

Ips hoppingi

Scientific Name

Ips hoppingi Lanier, 1970

Diagnostic notes

- Has five spines on the elytral declivity, body length is less than 4.5 mm, and the frons is moderately to densely tuberculate, the first declivital spine is closer to the second declivital spine than to the suture.
- Third declivital spine acute or subacute in males, and obtuse in females. Males with frons central tubercle present, absent in females.
- Some specimens best distinguished from *I. paraconfusus* and *I. confusus* by characters of the female pars stridens (Lanier 1970b) or DNA (Cognato and Sun 2007).
- May be sympatric with *I. confusus* in Arizona.

Morphological Summary

females

Body. 3.5-4.2(-4.8) mm long, 2.5-2.7 times longer than wide; pronotum 1.1-1.2 times longer than wide.

Head. Epistomal margin with uniseriate row of tubercles with gap at midline. Frons outline convex in lateral view; vestiture fine (not hiding part of integument); surface sculpture near epistoma densely tuberculate-punctate or with isolated tubercles; central carina absent; central tubercle absent, without pair of circular tubercles on either side of midline; transverse carina absent; frons central fovea present; circular tubercles above top of eyes present - more than one third of all frontal tubercles. 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 punctate (observed on interstriae 2 and 3 on middle third of elytral disc), punctures (0.6-)0.7(-0.8) times diameter of adjacent striae punctures (punctures and striae measured at steepest part of puncture wall), interstitial setae shorter than width of scutellar shield or longer than width of scutellar shield, interstriae 3-5 times as wide as adjacent striae. Elytral declivity with five spines per side, spine 3 largest; spine 1 (largest on 2nd interstria) closer to spine 2 than suture; spines 1 and 2 separated at base by distance less or greater than height of spine 1; spine 2 closer to spine 1 than spine 3; spine 3 hooked, apex obtuse to rounded, with apical half asymmetrical in lateral view; spines 2 and 3 not on shared tumescence, not in line with spines 1 and 4 (posterodorsal view); spine 4 closer to spine 3 than spine 5 or 5 than spine 3; declivital integument shiny.

males

Body. 3.5-4.2(-4.8) mm long, 2.5-2.7 times longer than wide; pronotum 1.1-1.2 times longer than wide.



Ips hoppingi, male frons



Ips hoppingi, female frons



Ips hoppingi, elytral disc

Head. Epistomal margin with uniseriate row of tubercles with gap at midline. Frons outline convex in lateral view; vestiture fine (not hiding part of integument); surface sculpture near epistoma densely tuberculate-punctate; central carina absent; central tubercle present and single, separated from base of epistomal setae by 0-0.5 tubercle diameters, without pair of circular tubercles on either side of midline; transverse carina absent or present; frons central fovea absent; circular tubercles above top of eyes present - more than one third of all frontal tubercles. Vertex and pronotum without stridulatory apparatus (pars stridens). Antennal club sutures acutely angulate.

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

Elytra. Interstriae punctate (observed on interstriae 2 and 3 on middle third of elytral disc), punctures (0.6-)-0.7(-0.8) times diameter of adjacent stria punctures (punctures and striae measured at steepest part of puncture wall), interstitial setae shorter than width of scutellar shield or longer than width of scutellar shield, interstriae 3-5 times as wide as adjacent striae. Elytral declivity with five spines per side, spine 3 largest; spine 1 (largest on 2nd interstria) closer to spine 2 than suture; spines 1 and 2 separated at base by distance less or greater than height of spine 1; spine 2 closer to spine 1 than spine 3; spine 3 hooked, apex acute or right-angled, with apical half asymmetrical in lateral view; spines 2 and 3 not on shared tumescence, not in line with spines 1 and 4 (posterodorsal view); spine 4 closer to spine 5 than spine 3; declivital integument shiny.

Geographic Distribution

Mexico (Chihuahua, Hidalgo); USA (Arizona, Texas).

Hosts

Pinus spp. Pinyon pines including *Pinus cembroides* and *P. discolor*.

Notes

Clade formed by (((*I. confusus* + *I. hoppingi*) + *I. paraconfusus*) + *I. montanus*), 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. 1970. Biosystematics of North American *Ips* (Coleoptera: Scolytidae): Hopping's group IX. *The Canadian Entomologist*, 102: 1139-1163.

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=1710



Ips hoppingi, male declivity



Ips hoppingi, female declivity



Ips hoppingi, male lateral habitus