

Ips pini

Scientific Name

Ips pini (Say, 1826)

Synonyms

Bostrichus dentatus Sturm, 1826

Bostrichus pallipes Sturm, 1826

Tomicus prae-frictus Eichhoff, 1868

Tomicus oregonis Eichhoff, 1869

Tomicus rectus LeConte, 1876

Ips laticollis Swaine, 1918

Common names: eastern pine engraver, pine engraver beetle (English)

Diagnostic notes

-Has four spines on the elytral declivity, elytral disc impunctate (examining interstriae 2 and 3 near midlength).

-Males with major median tubercle on its frons distant from epistomal setae by 2 to 3 times diameter; without median frontal fovea; antennal sutures bisinuate; and elytra with third declivital spine acute, and nearly parallel-sided or petiolate.

-Some females lack central tubercle on frons (when present distant from mouth opening by 2 to 3 times diameter), tubercles present on frons above eyes; and third declivital spine acute, and nearly parallel-sided or tapered. Some females cannot be distinguished from *I. bonansea*.

-Separated from *I. bonansea* by smaller pronotal punctures near midline on posterior half: diameter of punctures smaller than those in posterolateral areas (similar-sized in *I. pini*). Also differs from *I. bonansea* by the absence of a frons central carina (elongate tubercle if present in *I. pini* not reaching row of epistomal tubercles), and usually by its larger size, 3.0–4.5 mm (Wood 1982).

Morphological Summary

females

Body. 3.3-4.3 mm long, 2.5-2.7 times longer than wide; pronotum 1.0-1.2 times longer than wide.

Head. Epistomal margin with uniseriate row of tubercles with elongate mesal tubercle or 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 present or absent; central tubercle absent or present and single, separated from base of epistomal setae by 2-4(-5) tubercle diameters, without pair of circular tubercles on either side of midline; transverse carina absent; frons central fovea absent; circular tubercles above top of eyes present - up to, or more than one third of all tubercles. Vertex and pronotum with stridulatory apparatus (pars stridens). Antennal club sutures bisinuate.

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



Ips pini, male frons



Ips pini, female frons



Ips pini, female pronotum

include apical spine).

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

males

Body. 3.3-4.3 mm long, 2.5-2.7 times longer than wide; pronotum 1.0-1.2 times longer than wide.

Head. Epistomal margin with uniseriate row of tubercles with elongate mesal tubercle or 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 present or absent; central tubercle present and single, separated from base of epistomal setae by 2-4(-5) tubercle diameters, without pair of circular tubercles on either side of midline; transverse carina absent; 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 impunctate (observed on interstriae 2 and 3 on middle third of elytral disc), interstriae 3-5 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 straight sided with tapered apex or pedunculate (capitate), apex acute, with apical half asymmetrical in lateral view; spines 2 and 3 on shared tumescence, not in line with spines 1 and 4 (posterodorsal view); declivital integument shiny.

Geographic Distribution

Canada (widespread); USA (widespread except the southeast); Mexico (northern areas).

Hosts

Pinus spp.

Notes

I. pini, *I. integer*, and *I. plastographus* form clade (Cognato and Sun 2007).

References



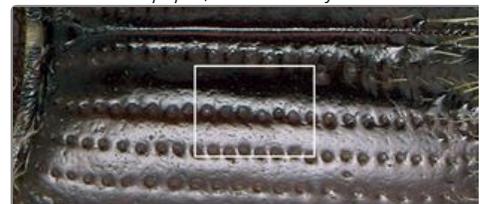
Ips pini, male declivity



Ips pini, male declivity



Ips pini, female declivity



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.

EPPO. No date. Data Sheets on Quarantine Pests: *Ips pini*. European and Mediterranean Plant Protection Organization.

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=1725

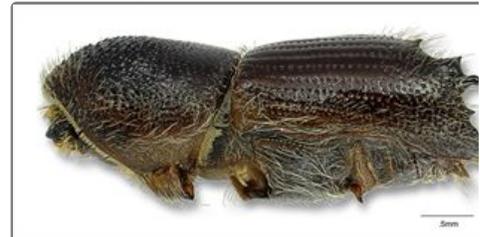
Ips pini, elytral disc showing impunctate interstriae.
Photo K. Bolte. Government of Canada.



Ips pini, male dorsal habitus
Photo K. Bolte. Government of Canada.



Ips pini, male lateral habitus



Ips pini, male lateral habitus
Photo K. Bolte. Government of Canada.