

Honey bees and the landscape:



Choosing an optimal apiary site

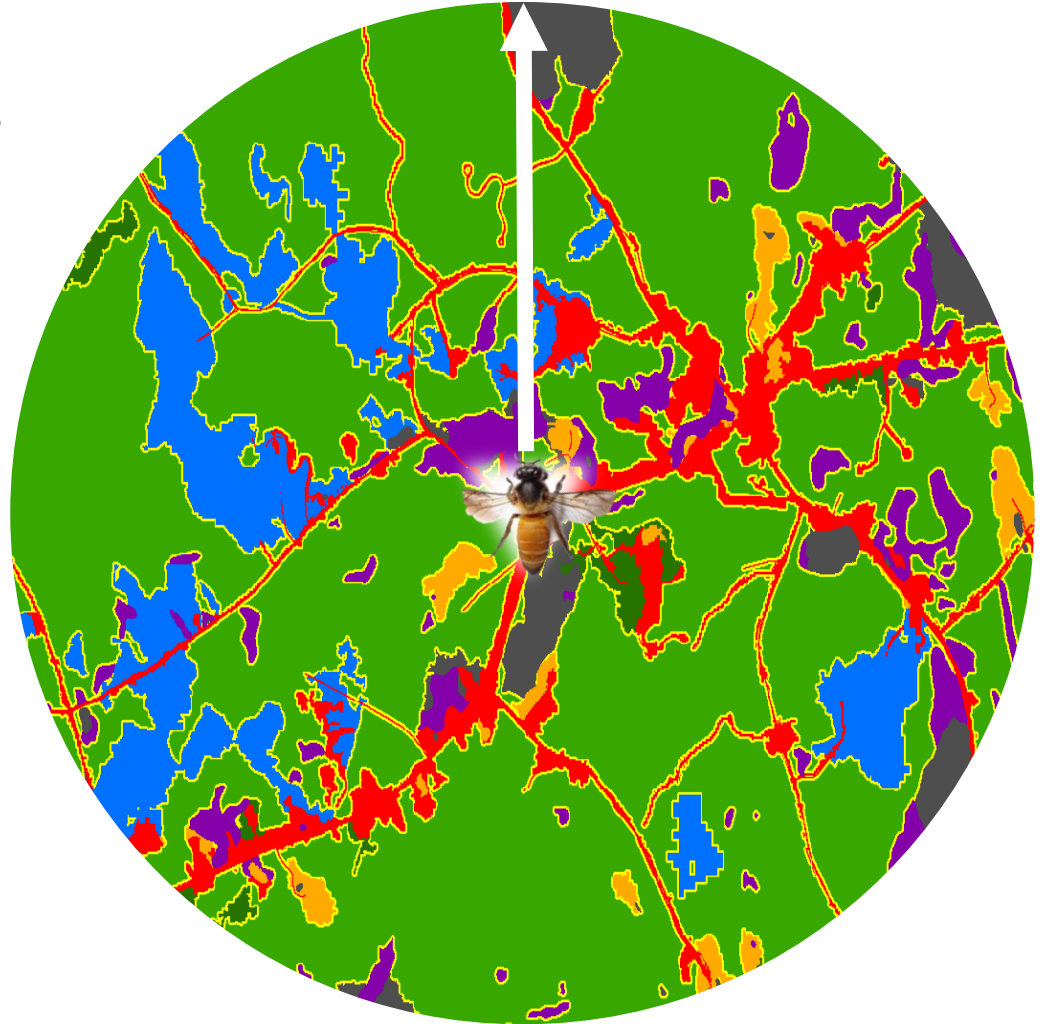
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What's a landscape to a bee?

- Anything it can fly to!
- Why a circle?
 - Central place foraging



What do bees need in their landscape?

Food:
pollen and nectar

Habitat:
Beehive

Within their
flight limit



How far do honey bees fly?



...as far as they have to!



But wait! Consider this:

- You can't just put them anywhere
- Bees that fly more will die earlier
- Typical foraging distance: 0.5 – 3.5 miles
- Exceptional examples exist



Establish your apiary near good
forage resources!

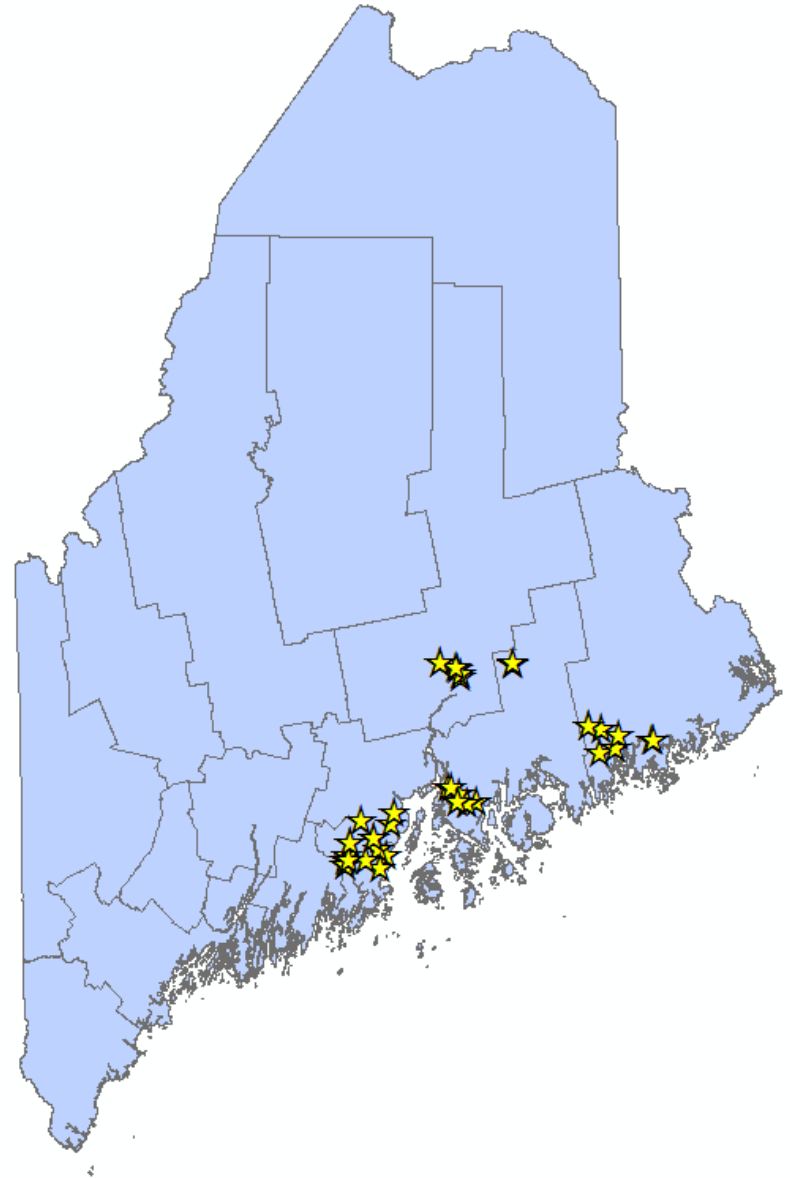
What are good forage resources?

- Consistent bloom throughout growing season
 - Wildflowers
 - Woody shrubs
 - Flowering trees (especially important in early Spring)
- Water source

What types of land offer good forage resources?

Land cover study

- Four sampling areas:
 - Midcoast (Waldo and Knox Counties)
 - Washington County
 - Hancock County
 - Orono/Old Town (Penobscot County)
- Early, mid, and late summer 2015
- Eight types of land





1) Agriculture/grassland



2) Blueberry field



3) Coniferous forest



4) Deciduous/mixed forest



5) Deciduous/mixed forest edge



6) Urban/developed



7) Emergent wetland



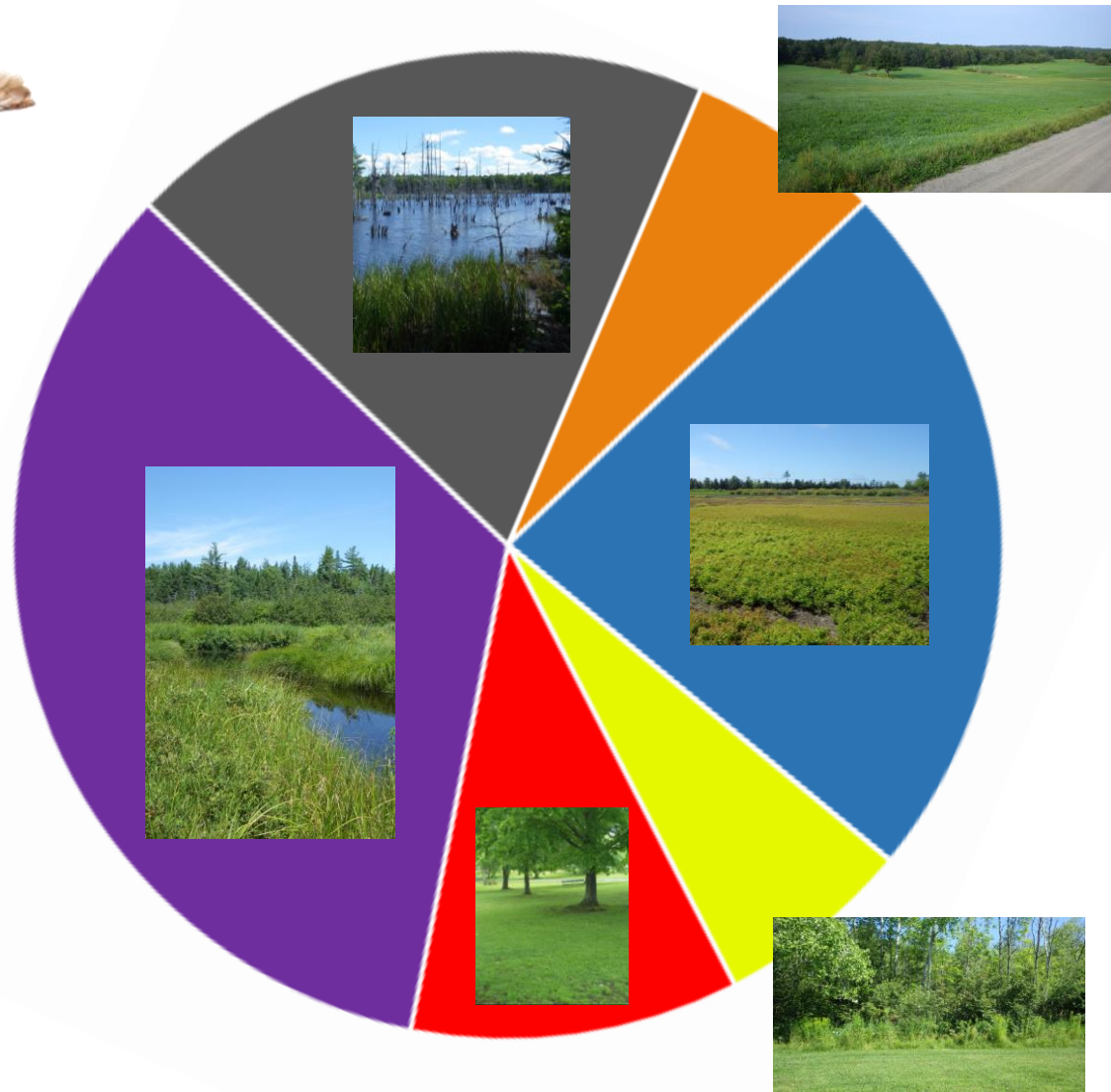
8) Wetlands/water



Where do honey bees fly to find food?



- Agriculture/grassland
- Blueberry field
- Coniferous forest
- Deciduous/mixed forest
- Deciduous/mixed forest edge
- Urban/developed
- Emergent wetland



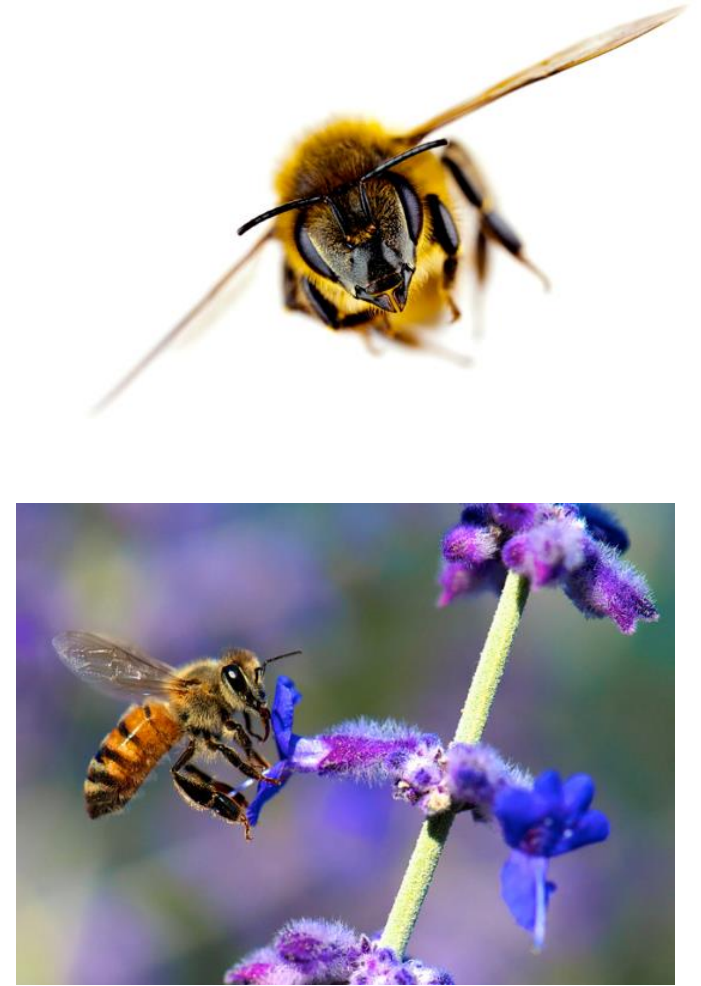
What's blooming in the wetlands?

- Woody shrubs
- Wildflowers
- Beware: Laurels (*Kalmia* spp.) and *Rhododendron* spp.
- Great water source!

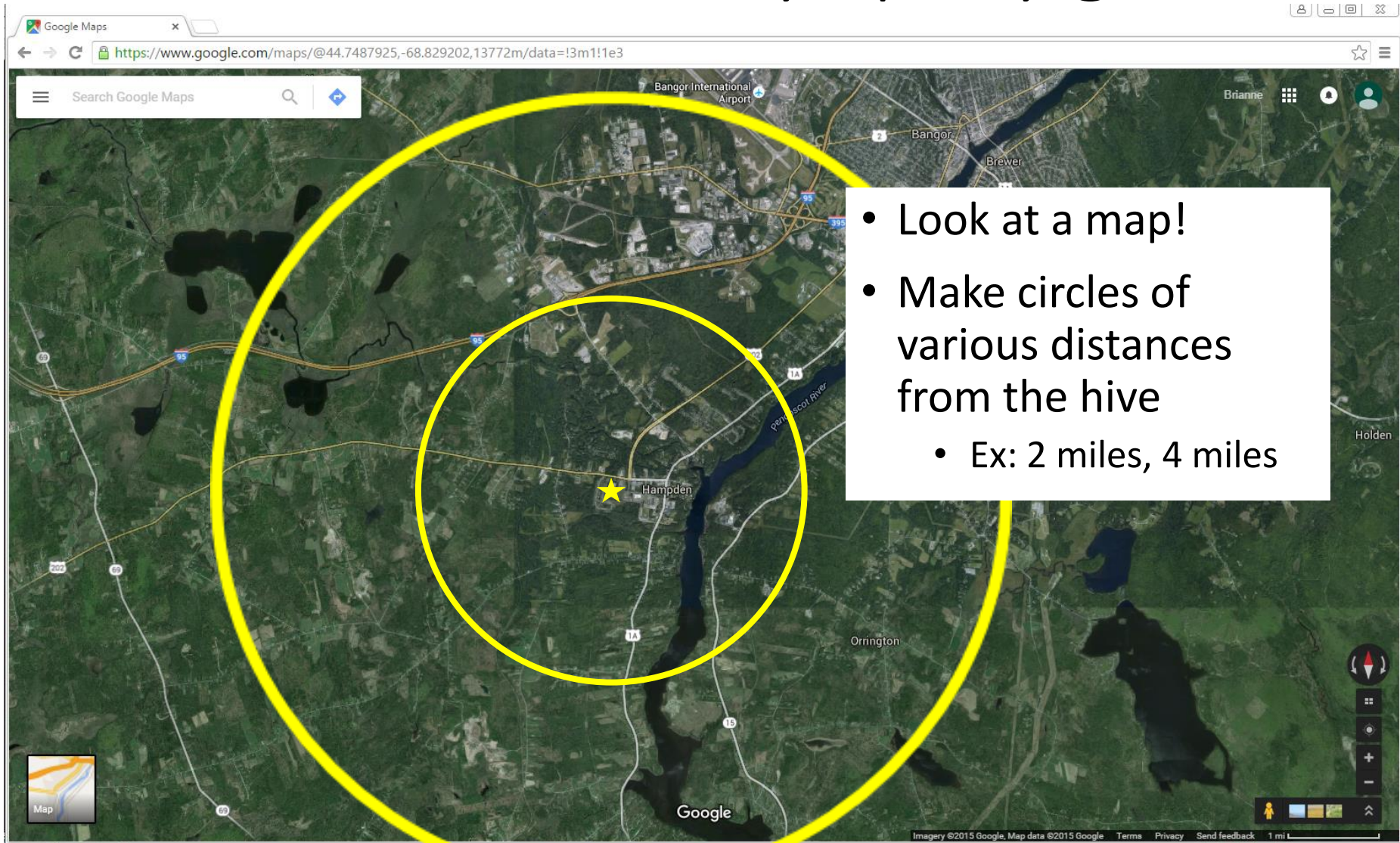


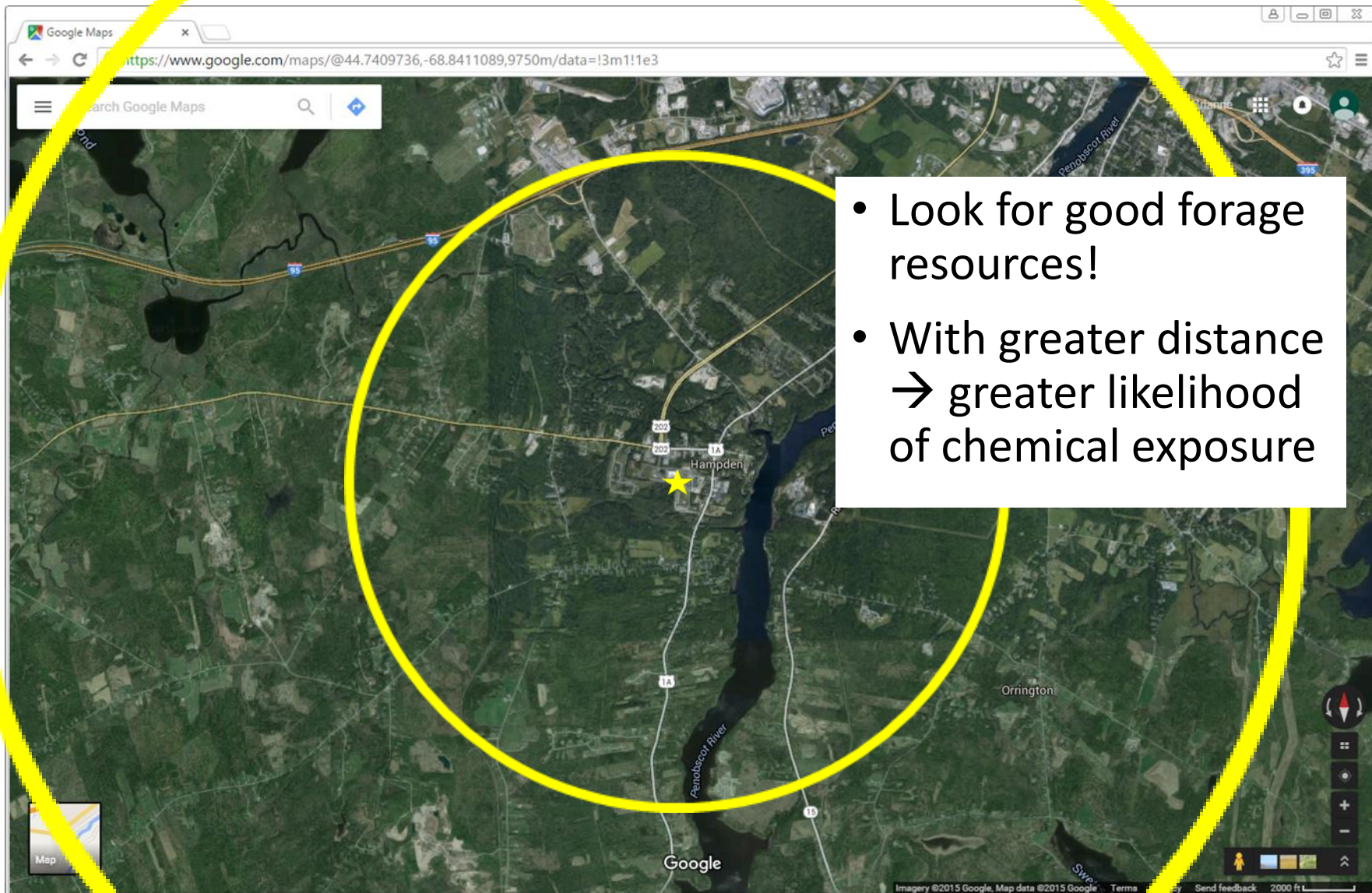
How do honey bees find food?

- Orientation flight
 - Searching for floral odors
- When they find forage, they fly only in that direction until they can't find any more forage
 - Will return first to the same field
 - Will disregard nearer forage sources if they aren't in the right direction



So where should my apiary go?!?





- Look for good forage resources!
- With greater distance → greater likelihood of chemical exposure

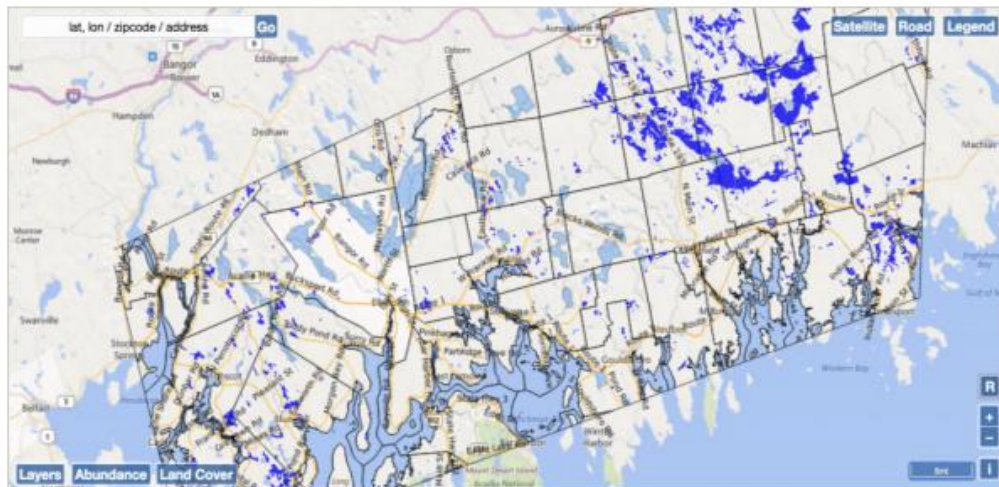


BeeMapper



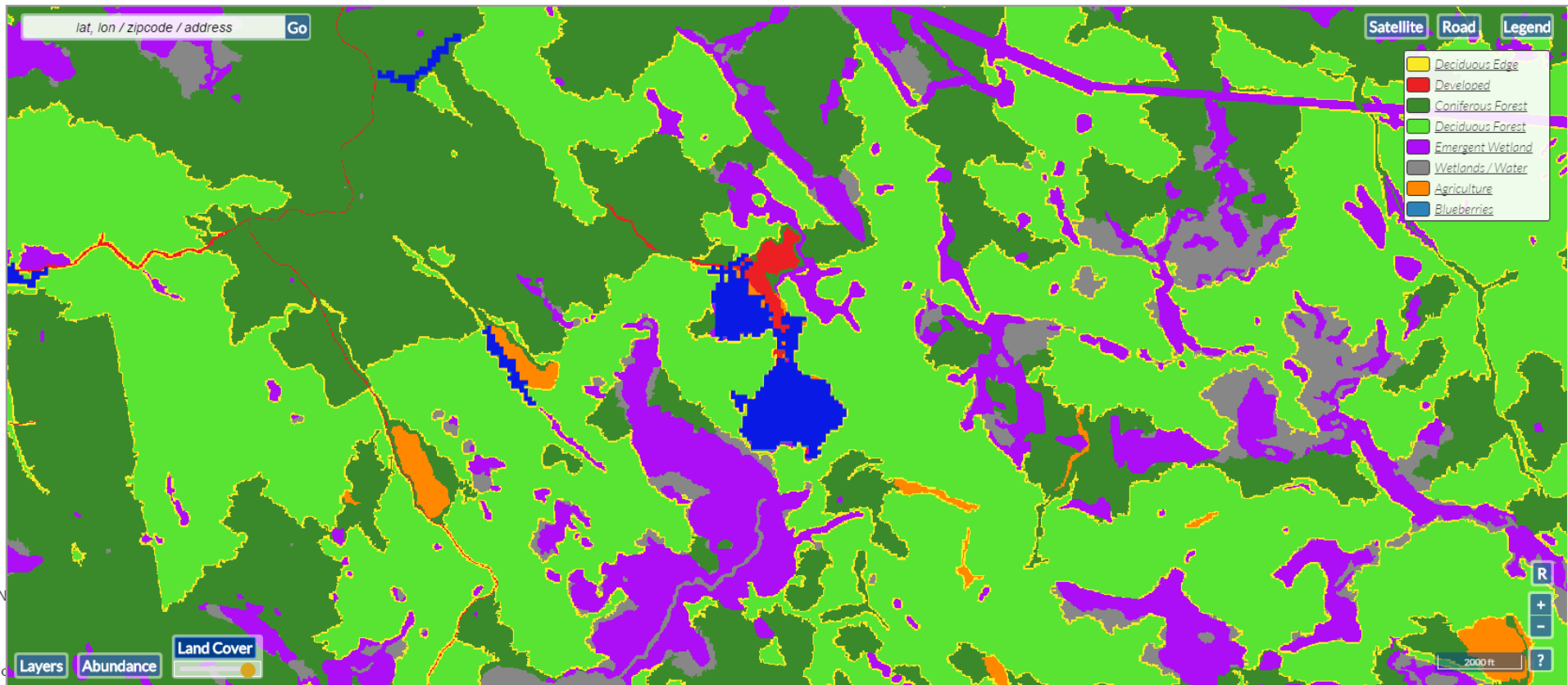
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Thanks!



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