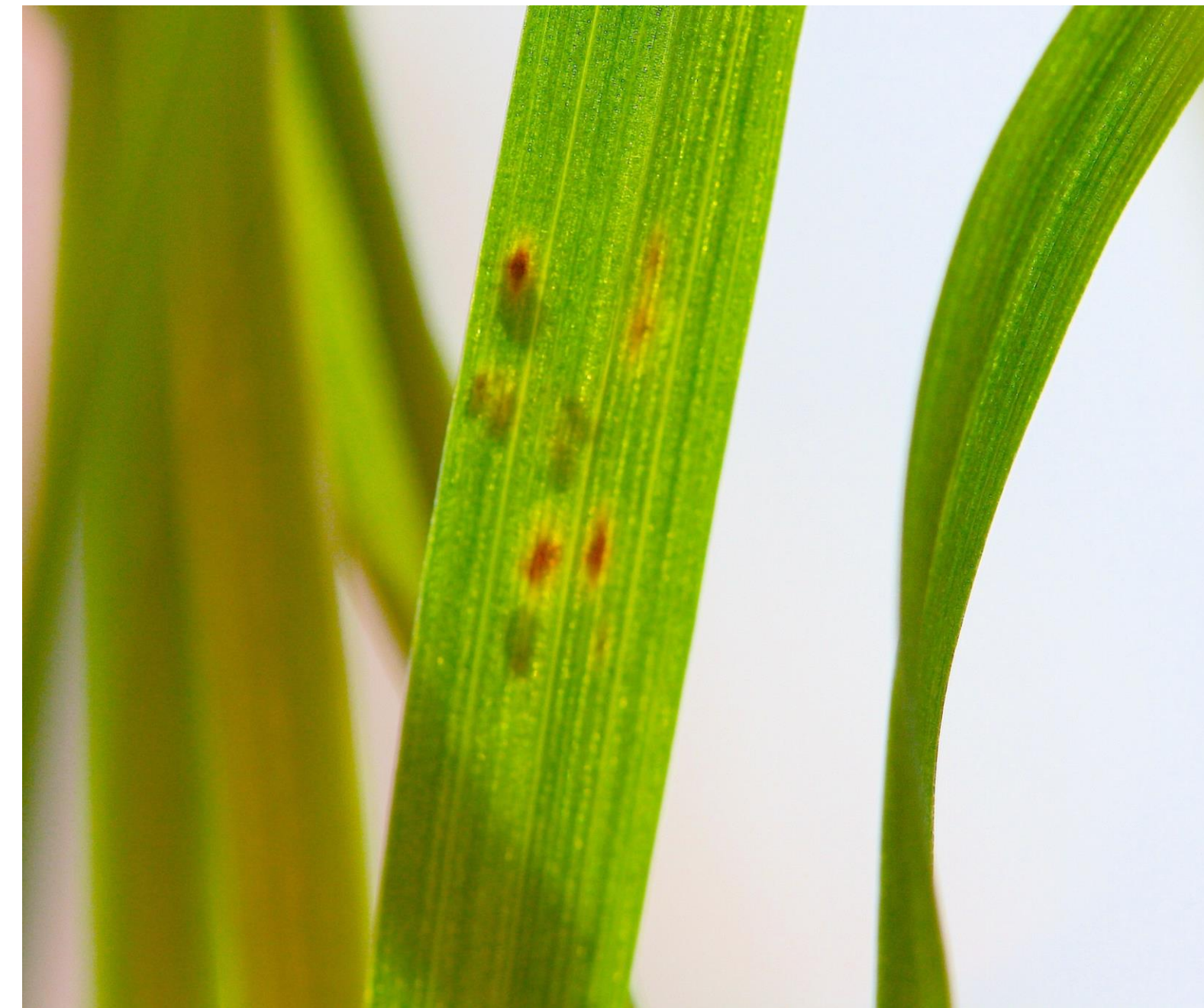


“Cereal grass aphid”

Metopolophium festucae cerealium (Stroyan)

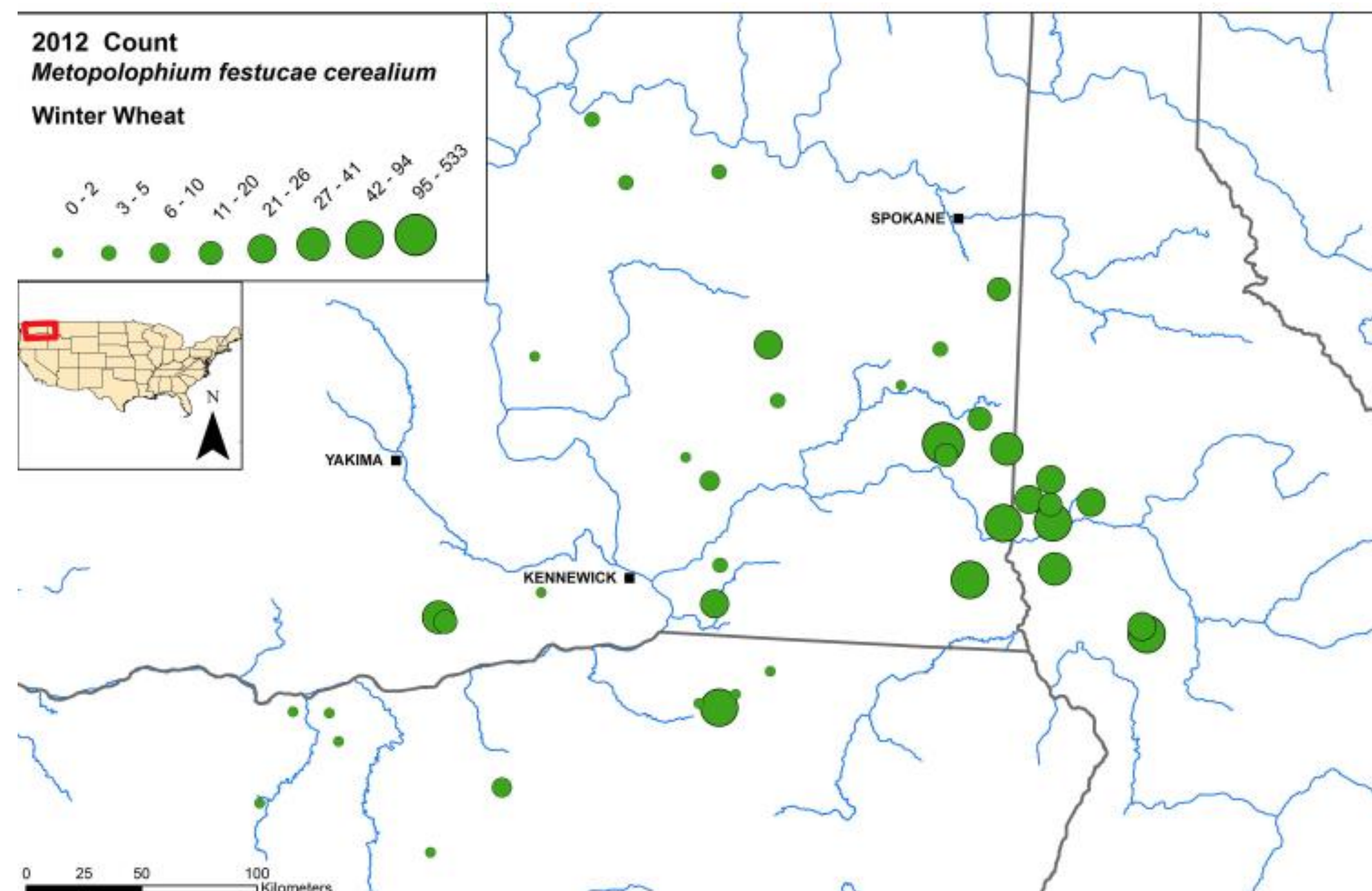


Feeding on wheat



Staining from feeding

- Likely present since 1990s
- Detected in abundance on wheat across the PNW 2011-2016
- Similar in appearance to rose-grass aphid
- Causes a redish staining
- In greenhouse trials, as injurious as Russian wheat aphid (RWA)
- Feeds on wild and cultivated grasses of our region
- Like RWA, unable to transmit Barley yellow dwarf virus
- Under some conditions can promote growth of bird cherry-oat aphid populations



Locations in PNW

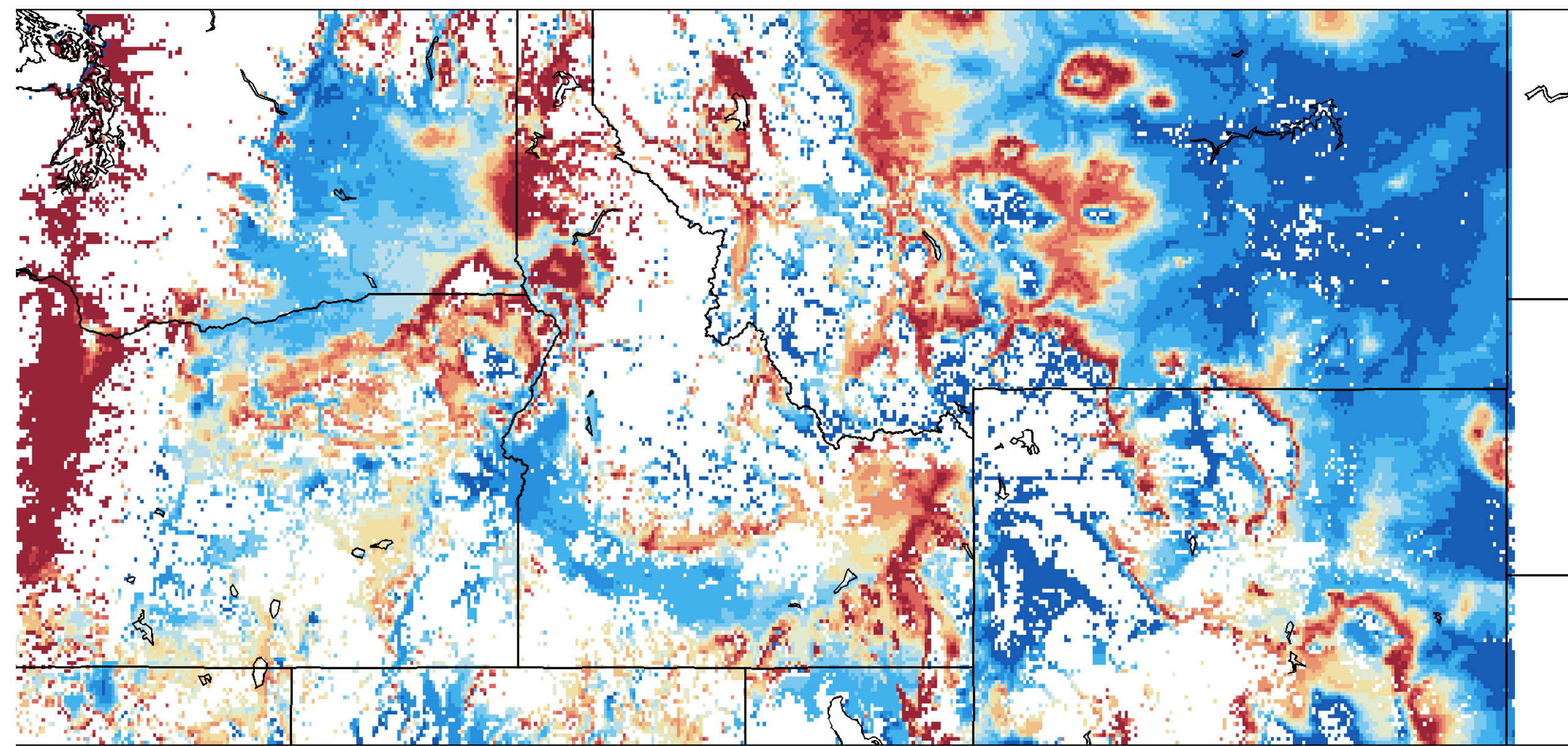
Cereal leaf beetle

Oulema melanopus



Projected increases in PNW climate suitability for CLB

Δ CLB SI excluding DD <850, 1979-2005 vs. 2031-2060

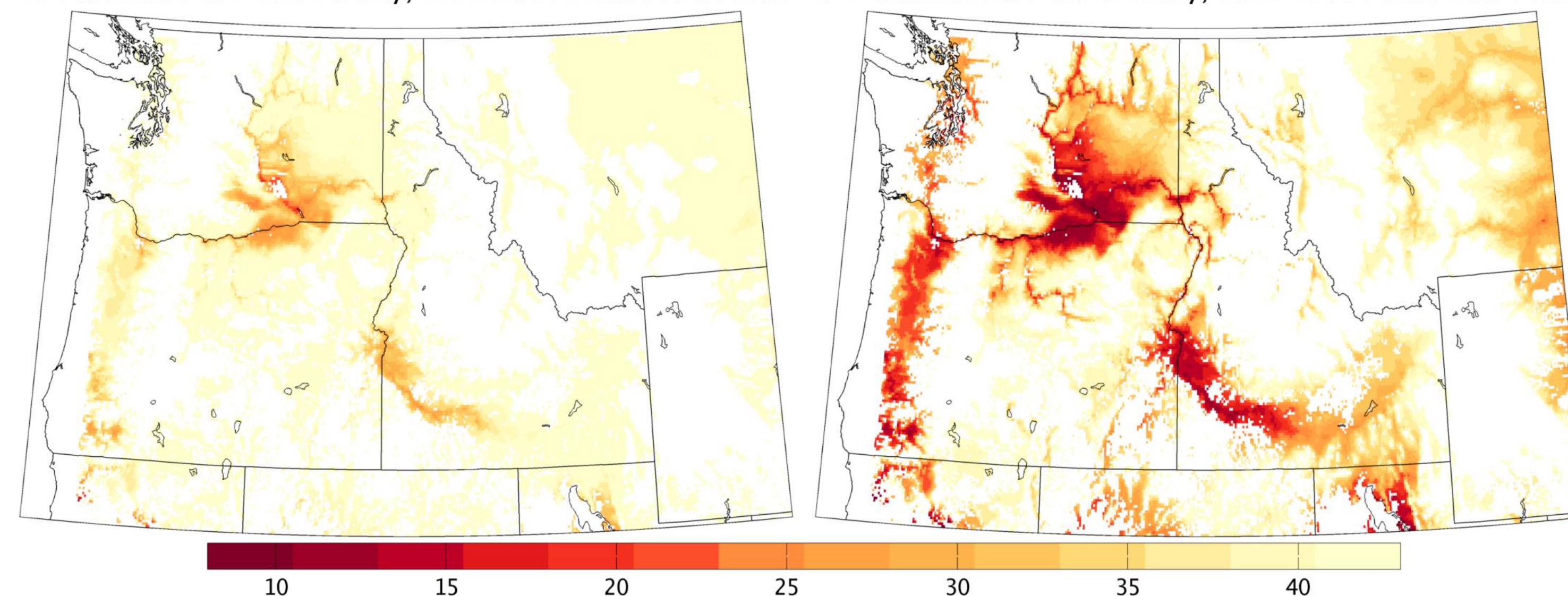


- Introduced into the inland PNW around 1998
- Sporadically a pest, but apparently checked effectively by parasitism (*Pterastichus julus*), introduced by WSU agents, APHIS
- Future climate is projected to be:

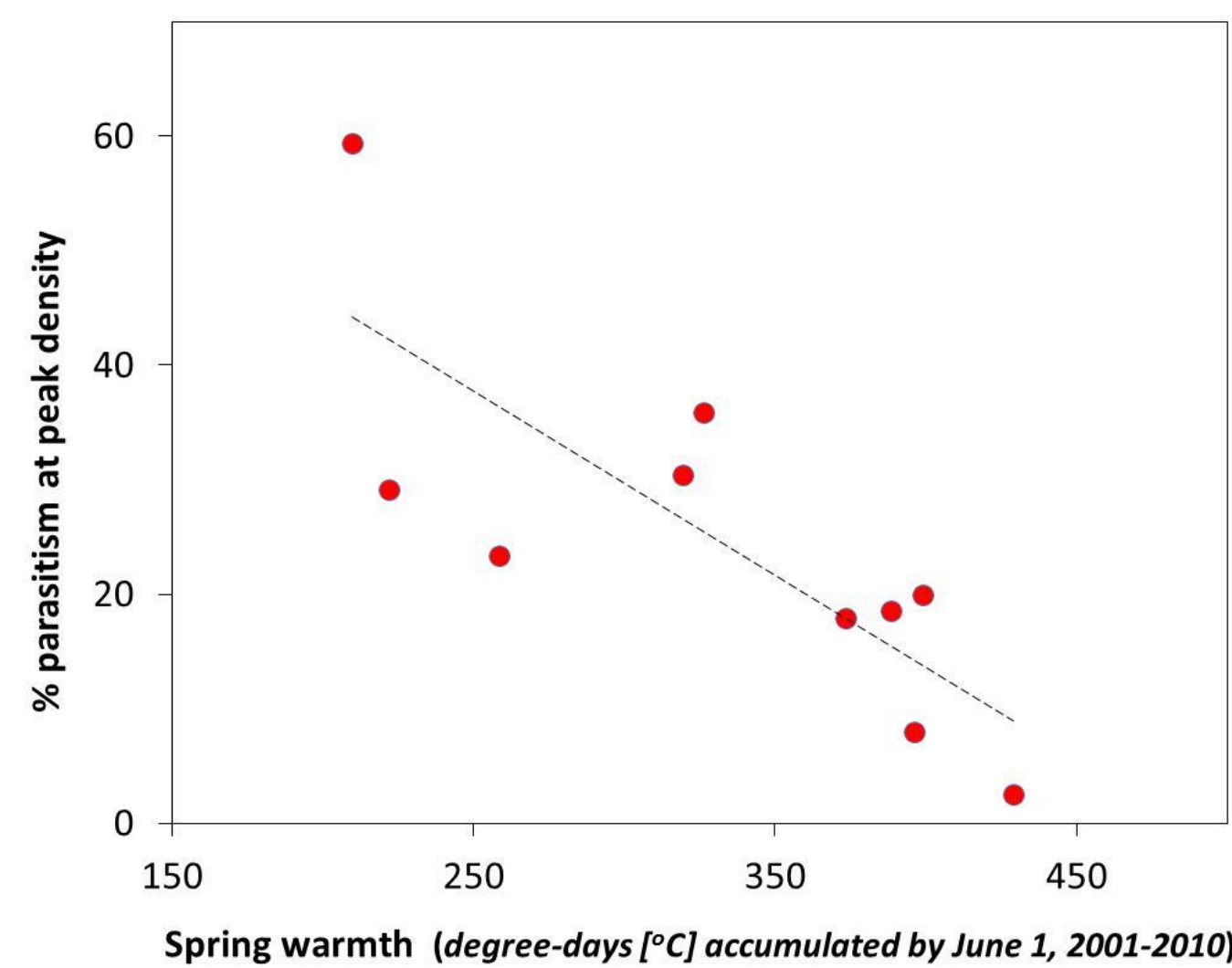


Projected Distribution of % Parasitism at Peak Density under Projected Climate Change in PNW to Mid Century

% Parasitism at Peak Density, 1971-2000 Multimodel Mean % Parasitism at Peak Density, 2031-2060 Multimodel Mean



- more suitable for the beetle
- less suitable for parasitism because of mismatches in timing





Pea aphid and viruses



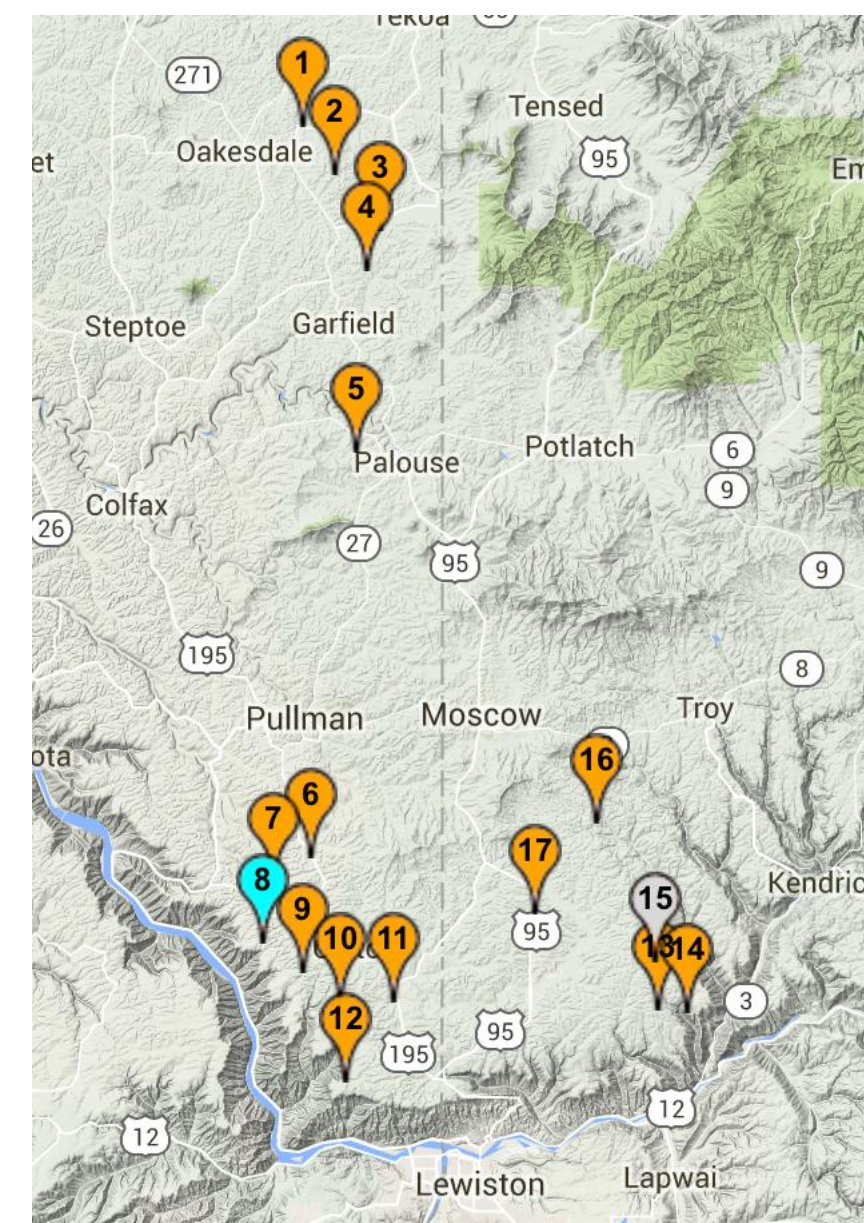
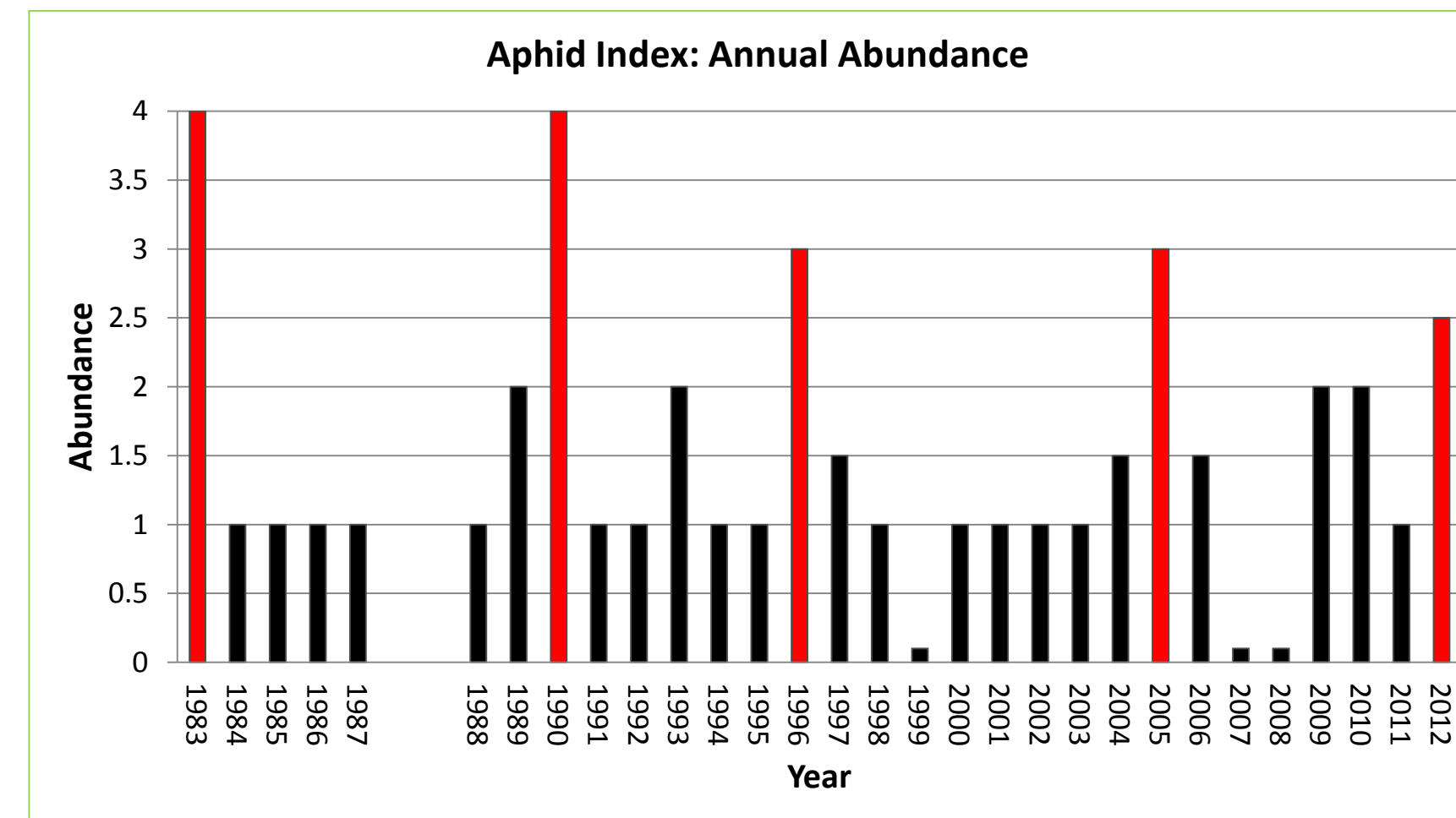
PEMV



BLRV



Pea Aphid Annual Migration



- Pea aphid is a direct pest of legumes, and carries destructive viruses (Pea enation mosaic virus and Bean leaf roll virus in the PNW)
- Annual migrations of the aphids cause sporadic virus outbreaks.
- The aphid tracker site provides weekly updates on aphid abundance and presence of virus
- The site contains threshold calculators and other tools to help manage aphid and virus.
- New pea variety Hampton is resistant to viruses – no resistance yet for chickpea and lentil
- New research shows that pea aphid genotypes differ in host use and may differ in virus transmission

<http://www.cals.uidaho.edu/aphidtracker/>

Hessian Fly

Mayetiola destructor



- Screening and breeding for resistance to Hessian fly is continuous
- Most varieties have resistance to prevalent fly biotypes
- Also checked by parasitoids (8 are known in PNW_
- Attack has not been extensive
- This year there have been reports of destructive infestations, e.g. Quincy WA in winter wheat (LCS Azimut)
- Cause of this 'release' from typical controls unknown

