**Ips pilifrons utahensis**

**Scientific Name**

*Ips pilifrons utahensis* Wood, 1960

**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 weakly protuberant, with sparse vestiture, elevated area without median sulcus (groove) and not extending above level of eyes, width of elevated about half of width of frons, most without dense pile-like patches of setae,. 4.4–5.0 mm. (Wood 1982)

**Morphological Summary**

**sexes combined**

**Body.** 4.4-5.0 mm long, 2.5-2.7 times longer than wide; pronotum 1.0-1.1 times longer than wide.

**Head.** Epistomal margin with uniseriate row of tubercles with gap at midline. Frons outline convex or protruding in lateral view; vestiture fine (not hiding part of integument); surface sculpture near epistoma densely tuberculinate-punctate or with isolated tubercles; central carina absent; central tubercle absent; 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 or four 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), interstrial 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.

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

**Hosts**

*Picea engelmannii* (Wood 1982)

**Notes**

*I. borealis, I. pilifrons, and I. tridens* form clade (Cognato and Sun 2007). Female frons little or not produced, and little vestiture dimorphism between sexes.

**References**


**Internet resources**

Ips pilifrons utahensis, male lateral habitus