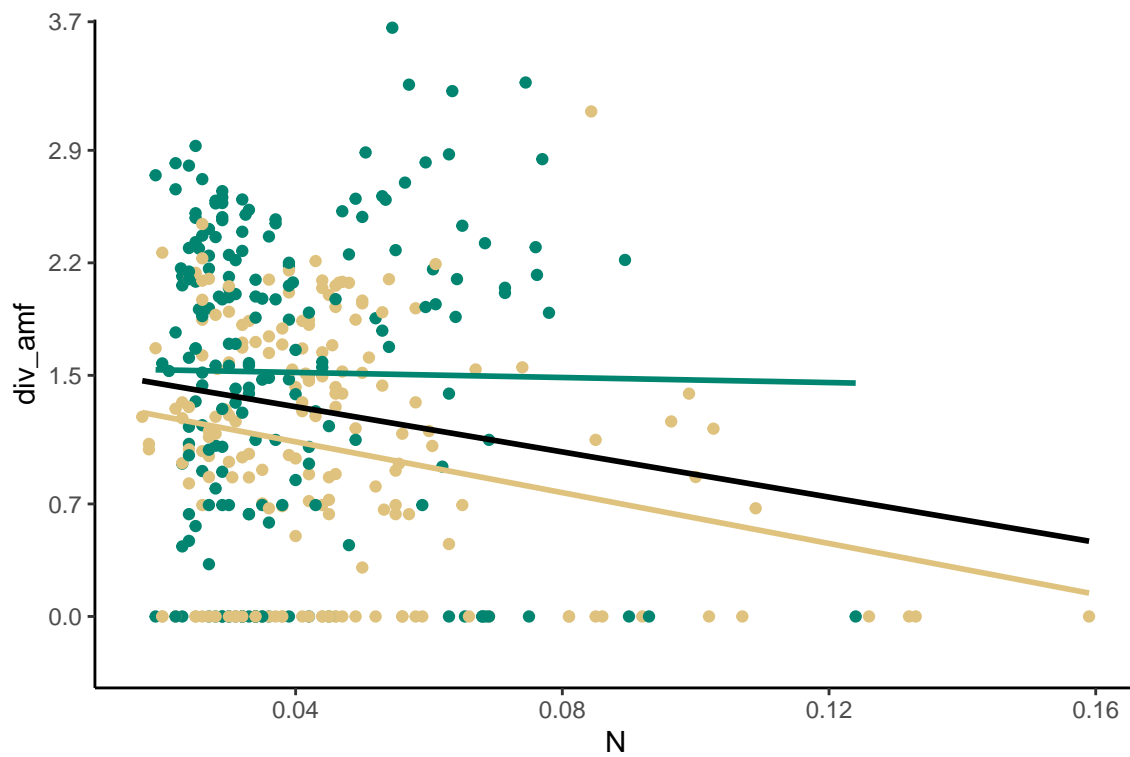
##  
## \$obs\_par



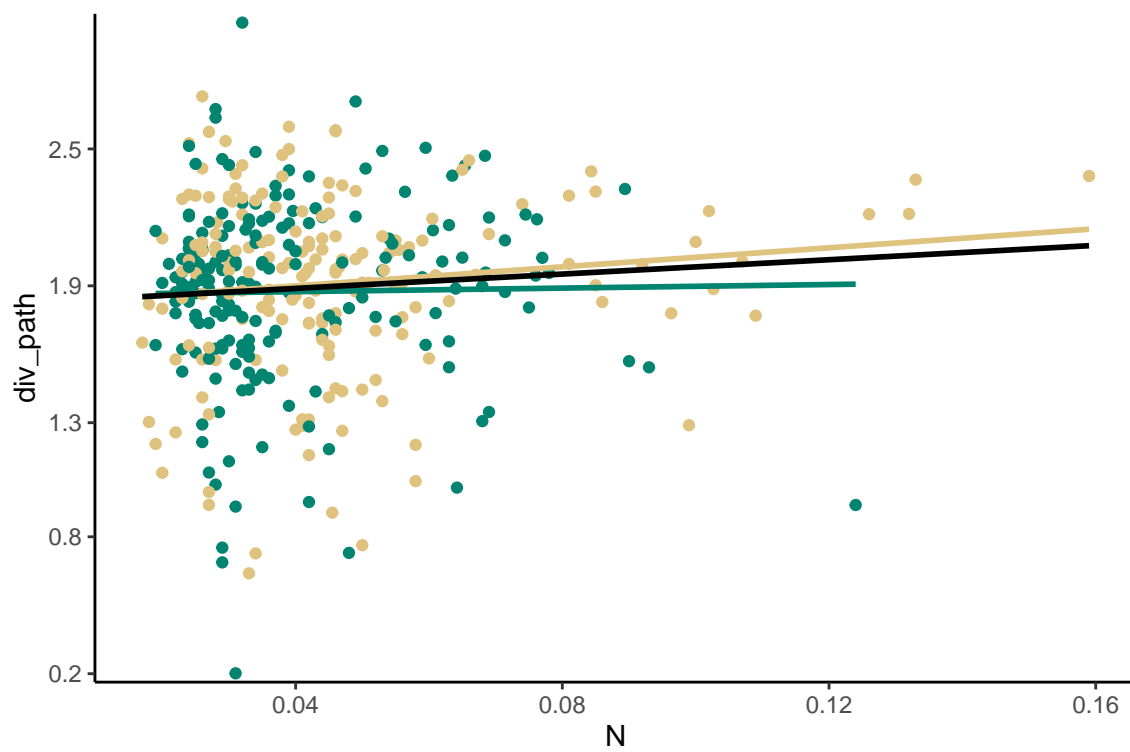
```
##
## $div_all
```



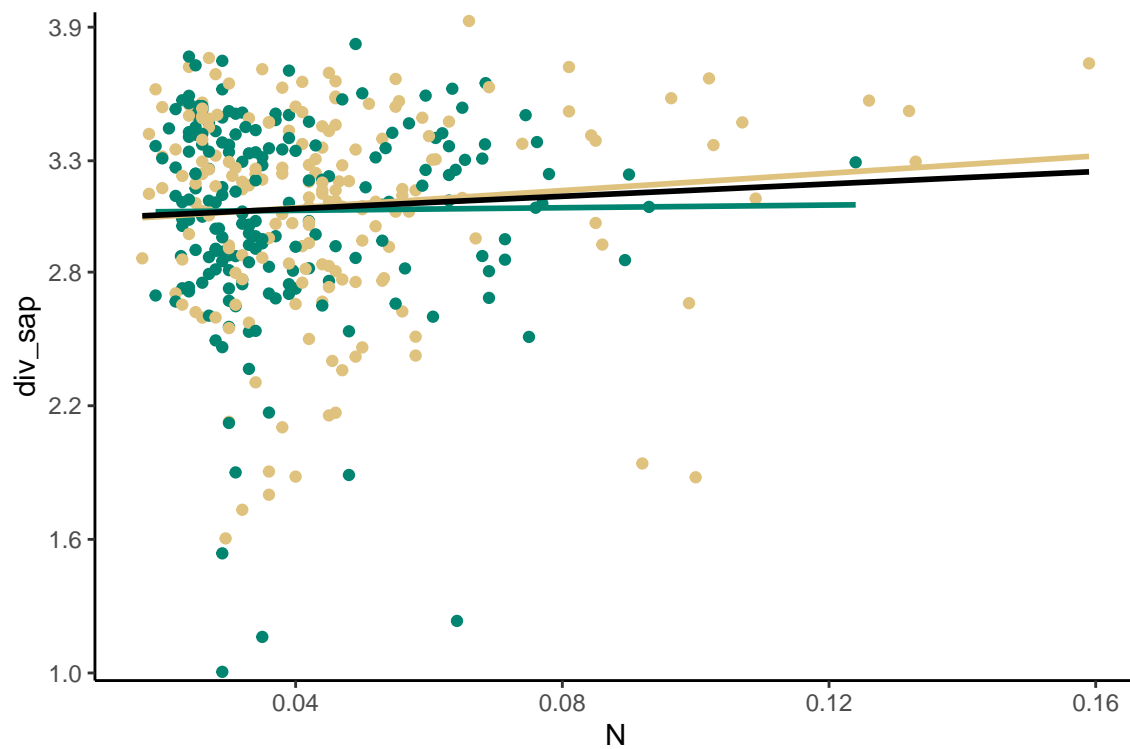
```
##
## $div_amf
```



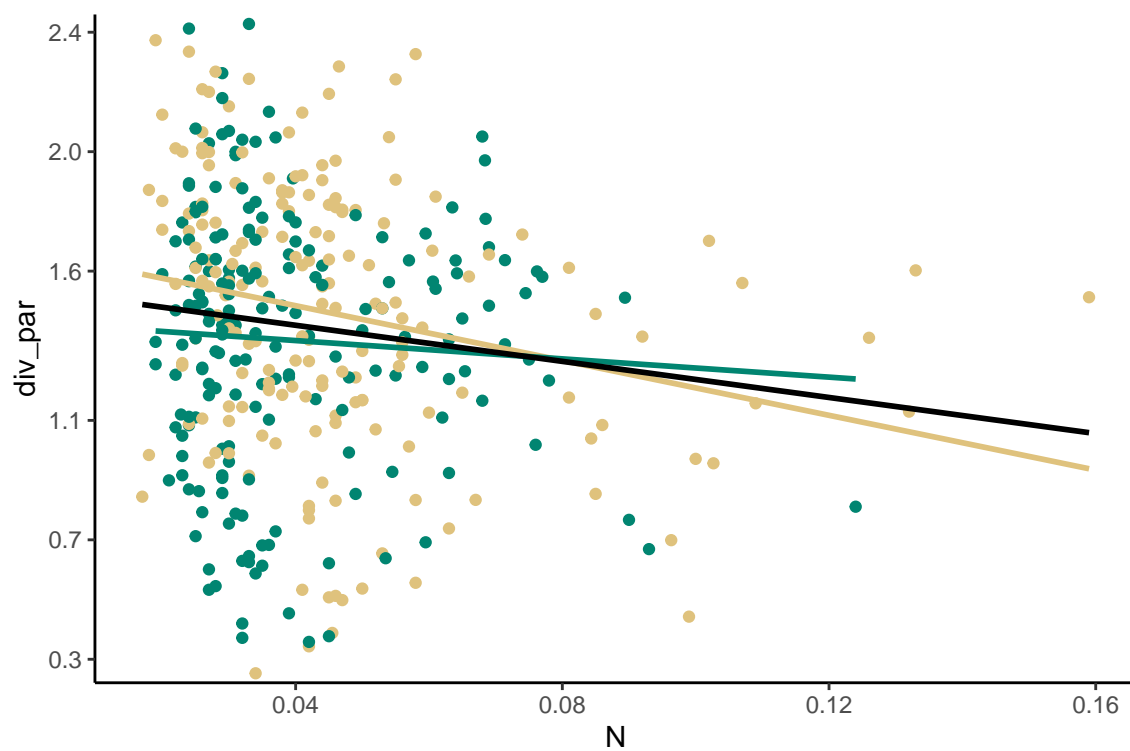
```
##
## $div_path
```



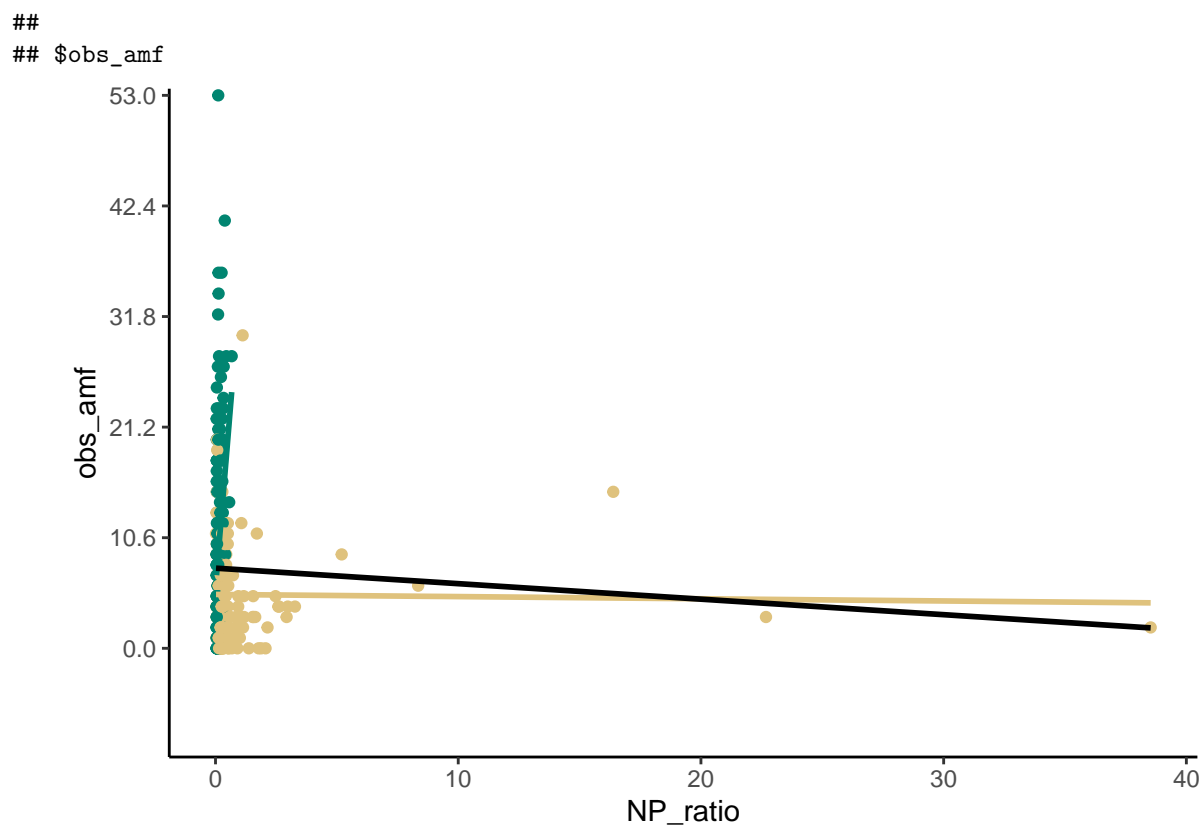
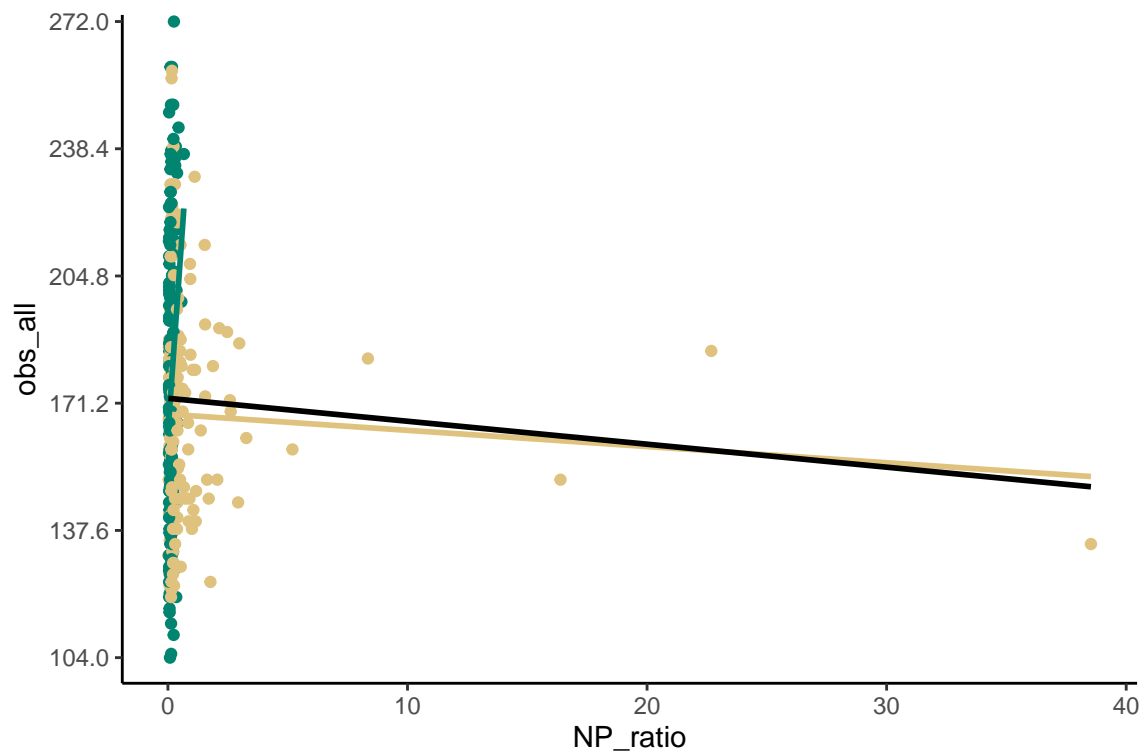
```
##
## $div_sap
```



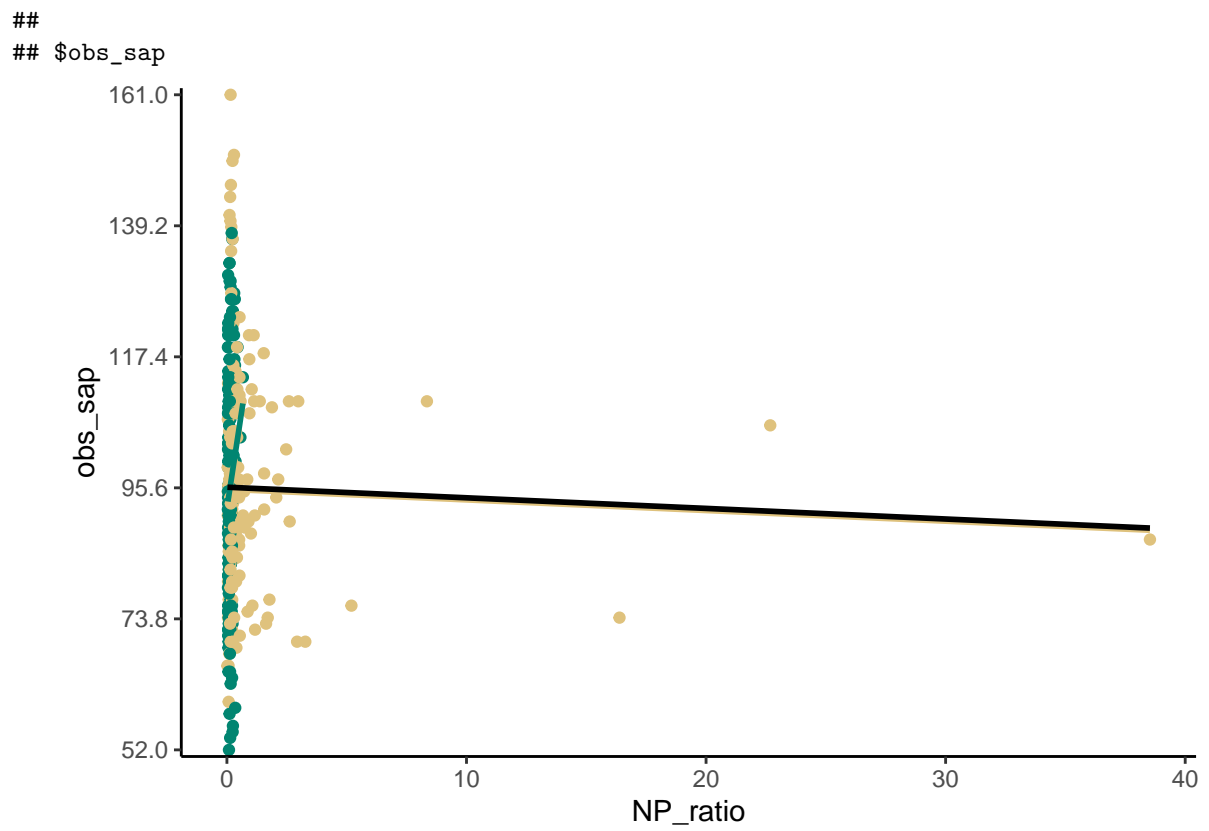
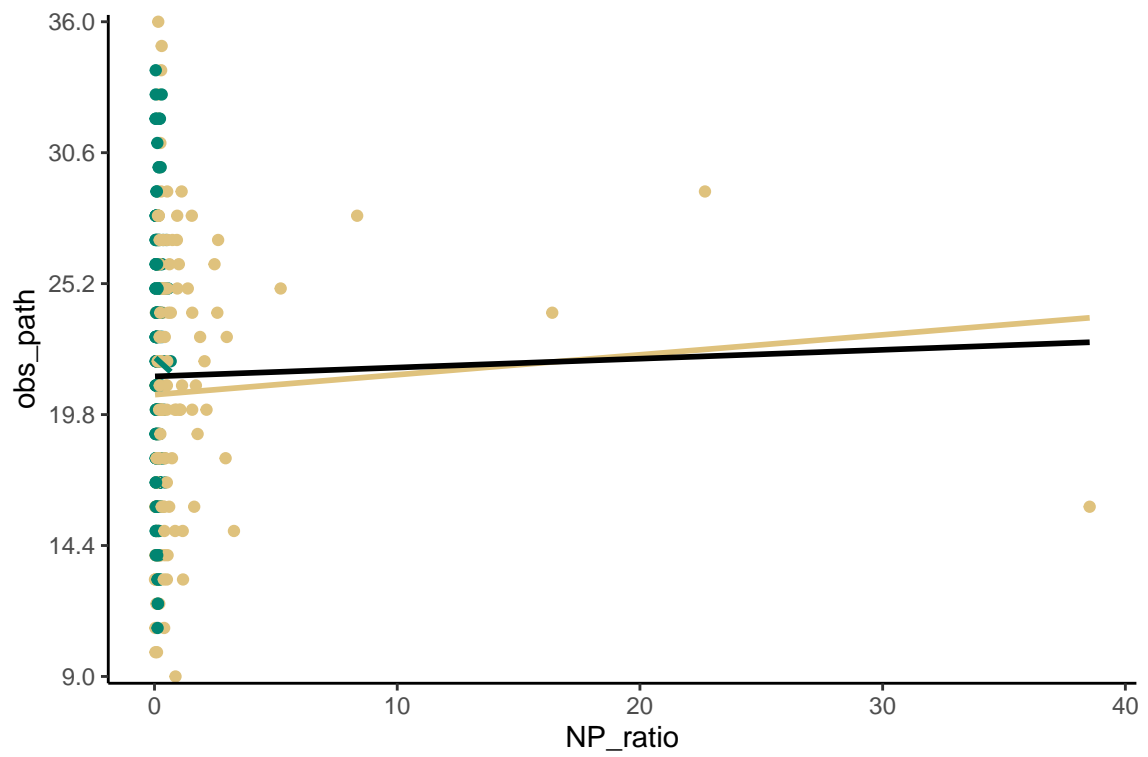
```
##
## $div_par
```



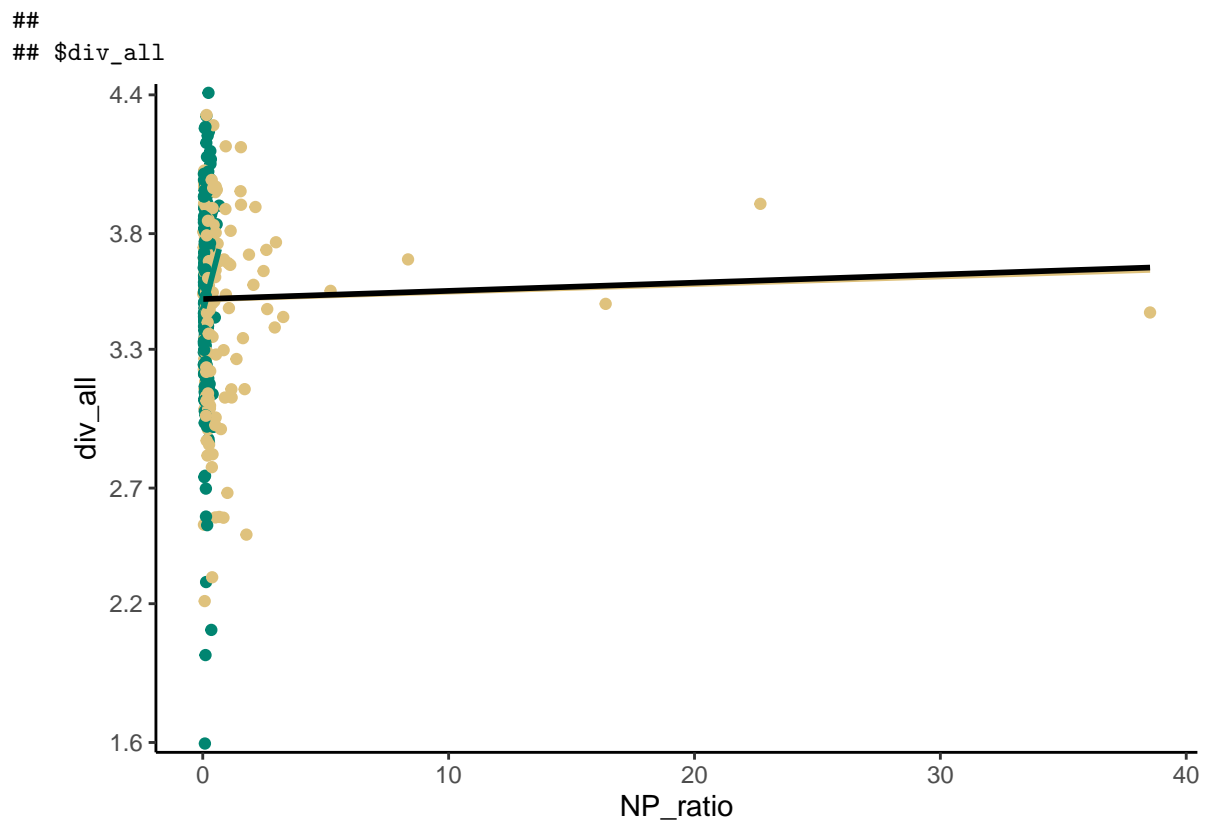
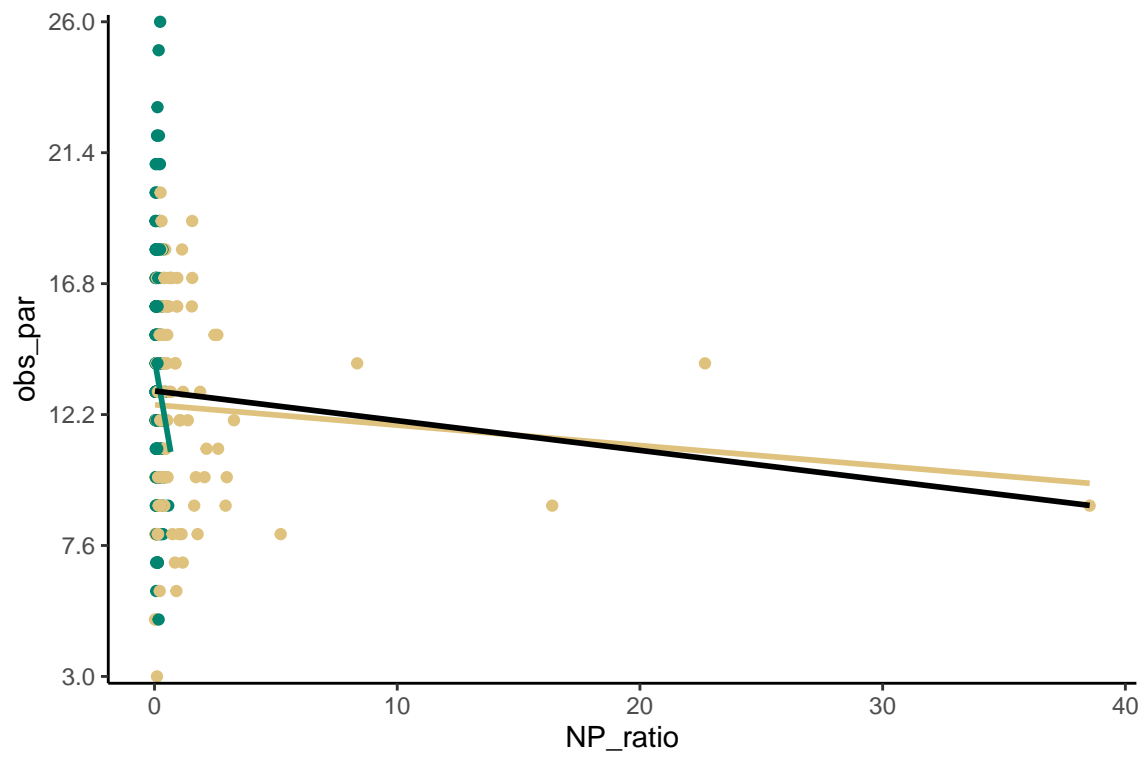
```
## $obs_all
```



##  
## \$obs\_path

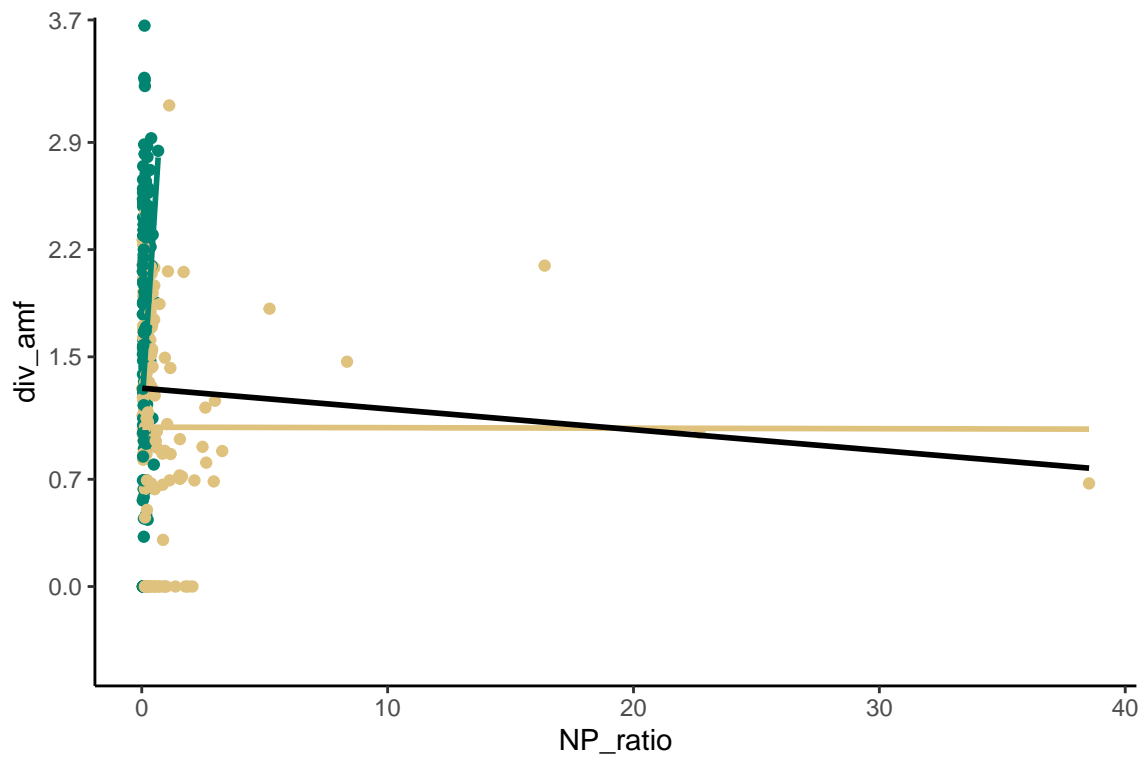


##  
## \$obs\_par

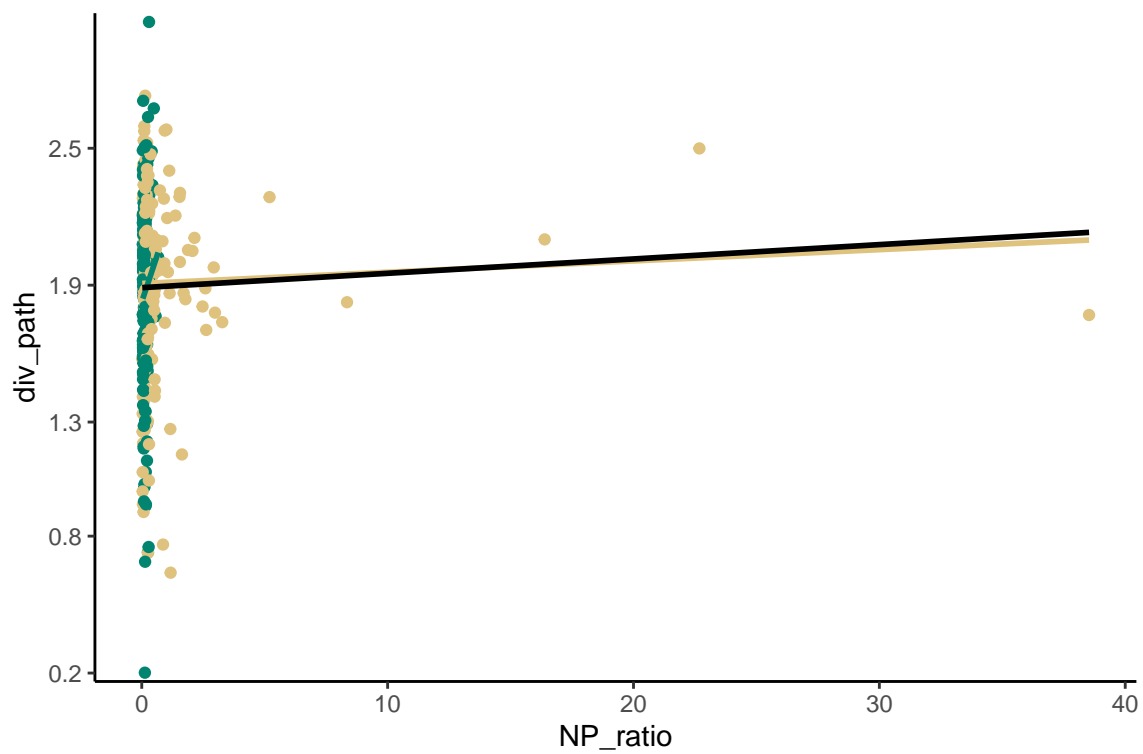


##  
## \$div\_amf

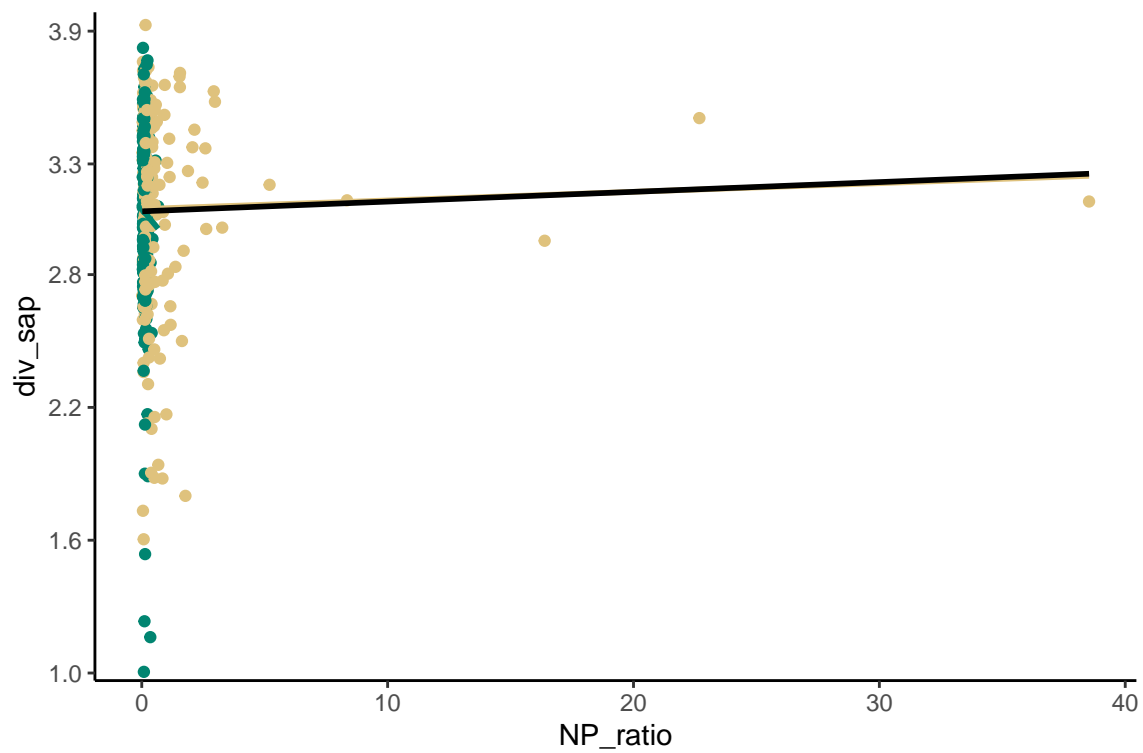




```
##
## $div_path
```



```
##
## $div_sap
```



##  
## \$div\_par

