



## **Ambient air measurements of monoterpenes, oxygenated terpenes, and sesquiterpenes**

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Chemical ozone loss within the forest canopy and the presence of biogenic VOC (BVOC) oxidation products in and above the canopy indirectly suggest the presence of very reactive BVOCs at Blodgett Forest. As a part of the 2007 Biosphere Effects on AeRosols and Photochemistry EXperiment (BEARPEX) campaign at this coniferous forest in the Sierra Nevada Mountains of California (1300 m elevation, 38.90°N, 120.63°W), we quantified ambient concentrations of monoterpenes, oxygenated terpenes, and sesquiterpenes using an *in-situ* gas chromatograph with mass spectrometer and flame ionization detectors (GC-MS-FID). The range of terpenes observed in ambient air matched enclosure based measurements of branch level emissions. For example, methyl chavicol was the dominant oxygenated terpene and  $\alpha$ -bergamotene was the major sesquiterpene at the site in both experiments. To our knowledge, these observations represent the first direct quantification of methyl chavicol and various sesquiterpenes in ambient air.