

S3. Polynomial models for *Loa loa* mf prevalence and intensity and environmental factors

Table 2 related models

Loa loa mf prevalence based on the bioecological zones in all locations.

Call:

```
lm(formula = Prevalence ~ Zones, data = Cameroon_all)
```

Residuals:

Min	1Q	Median	3Q	Max
-23.391	-1.380	0.000	1.641	20.899

Coefficients:

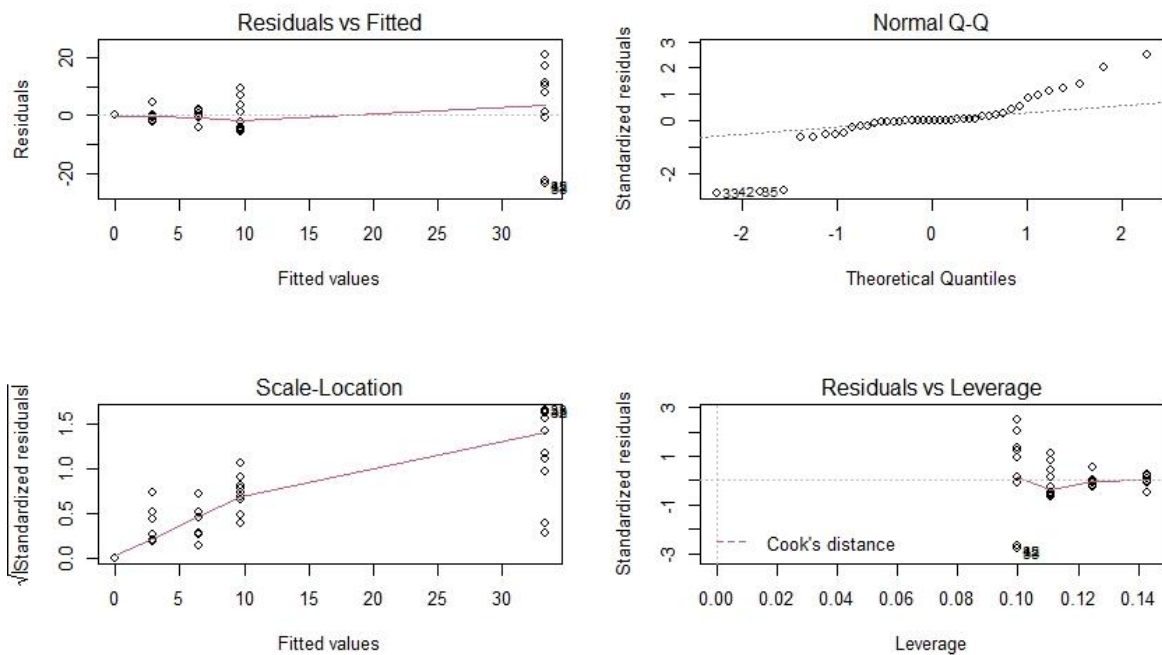
	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	6.454	3.367	1.917	0.063 .
ZonesDense-humid	3.262	4.490	0.727	0.472
ZonesForested	26.847	4.390	6.115	4.39e-07 ***
ZonesGrassland	-6.454	4.611	-1.400	0.170
ZonesMosaic Forest	-3.568	4.611	-0.774	0.444

signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 8.909 on 37 degrees of freedom

Multiple R-squared: 0.6924, Adjusted R-squared: 0.6592

F-statistic: 20.82 on 4 and 37 DF, p-value: 4.653e-09



***Loa loa* mf prevalence based on tree canopy cover in all locations.**

Call:

```
lm(formula = Prevalence ~ Treecov + Treecov_2 + Treecov_3 + Treecov_4,
    data = Cameroon_all)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-19.0009	-3.6173	-0.7314	1.8685	28.9827

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	3.52E+02	1.55E+02	2.275	0.028774	*
Treecov	-3.93E+01	1.45E+01	-2.714	0.010042	*
Treecov_2	1.49E+00	4.73E-01	3.158	0.003161	**
Treecov_3	-2.19E-02	6.35E-03	-3.446	0.001432	**
Treecov_4	1.09E-04	3.01E-05	3.611	0.000899	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

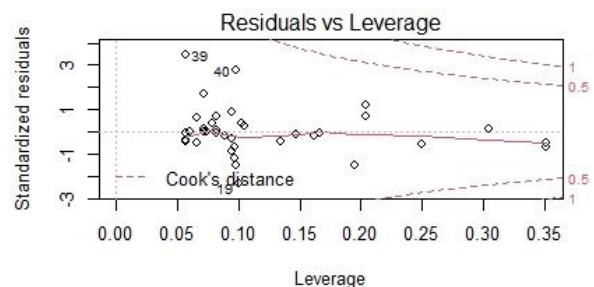
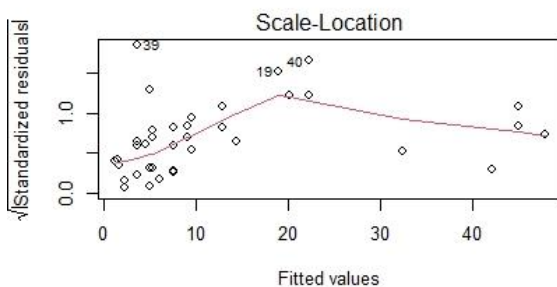
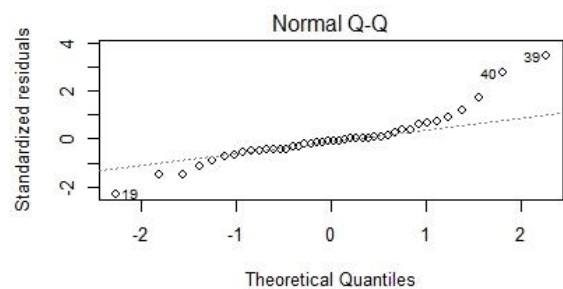
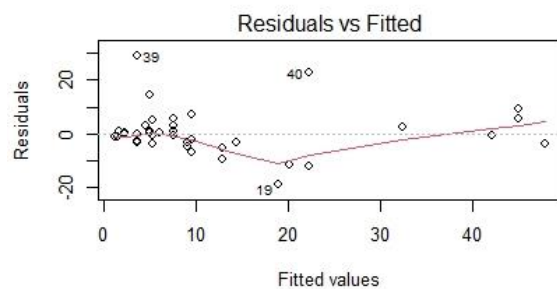
Residual standard error: 8.66 on 37 degrees of freedom

Multiple R-squared:

0.7094,

Adjusted R-squared: 0.6779

F-statistic: 22.58 on 4 and 37 DF, p-value: 1.667e-09



Loa loa mf prevalence based on the bioecological zones and tree canopy cover in all locations.

```
lm(formula = Prevalence ~ Zones + Zones:Treecov, data = Cameroon_all)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-20.539	-2.007	0.000	0.839	17.508

Coefficients:

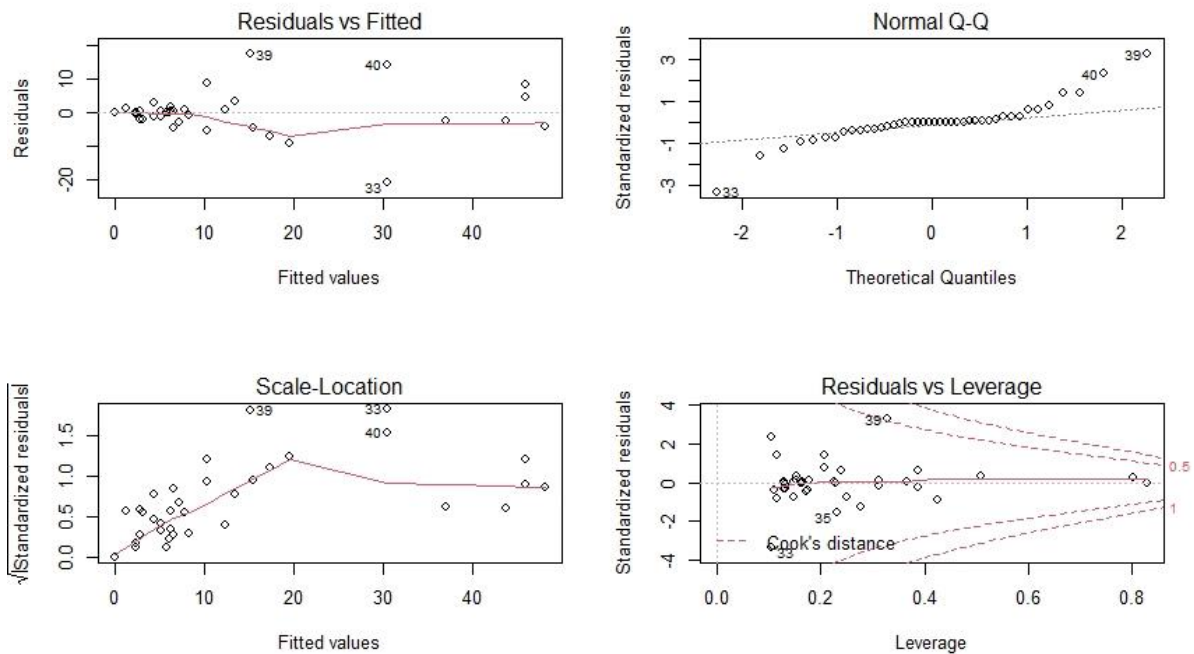
	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.786e+01	8.835e+01	0.315	0.755
ZonesDense-humid	6.159e+01	1.019e+02	0.605	0.550
ZonesForested	-6.981e+01	8.932e+01	-0.782	0.440
ZonesGrassland	-2.786e+01	9.098e+01	-0.306	0.761
ZonesMosaic Forest	-3.532e+01	9.171e+01	-0.385	0.703
ZonesDeciduous:Treecov	-2.915e-01	1.203e+00	-0.242	0.810
ZonesDense-humid:Treecov	-1.042e+00	6.615e-01	-1.574	0.125
ZonesForested:Treecov	2.194e+00	3.785e-01	5.797	1.95e06 ***
ZonesGrassland:Treecov	3.874e-30	8.464e-01	0.000	1.000
ZonesMosaic Forest:Treecov	3.922e-01	9.283e-01	0.422	0.675

 signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 6.556 on 32 degrees of freedom

Multiple R-squared: 0.8559, Adjusted R-squared: 0.8154

F-statistic: 21.12 on 9 and 32 DF, p-value: 4.596e-11



Loa loa mf prevalence based on the tree canopy cover and elevation in all locations.

Call:

```
lm(formula = Prevalence ~ Treecov + Treecov_2 + Treecov_3 + Treecov_4
+ Elev + Elev_2 + Elev_3 + Elev_4, data = Cameroon_all)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-12.9054	-3.0730	-0.1076	2.4973	16.9474

Coefficients:

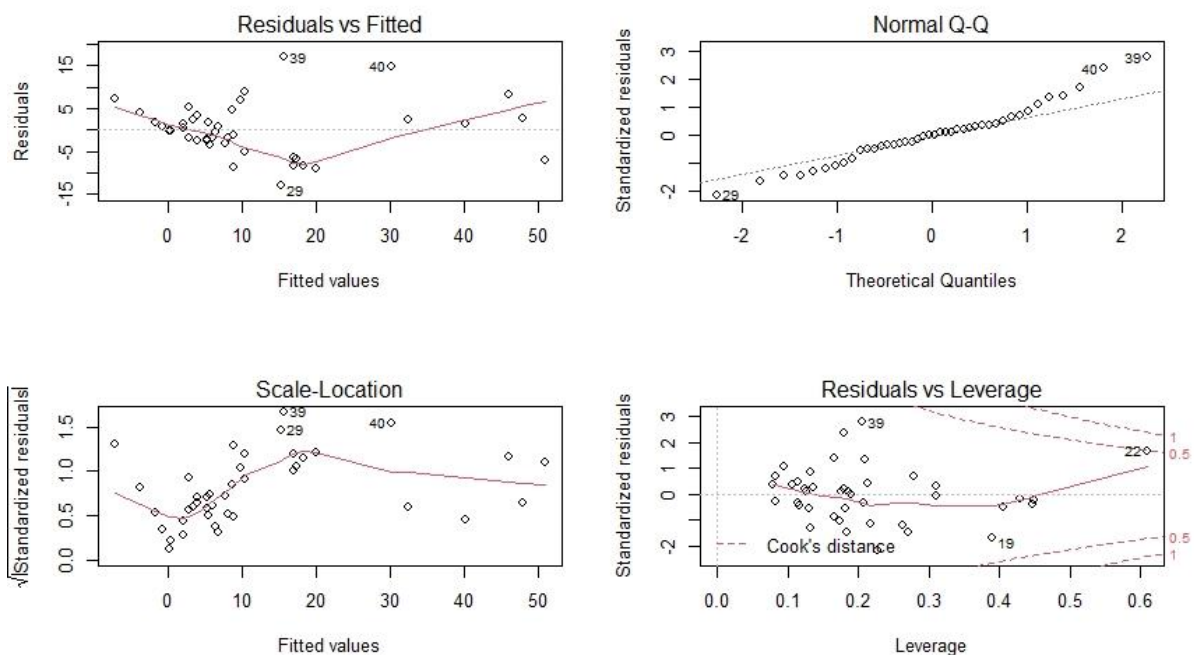
	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	4.094e+02	1.267e+02	3.230	0.002798	**
Treecov	-4.491e+01	1.166e+01	-3.850	0.000513	***
Treecov_2	1.642e+00	3.853e-01	4.262	0.000159	***
Treecov_3	-2.349e-02	5.301e-03	-4.431	9.75e-05	***
Treecov_4	1.139e-04	2.586e-05	4.402	0.000106	***
Elev	2.822e-01	8.042e-02	3.509	0.001323	**
Elev_2	-5.742e-04	1.706e-04	-3.365	0.001952	**
Elev_3	3.912e-07	1.311e-07	2.984	0.005323	**
Elev_4	-8.779e-11	3.298e-11	-2.662	0.011912	*

signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 6.835 on 33 degrees of freedom

Multiple R-squared: 0.8385, Adjusted R-squared: 0.7994

F-statistic: 21.42 on 8 and 33 DF, p-value: 5.514e-11



***Loa loa* mf prevalence based on the bioecological zones in Savannah locations.**

Call:

```
lm(formula = Prevalence ~ Zones, data = Cameroon_S)
```

Residuals:

Min	1Q	Median	3Q	Max
-23.3910	-0.5612	0.0000	1.0527	20.8990

Coefficients:

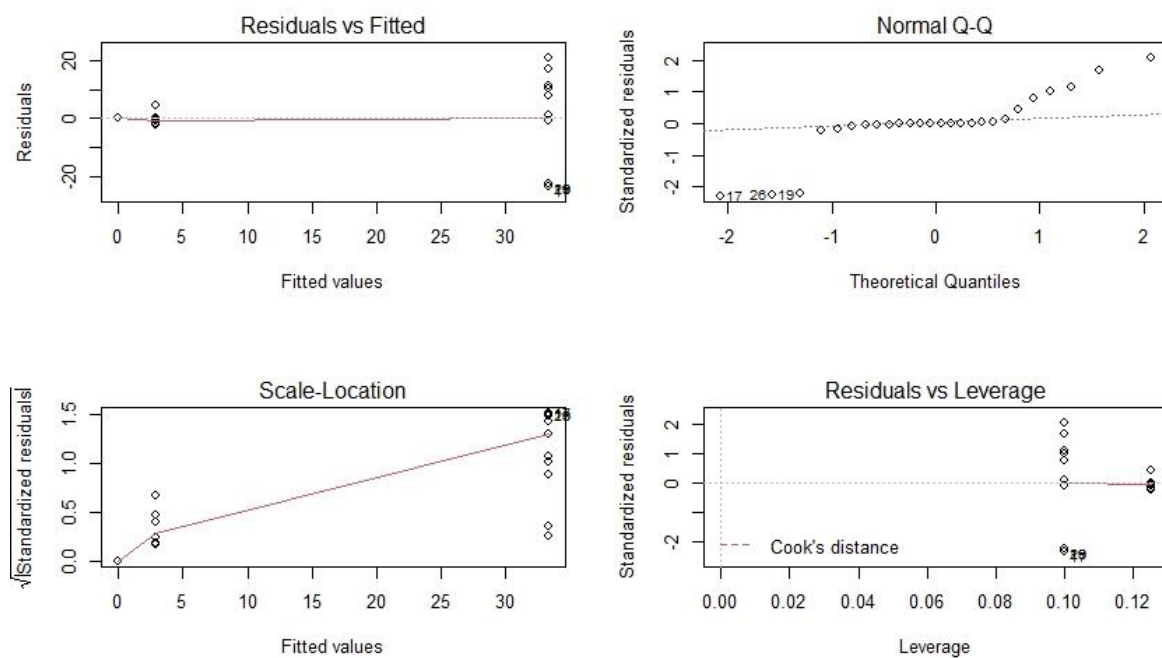
	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	33.301	3.398	9.800	1.12e-09 ***
ZonesGrassland	-33.301	5.097	-6.533	1.15e-06 ***
ZonesMosaic Forest	-30.415	5.097	-5.967	4.39e-06 ***

signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 10.75 on 23 degrees of freedom

Multiple R-squared: 0.7028, Adjusted R-squared: 0.6769

F-statistic: 27.19 on 2 and 23 DF, p-value: 8.721e-07



Loa loa mf prevalence based on tree cover in Savannah locations

Call:

```
lm(formula = Prevalence ~ Treecov, data = Cameroon_S)
```

Residuals:

	Min	1Q	Median	3Q	Max
Residuals	-21.5507	-4.9924	0.1877	3.1520	27.6076

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	66.7603	10.4633	-6.38	1.35E-06 ***
Treecov	2.7597	0.3522	7.835	4.56E-08 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

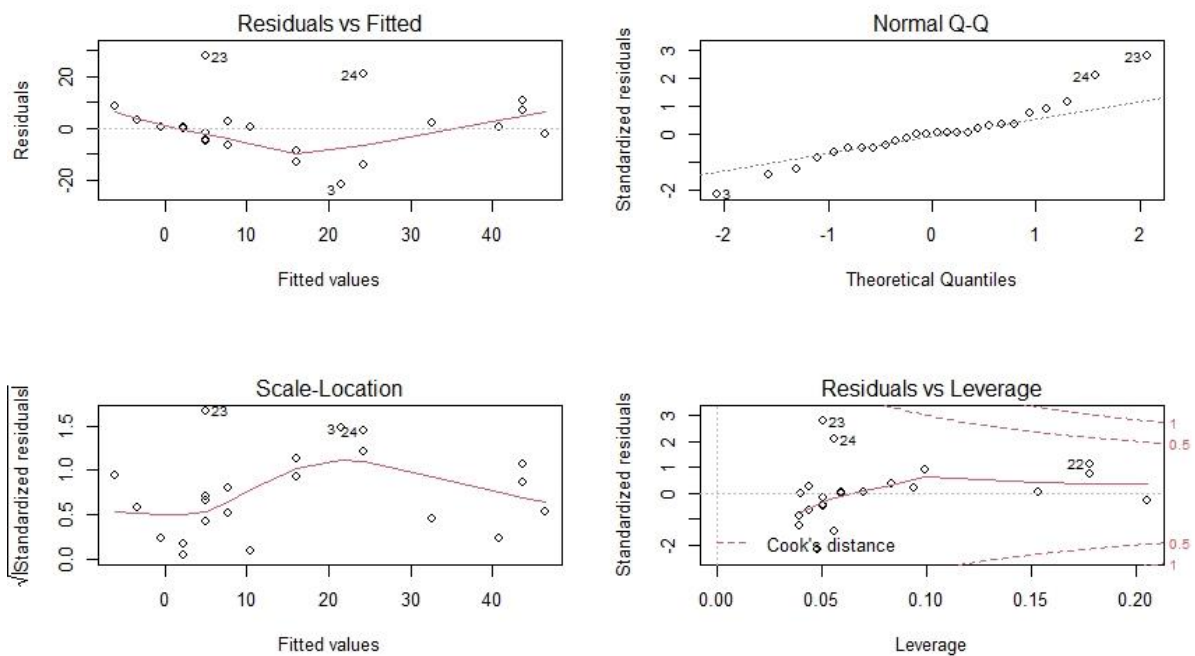
Residual standard error: 10.23 on 24 degrees of freedom

Multiple R-squared:

0.7189,

Adjusted R-squared: 0.7072

F-statistic: 61.38 on 1 and 24 DF, p-value: 4.557e-08



Loa loa mf prevalence based on the bioecological zones and tree cover in Savannah locations

Call:

```
lm(formula = Prevalence ~ Zones + Zones:Treecov, data = Cameroon_S)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-20.5389	-2.0072	0.0000	0.3889	17.5083

Coefficients:

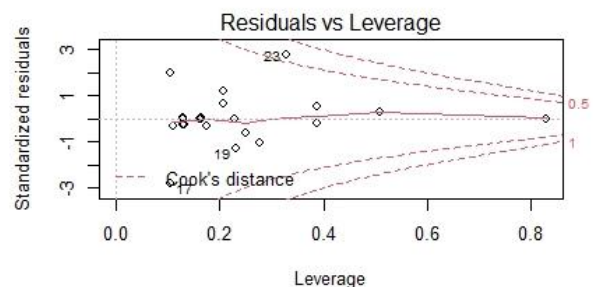
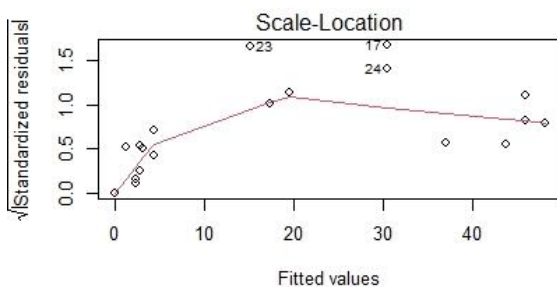
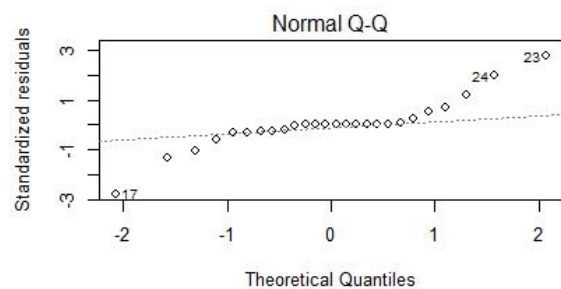
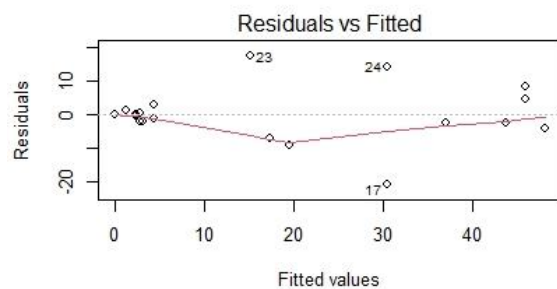
	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-4.20E+01	1.56E+01	-2.697	0.0139	*
ZonesGrassland	4.20E+01	3.00E+01	1.397	0.1777	
ZonesMosaic Forest	3.45E+01	3.30E+01	1.045	0.3084	
ZonesForested:Treecov	2.19E+00	4.48E-01	4.899	8.67E-05	***
ZonesGrassland:Treecov	-1.57E-15	1.00E+00	0	1	
ZonesMosaic Forest:Treecov	3.92E-01	1.10E+00	0.357	0.7248	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 7.757 on 20 degrees of freedom

Multiple R-squared: 0.8653, Adjusted R-squared: 0.8316

F-statistic: 25.69 on 5 and 20 DF, p-value: 4.587e-08



Loa loa mf prevalence based on the tree canopy cover and elevation in Savannah locations.

```
Call:
lm(formula = Prevalence ~ Treecov + Treecov_2 + Treecov_3 + Treecov_4
+
  Elev + Elev_2 + Elev_3, data = Cameroon_S)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-15.2728	-2.7369	0.2666	1.2476	15.6025

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	-1.858e+03	2.034e+03	-0.913	0.3731
Treecov	3.038e+02	2.710e+02	1.121	0.2771
Treecov_2	-1.609e+01	1.345e+01	-1.196	0.2471
Treecov_3	3.708e-01	2.930e-01	1.266	0.2218
Treecov_4	-3.117e-03	2.361e-03	-1.320	0.2033
Elev	-5.663e-01	2.562e-01	-2.210	0.0403 *
Elev_2	4.132e-04	2.113e-04	1.955	0.0662 .
Elev_3	-9.865e-08	5.567e-08	-1.772	0.0933 .

signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 7.31 on 18 degrees of freedom

Multiple R-squared: 0.8923, Adjusted R-squared: 0.8505

F-statistic: 21.31 on 7 and 18 DF, p-value: 1.71e-07

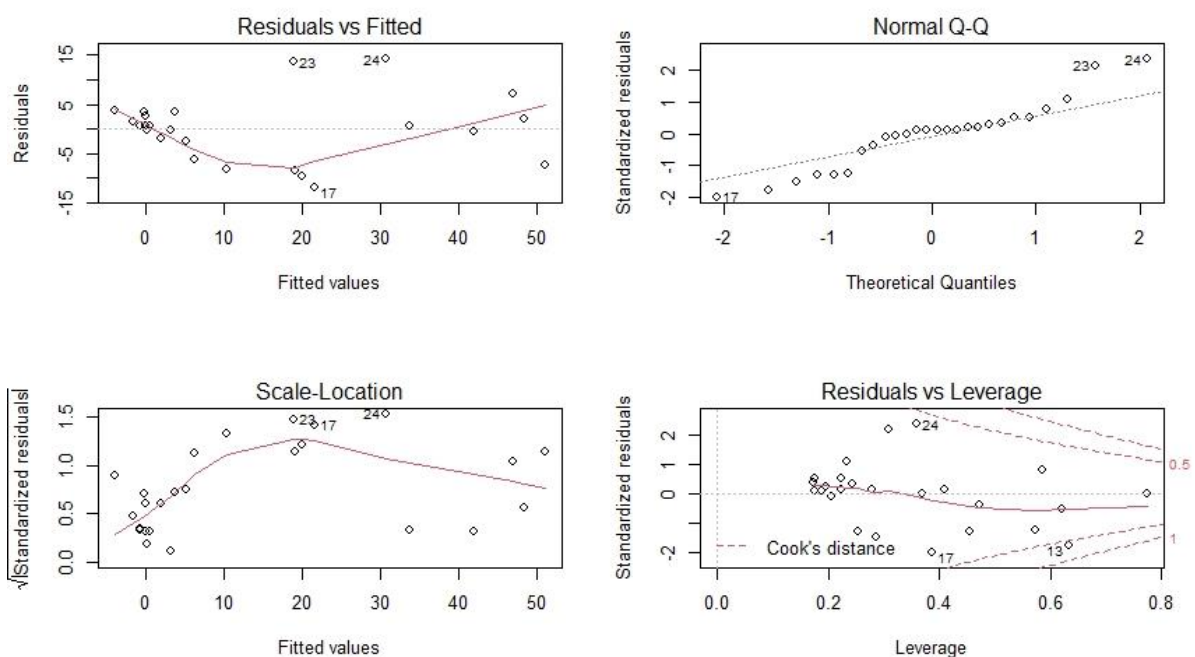


Table 3 related models

Loa loa mf intensity based on the bioecological zones in all locations.

Call:

```
lm(formula = Arithmetic ~ Zones, data = models_total.variables)
```

Residuals:

Min	1Q	Median	3Q	Max
-3007.2	-191.6	-55.7	29.0	6817.8

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	300.3	547.6	0.548	0.586723
ZonesDense-humid	112.4	730.1	0.154	0.878507
ZonesForested	2876.9	714.0	4.030	0.000267 ***
ZonesGrassland	-300.3	749.8	-0.400	0.691104
ZonesMosaic Forest	-129.8	749.8	-0.173	0.863523

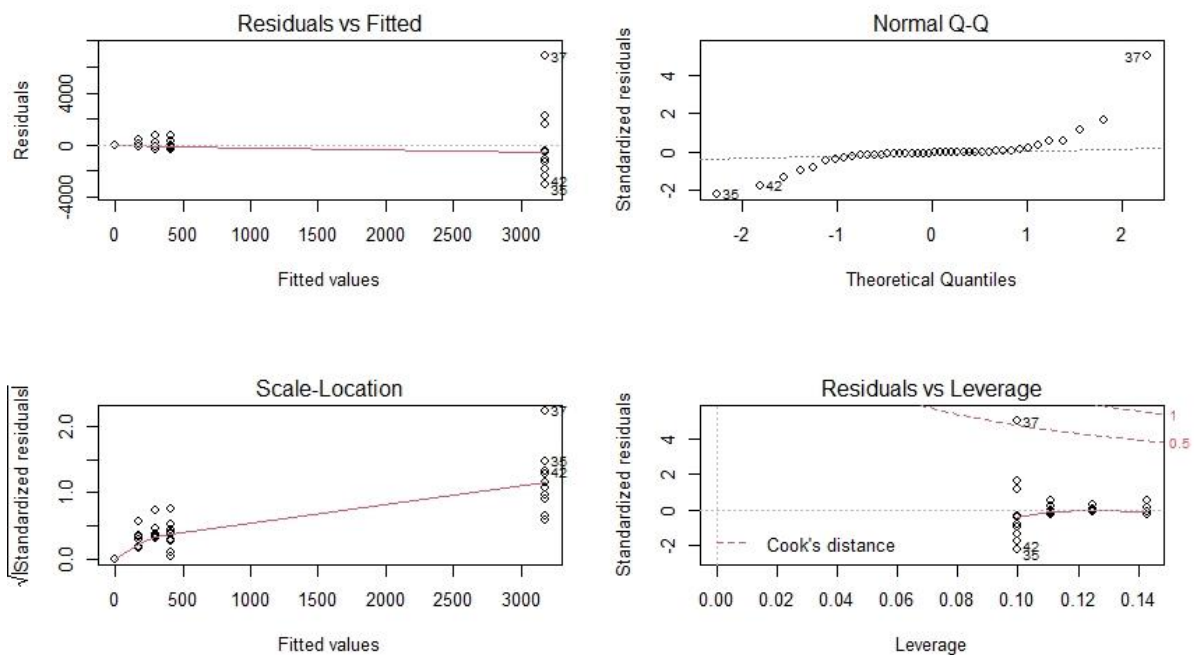
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1449 on 37 degrees of freedom

Multiple R-squared: 0.464, Adjusted R-squared: 0.406

F-statistic: 8.006 on 4 and 37 DF,

p-value: 9.369e-05



***Loa loa* mf intensity based on the tree canopy cover in all locations.**

Call:

```
lm(formula = Arithmetic ~ Treecov + Treecov_2 + Treecov_3 + Treecov_4,
    data = Cameroon_all)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-2508.5	-492.6	-56.1	247.2	5011.9

Coefficients:

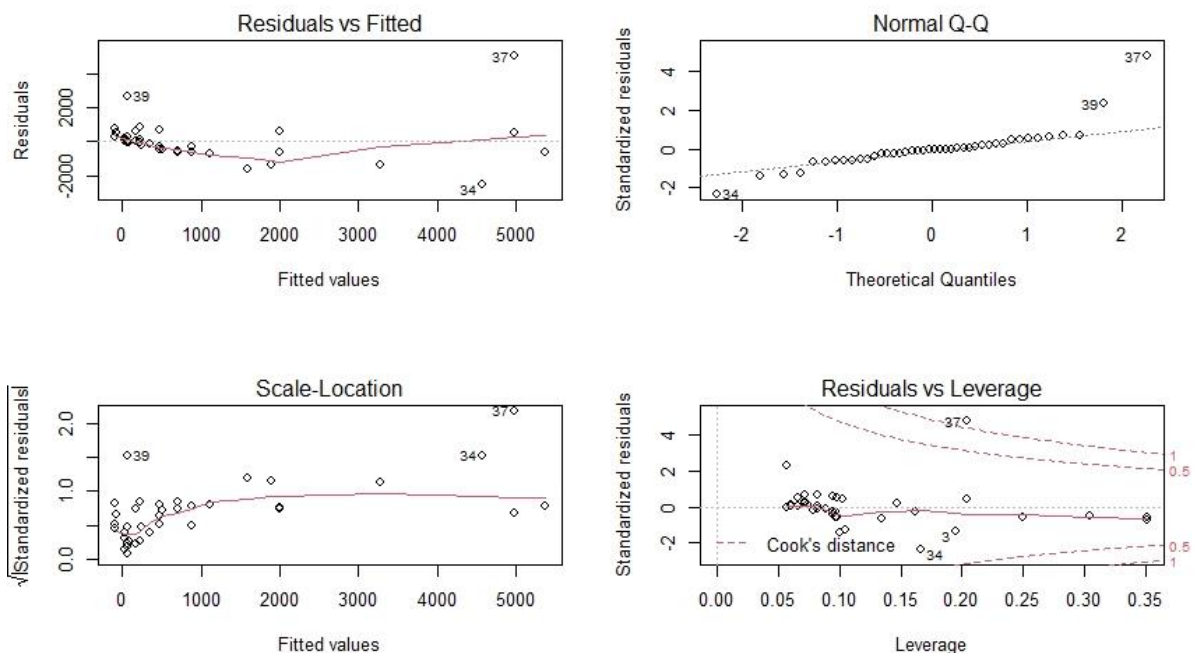
	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	6.16E+04	2.11E+04	2.92	0.005926	**
Treecov	-6.50E+03	1.98E+03	-3.292	0.002196	**
Treecov_2	2.35E+02	6.44E+01	3.654	7.95E-04	***
Treecov_3	-3.37E+00	8.65E-01	-3.891	0.000401	***
Treecov_4	1.65E-02	4.10E-03	4.025	0.000271	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1180 on 37 degrees of freedom

Multiple R-squared: 0.6445, Adjusted R-squared: 0.606

F-statistic: 16.77 on 4 and 37 DF, p-value: 6.352e-08



***Loa loa* mf intensity based on the bioecological zones and tree canopy cover in all locations.**

Call:

```
lm(formula = Arithmetic ~ Zones + Zones:Treecov, data = Cameroon_all)
```

Residuals:

Min	1Q	Median	3Q	Max
-2649.4	-147.3	0.0	40.2	4949.9

Coefficients:	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.71E+03	1.60E+04	0.169	0.867
ZonesDense-humid	1.83E+03	1.84E+04	0.099	0.921
ZonesForested	-1.08E+04	1.62E+04	-0.667	0.51
ZonesGrassland	-2.71E+03	1.65E+04	-0.165	0.87
ZonesMosaic Forest	-3.97E+03	1.66E+04	-0.239	0.812
ZonesDeciduous:Treecov	-3.28E+01	2.18E+02	-0.151	0.881
ZonesDense-humid:Treecov	-5.39E+01	1.20E+02	-0.45	0.655
ZonesForested:Treecov	3.28E+02	6.84E+01	4.789	3.67e-05 ***
ZonesGrassland:Treecov	-2.86E-13	1.53E+02	0	1
ZonesMosaic Forest:Treecov	5.44E+01	1.68E+02	0.324	0.748

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

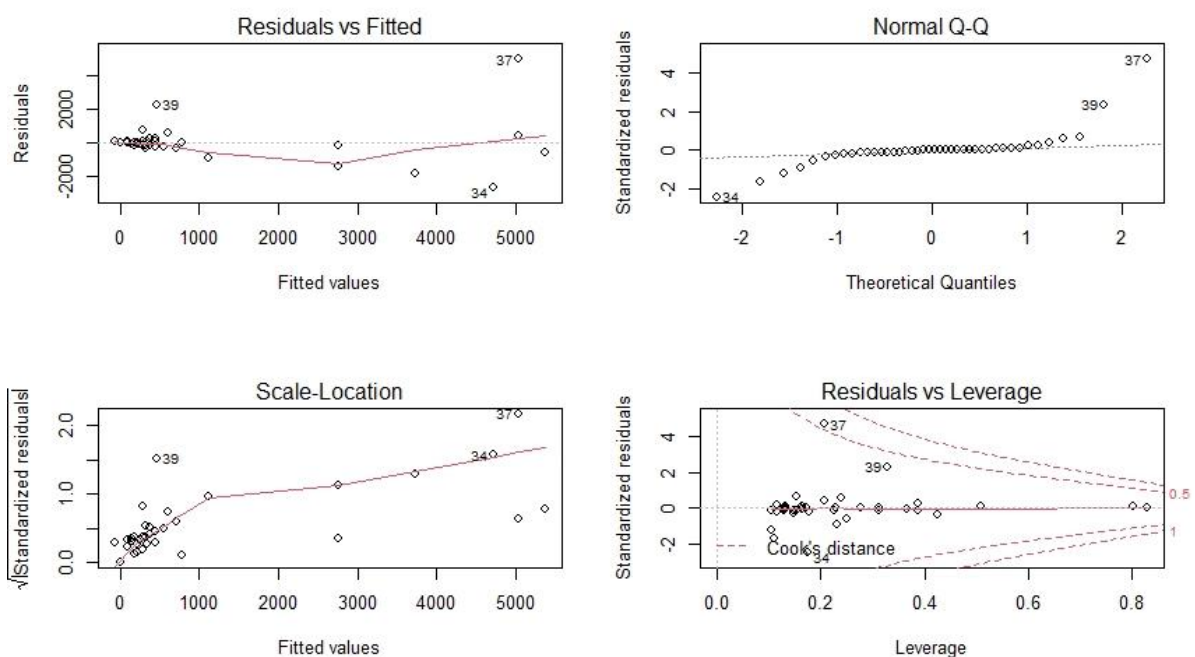
Residual standard error: 1185 on 32 degrees of freedom

Multiple R-squared:

0.6896,

Adjusted R-squared: 0.6023

F-statistic: 7.899 on 9 and 32 DF, p-value: 4.935e-06



***Loa loa* mf intensity based on the bioecological zones in Savannah locations.**

```
lm(formula = Arithmetic ~ Zones, data =
models_total.variablesSav)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-3007.2	-392.5	0.0	28.1	6817.8

Coefficients:

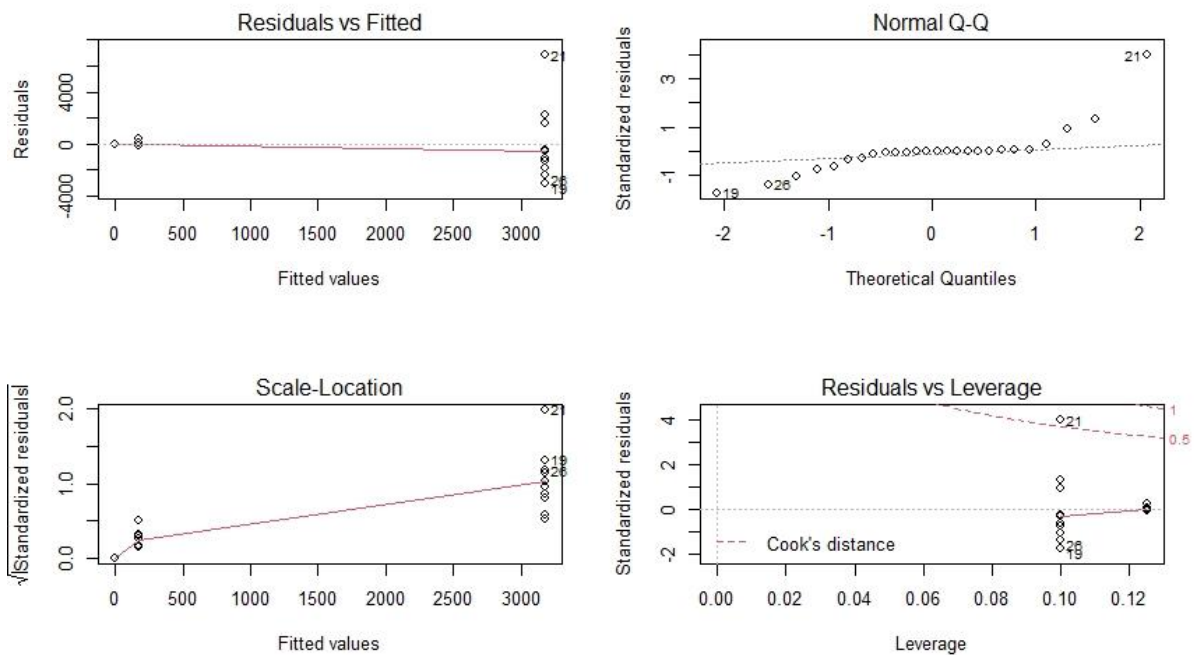
	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	3177.2	574.9	5.527	1.28e-05 ***
ZonesGrassland	-3177.2	862.3	-3.684	0.00123 **
ZonesMosaic Forest	-3006.7	862.3	-3.487	0.00199 **

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1818 on 23 degrees of freedom

Multiple R-squared: 0.4368, Adjusted R-squared: 0.3878

F-statistic: 8.918 on 2 and 23 DF, p-value: 0.001358



***Loa loa* mf intensity based on tree cover in Savannah locations.**

Call:

```
lm(formula = Arithmetic ~ Treecov, data = Cameroon_S)
```

Residuals:

Min	1Q	Median	3Q	Max
-2250.8	-656.9	-214.8	319.1	5367.0

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-7739.65	1539.01	-5.029	3.86E-05	***
Treecov	309.19	51.81	5.968	3.69E-06	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

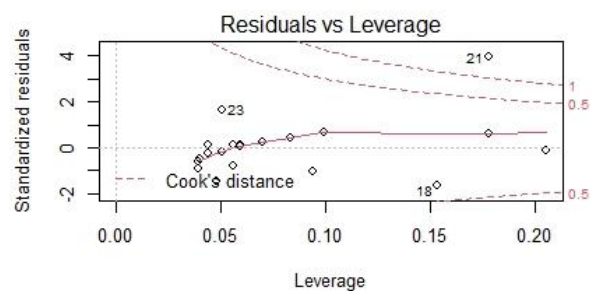
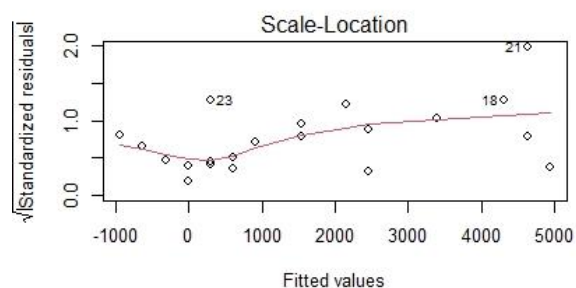
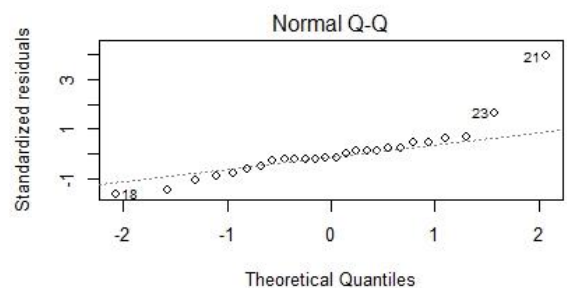
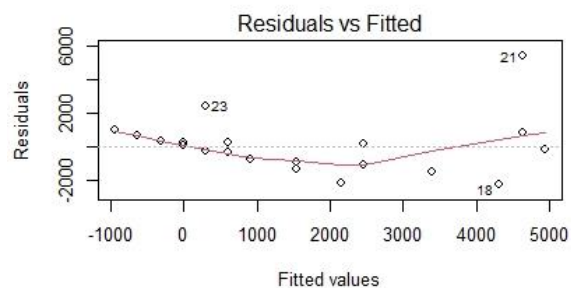
Residual standard error: 1505 on 24 degrees of freedom

Multiple R-squared:

0.5974,

Adjusted R-squared: 0.5806

F-statistic: 35.61 on 1 and 24 DF, p-value: 3.688e-06



***Loa loa* mf intensity based on the bioecological zones and tree cover in Savannah locations.**

Call:

```
lm(formula = Arithmetic ~ Zones + Zones:Treecov, data = Cameroon_S)
```

Residuals:

Min	1Q	Median	3Q	Max
-2649.4	-141.4	0.0	16.9	4949.9

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-8.06E+03	2.96E+03	-2.722	0.01312	*
ZonesGrassland	8.06E+03	5.72E+03	1.41	0.17385	
ZonesMosaic Forest	6.80E+03	6.28E+03	1.082	0.29204	
ZonesForested:Treecov	3.28E+02	8.53E+01	3.843	0.00101	**
ZonesGrassland:Treecov	-3.79E-13	1.91E+02	0	1	
ZonesMosaic Forest:Treecov	5.44E+01	2.09E+02	0.26	0.79758	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1477 on 20 degrees of freedom

Multiple R-squared:

0.6767,

Adjusted R-squared: 0.5958

F-statistic: 8.371 on 5 and 20 DF, p-value: 0.0002103

