

# Pine Seed Chalcid

## Transcontinental in Range

by  
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Eastern white pine seed collected in Transylvania Country, N. C. in 1972 was discovered to be attacked by larvae of *Megastigmus*. Members of this group of chalcids feed in seed and frequently are very destructive. In 1964, the destruction of Fraser fir seed exceeded 36 percent in North Carolina (4).

The 1/8-inch long adult drives its ovipositor into the developing cone and lays an egg in the embryo. After the egg hatches, the larva completely consumes the contents of the developing seed,

which externally appears normal in size and color. The larvae remain in a dormant state for 1 to 3 years before then transform to adults. emerge through a small round hole in the seedcoat, and attack the new cone crop.

Larvae discovered in North Carolina seed, which was cleaned in February 1973, were caged after exposing them to refrigeration for several months. Adults emerged in November 1973 and were identified the B.D. Burks. Systematic Entomology Laboratory, USDA Agricultural Research Service as *Megastigmus atedius*. This was the first record of *Megastigmus* attacking pine seed in eastern North America.

The only previous reports of *Megastigmus* attacking pine seed were those of *M. albifrons* in ponderosa pine in California and Arizona (3) and *M. atedius* in lodgepole pine in Washington (2). *M. piceae*, which attacks spruce in eastern Canada and in the Rocks Mountains, is reportedly synonymous with *M. atedius* (1).

After the discovery of *Megastigmus atedius* in North Carolina, we received a shipment of eastern white pine seed from Wisconsin. We recleaned this seed

and upon examining the rejected material, also found it to be attacked by *Megastigmus*, probably *atedius*. Based upon information available, it is apparent that this seed chalcid destroys both pine and spruce seed from at least North Carolina to Ontario, Canada and from the East to the West coast of the U.S.

### Literature Cited

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