

Online supplementary Table 1: Output of the pairwise contrasts between different seabird species and the location (rural vs urban). \* and bold indicated significance. Pseudo R2 is 0.08.

| <b>contrast</b>  | <b>t ratio</b> | <b>p value</b>    |
|--|----------------|-------------------|
| Black petrel (rural) - Buller's shearwater (rural)             | 6.704          | <b>0.0001*</b>    |
| Black petrel (rural) - Common diving petrel (rural)            | 5.651          | <b>0.001*</b>     |
| Black petrel (rural) - Cook's petrel (rural)                   | -2.144         | 0.7216            |
| Black petrel (rural) - Fluttering shearwater (rural)           | 4.604          | <b>0.0104*</b>    |
| Black petrel (rural) - Grey-faced petrel (rural)               | -1.517         | 0.9675            |
| Black petrel (rural) - Sooty shearwater (rural)                | 5.118          | <b>0.0034*</b>    |
| Black petrel (rural) - White-faced storm petrel (rural)        | 5.701          | <b>0.0009*</b>    |
| Black petrel (rural) - Black petrel (urban)                    | 6.915          | <b>0.0001*</b>    |
| Black petrel (rural) - Buller's shearwater (urban)             | 6.655          | <b>0.0001*</b>    |
| Black petrel (rural) - Common diving petrel (urban)            | 6.121          | <b>0.0004*</b>    |
| Black petrel (rural) - Cook's petrel (urban)                   | -11.603        | <b>&lt;.0001*</b> |
| Black petrel (rural) - Fluttering shearwater (urban)           | 5.316          | <b>0.0022*</b>    |
| Black petrel (rural) - Grey-faced petrel (urban)               | 3.829          | <b>0.0534*</b>    |
| Black petrel (rural) - Sooty shearwater (urban)                | 5.332          | <b>0.0021*</b>    |
| Black petrel (rural) - White-faced storm petrel (urban)        | 5.986          | <b>0.0005*</b>    |
| Buller's shearwater (rural) - Common diving petrel (rural)     | -2.251         | 0.6579            |
| Buller's shearwater (rural) - Cook's petrel (rural)            | -11.243        | <b>&lt;.0001*</b> |
| Buller's shearwater (rural) - Fluttering shearwater (rural)    | -4.043         | <b>0.0344*</b>    |
| Buller's shearwater (rural) - Grey-faced petrel (rural)        | -7.94          | <b>&lt;.0001*</b> |
| Buller's shearwater (rural) - Sooty shearwater (rural)         | -3.686         | <b>0.0711*</b>    |
| Buller's shearwater (rural) - White-faced storm petrel (rural) | -2.467         | 0.5246            |
| Buller's shearwater (rural) - Black petrel (urban)             | -5.732         | <b>0.0009*</b>    |
| Buller's shearwater (rural) - Buller's shearwater (urban)      | -0.963         | 0.9996            |
| Buller's shearwater (rural) - Common diving petrel (urban)     | -2.243         | 0.6625            |
| Buller's shearwater (rural) - Cook's petrel (urban)            | -31.826        | <b>&lt;.0001*</b> |
| Buller's shearwater (rural) - Fluttering shearwater (urban)    | -4.022         | <b>0.0359*</b>    |
| Buller's shearwater (rural) - Grey-faced petrel (urban)        | -5.885         | <b>0.0006*</b>    |
| Buller's shearwater (rural) - Sooty shearwater (urban)         | -3.718         | 0.0666            |

| <b>contrast</b>  | <b>t ratio</b> | <b>p value</b> |
|--|----------------|----------------|
| Buller's shearwater (rural) - White-faced storm petrel (urban)   | -2.474         | 0.5203         |
| Common diving petrel (rural) - Cook's petrel (rural)             | -9.916         | <.0001*        |
| Common diving petrel (rural) - Fluttering shearwater (rural)     | -1.833         | 0.8782         |
| Common diving petrel (rural) - Grey-faced petrel (rural)         | -6.95          | <b>0.0001*</b> |
| Common diving petrel (rural) - Sooty shearwater (rural)          | -1.156         | 0.9972         |
| Common diving petrel (rural) - White-faced storm petrel (rural)  | 0.002          | 1              |
| Common diving petrel (rural) - Black petrel (urban)              | -3.041         | 0.2318         |
| Common diving petrel (rural) - Buller's shearwater (urban)       | 2.076          | 0.7606         |
| Common diving petrel (rural) - Common diving petrel (urban)      | 2.175          | 0.7035         |
| Common diving petrel (rural) - Cook's petrel (urban)             | -27.487        | <.0001*        |
| Common diving petrel (rural) - Fluttering shearwater (urban)     | -1.08          | 0.9986         |
| Common diving petrel (rural) - Grey-faced petrel (urban)         | -3.069         | 0.2212         |
| Common diving petrel (rural) - Sooty shearwater (urban)          | -0.982         | 0.9995         |
| Common diving petrel (rural) - White-faced storm petrel (urban)  | 0.397          | 1              |
| Cook's petrel (rural) - Fluttering shearwater (rural)            | 8.692          | <.0001*        |
| Cook's petrel (rural) - Grey-faced petrel (rural)                | 0.157          | 1              |
| Cook's petrel (rural) - Sooty shearwater (rural)                 | 9.445          | <.0001*        |
| Cook's petrel (rural) - White-faced storm petrel (rural)         | 10.095         | <.0001*        |
| Cook's petrel (rural) - Black petrel (urban)                     | 6.724          | <b>0.0001*</b> |
| Cook's petrel (rural) - Buller's shearwater (urban)              | 11.167         | <.0001*        |
| Cook's petrel (rural) - Common diving petrel (urban)             | 10.252         | <.0001*        |
| Cook's petrel (rural) - Cook's petrel (urban)                    | -38.835        | <.0001*        |
| Cook's petrel (rural) - Fluttering shearwater (urban)            | 8.961          | <.0001*        |
| Cook's petrel (rural) - Grey-faced petrel (urban)                | 6.471          | <b>0.0002*</b> |
| Cook's petrel (rural) - Sooty shearwater (urban)                 | 9.044          | <.0001*        |
| Cook's petrel (rural) - White-faced storm petrel (urban)         | 10.083         | <.0001*        |
| Fluttering shearwater (rural) - Grey-faced petrel (rural)        | -5.957         | <b>0.0005*</b> |
| Fluttering shearwater (rural) - Sooty shearwater (rural)         | 0.794          | 1              |
| Fluttering shearwater (rural) - White-faced storm petrel (rural) | 1.897          | 0.8509         |
| Fluttering shearwater (rural) - Black petrel (urban)             | -1.093         | 0.9984         |
| Fluttering shearwater (rural) - Buller's shearwater (urban)      | 3.907          | <b>0.0455*</b> |

| <b>Contrast</b>  | <b>t ratio</b> | <b>p value</b> |
|--|----------------|----------------|
| Fluttering shearwater (rural) - Common diving petrel (urban)     | 2.647          | 0.4187         |
| Fluttering shearwater (rural) - Cook's petrel (urban)            | -24.361        | <.0001*        |
| Fluttering shearwater (rural) - Fluttering shearwater (urban)    | 3.337          | 0.1384         |
| Fluttering shearwater (rural) - Grey-faced petrel (urban)        | -1.103         | 0.9983         |
| Fluttering shearwater (rural) - Sooty shearwater (urban)         | 1.005          | 0.9994         |
| Fluttering shearwater (rural) - White-faced storm petrel (urban) | 2.343          | 0.601          |
| Grey-faced petrel (rural) - Sooty shearwater (rural)             | 6.44           | <b>0.0002*</b> |
| Grey-faced petrel (rural) - White-faced storm petrel (rural)     | 6.997          | <b>0.0001*</b> |
| Grey-faced petrel (rural) - Black petrel (urban)                 | 5.476          | <b>0.0015*</b> |
| Grey-faced petrel (rural) - Buller's shearwater (urban)          | 7.898          | <.0001*        |
| Grey-faced petrel (rural) - Common diving petrel (urban)         | 7.441          | <.0001*        |
| Grey-faced petrel (rural) - Cook's petrel (urban)                | -8.286         | <.0001*        |
| Grey-faced petrel (rural) - Fluttering shearwater (urban)        | 6.747          | <b>0.0001*</b> |
| Grey-faced petrel (rural) - Grey-faced petrel (urban)            | 8.643          | <.0001*        |
| Grey-faced petrel (rural) - Sooty shearwater (urban)             | 6.764          | <b>0.0001*</b> |
| Grey-faced petrel (rural) - White-faced storm petrel (urban)     | 7.329          | <.0001*        |
| Sooty shearwater (rural) - White-faced storm petrel (rural)      | 1.209          | 0.9957         |
| Sooty shearwater (rural) - Black petrel (urban)                  | -1.943         | 0.8297         |
| Sooty shearwater (rural) - Buller's shearwater (urban)           | 3.514          | 0.0994         |
| Sooty shearwater (rural) - Common diving petrel (urban)          | 2.024          | 0.7887         |
| Sooty shearwater (rural) - Cook's petrel (urban)                 | -25.895        | <.0001*        |
| Sooty shearwater (rural) - Fluttering shearwater (urban)         | 0.145          | 1              |
| Sooty shearwater (rural) - Grey-faced petrel (urban)             | -1.948         | 0.827          |
| Sooty shearwater (rural) - Sooty shearwater (urban)              | 1.277          | 0.9927         |
| Sooty shearwater (rural) - White-faced storm petrel (urban)      | 1.683          | 0.93           |
| White-faced storm petrel (rural) - Black petrel (urban)          | -3.123         | 0.2019         |
| White-faced storm petrel (rural) - Buller's shearwater (urban)   | 2.269          | 0.6468         |
| White-faced storm petrel (rural) - Common diving petrel (urban)  | 0.754          | 1              |
| White-faced storm petrel (rural) - Cook's petrel (urban)         | -27.848        | <.0001*        |
| White-faced storm petrel (rural) - Fluttering shearwater (urban) | -1.129         | 0.9978         |
| White-faced storm petrel (rural) - Grey-faced petrel (urban)     | -3.152         | 0.1922         |

| <b>Contrast</b>   | <b>t ratio</b> | <b>p value</b>    |
|---|----------------|-------------------|
| White-faced storm petrel (rural) - Sooty shearwater (urban)         | -1.026         | 0.9992            |
| White-faced storm petrel (rural) - White-faced storm petrel (urban) | 2.094          | 0.7507            |
| Black petrel (urban) - Buller's shearwater (urban)                  | 5.579          | <b>0.0012*</b>    |
| Black petrel (urban)- Common diving petrel (urban)                  | 4.168          | <b>0.0264*</b>    |
| Black petrel (urban) - Cook's petrel (urban)                        | -21.016        | <.0001            |
| Black petrel (urban) - Fluttering shearwater (urban)                | 2.319          | 0.616             |
| Black petrel (urban) - Grey-faced petrel (urban)                    | -0.033         | 1                 |
| Black petrel (urban) - Sooty shearwater (urban)                     | 2.324          | 0.6127            |
| Black petrel (urban) - White-faced storm petrel (urban)             | 3.803          | 0.0563            |
| Buller's shearwater (urban) - Common diving petrel (urban)          | -1.944         | 0.8292            |
| Buller's shearwater (urban) - Cook's petrel (urban)                 | -31.558        | <b>&lt;.0001*</b> |
| Buller's shearwater (urban) - Fluttering shearwater (urban)         | -3.816         | 0.0548            |
| Buller's shearwater (urban) - Grey-faced petrel (urban)             | -5.725         | <b>0.0009*</b>    |
| Buller's shearwater (urban) - Sooty shearwater (urban)              | -3.525         | 0.0974            |
| Buller's shearwater (urban) - White-faced storm petrel (urban)      | -2.209         | 0.6831            |
| Common diving petrel (urban) - Cook's petrel (urban)                | -28.706        | <b>&lt;.0001*</b> |
| Common diving petrel (urban) - Fluttering shearwater (urban)        | -2.078         | 0.7597            |
| Common diving petrel (urban) - Grey-faced petrel (urban)            | -4.277         | <b>0.021*</b>     |
| Common diving petrel (urban) - Sooty shearwater (urban)             | -1.912         | 0.844             |
| Common diving petrel (urban) - White-faced storm petrel (urban)     | -0.372         | 1                 |
| Cook's petrel (urban) - Fluttering shearwater (urban)               | 25.228         | <b>&lt;.0001*</b> |
| Cook's petrel (urban) - Grey-faced petrel (urban)                   | 21.178         | <b>&lt;.0001*</b> |
| Cook's petrel (urban) - Sooty shearwater (urban)                    | 25.012         | <b>&lt;.0001*</b> |
| Cook's petrel (urban) - White-faced storm petrel (urban)            | 28.025         | <b>&lt;.0001*</b> |
| Fluttering shearwater (urban) - Grey-faced petrel (urban)           | -2.381         | 0.5775            |
| Fluttering shearwater (urban) - Sooty shearwater (urban)            | 0.079          | 1                 |
| Fluttering shearwater (urban) - White-faced storm petrel (urban)    | 1.682          | 0.9301            |
| Grey-faced petrel (urban) - Sooty shearwater (urban)                | 2.385          | 0.575             |
| Grey-faced petrel (urban) - White-faced storm petrel (urban)        | 3.903          | 0.0459            |
| Sooty shearwater (urban) - White-faced storm petrel (urban)         | 1.541          | 0.9632            |