## S1. Set of biologically relevant candidate models to predict the probability of presence of new foraging marks on girdled trees. The information includes the number of parameters in the model (K), the log-likelihood (LL), the AIC corrected for small samples (AICc), the relative difference in AICc value compared to the top-ranked model (∆AICc), and the Akaike weight (ѡi).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Hypothesis | Variables in each model\* | K | LL | AICc | ∆AICc | ѡi |
| The probability of presence of new woodpecker foraging marks differs among treatments and sampling seasons; the probability may also increase at larger scales as the proportion of some landscape features that could contain a high volume of natural deadwood and the mean DBH of trees within sites increase as well. | Previous use + Treatment\*Season + RC 1 km\*Season | 12 | -727.3 | 1478.7 | 0 | 1 |
| Previous use + Treatment + Season + DBH.mean + RC 1 km + MP 1 km | 10 | -739.6 | 1499.4 | 20.70 | 0 |
| Previous use + Treatment\*Season + RC 1 km | 10 | -740.0 | 1500.1 | 21.42 | 0 |
| Previous use + Treatment\*Season + RC 1 km\*Treatment | 11 | -739.5 | 1501.2 | 22.49 | 0 |
| Previous use + Treatment\*Season | 9 | -743.7 | 1505.5 | 26.84 | 0 |
| Previous use + Treatment\*Season + ALL 1 km | 10 | -743.6 | 1507.3 | 28.57 | 0 |
| Previous use | 4 | -1080.7 | 2169.4 | 690.72 | 0 |

## **S2. List of captured saproxylic beetles**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Family** | **Genus** | **Species** | **Authority** | **2015** | ***%*** |  | **2016** | ***%*** |
| Cerambycidae | *Acmaeops* | *proteus* | (Kirby) | 19 | *0.08* |  | 6 | *0.16* |
|  | *Asemum* | *striatum* | (Linnæus) | 7 | *0.03* |  | 0 | *0.00* |
|  | *Clytus* | *ruricola* | (Olivier) | 7 | *0.03* |  | 4 | *0.11* |
|  | *Evodinus* | *m. monticola* | (Randall) | 6 | *0.02* |  | 1 | *0.03* |
|  | *Meriellum* | *proteus* | (Kirby) | 1 | *0.00* |  | 1 | *0.03* |
|  | *Monochamus* | *s. scutellatus* | (Say) | 19 | *0.08* |  | 15 | *0.39* |
|  | *Phymatodes* | *testaceus* | (Linnæus) | 0 | *0.00* |  | 1 | *0.03* |
|  | *Pogonocherus* | *penicillatus* | LeConte | 5 | *0.02* |  | 3 | *0.08* |
|  | *Rhagium* | *inquisitor* | (Linnæus) | 6 | *0.02* |  | 9 | *0.24* |
|  | *Tetropium* | *cinnamopterum* | Kirby | 183 | *0.74* |  | 8 | *0.21* |
|  | *Trachysida* | *mutabilis* | (Newman) | 1 | *0.00* |  | 0 | *0.00* |
|  | *Xylotrechus* | *undulatus* | Say | 12 | *0.05* |  | 4 | *0.11* |
|  |  |  |  | **266** | ***1.07*** |  | **52** | ***1.37*** |
| Cleridae | *Thanasimus* | *undatulus* | (Say) | 230 | *0.93* |  | 89 | *2.34* |
|  | *Thanasimus* | *dubius* | (Fabricius) | 8 | *0.03* |  | 1 | *0.03* |
|  | *Zenodosus* | *sanguineus* | (Say) | 0 | *0.00* |  | 1 | *0.03* |
|  |  |  |  | **238** | ***0.96*** |  | **91** | ***2.39*** |
| Curculionidae | *Hylobius* | *congener* | Dalla Tore *et al.* | 55 | *0.22* |  | 14 | *0.37* |
|  | *Hylobius* | *warreni* | Wood | 7 | *0.03* |  | 3 | *0.08* |
|  | *Pissodes* | *dubius* (*striatulus*) | Randall ((Fabricius)) | 239 | *0.96* |  | 40 | *1.05* |
|  | *Pissodes* | *nemorensis* | Germar | 10 | *0.04* |  | 0 | *0.00* |
|  | *Pissodes* | *rotundatus* | LeConte | 0 | *0.00* |  | 1 | *0.03* |
|  | *Rhyncolus* | *macrops* | Buchanan | 0 | *0.00* |  | 3 | *0.08* |
|  | *-* | *sp.* | - | 1 | *0.00* |  | 0 | *0.00* |
|  |  |  |  | **312** | ***1.26*** |  | **61** | ***1.60*** |
| (Scolytinae) | *Crypturgus* | *borealis* | Swaine | 2 | *0.01* |  | 2 | *0.05* |
|  | *Dendroctonus* | *rufipennis* | (Kirby) | 19 | *0.08* |  | 2 | *0.05* |
|  | *Dryocoetes* | *affaber* | (Mannerheim) | 65 | *0.26* |  | 63 | *1.66* |
|  | *Dryocoetes* | *autographus* | (Ratzeburg) | 332 | *1.34* |  | 130 | *3.42* |
|  | *Dryocoetes* | *betulae* | Hopkins | 51 | *0.21* |  | 77 | *2.02* |
|  | *Dryocoetes* | *caryi* | Hopkins | 247 | *0.99* |  | 88 | *2.31* |
|  | *Gnathotrichus* | *materiarius* | (Fitch) | 0 | *0.00* |  | 1 | *0.03* |
|  | *Ips* | *latidens* | (LeConte) | 1 | *0.00* |  | 6 | *0.16* |
|  | *Ips* | *pini* | (Say) | 1 | *0.00* |  | 0 | *0.00* |
|  | *Orthotomicus* | *caelatus* | (Eichhoff) | 3 | *0.01* |  | 2 | *0.05* |
|  | *Polygraphus* | *rufipennis* | (Kirby) | 1303 | *5.25* |  | 377 | *9.91* |
|  | *Scolytus* | *piceae* | (Swaine) | 3 | *0.01* |  | 3 | *0.08* |
|  | *Trypodendron* | *lineatum* | (Olivier) | 21983 | *88.54* |  | 2839 | *74.61* |
|  | *Xyleborus* | *sayi* | (Hopkins) | 2 | *0.01* |  | 11 | *0.29* |
|  |  |  |  | **24012** | ***96.71*** |  | **3601** | ***94.64*** |
| **Total** |  |  |  | **24828** | ***100.00*** |  | **3805** | ***100.00*** |