

Ips grandicollis

Scientific Name

Ips grandicollis (Eichhoff, 1868)

Synonyms

Tomicus cacographus LeConte, 1868

Ips chagnoni Swaine, 1916

Common names: Southern pine engraver (English)

Diagnostic notes

-Has five spines on the elytral declivity and appears similar to *I. confusus*.

-Potentially sympatric in Central America and Mexico with related and morphologically similar species *I. cribricollis*.

- *Ips grandicollis* differs from *I. cribricollis* by having the tubercles separated by only about their own diameter laterally on frons, the presence of a fovea on the male frons, and width of the pars stridens (Lanier 1987).

Morphological Summary

females

Body. 2.9-4.6 mm long, 2.5-2.7 times longer than wide; pronotum 1.1-1.3 times longer than wide.

Head. Epistomal margin with uniseriate row of tubercles uninterrupted medially or with gap at midline. Frons outline convex in lateral view; vestiture fine (not hiding part of integument); surface sculpture near epistoma with isolated tubercles; central carina absent; central tubercle absent or present and single, separated from base of epistomal setae by 1-3 tubercle diameters, without pair of circular tubercles on either side of midline; transverse carina absent; frons central fovea present; circular tubercles above top of eyes present - up to one third of all tubercles. Vertex and pronotum with stridulatory apparatus (pars stridens). Antennal club sutures acutely angulate or bisinuate.

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

Elytra. Interstriae impunctate or punctate (observed on interstriae 2 and 3 on middle third of elytral disc), punctures 0.4-0.5 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 2(-3) times as wide as adjacent striae. Elytral declivity with five 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 1 than spine 3 or 3 than spine 1; spine 3 tapered or hooked, apex obtuse to rounded, 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 or 5 than spine 3; declivital integument shiny.



Ips grandicollis, female frons



Ips grandicollis, male frons



Ips grandicollis, antenna

males

Body. 2.9-4.6 mm long, 2.5-2.7 times longer than wide; pronotum 1.1-1.3 times longer than wide.

Head. Epistomal margin with uniseriate row of tubercles uninterrupted medially 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 absent; central tubercle present and single, separated from base of epistomal setae by 0.5-4(-5) tubercle diameters; transverse carina absent; frons central fovea present; 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 acutely angulate or bisinuate.

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

Elytra. Interstriae impunctate or punctate (observed on interstriae 2 and 3 on middle third of elytral disc), punctures 0.4-0.5 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 2(-3) times as wide as adjacent striae. Elytral declivity with five 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 1 than spine 3 or 3 than spine 1; spine 3 hooked, apex obtuse to rounded, 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 or 5 than spine 3; declivital integument shiny.

Geographic Distribution

Australia (introduced); Canada (Manitoba, Nova Scotia, Ontario, Quebec); Honduras; Mexico (Colima, Guerrero, Hidalgo, Jalisco, Nuevo Leon, Veracruz); USA (Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin).

Hosts

Pinus spp.

Notes

Weak ability to kill trees (Lanier 1987).

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



Ips grandicollis, female elytral disc



Ips grandicollis, male declivity



Ips grandicollis, male declivity

R.W. Hofstetter. Elsevier, San Diego, California. Pp. 351–370.
EPPO. No date. Data Sheets on Quarantine Pests: *Ips grandicollis*. European and Mediterranean Plant Protection Organization.
Lanier, G.N. 1987. The validity of *Ips cribricollis* (Eich.) (Coleoptera: Scolytidae) as distinct from *I. grandicollis* (Eich.) and the occurrence of both species in Central America. *The Canadian Entomologist*, 119: 179–187.
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=1709



Ips grandicollis, female declivity



Ips grandicollis, male lateral habitus



Ips grandicollis, female lateral habitus



Ips grandicollis male dorsal habitus

Rotatable image of *Ips grandicollis* (Eichhoff 1868)
(click on dorsal habitus images)

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