



# Cone and Seed Insects

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Comprehensive information for common cone insects can be obtained at: [http://www.fs.usda.gov/detail/r6/forest-grasslandhealth/insects-diseases/?cid=fsbdev2\\_027337](http://www.fs.usda.gov/detail/r6/forest-grasslandhealth/insects-diseases/?cid=fsbdev2_027337)

Insect	Host Conifer						Larva Color	Type and Extent of Damage
	DF	IC	JP	PP	SP	WF/RF		
Cone Beetle <i>Conophthorus</i>			X	X	X		White, C-shape, lt. brown head	Bores into cone at stalk or base. - kills cones. Cones underdeveloped or brown and shriveled. Moderately common in some cone years - cones not collectable.
Cone Moth <i>Barbara, Eucosma</i>	X		X	X		X	White w/ dark head	Burrows w/in cone. May seed pitch and frass on cone exterior. Cones often mis-shapened. Can see damage by mid-summer - feeds indiscriminately. One larva can destroy 60% of seed in a cone, may damage 50%+ of the crop.
Cone Worm <i>Dioryctria</i>	X		X	X	X	X	Amber brown to dark red-brown	Bores through cone scale and seeds. May see round holes and coarse frass. Scales may not flex in area of damage - feeds indiscriminately. Extensive damage to cone - most of a poor crop and >50% of a good crop. On PP, more of a problem in S. Calif.
Cone Scale Midge <i>Contarinia, Asynapta</i>	X					X	Small, bright orange to red.	Deforms cone and fuses seed to scale - forming swollen galls. Causes problems with extraction.
Seed Chalcid <i>Megastigmus</i>	X		X	X		X	White, curved	Often no external damage. Consumes tissue inside seed coat. Larva in seed or may see round exit hole on seed or scale. Damage complete by harvest. Larva do not move from one part of cone to another. A major pest on DF and PP

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Seed Moth <i>Laspeyresia</i>			X	X		X	White	Consumes seed moving from one seed to another leaving each filled with frass, then bores into axis. Usually no external damage. Once in axis, no further seed damage expected. Major pest - destroys 20-30% of seed crop.
Seed Cone Maggott <i>Earomyia, Hylemya</i>						X	White w/ blk mouth hooks	Consumes seed and moves into axis. Will see holes on seeds. Exit in late summer - damage over by harvest. Abundant in fir.
Western Seed Bug <i>Leptoglossus</i>	X		X	X	X		Insect w/ orange and blk bands on abdomen	Pierces seed scale and sucks out seed contents. Can collapse soft seed coat and render gray-brown; can leave hard seed coat intact but tissue inside spongy, white and shrunken.
IC Tip Moth <i>Argyresthis</i>		X					Small, green w/ red dorsal bands	Mines cones and seed. May destroy almost entire crop.