



# America's Least Wanted Wood-Borers

Department of Entomology

## BLACK SPRUCE BEETLE, *TETROPIUM CASTANEUM* (LINNAEUS)

*Jeffrey D. Holland, K. R. Raje, J.T. Shukle, and V. R. Ferris, Entomologists*

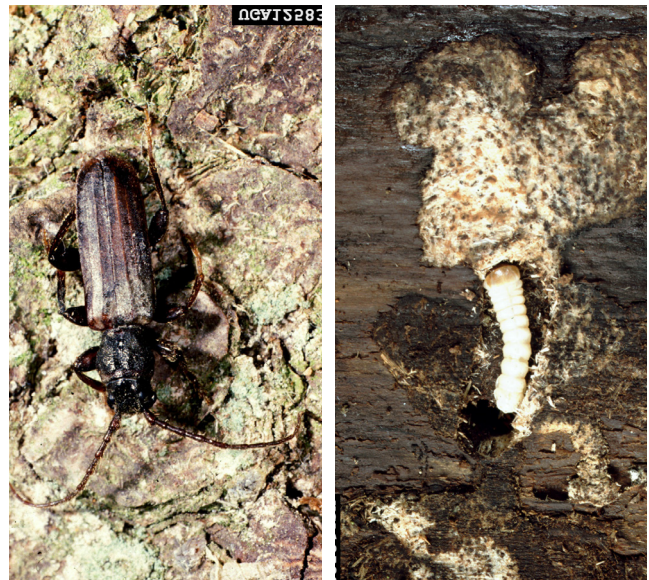
This longhorned beetle is native to Asia and Europe. These beetles can kill living trees. The wood-boring larvae cause structural damage that may make the trees susceptible to windstorms.

**Distribution:** *T. castaneum* is found in North Korea, South Korea, Siberia, Mongolia, China and Japan. It is also found in Europe. It has been found in Atlantic Canada.

**General Description:** The length of the adults is about 8 – 18 mm. The antennae are half of the body length. The body of the adults is typically black in color, the elytra are brown in color and the antennae and legs are either brown or red in color. The eyes are divided into two halves and there is a conspicuous groove between the antennae.

**Biology:** The host trees include pine, spruce, fir and larch. Larvae are found in the inner bark and outer sapwood. They can be found from the roots to the stem but usually they prefer the lower bole. Freshly cut trees and stumps, or trees weakened by drought, insects, or fungi are preferred, but they will also attack healthy trees. Early instars thrive on the inner bark and outer sapwood. Larvae form galleries that fill with brown, granular frass. Through narrow elliptical holes, the mature larvae bore horizontally into the sapwood and then parallel to the grain, forming L-shaped galleries, at the end of which larvae form pupal chambers plugged with coarse white frass. After pupation, adults bore through the bark and emerge through 5 mm exit holes.

**Source:** Canadian Food Inspection Agency– Pest Information. URL: <<http://www.inspection.gc.ca/english/plaveg/pestrava/tetcas/tech/tetcase.shtml>>. Accessed: November 16, 2011.



Adult and larva of *T. (castaneum)*.  
(Photo credit: Stanislaw Kinelski, Bugwood.org)

**Molecular Identification:** A DNA barcode for this species has been developed and is freely accessible online at the National Center for Biotechnology Information <[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov)>, and the Barcode of Life Data Systems database <[www.boldsystems.org](http://www.boldsystems.org)>. If a specimen of this species is suspected, DNA analysis could help to confirm the identification even if the material is of a life stage that cannot be identified with morphological identification techniques.

***T. castaneum* NCBI accession numbers:**  
JQ015116

**Funding:** This project was supported by funding from the 2009 Farm Bill 10201 program, USDA/APHIS grant number 10-8100-1488-CA.

October 2013

---

It is the policy of the Purdue University Cooperative Extension Service that all persons have equal opportunity and access to its educational programs, services, activities, and facilities without regard to race, religion, color, sex, age, national origin or ancestry, marital status, parental status, sexual orientation, disability or status as a veteran. Purdue University is an Affirmative Action institution. This material may be available in alternative formats.



1-888-EXT-INFO • [www.extension.purdue.edu](http://www.extension.purdue.edu)

---

Order or download materials from  
**Purdue Extension • The Education Store**  
[www.the-education-store.com](http://www.the-education-store.com)

---