



Santa Lucia Middle School Transect Surveys FALL 2017

In September 2017 a new field research program was created for the forest-wise 7th grade students at Santa Lucia Middle School (SLMS) in Cambria. In August and September 2017, our Greenspace Education group, headed by Rick Hawley and Bob Cichowski, created three 30-foot wide Transects, 15 foot to the right and left of three legs of the existing Strawberry Canyon Loop Trail. The multi-day exercise, funded in part by the Harold J. Miossi Charitable Trust, enabled students to learn about transects and data collection. The donut graph depicting four data collection surveys (pinecone predation, dwarf mistletoe infections, and pine tree and oak tree classifications), which were conducted by Santa Lucia Middle School students, gives us a snap-shot of conditions in Strawberry Canyon.

The total graph numbers depicted on the outer circle of the Pine Tree Graph tell us that 17% of the trees in the survey are seedlings, 35% are saplings, and 48% are adults. This indicates that the distribution of age classes are reasonable and a stock of new trees are growing that will eventually replace the adult trees. Collecting data every few years gives forest managers information on forest health and age class distribution.

The total graph numbers on the outer circle of the Oak Tree Graph tell us there is an even mix of trees under 2 feet and over 2 feet. In other words, 42% of oaks are either adults or saplings and 58% are seedlings under two feet.

The total graph numbers on the outer circle of the Pine Cone Predation Graph tell us that an exceedingly large number of pinecones are being predated (eaten) by squirrels and other animals.

The cone count only considered cones on the ground and not in the trees.

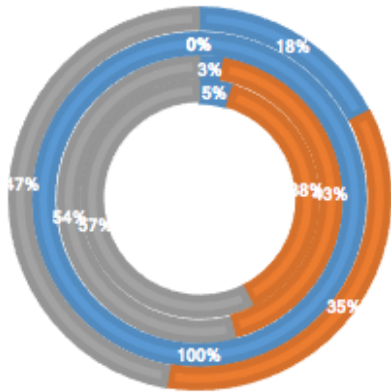
The numbers are clear. 73% of the cones on the ground were predated while only 27% were not. Observations of adult Monterey pines in various locations in our stand indicate very few ripe cones remaining on trees. This reinforces the concept that there are large numbers of squirrels in the forest this year. The total number on the outer circle of the Dwarf Mistletoe Graph tell us that 20% of all trees in the survey area are infected with the fungal disease called Dwarf Mistletoe and 80% that are asymptomatic or did not exhibit any fruiting bodies.

Table 1: The four transects completed by the students. Donut graphs produced by Justine Knight-Hawley.

Transect = 15ft (left of centerline)	
Inner Circle	Transect part A (Ascending North-facing slope)
2nd Circle	Transect part B (Ridgeline)
3rd Circle	Transect part C (Descending North-facing slope)
Outer Circle	Total

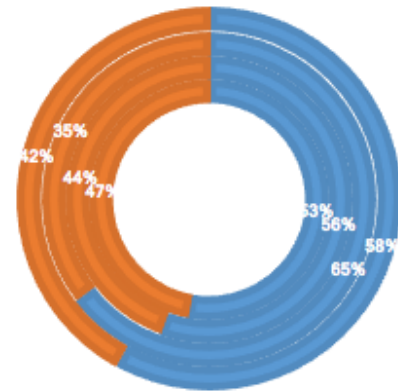
PINE SURVEY

■ Seedling ■ Sapling ■ Adult



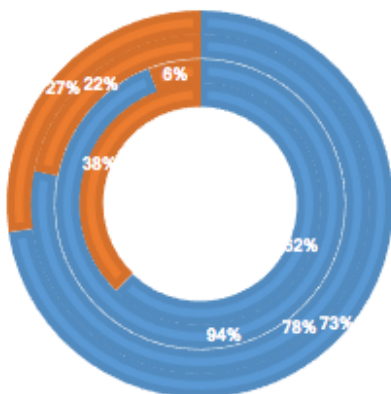
OAK SURVEY

■ Seedling < 2ft ■ Seedling > 2ft



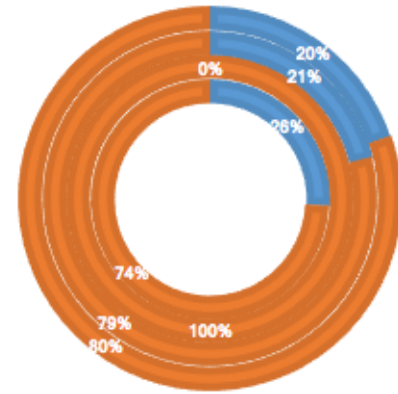
PINE CONE PREDATION SURVEY

■ Predation ■ No Predation



DWARF MISTLETOE SURVEY

■ Infected ■ Not infected



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