

**Southern California and Southern Sierra
Quarterly Aerial Survey Project
December 2004 Highlights**
(Previous quarterly editions obsolete)

A quarterly aerial survey program has been implemented to capture forest damage that has occurred since previous observations over the southern California forests including the San Bernardino, Cleveland, and Angeles National Forests, and portions of the Los Padres, Sequoia and Inyo National Forests. Portions of BLM, BIA and to a lesser extent adjacent private lands are also included in this survey. This is a synopsis incorporating the fourth quarterly survey occurring from November 28 through December 18, 2004. The first quarterly survey was conducted in March 2004; the second was conducted in June 2004 and the third was conducted in September 2004.

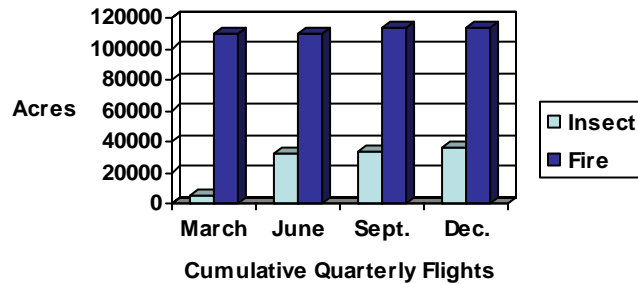
- **As observed during previous quarters, December 2004 showed a wide array of mortality scenarios ranging from continued expansion of mortality pockets (mapped earlier in the year) to scattered mortality in otherwise green stands.**
- **Annual precipitation was approximately 50 to 60% of normal for the 2004 water year (Sept. 1 - Oct. 30) and has shown varied but improving levels entering the current water year.**

San Bernardino National Forest

Approximately 500,000 acres of mortality were mapped with insect-caused mortality in 2003; the March survey mapped approximately a 1% increase over what was mapped in 2003. Observations cumulated from the June and March surveys indicated a 6% increase over what was recorded in 2003. Observations cumulated from March, June and September surveys indicated a 7% increase over what was mapped in 2003. Finally, observations cumulated from all four quarterly surveys in 2004 indicated a 7% increase over what was mapped in 2003 (no significant difference compared to 3rd quarter). 855,700 acres were flown during the December survey. New acres mapped include (rounded to the nearest 100):

- **0 new acres with fire-caused mortality since March, June & September 2004**
- **2,716 new acres of insect-caused mortality identified since March, June & September 2004**
- **Total cumulative acres of insect and fire caused mortality (March, June, September, & December '04 surveys) is 150,000 acres**

San Bernardino 2004

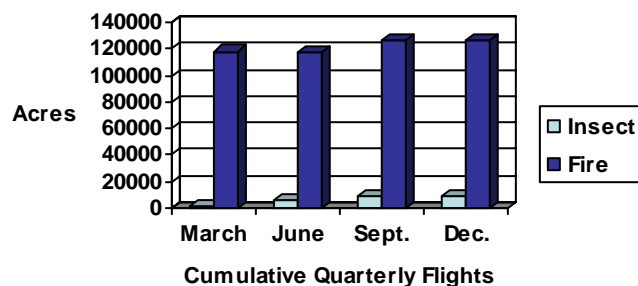


Cleveland National Forest

Approximately 59,000 acres of mortality were mapped with insect-caused mortality in 2003; the March survey mapped approximately a 1% increase over what was mapped in 2003. Observations cumulated from the June and March surveys indicated a 9% increase over what was recorded in 2003. Observations cumulated from March, June and September surveys indicated a 14% increase over what was mapped in 2003. Finally, observations cumulated from all four quarterly surveys in 2004 indicated a 16% increase over what was mapped in 2003. 813,900 acres were flown during the December survey. New acres mapped include (rounded to the nearest 100):

- 0 new acres with fire-caused mortality since March, June & September 2004
- 1,059 new acres of insect-caused mortality since March, June & September 2004
- Total cumulative acres of insect and fire caused mortality (March, June, September and December 04 surveys) is 135,700
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Cleveland 2004



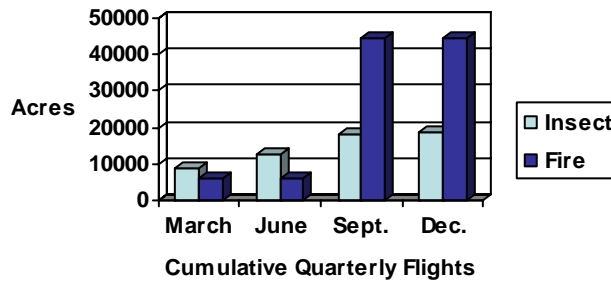
Angeles National Forest

Approximately 11,000 acres of mortality were mapped with insect-caused mortality in 2003; the March survey mapped approximately a 79% increase over what was

mapped in 2003. Observations cumulated from the June and March surveys indicated a 112% increase over what was recorded in 2003. Observations cumulated from March, June and September surveys indicated a 147% increase over what was mapped in 2003. Finally, observations cumulated from all four quarterly surveys in 2004 indicated a 169% increase over what was mapped in 2003. 713,200 acres were flown during the December survey. New acres mapped include (rounded to the nearest 100):

- 0 new acres with fire-caused mortality since March, June & September 2004
- 370 new acres of insect-caused mortality since March, June & September 2004
- Total cumulative acres of insect and fire caused mortality (March, June, September and December 04 surveys) is 63,000

Angeles 2004



Los Padres National Forest

Note that during the March and June surveys, portions of forest with greatest chance of capturing new mortality were flown. During September, the forest was flown entirely. Approximately 5,500 acres of mortality were mapped with insect-caused mortality in 2003; the March survey mapped approximately a 64% increase over what was mapped in 2003. Observations cumulated from the June and March surveys indicated a 127% increase over what was recorded in 2003. Observations cumulated from March, June and September surveys indicated a 260% increase over what was mapped in 2003 (a substantial portion of this is actually hardwood mortality likely due to the pathogen *P.ramorum* along the coast north of San Luis Obispo). Finally, observations cumulated from all four quarterly surveys in 2004 indicated a 262% increase over what was mapped in 2003. 1,580,000 acres were flown during the December survey. New acres mapped include (rounded to the nearest 100):

- 80 new acres with fire-caused mortality since March, June & September 2004
- 1,500 new acres with pest-caused (insect & disease) mortality since March, June & September 2004
- Total cumulative acres of insect and fire caused mortality (March, June, September and December 04 surveys) is 15,300

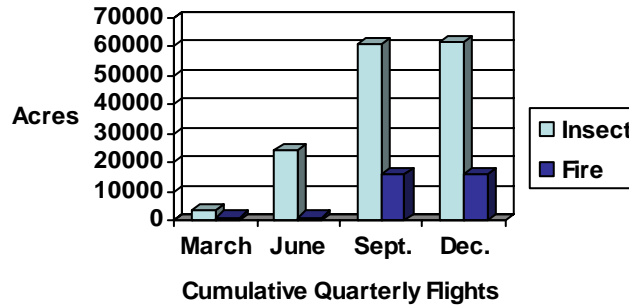


Sequoia National Forest

Note that during the March and June surveys, portions of forest with greatest chance of capturing new mortality were flown. During September, the forest was flown entirely. Approximately 55,000 acres of mortality were mapped with insect-caused mortality in 2003; the March survey mapped approximately a 6% increase over what was mapped in 2003. Observations cumulated from the June and March surveys indicated a 44% increase over what was recorded in 2003. Observations cumulated from March, June and September surveys indicated a 112% increase over what was mapped in 2003. Finally, observations cumulated from all four quarterly surveys in 2004 indicated a 112% increase over what was mapped in 2003 (no significant difference over what was mapped 3rd quarter). 967,700 acres were flown during the December survey. New acres mapped include (rounded to the nearest 100):

- 0 new acres with fire-caused mortality since March, June & September 2004
- 800 new acres of insect-caused mortality since March, June & September 2004
- Total cumulative acres of insect and fire caused mortality (March, June, September and December 04 surveys) is 77,300

Sequoia 2004



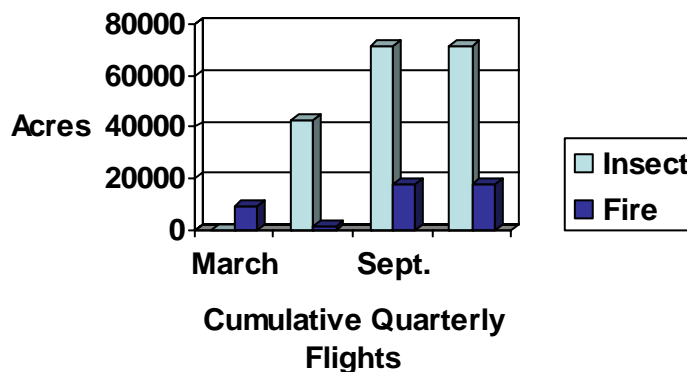
Inyo National Forest

Note that during the March and June surveys, portions of forest with greatest chance of capturing new mortality were flown. During September, the forest was flown entirely.

Approximately 59,000 acres of mortality were mapped with insect-caused mortality in 2003; the March survey mapped approximately a 0.1% increase over what was mapped in 2003. Observations cumulated from the June and March surveys indicated a 72% increase over what was recorded in 2003. Observations cumulated from March, June and September surveys indicated a 114% increase over what was mapped in 2003. Finally, observations cumulated from all four quarterly surveys in 2004 indicated a 121% increase over what was mapped in 2003. 775,500 acres were flown during the December survey. New acres mapped include (rounded to the nearest 100):

- 0 new acres with fire-caused mortality since March, June & September 2004
- 100 new acres of insect-caused mortality since March, June & September 2004
- Total cumulative acres of insect and fire caused mortality (March, June, September and December 04 surveys) is 89,700

Inyo 2004



Mai 1/14/05