

1

Supplementary Material.

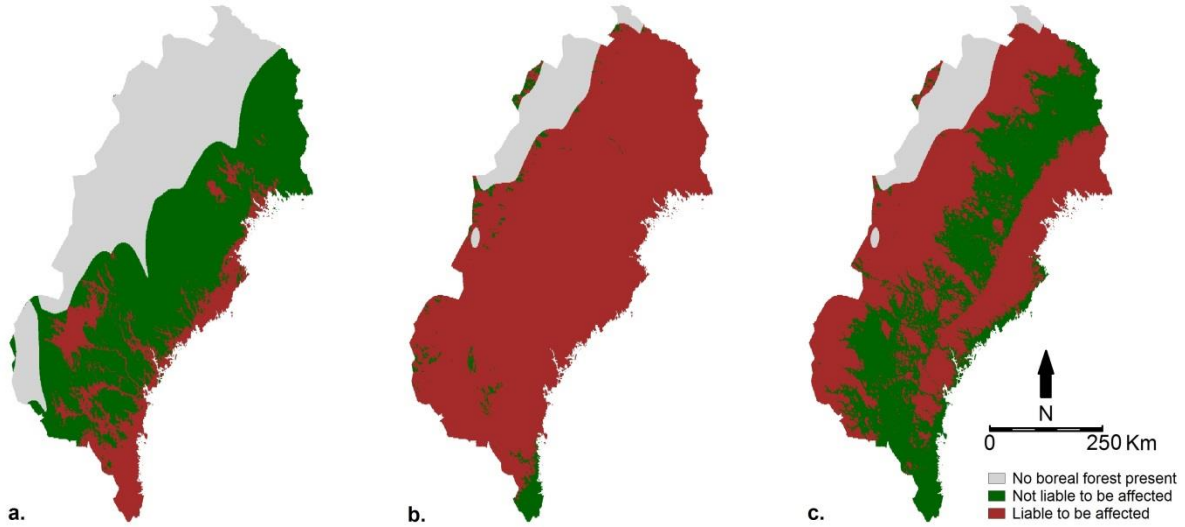


Figure S1: An indication of the geographic distribution of boreal forest that may be affected by *Acanthocinus aedilis*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

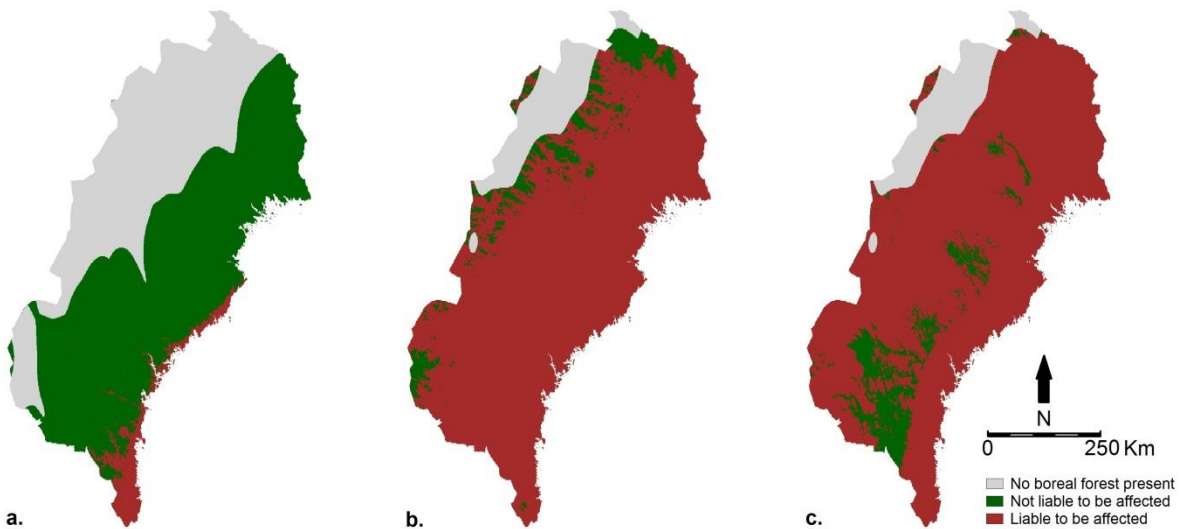
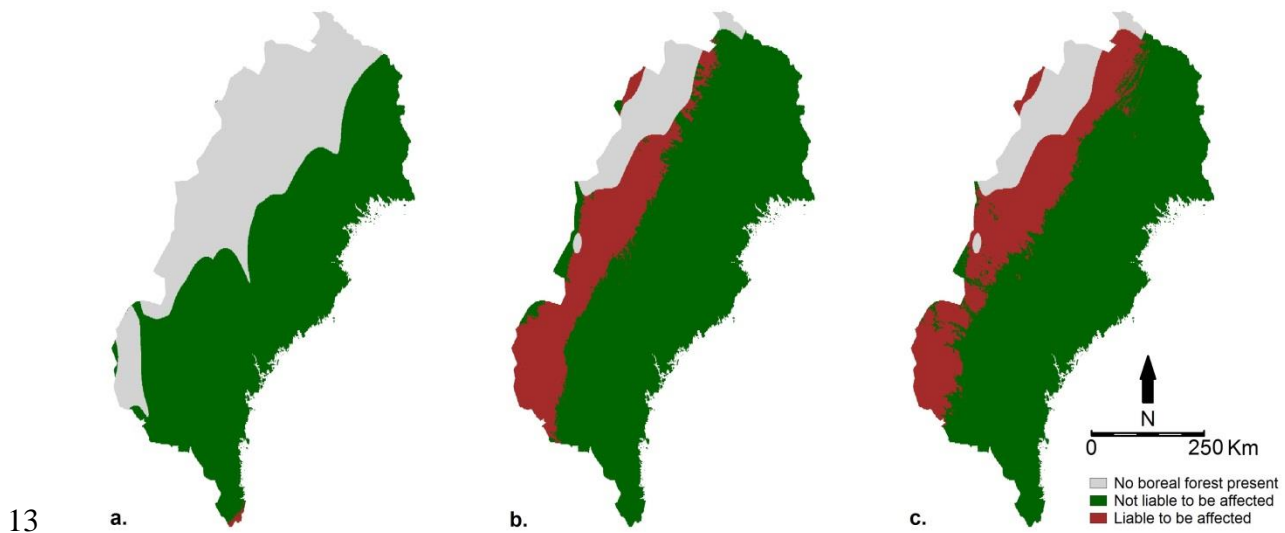


Figure S2: An indication of the geographic distribution of boreal forest that may be affected by *Bupalus piniaria*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.



17

18

19

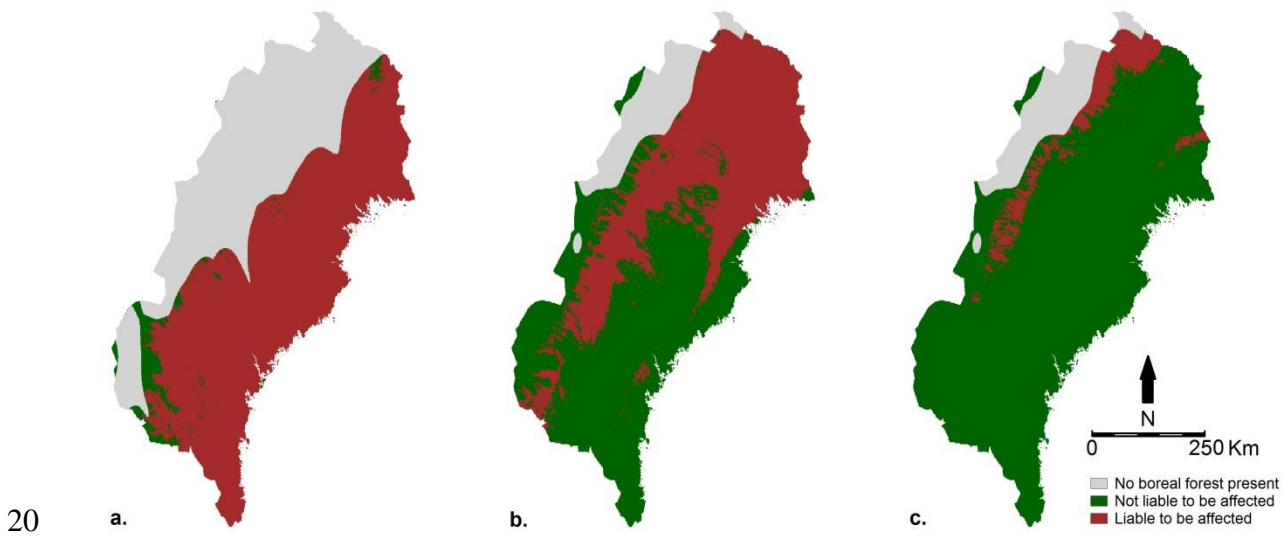
20

21

22

23

Figure S3: An indication of the geographic distribution of boreal forest that may be affected by *Cryphalus abietis*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

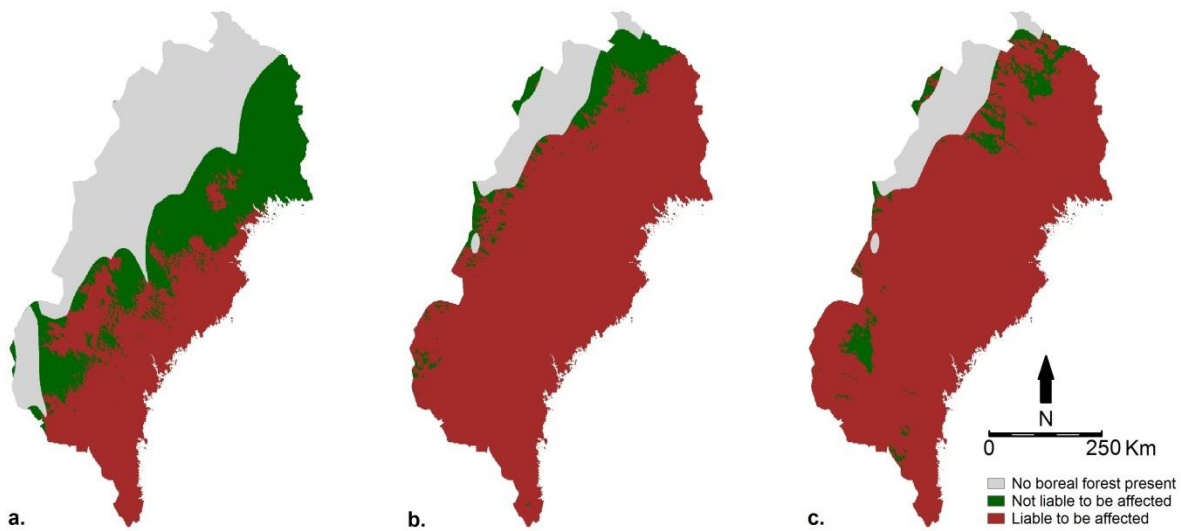


21

22

23

Figure S4: An indication of the geographic distribution of boreal forest that may be affected by *Cryphalus saltuarius*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.



24

a.

b.

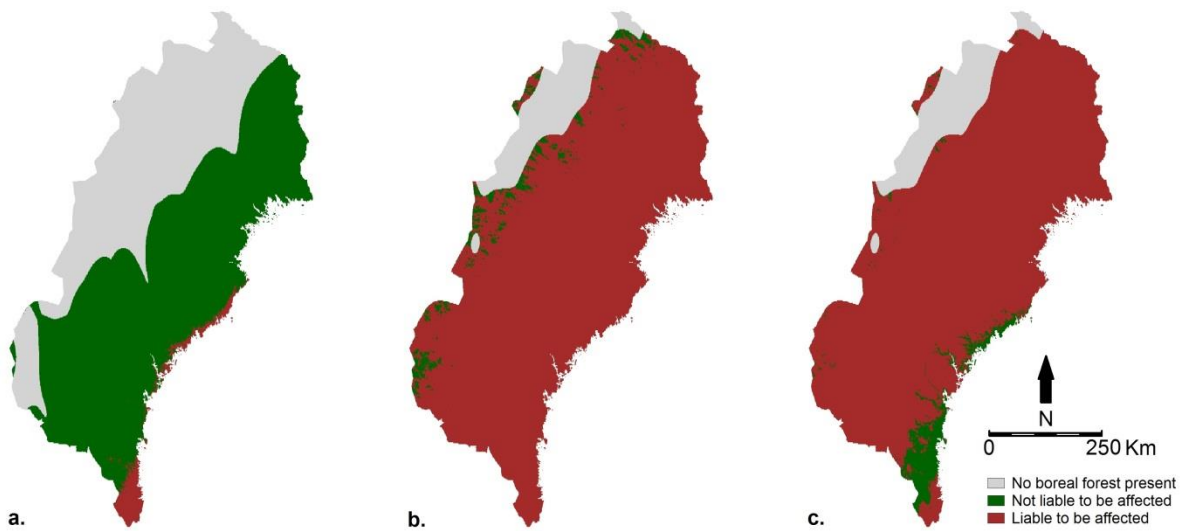
c.

25 **Figure S5:** An indication of the geographic distribution of boreal forest that may be affected by
 26 *Dendroctonus micans*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based
 27 on the average of ten predictions.

28

29

30



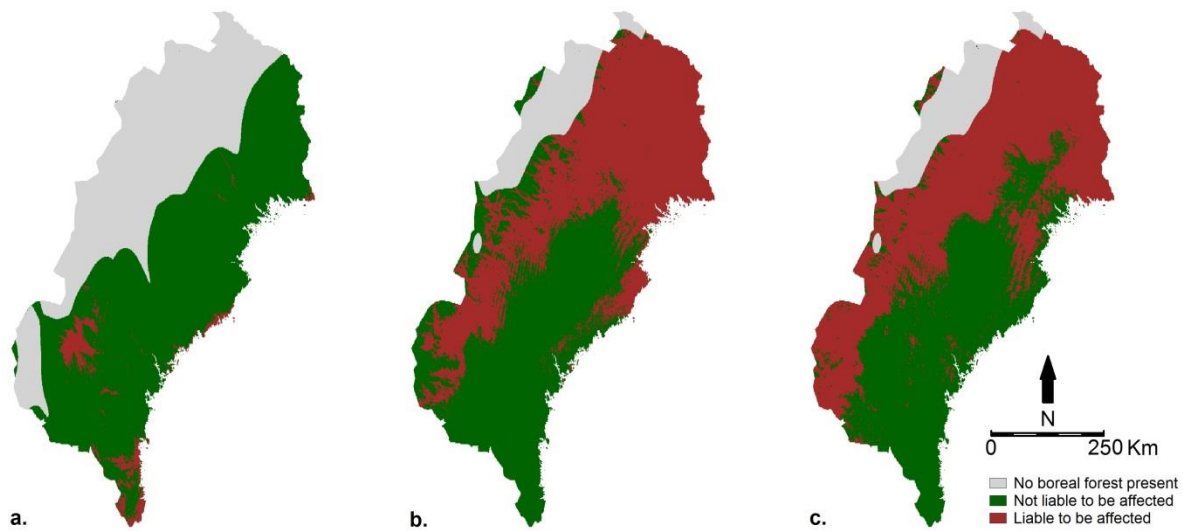
31

a.

b.

c.

32 **Figure S6:** An indication of the geographic distribution of boreal forest that may be affected by
 33 *Dendrolimus pini*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on
 34 the average of ten predictions.



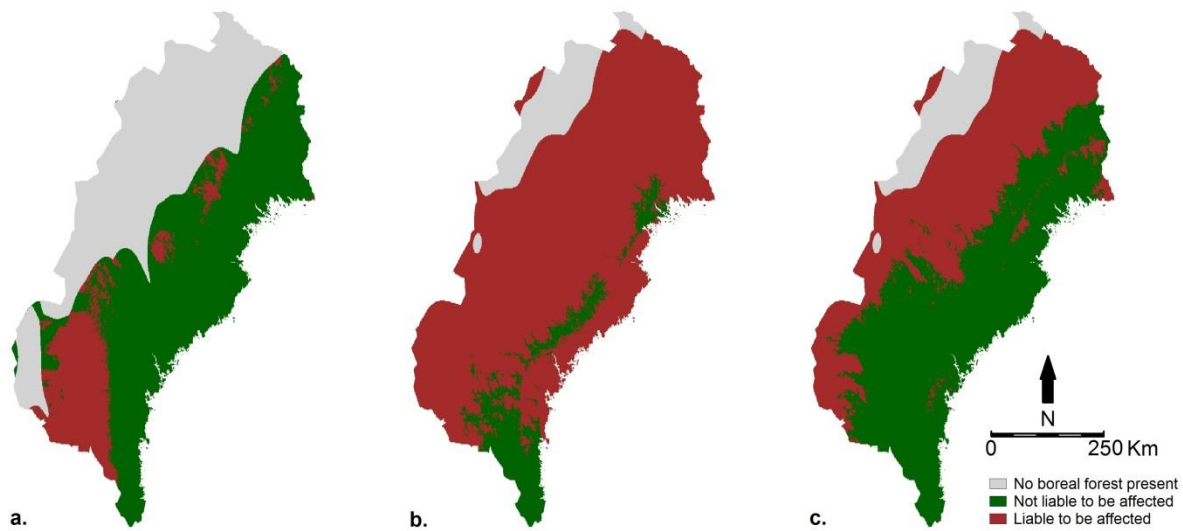
35

36 **Figure S7:** An indication of the geographic distribution of boreal forest that may be affected by
 37 *Epinotia pygmaeana*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based
 38 on the average of ten predictions.

39

40

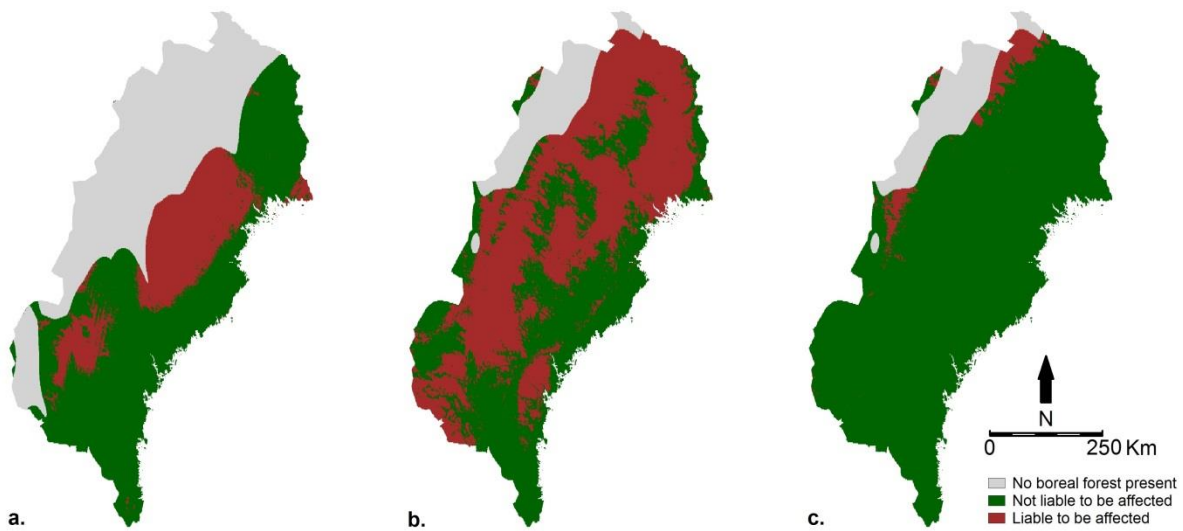
41



42

43 **Figure S8:** An indication of the geographic distribution of boreal forest that may be affected by *Ips*
 44 *acuminatus*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the
 45 average of ten predictions.

46

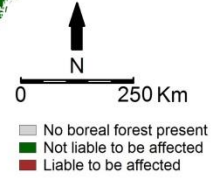


47

a.

b.

c.

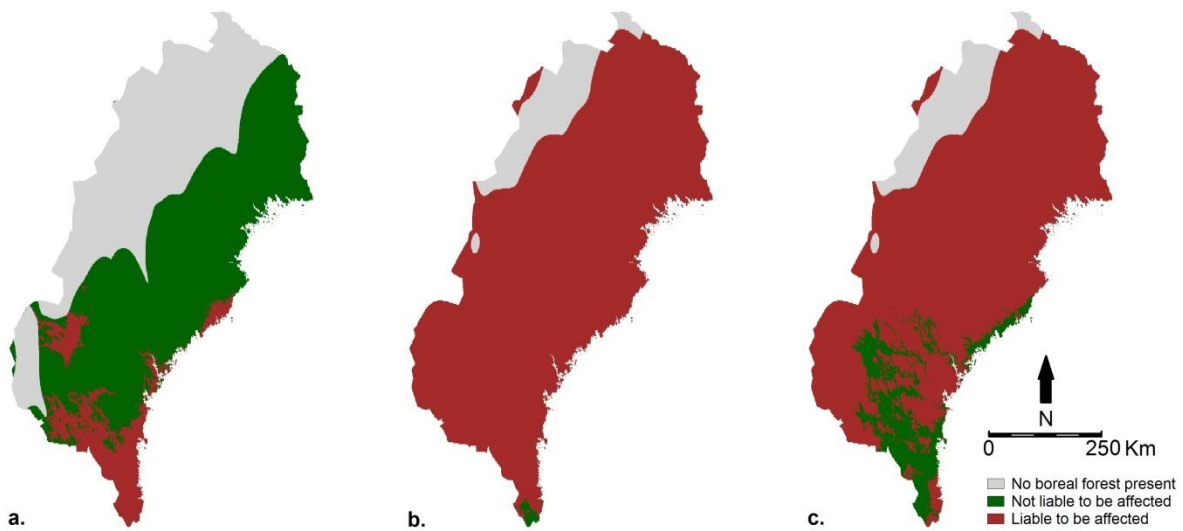


48 **Figure S9:** An indication of the geographic distribution of boreal forest that may be affected by *Ips*
 49 *sexdentatus*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the
 50 average of ten predictions.

51

52

53

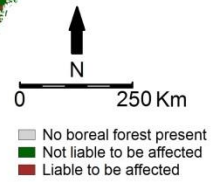


54

a.

b.

c.



55 **Figure S10:** An indication of the geographic distribution of boreal forest that may be affected by
 56 *Ips typographus*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on
 57 the average of ten predictions.

58

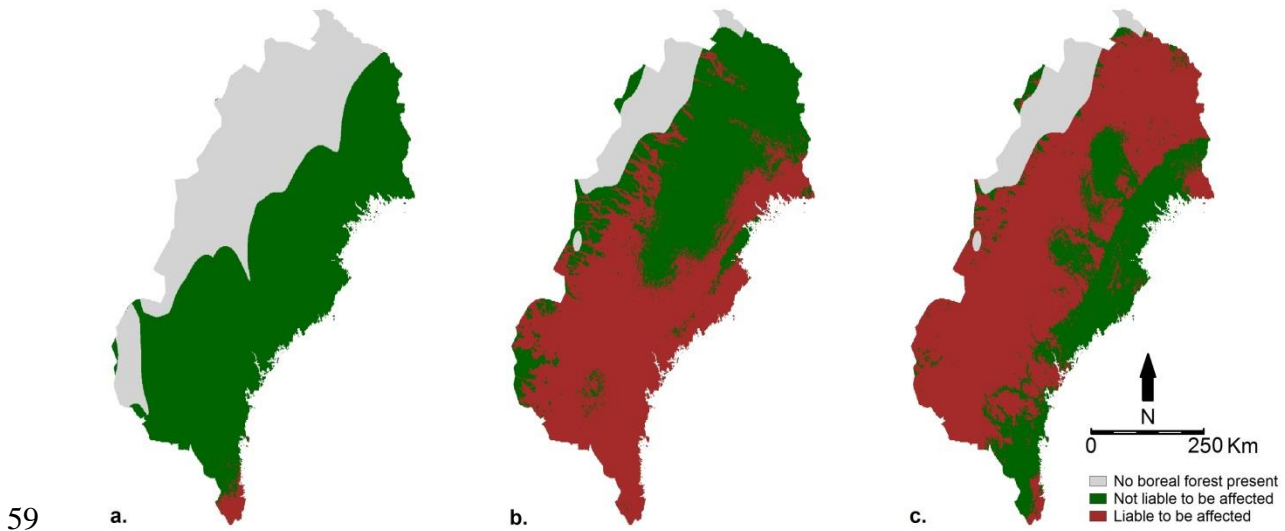


Figure S11: An indication of the geographic distribution of boreal forest that may be affected by *Lymantria monacha*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

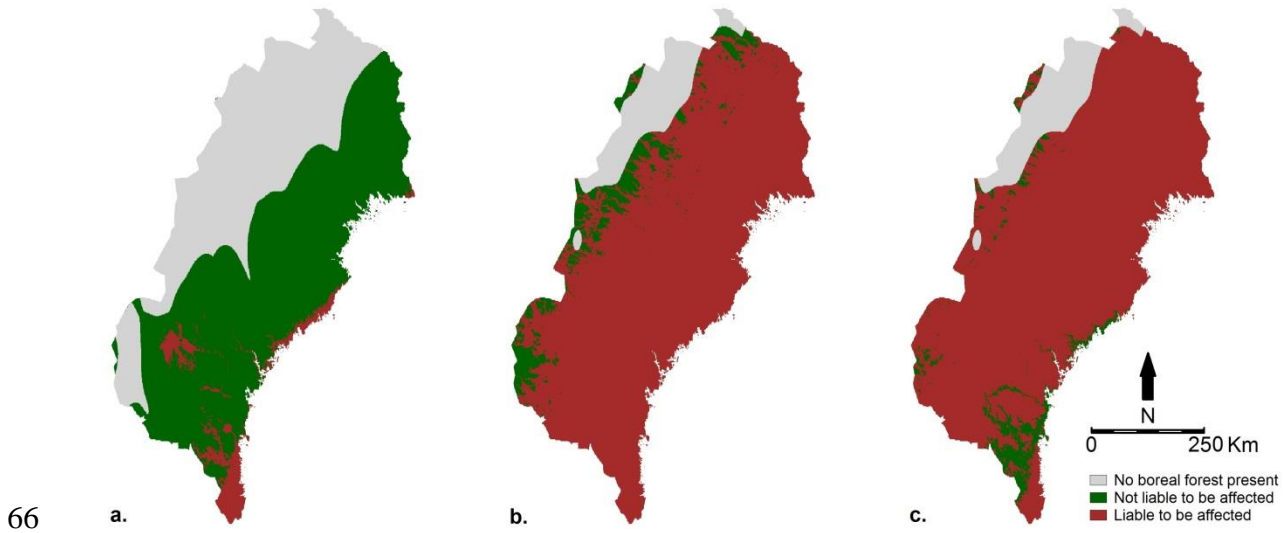
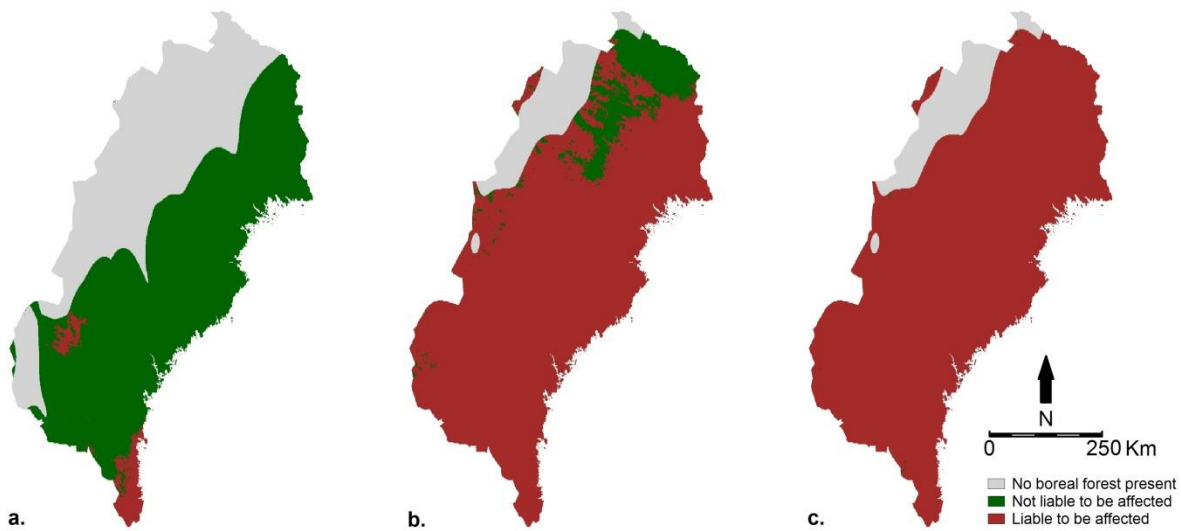


Figure S12: An indication of the geographic distribution of boreal forest that may be affected by *Panolis flammea*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.



71

a.

b.

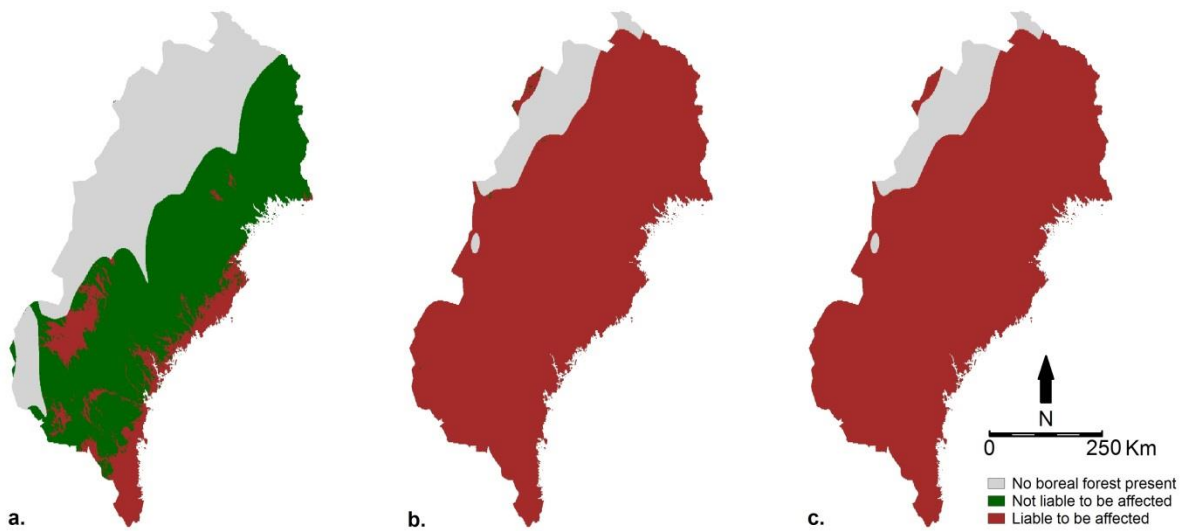
c.

72 **Figure S13:** An indication of the geographic distribution of boreal forest that may be affected by
 73 *Phaeops cyaneus*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on
 74 the average of ten predictions.

75

76

77



78

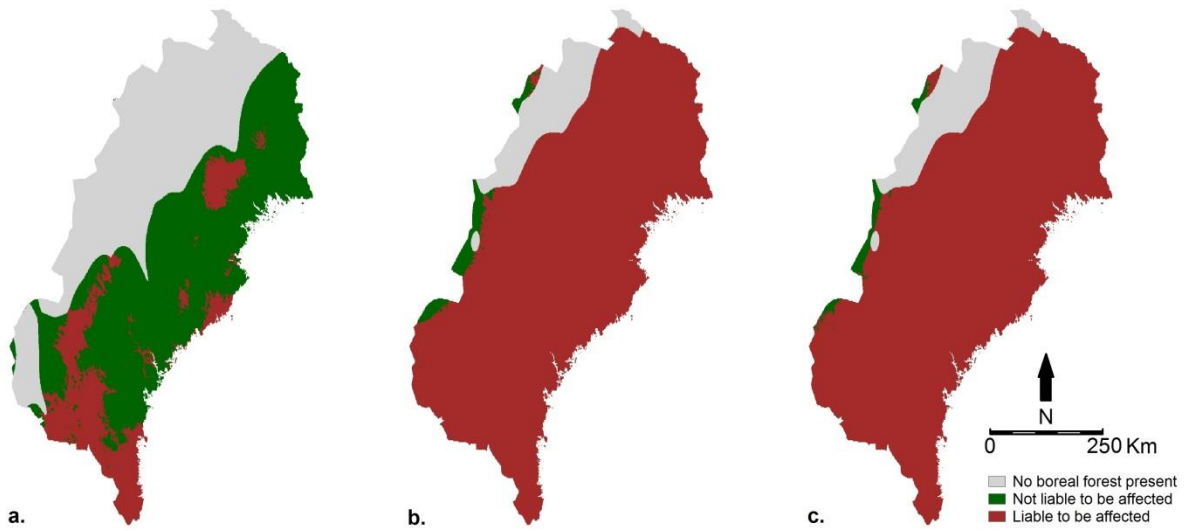
a.

b.

c.

79 **Figure S14:** An indication of the geographic distribution of boreal forest that may be affected by
 80 *Pissodes pini*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the
 81 average of ten predictions.

82



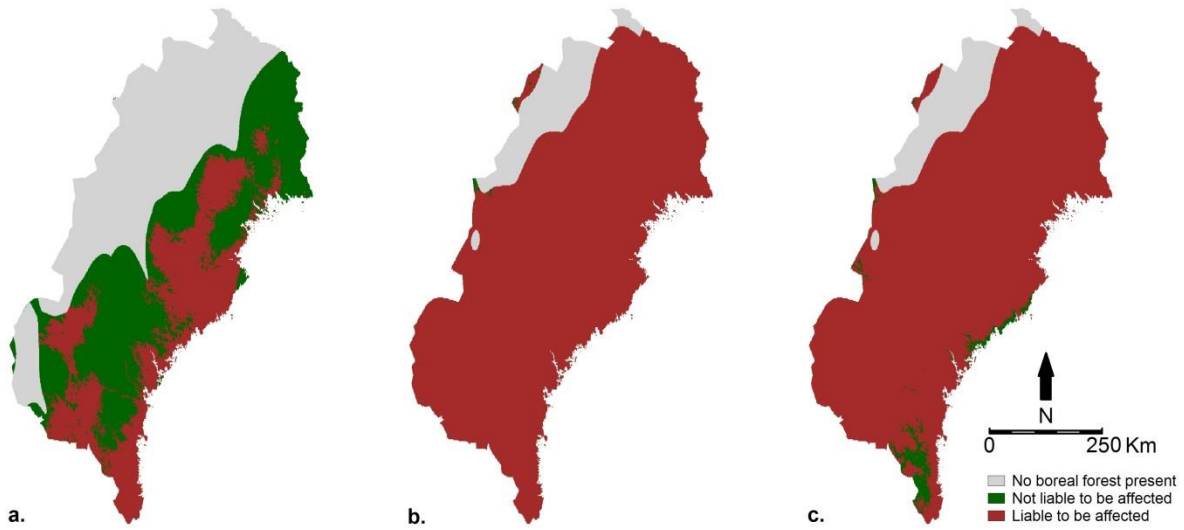
83

84 **Figure S15:** An indication of the geographic distribution of boreal forest that may be affected by
 85 *Pissodes piniphilus*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on
 86 the average of ten predictions.

87

88

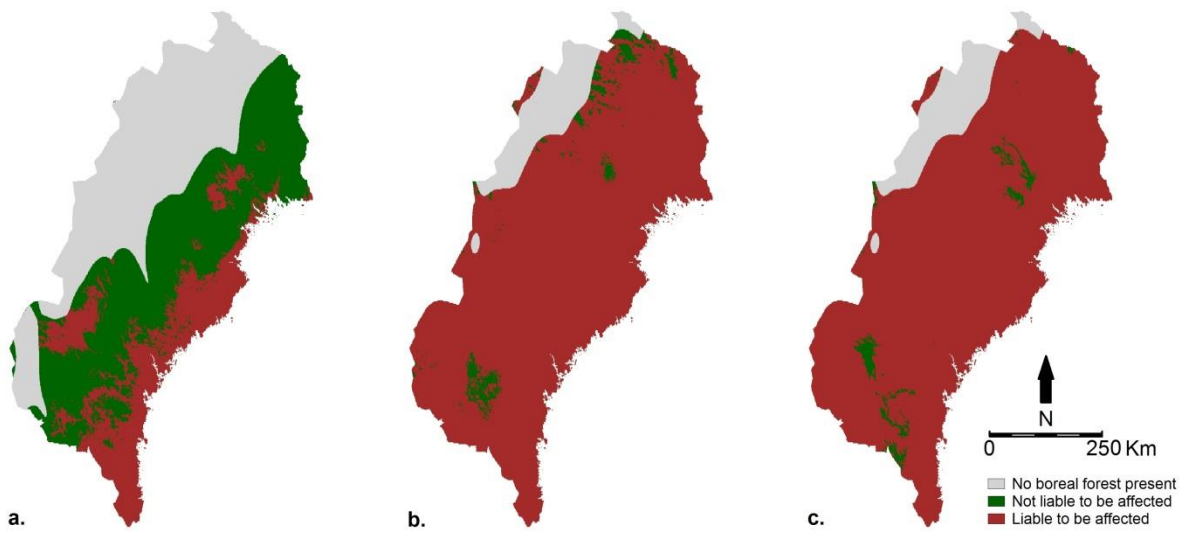
89



90

91 **Figure S16:** An indication of the geographic distribution of boreal forest that may be affected by
 92 *Pityogenes bidentatus*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based
 93 on the average of ten predictions.

94



95

96

97

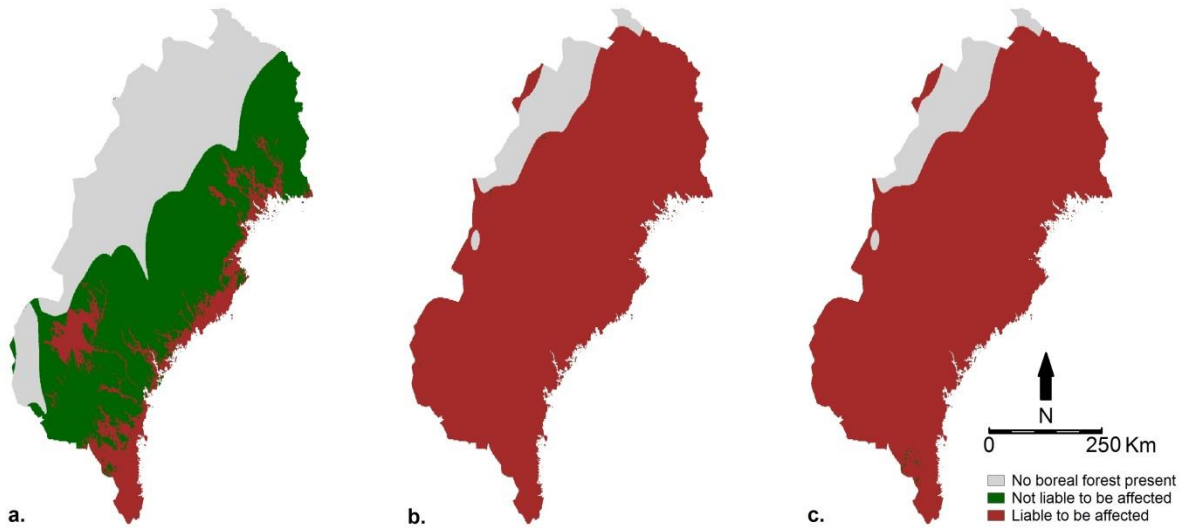
98

99

100

101

Figure S17: An indication of the geographic distribution of boreal forest that may be affected by *Pityogenes chalcographus*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.



102

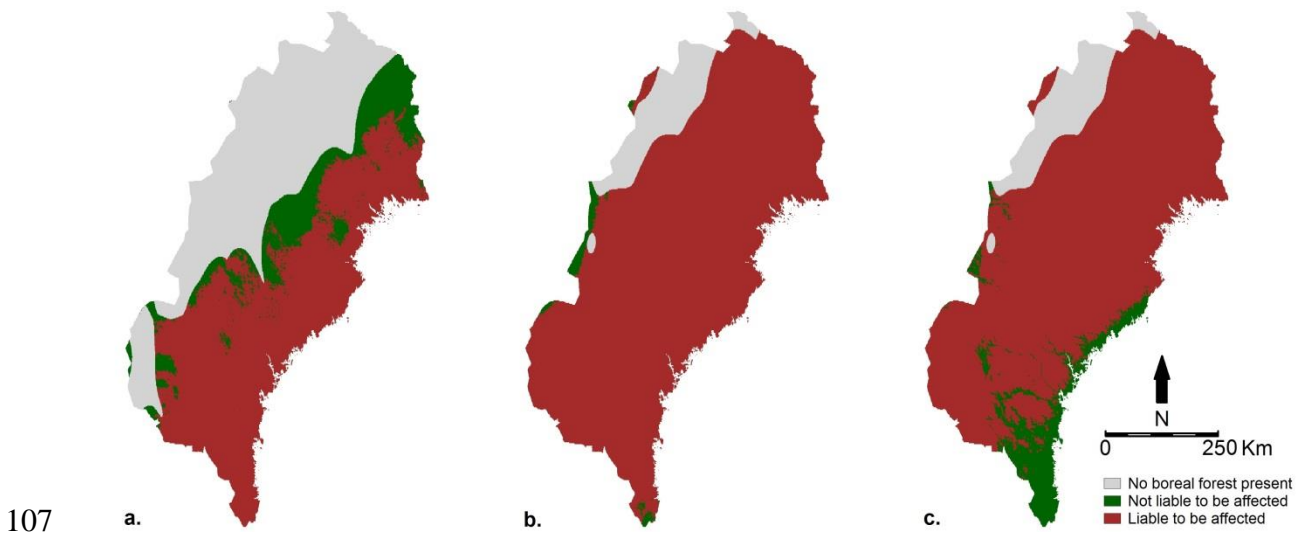
103

104

105

106

Figure S18: An indication of the geographic distribution of boreal forest that may be affected by *Pityogenes quadridens*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.



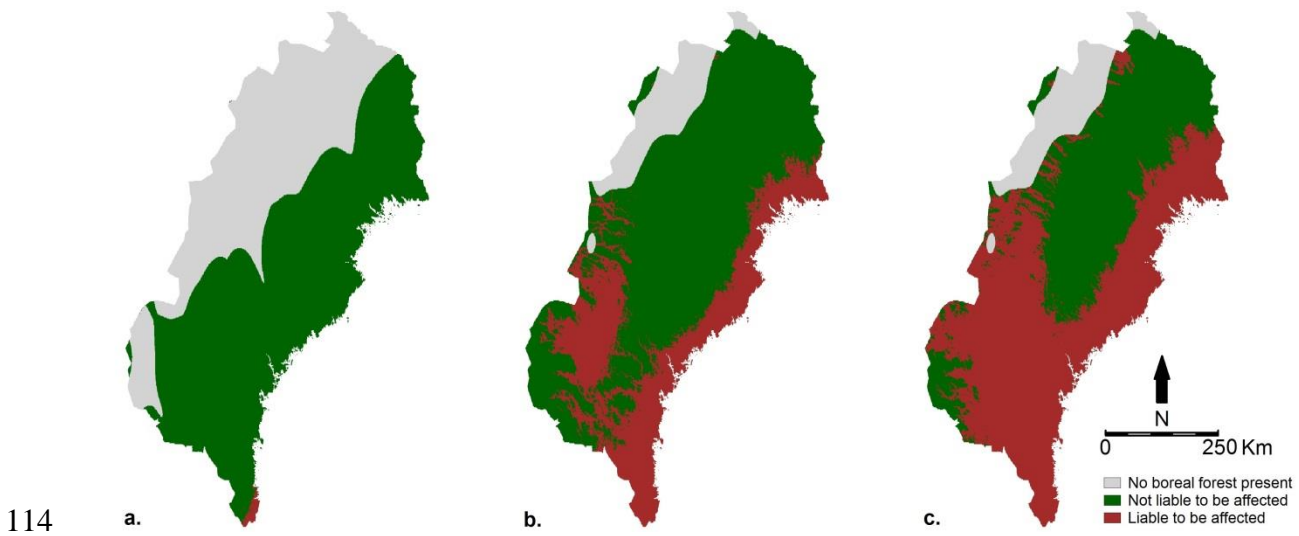
107 a. b. c.

108 **Figure S19:** An indication of the geographic distribution of boreal forest that may be affected by
 109 *Polygraphus poligraphus*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5,
 110 based on the average of ten predictions.

111

112

113



114 a. b. c.

115 **Figure S20:** An indication of the geographic distribution of boreal forest that may be affected by
 116 *Rhyacionia buoliana*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based
 117 on the average of ten predictions.

118

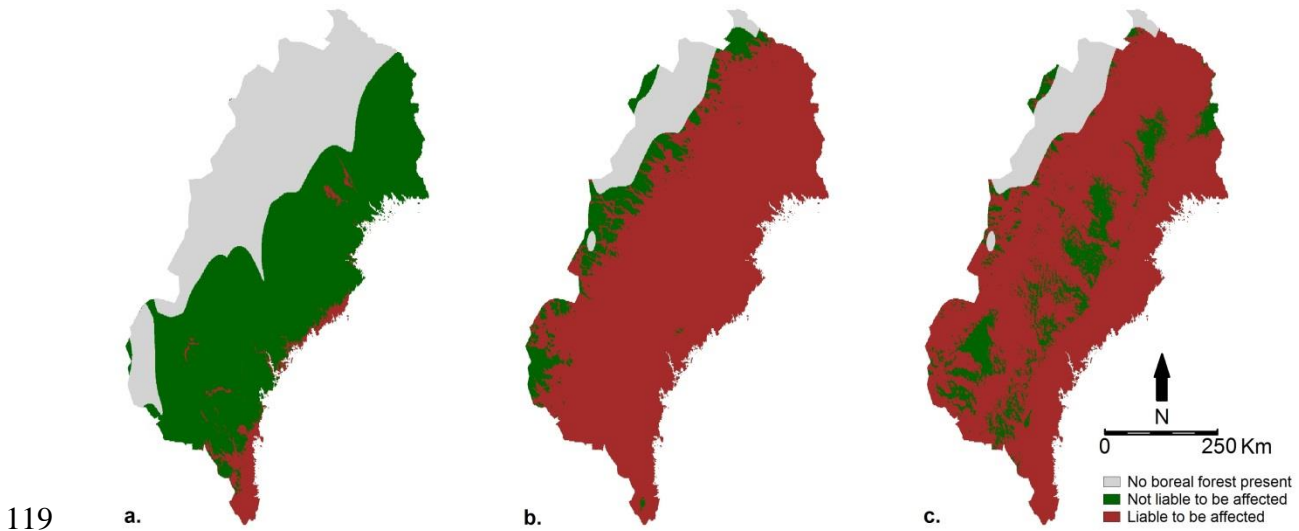


Figure S21: An indication of the geographic distribution of boreal forest that may be affected by *Rhyacionia duplana*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

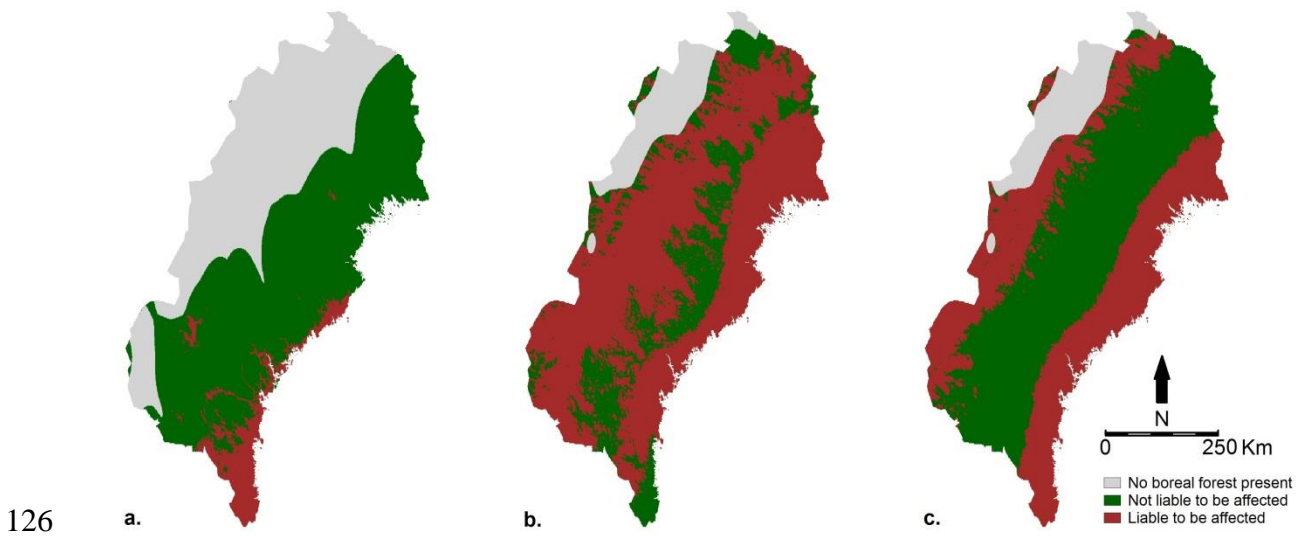


Figure S22: An indication of the geographic distribution of boreal forest that may be affected by *Tetropium castaneum*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

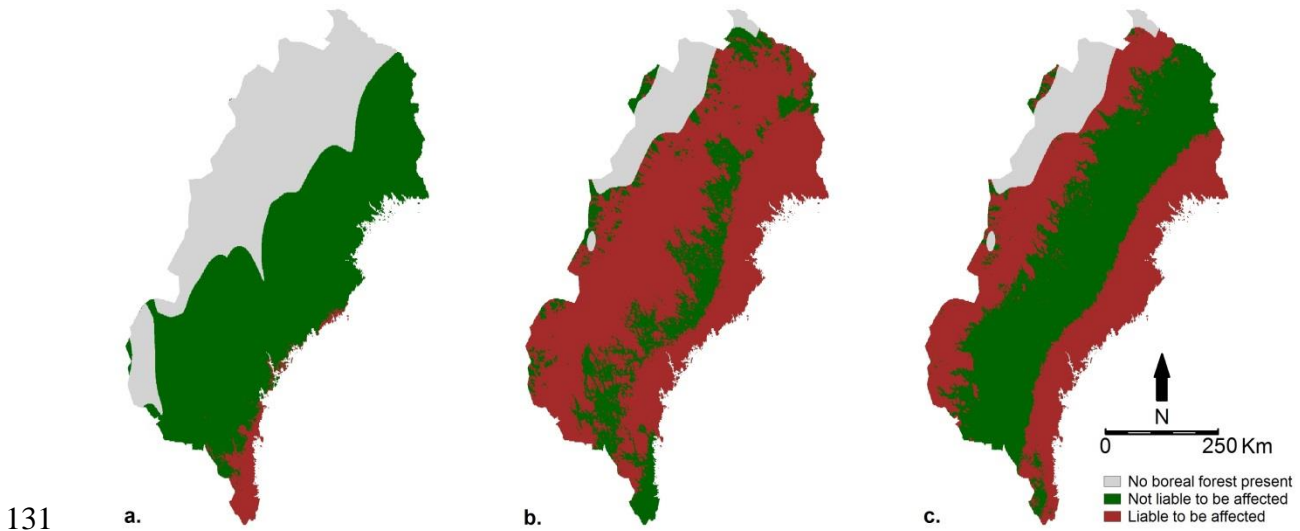


Figure S23: An indication of the geographic distribution of boreal forest that may be affected by *Tetropium fuscum*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

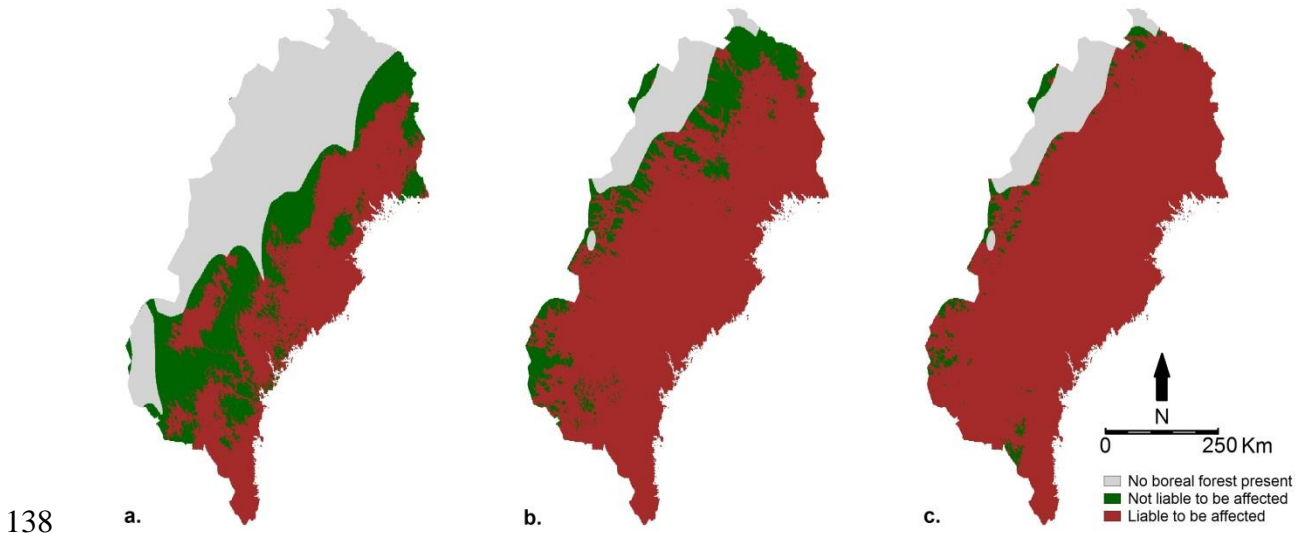


Figure S24: An indication of the geographic distribution of boreal forest that may be affected by *Tomicus minor*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

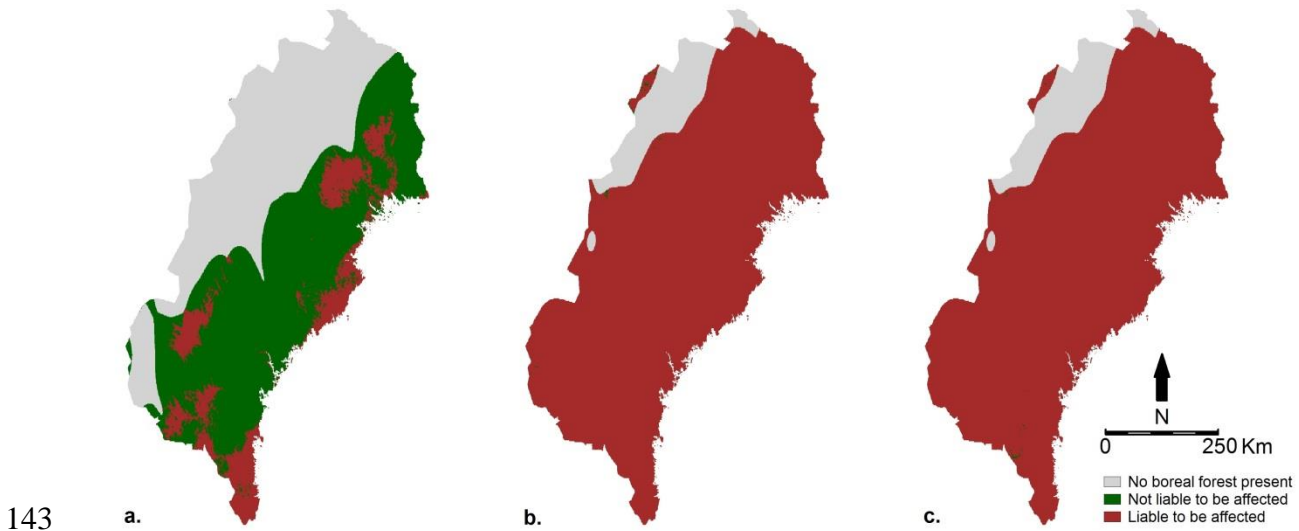


Figure S25: An indication of the geographic distribution of boreal forest that may be affected by *Tomicus piniperda*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

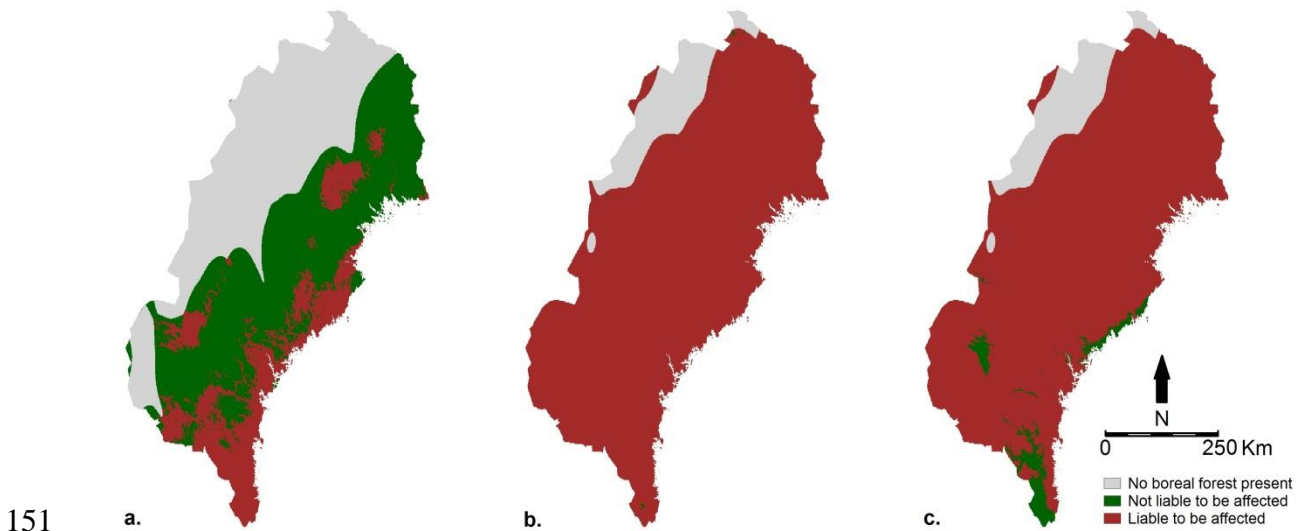


Figure S26: An indication of the geographic distribution of boreal forest that may be affected by *Trypodendron lineatum*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.

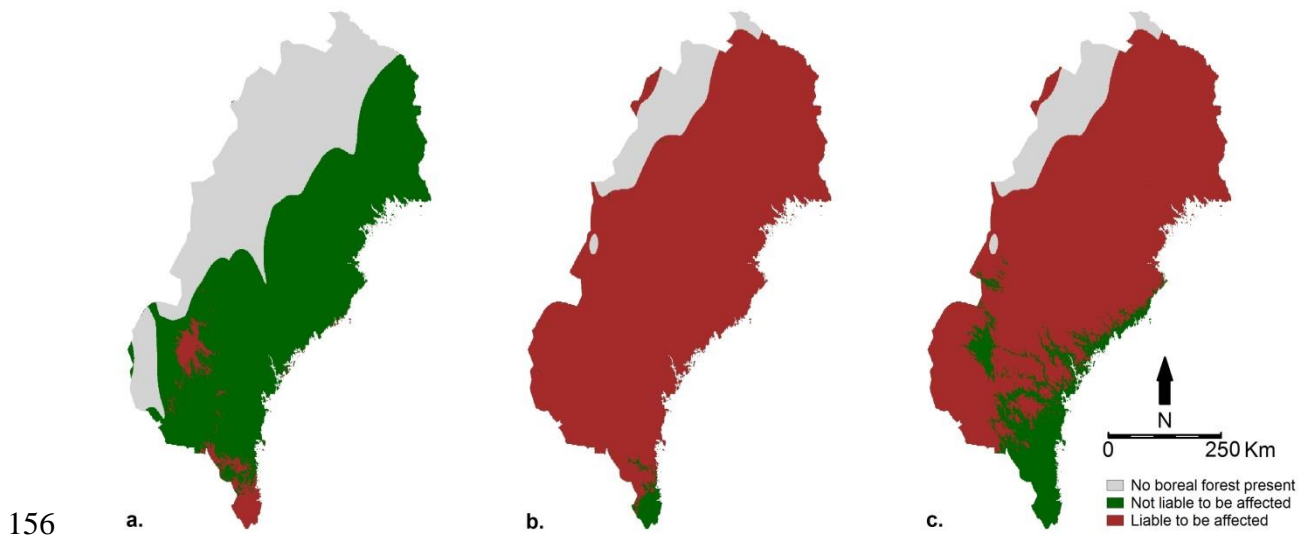


Figure S27: An indication of the geographic distribution of boreal forest that may be affected by *Zeiraphera ratzeburgiana*, a. at present, b. in 2070 under RCP 4.5, and c. in 2070 under RCP 4.5, based on the average of ten predictions.