

EVALUATION OF STAND HEALTH IN ASSOCIATION WITH BIOMASS REMOVAL AND STANDARD SILVICULTURAL PRACTICES

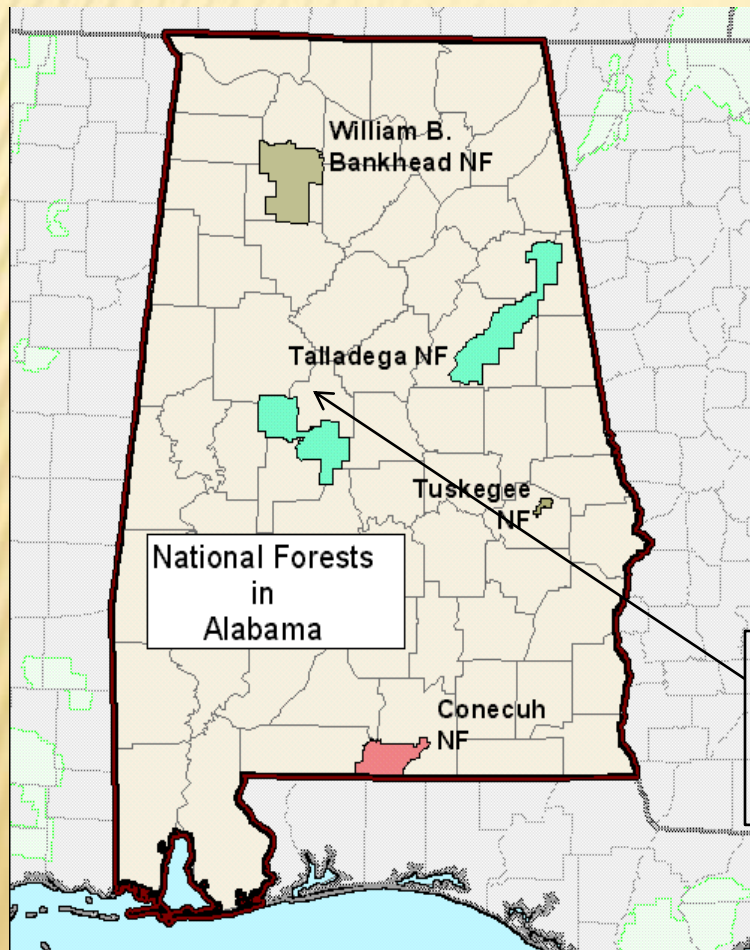
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METHODS AND TIMETABLE

- ✕ TRAPS COLLECTED EVERY TWO WEEKS FOR TWO YEARS STARTING IN MARCH 2007



3 pairs of control plots

4 pairs of conventional thinning plots

5 pairs of biomass control plots

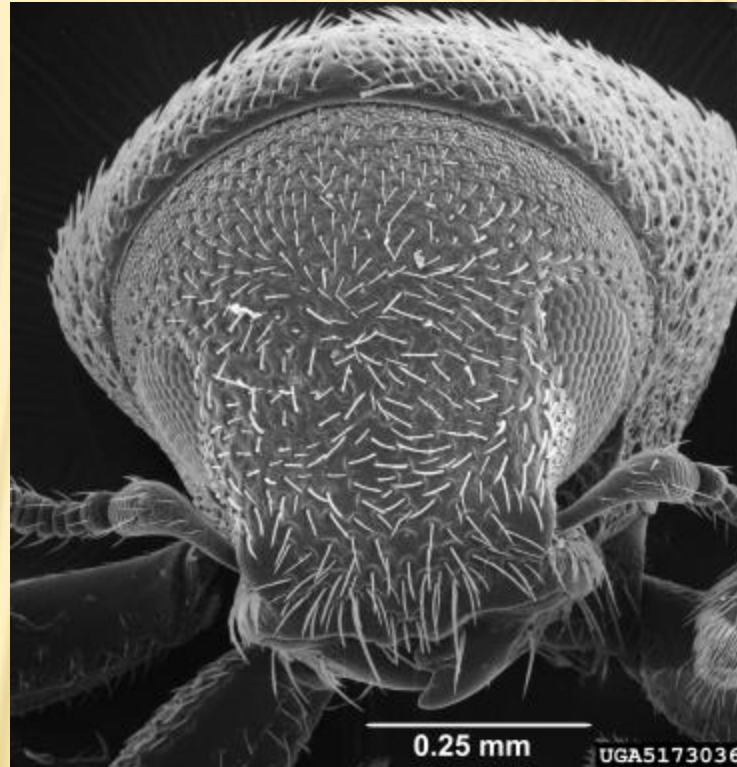
BIOMASS REMOVAL PLOTS

- ✗ ALL VEGETATION OF LESS THAN 8 INCHES DBH WILL BE CLEARED, CHIPPED AND COFIRED WITH COAL
- ✗ MATERIAL WILL BE COMPLETELY REMOVED FROM THE PLOT AND MIXED WITH COAL BY ALABAMA POWER

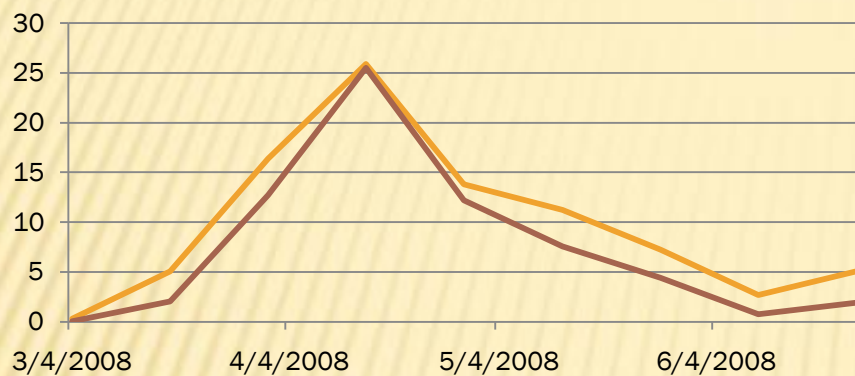
HYPOTHESIS: Removal of debris will result in fewer insects

MANY INSECTS HAVE BEEN COLLECTED, INCLUDING.....

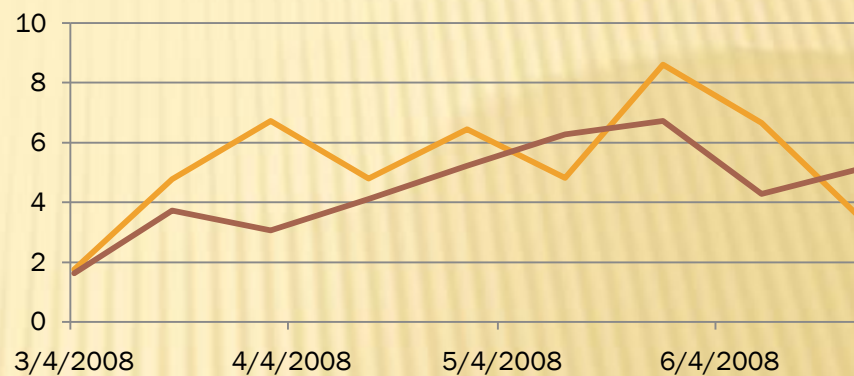
- ✗ -*Dendroctonus terebrans*
- ✗ -*Dendroctonus frontalis*
- ✗ -*Ips avulsus*
- ✗ -*Hylastes salebrosus*
- ✗ -*Hylastes porculus*
- ✗ -*Hylastes tenuis*
- ✗ -*Hylastes opacus*
- ✗ -*Ips grandicollis*
- ✗ -*Ips calligraphus*
- ✗ -*Xylosandrus crassiusculus*
- ✗ -*Xylosandrus compactus*
- ✗ -*Xyloborinus saxesenii*
- ✗ -*Gnathotrichus materiarius*
- ✗ -*Monarthrum mali*



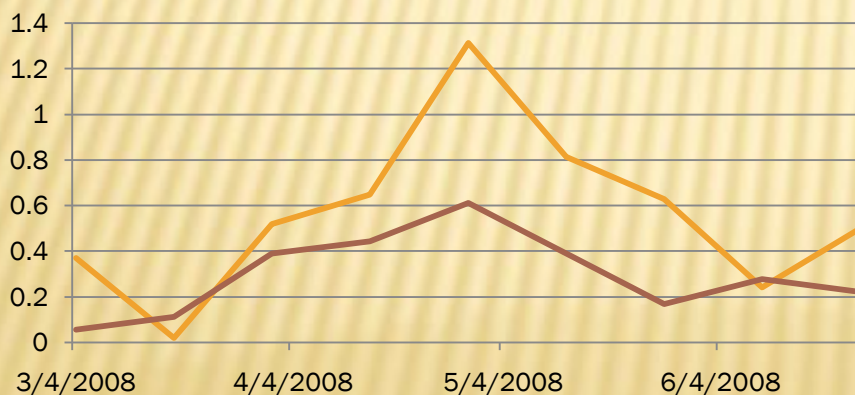
MORE INSECTS USUALLY FOUND IN TREATMENT PLOTS



Hylastes salebrosus panel traps



Ips grandicollis panel traps



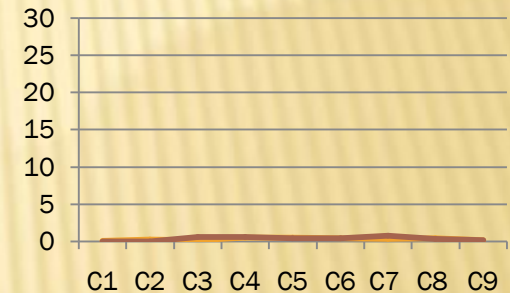
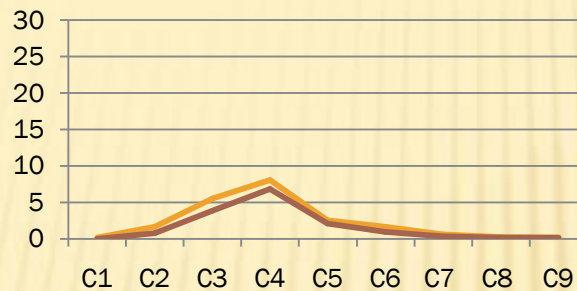
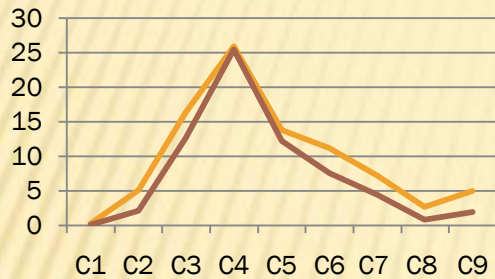
Hylastes tenuis panel traps

ORANGE = TREATMENT PLOTS
BROWN = CONTROL PLOTS

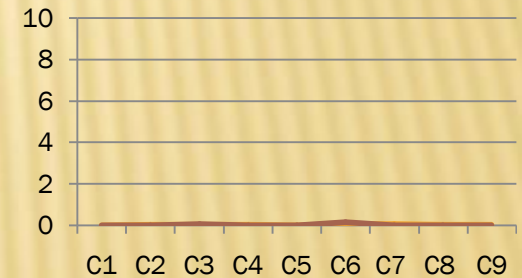
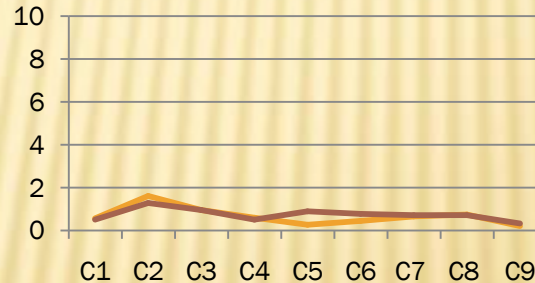
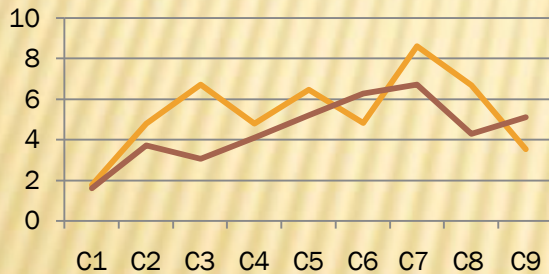
**All vertical axes show average
number of insects per trap**

AVERAGE NUMBER OF INSECTS PER TRAP

Hylastes salebrosus



Ips grandicollis



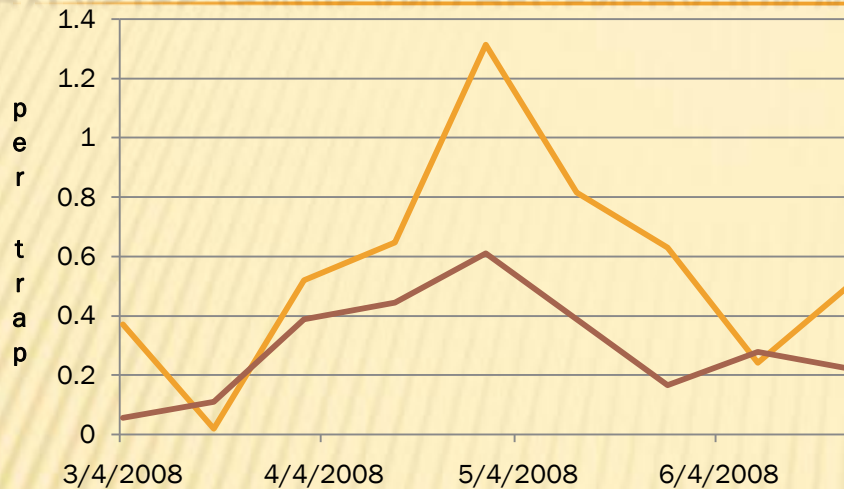
panel trap

FIT trap

pitfall trap

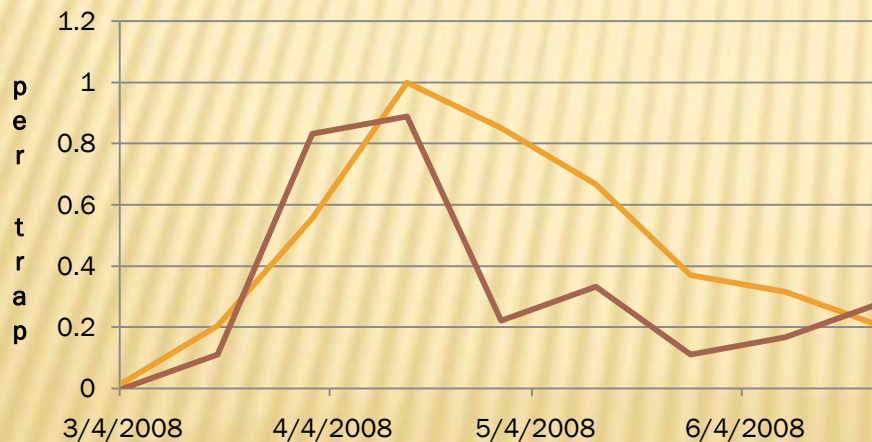
ORANGE = TREATMENT PLOTS BROWN = CONTROL PLOTS

HYLASTES TENUIS AND REGENERATION WEEVILS ARE AN EXCEPTION



Hylastes tenuis panel traps

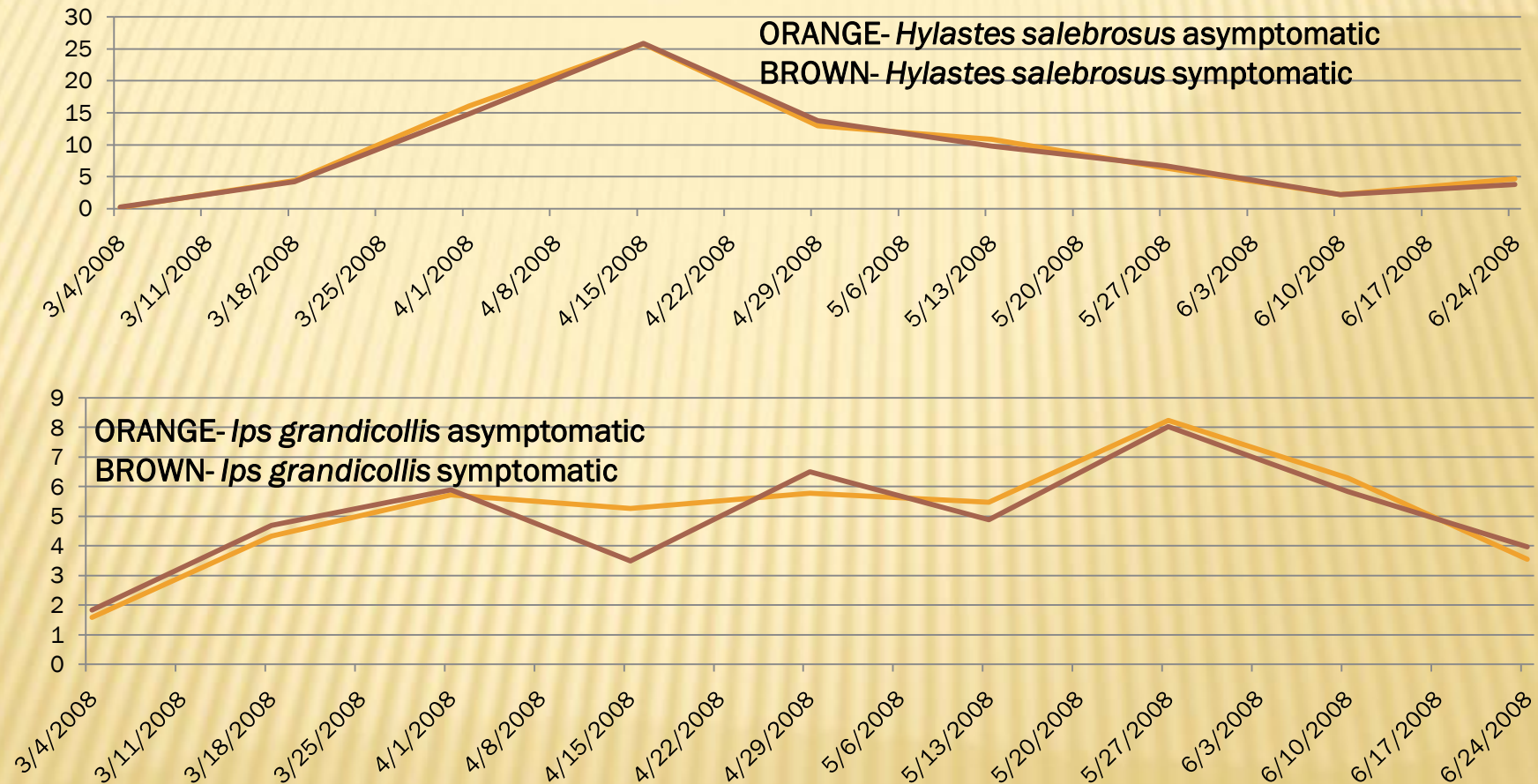
ORANGE = TREATMENT PLOTS
BROWN = CONTROL PLOTS



Hylastes tenuis pitfall traps

Xylosandrus crassiusculus found more frequently in FIT traps than panel traps

LITTLE DIFFERENCE WAS FOUND BETWEEN SYMPTOMATIC PLOTS AND ASYMPTOMATIC PLOTS



ALL VERTICAL AXES MEASURE AVERAGE NUMBER OF INSECTS PER TRAP

FINDINGS

- ✗ THE MAJORITY OF THE INSECTS COLLECTED HAVE BEEN FOUND IN PANEL TRAPS
- ✗ AFTER A SPRING POPULATION PEAK IN THE SPRING, NUMBERS DECLINED THROUGH SUMMER
- ✗ TREATMENT PLOTS HAVE HAD HIGHER INSECT COUNTS THAN CONTROL PLOTS
- ✗ THERE WERE FEW DIFFERENCES BETWEEN SYMPTOMATIC AND ASYMPTOMATIC PLOTS

SPECIAL THANKS

- ✕ Dr. Eckhardt, AU
- ✕ Roger Menard, USFS
- ✕ George Matusick, AU
- ✕ Delores Stinette, USFS
- ✕ Cynthia Ragland, USFS
- ✕ Fellow graduate students and student workers.

QUESTIONS?