Fire_summary

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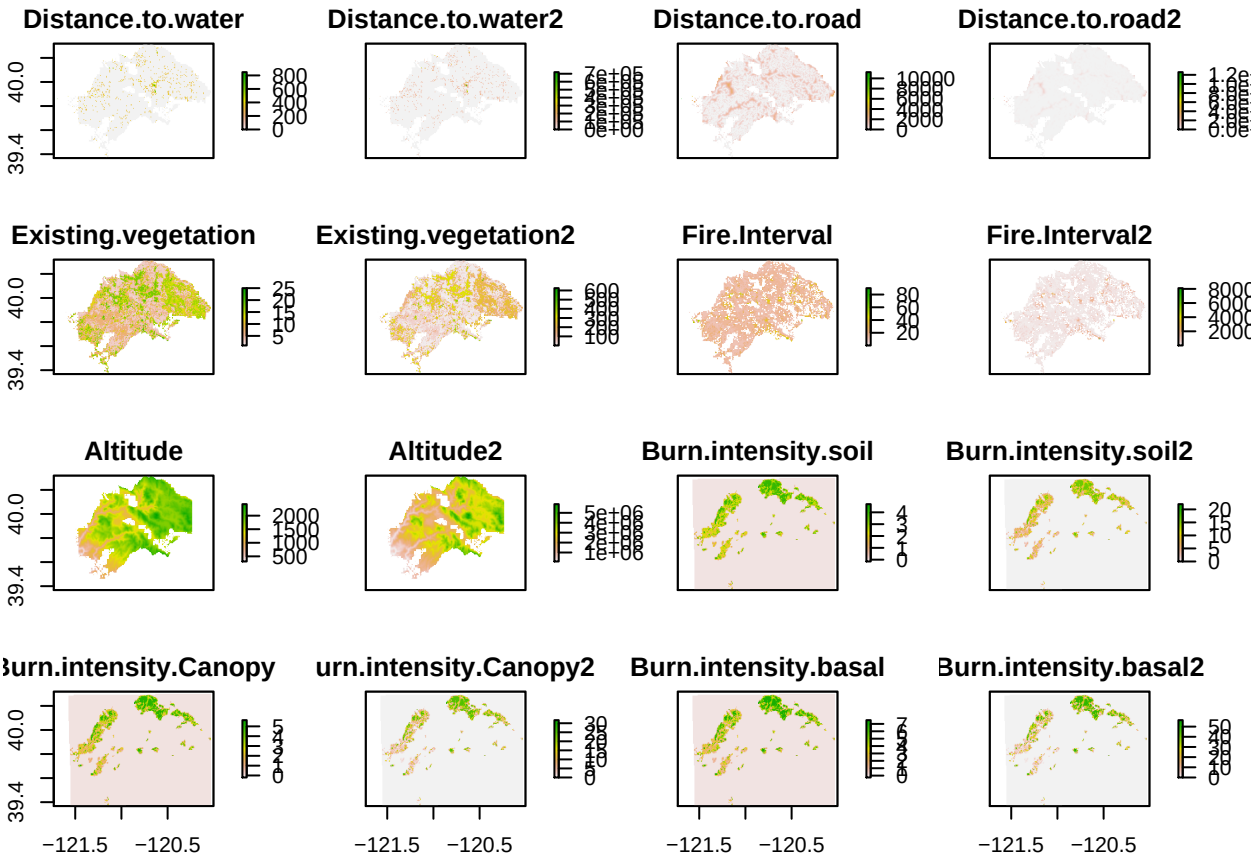
Abstract

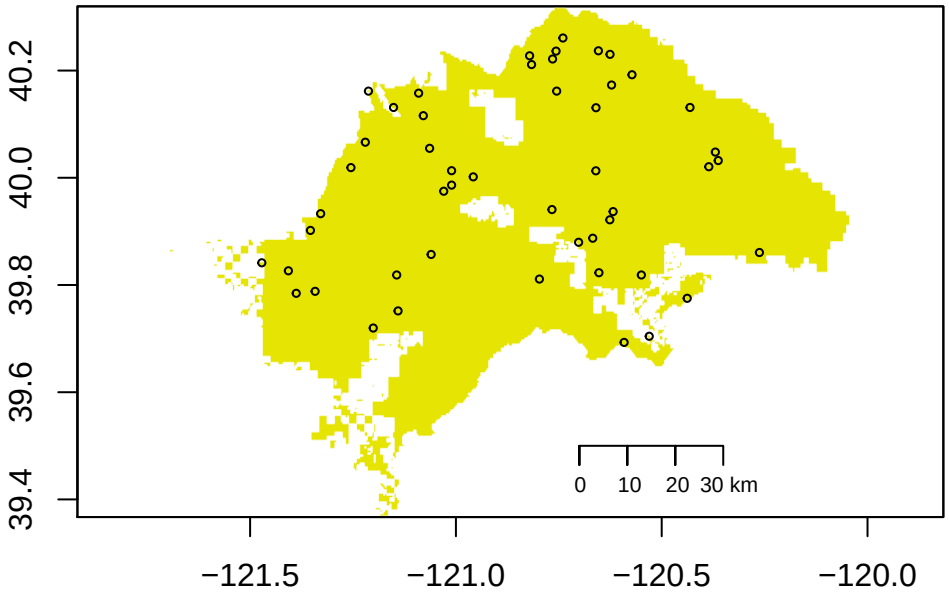
This webpage will show the results of a bat survey study done in the Plumas National Forest in North California. The objective of this study is to determine the distribution of the different species of bats within the park. In order to do that we have performed occupancy models for the species present in the park. The results of this models will be shown as maps showing the probability of occurence of bats in each point, that is, if you see a value of 1, there is a 100% chance of finding a bat in that point, if there is a value of 0 there is 0% chance of finding that specie in that point, if there is a value of 0.5 there is a 50% chance of finding that specie in that point.

Another result

Results collected in the field



Maps showing the sampled Points



Results of species prescence

In this area 0 means absence, and 1 means prescence. This table has for each site (ID), every specie and day, so for example if Mylu1=0, that means that for *Myotis lucifugus* (common name Little Brown bat, was detected on day one for that particular site).

Here is a key for bat species

- *Myotis yumanensis* (Myyu)
- *Myotis californicus* (Myca)
- *Myotis ciliolabrum* (Myci)
- *Myotis volans* (Myvo)
- *Myotis lucifugus* (Mylu)
- *Parastrellus hesperus* (Pahe)
- *Lasiurus blossevillii* (Labo)
- *Myotis evotis* (Myev)
- *Antrozous pallidus* **(Anpa)**
- *Eptesicus fuscus* (Epfu)
- *Lasionycteris noctivagans* (Lano)
- *Myotis thysanodes* **(Myth)**

- *Tadarida brasiliensis* (Tabr)
- *Lasiurus cinereus* (Laci)
- *Corynorhinus townsendii* **(Coto)**
- *Euderma maculatum* (Euma)
- *Eumops perotis* (Eupe)

Maps predicting the distribution of bats

Yuma myotis (***Myotis yumanensis***)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
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##   doing row 6000 of 108500
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##   doing row 43000 of 108500
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##   doing row 78000 of 108500
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##   doing row 80000 of 108500
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##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
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##   doing row 96000 of 108500
```

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##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
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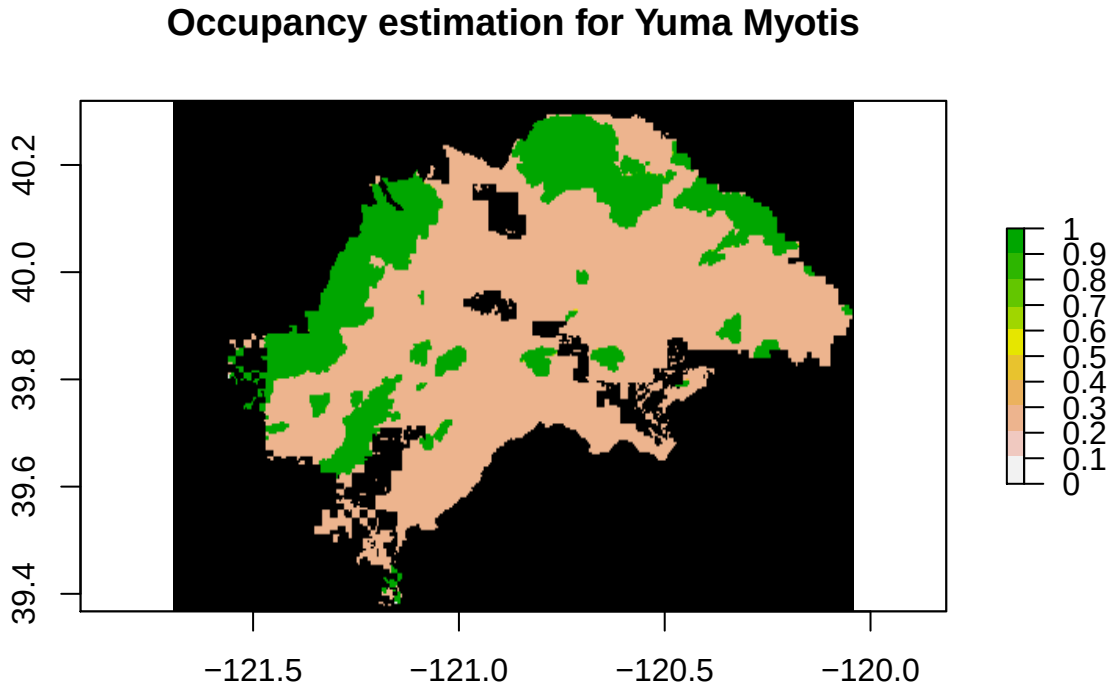
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

Model 9

Model 10

Model 11

Model 12

Model 13

Model 14

Model 15

Model 16

Model 17

Model 18

Model 19

Model 20

Model 21

Model 22

Model 23

Model 24

Model 25

Model 26

psi(Int)

-1.23

-1.45

-1.22

-1.38

-1.32

-1.59

-1.95

-1.35

-1.41

-1.77

-1.95

-1.52

-1.44

-1.59

-1.68

-1.59

-1.81

-1.99

-1.50

-1.23

-1.97

-1.59

-1.90

-1.89

-1.36

-1.01

(1.04)

(1.02)

(1.06)

(1.03)

(1.06)

(1.07)

(1.11)

(1.03)

(1.05)

(1.05)

(1.12)

(1.01)

(1.03)

(1.09)

(1.10)

(1.08)

(1.12)

(1.09)

(1.02)

(1.04)

(1.11)

(1.09)

(1.11)

(1.12)

(1.06)

(0.98)

psi(Burn.intensity.basal)

151.57

109.53

131.95

223.02

145.89

315.91

131.30

431.23

(203.26)

(198.88)

(805.89)

(871.02)

(198.83)

(256.18)

(200.99)

(1012.87)

p(Int)

-3.84***

-3.54**

-4.15***

-3.74**

-3.93***

-3.70**

-3.52**

-3.72**

-3.48*

-3.22**

-3.61**

-2.86*

-3.66**

-4.16***

-3.89***

-1.18

-1.74**

-2.59

-2.96*

-3.23*

-2.93**

-3.75**

-3.68**

-3.01*

-3.96**

-4.06***

(1.17)

(1.21)

(1.23)

(1.23)

(1.19)

(1.24)

(1.20)

(1.23)

(1.35)

(1.18)

(1.23)

(1.32)

(1.22)

(1.24)

(1.18)

(0.79)

(0.54)

(1.33)

(1.34)

(1.32)

(1.13)

(1.41)

(1.21)

(1.36)

(1.21)

(1.22)

p(Meantemp)

0.13

0.12

0.15*

0.13

0.14

0.13

0.12

0.13

0.16*

0.11

0.13

0.14

0.13

0.15*

0.14

0.14

0.15

0.15

0.09

0.19*

0.13

0.14

0.14

0.14

(0.07)

(0.07)

(0.07)

(0.07)

(0.07)

(0.07)

(0.07)

(0.07)

(0.08)

(0.07)

(0.07)

(0.08)

(0.07)

(0.07)

(0.07)

(0.08)

(0.08)

(0.08)

(0.07)

(0.08)

(0.07)

(0.08)

(0.07)

(0.07)

psi(Burn.intensity.soil)

120.89

69.41

412.18

91.95

220.96

148.39

79.13

166.50

223.75

353.04

157.15

116.72

196.35

(194.75)

(205.06)

(378.62)

(94.01)

(809.16)

(197.84)

(204.39)

(16777.82)

(218.34)

(308.79)

(13836.04)

(198.86)

(39766.04)

psi(I(Burn.intensity.soil^2))

-30.51

-126.38

-61.21

-113.57

-37.47

-32.82

-56.67

-89.22

-116.30

-50.02

-17.60

69.41

(48.81)

(266.89)

(59.29)

(156.38)

(49.60)

(74191.83)

(56.06)

(82.66)

(873.30)

(65.44)

(24.26)

(87.75)

psi(Burn.intensity.Canopy)

102.87

216.27

92.36

185.56

121.02

152.69

244.95

167.47

144.79

(199.23)

(214.92)

(198.05)

(208.82)

(121.77)

(16777.81)

(13845.22)

(39783.80)

(201.08)

psi(I(Burn.intensity.Canopy^2))

-31.31

-19.19

-12.90

-41.07

-56.42

-68.56

(57.65)

(41.88)

(32.73)

(55.68)

(50.60)

(1547.77)

psi(I(Burn.intensity.basal^2))

-22.20

7.11

-63.86

(22.00)

(94.66)

(81826.50)

p(sdtemp)

-0.29

-0.31

-0.17

-0.35

-0.33

-0.31

-0.34

-0.30

(0.31)

(0.31)

(0.24)

(0.32)

(0.31)

(0.31)

(0.33)

(0.31)

p(sdhum)

0.00

(0.05)

Log Likelihood

-33.43

-32.18

-33.65

-32.60

-33.87

-32.66

-31.36

-32.70

-32.74

-31.42

-31.44

-31.46

-32.80

-32.82

-32.89

-32.90

-32.92

-30.31

-31.75

-33.08

-31.76

-33.10

-31.77

-31.78

-33.13

-34.42

AICc

75.83

75.87

76.28

76.69

76.73

76.83

76.88

76.91

76.99

76.99

77.04

77.07

77.10

77.15

77.29

77.31

77.35

77.57

77.65

77.66

77.67

77.70

77.70

77.70

77.76

77.82

Delta

0.00

0.04

0.46

0.87

0.90

1.00

1.06

1.08

1.16

1.16

1.21

1.25

1.27

1.32

1.46

1.48

1.52

1.74

1.82

1.84

1.84

1.87

1.87

1.88

1.93

1.99

Weight

0.02

0.02

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

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0.01

0.01

0.01

0.01

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0.01

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0.01

0.01

0.01

0.01

0.01

Num. obs.

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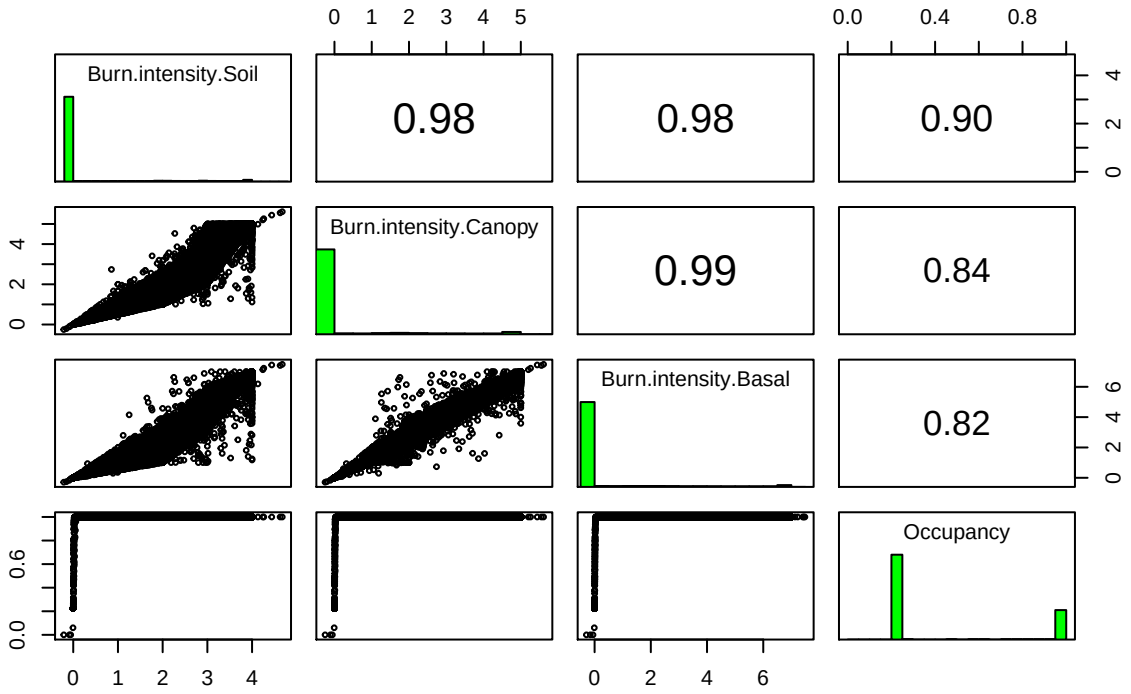
p < 0.001, *p < 0.01,* p < 0.05



California bat (*Myotis californicus*)

Total model

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
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##   doing row 10000 of 108500
##   doing row 11000 of 108500
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##   doing row 14000 of 108500
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##   doing row 41000 of 108500
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##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
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##   doing row 72000 of 108500
##   doing row 73000 of 108500
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##   doing row 75000 of 108500
##   doing row 76000 of 108500
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##   doing row 78000 of 108500
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##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
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##   doing row 103000 of 108500
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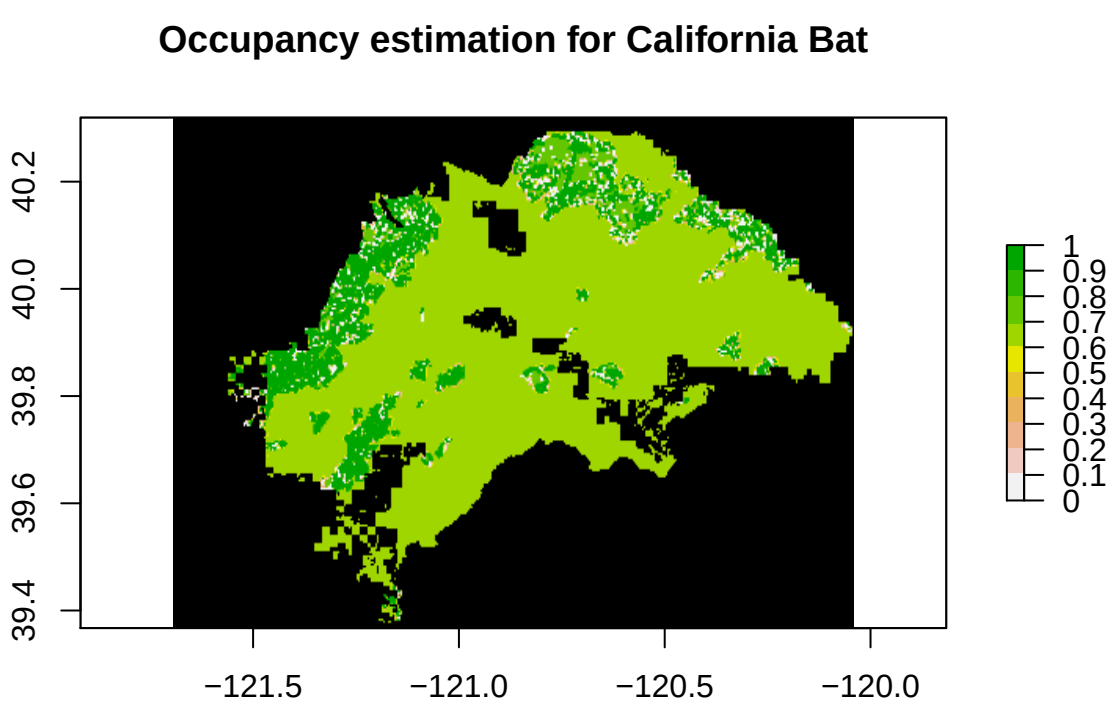

Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

Model 9

Model 10

Model 11

Model 12

Model 13

Model 14

Model 15

psi(Int)

0.73

0.52

0.75

0.72

0.73

1.02**

0.58

0.72

0.58

0.57

1.02**

0.65

0.64

0.60

0.65

(0.47)

(0.44)

(0.48)

(0.47)

(0.47)

(0.35)

(0.47)

(0.47)

(0.44)

(0.43)

(0.35)

(0.42)

(0.42)

(0.44)

(0.47)

psi(Burn.intensity.basal)

-2.17

-48.35

-2.17

-6.54

(1.31)

(44.73)

(1.30)

(3.86)

psi(I(Burn.intensity.Canopy^2))

-2.96

-2.44

-3.68

-2.80

-3.66

-10.73

-2.96

(2.17)

(2.31)

(2.31)

(1.84)

(2.26)

(8.39)

(2.16)

psi(I(Burn.intensity.soil^2))

5.58

3.84

6.63

5.25

6.59

9.08

5.59

0.10

0.12

0.77

(3.57)

(3.60)

(3.93)

(3.08)

(3.86)

(6.62)

(3.55)

(0.09)

(0.10)

(0.64)

p(Int)

-0.90

-1.03

-0.93

-0.93

2.12**

2.29**

-0.89

0.43

2.30**

3.12**

3.07**

2.30**

3.12**

-0.88

-0.87

(0.77)

(0.79)

(0.78)

(0.78)

(0.73)

(0.77)

(0.78)

(1.46)

(0.77)

(0.98)

(0.98)

(0.77)

(0.98)

(0.82)

(0.77)

p(Meantemp)

0.12*

0.13*

0.12*

0.12*

0.12*

0.08

0.12*

0.12*

(0.05)

(0.06)

(0.05)

(0.05)

(0.05)

(0.06)

(0.06)

(0.05)

psi(Burn.intensity.soil)

-3.37

-3.36

0.37

0.41

0.44

8.39

(2.15)

(2.10)

(0.27)

(0.29)

(0.32)

(5.25)

psi(Burn.intensity.Canopy)

-2.66

59.83

(1.70)

(56.67)

p(Meanhum)

-0.02*

-0.02*

-0.01

-0.02*

-0.03*

-0.02*

-0.02*

-0.03*

(0.01)

(0.01)

(0.01)

(0.01)

(0.01)

(0.01)

(0.01)

(0.01)

psi(I(Burn.intensity.basal^2))

3.32

(3.19)

p(sdhum)

-0.06

-0.06

-0.06

(0.04)

(0.04)

(0.04)

Log Likelihood

-77.95

-79.60

-78.32

-78.33

-78.66

-82.47

-75.83

-77.36

-81.35

-80.11

-81.39

-81.43

-80.18

-81.53

-78.94

AICc

170.05

170.70

170.80

170.82

171.46

171.52

171.56

171.67

171.68

171.72

171.76

171.84

171.85

172.03

172.04

Delta

0.00

0.66

0.75

0.77

1.42

1.47

1.51

1.62

1.63

1.67

1.72

1.79

1.80

1.98

2.00

Weight

0.02

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

Num. obs.

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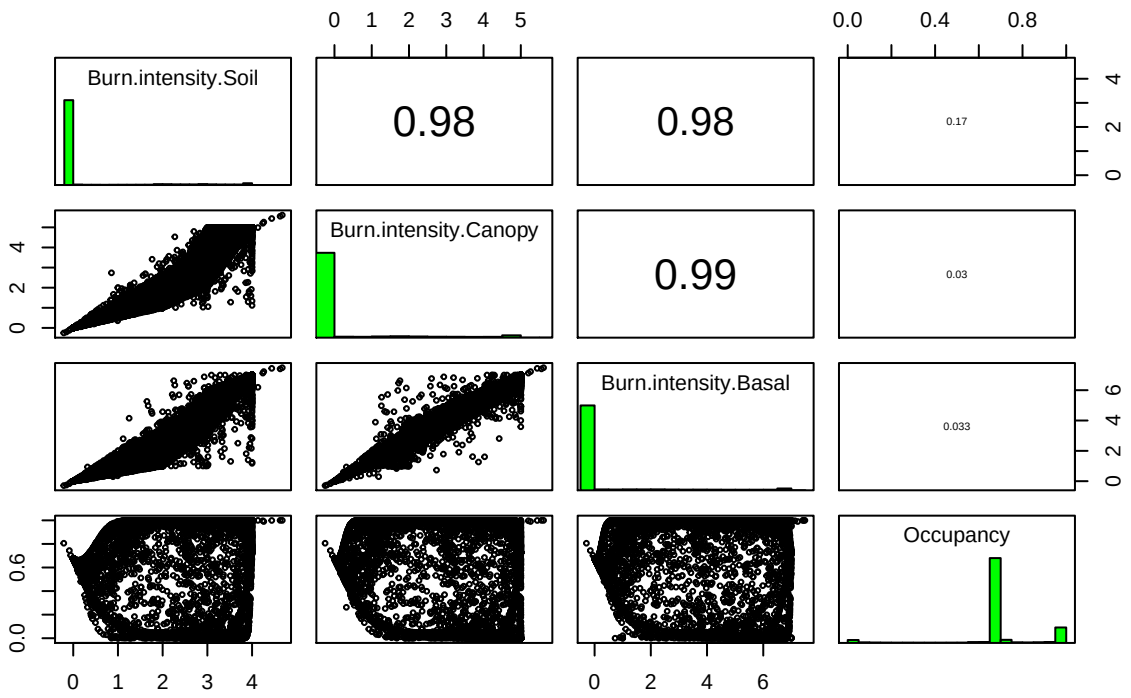
46

***p* < 0.001,** *p* < 0.01, p < 0.05

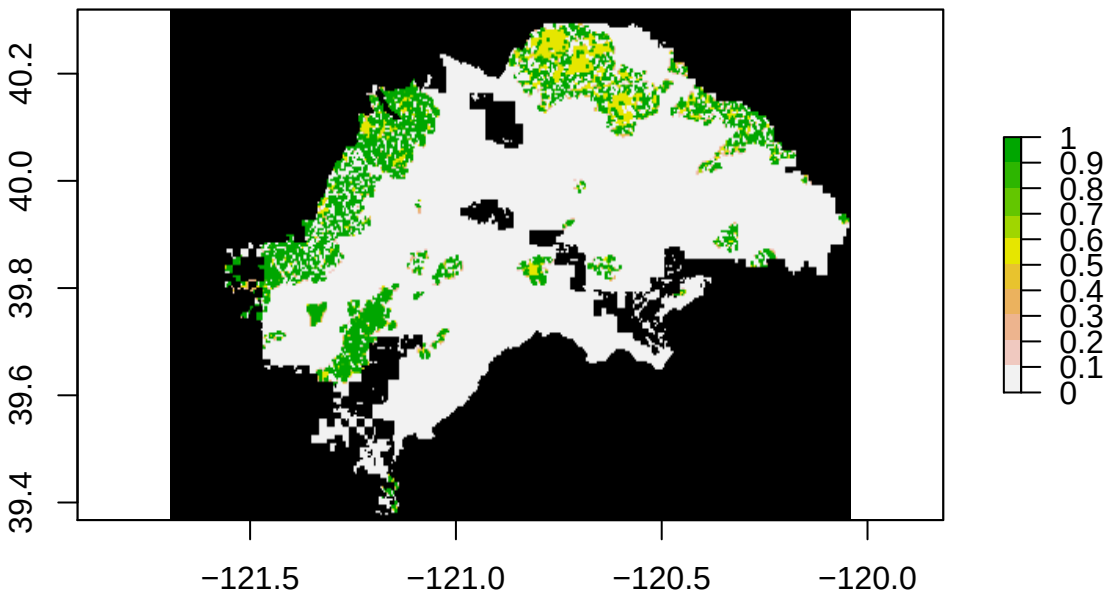


Western Small Footed Myotis (*Myotis ciliolabrum*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
```

```
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
```

```
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

psi(Int)

-2.23*

-2.41*

-2.36*

-2.34*

-2.77*

-2.74*

(0.98)

(1.04)

(1.02)

(1.02)

(1.18)

(1.18)

psi(Burn.intensity.basal)

-75.21

-138.72

-95.19

-122.96

-40.72

-39.94

(68.15)

(98.86)

(62.88)

(91.89)

(24.57)

(25.26)

psi(Burn.intensity.Canopy)

121.93

226.24

160.67

200.39

59.41

58.17

(111.94)

(162.46)

(106.52)

(151.00)

(34.08)

(34.96)

psi(Burn.intensity.soil)

-20.25

-39.44

-28.19

-34.72

(20.71)

(30.09)

(19.93)

(27.97)

p(Int)

3.56*

4.34*

3.56*

3.60*

3.50*

3.49*

(1.44)

(1.86)

(1.42)

(1.57)

(1.44)

(1.44)

p(Meantemp)

-0.31**

-0.33**

-0.31**

-0.31**

-0.30**

-0.30**

(0.10)

(0.11)

(0.10)

(0.10)

(0.10)

(0.10)

p(sdhum)

-0.05

(0.08)

psi(I(Burn.intensity.soil^2))

-1.37

-3.23

-2.81

(1.63)

(2.04)

(1.80)

p(sdtemp)

-0.01

(0.28)

psi(I(Burn.intensity.Canopy^2))

1.71

(1.02)

psi(I(Burn.intensity.basal^2))

0.75

(0.45)

Log Likelihood

-31.97

-30.93

-31.13

-31.29

-31.34

-31.42

AICc

78.08

78.80

79.21

79.53

79.63

79.79

Delta

0.00

0.72

1.13

1.45

1.54

1.70

Weight

0.06

0.04

0.03

0.03

0.03

0.02

Num. obs.

46

46

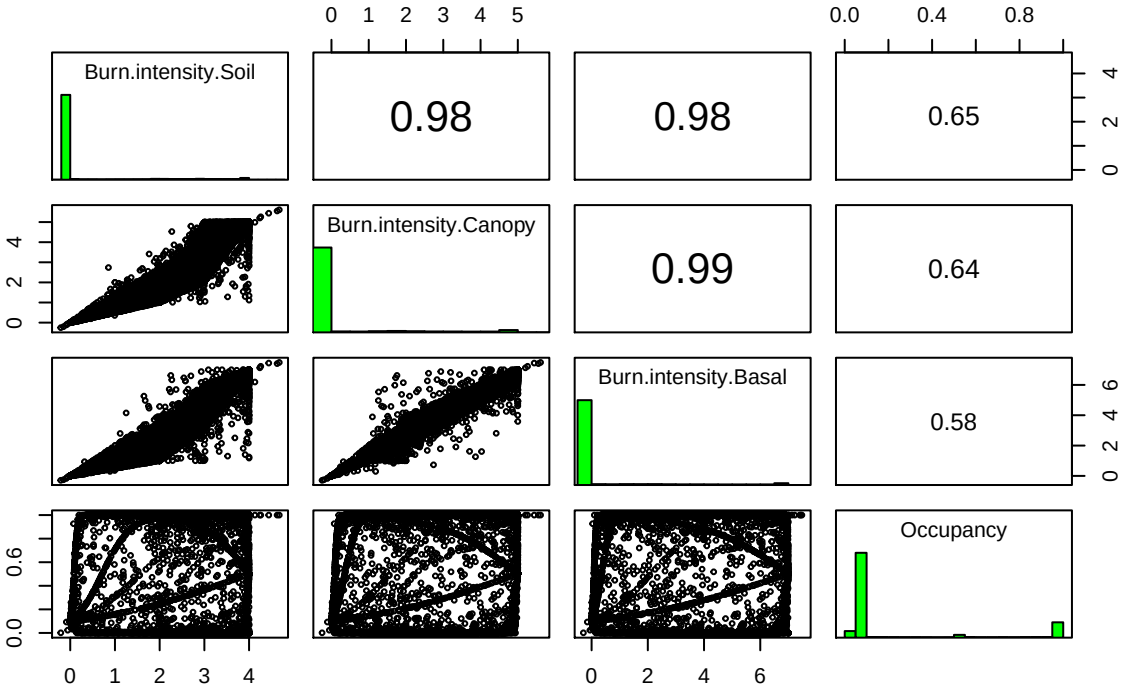
46

46

46

46

***p* < 0.001,** *p* < *0.01*, p < 0.05

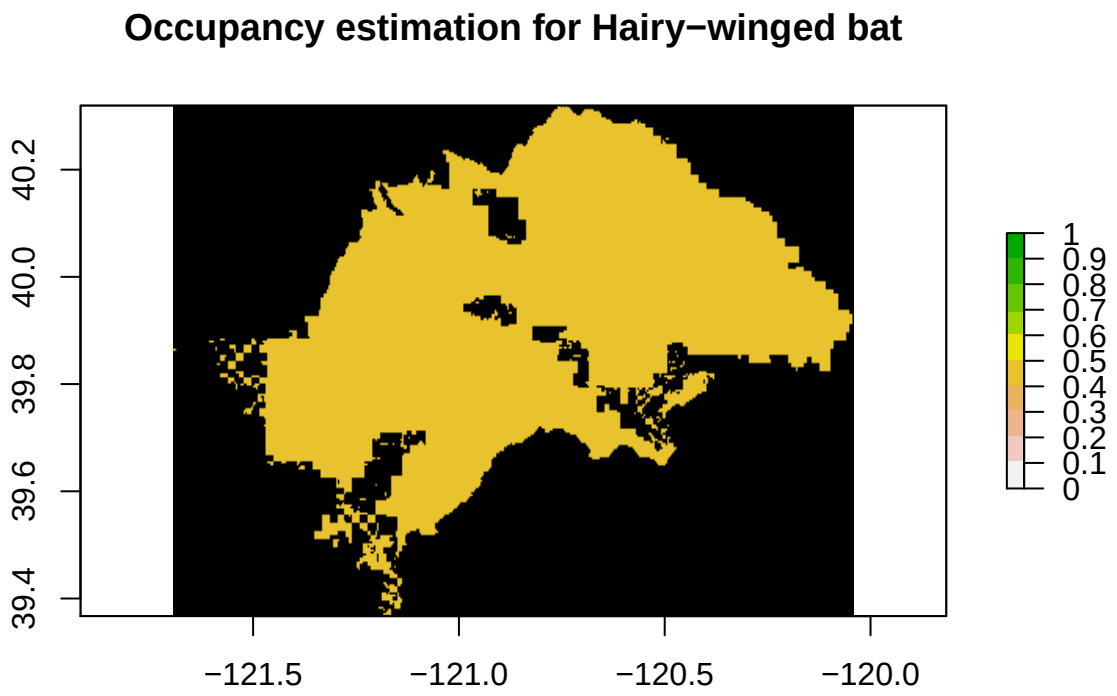


Hairy-winged bat (*Myotis volans*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
```

```
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
```

```
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

psi(Int)

-0.04

-0.45

-0.73

0.38

0.05

(0.95)

(0.71)

(0.61)

(1.15)

(1.01)

p(Int)

4.10

-0.28

-2.14

2.53

4.92

(4.32)

(1.06)

(1.70)

(3.89)

(4.28)

p(Julian)

-0.03

-0.02

-0.03

(0.02)

(0.02)

(0.02)

p(Meanhum)

-0.01

-0.01

(0.01)

(0.01)

p(Meantemp)

0.09

(0.14)

psi(Burn.intensity.basal)

-33.38

(30.21)

psi(Burn.intensity.Canopy)

44.81

(40.52)

Log Likelihood

-40.67

-40.92

-41.12

-38.70

-40.21

AICc

87.92

88.42

88.81

88.90

89.40

Delta

0.00

0.50

0.89

0.98

1.47

Weight

0.11

0.08

0.07

0.07

0.05

Num. obs.

46

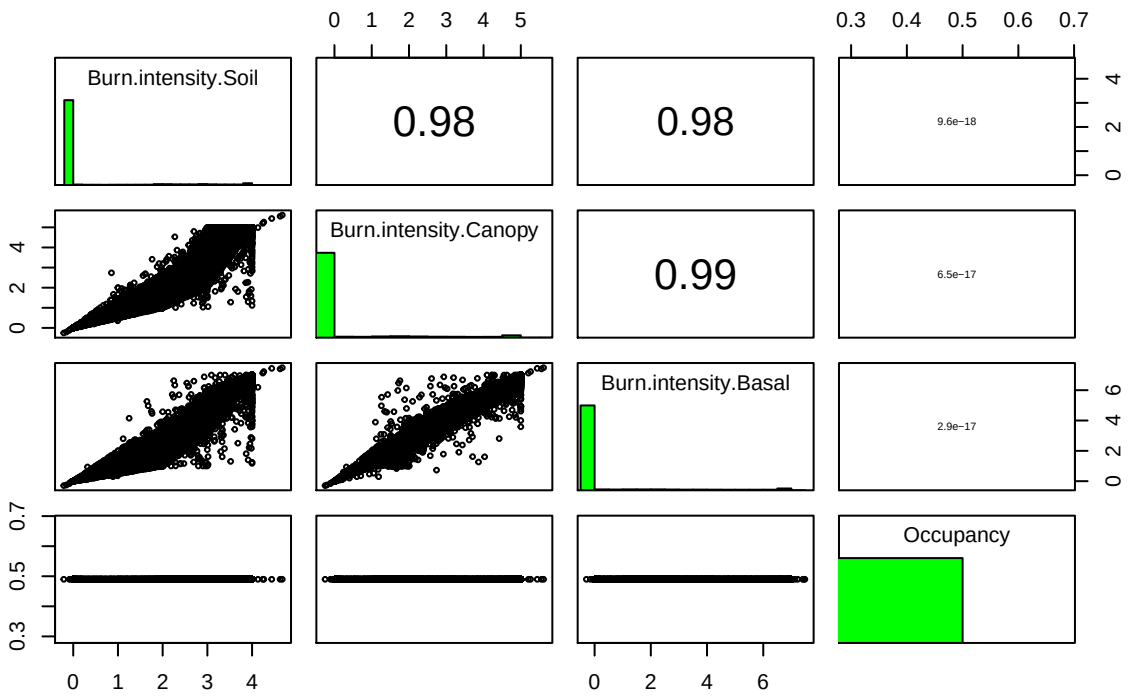
46

46

46

46

***p* < 0.001,** *p* < *0.01,* p < 0.05

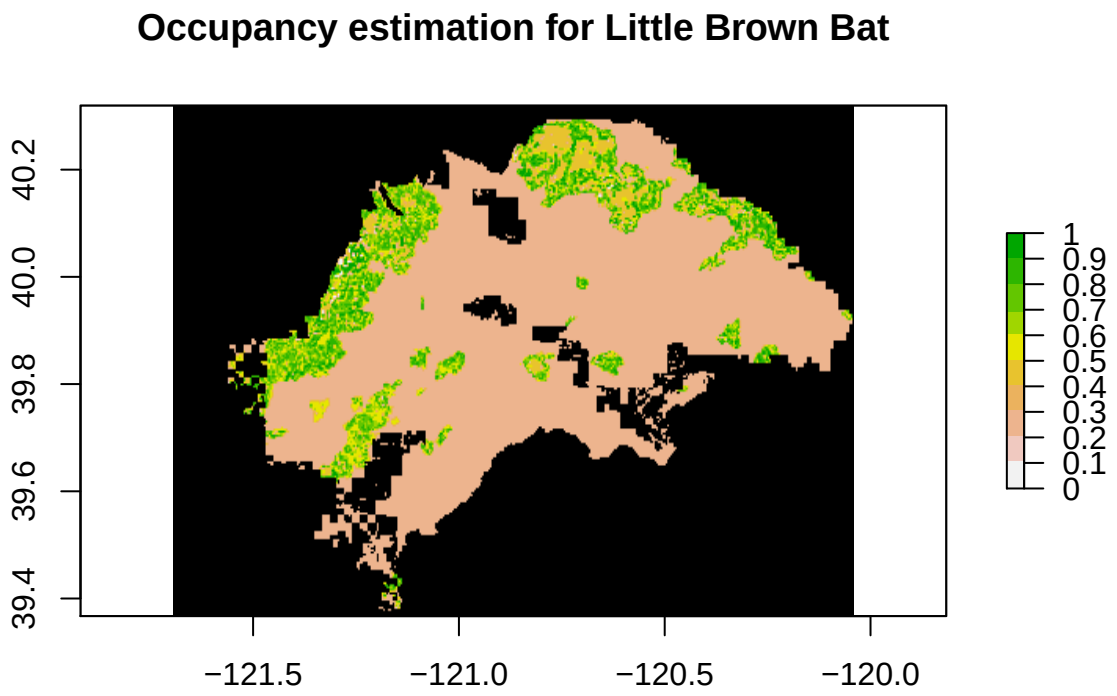


Little Brown bat (*Myotis lucifugus*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
```

```
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
```

```
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

Model 9

Model 10

Model 11

Model 12

Model 13

Model 14

Model 15

Model 16

Model 17

Model 18	
Model 19	
Model 20	
Model 21	
Model 22	
Model 23	
Model 24	
Model 25	
Model 26	
Model 27	
Model 28	
psi(Int)	
-1.19*	
-0.93*	
-0.92*	
-1.03*	
-0.95*	
-1.16*	
-1.14*	
-0.45	
-1.14*	
-1.02*	
-1.11*	
-0.98*	
-0.95*	
-0.44	
-1.16*	
-0.53	
-0.78	
-1.07*	
-0.84	
-0.93*	
-0.73	
-0.73	
-0.85	
-1.06*	

-1.13*

-1.07*

-0.81

-1.08*

(0.49)

(0.45)

(0.44)

(0.47)

(0.46)

(0.49)

(0.49)

(0.34)

(0.50)

(0.46)

(0.49)

(0.46)

(0.44)

(0.35)

(0.49)

(0.32)

(0.43)

(0.50)

(0.45)

(0.43)

(0.41)

(0.40)

(0.46)

(0.46)

(0.49)

(0.50)

(0.45)

(0.50)

psi(Burn.intensity.basal)

1.67

0.32

1.17

1.34

3.22

1.58

0.22

8.12

1.10

0.22

(0.89)

(0.20)

(0.65)

(1.24)

(1.72)

(1.04)

(0.15)

(5.34)

(0.63)

(0.17)

psi(I(Burn.intensity.Canopy^2))

-0.42

-1.07

-0.27

-0.65

-0.41

0.07

-0.27

(0.26)

(0.79)

(0.20)

(0.35)

(0.31)

(0.06)

(0.19)

p(Int)

6.70

6.21

6.33

8.67

6.95

6.30

6.14

5.25

5.87

4.96

5.87

5.28

-3.53*

7.10

5.76

-3.14

6.89

9.44

8.20

-3.57*

5.97

6.17

8.62

-3.62*

6.40

8.59

8.26

8.49

(5.03)

(5.19)

(5.19)

(4.71)

(5.27)

(5.15)

(5.15)

(5.27)

(5.13)

(5.13)

(5.19)

(5.08)

(1.69)

(5.25)

(4.96)

(1.61)

(5.46)

(5.30)

(5.38)

(1.70)

(5.25)

(5.23)

(5.54)

(1.63)

(4.99)

(5.32)

(5.40)

(5.35)

p(Julian)

-0.06*

-0.06*

-0.06*

-0.07**

-0.06*

-0.06*

-0.05*

-0.05

-0.05

-0.05

-0.05

-0.05

-0.05

-0.05*

-0.06

-0.06*

-0.05

-0.05

-0.05

-0.06

-0.06*

-0.06

-0.05

-0.06

(0.03)

(0.03)

(0.03)

(0.02)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

p(Meantemp)

0.23*

0.22*

0.22*

0.18

0.22*

0.21

0.21

0.19

0.20

0.21*

0.20

0.23*

0.20

0.23*

0.18

0.21*

0.20

0.21

0.22*

0.20

0.23*

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

(0.11)

p(sdtemp)

0.64

0.57

0.59

0.71*

0.58

0.62

0.61

0.56

0.67

0.59

0.59

0.60

0.56*

0.73

0.65*

0.56

0.55

0.87*

0.74*

0.57*

0.56

0.56

0.75*

0.58*

0.64*

0.82*

0.75*

0.81*

(0.33)

(0.32)

(0.32)

(0.36)

(0.32)

(0.33)

(0.33)

(0.33)

(0.36)

(0.32)

(0.33)

(0.32)

(0.27)

(0.37)

(0.33)

(0.29)

(0.32)

(0.36)

(0.36)

(0.27)

(0.32)

(0.32)

(0.36)

(0.28)

(0.33)

(0.37)

(0.37)

(0.37)

psi(Burn.intensity.Canopy)

0.42

1.55

1.58

1.17

0.31

0.31

1.68

-7.45

1.46

(0.25)

(0.88)

(1.23)

(0.68)

(0.20)

(0.22)

(1.20)

(5.57)

(0.87)

psi(I(Burn.intensity.soilˆ2))

1.70

-0.42

-0.40

-0.46

0.11

-0.45

(1.19)

(0.32)

(0.41)

(0.55)

(0.09)

(0.39)

psi(Burn.intensity.soil)

0.48

1.91

-1.31

0.35

(0.29)

(1.18)

(1.20)

(0.26)

psi(I(Burn.intensity.basalˆ2))

-0.15

-0.10

0.04

-0.38

-0.15

(0.11)

(0.08)

(0.04)

(0.22)

(0.10)

Log Likelihood

-47.36

-48.87

-48.89

-47.52

-48.96

-47.81

-47.83

-50.73

-48.05

-48.08

-48.15

-48.15

-50.88

-52.15

-46.69

-52.15

-49.59

-49.62

-50.95

-50.96

-49.68

-49.68

-51.02

-49.70

-46.84

-49.72

-51.04

-49.74

AICc

111.67

111.90

111.94

111.98

112.08

112.57

112.61

112.97

113.05

113.10

113.25

113.26

113.26

113.27

113.28

113.28

113.34

113.38

113.39

113.42

113.51

113.51

113.53

113.54

113.58

113.58

113.59

113.63

Delta

0.00

0.23

0.27

0.31

0.41

0.90

0.94

1.30

1.38

1.43

1.58

1.59

1.59

1.60

1.61

1.61

1.67

1.72

1.73

1.75

1.84

1.85

1.87

1.88

1.91

1.92

1.92

1.97

Weight

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.00

0.00

0.00

0.00

0.00

0.00

0.00

Num. obs.

46

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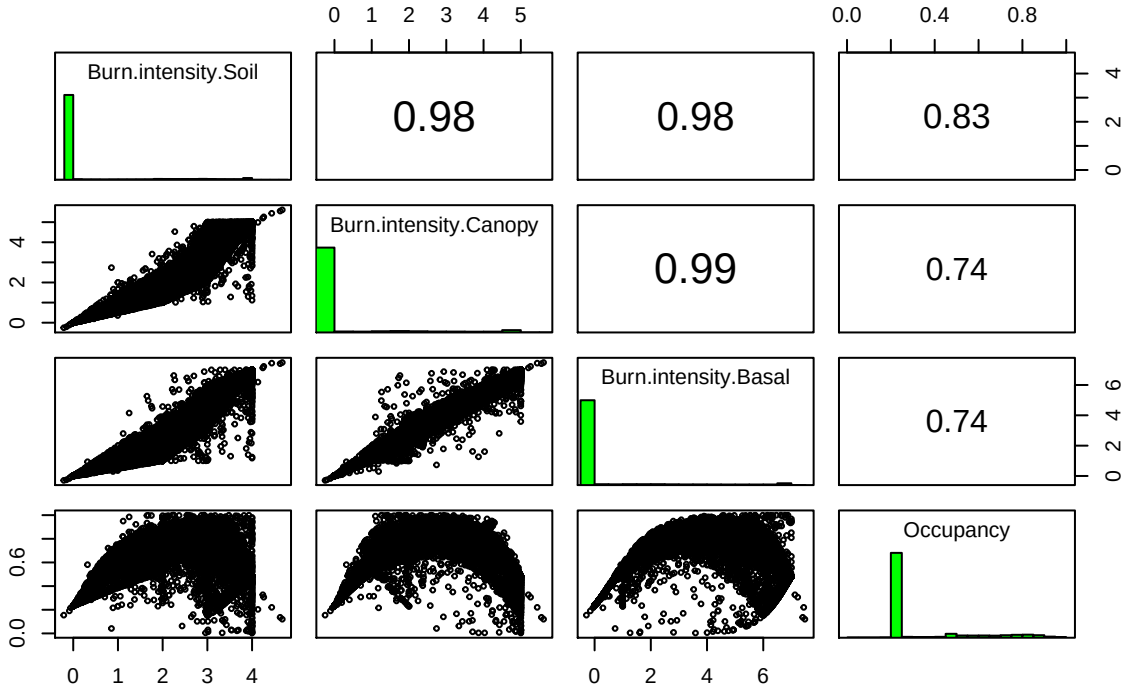
46

***p* < *0.001*,** $p < 0.01$, $\mathrm{p} < 0.05$

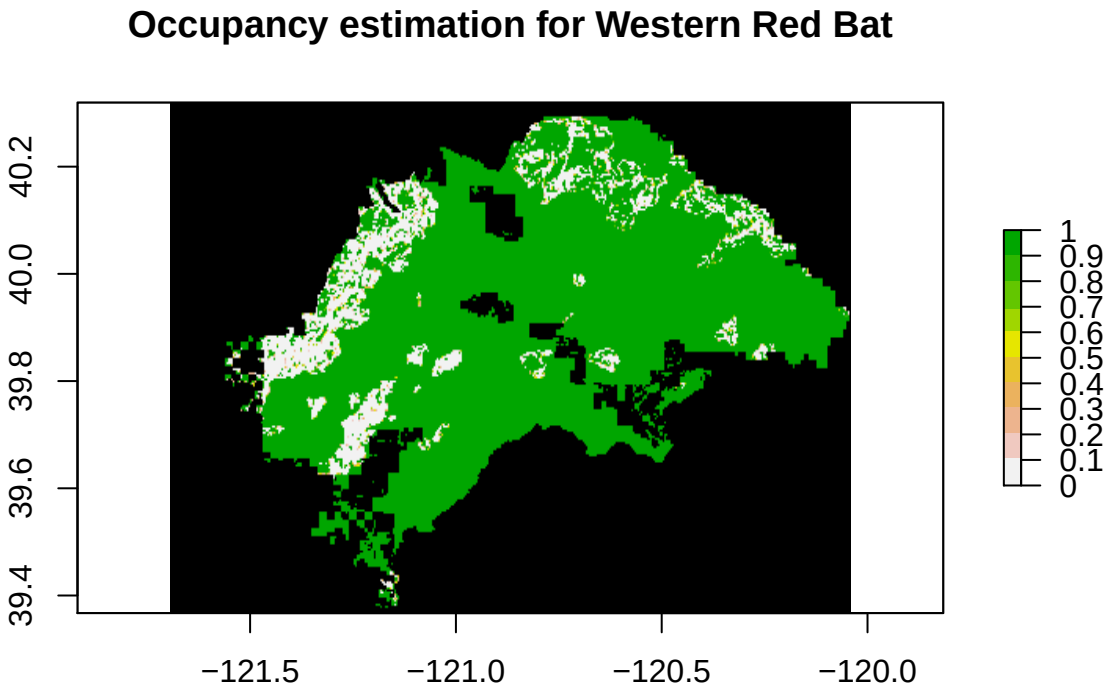


Western Red Bat (*Lasiurus blossevillii*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
```

```
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
```

```
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

Model 9

Model 10

Model 11

Model 12

Model 13

Model 14

Model 15

psi(Int)

17.38

14.35

24.59

7.96

15.90

17.93

15.67

3.62

10.43

23.34

34.98

30.25

34.20

25.78

14.48

(18.04)

(13.92)

(30.93)

(8.78)

(17.53)

(13.04)

(14.84)

(12.36)

(9.81)

(29.40)

(42.22)

(29.43)

(34.27)

(23.15)

(14.75)

psi(I(Burn.intensity.Canopy^2))

2.71

6.40

3.63

4.77

2.93

3.78

(3.01)

(6.90)

(3.81)

(4.76)

(5.39)

(4.29)

psi(Burn.intensity.soil)

-17.81

-30.91

-17.23

-12.79

(19.23)

(42.86)

(21.20)

(29.19)

p(Int)

6.02

5.70

6.20

5.46

5.82

5.17

6.13

7.34

6.81

6.32

6.08

6.07

5.94

6.03

5.59

(4.05)

(3.98)

(3.96)

(4.01)

(4.04)

(3.90)

(4.02)

(4.13)

(4.08)

(4.23)

(3.98)

(4.00)

(3.97)

(3.98)

(4.21)

p(Julian)

-0.04

-0.04

-0.05*

-0.04

-0.04

-0.04

-0.05*

-0.05*

-0.05*

-0.06*

-0.05*

-0.05*

-0.04*

-0.04*

-0.05*

(0.02)

(0.02)

(0.02)

(0.02)

(0.02)

(0.02)

(0.02)

(0.02)

(0.02)

(0.03)

(0.02)

(0.02)

(0.02)

(0.02)

(0.02)

psi(Burn.intensity.basal)

-16.24

-17.10

-27.17

(18.53)

(16.83)

(79.51)

psi(I(Burn.intensity.basal^2))

2.44

1.47

1.53

3.21

5.98

4.97

5.75

2.27

(2.82)

(1.85)

(1.69)

(3.61)

(8.37)

(5.25)

(6.28)

(3.71)

psi(I(Burn.intensity.soil^2))

6.90

-9.49

(9.89)

(10.27)

psi(Burn.intensity.Canopy)

-19.21

-13.85

-29.46

-17.13

-44.58

-40.59

-35.59

-19.05

(19.46)

(15.14)

(33.79)

(58.99)

(46.58)

(48.50)

(33.30)

(21.67)

p(Meantemp)

0.12

0.10

(0.11)

(0.11)

p(sdhum)

0.04

(0.06)

Log Likelihood

-32.49

-32.62

-32.63

-32.77

-32.79

-32.81

-32.89

-35.47

-33.15

-31.98

-32.00

-32.08

-32.08

-32.09

-32.13

AICc

76.48

76.74

76.77

77.04

77.08

77.13

77.28

77.51

77.81

78.11

78.15

78.31

78.31

78.33

78.41

Delta

0.00

0.27

0.29

0.56

0.60

0.65

0.80

1.04

1.33

1.64

1.68

1.84

1.84

1.85

1.94

Weight

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

Num. obs.

46

46

46

46

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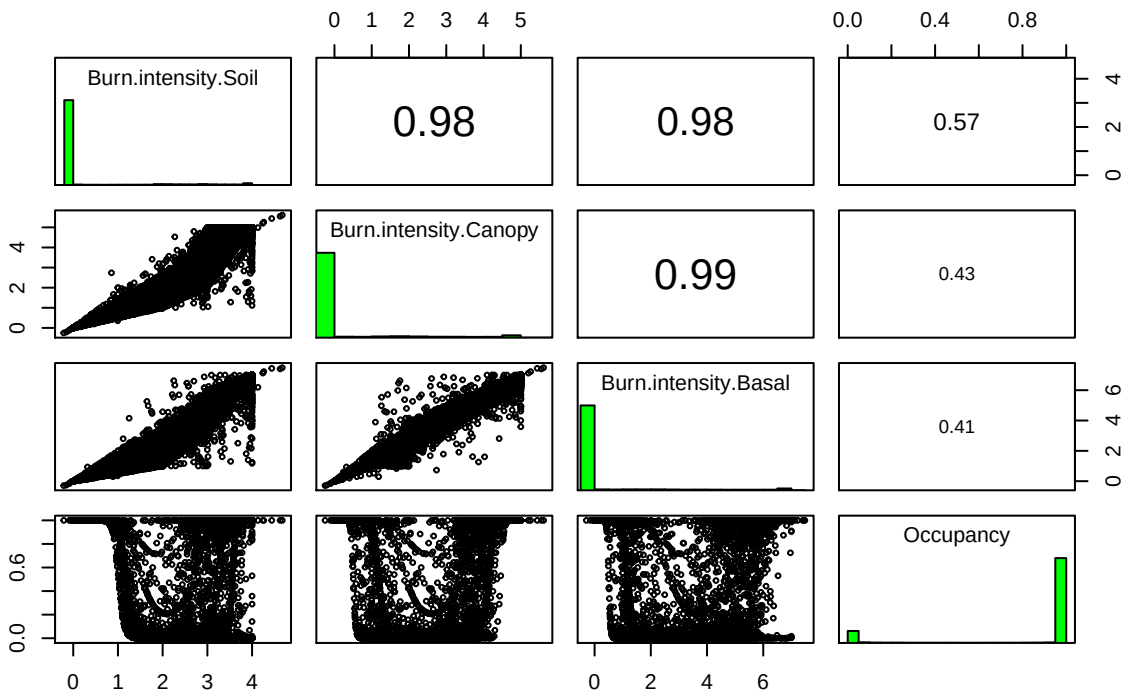
***p* < 0.001,** *p* < 0.01, p < 0.05

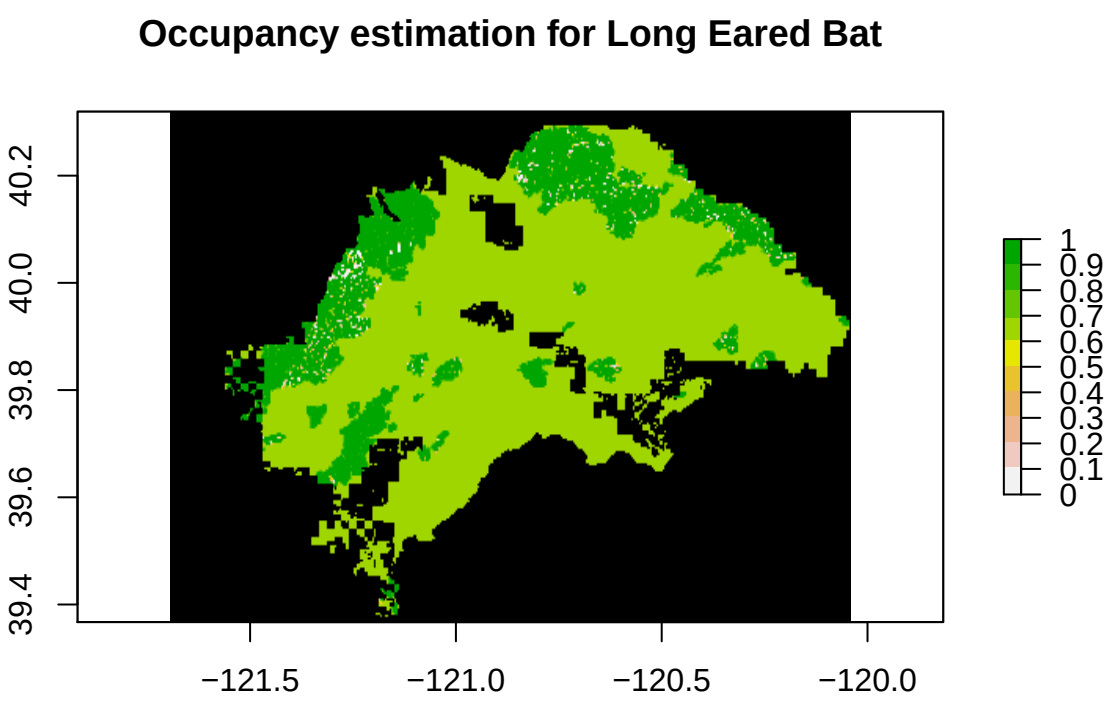


Long-eared Bat (*Myotis evotis*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
```

```
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
```

```
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

psi(Int)

0.68

0.71

0.75

1.31**

(0.51)

(0.49)

(0.54)

(0.45)

psi(Burn.intensity.basal)

-8.76

-28.35

(10.44)

(52.78)

psi(Burn.intensity.Canopy)

13.29

44.74

(16.49)

(85.78)

p(Int)

1.22*

1.25*

2.60*

1.13

(0.61)

(0.62)

(1.24)

(0.63)

p(Meanhum)

-0.01

-0.01

-0.02*

-0.01

(0.01)

(0.01)

(0.01)

(0.01)

psi(Burn.intensity.soil)

0.70

(0.56)

p(Meantemp)

-0.07

(0.05)

Log Likelihood

-85.66

-87.18

-84.87

-89.00

AICc

182.81

183.33

183.90

184.57

Delta

0.00

0.52

1.09

1.76

Weight

0.13

0.10

0.07

0.05

Num. obs.

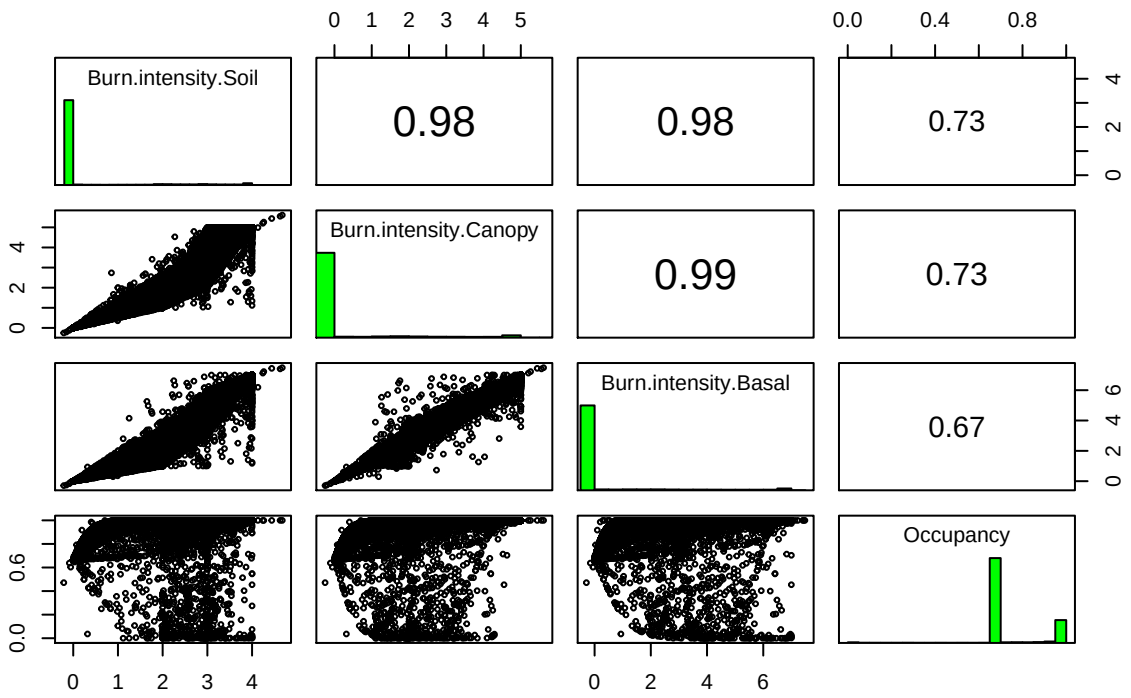
46

46

46

46

***p* < 0.001,** *p* < *0.01,* p < 0.05

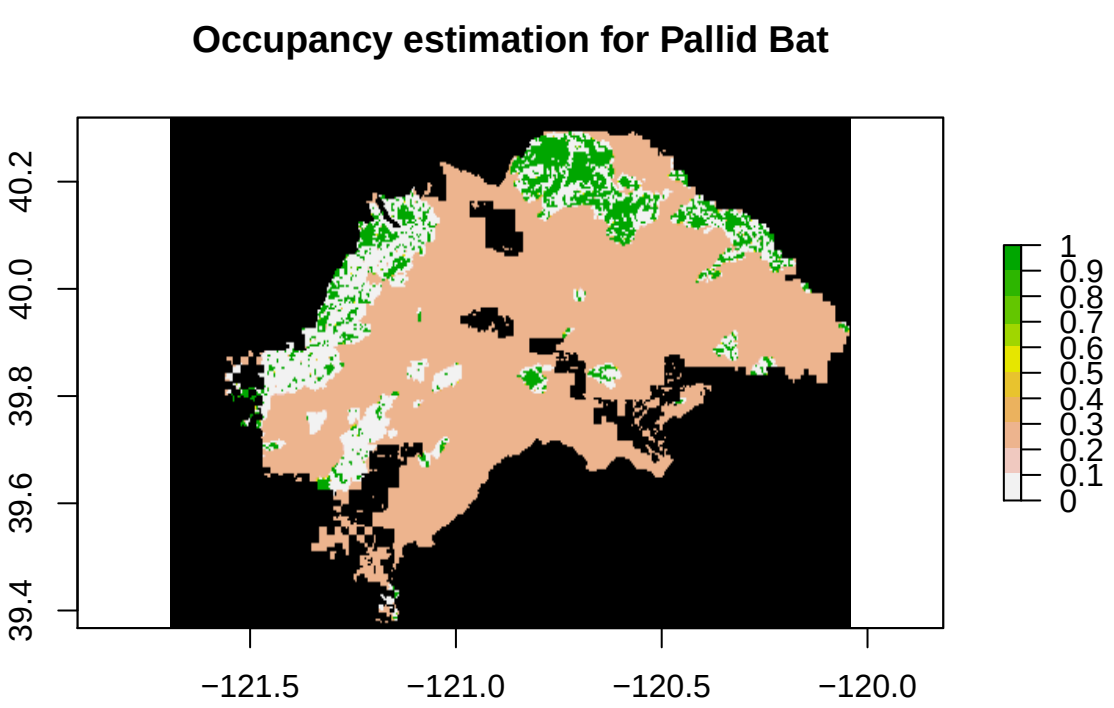


Pallid Bat (*Antrozous pallidus*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
```

```
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
```

```
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

psi(Int)

-0.86

-1.21

-0.83

-1.09

-1.14

-1.05

-1.11

-0.78

(0.80)

(0.73)

(0.84)

(0.76)

(0.74)

(0.78)

(0.73)

(0.84)

psi(I(Burn.intensity.Canopy^2))

22.37

26.15

23.81

47.78

(23.95)

(32.07)

(26.83)

(80.98)

psi(I(Burn.intensity.soil^2))

-31.93

-37.31

-33.96

-43.40

-68.47

(34.43)

(46.14)

(38.60)

(47.23)

(116.50)

p(Int)

13.94*

8.29

13.69*

8.63

7.91

8.69

9.87*

14.05*

(6.19)

(4.66)

(6.07)

(5.05)

(4.67)

(5.05)

(4.81)

(6.60)

p(Julian)

-0.07*

-0.05*

-0.07*

-0.06*

-0.05

-0.06*

-0.06*

-0.08*

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

(0.03)

p(Meantemp)

-0.20

-0.20

-0.18

(0.12)

(0.12)

(0.14)

psi(Burn.intensity.Canopy)

72.60

18.52

30.46

(130.37)

(13.35)

(40.77)

psi(Burn.intensity.soil)

-86.32

-21.35

-35.65

(156.22)

(15.76)

(48.94)

p(Meanhum)

0.02

0.02

0.01

(0.02)

(0.02)

(0.02)

psi(I(Burn.intensity.basal^2))

17.82

(19.29)

Log Likelihood

-25.70

-27.07

-25.76

-26.06

-27.54

-26.35

-27.72

-25.29

AICc

65.55

65.64

65.68

66.28

66.57

66.85

66.93

67.52

Delta

0.00

0.09

0.13

0.73

1.02

1.30

1.38

1.97

Weight

0.04

0.04

0.04

0.03

0.02

0.02

0.02

0.01

Num. obs.

46

46

46

46

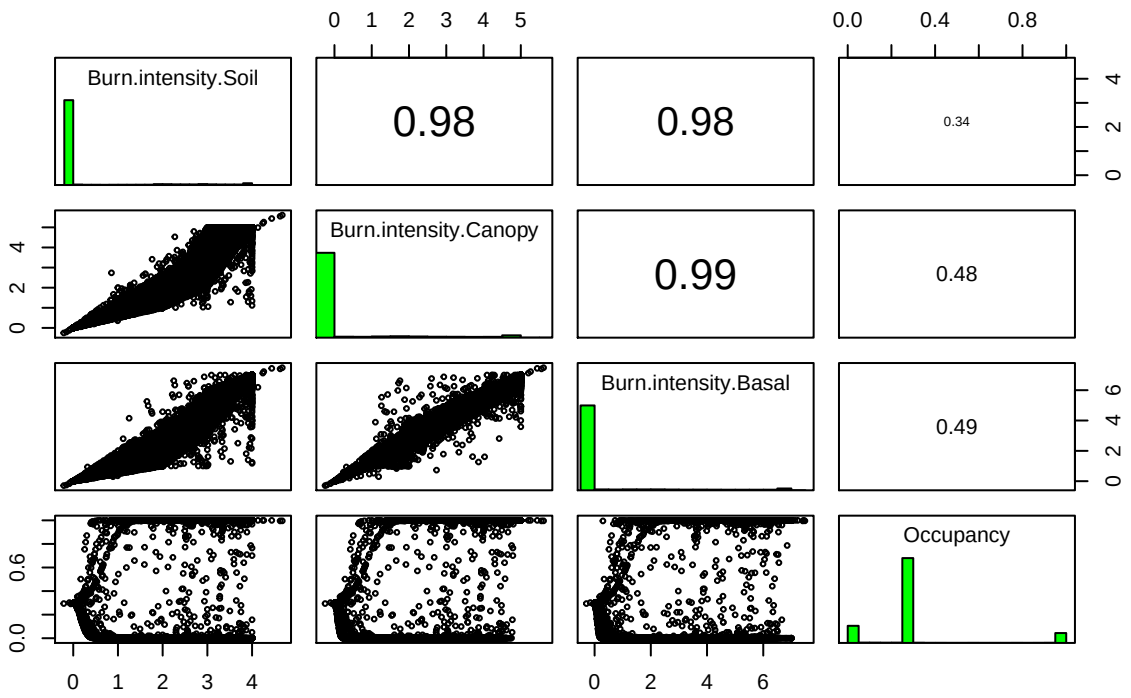
46

46

46

46

p < 0.001, *p < 0.01,* p < 0.05

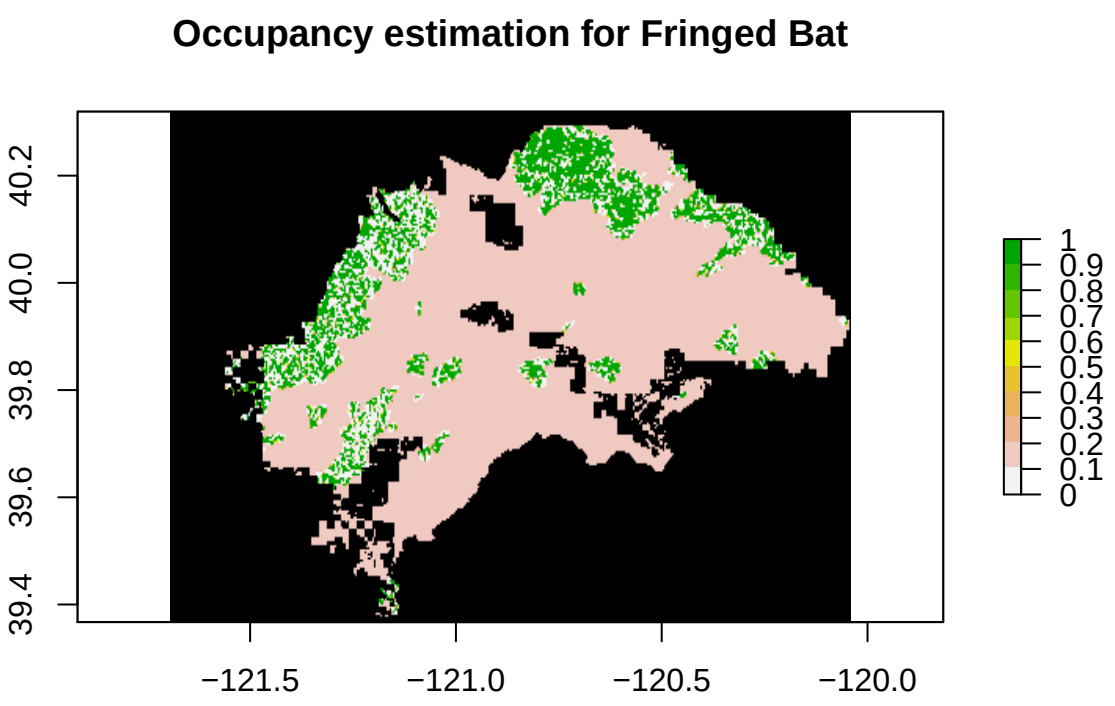


Fringed Bat (*Myotis thysanoides*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
```

```
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
```

```
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

psi(Int)

-1.93*

-1.98*

-1.99*

(0.79)

(0.78)

(0.79)

psi(Burn.intensity.basal)

42.88

50.65

(29.30)

(35.10)

psi(Burn.intensity.Canopy)

-78.13

-92.09

(51.58)

(62.19)

psi(Burn.intensity.soil)

24.28

28.39

(14.59)

(17.88)

p(Int)

-5.56**

-6.36**

-6.56**

(1.76)

(2.14)

(2.20)

p(Meantemp)

0.32*

0.34**

0.35**

(0.13)

(0.13)

(0.13)

psi(I(Burn.intensity.basal^2))

28.27

(28.74)

psi(I(Burn.intensity.Canopy^2))

-64.84

(64.91)

psi(I(Burn.intensity.soil^2))

18.86

(18.11)

p(sdtemp)

0.21

0.22

(0.27)

(0.27)

Log Likelihood

-26.59

-25.71

-26.17

AICc

67.34

68.36

69.29

Delta

0.00

1.02

1.95

Weight

0.05

0.03

0.02

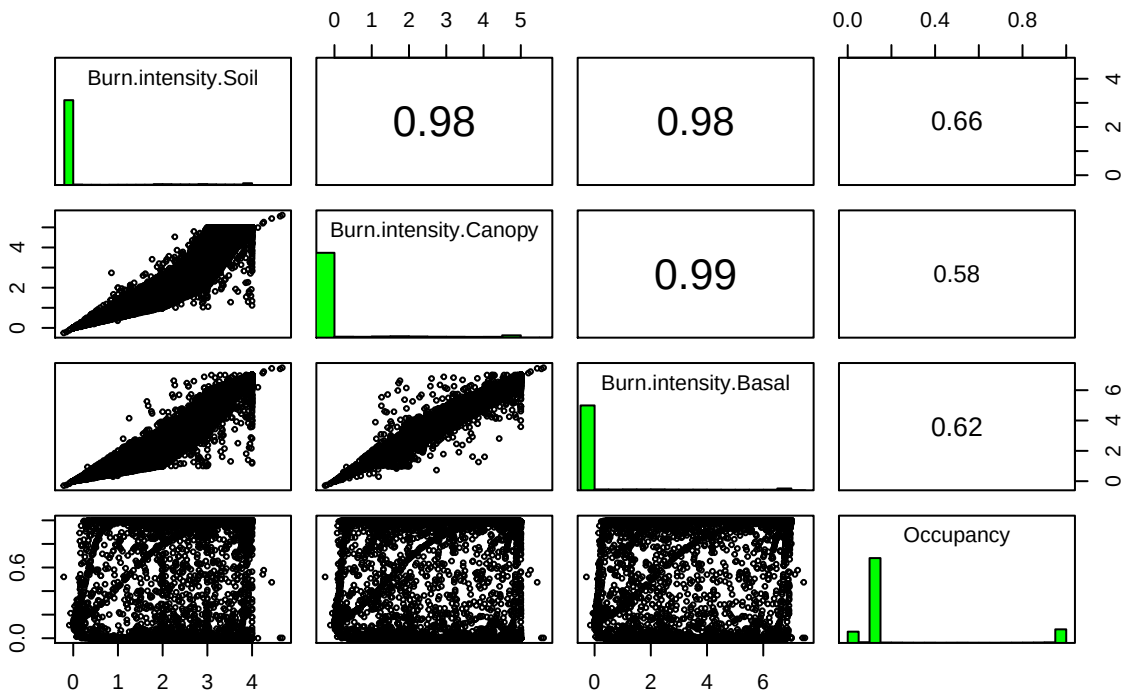
Num. obs.

46

46

46

***p* < 0.001,** *p < 0.01,* p < 0.05

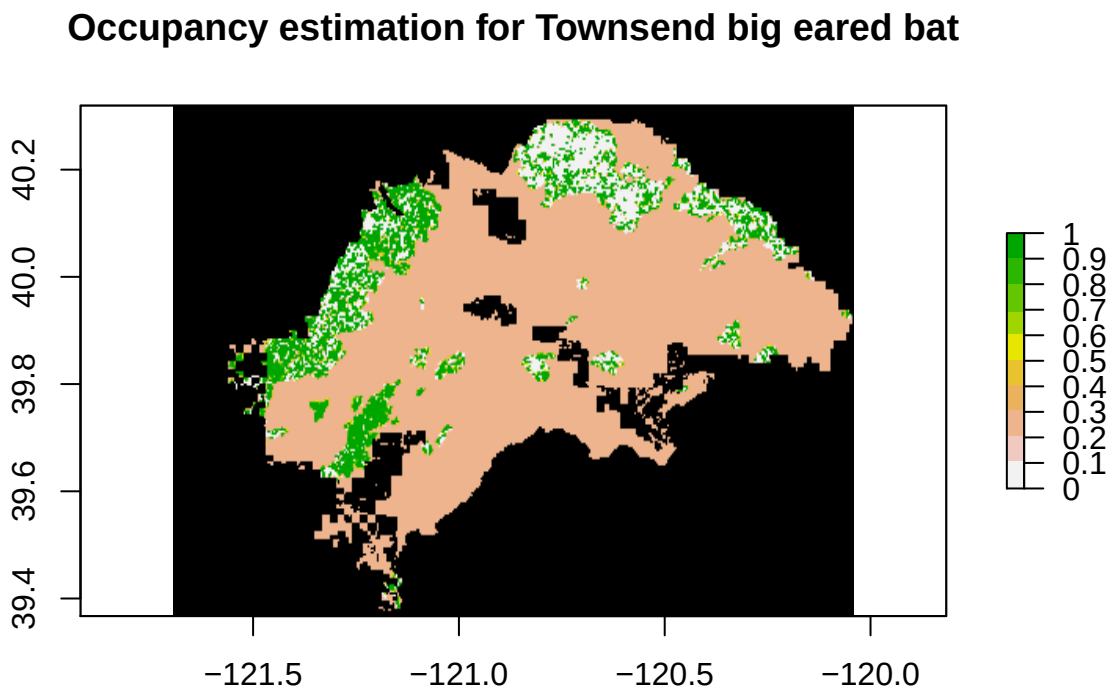


Townsend's Long-eared Bat (*Corynorhinus townsendii*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
```

```
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
```

```
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

Model 9

Model 10

Model 11

Model 12

Model 13

Model 14

Model 15

Model 16

Model 17

Model 18

Model 19

Model 20

Model 21

Model 22

Model 23

Model 24

Model 25

Model 26

Model 27

Model 28

Model 29

Model 30

psi(Int)

-1.17

-0.92

-0.27

-1.83

0.27

-0.85

-1.31

-1.67

-1.18

-1.14

-0.62

-0.63

-0.98

-0.85

-1.13

-1.18

-0.89

-0.77

-1.57

-1.79

0.06

-2.08

-0.65

-1.08

-1.09

-1.11

-0.67

-1.63

-2.08

-0.73

(1.22)

(1.35)

(1.61)

(1.21)

(2.14)

(1.07)

(1.16)

(1.22)

(1.15)

(1.45)

(1.31)

(1.38)

(1.42)

(1.25)

(1.46)

(1.08)

(1.22)

(1.24)

(1.24)

(1.21)

(1.88)

(1.15)

(1.26)

(1.46)

(1.32)

(1.07)

(1.30)

(1.24)

(1.20)

(1.36)

psi(I(Burn.intensity.basal^2))

-3.94

-3.92

-9.46

-7.72

-4.87

-6.39

0.42

-3.30

(5.28)

(6.16)

(10.98)

(9.70)

(5.32)

(5.98)

(0.73)

(5.42)

psi(I(Burn.intensity.Canopy^2))

7.43

-12.23

7.41

19.67

15.95

-40.43

9.17

13.00

0.44

-3.73

1.40

(9.77)

(12.68)

(11.40)

(22.64)

(19.70)

(42.59)

(9.87)

(12.37)

(0.55)

(3.46)

(1.90)

p(Int)

-5.01**

-4.73**

-4.38*

8.27

-8.63*

6.23

5.17

7.38

-8.58*

-3.77*

-5.31**

-5.30**

-4.03*

-4.82**

-4.39*

2.93

-5.08**

-9.28**

4.98

9.19

0.46

9.77

-9.32**

-4.26*

-4.67**

-2.19

-9.33**

5.54

9.83

-9.13**

(1.77)

(1.77)

(2.13)

(6.30)

(3.76)

(7.28)

(7.13)

(5.99)

(3.76)

(1.81)

(1.80)

(1.82)

(1.70)

(1.72)

(1.74)

(7.29)

(1.77)

(3.55)

(6.09)

(6.18)

(6.52)

(7.26)

(3.52)

(1.73)

(1.75)

(1.76)

(3.52)

(5.77)

(7.24)

(3.54)

p(Meanhum)

0.04

0.03

0.03

0.05

0.03

0.06*

0.02

0.05*

0.05*

0.02

0.04

0.03

0.04

0.04*

0.05

0.03

0.05

0.03

0.03

0.05

0.05

(0.02)

(0.02)

(0.02)

(0.03)

(0.02)

(0.03)

(0.02)

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(0.02)

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(0.02)

(0.02)

(0.03)

(0.02)

(0.03)

(0.02)

(0.02)

(0.03)

(0.03)

psi(Burn.intensity.basal)

-51.10

45.34

-51.32

39.25

-5.15

-48.88

-23.85

49.22

-70.91

-18.75

92.68

(48.85)

(42.00)

(41.90)

(40.16)

(6.92)

(46.18)

(31.11)

(43.84)

(65.35)

(20.57)

(123.93)

psi(Burn.intensity.Canopy)

70.07

70.52

51.73

-5.34

56.84

-34.60

91.61

0.91

(66.72)

(57.35)

(59.46)

(7.10)

(53.09)

(37.55)

(82.76)

(1.11)

psi(I(Burn.intensity.soil^2))

-19.24

-16.50

60.32

3.46

-4.51

-20.93

0.41

-34.07

(18.15)

(19.18)

(63.44)

(4.01)

(4.00)

(18.95)

(0.52)

(43.72)

p(Julian)

-0.06

-0.04

-0.05

-0.05

-0.04

-0.04

-0.06

-0.03

-0.07

-0.04

-0.07

(0.03)

(0.04)
(0.04)
(0.03)
(0.04)
(0.03)
(0.03)
(0.03)
(0.04)
(0.03)
(0.04)
p(Meantemp)
0.16
0.14
0.20
0.11
0.20
0.05
0.20
0.19
(0.11)
(0.12)
(0.11)
(0.09)
(0.11)
(0.10)
(0.11)
(0.11)
psi(Burn.intensity.soil)
40.49
-3.82
16.97
20.31
42.88
31.99
(51.88)
(4.75)

(14.71)

(18.26)

(46.24)

(34.12)

Log Likelihood

-20.31

-20.41

-22.90

-20.59

-21.91

-23.18

-19.48

-20.88

-19.58

-20.99

-19.67

-19.69

-21.02

-19.72

-21.05

-19.76

-19.77

-21.10

-21.15

-21.16

-22.43

-19.85

-21.19

-21.20

-19.88

-23.70

-21.24

-21.25

-19.94

-21.31

AICc

52.12

52.31

52.37

52.68

52.80

52.93

53.11

53.27

53.32

53.49

53.49

53.53

53.53

53.58

53.59

53.66

53.70

53.70

53.81

53.82

53.84

53.86

53.88

53.90

53.91

53.98

53.99

54.01

54.04

54.12

Delta

0.00

0.19

0.25

0.56

0.67

0.81

0.99

1.14

1.20

1.37

1.37

1.41

1.41

1.46

1.47

1.54

1.58

1.58

1.68

1.70

1.72

1.74

1.76

1.78

1.79

1.86

1.86

1.88

1.91

2.00

Weight

0.02

0.02

0.02

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

Num. obs.

46

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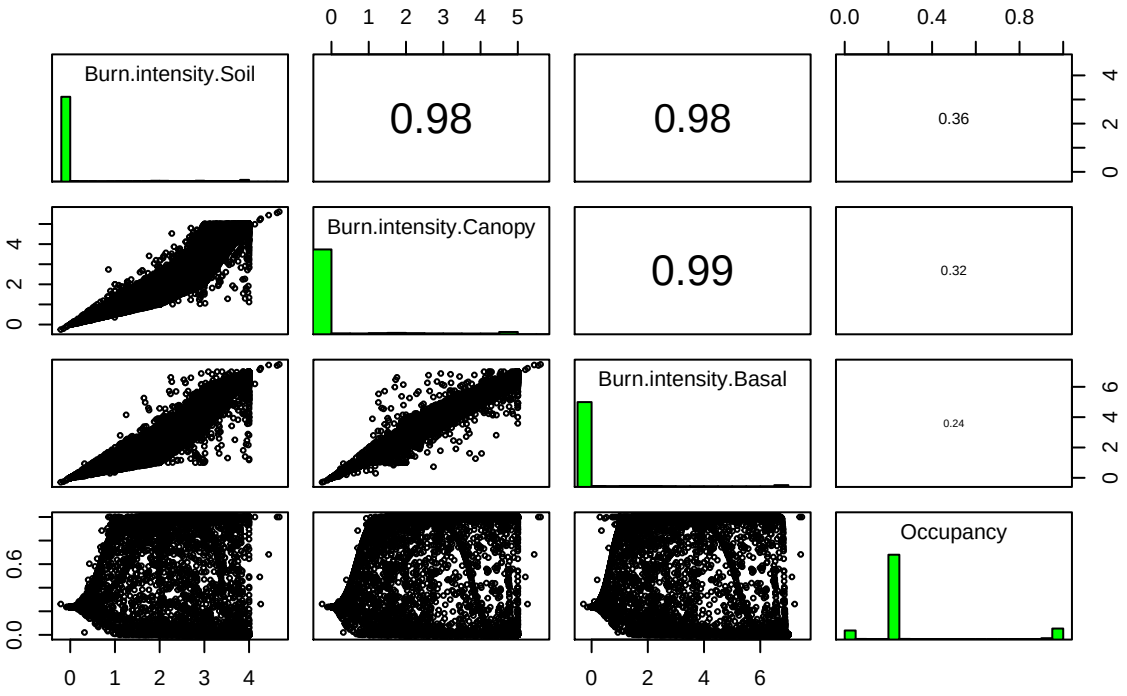
***p* < *0.001*,** *p* < *0.01*, p < 0.05



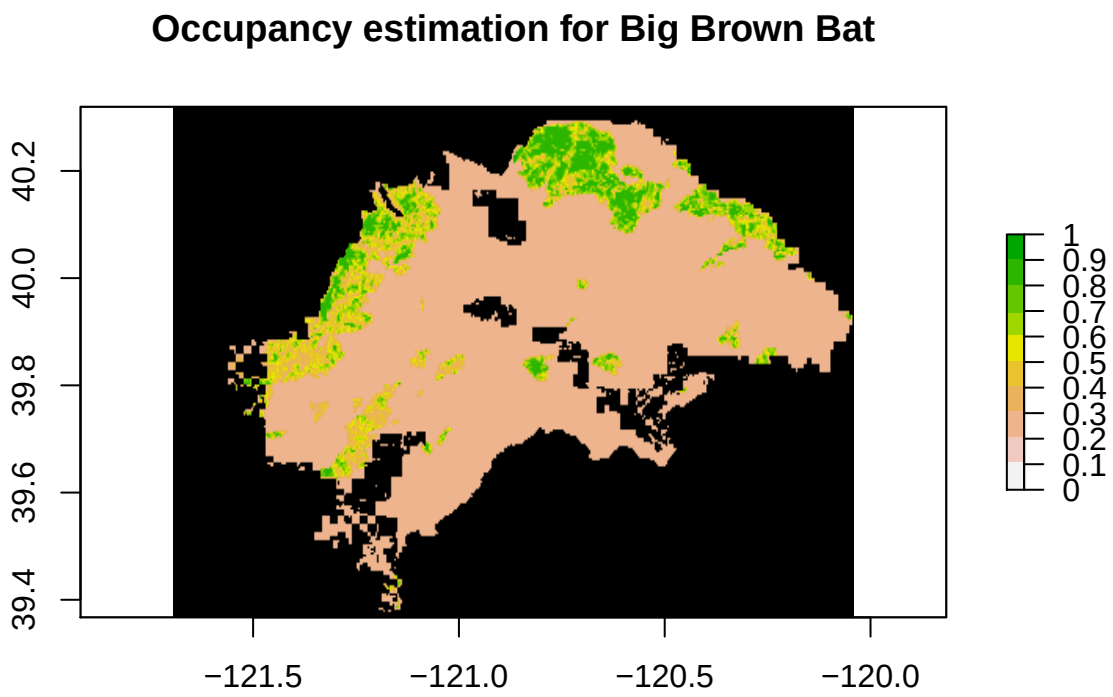
The western pipistrelle (*Parastrellus hesperus*)

big brown bat (*Eptesicus fuscus*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
```

```
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
```

```
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

Model 9

Model 10

Model 11

psi(Int)

-1.02*

-0.88*

-0.86*

-1.07*

-0.92

-1.03*

-0.97*

-0.97*

-0.95*

-0.93*

-0.90

(0.45)

(0.42)

(0.42)

(0.49)

(0.48)

(0.45)

(0.46)

(0.47)

(0.46)

(0.47)

(0.48)

psi(I(Burn.intensity.soil^2))

0.16*

0.16*

0.16*

0.16*

0.39

0.37

(0.07)

(0.07)

(0.07)

(0.07)

(0.36)

(0.34)

p(Int)

2.07*

2.05*

2.06*

2.02*

3.85

1.65

2.03*

-2.17

2.04*

2.07*

2.08*

(1.01)

(1.01)

(1.01)

(1.01)

(2.02)

(1.07)

(1.01)

(4.72)

(1.01)

(1.00)

(0.99)

p(Meanhum)

-0.03*

-0.03*

-0.03*

-0.03*

-0.04*

-0.03*

-0.03*

-0.03*

-0.03*

-0.03*

-0.03*

(0.01)

(0.01)

(0.01)

(0.01)

(0.02)

(0.01)

(0.01)

(0.01)

(0.01)

(0.01)

(0.01)

psi(I(Burn.intensity.Canopy^2))

0.11*

(0.05)

psi(I(Burn.intensity.basal^2))

0.06*

(0.03)

psi(Burn.intensity.soil)

0.53*

(0.24)

p(Meantemp)

-0.10

(0.10)

p(sdhum)

0.05

(0.06)

psi(Burn.intensity.Canopy)

0.45*

-0.69

(0.21)

(1.04)

p(Julian)

0.02

(0.02)

psi(Burn.intensity.basal)

0.33*

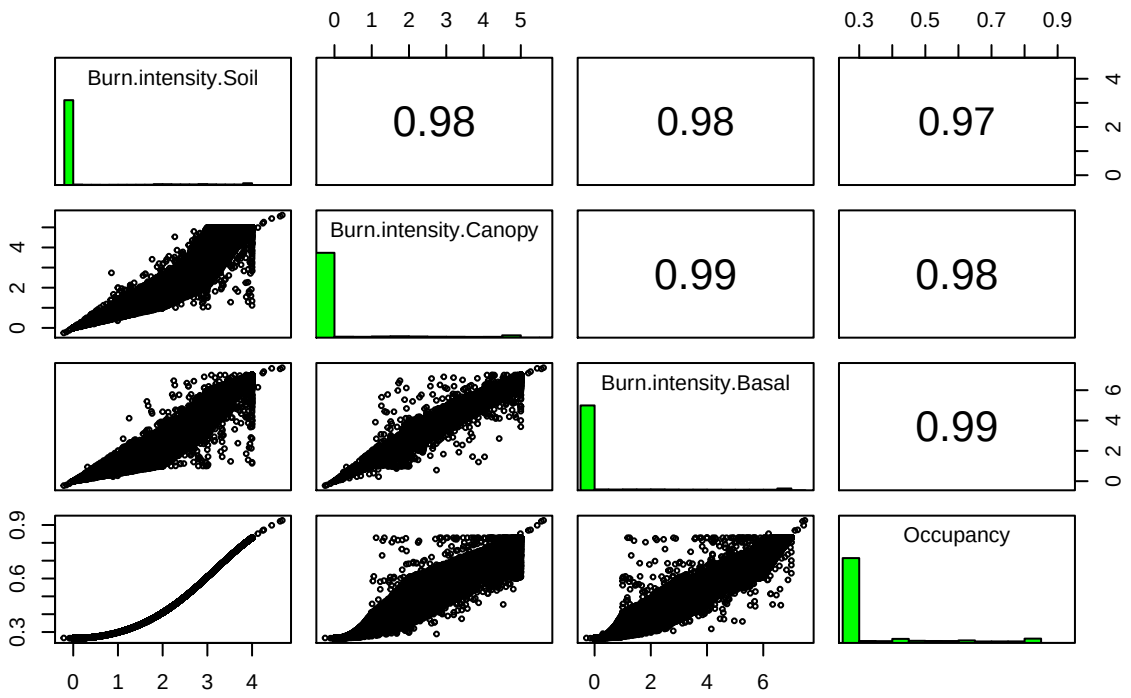
-0.55

(0.16)

(0.81)

Log Likelihood	AICc	Delta
-57.00	122.98	0.00
-57.38	123.74	0.75
-57.40	123.77	0.79
-57.63	124.25	1.26
-56.48	124.46	1.48
-56.55	124.59	1.61
-57.84	124.66	1.67
-56.58	124.67	1.68
-57.91	124.79	1.81
-56.68	124.85	1.87
-56.71	124.92	1.93

Weight											
0.02											
0.02											
0.01											
0.01											
0.01											
0.01											
0.01											
0.01											
0.01											
0.01											
Num. obs.											
46											
46											
46											
46											
46											
46											
46											
46											
46											
46											
p < 0.001, *p < 0.01,* p < 0.05											

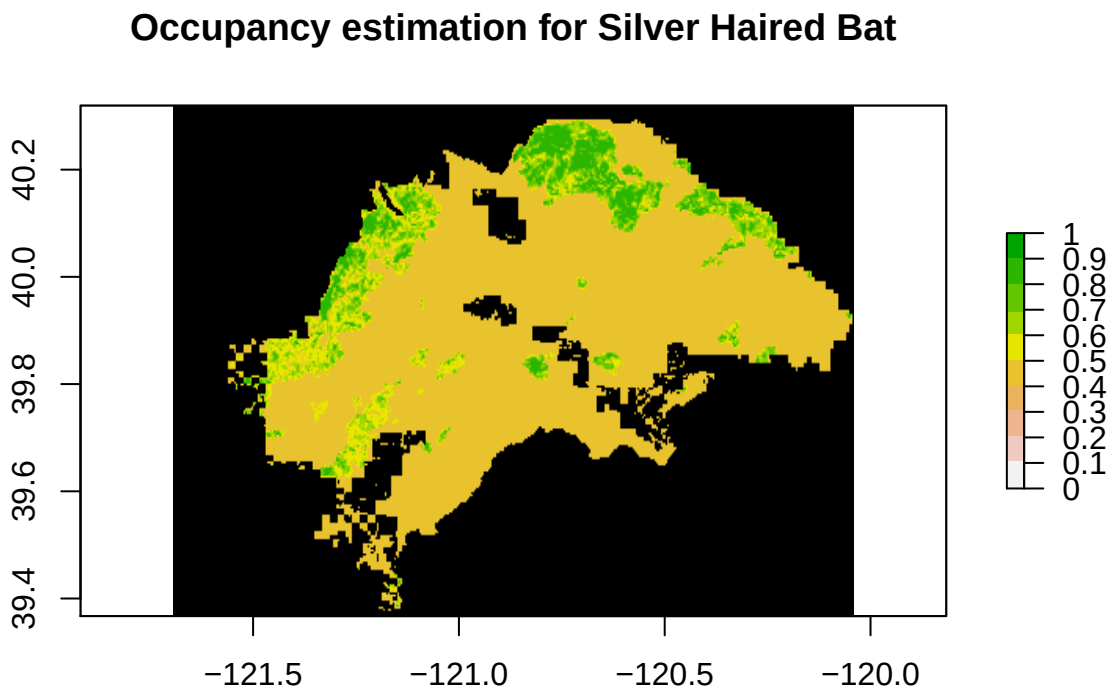


silver-haired bat (*Lasionycteris noctivagans*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
```

```
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
```

```
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

Model 9

Model 10

Model 11

Model 12

Model 13

Model 14

Model 15

Model 16

Model 17

Model 18

Model 19

Model 20

Model 21

Model 22

Model 23

Model 24

Model 25

Model 26

Model 27

Model 28

Model 29

Model 30

psi(Int)

-0.28

-0.29

-0.30

-0.34

-0.22

-0.05

-0.29

-0.26

-0.23

-0.27

-0.22

-0.18

-0.30

-0.31

-0.35

-0.28

-0.32

-0.27

-0.27

-0.11

-0.28

-0.33

-0.29

-0.19

-0.16

0.28

0.19

-0.17

0.20

0.16

(0.40)

(0.41)

(0.41)

(0.42)

(0.42)

(0.56)

(0.39)

(0.40)

(0.44)

(0.45)

(0.43)

(0.38)

(0.40)

(0.41)

(0.42)

(0.41)

(0.43)

(0.41)

(0.40)

(0.41)

(0.41)

(0.42)

(0.41)

(0.37)

(0.38)

(0.37)

(0.32)

(0.38)

(0.32)

(0.31)

psi(I(Burn.intensity.soil^2))

0.12

0.11

0.11

0.11

0.12

(0.07)

(0.07)

(0.06)

(0.07)

(0.07)

p(Int)

0.91

0.91

0.91

0.91

1.23

6.30*

1.02

0.19

1.31

1.28

1.25

0.91

1.02

1.02

1.02

0.19

0.20

0.19

0.99

1.28

0.95

0.93

0.91

1.01

0.18

1.45

0.89

0.98

0.14

1.04

(0.48)

(0.48)

(0.48)

(0.48)

(1.03)

(3.07)

(0.79)

(0.72)

(1.04)

(1.04)

(1.04)

(0.48)

(0.79)

(0.79)

(0.79)

(0.72)

(0.72)

(0.72)

(3.14)

(1.04)

(3.12)

(3.12)

(3.11)

(0.79)

(0.72)

(1.04)

(0.49)

(3.14)

(0.74)

(0.79)

p(sdhum)

-0.04

-0.04

-0.04

-0.04

-0.04

-0.03

(0.04)

(0.04)

(0.04)

(0.04)

(0.04)

(0.04)

psi(Burn.intensity.basal)

0.27

-72.83

0.25

0.25

0.25

0.26

(0.16)

(85.88)

(0.15)

(0.15)

(0.15)

(0.15)

psi(Burn.intensity.Canopy)

0.36

102.16

0.35

0.34

0.34

0.35

(0.21)

(120.18)

(0.21)

(0.20)

(0.21)

(0.21)

psi(Burn.intensity.soil)

0.39

0.38

0.38

0.38

0.39

(0.22)

(0.23)

(0.22)

(0.22)

(0.22)

p(Meantemp)

-0.05

-0.15**

-0.06

-0.06

-0.06

-0.06

-0.07

(0.08)

(0.06)

(0.08)

(0.08)

(0.08)

(0.08)

(0.08)

p(Julian)

-0.02

-0.00

-0.00

-0.00

-0.00

-0.00

(0.02)

(0.02)

(0.02)

(0.02)

(0.02)

(0.02)

p(sdtemp)

-0.11

-0.11

-0.11

-0.11

-0.11

-0.12

(0.18)

(0.18)

(0.18)

(0.18)

(0.18)

(0.18)

p(Meanhum)

0.01

0.01

0.01

0.01

0.01

0.01

(0.01)

(0.01)

(0.01)

(0.01)

(0.01)

(0.01)

psi(I(Burn.intensity.Canopy^2))

0.08

0.07

0.07

0.07

0.08

(0.06)

(0.05)

(0.05)

(0.05)

(0.05)

Log Likelihood

-72.91

-73.03

-73.04

-73.06

-73.09

-70.50

-73.14

-73.16

-73.18

-73.20

-73.22

-73.24

-73.27

-73.27

-73.28

-73.29

-73.30

-73.30

-73.31

-73.41

-73.44

-73.44

-73.45

-73.49

-73.51

-74.78

-74.82

-73.65

-74.97

-74.97

AICc

154.80

155.03

155.05

155.10

155.15

155.16

155.26

155.30

155.34

155.37

155.41

155.45

155.52

155.52

155.53

155.56

155.57

155.57

155.59

155.79

155.86

155.86

155.87

155.96

155.99

156.13

156.21

156.29

156.51

156.51

Delta

0.00

0.23

0.25

0.30

0.36

0.36

0.46

0.51

0.54

0.57

0.61

0.66

0.72

0.73

0.73

0.77

0.77

0.77

0.79

0.99

1.06

1.07

1.07

1.16

1.19

1.34

1.41

1.49

1.71

1.71

Weight

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

0.01

Num. obs.

46

46

46

46

46

46

46

46

46

46

46

46

46

46

46

46

46

46

46

46

46

46

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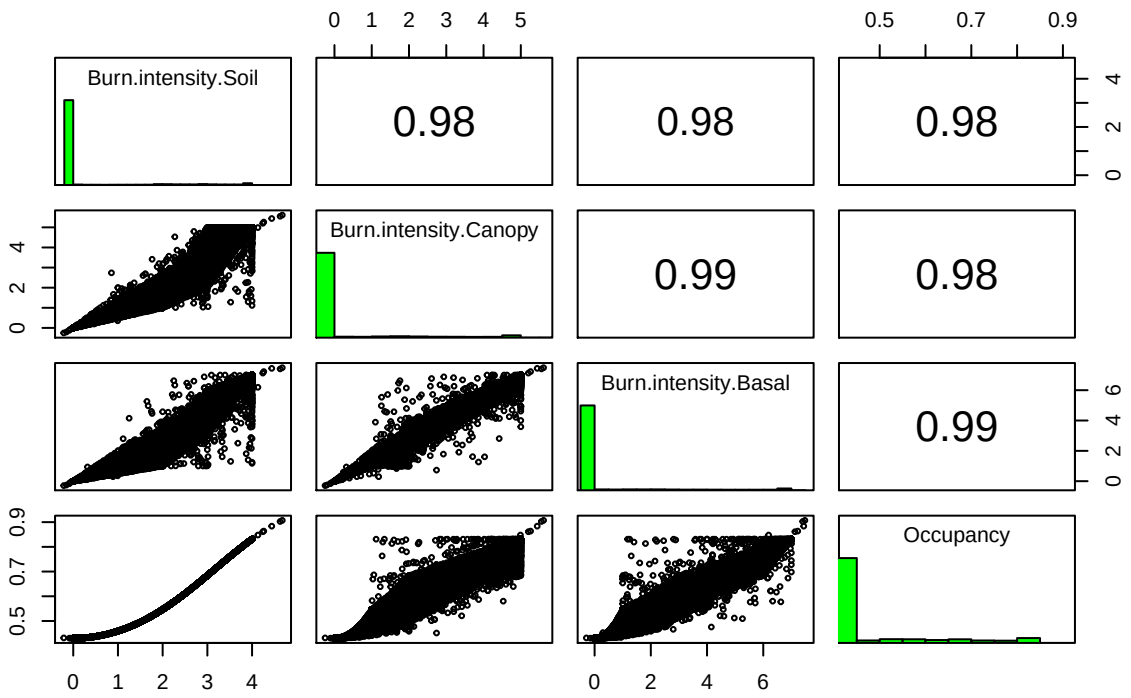
46

46

46

46

***p* < *0.001*,** *p* < *0.01*, p < 0.05

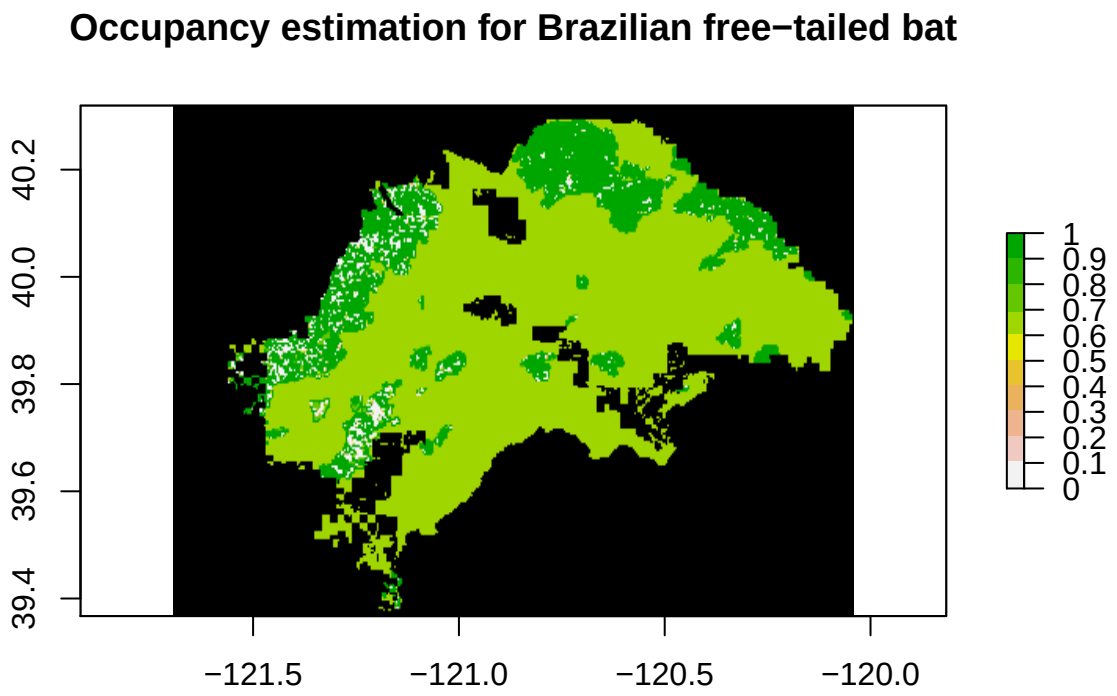


Brazilian free-tailed bat (*Tadarida brasiliensis*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
```

```
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
```

```
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

psi(Int)

0.67

0.66

0.65

0.58

0.63

0.63

0.65

0.65

(0.52)
(0.52)
(0.51)
(0.50)
(0.50)
(0.51)
(0.50)
(0.53)
psi(I(Burn.intensity.basal^2))
49.86
36.53
43.11
37.50
52.44
125.52
31.07
104.32
(55.40)
(40.20)
(44.06)
(40.93)
(61.19)
(121.57)
(31.39)
(546.06)
psi(Burn.intensity.Canopy)
27.36
23.63
29.11
-5.58
(32.65)
(25.17)
(36.51)
(3513.16)
psi(I(Burn.intensity.Canopy^2))
-77.04

-59.20

-66.55

-60.75

-81.24

-207.99

-50.31

-174.69

(86.92)

(66.55)

(68.39)

(67.07)

(96.48)

(202.05)

(51.07)

(363.88)

p(Int)

0.96

0.98

0.24

0.24

3.87

0.23

3.77

0.97

(0.72)

(0.72)

(0.62)

(0.62)

(2.69)

(0.62)

(2.69)

(0.72)

p(Meantemp)

-0.04

-0.04

-0.04

(0.05)
(0.05)
(0.05)
psi(Burn.intensity.basal)
22.70
23.45
102.91
19.30
77.29
(27.31)
(27.12)
(106.67)
(20.35)
(3731.70)
p(Meanhum)
0.00
0.00
0.00
0.00
0.00
(0.01)
(0.01)
(0.01)
(0.01)
(0.01)
p(Julian)
-0.02
-0.02
(0.01)
(0.01)
psi(Burn.intensity.soil)
-10.90
(16.17)
Log Likelihood
-81.47
-81.62

-81.75

-81.79

-80.52

-80.81

-80.82

-80.86

AICc

177.09

177.39

177.66

177.73

177.99

178.56

178.58

178.67

Delta

0.00

0.30

0.57

0.64

0.90

1.47

1.49

1.58

Weight

0.07

0.06

0.05

0.05

0.05

0.03

0.03

0.03

Num. obs.

46

46

46

46

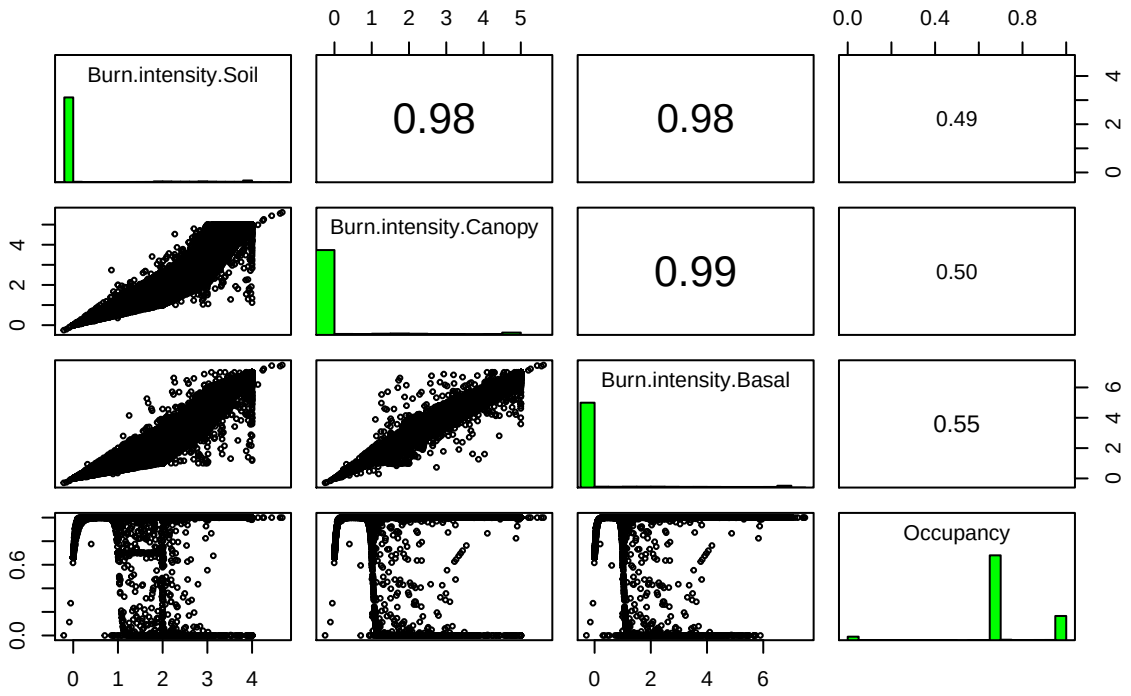
46

46

46

46

***p* < 0.001,** $p < 0.01$, $\mathrm{p} < 0.05$

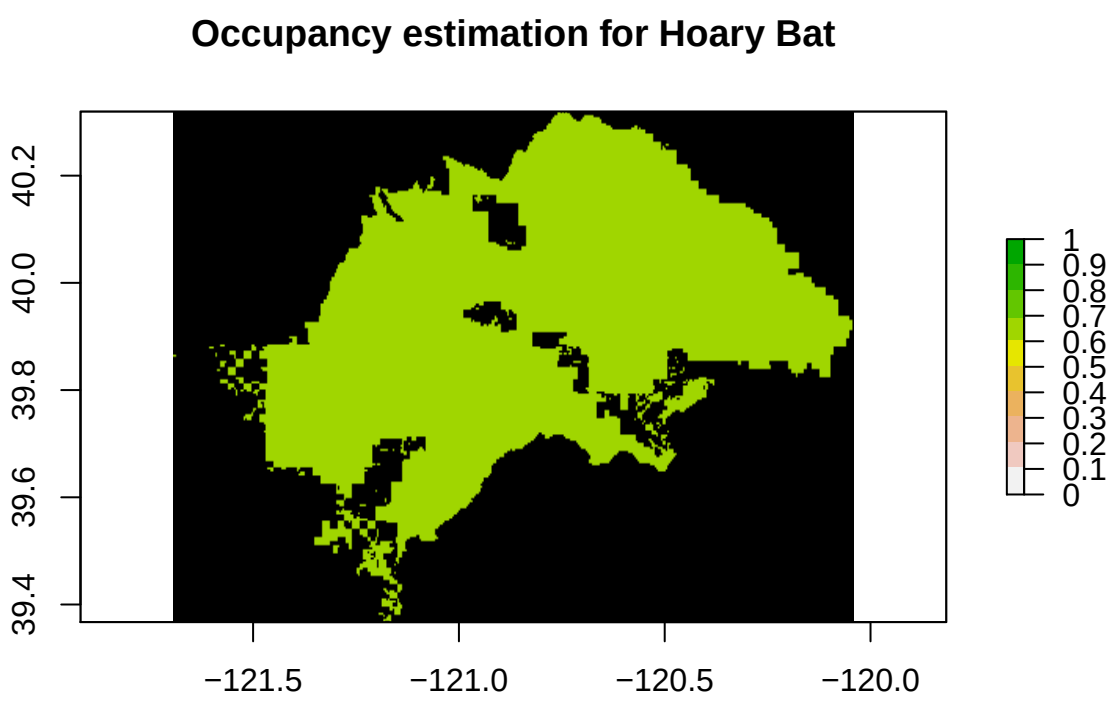


hoary bat (*Lasiurus cinereus*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
```

```
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
```

```
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

psi(Int)

0.76

0.94

0.85

1.10

0.84

(0.47)

(0.66)

(0.52)

(0.75)

(0.63)

p(Int)

5.86

6.44*

5.03

5.30

6.63*

(3.00)

(2.66)

(3.04)

(2.76)

(2.67)

p(Julian)

-0.03

-0.04*

-0.03

-0.03*

-0.04*

(0.02)

(0.01)

(0.02)

(0.01)

(0.01)

psi(Burn.intensity.basal)

45.01

55.57

45.56

(31.73)

(42.64)

(34.26)

psi(I(Burn.intensity.basal^2))

-1.46

-1.82

-1.17

(1.16)

(1.57)

(1.01)

psi(Burn.intensity.Canopy)

-47.16

-58.12

-52.69

(32.68)

(43.85)

(40.19)

p(Meanhum)

0.01

0.01

(0.01)

(0.01)

psi(Burn.intensity.soil)

3.31

(4.73)

Log Likelihood

-78.56

-75.13

-77.89

-74.27

-74.29

AICc

163.68

164.41

164.75

165.49

165.53

Delta

0.00

0.73

1.07

1.81

1.85

Weight

0.04

0.03

0.02

0.02

0.02

Num. obs.

46

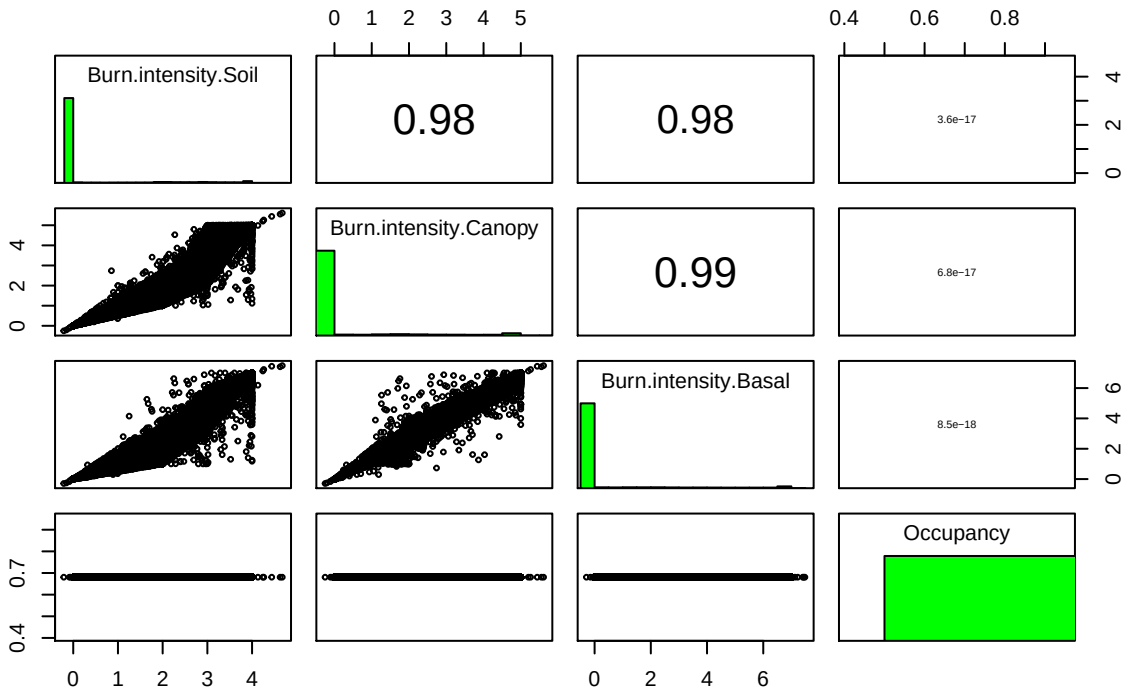
46

46

46

46

***p* < *0.001*,** *p* < *0.01*, p < 0.05

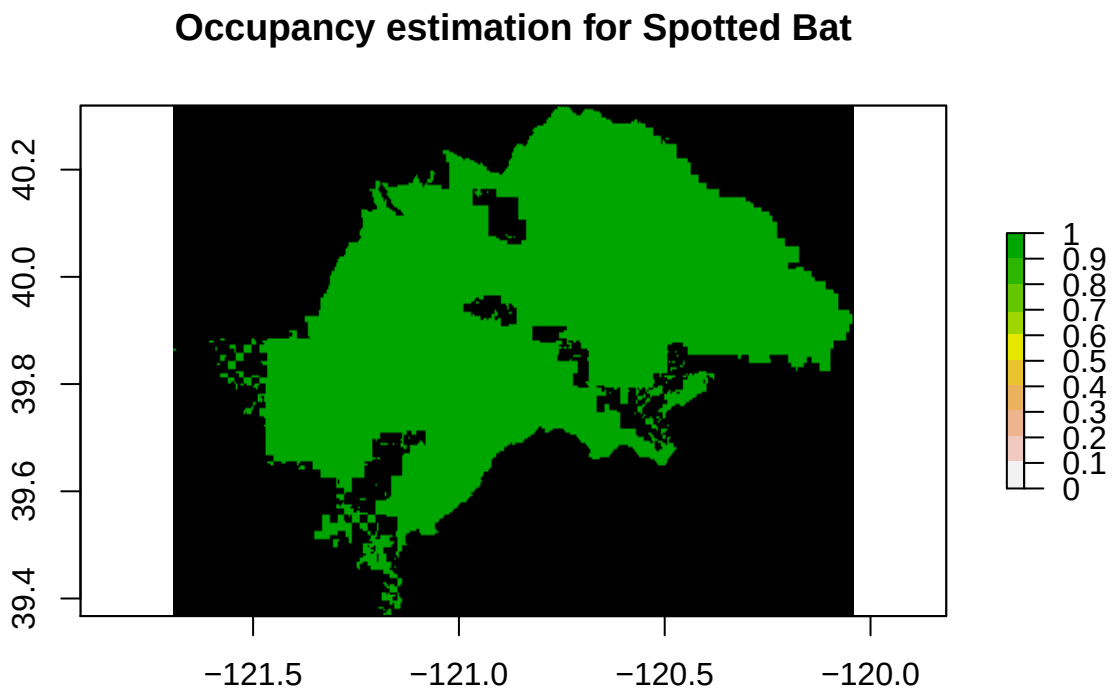


Spotted bat (*Euderma maculatum*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
```

```
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
```

```
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

Model 8

Model 9

psi(Int)

8.31

7.98

-0.90

-0.82

-0.45

-0.08

-0.36

5.89

-0.28

(89.85)

(65.83)

(1.92)

(1.99)

(2.28)

(1.17)

(2.35)

(21.66)

(2.28)

p(Int)

1.33

-0.23

1.69

1.70

1.59

4.76

1.58

5.63

1.57

(2.14)

(2.60)

(2.12)

(2.15)

(2.14)

(4.55)

(2.15)

(6.45)

(2.16)

p(Meanhum)

-0.11

-0.14

-0.10

-0.10

-0.10

-0.27

-0.11

-0.11

-0.11

(0.06)

(0.07)

(0.06)

(0.06)

(0.06)

(0.19)

(0.06)

(0.06)

(0.06)

p(sdtemp)

0.62

(0.50)

psi(I(Burn.intensity.basalˆ2))

0.19

(0.22)

psi(I(Burn.intensity.Canopyˆ2))

0.30

(0.36)

psi(Burn.intensity.basal)

0.68

(0.90)

p(sdhum)

0.35

(0.28)

psi(Burn.intensity.Canopy)

0.87

(1.24)

p(Julian)

-0.02

(0.03)

psi(I(Burn.intensity.soilˆ2))

0.36

(0.59)

Log Likelihood

-10.76

-9.89

-10.31

-10.36

-10.50

-10.50

-10.52

-10.52

-10.52

AICc

28.09

28.75

29.60

29.69

29.97

29.98

30.02

30.02

30.02

Delta

0.00

0.66

1.51

1.60

1.88

1.89

1.93

1.93

1.93

Weight

0.03

0.02

0.01

0.01

0.01

0.01

0.01

0.01

0.01

Num. obs.

46

46

46

46

46

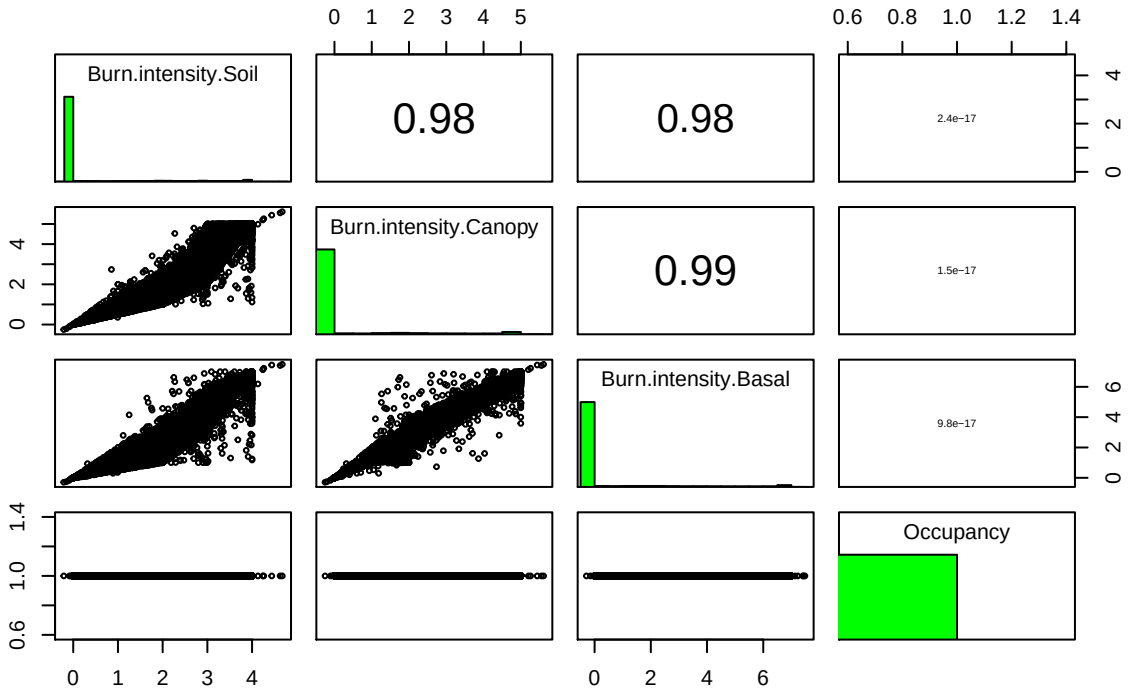
46

46

46

46

***p* < 0.001,** *p* < *0.01*, p < 0.05

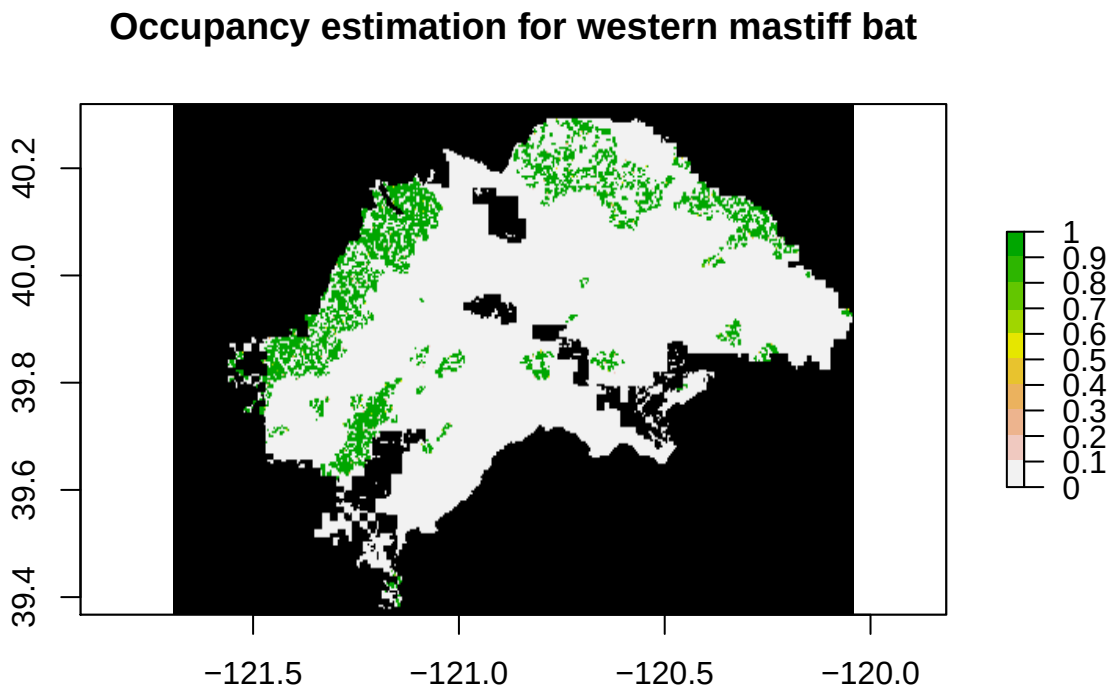


western mastiff bat (*Eumops perotis*)

```
##   doing row 1000 of 108500
##   doing row 2000 of 108500
##   doing row 3000 of 108500
##   doing row 4000 of 108500
##   doing row 5000 of 108500
##   doing row 6000 of 108500
##   doing row 7000 of 108500
##   doing row 8000 of 108500
##   doing row 9000 of 108500
##   doing row 10000 of 108500
##   doing row 11000 of 108500
##   doing row 12000 of 108500
##   doing row 13000 of 108500
##   doing row 14000 of 108500
##   doing row 15000 of 108500
##   doing row 16000 of 108500
##   doing row 17000 of 108500
##   doing row 18000 of 108500
##   doing row 19000 of 108500
##   doing row 20000 of 108500
##   doing row 21000 of 108500
##   doing row 22000 of 108500
##   doing row 23000 of 108500
##   doing row 24000 of 108500
##   doing row 25000 of 108500
##   doing row 26000 of 108500
##   doing row 27000 of 108500
##   doing row 28000 of 108500
##   doing row 29000 of 108500
##   doing row 30000 of 108500
##   doing row 31000 of 108500
##   doing row 32000 of 108500
##   doing row 33000 of 108500
##   doing row 34000 of 108500
##   doing row 35000 of 108500
##   doing row 36000 of 108500
##   doing row 37000 of 108500
##   doing row 38000 of 108500
##   doing row 39000 of 108500
##   doing row 40000 of 108500
##   doing row 41000 of 108500
##   doing row 42000 of 108500
##   doing row 43000 of 108500
##   doing row 44000 of 108500
##   doing row 45000 of 108500
##   doing row 46000 of 108500
##   doing row 47000 of 108500
##   doing row 48000 of 108500
##   doing row 49000 of 108500
##   doing row 50000 of 108500
##   doing row 51000 of 108500
##   doing row 52000 of 108500
```

```
##   doing row 53000 of 108500
##   doing row 54000 of 108500
##   doing row 55000 of 108500
##   doing row 56000 of 108500
##   doing row 57000 of 108500
##   doing row 58000 of 108500
##   doing row 59000 of 108500
##   doing row 60000 of 108500
##   doing row 61000 of 108500
##   doing row 62000 of 108500
##   doing row 63000 of 108500
##   doing row 64000 of 108500
##   doing row 65000 of 108500
##   doing row 66000 of 108500
##   doing row 67000 of 108500
##   doing row 68000 of 108500
##   doing row 69000 of 108500
##   doing row 70000 of 108500
##   doing row 71000 of 108500
##   doing row 72000 of 108500
##   doing row 73000 of 108500
##   doing row 74000 of 108500
##   doing row 75000 of 108500
##   doing row 76000 of 108500
##   doing row 77000 of 108500
##   doing row 78000 of 108500
##   doing row 79000 of 108500
##   doing row 80000 of 108500
##   doing row 81000 of 108500
##   doing row 82000 of 108500
##   doing row 83000 of 108500
##   doing row 84000 of 108500
##   doing row 85000 of 108500
##   doing row 86000 of 108500
##   doing row 87000 of 108500
##   doing row 88000 of 108500
##   doing row 89000 of 108500
##   doing row 90000 of 108500
##   doing row 91000 of 108500
##   doing row 92000 of 108500
##   doing row 93000 of 108500
##   doing row 94000 of 108500
##   doing row 95000 of 108500
##   doing row 96000 of 108500
##   doing row 97000 of 108500
##   doing row 98000 of 108500
##   doing row 99000 of 108500
##   doing row 100000 of 108500
##   doing row 101000 of 108500
##   doing row 102000 of 108500
##   doing row 103000 of 108500
##   doing row 104000 of 108500
##   doing row 105000 of 108500
##   doing row 106000 of 108500
```

```
##   doing row 107000 of 108500
##   doing row 108000 of 108500
```



Statistical models

Model 1

Model 2

Model 3

Model 4

Model 5

Model 6

Model 7

psi(Int)

-14.29

-24.26

-19.30

-6.08

-6.26

-9.75

-9.16

(15.09)

(22.68)

(17.06)

(5.35)

(5.92)

(41.78)

(9.44)

psi(I(Burn.intensity.basal^2))

-56.81

-8.15

-40.39

-44.75

-49.31

-81.40

-28.02

(57.02)

(6.27)

(32.69)

(36.20)

(39.86)

(138.86)

(23.57)

psi(I(Burn.intensity.Canopy^2))

124.07

71.22

80.41

88.54

175.33

49.78

(125.00)

(58.11)

(64.97)

(71.54)

(304.89)

(42.15)

psi(I(Burn.intensity.soil^2))

-19.71

15.34

-20.09

(20.27)

(11.71)

(54.40)

p(Int)

1.41

-1.11*

1.67

0.68

-0.38

1.61

1.51

(1.55)

(0.47)

(1.53)

(1.49)

(1.73)

(1.53)

(1.54)

p(Meantemp)

-0.19

-0.20

-0.16

-0.23

-0.20

-0.19

(0.10)

(0.10)

(0.11)

(0.12)

(0.10)

(0.10)

psi(Burn.intensity.Canopy)

103.76

46.67

(79.75)

(36.27)

psi(Burn.intensity.soil)

-96.42

-36.89

-20.24

-22.64

(72.99)

(28.44)

(46.22)

(18.42)

p(sdtemp)

0.60

(0.42)

psi(Burn.intensity.basal)

20.16

(16.76)

Log Likelihood

-13.56

-13.71

-12.64

-15.45

-14.32

-12.95

-12.96

AICc

41.26

41.43

42.23

42.41

42.80

42.86

42.87

Delta

0.00

0.17

0.97

1.14

1.53

1.59

1.60

Weight

0.04

0.03

0.02

0.02

0.02

0.02

0.02

Num. obs.

46

46

46

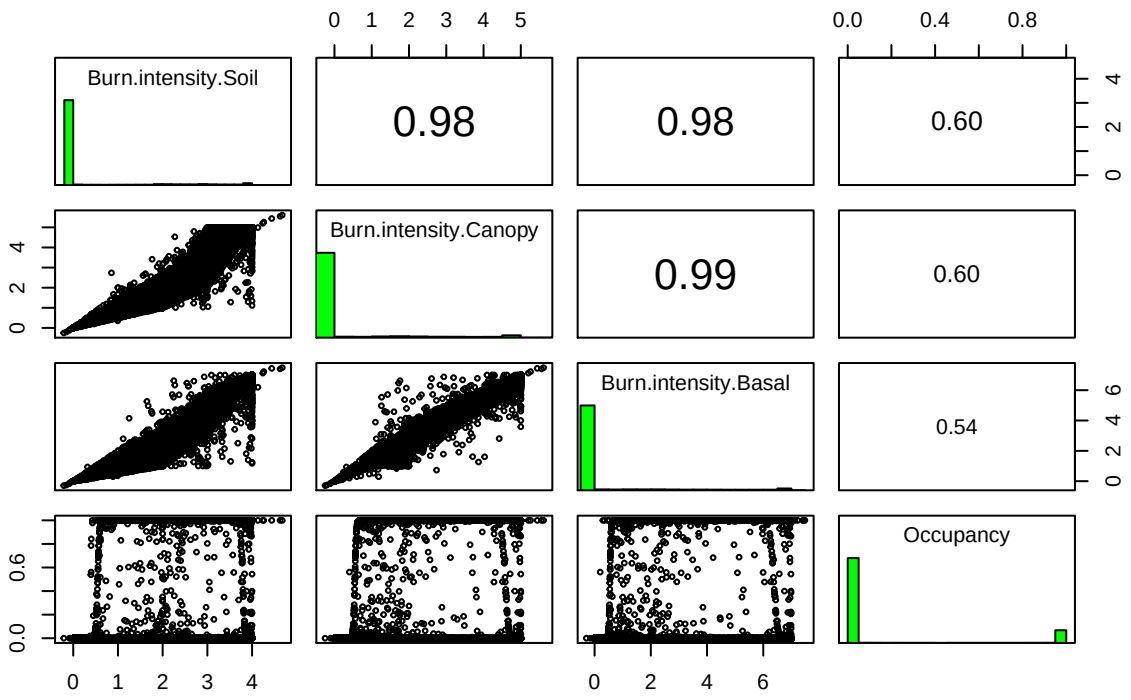
46

46

46

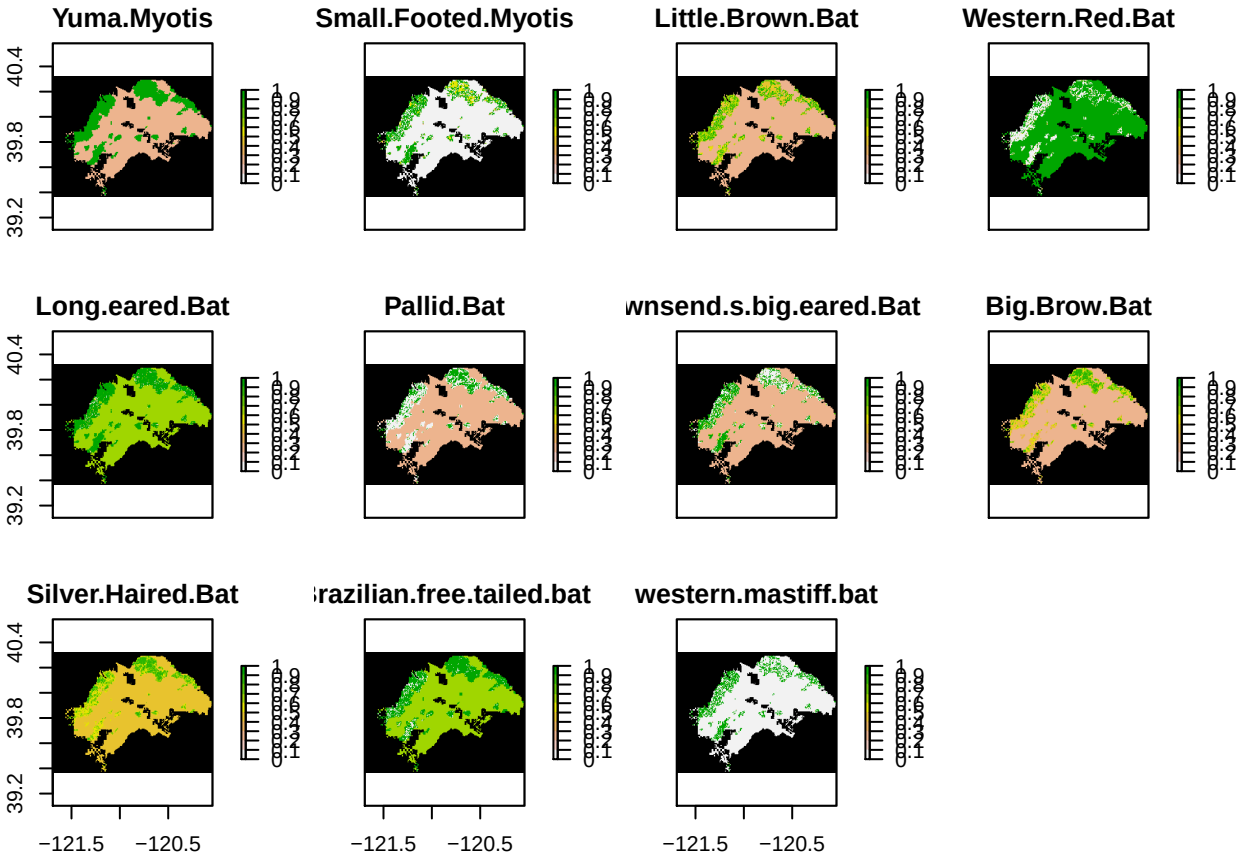
46

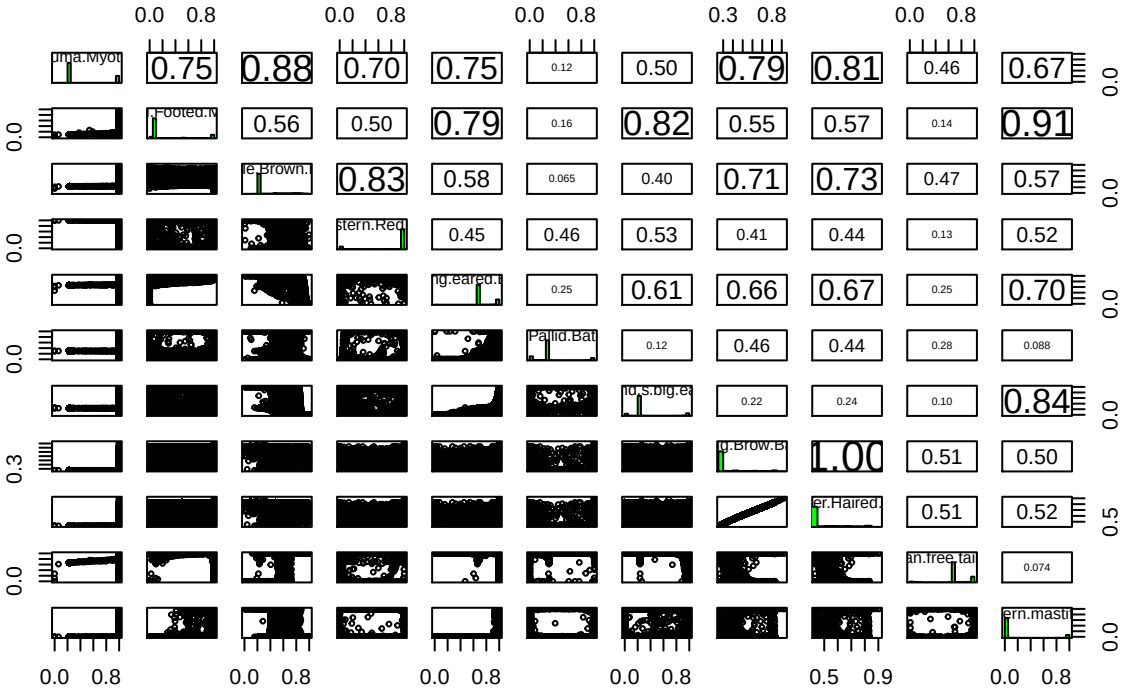
***p* < 0.001,** *p* < *0.01,* p < 0.05

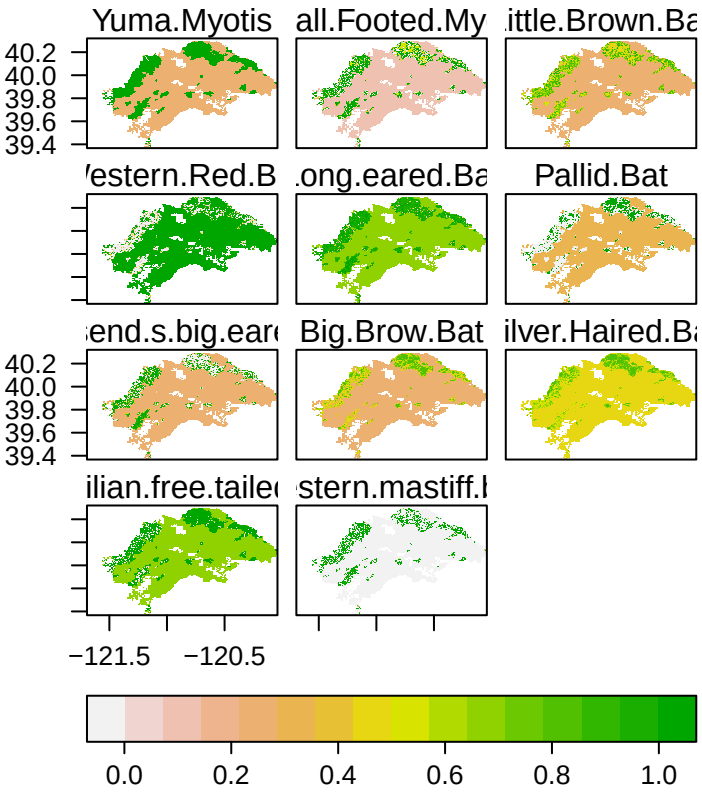

Burn.intensity.Soil
0.98
0.98
0.60
Burn.intensity.Canopy
0.99
0.60
Burn.intensity.Basal
0.54
Occupancy

Relationships between different species of Bats

Fire bats

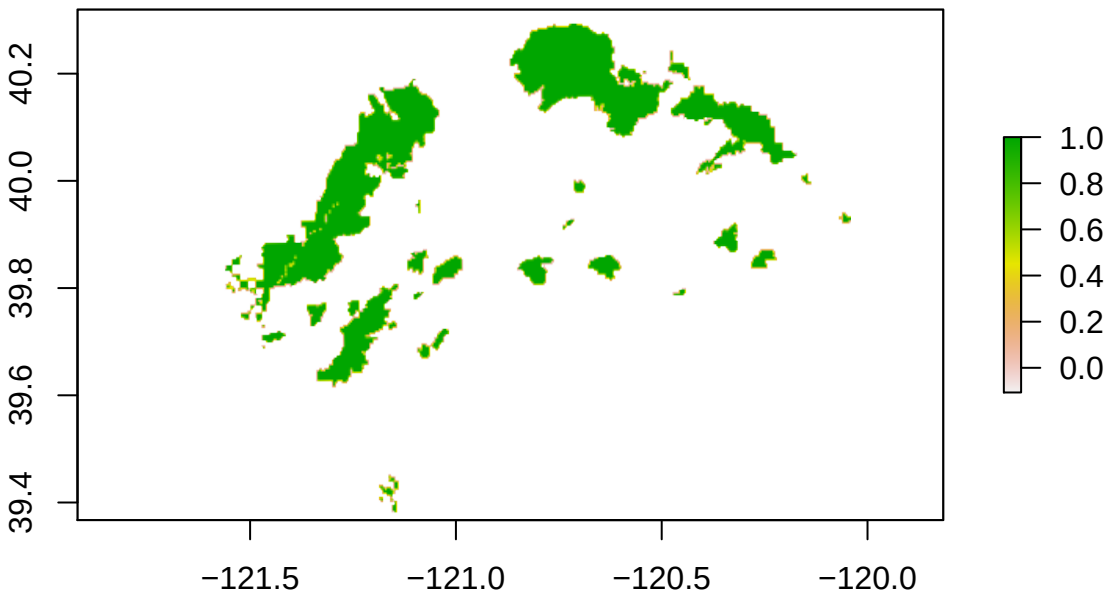


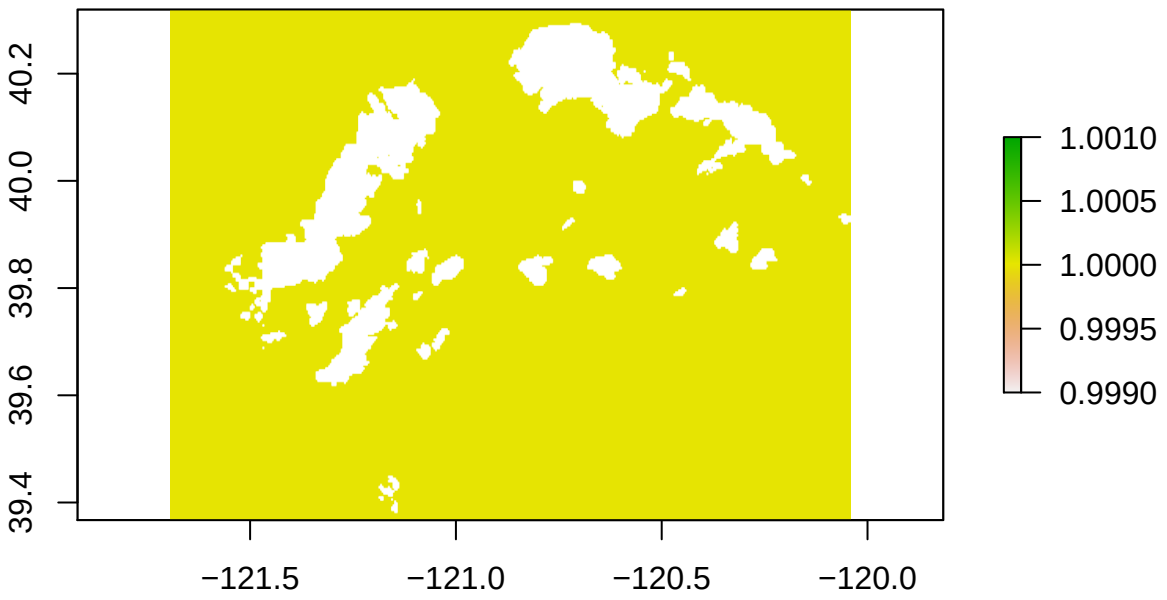

0.0 0.8
0.0 0.8
0.0 0.8
0.3 0.8
0.0 0.8
0.0 0.8
0.75
0.88
0.70
0.75
0.12
0.50
0.79
0.81
0.46
0.67
0.56
0.50
0.79
0.16
0.82
0.55
0.57
0.14
0.91
0.83
0.58
0.065
0.40
0.71
0.73
0.47
0.57
0.45
0.46
0.53
0.41
0.44
0.13
0.52
0.25
0.61
0.66
0.67
0.25
0.70
0.12
0.46
0.44
0.28
0.088
0.22
0.24
0.10
0.84
1.00
0.51
0.50
0.51
0.52
0.074
0.0 0.8
0.0 0.8
0.0 0.8
0.0 0.8
0.5 0.9
0.0 0.8

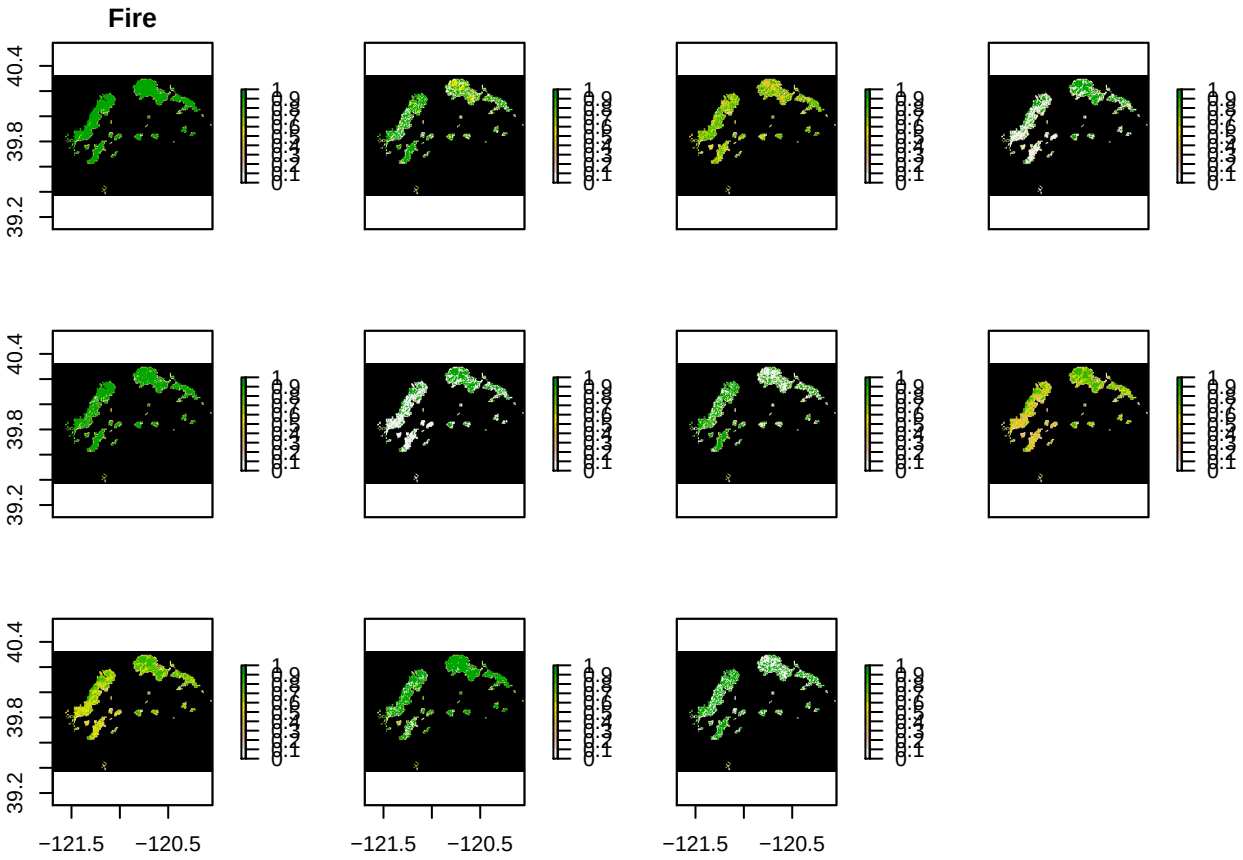


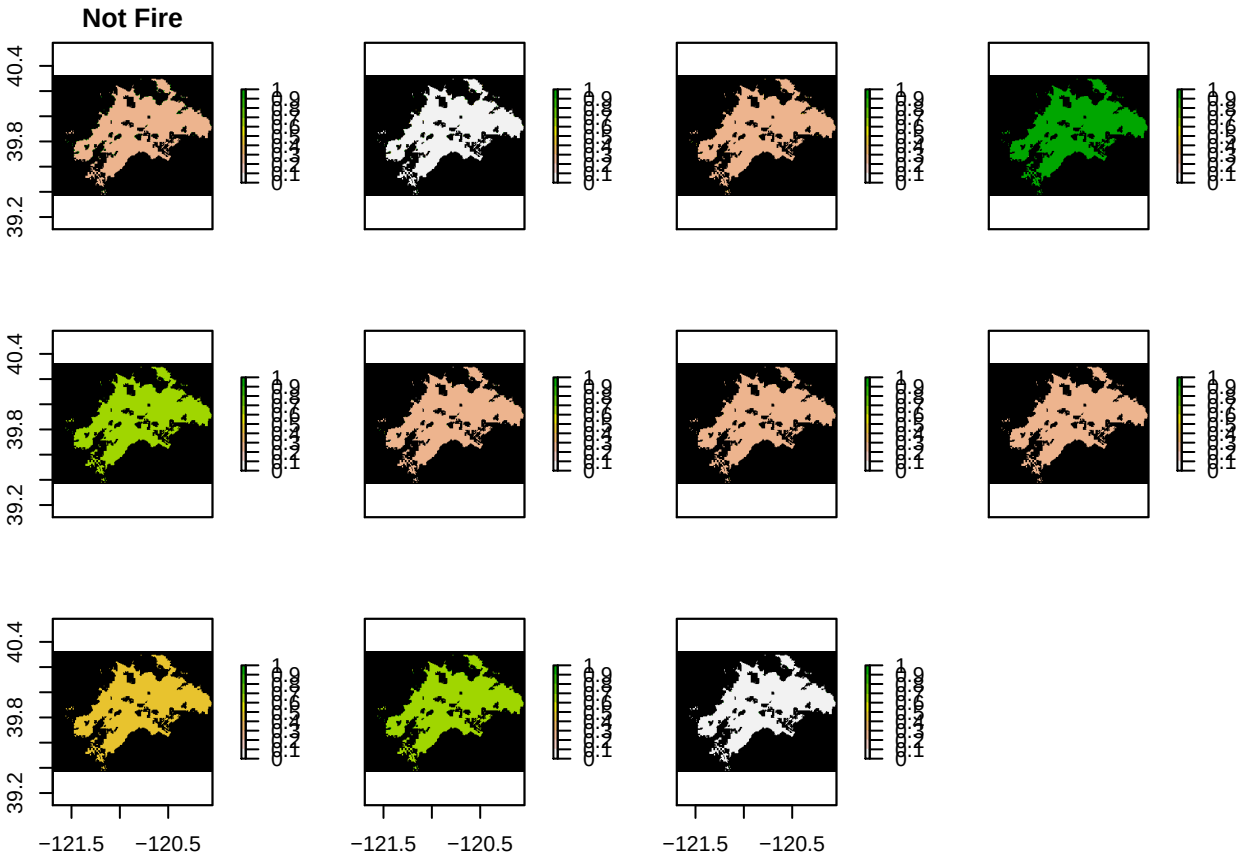

```
## ~/new_bats/Rnew_bats/Bats_data_products/fire.asc has GDAL driver AAIGrid
## and has 250 rows and 434 columns
```

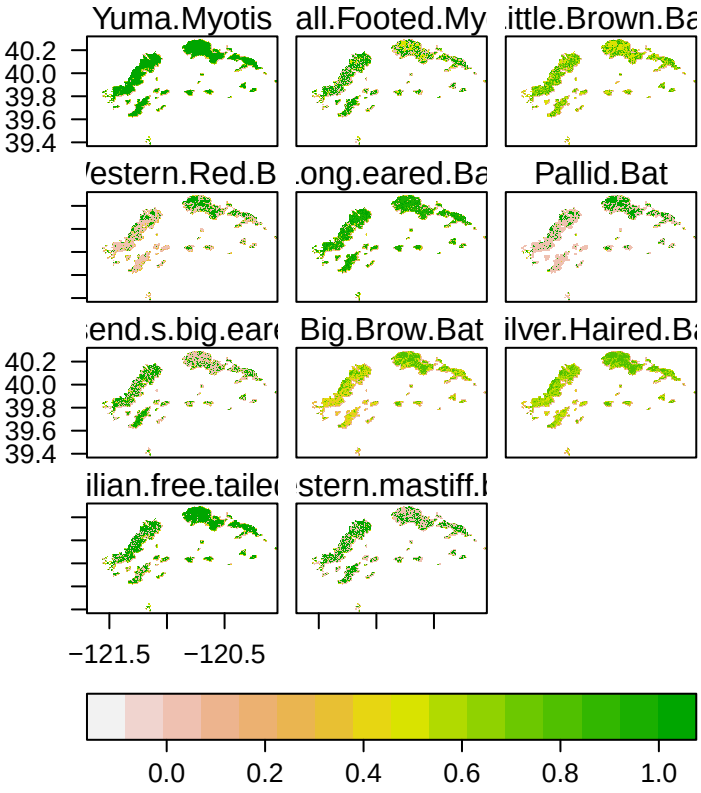
```
## ~/new_bats/Rnew_bats/Bats_data_products/not_fire.asc has GDAL driver AAIGrid
## and has 250 rows and 434 columns
```

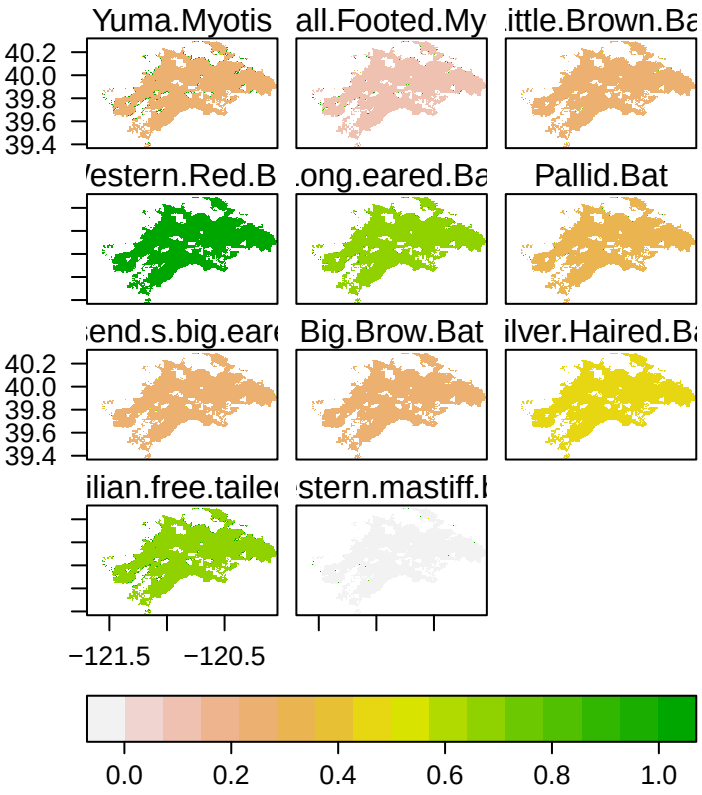

40.2
40.0
39.8
39.6
39.4
−121.5
−121.0
−120.5
−120.0
1.0
0.8
0.6
0.4
0.2
0.0


40.2
40.0
39.8
39.6
39.4
−121.5
−121.0
−120.5
−120.0
1.0010
1.0005
1.0000
0.9995
0.9990


Fire
40.4
39.8
39.2
−121.5
−120.5


Not Fire
40.4
39.8
39.2
−121.5
−120.5


Yuma.Myotis
all.Footed.My
ittle.Brown.Ba
estern.Red.B
ong.eared.Ba
Pallid.Bat
end.s.big.ear
Big.Brow.Bat
ilver.Haired.Ba
ilian.free.taile
stern.mastiff.b
40.2
40.0
39.8
39.6
39.4
−121.5
−120.5
0.0
0.2
0.4
0.6
0.8
1.0



	with.fire1	without.fire1	with.fire.sd1
Yuma.Myotis	0.88	0.24	0.26
Small.Footed.Myotis	0.58	0.10	0.42
Little.Brown.Bat	0.58	0.24	0.24
Western.Red.Bat	0.37	1.00	0.44
Long.eared.Bat	0.82	0.66	0.31
Pallid.Bat	0.33	0.30	0.46
Townsend.s.big.eared.Bat	0.49	0.24	0.45
Big.Brow.Bat	0.51	0.27	0.24
Silver.Haired.Bat	0.58	0.43	0.22
Brazilian.free.tailed.bat	0.75	0.67	0.38
western.mastiff.bat	0.49	0.00	0.48

```
##
##  One Sample t-test
##
## data:  myyu
## t = 253.5, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.2397871
## 95 percent confidence interval:
##  0.8725485 0.8824104
## sample estimates:
## mean of x
## 0.8774795
```

```
##
##  One Sample t-test
##
## data:  myci
## t = 118.8, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.1033723
## 95 percent confidence interval:
##  0.5752952 0.5911300
## sample estimates:
## mean of x
## 0.5832126
```

```
##
##  One Sample t-test
##
## data:  mylu
## t = 148.19, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.2356016
## 95 percent confidence interval:
##  0.5756692 0.5847865
## sample estimates:
## mean of x
## 0.5802279
```

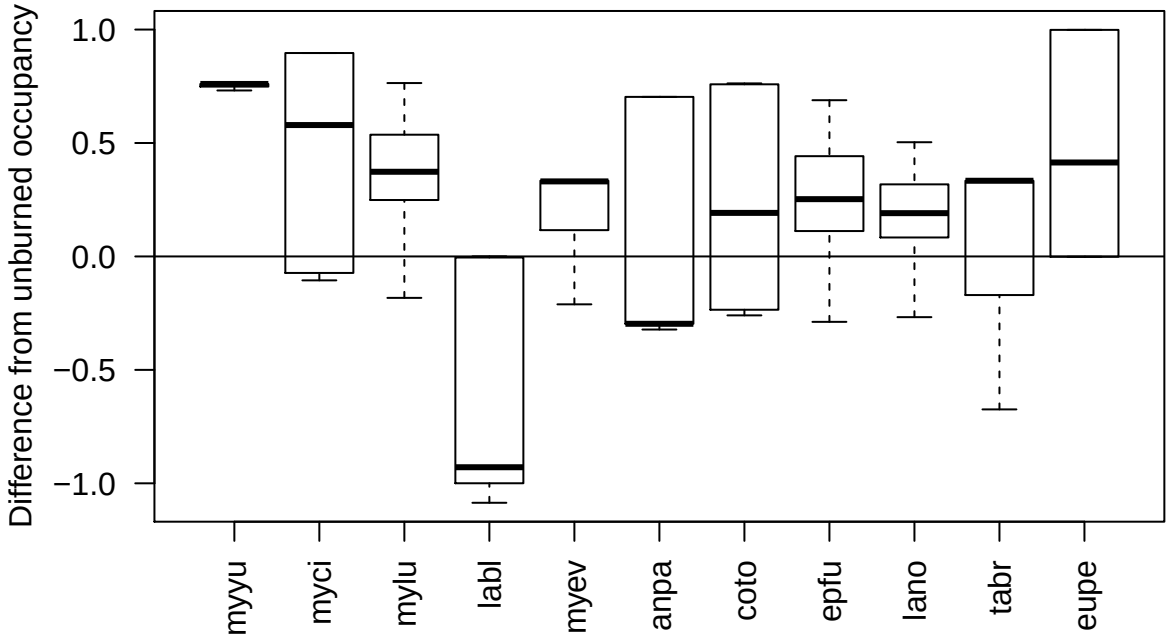
```
##
##  One Sample t-test
##
## data:  labl
## t = -150.7, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.9997946
## 95 percent confidence interval:
##  0.3610113 0.3774160
## sample estimates:
## mean of x
## 0.3692137
```

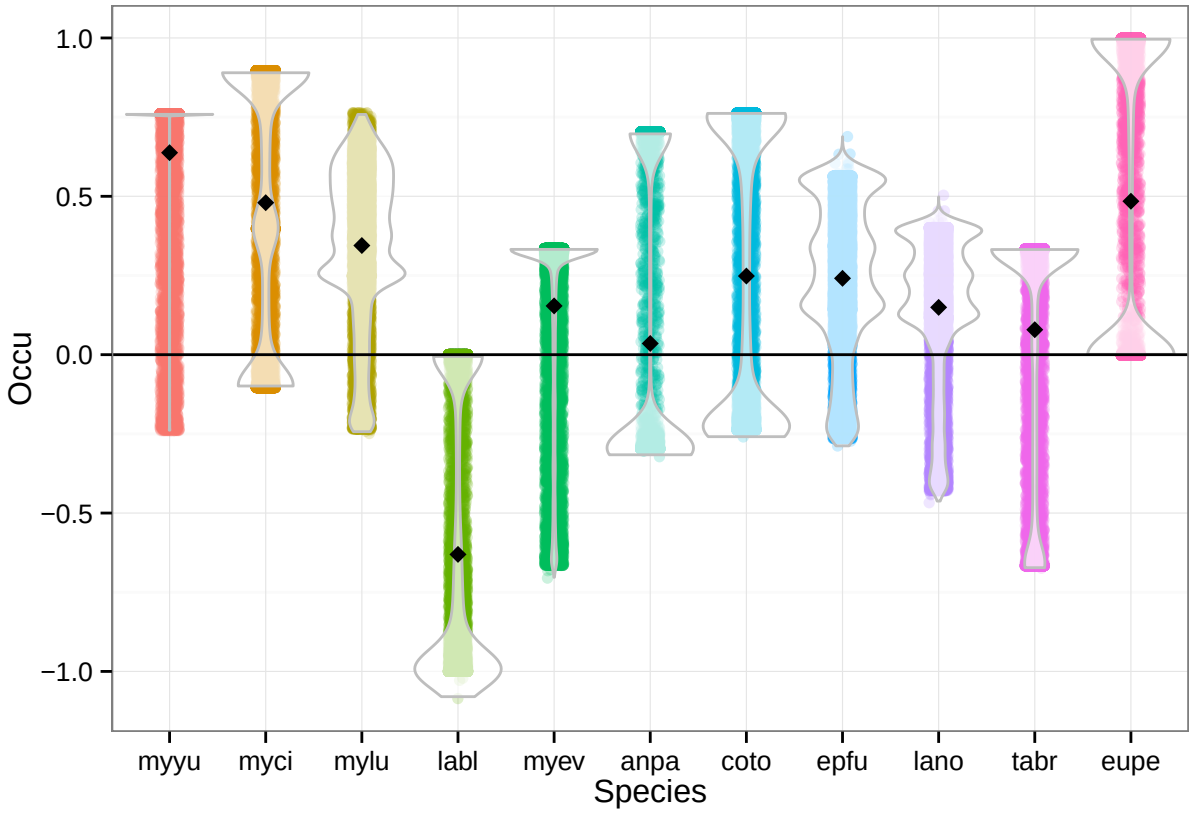
```
##
##  One Sample t-test
##
## data:  myev
## t = 51.977, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.6649493
## 95 percent confidence interval:
##  0.8130864 0.8246974
## sample estimates:
## mean of x
## 0.8188919
```

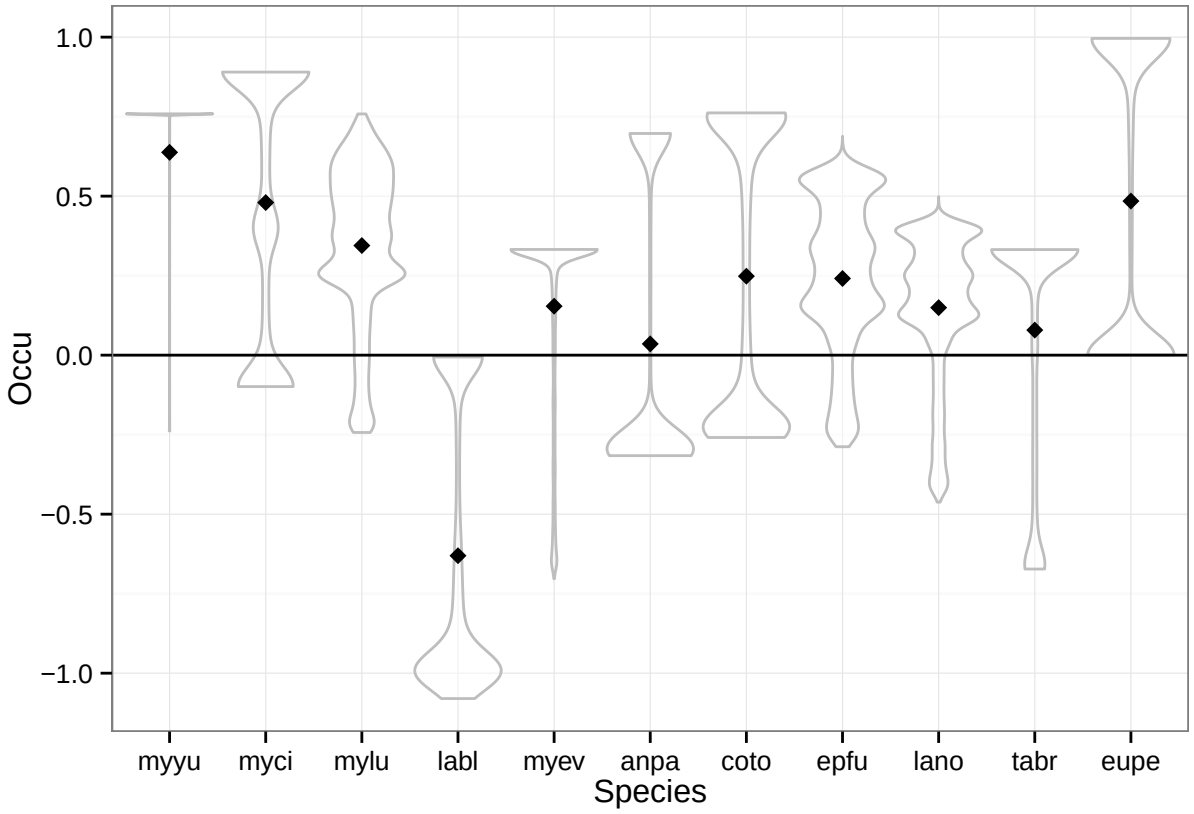
```
##
##  One Sample t-test
##
## data:  anpa
## t = 8.0984, df = 10955, p-value = 6.161e-16
```

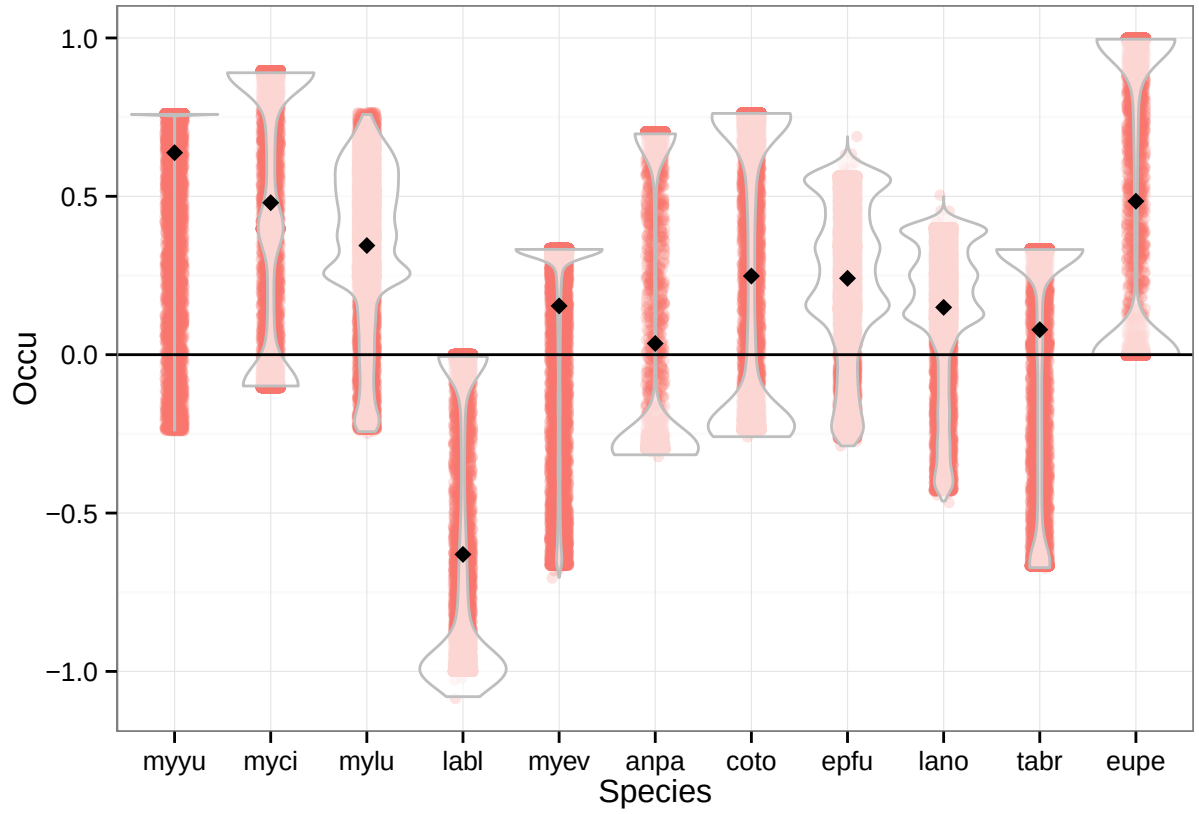
```
## alternative hypothesis: true mean is not equal to 0.2968227
## 95 percent confidence interval:
##  0.3236638 0.3408068
## sample estimates:
## mean of x
## 0.3322353

##
##  One Sample t-test
##
## data:  coto
## t = 57.729, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.2372795
## 95 percent confidence interval:
##  0.4771470 0.4940088
## sample estimates:
## mean of x
## 0.4855779

##
##  One Sample t-test
##
## data:  epfu
## t = 105.91, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.2654047
## 95 percent confidence interval:
##  0.5020413 0.5109656
## sample estimates:
## mean of x
## 0.5065034

##
##  One Sample t-test
##
## data:  lano
## t = 70.243, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.430335
## 95 percent confidence interval:
##  0.5755415 0.5838783
## sample estimates:
## mean of x
## 0.5797099

##
##  One Sample t-test
##
## data:  tabr
## t = 21.512, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.6663598
## 95 percent confidence interval:
##  0.7380181 0.7523864
## sample estimates:
## mean of x
## 0.7452022
```

```
##
##  One Sample t-test
##
## data:  eupe
## t = 105.44, df = 10955, p-value < 2.2e-16
## alternative hypothesis: true mean is not equal to 0.001436687
## 95 percent confidence interval:
##  0.4769165 0.4949296
## sample estimates:
## mean of x
## 0.4859231
```




1.0
0.5
0.0
−0.5
−1.0
Occu
myyu
myci
mylu
labl
myev
anpa
coto
epfu
lano
tabr
eupe
Species

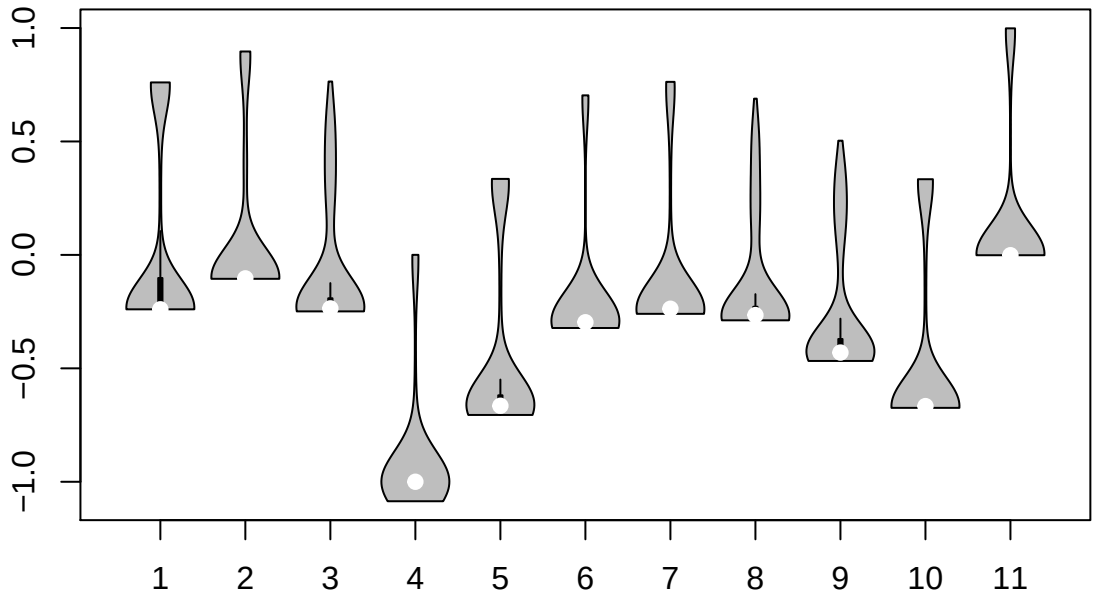

1.0
0.5
0.0
−0.5
−1.0
Occu
myyu
myci
mylu
labl
myev
anpa
coto
epfu
lano
tabr
eupe
Species



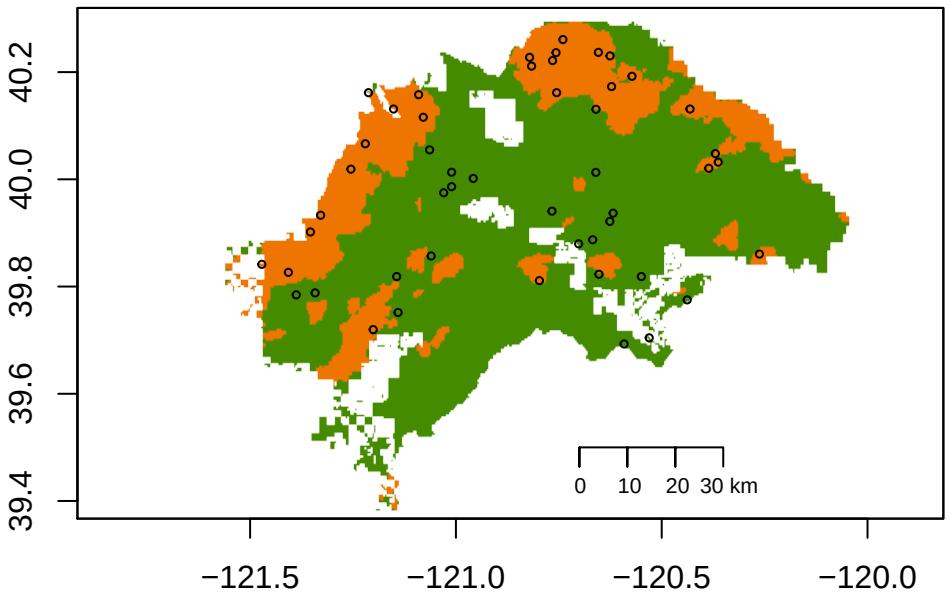

```
library(vioplot)
```

```
## Loading required package: sm
## Package 'sm', version 2.2-5.4: type help(sm) for summary information
```

```
vioplot(myyu,myci, mylu, labl, myev, anpa, coto, epfu, lano, tabr, eupe, col="grey")
```


1.0
0.5
0.0
−0.5
−1.0
1
2
3
4
5
6
7
8
9
10
11

The End




```
#valuetable <- getValues(AllLayers2)
#km1 <- kmeans(na.omit(valuetable), centers = 5, iter.max = 100, nstart = 10)
# create a blank raster with default values of 0
#rNA <- setValues(raster(AllLayers2), 0)
#for(i in 1:nlayers(AllLayers2)){
  #rNA[is.na(AllLayers2[[i]])] <- 1
#}
# convert rNA to an integer vector
#rNA <- getValues(rNA)
# convert valuetable to a data.frame
#valuetable <- as.data.frame(valuetable)
# if rNA is a 0, assign the cluster value at that position
#valuetable$class[rNA==0] <- km1$cluster
# if rNA is a 1, assign an NA at that position
#valuetable$class[rNA==1] <- NA
# create a blank raster
#classes1 <- raster(AllLayers2)
# assign values from the 'class' column of valuetable
#classes1 <- setValues(classes1, valuetable$class)
#plot(classes1, legend=TRUE, colNA="black")
#More info on how to do this clasification in *https://geoscripting-wur.github.io/AdvancedRasterAnalysi
```

Power Analysis

```
##
## Call:
## occu(formula = ~Julian + 1 ~ 1, data = SimOccuMyVo2)
##
## Occupancy:
##  Estimate    SE       z P(>|z|)
##   -0.0404 0.948 -0.0427   0.966
##
## Detection:
##             Estimate     SE     z P(>|z|)
## (Intercept)   4.1018 4.3196  0.95   0.342
## Julian       -0.0302 0.0245 -1.23   0.218
##
## AIC: 87.34946
```

```
##                  0.025      0.975
## p(Int)    -4.36438089 12.5680782
## p(Julian) -0.07831246  0.0178378
```

```
## Profiling parameter 1 of 2 ... done.
## Profiling parameter 2 of 2 ... done.
```

```
##                  0.025       0.975
## p(Int)    -5.23016538 12.79401481
## p(Julian) -0.07861223  0.02438732
```

```
## Backtransformed linear combination(s) of Detection estimate(s)
##
##  Estimate   SE LinComb (Intercept) Julian
##     0.983 0.07    4.09           1    0.5
##
## Transformation: logistic
```

```
##            Length             Class              Mode
##                 1 unmarkedBackTrans                S4
```

```
##        0.05      0.95
##  0.04749894 0.9999859
```

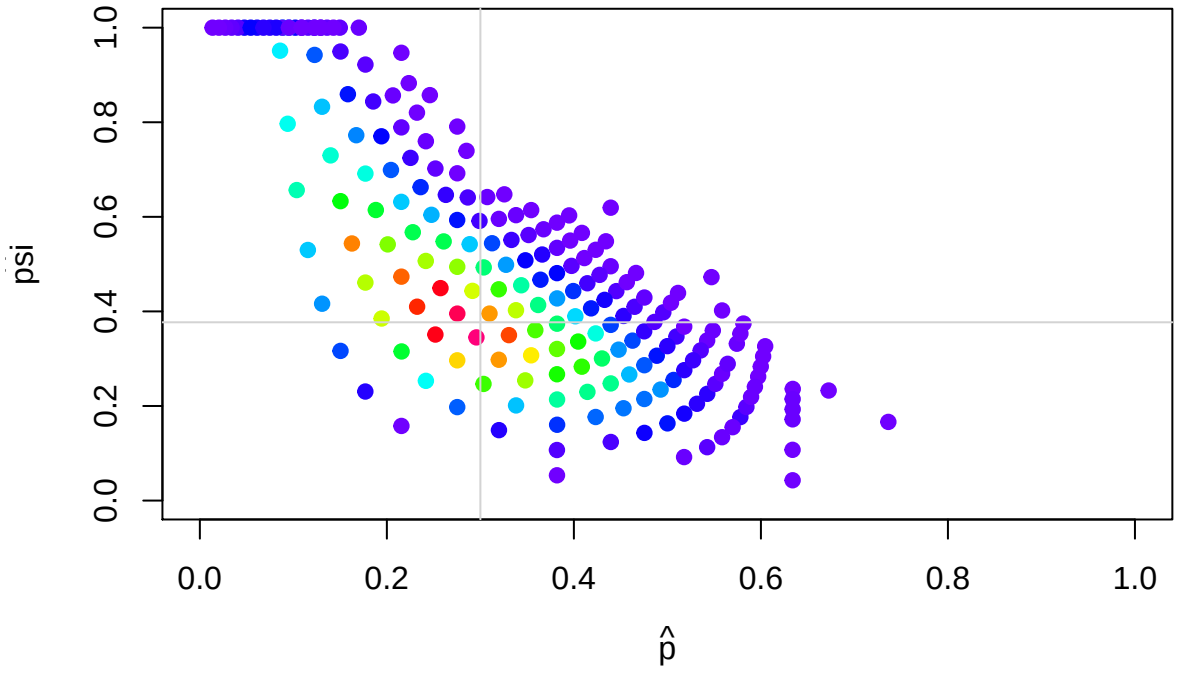
```
## Warning: Some observations have been discarded because corresponding
## covariates were missing.
```

```
## Warning: 3 sites have been discarded because of missing data.
```

```
## Warning: Some observations have been discarded because corresponding
## covariates were missing.
```

```
## Warning: 3 sites have been discarded because of missing data.
```

```
## [1] 10

##
## ------------------------------------------------------------------------
## Evaluation of design K = 3 S = 49 (TS = 147)
## ------------------------------------------------------------------------
## estimator performance (excl empty histories)
## psi: bias = +0.0632   var = +0.0353   MSE = +0.0392
##   p: bias = -0.0085   var = +0.0117   MSE = +0.0117
##     covar = -0.0152 critA = +0.0510 critD = +2.311e-04
## estimator performance (excl also histories leading to boundary estimates)
## psi: bias = +0.0423   var = +0.0244   MSE = +0.0262
##   p: bias = -0.0008   var = +0.0104   MSE = +0.0104
##     covar = -0.0113 critA = +0.0367 critD = +1.468e-04
##  empty histories = 0.0%
##  boundary estimates = 3.6%
## this took  0.73 seconds
## ------------------------------------------------------------------------
```




```
## $dist
##        [,1] [,2]   [,3]       [,4]       [,5]
##   [1,]    7   11 0.0048 0.17673690 0.42328313
##   [2,]   13   15 0.0090 0.72988153 0.13981563
##   [3,]   12   16 0.0263 0.39532090 0.27533463
##   [4,]    7   10 0.0068 0.20119696 0.33817827
```

```
##   [5,]   10   14 0.0212 0.29777285 0.31971995
##   [6,]   12   19 0.0114 0.30044165 0.43007064
##   [7,]   13   16 0.0163 0.54174266 0.20094181
##   [8,]   17   23 0.0069 0.54212925 0.28859256
##   [9,]    9   14 0.0106 0.22982544 0.41446722
##  [10,]   14   21 0.0112 0.37399443 0.38200218
##  [11,]    7    9 0.0082 0.25316523 0.24176005
##  [12,]   10   13 0.0251 0.35109925 0.25189666
##  [13,]   12   18 0.0156 0.32055105 0.38194264
##  [14,]   11   15 0.0271 0.34500942 0.29579243
##  [15,]   15   17 0.0045 0.94237288 0.12272783
##  [16,]   14   18 0.0172 0.50670132 0.24164842
##  [17,]   12   17 0.0230 0.34982687 0.33054615
##  [18,]   10   17 0.0057 0.23471724 0.49273263
##  [19,]   15   20 0.0166 0.49431299 0.27529165
##  [20,]   16   23 0.0100 0.45527103 0.34369932
##  [21,]   17   21 0.0044 0.69904321 0.20438190
##  [22,]    9   13 0.0169 0.25413268 0.34800739
##  [23,]   10   15 0.0140 0.26708435 0.38194793
##  [24,]   14   17 0.0125 0.61442433 0.18822027
##  [25,]   12   15 0.0224 0.47347399 0.21553945
##  [26,]    8    9 0.0069 0.52989321 0.11552011
##  [27,]   15   22 0.0107 0.41357320 0.36176977
##  [28,]   10   16 0.0106 0.24767900 0.43942454
##  [29,]   15   24 0.0040 0.37153943 0.43937189
##  [30,]    9   11 0.0180 0.38498189 0.19442396
##  [31,]   15   21 0.0147 0.44675975 0.31970007
##  [32,]   13   19 0.0152 0.36037074 0.35874277
##  [33,]   13   18 0.0213 0.39542083 0.30974884
##  [34,]   17   20 0.0029 0.85934362 0.15833633
##  [35,]   15   19 0.0118 0.56741802 0.22775140
##  [36,]   12   13 0.0069 1.00000000 0.08843537
##  [37,]   16   24 0.0059 0.42747490 0.38205232
##  [38,]   10   12 0.0174 0.46099107 0.17703964
##  [39,]   16   26 0.0016 0.39039191 0.45311980
##  [40,]   15   23 0.0073 0.38969182 0.40156562
##  [41,]   13   17 0.0251 0.44926932 0.25735822
##  [42,]    7    8 0.0057 0.41625361 0.13075569
##  [43,]    8   10 0.0125 0.31530354 0.21573104
##  [44,]   14   22 0.0088 0.35344323 0.42335241
##  [45,]   11   17 0.0145 0.28312021 0.40849561
##  [46,]   18   28 0.0012 0.45952787 0.41441119
##  [47,]   14   19 0.0181 0.44346156 0.29154825
##  [48,]   19   24 0.0014 0.72465965 0.22528063
##  [49,]   18   25 0.0041 0.54415254 0.31251336
##  [50,]   11   14 0.0237 0.40996546 0.23235433
##  [51,]    9   12 0.0199 0.29651944 0.27524302
##  [52,]   13   21 0.0057 0.31908962 0.44784856
##  [53,]   15   18 0.0088 0.69143215 0.17707380
##  [54,]   17   22 0.0065 0.60426827 0.24767176
##  [55,]    6   10 0.0024 0.14310806 0.47543937
##  [56,]    8   15 0.0014 0.17654133 0.57805584
##  [57,]    8   11 0.0149 0.24663827 0.30335567
##  [58,]   17   29 0.0008 0.39805399 0.49567623
```

```
##  [59,]   11   16 0.0195 0.30715071 0.35428327
##  [60,]   13   20 0.0139 0.33625771 0.40460551
##  [61,]   16   20 0.0070 0.63165842 0.21542925
##  [62,]   14   15 0.0024 1.00000000 0.10204082
##  [63,]   14   20 0.0176 0.40249258 0.33809285
##  [64,]   19   25 0.0015 0.64642225 0.26309961
##  [65,]    9    9 0.0021 1.00000000 0.06122449
##  [66,]   11   12 0.0078 0.95130890 0.08579263
##  [67,]   19   27 0.0014 0.55114245 0.33323616
##  [68,]    9   15 0.0049 0.21475477 0.47532571
##  [69,]    9   10 0.0097 0.65657736 0.10360274
##  [70,]   18   26 0.0025 0.50806133 0.34815681
##  [71,]   11   13 0.0217 0.54367262 0.16264530
##  [72,]   20   24 0.0007 0.92199092 0.17709309
##  [73,]   14   23 0.0042 0.33820297 0.46270913
##  [74,]   16   19 0.0055 0.77259437 0.16729487
##  [75,]   17   19 0.0012 1.00000000 0.12925170
##  [76,]   11   19 0.0034 0.25506578 0.50661431
##  [77,]    6    7 0.0041 0.31651711 0.15043213
##  [78,]   15   25 0.0015 0.35788124 0.47519401
##  [79,]   16   25 0.0031 0.40642944 0.41836993
##  [80,]    8   12 0.0103 0.21368967 0.38201646
##  [81,]   13   22 0.0029 0.30627870 0.48866258
##  [82,]   19   28 0.0018 0.52027473 0.36608796
##  [83,]   16   21 0.0118 0.54799182 0.26073682
##  [84,]   15   16 0.0012 1.00000000 0.10884354
##  [85,]   17   25 0.0032 0.46701394 0.36427162
##  [86,]   13   13 0.0005 1.00000000 0.08843537
##  [87,]   22   28 0.0001 0.82030590 0.23219020
##  [88,]   18   29 0.0008 0.44292710 0.44543177
##  [89,]   10   11 0.0084 0.79675849 0.09395336
##  [90,]   11   18 0.0066 0.26664977 0.45924584
##  [91,]    7    7 0.0021 1.00000000 0.04761905
##  [92,]   23   31 0.0001 0.73951304 0.28514032
##  [93,]    6    9 0.0036 0.16030272 0.38207428
##  [94,]    6    6 0.0009 1.00000000 0.04081633
##  [95,]    5    7 0.0018 0.14888459 0.31988994
##  [96,]    6    8 0.0047 0.19765816 0.27524513
##  [97,]   18   23 0.0034 0.66282250 0.23609787
##  [98,]   12   14 0.0134 0.63314989 0.15044315
##  [99,]   17   24 0.0059 0.49861284 0.32743880
## [100,]   20   32 0.0003 0.49548051 0.43938455
## [101,]    9   16 0.0016 0.20467499 0.53163590
## [102,]   16   22 0.0111 0.49303255 0.30358927
## [103,]   20   29 0.0006 0.56153661 0.35161586
## [104,]   15   27 0.0003 0.33851018 0.54251341
## [105,]   17   27 0.0021 0.42442977 0.43285481
## [106,]   12   21 0.0016 0.27576810 0.51807203
## [107,]   15   26 0.0011 0.34693051 0.50969637
## [108,]    8   14 0.0022 0.18379915 0.51806079
## [109,]   14   16 0.0067 0.83276203 0.13066311
## [110,]   22   32 0.0002 0.61427036 0.35433150
## [111,]   14   25 0.0009 0.31753079 0.53561895
## [112,]   13   14 0.0049 1.00000000 0.09523810
```

```
## [113,]   14   24 0.0016 0.32651856 0.49997086
## [114,]   18   22 0.0026 0.77030636 0.19417234
## [115,]   21   31 0.0003 0.57370286 0.36754066
## [116,]   12   20 0.0045 0.28620409 0.47533948
## [117,]   18   24 0.0029 0.59330084 0.27521242
## [118,]   21   27 0.0004 0.75985047 0.24173088
## [119,]   18   27 0.0026 0.48095347 0.38191883
## [120,]   11   11 0.0018 1.00000000 0.07482993
## [121,]    5    6 0.0018 0.23057472 0.17698334
## [122,]    8   13 0.0051 0.19521996 0.45307226
## [123,]    5    9 0.0007 0.11285671 0.54251299
## [124,]   16   17 0.0007 1.00000000 0.11564626
## [125,]    7   12 0.0029 0.16325010 0.50007592
## [126,]   17   28 0.0010 0.40978153 0.46493614
## [127,]    6   11 0.0004 0.13396965 0.55848701
## [128,]   18   20 0.0005 1.00000000 0.13605442
## [129,]   16   28 0.0002 0.36775234 0.51798348
## [130,]    4    6 0.0008 0.10687443 0.38187788
## [131,]    9   17 0.0007 0.19790215 0.58449243
## [132,]   18   21 0.0010 0.94956628 0.15042945
## [133,]   23   29 0.0001 0.88268871 0.22348134
## [134,]    5    8 0.0010 0.12386379 0.43950693
## [135,]    5    5 0.0005 1.00000000 0.03401361
## [136,]   21   25 0.0004 1.00000000 0.17006803
## [137,]   16   27 0.0008 0.37772833 0.48619305
## [138,]   16   18 0.0018 1.00000000 0.12244898
## [139,]   12   12 0.0020 1.00000000 0.08163265
## [140,]   15   28 0.0003 0.33168350 0.57429261
## [141,]    8    8 0.0025 1.00000000 0.05442177
## [142,]   10   10 0.0016 1.00000000 0.06802721
## [143,]   12   23 0.0002 0.26206083 0.59707316
## [144,]   16   29 0.0003 0.35966896 0.54859172
## [145,]    8   16 0.0004 0.17174337 0.63392296
## [146,]   21   30 0.0004 0.60355132 0.33814463
## [147,]   11   21 0.0004 0.24058403 0.59359691
## [148,]   13   23 0.0014 0.29663315 0.52746030
## [149,]   10   19 0.0004 0.21919322 0.58948088
## [150,]    7   13 0.0004 0.15517775 0.56980360
## [151,]   10   18 0.0017 0.22571543 0.54264567
## [152,]   11   22 0.0001 0.23606924 0.63405645
## [153,]   19   23 0.0012 0.84391240 0.18539093
## [154,]   13   25 0.0002 0.28340103 0.59985998
## [155,]   20   27 0.0010 0.64098322 0.28653593
## [156,]   17   26 0.0037 0.44301835 0.39931860
## [157,]   11   20 0.0007 0.24673883 0.55131565
## [158,]   24   31 0.0001 0.85734749 0.24600735
## [159,]   14   14 0.0003 1.00000000 0.09523810
## [160,]   19   29 0.0007 0.49625248 0.39748491
## [161,]   22   31 0.0002 0.64754712 0.32560949
## [162,]   20   25 0.0005 0.78912285 0.21551653
## [163,]   18   30 0.0005 0.42935955 0.47538561
## [164,]   19   26 0.0011 0.59134681 0.29908096
## [165,]   18   31 0.0001 0.41837276 0.50385641
## [166,]   11   23 0.0001 0.23271644 0.67247549
```

```
## [167,]   20   33 0.0001 0.48128696 0.46645361
## [168,]   23   35 0.0001 0.60302988 0.39491678
## [169,]   16   16 0.0001 1.00000000 0.10884354
## [170,]   21   29 0.0003 0.64184030 0.30733434
## [171,]    2    2 0.0002 1.00000000 0.01360544
## [172,]   20   30 0.0005 0.53439328 0.38195816
## [173,]    8   18 0.0001 0.16633220 0.73630279
## [174,]   15   29 0.0001 0.32630863 0.60457687
## [175,]   22   34 0.0001 0.56604138 0.40857807
## [176,]   21   26 0.0003 0.85671670 0.20645559
## [177,]    9   18 0.0003 0.19310669 0.63396655
## [178,]   20   26 0.0005 0.70211510 0.25191813
## [179,]   19   22 0.0005 1.00000000 0.14965986
## [180,]   21   32 0.0002 0.54976522 0.39601811
## [181,]    4    4 0.0003 1.00000000 0.02721088
## [182,]    2    4 0.0001 0.04291309 0.63391633
## [183,]   12   22 0.0004 0.26799979 0.55852707
## [184,]   21   28 0.0002 0.69204455 0.27528511
## [185,]   17   32 0.0001 0.37437485 0.58135411
## [186,]   22   33 0.0002 0.58767767 0.38193445
## [187,]   19   30 0.0006 0.47726862 0.42754473
## [188,]    5   10 0.0001 0.10729568 0.63385007
## [189,]   21   33 0.0002 0.53029776 0.42337053
## [190,]    4    7 0.0004 0.09194188 0.51786490
## [191,]   16   30 0.0001 0.35307321 0.57806593
## [192,]   20   28 0.0004 0.59563879 0.31979951
## [193,]   22   35 0.0001 0.54826828 0.43426121
## [194,]   19   33 0.0001 0.43903889 0.51138677
## [195,]   18   19 0.0002 1.00000000 0.12925170
## [196,]    2    3 0.0001 0.05345628 0.38192588
## [197,]   14   27 0.0001 0.30492228 0.60238418
## [198,]    3    3 0.0001 1.00000000 0.02040816
## [199,]    4    5 0.0001 0.15782473 0.21557133
## [200,]   13   24 0.0005 0.28917717 0.56449756
## [201,]   10   20 0.0003 0.21464395 0.63395812
## [202,]   25   40 0.0001 0.61934008 0.43940290
## [203,]   20   31 0.0001 0.51280679 0.41121158
## [204,]   21   38 0.0001 0.47249602 0.54716496
## [205,]   17   18 0.0002 1.00000000 0.12244898
## [206,]   18   33 0.0001 0.40198780 0.55849571
## [207,]   19   31 0.0002 0.46181758 0.45662196
## [208,]   19   21 0.0001 1.00000000 0.14285714
## [209,]   24   30 0.0001 0.94689950 0.21553276
## [210,]   24   32 0.0001 0.79083987 0.27528203
##
## $biaspsi
## [1] 0.06318554
##
## $varpsi
## [1] 0.03525166
##
## $MSEpsi
## [1] 0.03924408
##
```

```
## $biasp
## [1] -0.00847324
##
## $varp
## [1] 0.01166847
##
## $MSEp
## [1] 0.01174027
##
## $covar
## [1] -0.01515282
##
## $critA
## [1] 0.05098434
##
## $critD
## [1] 0.0002311281
##
## $biaspsi_B
## [1] 0.04227961
##
## $varpsi_B
## [1] 0.02442761
##
## $MSEpsi_B
## [1] 0.02621518
##
## $biasp_B
## [1] -0.0008084669
##
## $varp_B
## [1] 0.01044383
##
## $MSEp_B
## [1] 0.01044448
##
## $covar_B
## [1] -0.0112676
##
## $critA_B
## [1] 0.03665966
##
## $critD_B
## [1] 0.0001468451
##
## $pempty
## [1] 0
##
## $pbound
## [1] 3.6
```

```
Predictors
```

```
## class       : RasterStack
```

```
## dimensions  : 250, 434, 108500, 16  (nrow, ncol, ncell, nlayers)
## resolution  : 0.003810748, 0.003810748  (x, y)
## extent      : -121.6945, -120.0407, 39.36708, 40.31977  (xmin, xmax, ymin, ymax)
## coord. ref. : NA
## names       : Distance.to.water, Distance.to.water2, Distance.to.road, Distance.to.road2, Existing.ve
## min values  :      0.000000e+00,       0.000000e+00,     0.000000e+00,      0.000000e+00,        1.00
## max values  :      9.752505e+02,       9.511136e+05,     1.122052e+04,      1.259000e+08,        2.55
```

```
summary(sampling.cov2)
```

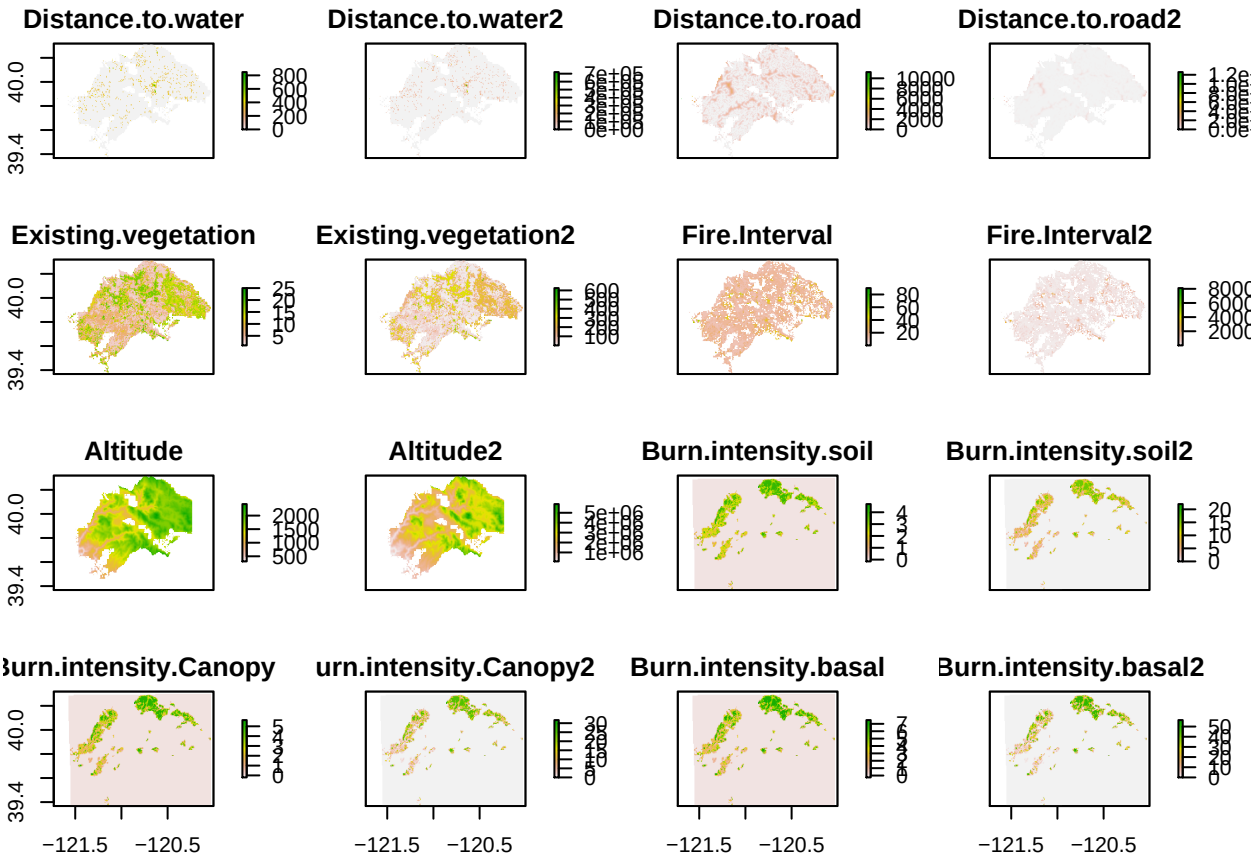
```
##  Distance.to.water Distance.to.road Existing.vegetation Fire.Interval
##  Min.   :  0.00    Min.   :   0.0   Min.   : 3.000      Min.   :11.00
##  1st Qu.:  0.00    1st Qu.:   0.0   1st Qu.: 4.204      1st Qu.:11.76
##  Median :  0.00    Median :   0.0   Median : 6.825      Median :14.62
##  Mean   : 53.07    Mean   : 245.5   Mean   : 8.970      Mean   :14.97
##  3rd Qu.:  0.00    3rd Qu.: 325.7   3rd Qu.:14.225      3rd Qu.:16.00
##  Max.   :325.83    Max.   :2308.6   Max.   :18.876      Max.   :37.92
##                                                         NA's   :1
##     Altitude      Burn.intensity.soil Burn.intensity.Canopy
##  Min.   : 648.5   Min.   :0.0000      Min.   :0.0000
##  1st Qu.:1325.5   1st Qu.:0.0000      1st Qu.:0.0000
##  Median :1601.5   Median :0.5292      Median :0.6589
##  Mean   :1539.4   Mean   :1.4178      Mean   :1.5108
##  3rd Qu.:1839.8   3rd Qu.:2.9182      3rd Qu.:2.5249
##  Max.   :2098.4   Max.   :4.0000      Max.   :5.0000
##
##  Burn.intensity.basal  Canopy.cover       Woody         Herbacious
##  Min.   :0.0000       Min.   : 0.00   Min.   : 3.50   Min.   : 0.000
##  1st Qu.:0.0000       1st Qu.:24.96   1st Qu.:10.00   1st Qu.: 1.000
##  Median :0.8086       Median :48.67   Median :14.00   Median : 2.500
##  Mean   :2.0149       Mean   :46.09   Mean   :21.22   Mean   : 5.357
##  3rd Qu.:3.7068       3rd Qu.:69.47   3rd Qu.:33.00   3rd Qu.: 8.500
##  Max.   :7.0000       Max.   :89.65   Max.   :90.50   Max.   :24.000
##
##      Grass           Naked.Soil         Rocky         Down.Wood
##  Min.   : 0.000   Min.   : 0.500   Min.   : 0.00   Min.   : 0.0
##  1st Qu.: 0.000   1st Qu.: 3.000   1st Qu.: 0.00   1st Qu.: 9.5
##  Median : 1.000   Median : 7.500   Median : 3.50   Median :16.5
##  Mean   : 6.878   Mean   : 9.765   Mean   :11.57   Mean   :19.2
##  3rd Qu.: 7.000   3rd Qu.:13.500   3rd Qu.:14.50   3rd Qu.:26.5
##  Max.   :55.500   Max.   :40.500   Max.   :64.50   Max.   :60.0
##
##   Leaf.Litter      Basal.Area      Burn.intensity.soil2
##  Min.   : 0.00   Min.   :  0.000   Min.   : 0.000
##  1st Qu.: 8.50   1st Qu.:  6.062   1st Qu.: 0.000
##  Median :27.50   Median : 19.753   Median : 0.280
##  Mean   :25.58   Mean   : 26.955   Mean   : 4.426
##  3rd Qu.:39.50   3rd Qu.: 41.479   3rd Qu.: 8.516
##  Max.   :67.50   Max.   :101.212   Max.   :16.000
##
##  Burn.intensity.Canopy2 Burn.intensity.basal2
##  Min.   : 0.0000        Min.   : 0.0000
##  1st Qu.: 0.0000        1st Qu.: 0.0000
##  Median : 0.4342        Median : 0.6539
```

```
##  Mean   : 5.5035        Mean   :10.1716
##  3rd Qu.: 6.3754        3rd Qu.:13.7400
##  Max.   :25.0000        Max.   :49.0000
##
```

```
Occu1.layer.MyLu2$layer.1
```

```
## class       : RasterLayer
## dimensions  : 250, 434, 108500  (nrow, ncol, ncell)
## resolution  : 0.003810748, 0.003810748  (x, y)
## extent      : -121.6945, -120.0407, 39.36708, 40.31977  (xmin, xmax, ymin, ymax)
## coord. ref. : NA
## data source : in memory
## names       : layer.1
## values      : 0.003199792, 0.9998045  (min, max)
```

```
plot(Predictors)
```




```
names(Predictors)
```

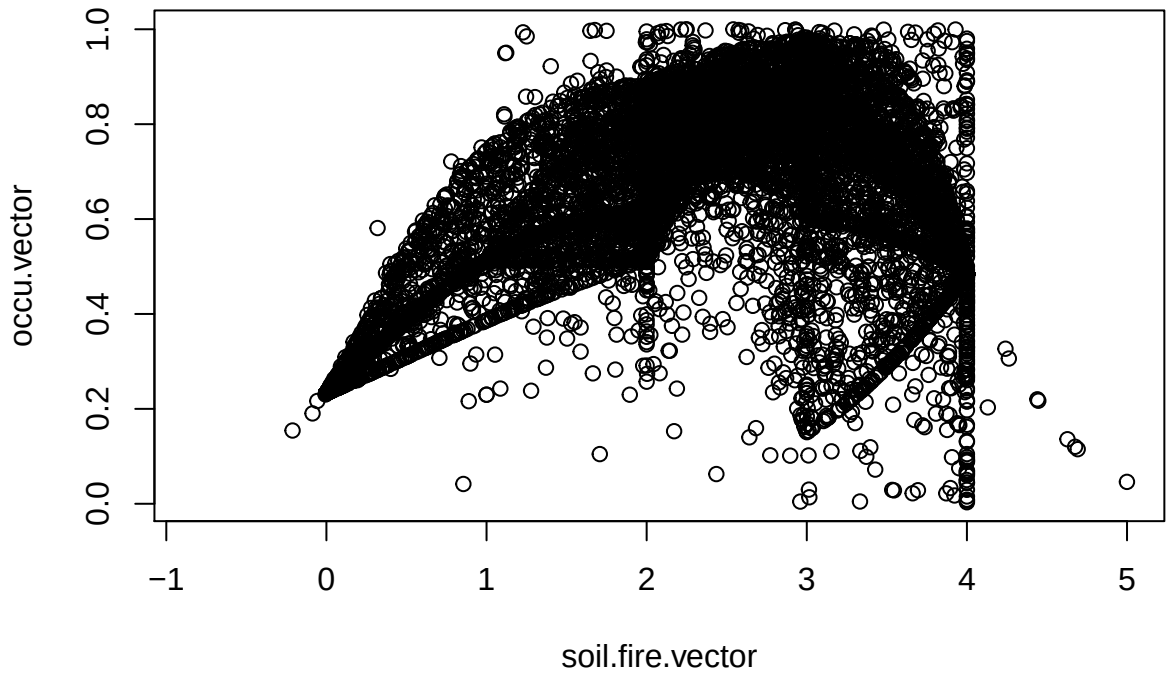
```
##  [1] "Distance.to.water"      "Distance.to.water2"
##  [3] "Distance.to.road"       "Distance.to.road2"
##  [5] "Existing.vegetation"    "Existing.vegetation2"
##  [7] "Fire.Interval"          "Fire.Interval2"
```

```
##  [9] "Altitude"               "Altitude2"
## [11] "Burn.intensity.soil"    "Burn.intensity.soil2"
## [13] "Burn.intensity.Canopy"  "Burn.intensity.Canopy2"
## [15] "Burn.intensity.basal"   "Burn.intensity.basal2"
```

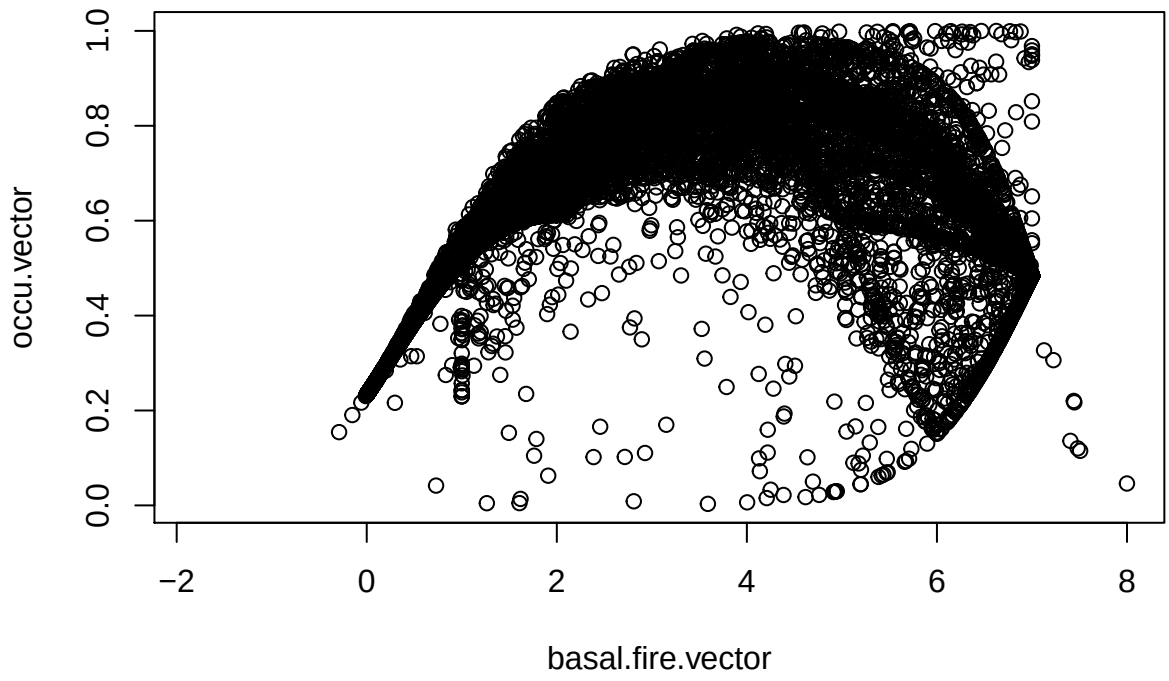
```
soil.fire.vector<-as.vector(subset(Predictors,11))
canopy.fire.vector<-as.vector(subset(Predictors,13))
basal.fire.vector<-as.vector(subset(Predictors,15))


occu.vector<-as.vector(Occu1.layer.MyLu2$layer.1)

fire.response.df <- data.frame(cbind(soil.fire.vector, basal.fire.vector, canopy.fire.vector, occu.vecto

summary(fire.response.df)
```

```
##  soil.fire.vector basal.fire.vector canopy.fire.vector  occu.vector
##  Min.   :-0.840   Min.   :-1.840    Min.   :-1.174     Min.   :0.00
##  1st Qu.: 0.000   1st Qu.: 0.000    1st Qu.: 0.000     1st Qu.:0.23
##  Median : 0.000   Median : 0.000    Median : 0.000     Median :0.23
##  Mean   : 0.293   Mean   : 0.428    Mean   : 0.322     Mean   :0.34
##  3rd Qu.: 0.000   3rd Qu.: 0.000    3rd Qu.: 0.000     3rd Qu.:0.27
##  Max.   : 5.000   Max.   : 8.000    Max.   : 6.000     Max.   :1.00
##  NA's   :12775    NA's   :12775     NA's   :12775      NA's   :66621
```

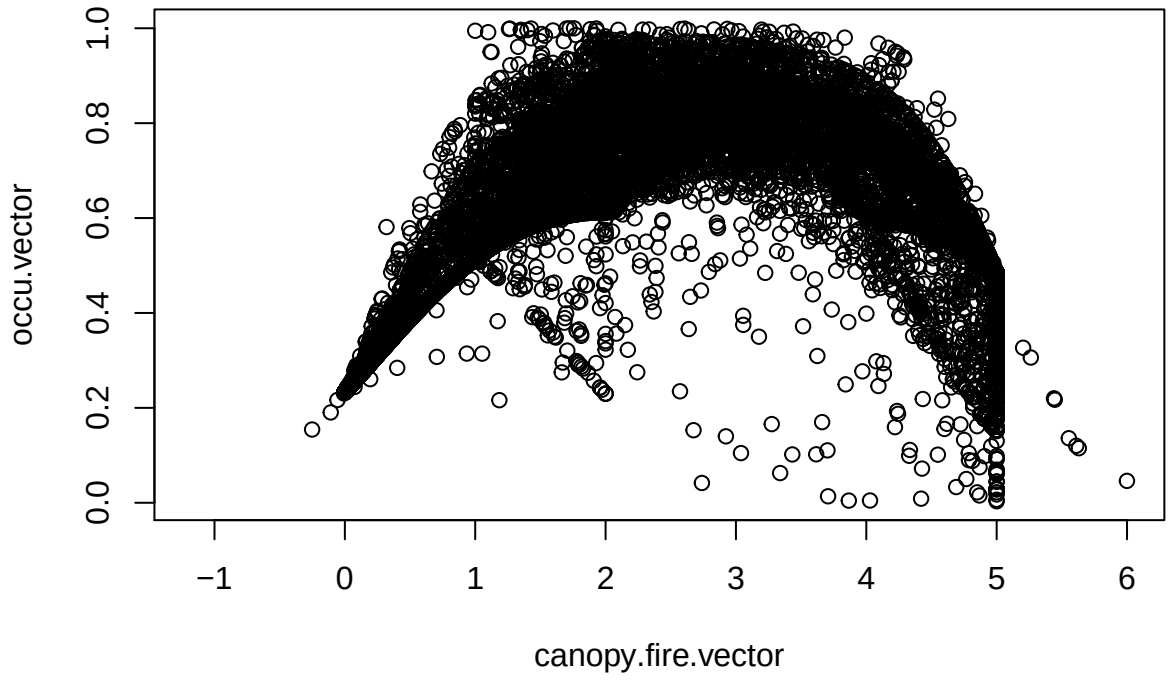
```
plot(occu.vector~soil.fire.vector)
```



```
plot(occu.vector~basal.fire.vector)
```




```
plot(occu.vector~canopy.fire.vector)
```

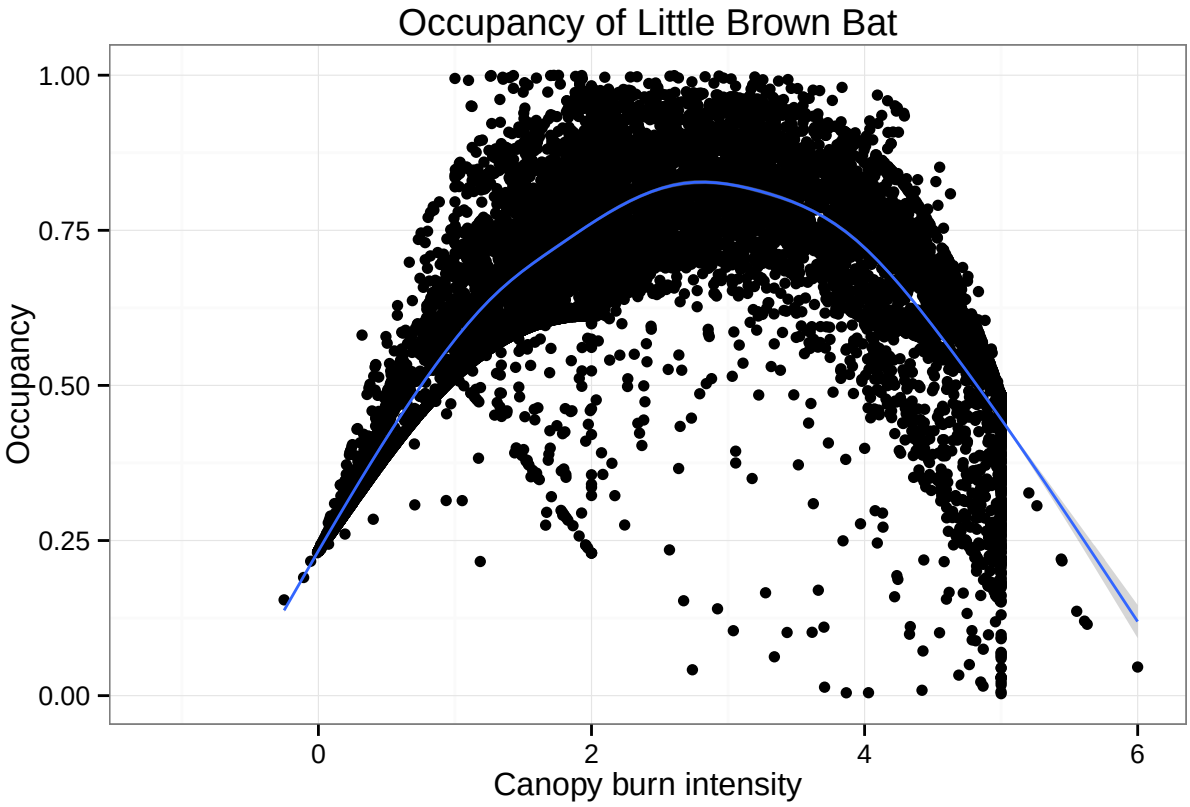



```
ggplot(fire.response.df, aes(canopy.fire.vector, occu.vector))+geom_point()+ggtitle('Occupancy of Littl
```

```
## geom_smooth: method="auto" and size of largest group is >=1000, so using gam with formula: y ~ s(x,
```

```
## Warning: Removed 66621 rows containing missing values (stat_smooth).
```

```
## Warning: Removed 66621 rows containing missing values (geom_point).
```


Occupancy of Little Brown Bat
Occupancy
1.00
0.75
0.50
0.25
0.00
0
2
4
6
Canopy burn intensity