**Supplementary Material**

Drivers of bird diversity in an understudied African centre of endemism: The Angolan Central Escarpment Forest

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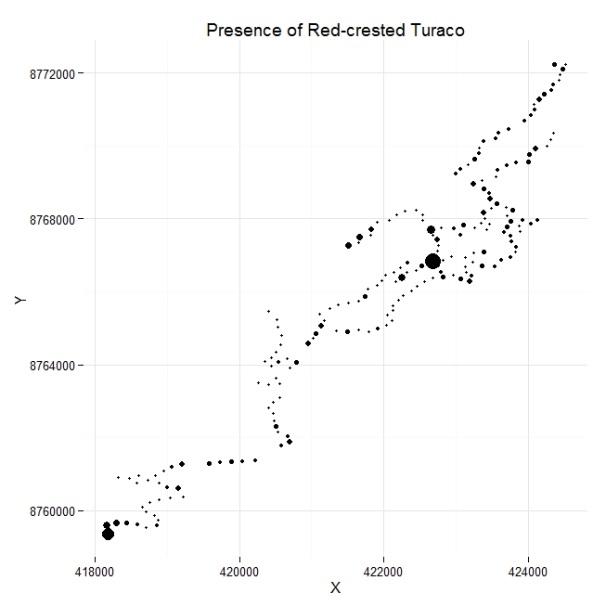
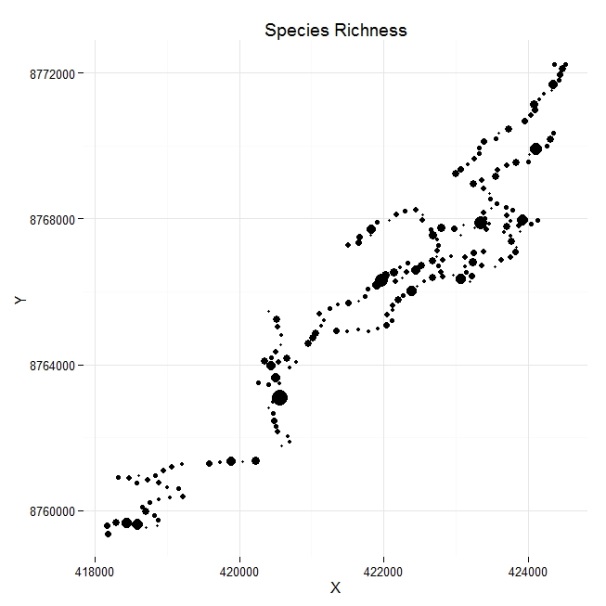
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Figure S1. Pair plots and correlation coefficients for explanatory variables, elev – elevation, cc – canopy cover, ch – canopy height, shrub – shrub cover, ld – liana density, c – carbon, xfor – forest cover percent, LSWI – land surface water index, EVI – enhanced vegetation index, BR – blue-red ratio index (n= 132 sample points).



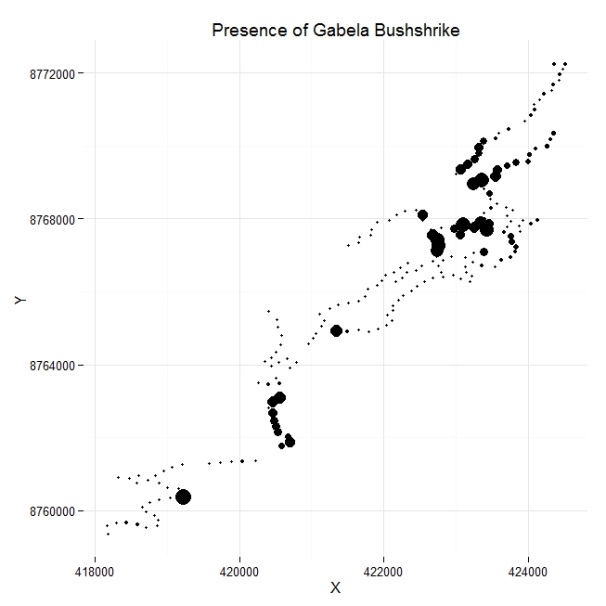
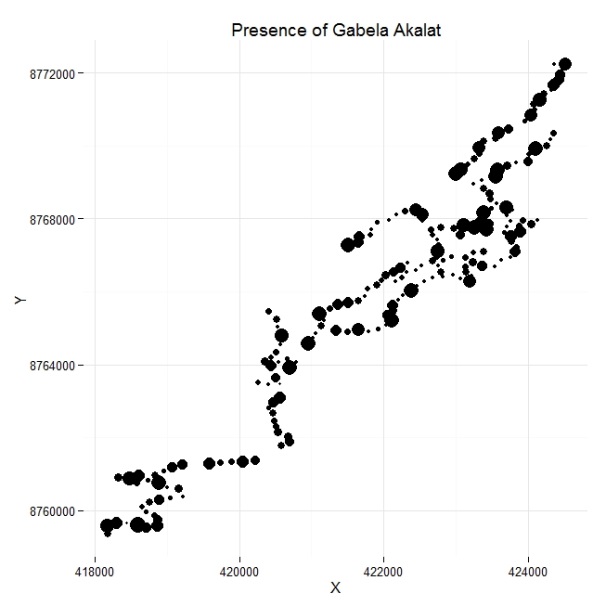
Figure S2. Map of residuals from generalized linear models of (A) Species Richness, presence of (B) Red-crested Turaco, (C) Gabela Akalat and (D) Gabela Bushshrike. Black dots represent the sample points (N=201) and their size is proportional to the absolute value of residuals. No pattern is observed with the residuals so there is no influence of spatial location on model residuals.

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**(C)**

**(B)**

**(A)**

****

**(D)**

Table S1. Environmental variables obtained through vegetation surveys (ground variables) and remote sensing.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Description** | **Unit** | **Group** |
| Elevation (elev) | Elevation at each sample point | Meters | Ground |
| Canopy Cover (cc) | Percent of canopy cover | % | Ground |
| Canopy Height (ch) | Maximum visible height of the canopy | meters | Ground |
| Shrub cover (shrub) | Percent of vegetation cover at shrub level (0.15 – 1.5) | % | Ground |
| Liana density (ld) | Number of lianas in a 10 m transect | #lianas/meter | Ground |
| Above-ground carbon (c) | Carbon per area estimated from above-ground biomass (AGB) | Mg/ha | Ground |
| Land Surface Water Index (LSWI) | Proportion between Near Infrared (NIR) and Short Wave Infrared (SWIR) bands and represents the amount of moisture present in the leaves and soil | --- | Remote sensing |
| Blue- Red Ratio Index (BR) | Normalized difference between Blue and Red bands and represents the shadow produced by the canopy | --- | Remote sensing |
| Enhanced Vegetation Index (EVI) | Optimizes vegetation signal in high biomass areas and reduces atmosphere influences | --- | Remote sensing |
| Forest Cover (xfor) | Percent of the forest mask in a 50 m circular plot around each sample point | % | Remote sensing |

Table S2. Results of Pearson-based Mantel test with 1000 permutations. Only the presence of Red-crested Turaco was significant (p-value < 0.05) presenting some spatial autocorrelation.

|  |  |
| --- | --- |
|  | **Values** |
| Species Richness | *r* = -0.05, *P* = 0.951 |
| Red-crested Turaco | *r* = 0.04, *P* = 0.032 |
| Gabela Akalat | *r* = 0.007, *P* = 0.147 |
| Gabela Bushshrike | *r* = -0.02, *P* = 0.703 |

Table S3. Set of models generated for species richness. Here are listed all possible variables in the models, followed by degrees of freedom (df), model log-likelihood (logLik), Akaike´s Information Criterion with small sample size correction (AICc), AIC differences (ΔAICc), Akaike weights (ω) and adjusted coefficient of determination (adjR2). c – carbon, cc – canopy cover, elev – elevation, ld – liana density, shrub – shrub cover.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(Intercept)** | **c** | **cc** | **elev** | **ld** | **shrub** | **df** | **logLik** | **AICc** | **ΔAICc** | **ω** | **adjR2** |
| 11 | -6.05E-17 | NA | 0.278872 | NA | 0.223486 | NA | 4 | -268.41 | 545.02 | 0 | 3.65E-01 | 0.159 |
| 15 | 1.82E-17 | NA | 0.288224 | 4.41E-02 | 0.213701 | NA | 5 | -268.20 | 546.70 | 1.68 | 1.57E-01 | 0.161 |
| 27 | -3.26E-17 | NA | 0.288467 | NA | 0.23137 | -0.0310208 | 5 | -268.32 | 546.94 | 1.92 | 1.40E-01 | 0.160 |
| 12 | -5.96E-17 | 0.0243281 | 0.269525 | NA | 0.22443 | NA | 5 | -268.35 | 547.01 | 1.98 | 1.35E-01 | 0.160 |
| 16 | -1.17E-17 | 0.0251605 | 0.278651 | 4.45E-02 | 0.214581 | NA | 6 | -268.13 | 548.70 | 3.68 | 5.80E-02 | 0.162 |
| 31 | 1.09E-17 | NA | 0.293887 | 3.95E-02 | 0.22017 | -0.0214498 | 6 | -268.16 | 548.74 | 3.72 | 5.68E-02 | 0.161 |
| 28 | -3.17E-17 | 0.0253971 | 0.278987 | NA | 0.232584 | -0.0319177 | 6 | -268.25 | 548.94 | 3.91 | 5.16E-02 | 0.160 |
| 32 | -1.92E-17 | 0.0258184 | 0.284286 | 3.97E-02 | 0.221328 | -0.0222967 | 7 | -268.09 | 550.76 | 5.73 | 2.08E-02 | 0.162 |
| 3 | -3.06E-17 | NA | 0.318272 | NA | NA | NA | 3 | -273.97 | 554.07 | 9.04 | 3.97E-03 | 0.108 |
| 7 | 6.79E-17 | NA | 0.334109 | 9.15E-02 | NA | NA | 4 | -273.06 | 554.32 | 9.30 | 3.48E-03 | 0.116 |
| 19 | -2.68E-17 | NA | 0.306187 | NA | NA | 0.03412842 | 4 | -273.86 | 555.92 | 10.90 | 1.57E-03 | 0.109 |
| 23 | 8.14E-17 | NA | 0.317608 | 9.88E-02 | NA | 0.05019416 | 5 | -272.82 | 555.94 | 10.92 | 1.55E-03 | 0.119 |
| 4 | -3.00E-17 | 0.0144865 | 0.312806 | NA | NA | NA | 4 | -273.95 | 556.11 | 11.09 | 1.43E-03 | 0.108 |
| 8 | 6.91E-17 | 0.017098 | 0.327731 | 9.19E-02 | NA | NA | 5 | -273.03 | 556.37 | 11.35 | 1.25E-03 | 0.117 |
| 20 | -5.77E-17 | 0.0137324 | 0.301111 | NA | NA | 0.03382825 | 5 | -273.84 | 557.99 | 12.97 | 5.58E-04 | 0.109 |
| 24 | 8.24E-17 | 0.0161929 | 0.311665 | 9.92E-02 | NA | 0.04989933 | 6 | -272.79 | 558.02 | 12.99 | 5.50E-04 | 0.119 |
| 10 | -1.35E-17 | 0.1247417 | NA | NA | 0.269043 | NA | 4 | -275.24 | 558.68 | 13.66 | 3.94E-04 | 0.096 |
| 9 | -1.62E-17 | NA | NA | NA | 0.272651 | NA | 3 | -276.94 | 560.01 | 14.98 | 2.03E-04 | 0.079 |
| 26 | -4.06E-17 | 0.118156 | NA | NA | 0.255109 | 0.04575508 | 5 | -275.04 | 560.38 | 15.36 | 1.69E-04 | 0.097 |
| 14 | -5.04E-17 | 0.1242563 | NA | -5.10E-03 | 0.27 | NA | 5 | -275.24 | 560.78 | 15.76 | 1.38E-04 | 0.096 |
| 25 | -1.01E-17 | NA | NA | NA | 0.252728 | 0.06453756 | 4 | -276.53 | 561.27 | 16.25 | 1.08E-04 | 0.083 |
| 13 | -3.50E-17 | NA | NA | -1.73E-02 | 0.275851 | NA | 4 | -276.91 | 562.03 | 17.00 | 7.41E-05 | 0.079 |
| 30 | -1.28E-18 | 0.1185526 | NA | 7.22E-03 | 0.253142 | 0.04777122 | 6 | -275.03 | 562.49 | 17.47 | 5.86E-05 | 0.098 |
| 29 | -4.13E-17 | NA | NA | 8.31E-05 | 0.252705 | 0.06456148 | 5 | -276.53 | 563.37 | 18.35 | 3.78E-05 | 0.083 |
| 18 | -1.45E-18 | 0.1133933 | NA | NA | NA | 0.12523491 | 4 | -281.35 | 570.89 | 25.87 | 8.79E-07 | 0.035 |
| 17 | -2.27E-18 | NA | NA | NA | NA | 0.14255481 | 3 | -282.64 | 571.41 | 26.38 | 6.81E-07 | 0.022 |
| 22 | 4.74E-17 | 0.117747 | NA | 7.25E-02 | NA | 0.13933008 | 5 | -280.82 | 571.95 | 26.93 | 5.18E-07 | 0.040 |
| 2 | -1.28E-17 | 0.1325219 | NA | NA | NA | NA | 3 | -282.92 | 571.97 | 26.95 | 5.13E-07 | 0.019 |
| 21 | 6.99E-17 | NA | NA | 6.53E-02 | NA | 0.15584955 | 4 | -282.22 | 572.65 | 27.63 | 3.66E-07 | 0.026 |
| 1 | -1.57E-17 | NA | NA | NA | NA | NA | 2 | -284.71 | 573.47 | 28.45 | 2.42E-07 | 0.000 |
| 6 | 3.71E-17 | 0.136637 | NA | 4.59E-02 | NA | NA | 4 | -282.71 | 573.63 | 28.60 | 2.24E-07 | 0.021 |
| 5 | 2.08E-17 | NA | NA | 3.36E-02 | NA | NA | 3 | -284.59 | 575.31 | 30.28 | 9.68E-08 | 0.001 |

Table S4. Complete set of models generated for Red-crested Turaco presence. Here are listed all possible variables in the models, followed by degrees of freedom (df), model log-likelihood (logLik), Akaike´s Information Criterion with small sample size correction (AICc), AIC differences (ΔAICc), Akaike weights (ω) and adjusted coefficient of determination (adjR2). c – carbon, cc – canopy cover, elev – elevation, ld – liana density, shrub – shrub cover and slope.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(Intercept)** | **c** | **cc** | **elev** | **ld** | **shrub** | **df** | **logLik** | **AICc** | **ΔAICc** | **ω** | **adjR2** |
| 14 | 0.8060029 | -0.28415 | NA | -0.5277 | 0.45433 | NA | 4 | -117.87 | 243.94 | 0.00 | 0.2989 | 0.115 |
| 13 | 0.7896822 | NA | NA | -0.4884 | 0.426913 | NA | 3 | -119.61 | 245.34 | 1.41 | 0.1479 | 0.093 |
| 16 | 0.8091374 | -0.33095 | 0.130981 | -0.50834 | 0.425815 | NA | 5 | -117.60 | 245.51 | 1.58 | 0.1358 | 0.118 |
| 30 | 0.8059233 | -0.28182 | NA | -0.53181 | 0.460689 | -0.01731 | 5 | -117.86 | 246.03 | 2.09 | 0.1049 | 0.115 |
| 29 | 0.7903613 | NA | NA | -0.50531 | 0.452329 | -0.06451 | 4 | -119.54 | 247.28 | 3.35 | 0.0561 | 0.094 |
| 15 | 0.7897053 | NA | -0.00798 | -0.49004 | 0.429013 | NA | 4 | -119.61 | 247.42 | 3.49 | 0.0523 | 0.093 |
| 32 | 0.8096766 | -0.3302 | 0.150118 | -0.52022 | 0.444314 | -0.06041 | 6 | -117.55 | 247.53 | 3.59 | 0.0496 | 0.119 |
| 6 | 0.775076 | -0.25686 | NA | -0.44407 | NA | NA | 3 | -121.22 | 248.55 | 4.62 | 0.0297 | 0.072 |
| 8 | 0.7831896 | -0.3373 | 0.222742 | -0.42048 | NA | NA | 4 | -120.42 | 249.03 | 5.10 | 0.0234 | 0.082 |
| 31 | 0.7903913 | NA | 0.012466 | -0.5038 | 0.450655 | -0.06844 | 5 | -119.54 | 249.38 | 5.44 | 0.0197 | 0.094 |
| 5 | 0.7628697 | NA | NA | -0.4139 | NA | NA | 2 | -122.67 | 249.40 | 5.46 | 0.0195 | 0.052 |
| 22 | 0.7786386 | -0.27643 | NA | -0.42253 | NA | 0.133605 | 4 | -120.88 | 249.97 | 6.04 | 0.0146 | 0.076 |
| 24 | 0.7837762 | -0.33769 | 0.196869 | -0.41133 | NA | 0.070745 | 5 | -120.33 | 250.97 | 7.03 | 0.0089 | 0.083 |
| 21 | 0.7644519 | NA | NA | -0.39786 | NA | 0.087576 | 3 | -122.52 | 251.16 | 7.22 | 0.0081 | 0.054 |
| 7 | 0.7643647 | NA | 0.083932 | -0.40104 | NA | NA | 3 | -122.53 | 251.19 | 7.25 | 0.0080 | 0.054 |
| 23 | 0.7650971 | NA | 0.060941 | -0.39232 | NA | 0.066439 | 4 | -122.45 | 253.11 | 9.18 | 0.0030 | 0.055 |
| 10 | 0.7657008 | -0.21697 | NA | NA | 0.333743 | NA | 3 | -123.58 | 253.29 | 9.35 | 0.0028 | 0.040 |
| 9 | 0.7583267 | NA | NA | NA | 0.320847 | NA | 2 | -124.67 | 253.39 | 9.46 | 0.0026 | 0.025 |
| 12 | 0.7712924 | -0.3006 | 0.222852 | NA | 0.291848 | NA | 4 | -122.74 | 253.67 | 9.74 | 0.0023 | 0.051 |
| 4 | 0.7552993 | -0.30865 | 0.276285 | NA | NA | NA | 3 | -124.18 | 254.49 | 10.55 | 0.0015 | 0.032 |
| 26 | 0.7681303 | -0.23736 | NA | NA | 0.29385 | 0.126452 | 4 | -123.28 | 254.77 | 10.83 | 0.0013 | 0.044 |
| 1 | 0.7382676 | NA | NA | NA | NA | NA | 1 | -126.51 | 255.04 | 11.10 | 0.0012 | 0.000 |
| 11 | 0.7591609 | NA | 0.096838 | NA | 0.299787 | NA | 3 | -124.47 | 255.07 | 11.13 | 0.0011 | 0.028 |
| 2 | 0.7445415 | -0.20491 | NA | NA | NA | NA | 2 | -125.53 | 255.12 | 11.18 | 0.0011 | 0.014 |
| 25 | 0.7588277 | NA | NA | NA | 0.293473 | 0.081135 | 3 | -124.54 | 255.19 | 11.26 | 0.0011 | 0.027 |
| 18 | 0.7523067 | -0.23906 | NA | NA | NA | 0.208455 | 3 | -124.64 | 255.41 | 11.47 | 0.0010 | 0.026 |
| 28 | 0.7715715 | -0.30253 | 0.201082 | NA | 0.274664 | 0.065443 | 5 | -122.66 | 255.63 | 11.69 | 0.0009 | 0.052 |
| 20 | 0.7576382 | -0.31121 | 0.226602 | NA | NA | 0.134417 | 4 | -123.85 | 255.90 | 11.97 | 0.0008 | 0.036 |
| 17 | 0.743033 | NA | NA | NA | NA | 0.1645 | 2 | -125.92 | 255.91 | 11.97 | 0.0008 | 0.008 |
| 3 | 0.7422525 | NA | 0.149045 | NA | NA | NA | 2 | -126.03 | 256.13 | 12.19 | 0.0007 | 0.007 |
| 27 | 0.7592288 | NA | 0.079075 | NA | 0.285306 | 0.053459 | 4 | -124.42 | 257.05 | 13.11 | 0.0004 | 0.029 |
| 19 | 0.7445153 | NA | 0.103022 | NA | NA | 0.126524 | 3 | -125.73 | 257.58 | 13.64 | 0.0003 | 0.011 |

Table S5. Complete set of models generated for Gabela Akalat presence. Here are listed all possible variables in the models, followed by degrees of freedom (df), model log-likelihood (logLik), Akaike´s Information Criterion with small sample size correction (AICc), AIC differences (ΔAICc), Akaike weights (ω) and adjusted coefficient of determination (adjR2). c – carbon, cc – canopy cover, elev – elevation, ld – liana density, shrub – shrub cover and slope.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(Intercept)** | **c** | **cc** | **elev** | **ld** | **shrub** | **df** | **logLik** | **AICc** | **ΔAICc** | **ω** | **adjR2** |
| 3 | -0.172006 | NA | 0.287602 | NA | NA | NA | 2 | -136.58 | 277.22 | 0.0000 | 0.1459 | 0.0266 |
| 7 | -0.173917 | NA | 0.318783 | 0.1703981 | NA | NA | 3 | -135.89 | 277.91 | 0.6899 | 0.1033 | 0.0356 |
| 4 | -0.172524 | -0.1601 | 0.349397 | NA | NA | NA | 3 | -136.05 | 278.23 | 1.0118 | 0.0880 | 0.0335 |
| 19 | -0.172913 | NA | 0.334877 | NA | NA | -0.12944199 | 3 | -136.23 | 278.59 | 1.3711 | 0.0735 | 0.0311 |
| 8 | -0.17463 | -0.157 | 0.37895 | 0.1676578 | NA | NA | 4 | -135.39 | 278.99 | 1.7734 | 0.0601 | 0.0420 |
| 1 | -0.169559 | NA | NA | NA | NA | NA | 1 | -138.60 | 279.23 | 2.0077 | 0.0535 | 0.0000 |
| 11 | -0.171935 | NA | 0.290764 | NA | -0.0178112 | NA | 3 | -136.57 | 279.26 | 2.0462 | 0.0524 | 0.0267 |
| 23 | -0.174597 | NA | 0.354432 | 0.1558818 | NA | -0.10488782 | 4 | -135.67 | 279.55 | 2.3341 | 0.0454 | 0.0384 |
| 20 | -0.173091 | -0.1579 | 0.395052 | NA | NA | -0.12647107 | 4 | -135.73 | 279.65 | 2.4365 | 0.0431 | 0.0377 |
| 15 | -0.173803 | NA | 0.331443 | 0.1834227 | -0.0584975 | NA | 4 | -135.82 | 279.84 | 2.6191 | 0.0394 | 0.0365 |
| 12 | -0.172442 | -0.1612 | 0.354188 | NA | -0.0243464 | NA | 4 | -136.04 | 280.28 | 3.0662 | 0.0315 | 0.0337 |
| 5 | -0.169964 | NA | NA | 0.1125428 | NA | NA | 2 | -138.29 | 280.64 | 3.4192 | 0.0264 | 0.0042 |
| 27 | -0.172974 | NA | 0.333724 | NA | 0.01537885 | -0.13380611 | 4 | -136.23 | 280.66 | 3.4431 | 0.0261 | 0.0312 |
| 24 | -0.175024 | -0.155 | 0.412801 | 0.153154 | NA | -0.10173349 | 5 | -135.19 | 280.68 | 3.4659 | 0.0258 | 0.0446 |
| 16 | -0.174551 | -0.1597 | 0.393959 | 0.1818903 | -0.0644161 | NA | 5 | -135.30 | 280.91 | 3.6926 | 0.0230 | 0.0432 |
| 9 | -0.1696 | NA | NA | NA | 0.03298837 | NA | 2 | -138.58 | 281.21 | 3.9941 | 0.0198 | 0.0004 |
| 2 | -0.16959 | -0.0256 | NA | NA | NA | NA | 2 | -138.59 | 281.23 | 4.0159 | 0.0196 | 0.0002 |
| 17 | -0.169562 | NA | NA | NA | NA | -0.00715844 | 2 | -138.60 | 281.26 | 4.0457 | 0.0193 | 0.0000 |
| 31 | -0.174518 | NA | 0.357713 | 0.1641465 | -0.0309308 | -0.09477234 | 5 | -135.65 | 281.62 | 4.3993 | 0.0162 | 0.0386 |
| 28 | -0.173116 | -0.1575 | 0.394313 | NA | 0.00772156 | -0.12866272 | 5 | -135.72 | 281.76 | 4.5376 | 0.0151 | 0.0377 |
| 21 | -0.169973 | NA | NA | 0.1158896 | NA | 0.01647524 | 3 | -138.28 | 282.69 | 5.4676 | 0.0095 | 0.0043 |
| 6 | -0.169976 | -0.0156 | NA | 0.1111498 | NA | NA | 3 | -138.28 | 282.69 | 5.4685 | 0.0095 | 0.0043 |
| 13 | -0.169978 | NA | NA | 0.110199 | 0.01272871 | NA | 3 | -138.28 | 282.69 | 5.4726 | 0.0095 | 0.0042 |
| 32 | -0.174969 | -0.1568 | 0.417573 | 0.1633874 | -0.0383237 | -0.08916282 | 6 | -135.16 | 282.75 | 5.5327 | 0.0092 | 0.0450 |
| 10 | -0.169632 | -0.0266 | NA | NA | 0.03375971 | NA | 3 | -138.56 | 283.24 | 6.0204 | 0.0072 | 0.0006 |
| 25 | -0.169614 | NA | NA | NA | 0.03891877 | -0.01921298 | 3 | -138.57 | 283.26 | 6.0387 | 0.0071 | 0.0005 |
| 18 | -0.16959 | -0.0251 | NA | NA | NA | -0.00333739 | 3 | -138.59 | 283.29 | 6.0766 | 0.0070 | 0.0002 |
| 22 | -0.169988 | -0.0182 | NA | 0.1147863 | NA | 0.01902689 | 4 | -138.27 | 284.75 | 7.5339 | 0.0034 | 0.0044 |
| 14 | -0.169992 | -0.0163 | NA | 0.1086087 | 0.01350137 | NA | 4 | -138.28 | 284.76 | 7.5420 | 0.0034 | 0.0043 |
| 29 | -0.16998 | NA | NA | 0.1138647 | 0.00785067 | 0.01362709 | 4 | -138.28 | 284.77 | 7.5472 | 0.0034 | 0.0043 |
| 26 | -0.169642 | -0.0244 | NA | NA | 0.03843925 | -0.01535624 | 4 | -138.55 | 285.31 | 8.0923 | 0.0026 | 0.0007 |
| 30 | -0.169995 | -0.0182 | NA | 0.1127779 | 0.00779286 | 0.01619608 | 5 | -138.27 | 286.85 | 9.6350 | 0.0012 | 0.0044 |

Table S6. Complete set of models generated for Gabela Bushshrike presence. Here are listed all possible variables in the models, followed by degrees of freedom (df), model log-likelihood (logLik), Akaike´s Information Criterion with small sample size correction (AICc), AIC differences (ΔAICc), Akaike weights (ω) and adjusted coefficient of determination (adjR2). c – carbon, cc – canopy cover, elev – elevation, ld – liana density, shrub – shrub cover and slope.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(Intercept)** | **c** | **cc** | **elev** | **ld** | **shrub** | **df** | **logLik** | **AICc** | **ΔAICc** | **ω** | **adjR2** |
| 15 | -1.398236 | NA | 0.301902 | 0.4113347 | -0.3309844 | NA | 4 | -99.10 | 206.40 | 0.0000 | 0.0964 | 0.0598 |
| 5 | -1.357536 | NA | NA | 0.3049394 | NA | NA | 2 | -101.34 | 206.74 | 0.3374 | 0.0815 | 0.0259 |
| 13 | -1.373097 | NA | NA | 0.3415879 | -0.2557456 | NA | 3 | -100.44 | 207.01 | 0.6071 | 0.0712 | 0.0396 |
| 16 | -1.413335 | -0.2544 | 0.39607 | 0.4108218 | -0.3404305 | NA | 5 | -98.35 | 207.01 | 0.6086 | 0.0711 | 0.0709 |
| 7 | -1.373926 | NA | 0.23694 | 0.351059 | NA | NA | 3 | -100.48 | 207.09 | 0.6864 | 0.0684 | 0.0390 |
| 8 | -1.387632 | -0.2412 | 0.321901 | 0.3491518 | NA | NA | 4 | -99.81 | 207.82 | 1.4187 | 0.0474 | 0.0491 |
| 23 | -1.388341 | NA | 0.320165 | 0.3256553 | NA | -0.2321732 | 4 | -99.85 | 207.90 | 1.5008 | 0.0455 | 0.0485 |
| 31 | -1.40452 | NA | 0.347771 | 0.387927 | -0.2921182 | -0.142274 | 5 | -98.88 | 208.07 | 1.6623 | 0.0420 | 0.0630 |
| 1 | -1.331235 | NA | NA | NA | NA | NA | 1 | -103.03 | 208.07 | 1.6691 | 0.0419 | 0.0000 |
| 6 | -1.361132 | -0.1116 | NA | 0.2960127 | NA | NA | 3 | -101.17 | 208.46 | 2.0542 | 0.0345 | 0.0286 |
| 21 | -1.360766 | NA | NA | 0.2856214 | NA | -0.1043661 | 3 | -101.18 | 208.47 | 2.0710 | 0.0342 | 0.0284 |
| 24 | -1.400485 | -0.2334 | 0.396045 | 0.324697 | NA | -0.2224435 | 5 | -99.22 | 208.75 | 2.3470 | 0.0298 | 0.0579 |
| 32 | -1.417767 | -0.2467 | 0.431857 | 0.3896167 | -0.3043064 | -0.1259983 | 6 | -98.18 | 208.79 | 2.3871 | 0.0292 | 0.0734 |
| 14 | -1.375457 | -0.0952 | NA | 0.3325843 | -0.2489949 | NA | 4 | -100.32 | 208.84 | 2.4364 | 0.0285 | 0.0415 |
| 29 | -1.373174 | NA | NA | 0.3375884 | -0.2495146 | -0.016142 | 4 | -100.44 | 209.09 | 2.6824 | 0.0252 | 0.0396 |
| 9 | -1.341427 | NA | NA | NA | -0.1891151 | NA | 2 | -102.52 | 209.10 | 2.6965 | 0.0250 | 0.0078 |
| 3 | -1.338524 | NA | 0.158829 | NA | NA | NA | 2 | -102.60 | 209.26 | 2.8539 | 0.0231 | 0.0066 |
| 17 | -1.338804 | NA | NA | NA | NA | -0.1619511 | 2 | -102.60 | 209.26 | 2.8551 | 0.0231 | 0.0066 |
| 19 | -1.357747 | NA | 0.263556 | NA | NA | -0.2753955 | 3 | -101.63 | 209.39 | 2.9823 | 0.0217 | 0.0215 |
| 2 | -1.336622 | -0.1371 | NA | NA | NA | NA | 2 | -102.75 | 209.56 | 3.1563 | 0.0199 | 0.0043 |
| 11 | -1.352373 | NA | 0.193833 | NA | -0.2295315 | NA | 3 | -101.89 | 209.91 | 3.5025 | 0.0167 | 0.0175 |
| 4 | -1.351528 | -0.2368 | 0.24193 | NA | NA | NA | 3 | -101.90 | 209.92 | 3.5192 | 0.0166 | 0.0174 |
| 20 | -1.368577 | -0.2277 | 0.336807 | NA | NA | -0.2656065 | 4 | -100.99 | 210.19 | 3.7891 | 0.0145 | 0.0312 |
| 22 | -1.363501 | -0.0984 | NA | 0.2802926 | NA | -0.0906465 | 4 | -101.05 | 210.30 | 3.8916 | 0.0138 | 0.0304 |
| 12 | -1.366488 | -0.2464 | 0.283608 | NA | -0.2398944 | NA | 4 | -101.13 | 210.47 | 4.0672 | 0.0126 | 0.0291 |
| 10 | -1.346017 | -0.1292 | NA | NA | -0.1834383 | NA | 3 | -102.27 | 210.66 | 4.2600 | 0.0115 | 0.0117 |
| 27 | -1.365408 | NA | 0.275379 | NA | -0.1751394 | -0.2288855 | 4 | -101.26 | 210.72 | 4.3152 | 0.0111 | 0.0272 |
| 25 | -1.344612 | NA | NA | NA | -0.1497134 | -0.1165171 | 3 | -102.32 | 210.75 | 4.3498 | 0.0110 | 0.0110 |
| 30 | -1.375458 | -0.0949 | NA | 0.3320384 | -0.2481048 | -0.0023212 | 5 | -100.32 | 210.94 | 4.5399 | 0.0100 | 0.0415 |
| 18 | -1.342391 | -0.1138 | NA | NA | NA | -0.144346 | 3 | -102.42 | 210.95 | 4.5483 | 0.0099 | 0.0095 |
| 28 | -1.376881 | -0.2351 | 0.353297 | NA | -0.1863945 | -0.214554 | 5 | -100.57 | 211.46 | 5.0525 | 0.0077 | 0.0376 |
| 26 | -1.348002 | -0.1137 | NA | NA | -0.1500997 | -0.0979178 | 4 | -102.13 | 212.46 | 6.0604 | 0.0047 | 0.0138 |