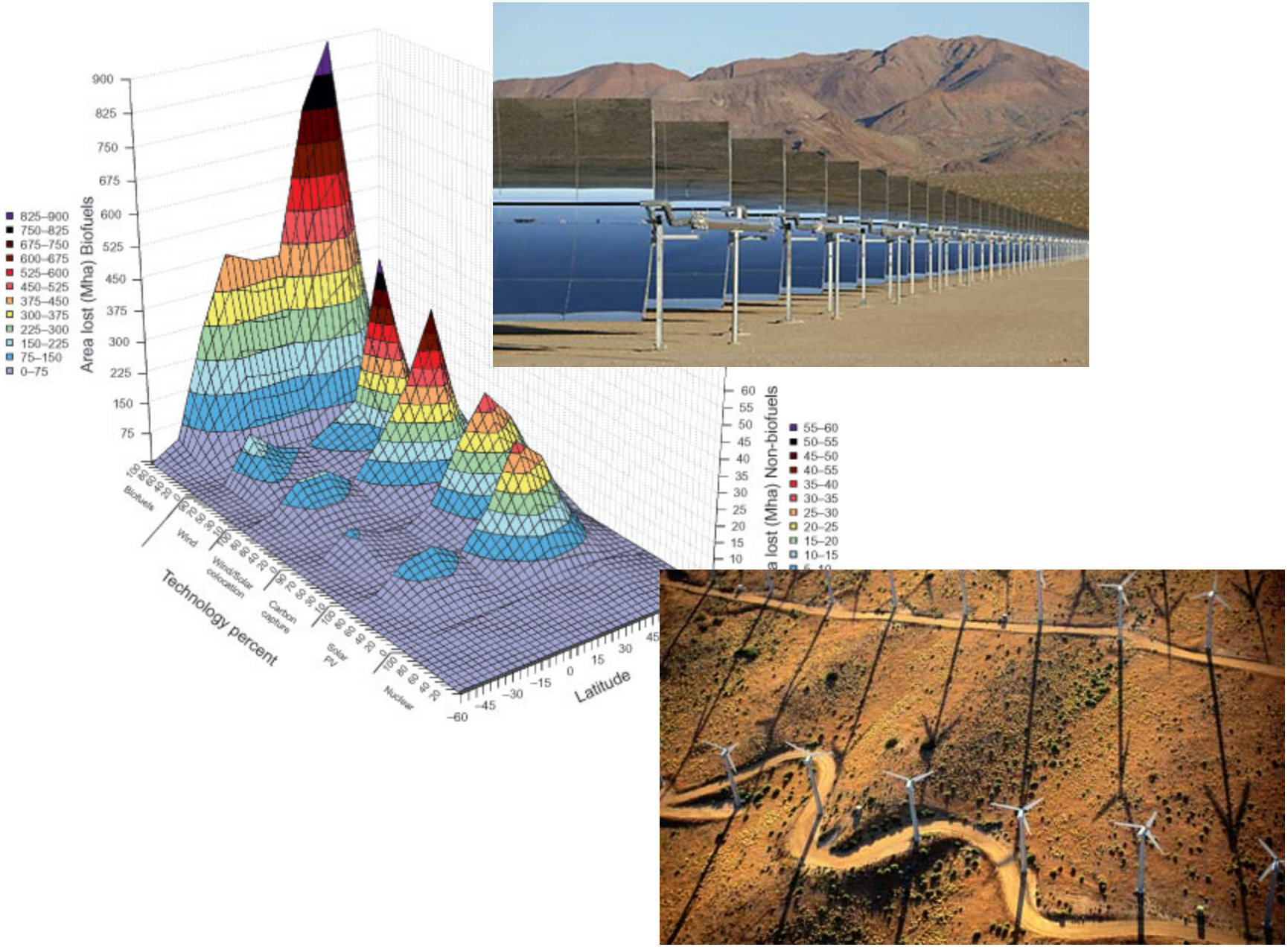
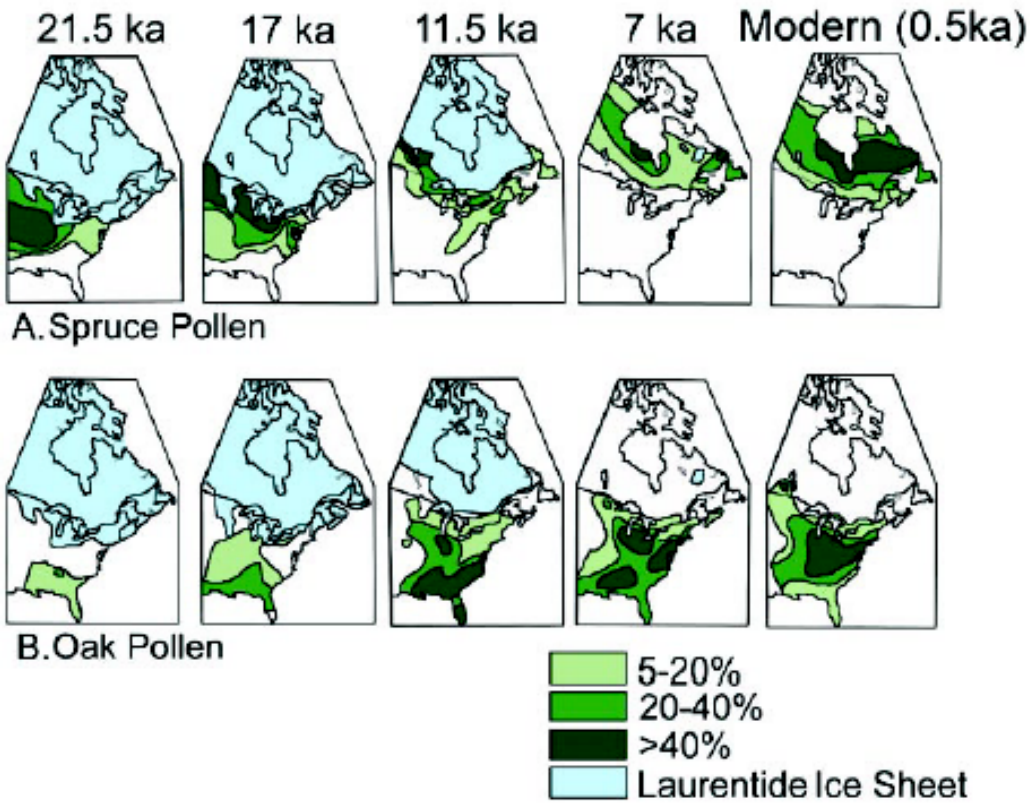
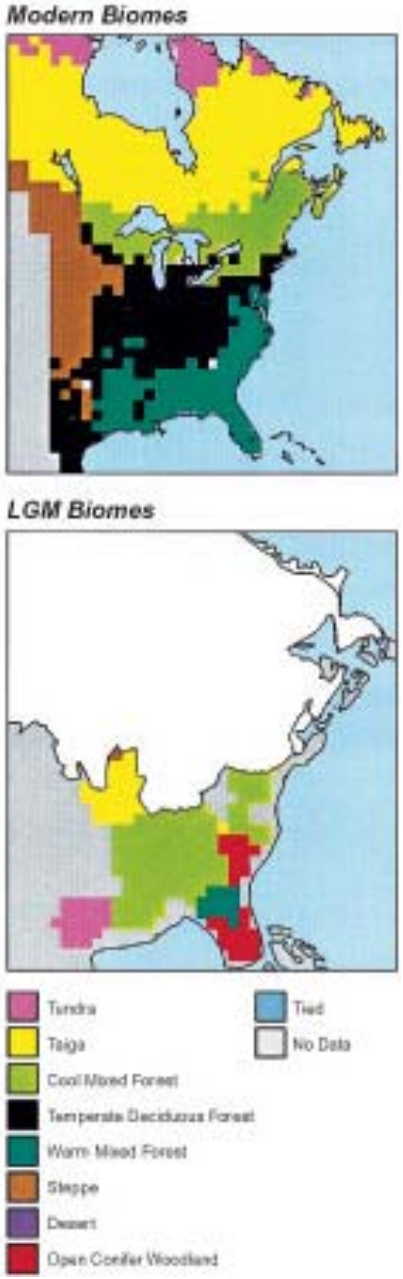
Edited by Lee Hannah

Saving a Million Species

Extinction Risk from Climate Change

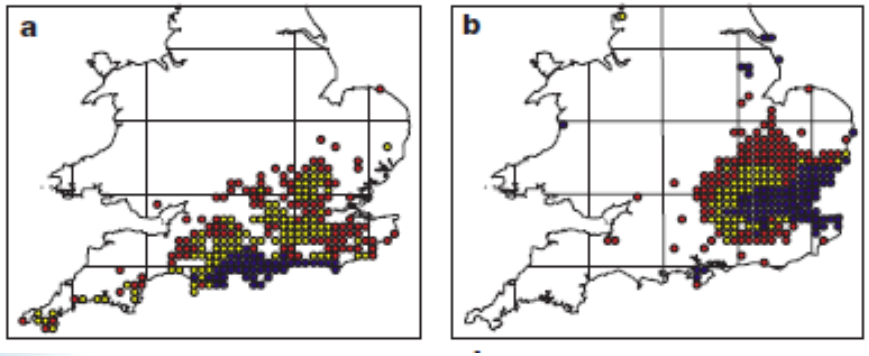

Area lost (Mha) Biofuels
900
825
750
675
600
525
450
375
300
225
150
75
825–900
750–825
675–750
600–675
525–600
450–525
375–450
300–375
225–300
150–225
75–150
0–75
Biofuels
Wind
Wind/Solar colocation
Carbon capture
Solar PV
Nuclear
Technology percent
Latitude
−60
−45
−30
−15
0
15
30
45
Area lost (Mha) Non-biofuels
60
55
50
45
40
35
30
25
20
15
10
55–60
50–55
45–50
40–55
35–40
30–35
25–30
20–25
15–20
10–15

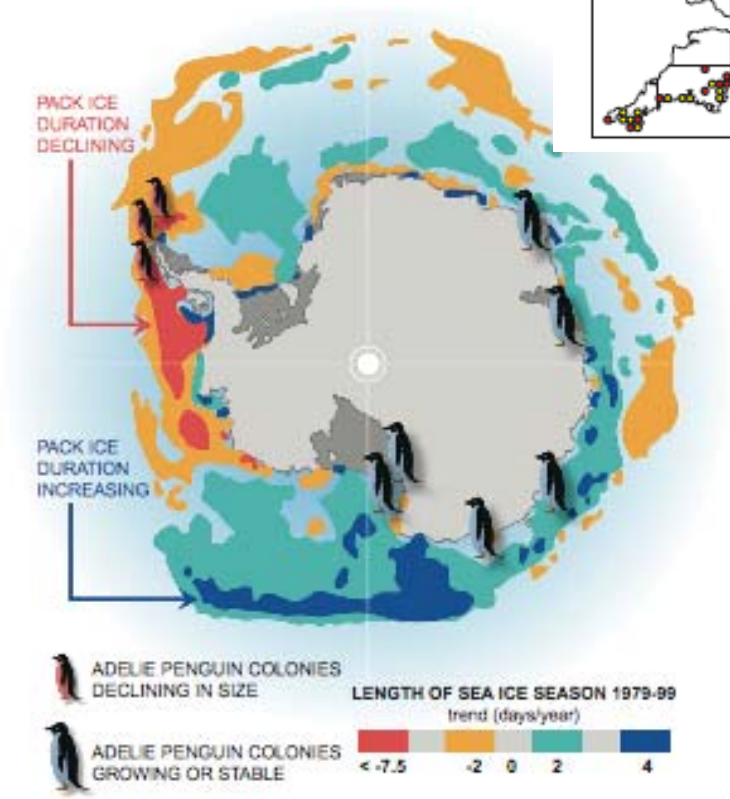




Response to past climate change:

Range Shifts





Contemporary Range Shifts

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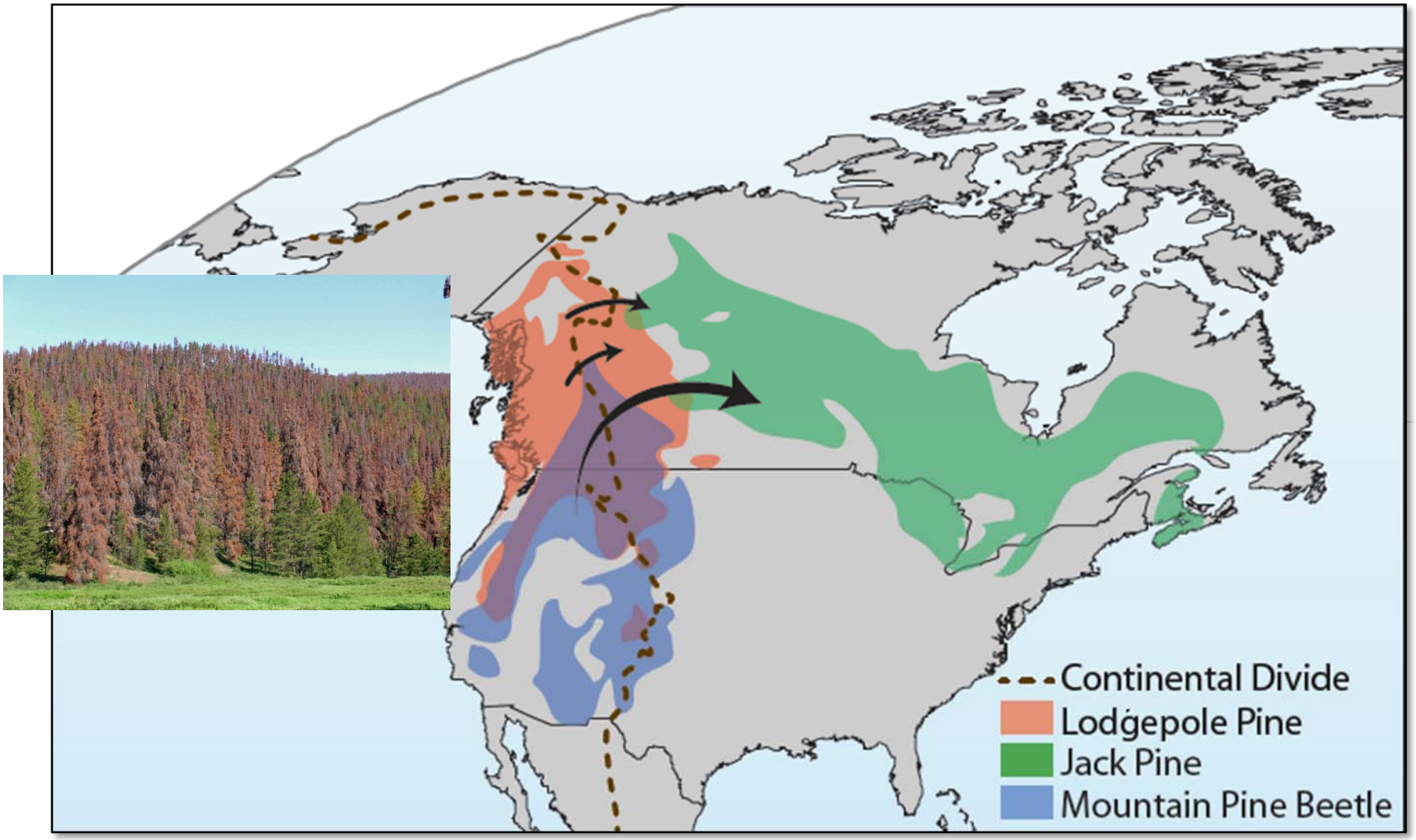
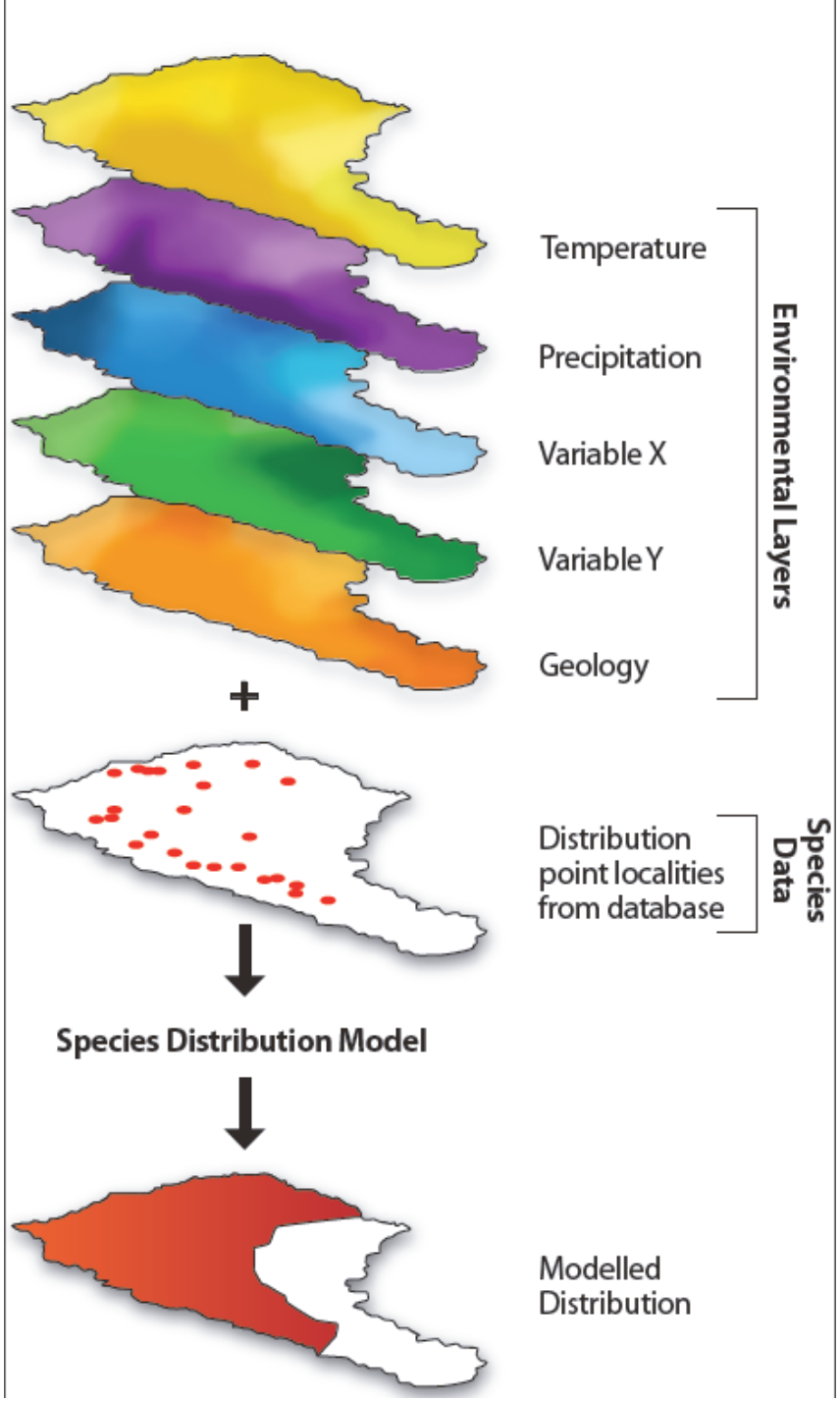
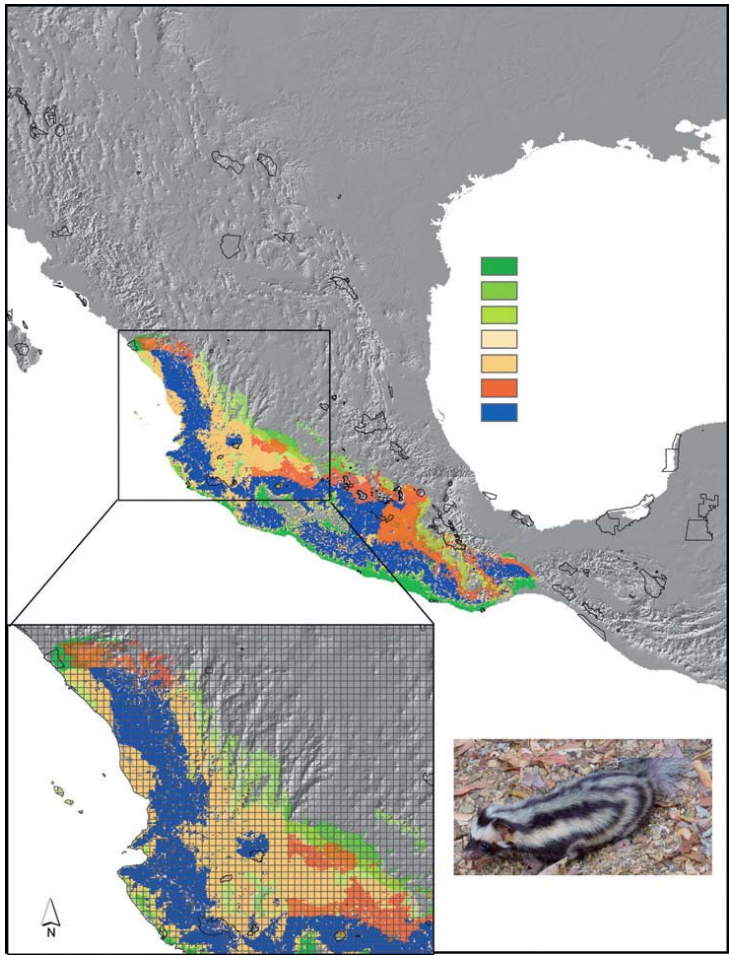

Continental Divide
Lodgepole Pine
Jack Pine
Mountain Pine Beetle

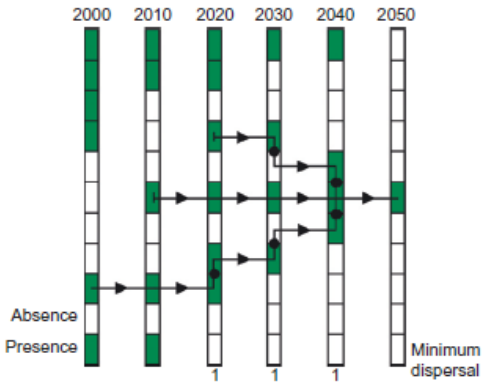
Species Distribution Models

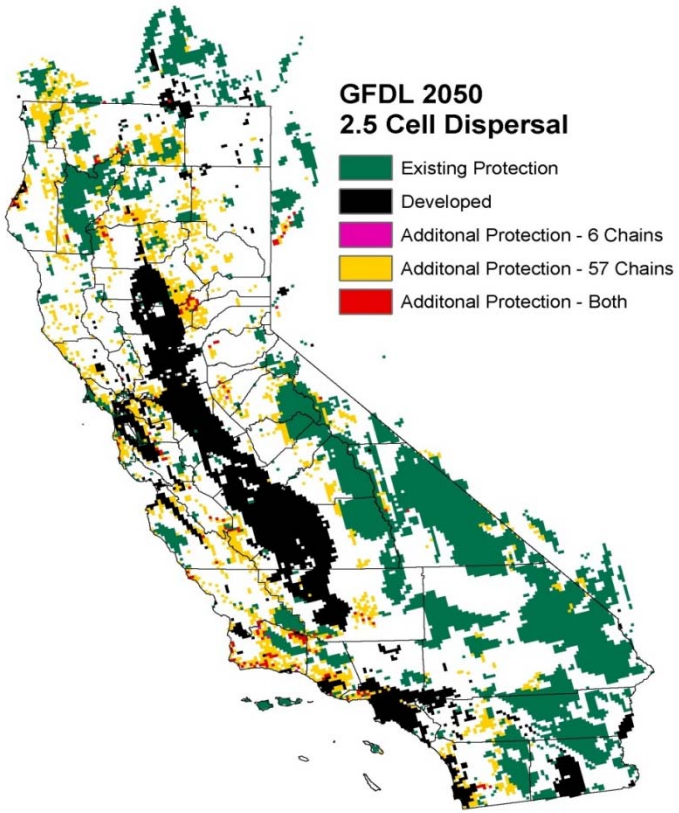


Species Distribution Models (SDM)

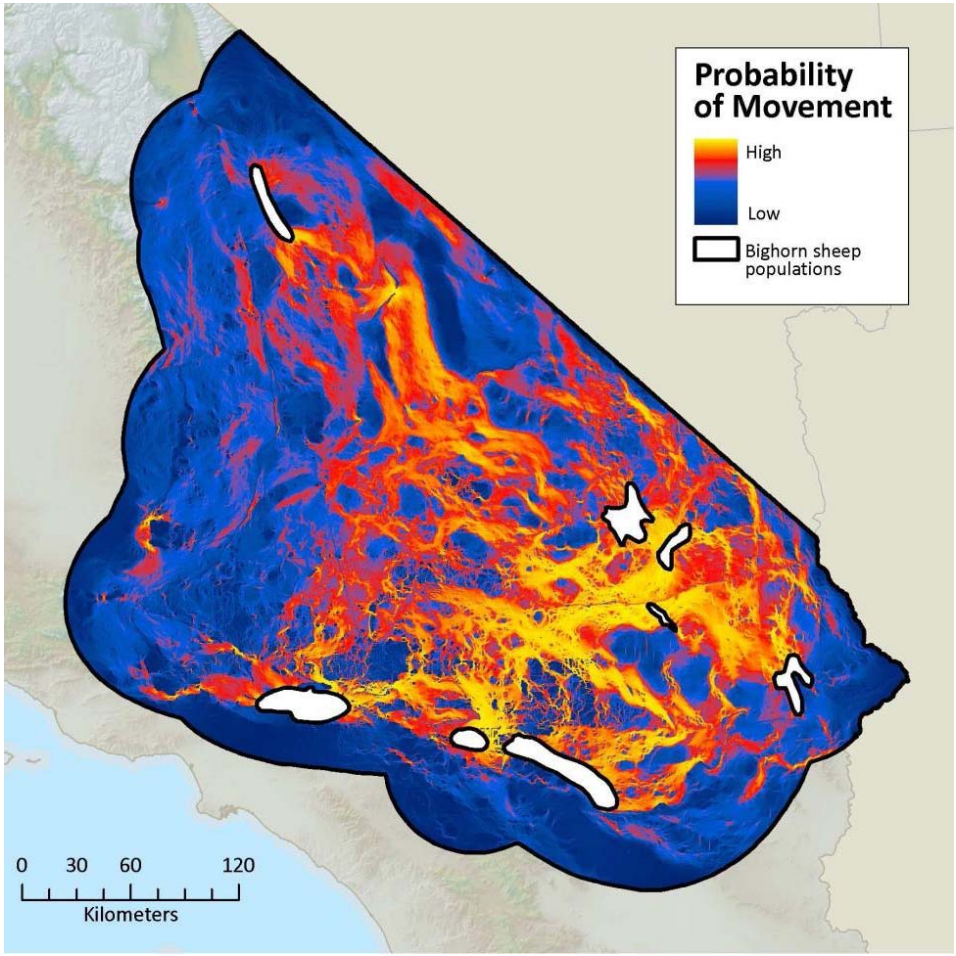


Conservation Planning with SDM:
Network Flow





Conservation Planning with SDM: **Circuitscape**



Recommendations

- Best practice is participatory Vulnerability Assessment
- Transmission corridors of particular concern
- Need for flexibility and adaptive management difficult to meet
- Tools should be used in conjunction with expert opinion