

# FOREST INVENTORY GROWTH (FIG) PROJECT

2014

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## PURPOSE

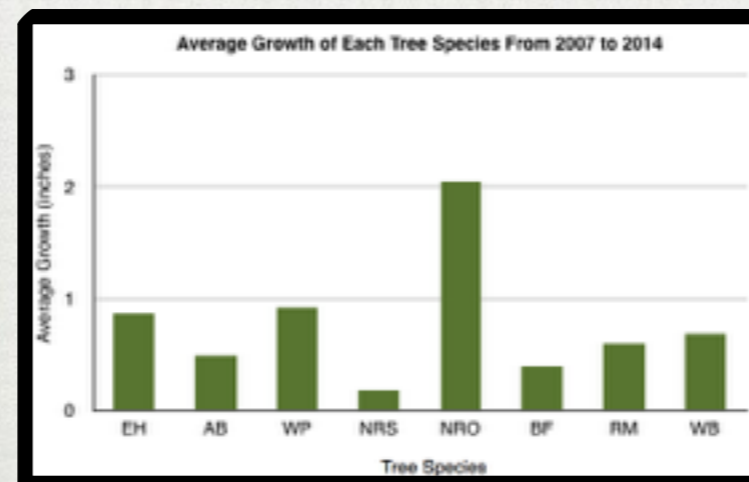
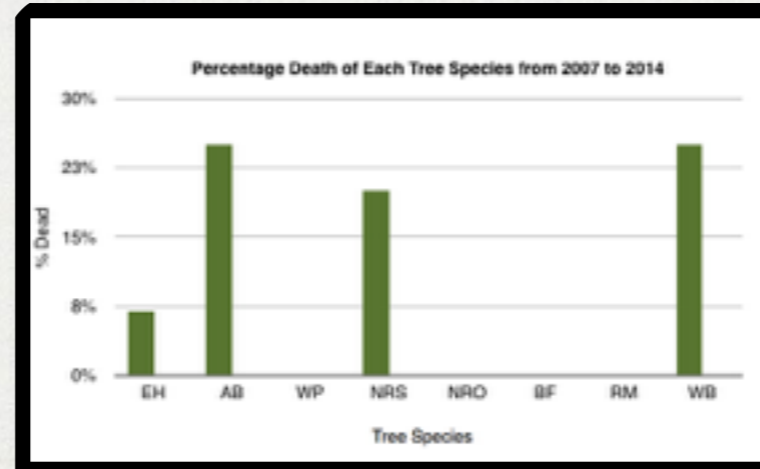
OF THE TREE SPECIES IN THE CATHANCE RIVER PRESERVE FIG 1/10 ACRE PLOT, THE AMERICAN BEECH, NORTHERN RED OAK, BALSAM FIR, RED MAPLE, NORTHERN RED SPRUCE, WHITE BIRCH, EASTERN HEMLOCK AND WHITE PINE, WHICH SPECIES WILL SHOW THE MOST DAMAGE AND DEATH AND WHICH WILL SHOW THE MOST GROWTH? OVER THE PAST 8 YEARS?

## HYPOTHESIS

OF THE SPECIES IN THE FIG, AMERICAN BEECH, NORTHERN RED OAK, BALSAM FIR, RED MAPLE, NORTHERN RED SPRUCE, WHITE BIRCH, EASTERN HEMLOCK, WHITE PINE, THE WHITE BIRCH WILL SHOW THE MOST DAMAGE AND DEATH. THE WHITE PINE WILL SHOW THE MOST GROWTH IN THE GIVEN TIME PERIOD.

## PROCEDURE OVERVIEW

- SURVEY EVERY EACH OF THE 50 TREES ON THE 1/10 ACRE FIG PLOT.
- MEASURE, OBSERVE, AND RECORD DIAMETER BREST HEIGHT (DBH), BOLE AND CROWN DAMAGE.
- OBSERVE AND RECORD DATA FOR 4 SATELLITE PLOTS. THE DATA INCLUDES POPULATION AND GROWTH OF VARIOUS VEGETATION INCLUDING, SHRUBS, MOSSES, FERNS, WILD FLOWERS, FUNGUS, PLANT MATTER, SAPLINGS, AND SEEDLINGS.
- MEASURE THE TOPOGRAPHY AND SOIL FOR THINGS LIKE SLOPE AND PH.
- COMPARE DATA TO DATA TAKEN FROM THE SITE 8 YEARS AGO BY MT. ARARAT HONORS BIOLOGY STUDENTS.



EH - EASTERN HEMLOCK  
 AB - AMERICAN BEECH  
 WP - WHITE PINE  
 NRS - NORTHERN RED SPRUCE  
 NRO - NORTHERN RED OAK  
 BF - BALSAM FIR  
 RM - RED MAPLE  
 WB - WHITE BIRCH



CAM AND NICK MEASURING A TREE



CAM DOING SOIL CORE MEASUREMENTS

THANKS  
 KEVIN DORAN  
 KEN LAUSTSEN  
 PATRICIA MALONEY  
 MAINE FORESTRY SERVICES

## CONCLUSIONS

BASED ON THE GRAPHS THE HYPOTHESIS WAS NOT SUPPORTED BECAUSE THE WHITE PINE DID NOT SHOW THE MOST GROWTH. INSTEAD, THE NORTHERN RED OAK SHOWED EXCEPTIONAL GROWTH OVER THE 7 YEAR PERIOD. THE OAK GREW ON AVERAGE 2.05 INCHES DBH OVER SEVEN YEARS. THE WHITE PINE GREW ON AVERAGE 0.92 INCHES DBH OVER SEVEN YEARS. THE OTHER PART OF THE HYPOTHESIS WAS PARTIALLY SUPPORTED BECAUSE THE WHITE BIRCH WAS NOT THE ONLY TREE THAT SHOWED THE MOST DEATH. THE AMERICAN BEECH TIED THE WHITE PINE AT 25%.