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**First record of *Serropalpus substriatus* Haldeman, 1848 (Coleoptera: Melandryidae) on giant sequoia, *Sequoiadendron giganteum* (Lindl.)
J. Buchholz (Cupressaceae): New larval host**

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Scientific Note

First record of *Serropalpus substriatus* Haldeman, 1848 (Coleoptera: Melandryidae) on giant sequoia, *Sequoiadendron giganteum* (Lindl.) J. Buchholz (Cupressaceae): New larval host

An adult of *Serropalpus substriatus* Haldeman, 1848 (Coleoptera: Melandryidae) was reared from a giant sequoia, *Sequoiadendron giganteum* (Lindl.) J. Buchholz (Cupressaceae), log obtained from a dead tree at Mountain Home Demonstration State Forest, Tulare County, California (36°13'29.5" N, 118°40'06.0" W, 2049m). Though several species of melandryids live under the bark and in the wood of dead trees (DeLeon 1952), only *S. substriatus* is recorded as having economic importance in western forests. This species is widely distributed in North America where it breeds in various coniferous trees. In the West, hosts include red fir, *Abies magnifica* A. Murray bis (Pinaceae); incense-cedar, *Calocedrus decurrens* (Torr.) Florin (Cupressaceae); lodgepole pine, *Pinus contorta* Loudon (Pinaceae); ponderosa pine, *Pinus ponderosa* Douglas Lawson & C. Lawson (Pinaceae); redwood, *Sequoia sempervirens* (Lamb. Ex D. Don) Endl. (Cupressaceae); Port-Orford-cedar, *Chamaecyparis lawsoniana* (A. Murray bis) Parl (Cupressaceae); Engelmann spruce, *Picea engelmannii* Engelm. (Pinaceae); and Douglas-fir, *Pseudotsuga menziesii* (Mirb.) Franco (Pinaceae) (Furniss & Carolin 1977, Ross 1968). In British Columbia, the species also commonly infests felled white spruce, *Picea glauca* (Moench) Voss (Ross 1968).

Two young giant sequoias died in the month of August at Mountain Home Demonstration State Forest: one in 2009 and a second in 2010 (Soderlund 2012). Tree deaths were very rapid occurring within one month as determined by crown fade. Trees were approximately 47 and 34 years old, respectively. The giant sequoia that died in 2010 had multiple round exit holes extending from the base of the tree to approximately 2 m in height. Six round wood sections, each 30 cm in height, were collected starting at the base of the tree and taken back to San Luis Obispo, CA on 24 August 2010. These sections were covered with a 0.033-cm thick woven fiberglass mesh screening with openings 1 mm × 1 mm in size. The mesh was wrapped around the entire log sections with the ends of the screening folded over and stapled and then covered in duct tape to ensure any emerging insects would not escape. These rounds were then stored inside at room temperature for observation and checked every 3–4 weeks for emerging insects.

On 27 October 2010, one adult *Serropalpus substriatus* was collected from one round wood section (Fig. 1). Species identification was completed by Cheryl Barr, Senior Museum Scientist/Collection Manager of the Essig Museum of Entomology at the University of California, Berkeley and further confirmed by Dr. Darren Polluck, Head Curator of Eastern New Mexico University. To confirm if this insect had been recorded previously on giant sequoias, we referred to relevant works (Furniss & Carolin 1977; Hartesveldt et al. 1975; Harvey et al. 1976; Piirto 1977, 1994; Piirto et al. 1998; Stecker 1980) and queried eleven entomological collections in California (California Academy of Sciences; California State Collection of Arthropods, California Department of Food & Agriculture; Bohart Entomology Museum, University of California-Davis; Entomology Research Museum, University

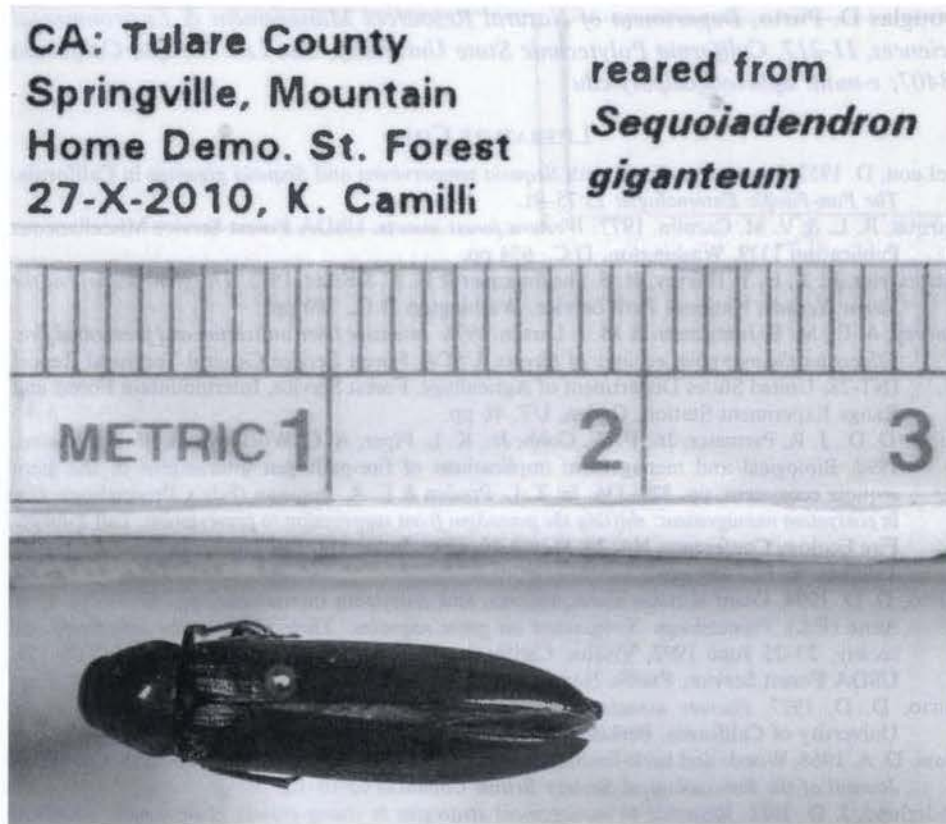


Figure 1. Adult *Serropalpus substriatus* reared from *Sequoiadendron giganteum*.

of California-Riverside; Santa Barbara Museum of Natural History; Natural History Museum of Los Angeles County; San Diego Natural History Museum; Cornell University; National Forest Service Library; Essig Museum of Entomology, University of California, Berkeley; and Sequoia-Kings Canyon insect collection) as well as two experts on Melandryidae (Darren Polluck from Eastern New Mexico University and Dan Young from University of Wisconsin). We found no evidence of *S. substriatus* being previously reared from or collected on giant sequoia.

Thus, this represents a **new larval host** of *Serropalpus substriatus* reared from giant sequoia. The voucher specimen is deposited at the Essig Museum of Entomology at the University of California-Berkeley.

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