**Supplementary Material**

Tall trees drive the nest-site selection of wild Crested Ibis *Nipponia nippon*

YONGJIE HUANG, YUANXING YE, YAZU ZHANG, ARNAUD GIAN BARRAS, CHAO WANG, BAOPING QING and CHANGQING DING

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**Appendix S1: Description of measurements of breeding habitat variables within a 10 × 10 m plot around each nest site and random site.**

(1) Elevation (m): measured using GPS (Garmin eTrex).

(2) Slope (°): measured using Type-65 Military Compass.

(3) Diameter of nesting tree (cm): measured at 1.5-m breast height using a 5-m tape.

(4) Nest height (m) and height of nesting tree (m): measured using a telescopic rod or neighboring references.

(5) Cover above nest (%) and understory (grasses or shrubs) coverage (%): measured using an ocular tube.

(6) Nest distance to tree trunk (m): measured using a 5-m tape.

(7) Tree cover (%): measured using an ocular tube.

(8) Average height of trees (m): measured using a telescopic rod or neighboring references.

(9) Distance to nearest road\path\settlement\forest edge\water source\paddy field (m): measured using GPS or a tape.

(10) Number of trees in the plot.

Since there was no nest in the random site, we followed Li *et al.* (2001) in measuring variables associated with nests. For each nest height in random site, we firstly calculated each proportion of nest height to the height of nesting tree recorded in nest sites, then we randomly generated a set of proportion values with uniform distribution within the range between maximum and minimum of all the calculated proportions, and the nest height in each random site was finally determined by multiplying the random proportion by the tree height recorded in random site. For the nest distance to tree trunk in random sites, we also generated a set of random values with each between the maximum and minimum recorded in all nest sites. Similarly, the cover above nest and canopy below nest in random sites were obtained from random values with uniform distribution between 0 – 100%, respectively.

**Reference**

Li, X. H., Ma, Z. J., Li, D. M., Ding, C. Q., Zhai, T. B. and Lu, B. Z. (2001) Using resource selection functions to study nest site selection of crested ibis. *Biodivers. Sci.* 9: 352–358. (In Chinese with English abstract).

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| **Table S1. Results of model selection evaluating the effect of environmental factors affecting the nest-site selection of Crested Ibis. Log (*L*) is the log-likelihood estimator; AICc is the Akaike Information Criterion with correction for small sample size; ΔAICc is a measure of change in AICc relative to the best model; Akaike weight *wi* is the probability that model i is the best model. Except for the null model, only top ten models are shown.** |
| Models | Log (*L*) | ΔAICc | *wi* |
| Diameter at breast height + Distance to path + Distance to tree trunk + Understory coverage + Cover above nest + Count of trees + Slope + Height of nesting tree | -38.78 | 0.00 | 0.190 |
| Diameter at breast height + Distance to paddy field + Distance to path + Distance to tree trunk + Understory coverage + Count of trees + Slope + Average height of trees + Height of nesting tree | -37.85 | 0.41 | 0.154 |
| Diameter at breast height + Distance to path + Distance to tree trunk + Understory coverage + Count of trees + Slope + Height of nesting tree | -40.26 | 0.71 | 0.134 |
| Diameter at breast height + Distance to path + Distance to tree trunk + Understory coverage + Cover above nest + Slope + Height of nesting tree | -40.44 | 1.06 | 0.112 |
| Diameter at breast height + Distance to path + Distance to tree trunk + Count of trees + Slope + Height of nesting tree | -41.75 | 1.45 | 0.092 |
| Diameter at breast height + Distance to path + Distance to tree trunk + Cover above nest + Slope + Height of nesting tree | -42.42 | 2.80 | 0.047 |
| Diameter at breast height + Distance to tree trunk + Distance to forest edge + Understory coverage + Cover above nest + Slope + Tree cover + Height of nesting tree | -40.35 | 3.14 | 0.040 |
| Diameter at breast height + Distance to tree trunk + Understory coverage + Cover above nest + Slope + Tree cover + Height of nesting tree | -41.57 | 3.33 | 0.036 |
| Diameter at breast height + Distance to path + Distance to tree trunk + Slope + Height of nesting tree | -44.01 | 3.78 | 0.029 |
| Diameter at breast height + Distance to tree trunk + Distance to forest edge + Understory coverage + Cover above nest + Count of trees + Slope + Height of nesting tree | -40.94 | 4.32 | 0.022 |
| NULL | -125.87 | 156.83 | 0.000 |

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| **Table S2. Results of generalized linear mixed-effects model including habitat type (mountain or plain) as a fixed factor (i.e. interactions). This model was fitted for variables retained in the top-ranked model referred to Table S1.** |
| Variables | Estimate ± se | *Z*-value | *P*-value |
| Diameter at breast height | 0.36 ± 0.17 | 2.13 | 0.034\* |
| Height of nesting tree | 0.70 ± 0.33 | 2.10 | 0.036\* |
| Distance to path | 0.02 ± 0.02 | 2.03 | 0.044\* |
| Understory coverage | -0.10 ± 0.04 | -2.28 | 0.022\* |
| Slope | 0.15 ± 0.07 | 2.19 | 0.028\* |
| Distance to tree trunk | -2.45 ± 0.88 | -2.77 | 0.006\*\* |
| Count of trees | -0.20 ± 0.12 | -1.68 | 0.093 |
| Cover above nest | -0.03 ± 0.03 | -0.84 | 0.402 |
| Plain | 4.02 ± 11.88 | 0.34 | 0.73 |
| Plain: Diameter at breast height | -0.22 ± 0.17 | -1.28 | 0.202 |
| Plain: Height of nesting tree | -0.14 ± 0.37 | -0.37 | 0.711 |
| Plain: Distance to path | 0.09 ± 0.06 | 1.52 | 0.129 |
| Plain: Understory coverage | 0.11 ± 0.05 | 2.34 | 0.019\* |
| Plain: Slope | -0.02 ± 0.09 | -0.17 | 0.867 |
| Plain: Distance to tree trunk | 0.98 ± 1.01 | 0.97 | 0.331 |
| Plain: Count of trees | 0.17 ± 0.13 | 1.30 | 0.193 |
| Plain: Cover above nest | 0.08 ± 0.04 | 1.91 | 0.056 |

\**P* < 0.05; \*\**P* < 0.01