

2016 Forest Health Conditions & Key Insect Species in Alaska

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Northern Spruce Engraver

(*Ips perturbatus*)



- 14,400 acres mapped in 2016
- 55% increase since 2015
- 8,200 acres occurred between Delta Junction and Tok

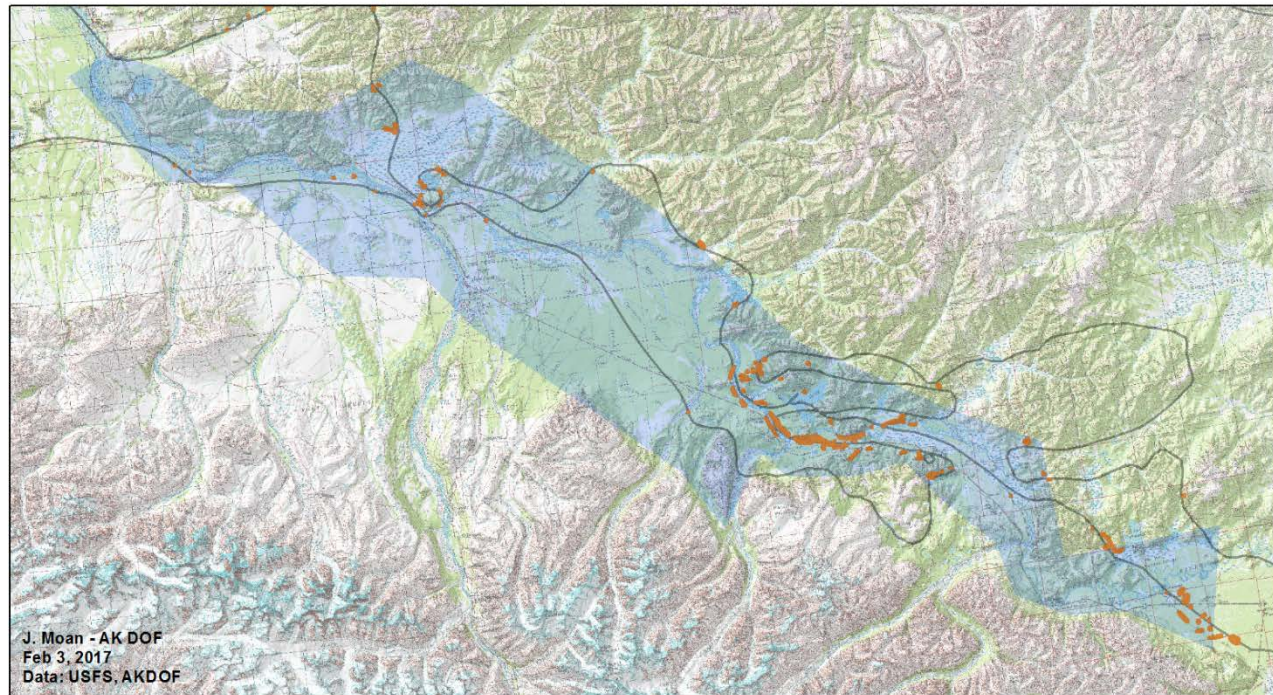
Northern Spruce Engraver



Northern Spruce Engraver
Aerially-mapped damage 2016

2012 Tanana windstorm area

- Northern spruce engraver 2016
- Forest Health Flightline 2016
- Windstorm2012



These data are collected annually by USDA Forest Service -
Forest Health Protection and Alaska Division of Forestry surveyors

Note: Damage polygons have been exaggerated to allow for better visibility

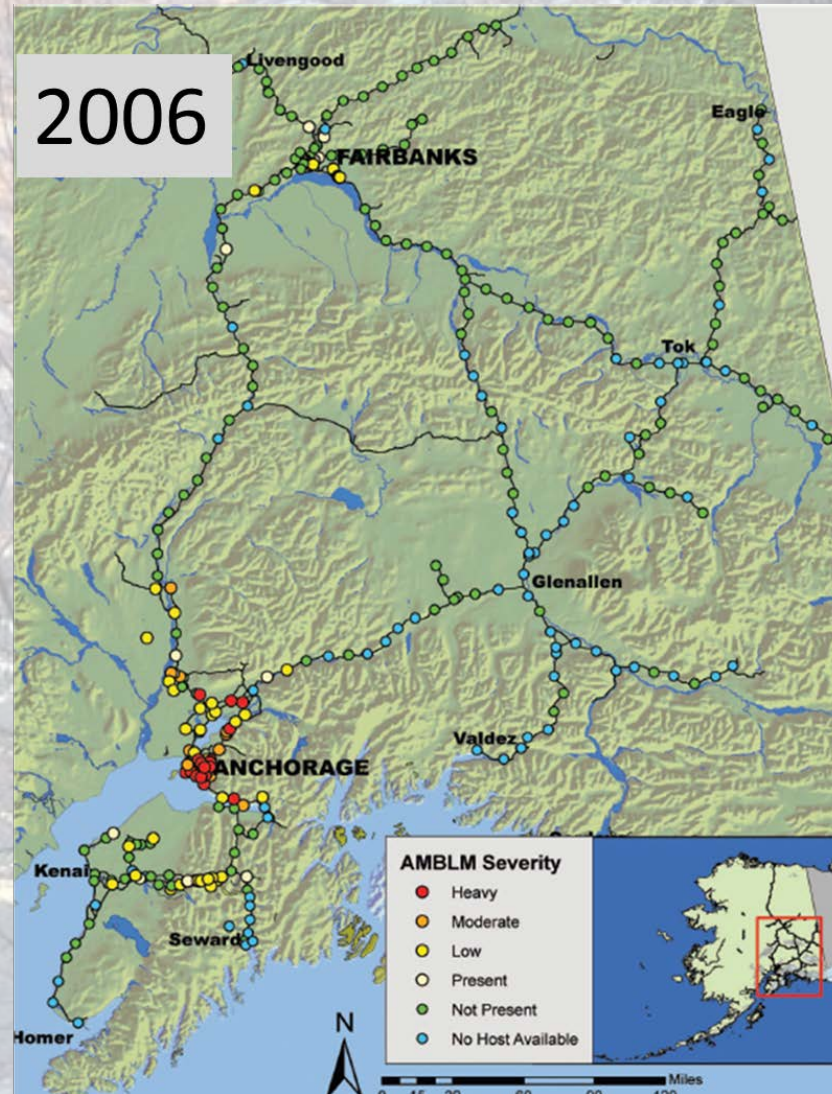
Amber-Marked Birch Leafminer

(*Profenusa thomsoni*)

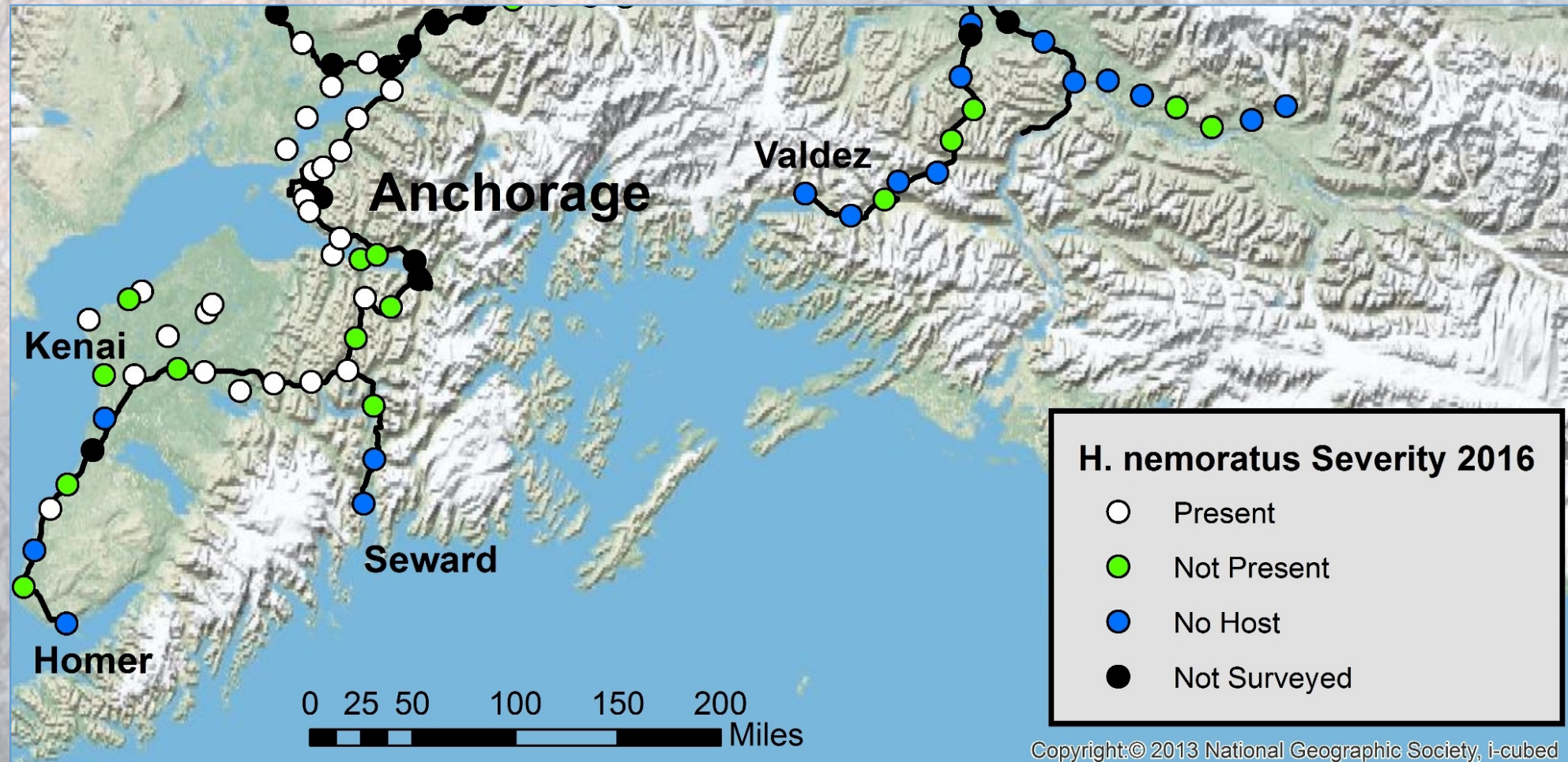


- Late birch leaf edgeminer (*Heterarthrus nemoratus*)
- Birch leafminer (*Fenusa pumila*)

Amber-Marked Birch Leafminer



Late Birch Leaf Edgeminers



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Management & control efforts

- Release of *Lathrolestes thomsoni* (2004-2008)
- Hymenoptera: Ichneumonidae
- 3600 released
- 9 sites (6-Anchorage, 1-Soldotna, 2 Eielson AFB)



Amber-marked birch leafminer

Late birch leaf edgeminer

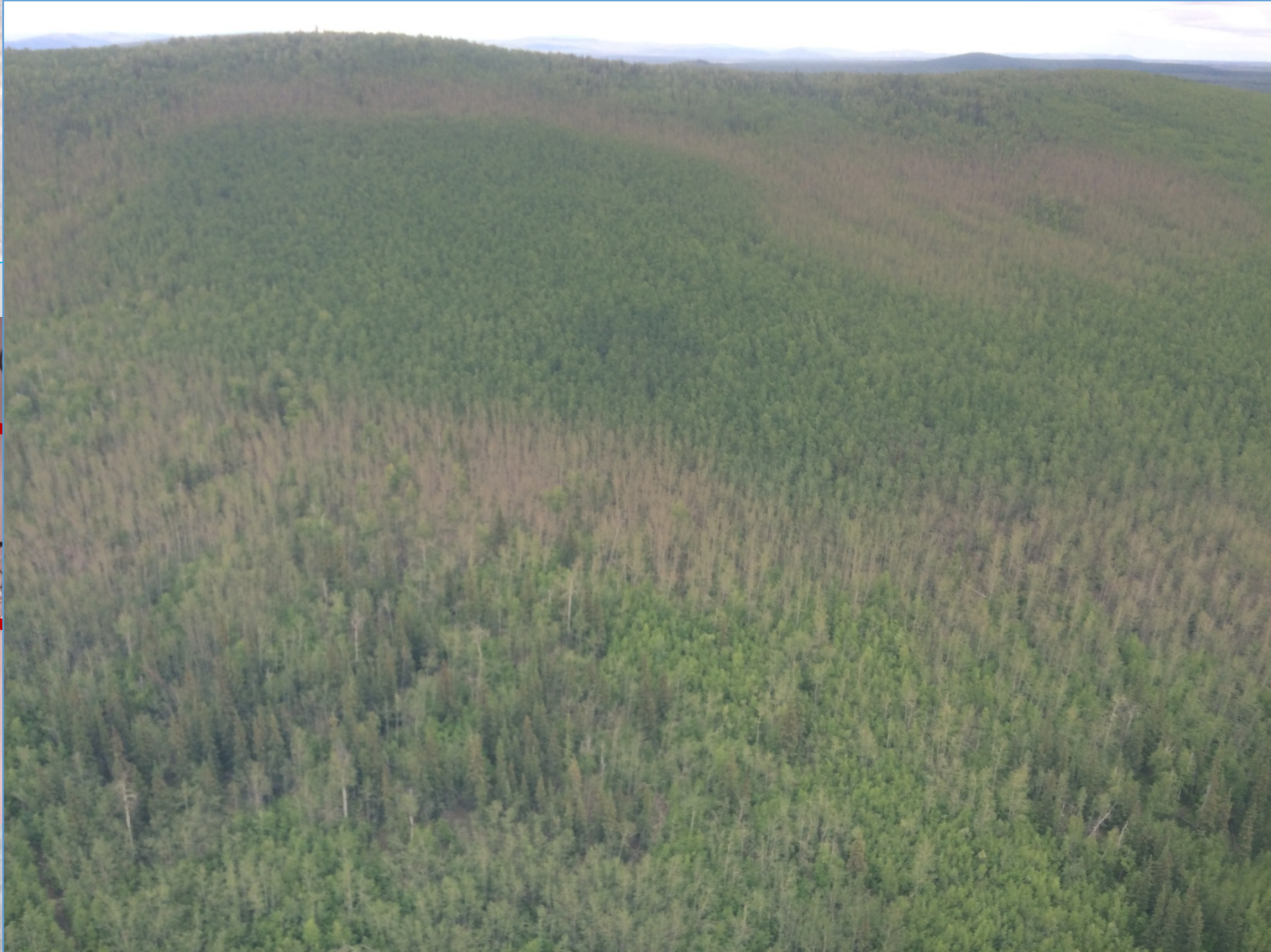
Digweed, S. C., C. J. MacQuarrie, D. W. Langor, D. J. Williams, J. R. Spence, K. L. Nystrom, and L. Morneau. 2009. Current status of invasive alien birch-leafmining sawflies (Hymenoptera: Tenthredinidae) in Canada, with keys to species. *The Canadian Entomologist* 141:201-235.

Birch Leaf Rollers

- *Caloptilia strictella*, *C. alniorella*, & *Epinotia solandriana*
- 26,950 acres
- Interior predominately



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Eastern Spruce Budworm

Choristoneura fumiferana



- 800 acres Interior
- Elevated trap captures west of Fairbanks
- Outbreak in Eagle, AK

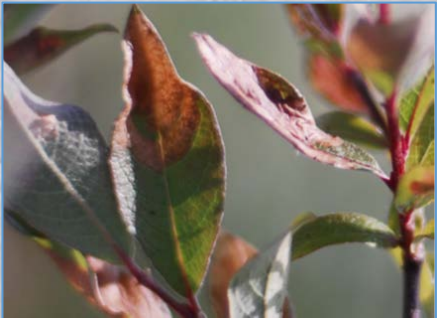
Eastern Spruce Budworm

Eagle: Outbreak



Willow Leaf blotch Miner

(*Micurapteryx salicifoliella*)



- 145,000 acres
- 280% increase from 2015
- 136,000 acres in the Interior
- Yukon Flats: 100,000 acres

Aspen Leafminer

- 200,000 acres
- 152% increase from 2015

- Leaf gas exchange
- Tree water relations



Aspen Leafminer

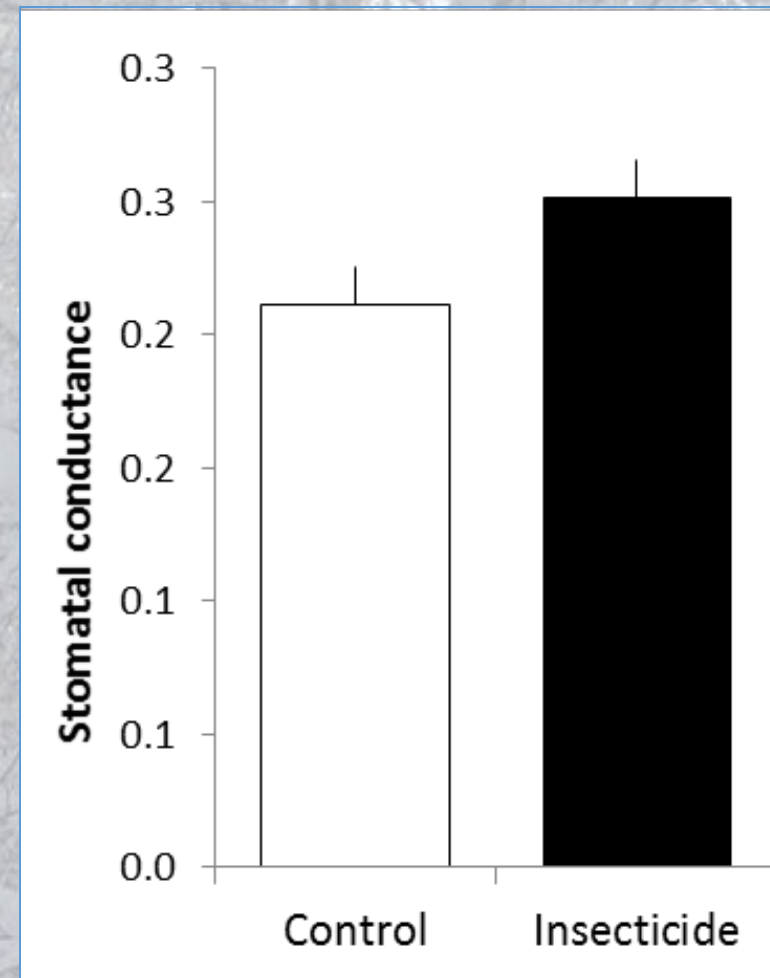
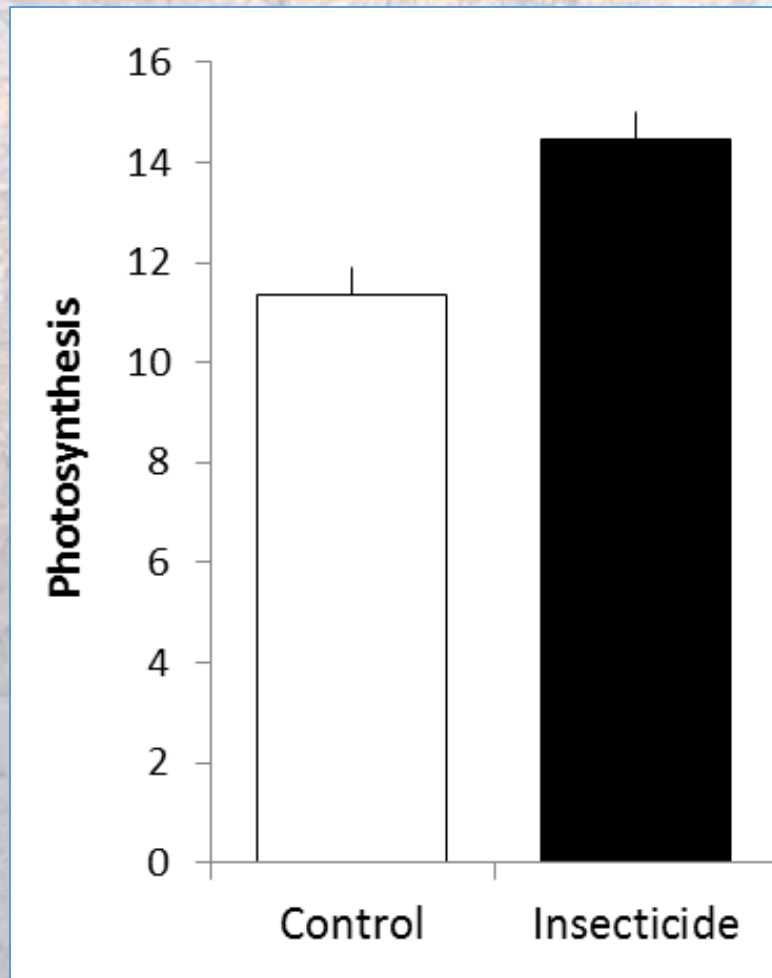
Leaf Gas exchange



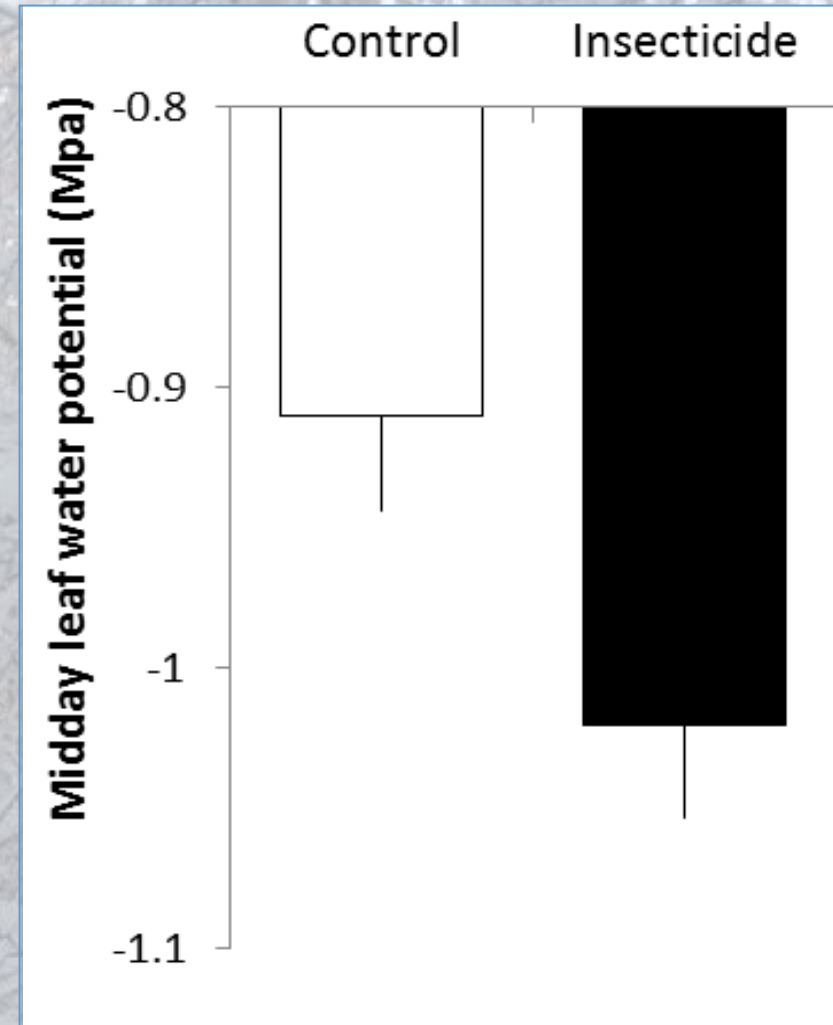
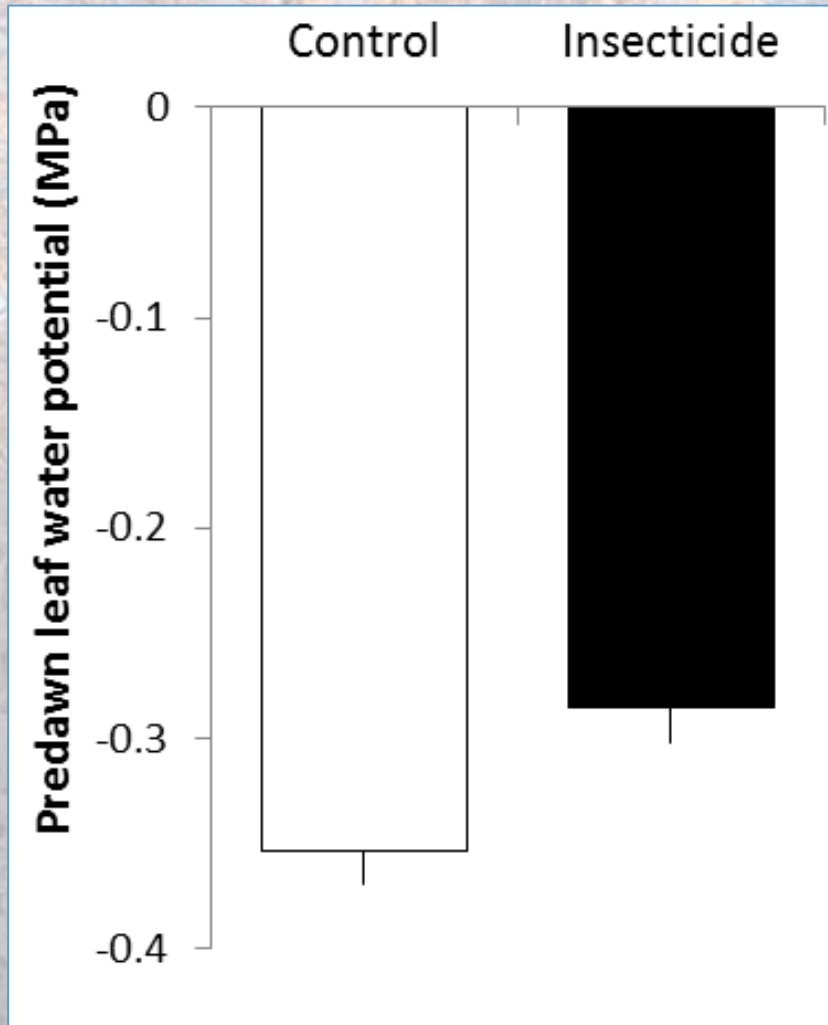
Tree Water Relations



Aspen Leafminer: Leaf Gas Exchange



Aspen Leafminer: Tree Water Relations



Brown Marmorated Stink Bug

(*Halyomorpha halys*)



Thank You

