**Supplementary Material**

Evaluation of nest habitat, site preferences and architecture of the critically endangered White-bellied Heron *Ardea insignis* in Bhutan

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Figure S1. Boxplots comparing means of all habitat variables of White-bellied Heron nests and random sites in Bhutan, 2018.

Appendix S1. Additional data.

Table S1**.** The density of trees >10m height, overall tree density and Shannon's diversity indices of White-bellied Heron nest and random sites in Bhutan, 2018.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Location** | **Density of trees >10m height** | | **Overall tree density** | | **Shannon's diversity** | |
| **Nest** | **Random** | **Nest** | **Random** | **Nest** | **Random** |
| ADH | 95 | 56 | 191 | 127 | 2.54 | 2.14 |
| BPL | 48 | 64 | 119 | 111 | 2.34 | 2.19 |
| BPR | 56 | 72 | 151 | 151 | 2.76 | 2.63 |
| BUA | 103 | 103 | 135 | 135 | 2.79 | 2.53 |
| BUC | 48 | 16 | 95 | 103 | 2.14 | 1.96 |
| CBL | 167 | 175 | 207 | 183 | 2.37 | 2.26 |
| DOM | 32 | 24 | 127 | 95 | 2.20 | 2.00 |
| HRD | 56 | 64 | 119 | 143 | 2.64 | 2.52 |
| HRU | 16 | 24 | 95 | 88 | 1.93 | 1.41 |
| KHO | 191 | 159 | 223 | 223 | 2.14 | 2.26 |
| PHO | 24 | 24 | 64 | 64 | 2.04 | 2.07 |
| TSO | 111 | 111 | 143 | 151 | 2.54 | 2.24 |
| WAK | 56 | 24 | 80 | 32 | 1.96 | 1.89 |
| YEU | 80 | 40 | 103 | 103 | 2.21 | 1.76 |
| **Mean±SD** | **77±50** | **68±49** | **132±46** | **122±47** | **2.33±0.28** | **2.13±0.31** |

Table S2. The mean herb richness, mean herb abundance and mean herb height of White-bellied Heron nest and random sites in Bhutan, 2018.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Location** | **Mean herb richness** | | **Mean herb abundance** | | **Mean herb height (cm)** | |
| **Nest** | **Random** | **Nest** | **Random** | **Nest** | **Random** |
| ADH | 3.3 | 4.0 | 14.3 | 15.3 | 68 | 72 |
| BPL | 2.0 | 3.3 | 8.5 | 7.5 | 21 | 36 |
| BPR | 2.3 | 3.0 | 10.5 | 8.5 | 12 | 25 |
| BUA | 2.8 | 2.3 | 8.3 | 5.5 | 26 | 20 |
| BUC | 3.8 | 2.5 | 10.5 | 11.3 | 64 | 40 |
| CBL | 3.0 | 2.5 | 8.8 | 13.5 | 45 | 51 |
| DOM | 3.5 | 4.0 | 9.8 | 8.8 | 54 | 54 |
| HRD | 2.8 | 2.5 | 8.8 | 10.3 | 18 | 27 |
| HRU | 4.0 | 2.0 | 9.0 | 13.5 | 30 | 30 |
| KHO | 3.3 | 2.0 | 11.3 | 15.3 | 29 | 29 |
| PHO | 2.3 | 3.3 | 14.0 | 9.5 | 51 | 54 |
| TSO | 4.0 | 4.5 | 13.8 | 17.8 | 72 | 69 |
| WAK | 3.5 | 3.8 | 11.5 | 11.5 | 27 | 31 |
| YEU | 3.0 | 4.0 | 5.0 | 9.0 | 79 | 54 |
| **Mean±SD** | **3.1±0.6** | **3.1±0.8** | **10.3±2.5** | **11.2±3.3** | **42±21** | **42±16** |

Table S3. The mean percent canopy cover, litter cover, rock cover and barren ground in White-bellied Heron nest and random sites in Bhutan, 2018.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Location** | **% Canopy cover** | | **% Litter cover** | | **% Rock cover** | | **% Barren ground** | |
| ***Nest*** | ***Random*** | ***Nest*** | ***Random*** | ***Nest*** | ***Random*** | ***Nest*** | ***Random*** |
| ADH | 70 | 79 | 54 | 75 | 20 | 23 | 26 | 3 |
| BPL | 18 | 53 | 50 | 10 | 26 | 80 | 24 | 10 |
| BPR | 58 | 33 | 69 | 83 | 3 | 15 | 29 | 3 |
| BUA | 69 | 81 | 18 | 20 | 68 | 40 | 15 | 40 |
| BUC | 15 | 18 | 79 | 53 | 9 | 25 | 13 | 23 |
| CBL | 64 | 90 | 60 | 89 | 33 | 11 | 8 | 0 |
| DOM | 63 | 19 | 41 | 35 | 35 | 48 | 24 | 18 |
| HRD | 36 | 70 | 30 | 48 | 36 | 39 | 34 | 14 |
| HRU | 14 | 13 | 28 | 44 | 55 | 44 | 18 | 13 |
| KHO | 26 | 23 | 81 | 71 | 11 | 5 | 8 | 24 |
| PHO | 24 | 28 | 70 | 79 | 8 | 16 | 23 | 5 |
| TSO | 83 | 85 | 98 | 78 | 0 | 8 | 3 | 15 |
| WAK | 28 | 15 | 73 | 55 | 23 | 40 | 5 | 5 |
| YEU | 45 | 25 | 35 | 35 | 51 | 45 | 14 | 20 |
| **Mean±SD** | **44±23** | **45±29** | **56±23** | **55±24** | **27±20** | **31±20** | **17±9** | **14±10** |

Figure S1. Boxplots comparing means of all habitat variables of White-bellied Heron nests and random sites in Bhutan, 2018.





