

## Appendix 1

**Table A1.1** Summary of the top ranked models according to QAICc values for Forest Owlet.

| Model   | QAICc | $\Delta$ QAICc | AIC wgt | Model Likelihood | no. Par. | -2*LogLike |
|---|-------|----------------|---------|------------------|----------|------------|
| $\psi(\text{GBH}+\text{AC})\text{p}(\text{N})$  | 89.18 | 0.00           | 0.2001  | 1.0000           | 5        | 167.47     |
| $\psi(\text{GBH}+\text{BC}+\text{AC})\text{p}(\text{N})$  | 89.29 | 0.11           | 0.1894  | 0.9465           | 6        | 162.59     |
| $\psi(\text{GBH}+\text{EVI})\text{p}(\text{N})$   | 90.19 | 1.01           | 0.1208  | 0.6035           | 5        | 169.63     |
| $\psi(\text{GBH}+\text{BC}+\text{EVI})\text{p}(\text{N})$   | 90.30 | 1.12           | 0.1143  | 0.5712           | 6        | 164.76     |
| $\psi(\text{GBH}+\text{BC}+\text{ELE}+\text{AC})\text{p}(\text{N})$   | 90.66 | 1.48           | 0.0955  | 0.4771           | 7        | 160.24     |
| $\psi(\cdot)\text{p}(\cdot)$  | 90.75 | 1.57           | 0.0913  | 0.4561           | 2        | 185.27     |
| $\psi(\text{GBH}+\text{BC}+\text{EVI}+\text{AC})\text{p}(\text{N})$   | 91.32 | 2.14           | 0.0686  | 0.3430           | 7        | 161.65     |
| $\psi(\text{GBH}+\text{BC}+\text{RC}+\text{ELE}+\text{AC})\text{p}(\text{N})$                                 | 92.26 | 3.08           | 0.0429  | 0.2144           | 8        | 158.22     |
| $\psi(\text{GBH}+\text{CC}+\text{BC}+\text{LC}+\text{RC}+\text{TRI}+\text{ELE}+\text{EVI})\text{p}(\text{N})$ | 92.69 | 3.51           | 0.0346  | 0.1729           | 8        | 159.14     |

GBH: Girth at breast height, CC: Canopy Cover, AC: Agricultural Land Cover, BC: Bare ground cover, LC: Litter cover, ELE: Elevation, EVI: Enhanced Vegetation Index, TRI: Average topographic ruggedness index, RC: Rock ground cover N: Noise, AL: Ambient Light.  $\psi(\cdot)\text{p}(\cdot)$  is the null model.

**Table A1.2** Summary of the top ranked models according to QAICc values for Jungle Owlet.

| Model  | QAICc  | $\Delta$ QAICc | AIC wgt | Model Likelihood | no. Par. | -2*logLike |
|--|--------|----------------|---------|------------------|----------|------------|
| $\psi(\text{CC}+\text{FC}),\text{p}(\text{AL})$                      | 230.12 | 0.00           | 0.5608  | 1.0000           | 5        | 347.08     |
| $\psi(\text{CC}+\text{BC}+\text{FC}),\text{p}(\text{AL})$            | 231.50 | 1.38           | 0.2813  | 0.5016           | 6        | 345.82     |
| $\psi(\text{CC}+\text{BC}+\text{FC}+\text{ELE}),\text{p}(\text{AL})$ | 233.53 | 3.41           | 0.1019  | 0.1818           | 7        | 345.52     |

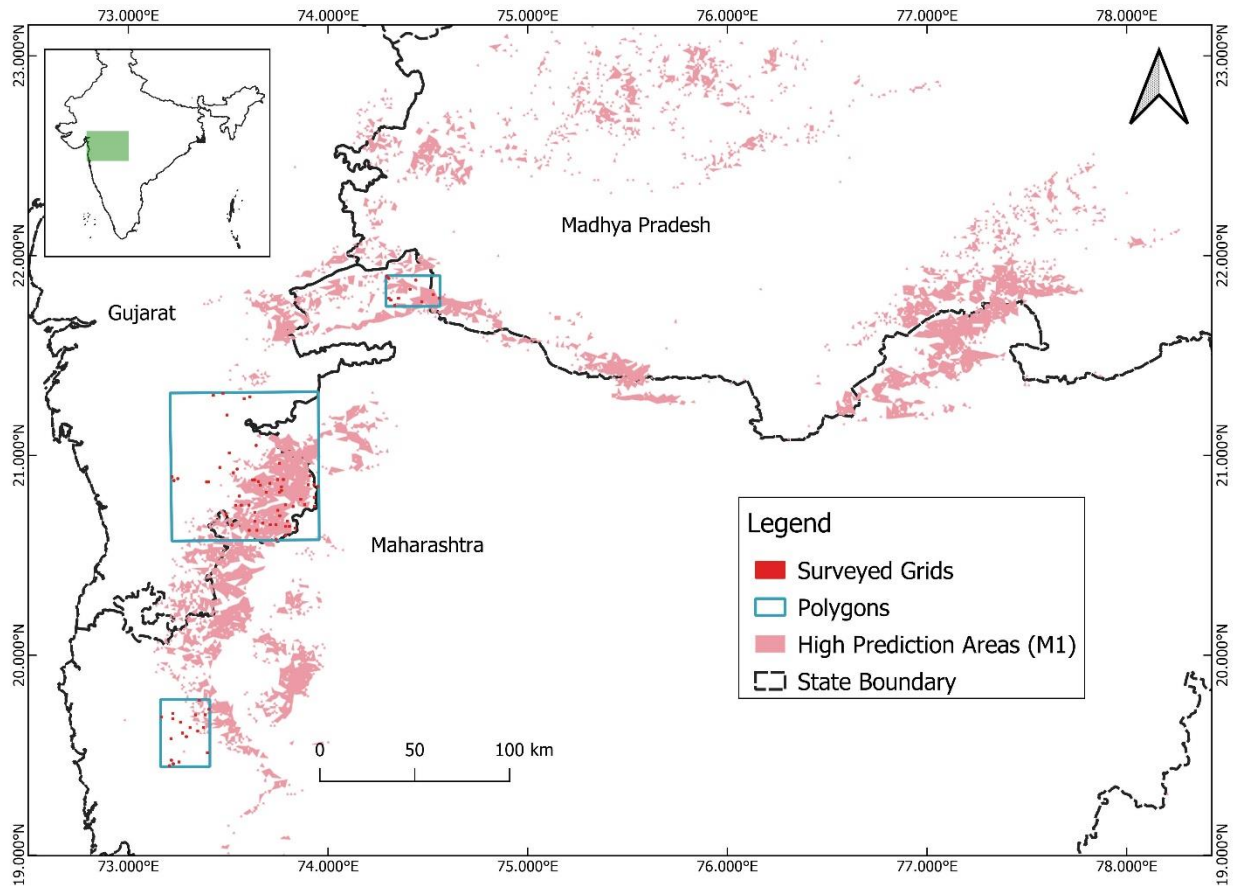
|  |        |       |        |        |    |        |
|--|--------|-------|--------|--------|----|--------|
| $\psi(\text{CC}+\text{BC}+\text{FC}+\text{ELE}+\text{FED}),p(\text{AL})$                               | 235.68 | 5.56  | 0.0348 | 0.0620 | 8  | 345.36 |
| $\psi(\text{GBH}+\text{CC}+\text{BC}+\text{FC}+\text{ELE}+\text{FED}),p(\text{AL})$                    | 237.88 | 7.76  | 0.0116 | 0.0207 | 9  | 345.23 |
| $\psi(\cdot),p(\cdot)$   | 239.70 | 9.58  | 0.0047 | 0.0083 | 2  | 372.27 |
| $\psi(\text{GBH}+\text{CC}+\text{BC}+\text{LR}+\text{FC}+\text{ELE}+\text{FED}),p(\text{AL})$          | 240.14 | 10.02 | 0.0037 | 0.0067 | 10 | 345.12 |
| $\psi(\text{GBH}+\text{CC}+\text{BC}+\text{LC}+\text{FC}+\text{ELE}+\text{FED}),p(\text{AL}+\text{N})$ | 242.49 | 12.37 | 0.0012 | 0.0021 | 11 | 345.12 |

GBH: Girth at breast height, FC: Forest Land cover, CC: Canopy Cover, BC: Bare ground cover, LC: Litter cover, ELE: Elevation, FED: Forest Edge Density, N: Noise, AL: Ambient Light.  $\psi(\cdot)p(\cdot)$  is the null model.

**Table A1.3** Summary of the top ranked models according to AICc values for Spotted Owllet.

| Model  | AICc   | $\Delta\text{AICc}$ | AIC wgt | Model Likelihood | no. Par. | $-2*\log\text{Like}$ |
|--|--------|---------------------|---------|------------------|----------|----------------------|
| $\psi(\text{BC}+\text{LC}+\text{AC}),p(\text{AL})$                     | 154.44 | 0                   | 0.3941  | 1                | 6        | 139.33               |
| $\psi(\text{BC}+\text{AC}),p(\text{AL})$                               | 157.39 | 2.95                | 0.0902  | 0.2288           | 5        | 145.25               |
| $\psi(\text{BC}+\text{LC}+\text{AC}+\text{GC}),p(\text{AL})$           | 157.49 | 3.05                | 0.0858  | 0.2176           | 7        | 139.18               |
| $\psi(\text{CC}+\text{BC}+\text{LC}+\text{AC}),p(\text{AL})$           | 157.64 | 3.2                 | 0.0796  | 0.2019           | 7        | 139.33               |
| $\psi(\text{BC}+\text{LC}),p(\text{AL})$                               | 157.67 | 3.23                | 0.0784  | 0.1989           | 5        | 145.53               |
| $\psi(\text{LC}+\text{AC}),p(\text{AL})$                               | 157.77 | 3.33                | 0.0746  | 0.1892           | 5        | 145.63               |
| $\psi(\text{LC}),p(\text{AL})$   | 159    | 4.56                | 0.0403  | 0.1023           | 4        | 149.62               |
| $\psi(\text{AC}),p(\text{AL})$   | 159.3  | 4.86                | 0.0347  | 0.088            | 4        | 149.92               |
| $\psi(\text{BC}+\text{AC}+\text{GC}),p(\text{AL})$                     | 160.12 | 5.68                | 0.023   | 0.0584           | 6        | 145.01               |
| $\psi(\text{BC}+\text{LC}+\text{AC}+\text{GC}+\text{HS}),p(\text{AL})$ | 160.82 | 6.38                | 0.0162  | 0.0412           | 8        | 139.06               |

GBH: Girth at breast height, CC: Canopy Cover, AC: Agricultural Land Cover, BC: Bare ground cover, LC: Litter cover, GC: Grassland cover, HS: Human-settlements, N: Noise, AL: Ambient Light.  $\psi(.)p(.)$  is the null model.



**Fig. A1.4** Map representing the polygons that were created based on the SDMs for the Forest Owllet (Mukherjee et al. 2016, Koparde 2019). Location of the study area (green polygon) is indicated in the insetmap of India.