**Bird diversity in forest and coconut farms of Sulawesi, Indonesia**

Nurul L. Winarni, Simon L. Mitchell, Bhisma G. Anugra, Nicolas J. Deere,

Khaleb Yordan, Boas Immanuel, Zuliyanto Zakaria, Muhajir A. W. Gaib,

Jatna Supriatna and Matthew J. Struebig

Supplementary material is published as supplied by the authors. It is not checked for accuracy, copyedited, typeset or proofread. The responsibility for scientific accuracy and file functionality remains with the authors.

Supplementary Table 1 Locations of 54 bird point counts across three landscapes in Gorontalo province, Sulawesi in 2021.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Landscape/point count | Village/District (*kecamatan*) | Latitude | Longitude | Habitat |
| **Nantu-Tamilo** |  |  |  |  |
| Nantu\_PC01 | Wonosari | 0.7775 | 122.3039 | Coconut |
| Nantu\_PC02 | Wonosari | 0.7785 | 122.3025 | Corn |
| Nantu\_PC03 | Wonosari | 0.7777 | 122.3009 | Coconut |
| Nantu\_PC04 | Wonosari | 0.7820 | 122.2930 | Coconut |
| Nantu\_PC05 | Wonosari | 0.7820 | 122.2910 | Coconut |
| Nantu\_PC06 | Wonosari | 0.7812 | 122.2893 | Coconut |
| Nantu\_PC07 | Asparaga | 0.7870 | 122.2824 | Forest |
| Nantu\_PC08 | Asparaga | 0.7877 | 122.2807 | Forest |
| Nantu\_PC09 | Asparaga | 0.7881 | 122.2790 | Forest |
| Tamilo\_PC01 | Wonosari | 0.7762 | 122.2792 | Open farmland |
| Tamilo\_PC02 | Wonosari | 0.7749 | 122.2779 | Open farmland |
| Tamilo\_PC03 | Wonosari | 0.7736 | 122.2791 | Corn |
| Tamilo\_PC04 | Wonosari | 0.7721 | 122.2695 | Corn |
| Tamilo\_PC05 | Wonosari | 0.7704 | 122.2690 | Open farmland |
| Tamilo\_PC06 | Wonosari | 0.7693 | 122.2675 | Corn |
| Tamilo\_PC07 | Wonosari | 0.7736 | 122.2606 | Open farmland |
| Tamilo\_PC08 | Wonosari | 0.7752 | 122.2611 | Open farmland |
| Tamilo\_PC09 | Wonosari | 0.7764 | 122.2598 | Forest edge |
| **Hutamono-Tapaada** |
| Hutamonu\_PC01 | Botumoito | 0.4942 | 122.2189 | Coconut |
| Hutamonu\_PC02 | Botumoito | 0.4961 | 122.2191 | Open farmland |
| Hutamonu\_PC03 | Botumoito | 0.4961 | 122.2210 | Open farmland |
| Hutamonu\_PC04 | Botumoito | 0.5042 | 122.2251 | Coconut |
| Hutamonu\_PC05 | Botumoito | 0.5060 | 122.2253 | Farmland |
| Hutamonu\_PC06 | Botumoito | 0.5076 | 122.2245 | Coconut |
| Hutamonu\_PC07 | Botumoito | 0.5105 | 122.2317 | Coconut |
| Hutamonu\_PC08 | Botumoito | 0.5098 | 122.2333 | Coconut |
| Hutamonu\_PC09 | Botumoito | 0.5112 | 122.2343 | Forest edge |
| Tapadaa\_PC01 | Botumoito | 0.5299 | 122.2105 | Coconut |
| Tapadaa\_PC02 | Botumoito | 0.5307 | 122.2090 | Bushes and bamboo |
| Tapadaa\_PC03 | Botumoito | 0.5322 | 122.2097 | Coconut |
| Tapadaa\_PC04 | Botumoito | 0.5410 | 122.2071 | Coconut |
| Tapadaa\_PC05 | Botumoito | 0.5427 | 122.2066 | Open farmland |
| Tapadaa\_PC06 | Botumoito | 0.5445 | 122.2065 | Aren plantation |
| Tapadaa\_PC07 | Botumoito | 0.5535 | 122.2072 | Coconut |
| Tapadaa\_PC08 | Botumoito | 0.5548 | 122.2083 | Forest edge |
| Tapadaa\_PC09 | Botumoito | 0.5565 | 122.2090 | Forest edge |
| **Bogani-Tinemba** |  |  |  |  |
| Bogani\_PC01 | Suwawa Tengah | 0.5387 | 123.1755 | Forest edge |
| Bogani\_PC02 | Suwawa Tengah | 0.5394 | 123.1771 | Open habitat |
| Bogani\_PC03 | Suwawa Tengah | 0.5398 | 123.1789 | Open habitat |
| Bogani\_PC04 | Suwawa Tengah | 0.5488 | 123.1799 | Forest |
| Bogani\_PC05 | Suwawa Tengah | 0.5492 | 123.1816 | Forest |
| Bogani\_PC06 | Suwawa Tengah | 0.5502 | 123.1831 | Forest |
| Bogani\_PC07 | Suwawa Tengah | 0.5575 | 123.1883 | Forest |
| Bogani\_PC08 | Suwawa Tengah | 0.5574 | 123.1901 | Forest |
| Bogani\_PC09 | Suwawa Tengah | 0.5579 | 123.1918 | Forest |
| Tinemba\_PC01 | Suwawa Tengah | 0.5176 | 123.2028 | Forest edge |
| Tinemba\_PC02 | Suwawa Tengah | 0.5168 | 123.2046 | Farmland |
| Tinemba\_PC03 | Suwawa Tengah | 0.5168 | 123.2067 | Coconut |
| Tinemba\_PC04 | Suwawa Tengah | 0.5207 | 123.2146 | Farmland |
| Tinemba\_PC05 | Suwawa Tengah | 0.5226 | 123.2145 | Farmland |
| Tinemba\_PC06 | Suwawa Tengah | 0.5244 | 123.2147 | Coconut |
| Tinemba\_PC07 | Suwawa Timur | 0.5327 | 123.2179 | Coconut |
| Tinemba\_PC08 | Suwawa Timur | 0.5343 | 123.2184 | Farmland |
| Tinemba\_PC09 | Suwawa Timur | 0.5357 | 123.2195 | Forest edge |

[‘Corn field’ and ‘Coconut farm’ would be better than ‘Corn’ and ‘Coconut’, as the latter are crops, not habitats.]

|  |
| --- |
| Chart  Description automatically generatedChart, diagram  Description automatically generated |
| A picture containing chart  Description automatically generated |
|  |

Supplementary Fig. 1 Rarefied accumulation curves for bird communities in forest (dark green) coconut (yellow) and mixed farmland (orange) of Gorontalo, Sulawesi. Curves are presented for richness (q = 0), Shannon diversity (q = 1) and Simpson diversity (q = 2). Analyses were undertaken separately for (a) all species, (b) taxa endemic to Sulawesi and surrounding islands, and (c) non-endemic species. Curves were extrapolated (dashed line) to 1000 individuals to ensure a consistent sample size for each comparison. Confidence intervals (CIs) were set at 84%, which has been demonstrated equivalent to a P-value of 0.05 significant differences ([MacGregor-Fors & Payton, 2013](https://www.frontiersin.org/articles/10.3389/ffgc.2021.673071/full#B34)). CIs are represented by shaded areas around the curves.

[Some of the labels in this figure are very small and the images are of low resolution. We recommend increasing the font size so that all labels are clearly legible, and using higher-resolution images.

The label ‘(A)’ should be ‘(a)’.