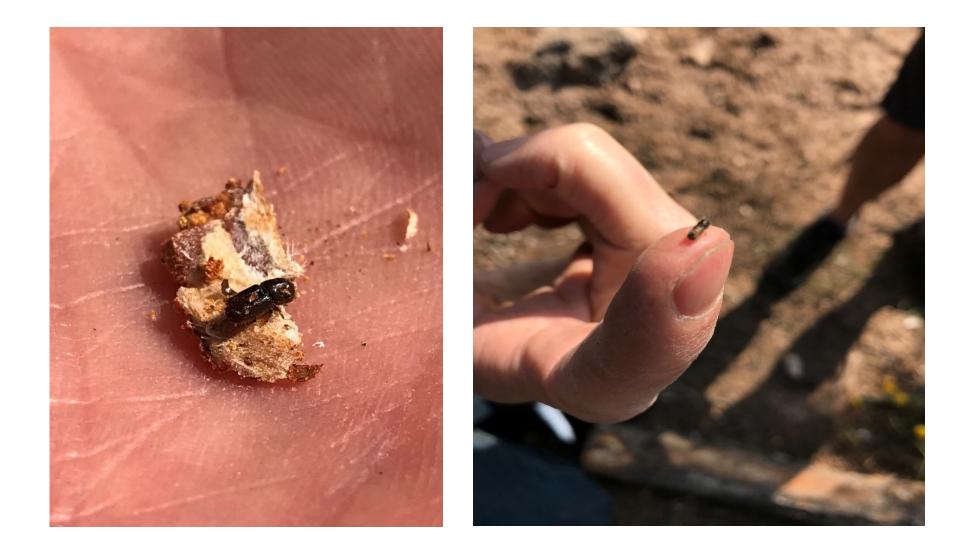
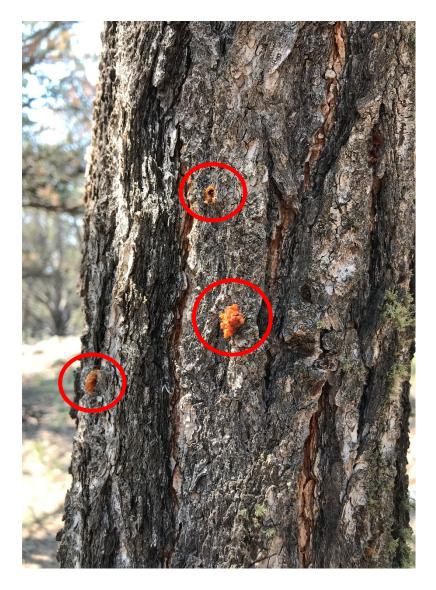
## Pinon Ips bark beetle



# Signs of ips bark beetle: Pitch tubes Saw dust in bark and at trunk base





# Exit holes Too large, not round = Not ips Very small, perfectly round = ips





#### **Crown indicators**

Live and dead needles mixed, older dead branches. Crown is not dying all at the same time = not ips



# Crown turned brown at the same time. No green mixed in = ips



Not ips -> Other pests or environmental factors

Clear sap -> no sawdust mixed in = wound or bark crack



Crown not browning/dying at once, dieback in individual branches = other pest/ drought stress



Not ips -> Other pests or environmental factors

## Reddish color in bark cracks/splits (no sawdust) = Pinon blister rust



Mass amount of pitch, usually near wounds, sawdust in sap = Pinon pitch mass borer

