

# Ips emarginatus

## Scientific Name

*Ips emarginatus* (LeConte, 1876)

## Diagnostic notes

- Has three spines on the elytral declivity.
- Differs from other *Ips* by its large size (5.5–7.0 mm) and emarginate spine 3.
- sister species to *I. knausi*, which is diagnosable from *emarginatus* by the absence of elytral interstitial punctures and the presence of a fourth declivital spine.

## Morphological Summary

### females

**Body.** 5.5-7.0 mm long, 2.7-2.8 times longer than wide; pronotum 1.1-1.2 times longer than wide.

**Head.** Epistomal margin with uniseriate row of tubercles with elongate mesal tubercle. 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 absent, without pair of circular tubercles on either side of midline; transverse carina present, punctate; frons central fovea present or absent; circular tubercles above top of eyes present - up to one third of all tubercles. Vertex and pronotum without stridulatory apparatus (pars stridens). Antennal club sutures bisinuate.

**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), interstriae 2-3 times as wide as adjacent striae. Elytral declivity with three 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 or 3 than spine 1; spine 3 emarginate, apex right-angled or obtuse to rounded, with apical half symmetrical or asymmetrical in lateral view; spines 2 and 3 not on shared tumescence; declivital integument mat.

### males

**Body.** 5.5-7.0 mm long, 2.7-2.8 times longer than wide; pronotum 1.1-1.2 times longer than wide.

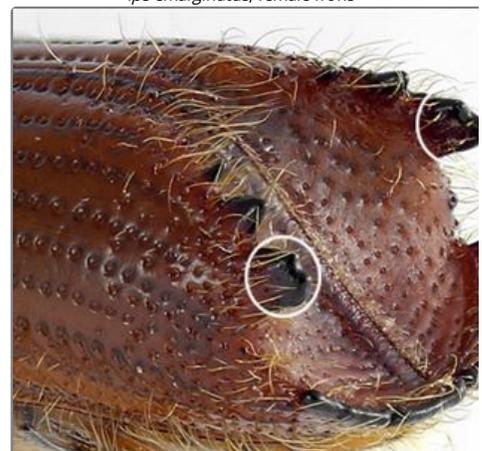
**Head.** Epistomal margin with uniseriate row of tubercles with elongate mesal tubercle or with gap at midline. Frons outline convex in lateral view; vestiture fine (not hiding part of integument); surface sculpture near epistoma densely tuberculate-punctate; central carina present or absent; central tubercle present and single, separated from base of epistomal setae by 0-0.5 tubercle diameters, without pair of circular tubercles on either side of midline; transverse carina present, punctate;



*Ips emarginatus*, male frons



*Ips emarginatus*, female frons



*Ips emarginatus*, male declivity showing emarginate spine 3

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

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

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### Geographic Distribution

Canada (British Columbia); Mexico (Baja California); USA (California, Idaho, Montana, Oregon, Washington)

### Hosts

*Pinus* spp. Known from *P. jeffreyi*, *P. monticola*, *P. ponderosa*.

### Notes

Clade formed by ((*I. emarginatus* + *I. knausi*) + *I. sexdentatus*), 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.

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=1707](https://www.barkbeetles.info/regional_chklist_target_species.php?lookUp=1707)



*Ips emarginatus*, male declivity



*Ips emarginatus*, female declivity



*Ips emarginatus*, declivity, spine 3



*Ips emarginatus*, male lateral habitus



*Ips emarginatus*, female lateral habitus