Negative data can be reported for these species using at least one of the four lures: A) Alpha-pinene, B) Ultra-high release ethanol (UHR EtOH), C) Combination of Ultra-high release ethanol and alpha-pinene (UHR EtOH + alpha-pinene), or D) EBB/Ips lure.

Lure	Species	Reference	Notes	Additional Lures That Will Attract Pest
Alpha-pinene	*Hylurgops palliatus* (Pale spruce bark beetle)	(Pertunnen, 1957; Vite et al., 1986)	Alpha-pinene and EtOH in combination were more attractive than either lure separately (Schroeder and Lindelow, 1989; Brockerhoff et al., 2006)	
	Monochamus alternatus	(Fan et al. 2007)		
	Tomicus piniperda (Pine shoot beetle)	(Schroeder and Lindelow, 1989)	Alpha-pinene alone was most effective. High release rates of EtOH decreased attraction. (Schroeder and Lindelow, 1989)	Possible to improve with verbenol (D. Lance, personal communication, 2007).
UHR EtOH	*Hylurgops palliatus* (Pale spruce bark beetle)	(Klimetzek et al 1986; Byers, 1992)	Alpha-pinene and EtOH in combination were more attractive than either lure separately (Schroeder and Lindelow, 1989; Brockerhoff et al., 2006)	
	Trypodendron domesticus	(Byers, 1992)	UHR alpha-pinene reduces attraction to the point where results are not reliable (D. Lance, personal communication, 2007).	Lineatin and ethanol is the best lure for this species (D. Lance, personal communication, 2007)
	Xyleborus spp.	Various in Pherobase	In Pherobase, 7 of the 8 species listed EtOH as an attractant. The species listed were native species to the United States. It is assumed that other exotic species would also be attracted to EtOH.	Pinene can add to the effect in some species (D. Lance, personal communication, 2007). One species (native) in Pherobase listed the addition of alpha-pinene.

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Lure	Species	Reference	Notes	Additional Lures
UHR EtOH + alpha-pinene	*Hylurgops palliatus* (Pale spruce bark beetle)	(Schroeder and Lindelow, 1989; Brockerhoff et al., 2006)	Alpha-pinene and EtOH in combination were more attractive than either lure separately (Schroeder and Lindelow, 1989; Brockerhoff et al., 2006)	
UHR EtOH + alpha-pinene	*Hylurgus ligniperda* (Redhaired pine bark beetle)	(Petrice et al., 2004)		
	Tomicus destruens	(D. Lance, 2008 Personal communication)	[-] alpha-pinene is more attractive than [+], though mixtures are likely to work also (D. Lance, personal communication, 2007)	
EBB/ Ips lure	*Hylurgus ligniperda* (Redhaired pine bark beetle)	(Serez, 1987)		
	Ips sexdentatus (Spruce bark beetle)	(Serez, 1987; Gayvalis et al., 1981)		
	Ips typographus	(Gayvalis et al., 1981; Bakke et al., 1977)		
	Orthotomicus erosus (Mediterranean bark beetle)	(Serez, 1987)	Verbenol may partially inhibit the response to the other two compounds (D. Lance, personal communicatio, 2007).	
	Pityogenes chalcographus (Sixtoothed spruce bark beetle)	(Vlakame et al.)		Chalcogran or Chalaprax works better if targeting this insect specifically (D. Lance, personal communication, 2007).

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