

Ips schmutzenhoferi

Scientific Name

Ips schmutzenhoferi Holzschuh, 1988

Diagnostic notes

- Elytra with **interstriae** setose throughout on disc; **declivity** with four spines, **spine 3** petiolate, **spine 1** closer to suture than spine 2.
- Frons** densely tuberculate below and above top of eyes without central tubercle or carina; transverse elevation present or absent; row of tubercles along **epistomal** margin interrupted mesally; central fovea present.
- Morphological methods may not lead to reliable separation of all specimens of *I. schmutzenhoferi* from *I. nitidus* and *I. stebbingi*.

Morphological Summary

sexes combined

Body. (4.8-)5.1-6.5 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** absent; central tubercle absent; **transverse carina** present, punctate; **frons** central fovea present; circular tubercles above top of eyes present - up to, or more than one third of all tubercles. Vertex and pronotum with or 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 0.6-0.7 times diameter of adjacent **strial punctures** (punctures and striae measured at steepest part of puncture wall), interstitial setae shorter than width of scutellar shield, **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 1** than **spine 3** or **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); declival integument shiny.

Geographic Distribution

Bhutan

Hosts

Larix, *Picea*, and *Pinus* spp.

Notes



Ips schmutzenhoferi, female frons



Ips schmutzenhoferi, male declivity



Ips schmutzenhoferi, female declivity

Clade formed by (((*I. longifolia* + *I. stebbingi*) + *I. schmutzenhoferi*) + *I. perroti*), see Cognato and Sun (2007).

Multi-year tree-killing epidemics recorded (Schmutzenhofer 1988)

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.

Knížek M. 2011. Scolytinae. In *Catalogue of Palaearctic Coleoptera*, Vol. 7. Edited by I. Löbl and A. Smetana. Apollo Books, Stenstrup, Denmark, Pp. 204–251.



Ips schmutzenhoferi, male lateral habitus (pterothorax and abdomen only)



Ips schmutzenhoferi, female lateral habitus