

Ips pilifrons pilifrons

Scientific Name

Ips pilifrons pilifrons Swaine, 1912

Diagnostic notes

Species:

-Has four spines on the elytral declivity and general appearance is similar to *I. borealis*.

-Potentially sympatric with related species *I. borealis*, *I. tridens*, *I. hunteri*, and morphologically similar species *I. pini*.

-Differs from related species by deep, coarse strial punctures, large size, 3.9–5.0 mm and from *I. pini* by uniseriately punctured discal interstriae.

Subspecies:

-Diagnosable by female only.

-Female frons moderately protuberant, elevated area without median sulcus (groove), with dense pile-like patches of setae, and extending above level of eyes. 4.0–5.0 mm.

Morphological Summary

females

Body. 4.0-5.0(-5.3) mm long, 2.5-2.6 times longer than wide; pronotum 1.1-1.2 times longer than wide.

Head. Epistomal margin with uniseriate row of tubercles absent. Frons outline protruding in lateral view; vestiture coarse and dense (hiding part of integument); central carina absent; central tubercle absent, 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 absent or present - up to one third of all tubercles. Vertex and pronotum without stridulatory apparatus (pars stridens). Antennal club sutures bisinuate.

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 0.5-0.7 times diameter of adjacent strial punctures (punctures and striae measured at steepest part of puncture wall), interstitial setae longer than width of scutellar shield, interstriae 3-4 times as wide as adjacent striae. Elytral declivity with four 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 pedunculate (capitate), apex acute or right-angled, with apical half symmetrical or asymmetrical in lateral view; spines 2 and 3 on shared tumescence, not in line with spines 1 and 4 (posterodorsal view); declivital integument shiny.

males

Body. 4.0-5.0(-5.3) mm long, 2.5-2.6 times longer than wide; pronotum 1.1-1.2 times longer than wide.



Ips pilifrons pilifrons, female frons



Ips pilifrons pilifrons, male frons



Ips pilifrons pilifrons, female lateral habitus



Ips pilifrons pilifrons, male lateral habitus

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 absent; transverse carina absent or present; frons central fovea absent; circular tubercles above top of eyes present - up to, or more than one third of all tubercles. Vertex and pronotum without stridulatory apparatus (pars stridens). Antennal club sutures bisinuate.

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 0.5-0.7 times diameter of adjacent stria punctures (punctures and striae measured at steepest part of puncture wall), interstitial setae longer than width of scutellar shield, interstriae 3-4 times as wide as adjacent striae. Elytral declivity with four 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 pedunculate (capitate), apex acute or right-angled, 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); declivital integument shiny.

Geographic Distribution

Species: Mexico (Coahuila); USA (Arizona, Colorado, Idaho, Nevada, New Mexico, Utah, Wyoming).

Subspecies: USA (Colorado, Wyoming).

Hosts

Picea engelmannii (Wood 1982)

Notes

I. borealis, *I. pilifrons*, and *I. tridens* form clade (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.

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=1721