

Ips apache

Scientific Name

Ips apache Lanier, 1991

Diagnostic notes

-This species has 6 spines per side on the elytral declivity, and is very similar to *I. calligraphus*.

-Frons central tubercle is above the epistomal margin by a distance of twice its width or more in male *I. apache* but less than twice its width in male *I. calligraphus ponderosae*.

-Elytral interstitial punctures wider than 0.5 the width of striae punctures in *I. apache* but less than 0.5 the width of striae punctures in *I. calligraphus calligraphus*.

-*I. apache* is often smaller (pronotal width 1.3 to 2.1 mm) than *I. calligraphus* (pronotal width 1.3 to 2.5 mm) and striations on the pars stridens are narrower (Mean values: *I. apache* = 0.9 μm ; *I. calligraphus* = 1.0 μm) (Lanier *et al.* 1991).

Morphological Summary

females

Body. 3.8-5.3 mm long, 2.6-2.9 times longer than wide; pronotum 1.2-1.4 times longer than wide.

Head. Epistomal margin with uniseriate row of tubercles with elongate mesal tubercle. Frons outline convex; vestiture fine - not hiding part of integument; surface sculpture near epistoma densely tuberculate-punctate; central carina present or absent; central tubercle present and single, separated from base of epistomal setae by 0.5-4(-5) tubercle diameters, without pair of circular tubercles on either side of midline; transverse carina absent or present; circular tubercles above top of eyes present - up to, or more than one third of all granules. Vertex and pronotum with stridulatory apparatus (pars stridens). Antennal club sutures acutely angulate.

Prothorax. Protibiae with four socketed teeth on apical half (does not include apical spine).

Elytra. Interstriae impunctate (observed on interstriae 2 and 3 on middle third of elytral disc), punctures 0.5-0.8 times diameter of adjacent striae punctures (punctures and striae measured at steepest part of puncture wall), interstriae 2-3 times as wide as adjacent striae. Elytral declivity with six spines per side, spine 3 largest; spine 1 (largest on 2nd interstria) closer to suture than spine 2; spines 1 and 2 separated at base by distance greater than height of spine 1; spine 2 closer to spine 3 than spine 1; spine 3 straight sided with tapered apex, apex acute or right-angled, with apical half symmetrical in lateral view; spines 2 and 3 on or not on shared tumescence, not in line with spines 1 and 4 (posterodorsal view); spine 4 closer to spine 3 than spine 5; declivital integument shiny.

males



Ips apache, male frons



Ips apache, male elytral declivity



Ips apache, female elytral declivity

Body. 3.8-5.3 mm long, 2.6-2.9 times longer than wide; **pronotum** 1.2-1.4 times longer than wide.

Head. **Epistomal** margin with uniseriate row of tubercles with elongate mesal tubercle or with gap at midline. **Frons** outline convex; vestiture fine - not hiding part of integument; surface sculpture near epistoma densely tuberculate-punctate; **central carina** present or absent; central tubercle present and single, separated from base of **epistomal** setae by 1-4(-5) tubercle diameters, without pair of circular tubercles on either side of midline; **transverse carina** absent or present; circular tubercles above top of eyes present - up to, or more than one third of all granules. Vertex and **pronotum** without **stridulatory apparatus** (pars stridens). **Antennal club sutures** acutely angulate.



Ips apache, male lateral habitus

Prothorax. Protibiae with three **socketed teeth** on apical half (does not include apical spine).

Elytra. **Interstriae impunctate** (observed on **interstriae** 2 and 3 on middle third of **elytral disc**), punctures 0.5-0.8 times diameter of adjacent **strial punctures** (punctures and **striae** measured at steepest part of puncture wall), **interstriae** 2-3 times as wide as adjacent **striae**. **Elytral declivity** with six spines per side, **spine 3** largest; **spine 1** (largest on 2nd **interstria**) closer to **suture** than **spine 2**; spines 1 and 2 separated at base by distance greater than height of **spine 1**; **spine 2** closer to **spine 3** than **spine 1**; **spine 3** hooked, apex acute, with apical half asymmetrical in lateral view; spines 2 and 3 on or not on shared tumescence, not in line with spines 1 and 4 (posterodorsal view); **spine 4** closer to **spine 3** than **spine 5**; declivital integument shiny.

Geographic Distribution

Guatemala; Honduras; Mexico (Chiapas, Hidalgo, Jalisco, Mexico, Michoacan, Nuevo Leon, Sinaloa); Nicaragua; Panama (introduced); USA (southeastern Arizona).

Hosts

Pinus spp.

Notes

Clade formed by (((*I. apache* + *I. calligraphus*) + *I. lecontei*) + *I. cribricollis*), see Cognato and Sun (2007).

References

- Cognato, A.I. 2015. Biology, systematics, and evolution of *Ips*. In *Bark beetles: biology and ecology of native and invasive species*. Edited by F.E. Vega and R.W. Hofstetter. Elsevier, San Diego, California. Pp. 351–370.
- Cognato, A.I. and Sun, J.H. 2007. DNA based cladograms augment the discovery of a new *Ips* species from China (Coleoptera: Curculionidae: Scolytinae). *Cladistics*, 23: 539–551.
- Lanier, G.N., Teale, S.A. and Pajares, J.A. 1991. Biosystematics of the genus *Ips* (Coleoptera: Scolytidae) in North America: Review of the *Ips calligraphus* group. *The Canadian Entomologist*, 123: 1103–1124.
- Wood, S.L. 1982. The bark and ambrosia beetles of North and Central America (Coleoptera: Scolytidae), a taxonomic monograph. *Great Basin Naturalist Memoirs*, 6: 1–1359.

Internet resources

https://www.barkbeetles.info/regional_chklist_target_species.php?lookUp=1697