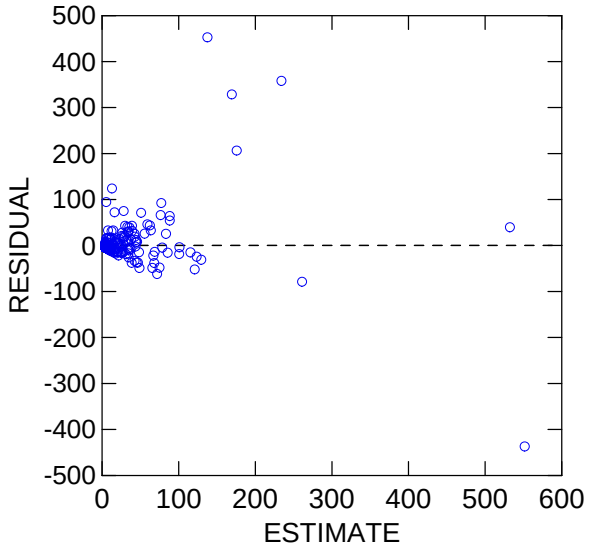
APPENDIX A

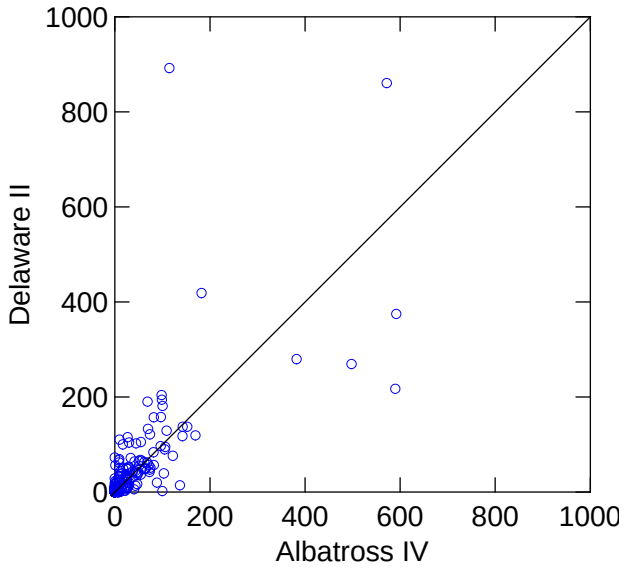
Winter skate [cruise = Pooled data]

```
Dep Var: WINTERSK_ALB   N: 482   Multiple R: 0.728   Squared multiple R: 0.530

Adjusted squared multiple R: 0.529   Standard error of estimate: 40.948

Effect     Coefficient    Std Error     Std Coef  Tolerance     t   P(2 Tail)

CONSTANT         4.502        1.934        0.000      .       2.328    0.020
WINTERSK_DEL     0.614        0.026        0.728     1.000   23.276    0.000

Analysis of Variance
Source             Sum-of-Squares   df  Mean-Square     F-ratio       P

Regression            908363.493     1   908363.493     541.750       0.000
Residual              804825.997   480     1676.721

------------------------------------------------------------------------------
Case           83 is an outlier        (Studentized Residual =        5.259)
Case          198 has large leverage   (Leverage =                    0.318)
Case          198 is an outlier        (Studentized Residual =      -15.989)
Case          198 has large influence  (Cook distance =              38.888)
Case          207 is an outlier        (Studentized Residual =       12.938)
Case          212 has large leverage   (Leverage =                    0.295)
Case          216 is an outlier        (Studentized Residual =        8.753)
Case          224 has large leverage   (Leverage =                    0.054)
Case          224 is an outlier        (Studentized Residual =        9.839)
Case          257 has large leverage   (Leverage =                    0.068)

Durbin-Watson D Statistic          1.866
First Order Autocorrelation        0.067
```

Plot of Residuals against Predicted Values



Winter skate weights (kg)



Silver Hake [cruise = Pooled data]

Dep Var: SH_ALB N: 482 Multiple R: 0.343 Squared multiple R: 0.118

Adjusted squared multiple R: 0.116 Standard error of estimate: 22.614

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.921	1.073	0.000	.	1.791	0.074
SH_DEL	0.613	0.077	0.343	1.000	8.012	0.000

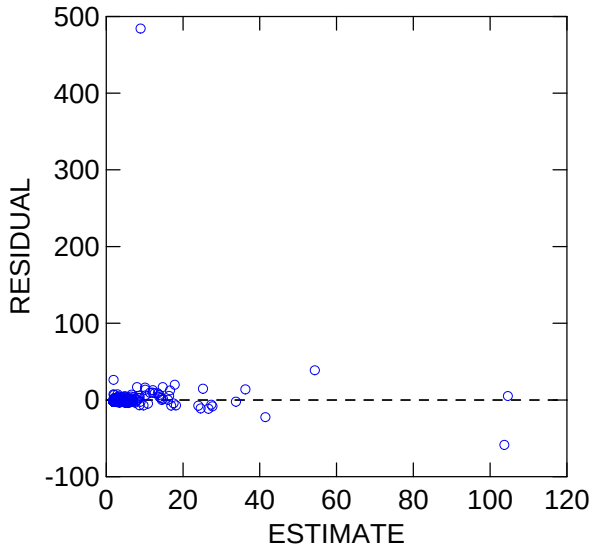
Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	32832.852	1	32832.852	64.200	0.000
Residual	245479.063	480	511.415		

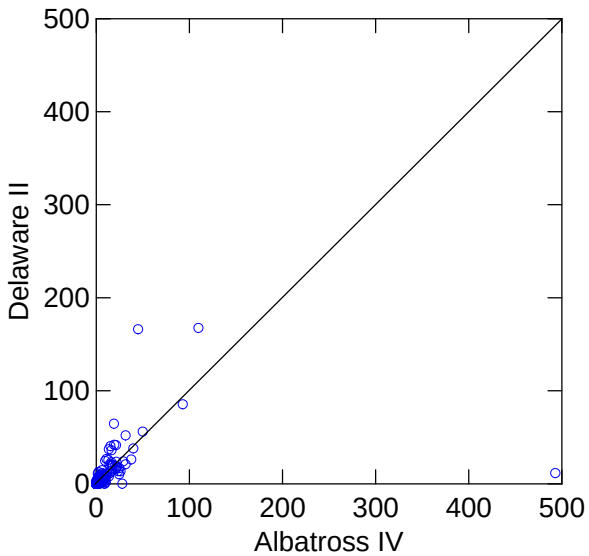
Case 95 is an outlier (Studentized Residual = 103.250)
Case 229 has large leverage (Leverage = 0.044)
Case 232 has large leverage (Leverage = 0.303)
Case 248 has large leverage (Leverage = 0.309)
Case 344 has large leverage (Leverage = 0.078)

Durbin-Watson D Statistic 2.011
First Order Autocorrelation -0.006

Plot of Residuals against Predicted Values



Silver hake weights (kg)



Atlantic Cod [cruise = Pooled data]

Dep Var: COD_ALB N: 482 Multiple R: 0.634 Squared multiple R: 0.401

Adjusted squared multiple R: 0.400 Standard error of estimate: 9.876

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.969	0.470	0.000	.	2.063	0.040
COD_DEL	0.513	0.029	0.634	1.000	17.943	0.000

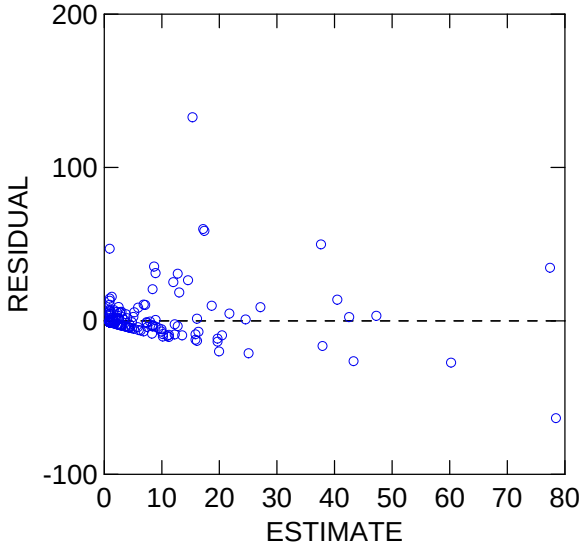
Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	31398.690	1	31398.690	321.946	0.000
Residual	46813.349	480	97.528		

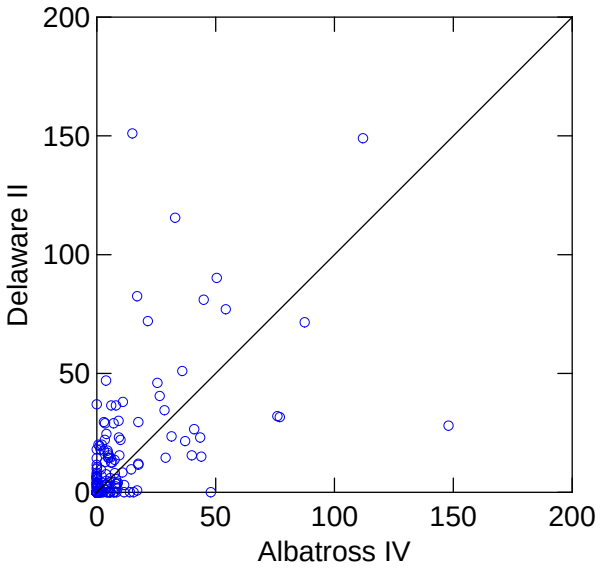
Case	98 is an outlier	(Studentized Residual =	6.186)
Case	186 has large leverage	(Leverage =	0.053)
Case	222 has large leverage	(Leverage =	0.046)
Case	223 has large leverage	(Leverage =	0.040)
Case	236 has large leverage	(Leverage =	0.182)
Case	236 is an outlier	(Studentized Residual =	-7.502)
Case	318 has large leverage	(Leverage =	0.040)
Case	318 is an outlier	(Studentized Residual =	5.292)
Case	329 is an outlier	(Studentized Residual =	4.880)
Case	342 has large leverage	(Leverage =	0.177)
Case	359 has large leverage	(Leverage =	0.063)
Case	361 has large leverage	(Leverage =	0.051)
Case	362 is an outlier	(Studentized Residual =	17.078)
Case	383 is an outlier	(Studentized Residual =	6.324)
Case	393 has large leverage	(Leverage =	0.105)

Durbin-Watson D Statistic 1.923
First Order Autocorrelation 0.037

Plot of Residuals against Predicted Values



Atlantic cod weights (kg)



Haddock [cruise = Pooled data]

Dep Var: HADDOCK_ALB N: 482 Multiple R: 0.646 Squared multiple R: 0.417

Adjusted squared multiple R: 0.416 Standard error of estimate: 11.751

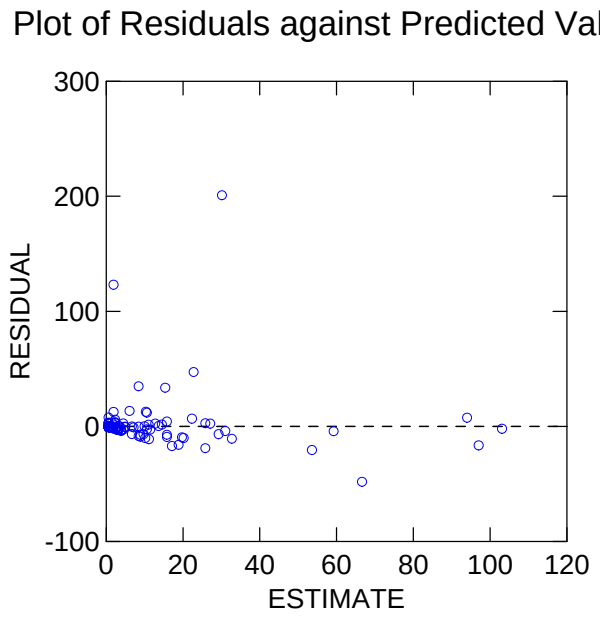
Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.619	0.550	0.000	.	1.126	0.261
HADDOCK_DEL	0.869	0.047	0.646	1.000	18.545	0.000

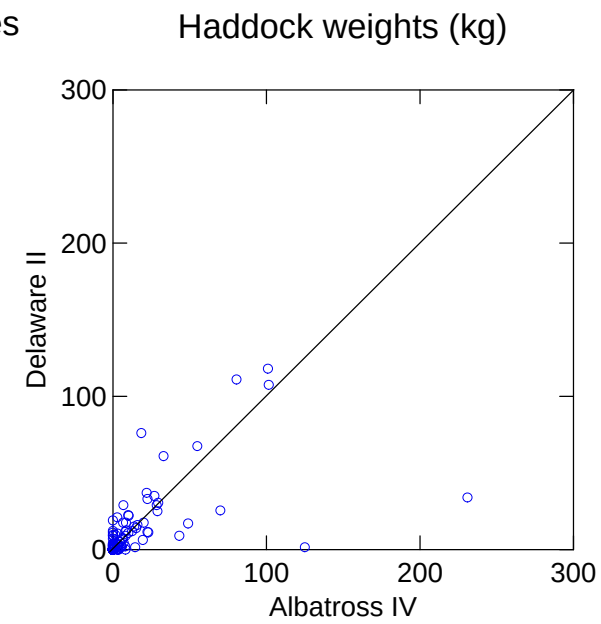
Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	47488.890	1	47488.890	343.901	0.000
Residual	66282.680	480	138.089		

Case	236 has large leverage	(Leverage =	0.189)
Case	325 has large leverage	(Leverage =	0.088)
Case	325 is an outlier	(Studentized Residual =	-4.370)
Case	329 is an outlier	(Studentized Residual =	11.928)
Case	340 is an outlier	(Studentized Residual =	27.927)
Case	342 has large leverage	(Leverage =	0.056)
Case	382 has large leverage	(Leverage =	0.177)
Case	383 has large leverage	(Leverage =	0.069)
Case	389 is an outlier	(Studentized Residual =	4.106)
Case	393 has large leverage	(Leverage =	0.214)

Durbin-Watson D Statistic	1.996
First Order Autocorrelation	0.002

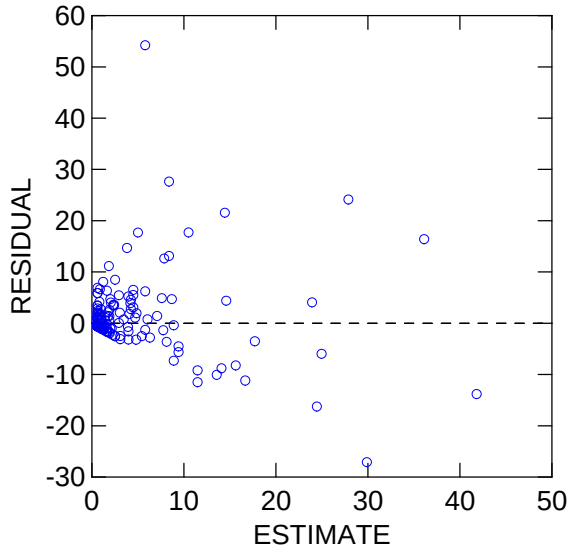




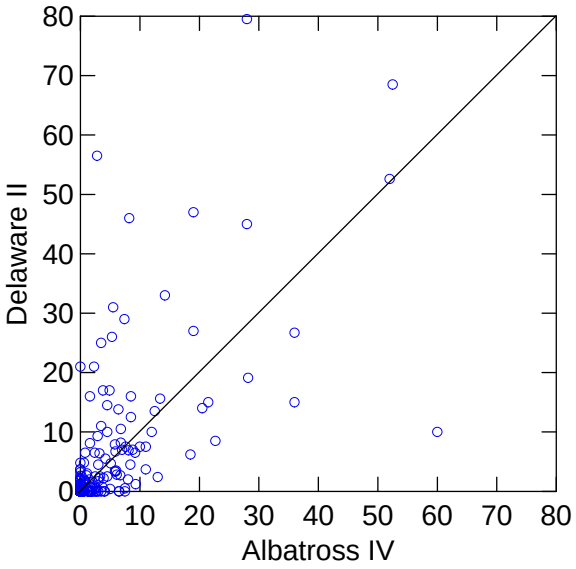
White Hake [cruise = Pooled data]

```
Dep Var: W_HAKE_ALB   N: 482   Multiple R: 0.693   Squared multiple R: 0.480

Adjusted squared multiple R: 0.479   Standard error of estimate: 4.411

Effect   Coefficient    Std Error     Std Coef  Tolerance     t   P(2 Tail)

CONSTANT        0.621        0.209        0.000      .       2.970    0.003
W_HAKE_DEL      0.518        0.025        0.693     1.000   21.036    0.000

Analysis of Variance
Source             Sum-of-Squares   df  Mean-Square     F-ratio       P

Regression               8608.851     1     8608.851     442.493       0.000
Residual                 9338.566   480       19.455
--------------------------------------------------------------------------------
Case          232 has large leverage   (Leverage =                      0.064)
Case          233 has large leverage   (Leverage =                      0.188)
Case          235 has large leverage   (Leverage =                      0.059)
Case          243 is an outlier        (Studentized Residual =          4.096)
Case          252 has large leverage   (Leverage =                      0.139)
Case          252 is an outlier        (Studentized Residual =          4.065)
Case          368 is an outlier        (Studentized Residual =          5.060)
Case          371 is an outlier        (Studentized Residual =          6.549)
Case          372 has large leverage   (Leverage =                      0.081)
Case          372 is an outlier        (Studentized Residual =          5.901)
Case          392 has large leverage   (Leverage =                      0.061)
Case          397 is an outlier        (Studentized Residual =         14.868)
Case          398 has large leverage   (Leverage =                      0.094)
Case          398 is an outlier        (Studentized Residual =         -6.746)
Case          405 is an outlier        (Studentized Residual =          4.078)

Durbin-Watson D Statistic          1.994
First Order Autocorrelation        0.003
```

Plot of Residuals against Predicted Values



White hake weights (kg)



Red Hake [cruise = Pooled data]

Dep Var: RED_HAKE_ALB N: 482 Multiple R: 0.743 Squared multiple R: 0.552

Adjusted squared multiple R: 0.551 Standard error of estimate: 6.582

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.561	0.312	0.000	.	1.800	0.073
RED_HAKE_DEL	0.705	0.029	0.743	1.000	24.322	0.000

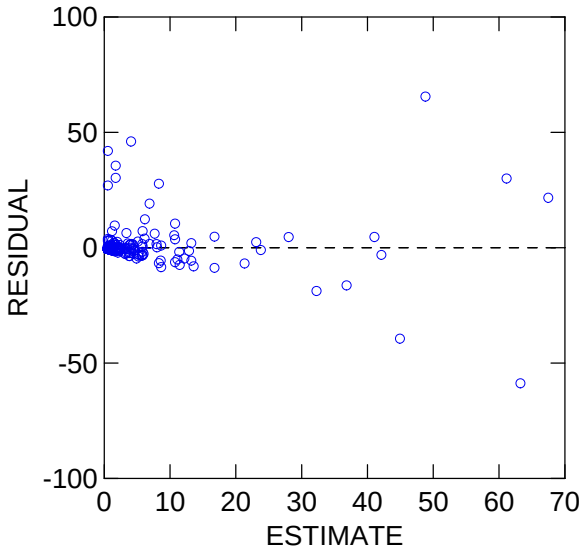
Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	25627.542	1	25627.542	591.546	0.000
Residual	20795.050	480	43.323		

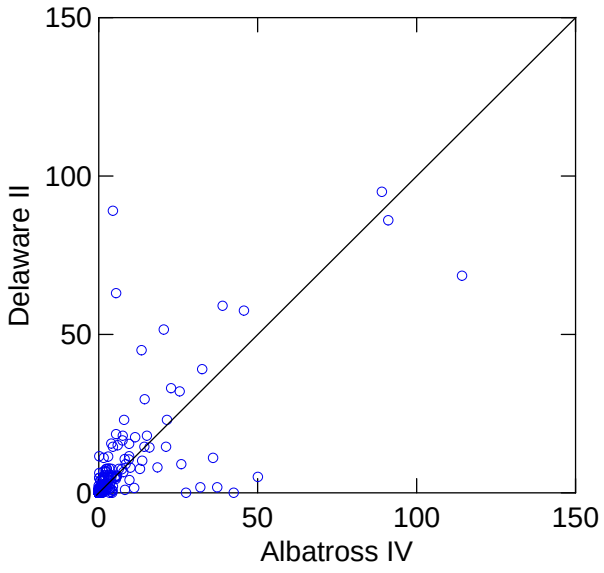
Case	26 has large leverage	(Leverage =	0.060)
Case	27 has large leverage	(Leverage =	0.048)
Case	45 has large leverage	(Leverage =	0.146)
Case	45 is an outlier	(Studentized Residual =	-10.750)
Case	86 is an outlier	(Studentized Residual =	5.572)
Case	95 is an outlier	(Studentized Residual =	7.378)
Case	145 has large leverage	(Leverage =	0.085)
Case	145 is an outlier	(Studentized Residual =	11.807)
Case	155 has large leverage	(Leverage =	0.166)
Case	157 has large leverage	(Leverage =	0.136)
Case	157 is an outlier	(Studentized Residual =	5.016)
Case	258 is an outlier	(Studentized Residual =	6.661)
Case	259 is an outlier	(Studentized Residual =	4.167)
Case	287 is an outlier	(Studentized Residual =	4.699)
Case	341 has large leverage	(Leverage =	0.072)
Case	341 is an outlier	(Studentized Residual =	-6.482)
Case	346 is an outlier	(Studentized Residual =	4.290)
Case	347 has large leverage	(Leverage =	0.063)

Durbin-Watson D Statistic 1.839
First Order Autocorrelation 0.080

Plot of Residuals against Predicted Values



Red hake weights (kg)



American Plaice [cruise = Pooled data]

Dep Var: A_PLAICE_ALB N: 482 Multiple R: 0.914 Squared multiple R: 0.836

Adjusted squared multiple R: 0.835 Standard error of estimate: 1.373

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.102	0.064	0.000	.	1.600	0.110
A_PLAICE_DEL	0.677	0.014	0.914	1.000	49.408	0.000

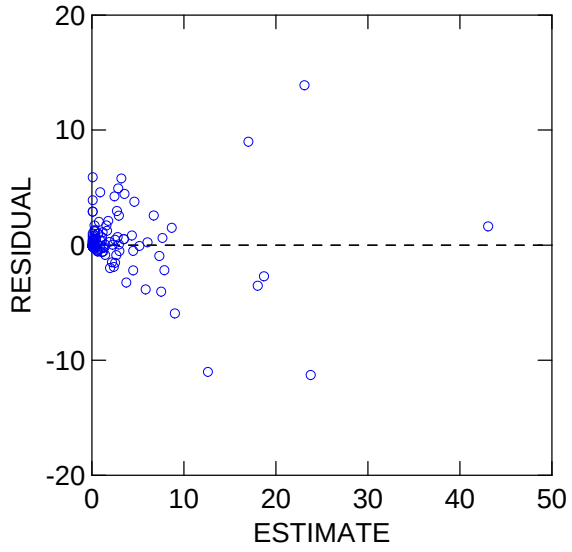
Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	4602.279	1	4602.279	2441.151	0.000
Residual	904.940	480	1.885		

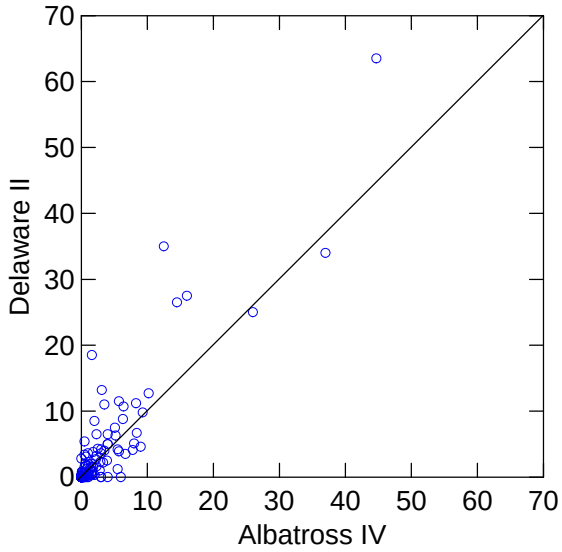
Case	86	is an outlier	(Studentized Residual = 4.381)
Case	88	has large leverage	(Leverage = 0.391)
Case	97	is an outlier	(Studentized Residual = -8.786)
Case	229	has large leverage	(Leverage = 0.117)
Case	229	is an outlier	(Studentized Residual = -9.536)
Case	233	has large leverage	(Leverage = 0.072)
Case	235	has large leverage	(Leverage = 0.067)
Case	248	is an outlier	(Studentized Residual = 4.296)
Case	360	is an outlier	(Studentized Residual = -4.445)
Case	361	has large leverage	(Leverage = 0.111)
Case	361	is an outlier	(Studentized Residual = 12.285)
Case	481	has large leverage	(Leverage = 0.059)
Case	481	is an outlier	(Studentized Residual = 7.078)

Durbin-Watson D Statistic 2.125
First Order Autocorrelation -0.063

Plot of Residuals against Predicted Values



American plaice weights (kg)



Fourspot Flounder [cruise = Pooled data]

Dep Var: FOURSPOT_ALB N: 482 Multiple R: 0.932 Squared multiple R: 0.868

Adjusted squared multiple R: 0.868 Standard error of estimate: 0.861

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.120	0.041	0.000	.	2.893	0.004
FOURSPOT_DEL	0.725	0.013	0.932	1.000	56.206	0.000

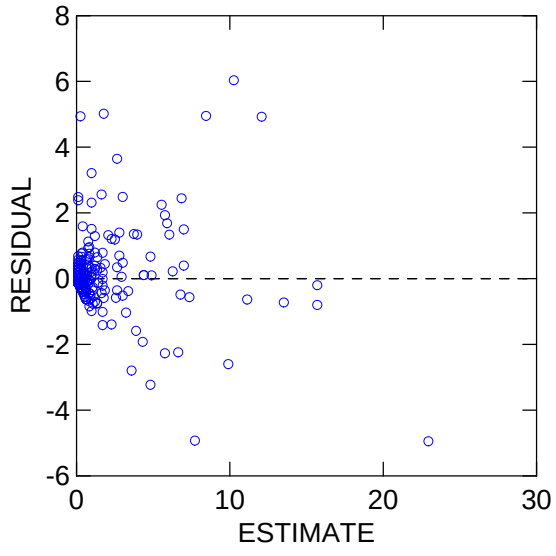
Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	2343.690	1	2343.690	3159.156	0.000
Residual	356.099	480	0.742		

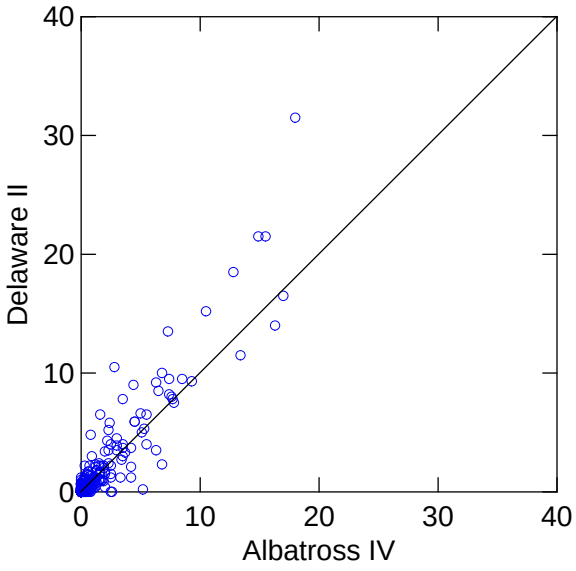
Case	26 has large leverage	(Leverage =	0.037)
Case	53 has large leverage	(Leverage =	0.096)
Case	56 is an outlier	(Studentized Residual =	6.039)
Case	103 has large leverage	(Leverage =	0.056)
Case	103 is an outlier	(Studentized Residual =	6.099)
Case	145 has large leverage	(Leverage =	0.040)
Case	145 is an outlier	(Studentized Residual =	7.555)
Case	149 has large leverage	(Leverage =	0.096)
Case	155 has large leverage	(Leverage =	0.210)
Case	155 is an outlier	(Studentized Residual =	-6.757)
Case	157 has large leverage	(Leverage =	0.070)
Case	167 is an outlier	(Studentized Residual =	4.315)
Case	287 is an outlier	(Studentized Residual =	5.937)
Case	301 has large leverage	(Leverage =	0.047)
Case	305 is an outlier	(Studentized Residual =	-5.994)
Case	478 is an outlier	(Studentized Residual =	6.031)

Durbin-Watson D Statistic	2.127
First Order Autocorrelation	-0.064

Plot of Residuals against Predicted Values



Fourspot flounder weights (kg)



Yellowtail Flounder [cruise = Pooled data]

Dep Var: YT_ALB N: 482 Multiple R: 0.941 Squared multiple R: 0.886

Adjusted squared multiple R: 0.886 Standard error of estimate: 1.887

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.146	0.088	0.000	.	1.655	0.099
YT_DEL	0.658	0.011	0.941	1.000	61.078	0.000

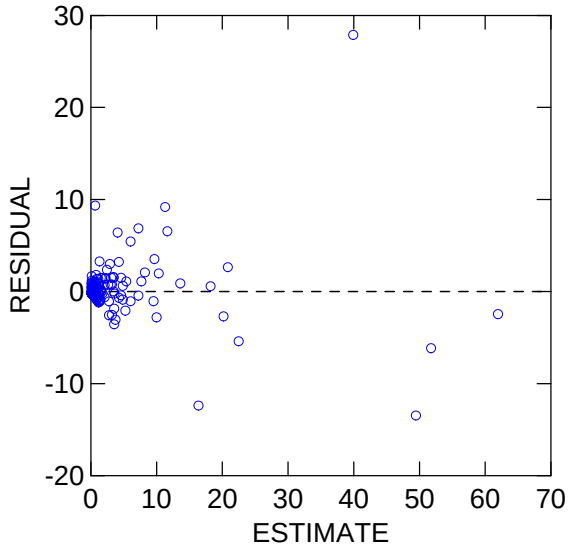
Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	13279.336	1	13279.336	3730.523	0.000
Residual	1708.629	480	3.560		

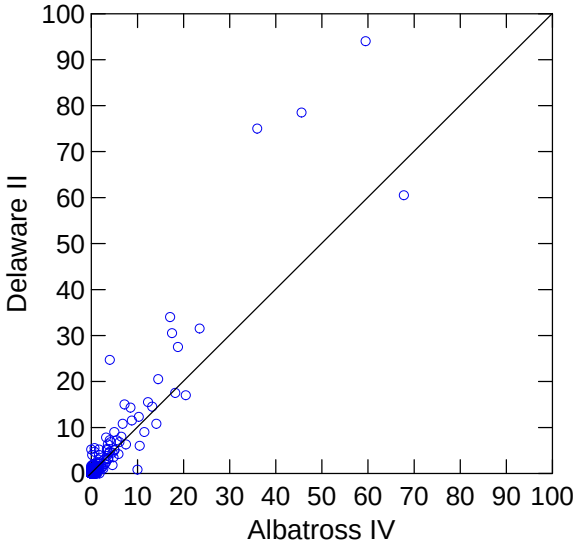
Case	21 has large leverage	(Leverage =	0.114)
Case	21 is an outlier	(Studentized Residual =	22.472)
Case	30 has large leverage	(Leverage =	0.279)
Case	31 has large leverage	(Leverage =	0.177)
Case	31 is an outlier	(Studentized Residual =	-8.421)
Case	92 is an outlier	(Studentized Residual =	-6.950)
Case	149 has large leverage	(Leverage =	0.194)
Case	151 is an outlier	(Studentized Residual =	5.007)
Case	174 is an outlier	(Studentized Residual =	5.075)

Durbin-Watson D Statistic	1.948
First Order Autocorrelation	0.023

Plot of Residuals against Predicted Values



Yellowtail flounder weights (kg)



Winter Flounder [cruise = Pooled data]

Dep Var: WINTER_F_ALB N: 482 Multiple R: 0.816 Squared multiple R: 0.666

Adjusted squared multiple R: 0.666 Standard error of estimate: 2.643

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.284	0.126	0.000	.	2.257	0.024
WINTER_F_DEL	0.777	0.025	0.816	1.000	30.956	0.000

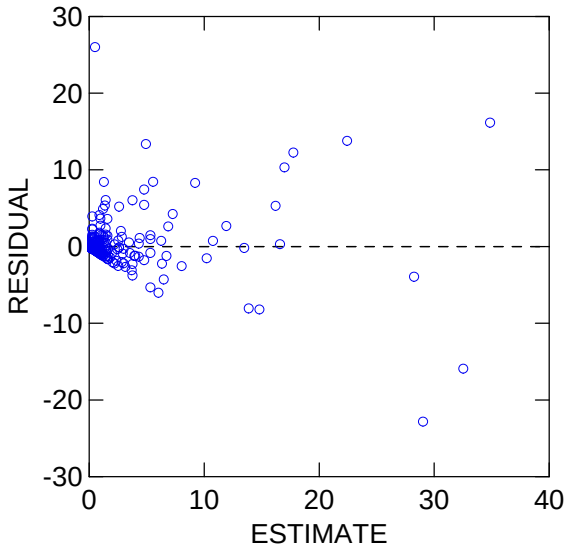
Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	6691.408	1	6691.408	958.245	0.000
Residual	3351.831	480	6.983		

Case	81	has large leverage	(Leverage = 0.038)
Case	81	is an outlier	(Studentized Residual = 4.042)
Case	91	is an outlier	(Studentized Residual = 5.199)
Case	143	is an outlier	(Studentized Residual = 11.007)
Case	210	has large leverage	(Leverage = 0.068)
Case	210	is an outlier	(Studentized Residual = 5.565)
Case	239	has large leverage	(Leverage = 0.110)
Case	332	has large leverage	(Leverage = 0.147)
Case	332	is an outlier	(Studentized Residual = -6.830)
Case	382	has large leverage	(Leverage = 0.042)
Case	382	is an outlier	(Studentized Residual = 4.839)
Case	383	has large leverage	(Leverage = 0.169)
Case	383	is an outlier	(Studentized Residual = 7.031)
Case	469	has large leverage	(Leverage = 0.116)
Case	469	is an outlier	(Studentized Residual = -10.115)

Durbin-Watson D Statistic	1.893
First Order Autocorrelation	0.054

Plot of Residuals against Predicted Values



Winter flounder weights (kg)