



Total Records of Velvet Longhorn Beetle *Trichoferus campestris* Faldermann (Coleoptera, Cerambycidae) from Utah

Clinton E. Burfitt, Kristopher Watson, Caressa A. Pratt, Joey Caputo
Utah Department of Agriculture and Food
Plant Industry and Conservation Division

Introduction

The velvet longhorn beetle (*Trichoferus campestris* Faldermann) is a potential threat to Utah's urban, orchard, and riparian wood land areas. Field sampling and actions taken in association with the detection efforts by the Utah Department of Agriculture and Food (UDAF) are necessary to maintain productive commercial tree fruit production, and healthy urban forests. Expanded detection trapping along natural waterways and orchards indicate that the velvet longhorn beetle (VLB) distribution, first discovered in South Salt Lake City in July 2010, is widespread in Salt Lake and Utah counties. The insect was first detected in North America in the province of Quebec, Canada in 2002 and 2006 (Grebennikov et al. 2010). The VLB has been found in warehouse settings in Ohio (2009), Rhode Island (2006), New Jersey (2007, 2013), and Illinois (2009) (Blackwood 2010), it has also been detected in Colorado (2013), and New York (2014). It spreads into new areas through infested wood packing material that accompanies a wide variety of imported commodities such as: building supplies, machinery, tools, glass, tiles, etc. (Cavey 1998). Published reports from the European Plant Protection Organization, CABI and Global Pest Disease Database have been summarized in the USDA-APHIS-National Identification Services Plant Pest Risk Assessment (1998). The conclusion of this literature review is that VLB is polyphagous and prefers to attack apple (*Malus*), and mulberry (*Morus*) in its native range. In Utah, VLB larva, pupae, and adult life stages have been recovered through destructive sampling from peach and cherry (*Prunus*). See Table 2 for a complete list of hosts.

Description

The adult is 11–20 mm long, with an elongated body and parallel-sided elytra (Photo 1). The elytra, legs and other parts of the body vary in color from dark brown to brownish-orange, with the legs and antennae – usually being lighter - Photo 3). It is easily recognized by the irregularly distributed hairs on the elytra, which form spots (Kostin 1973). Mature larvae are 22 mm long, yellow-white in color, and have a brown head (Photo 2).



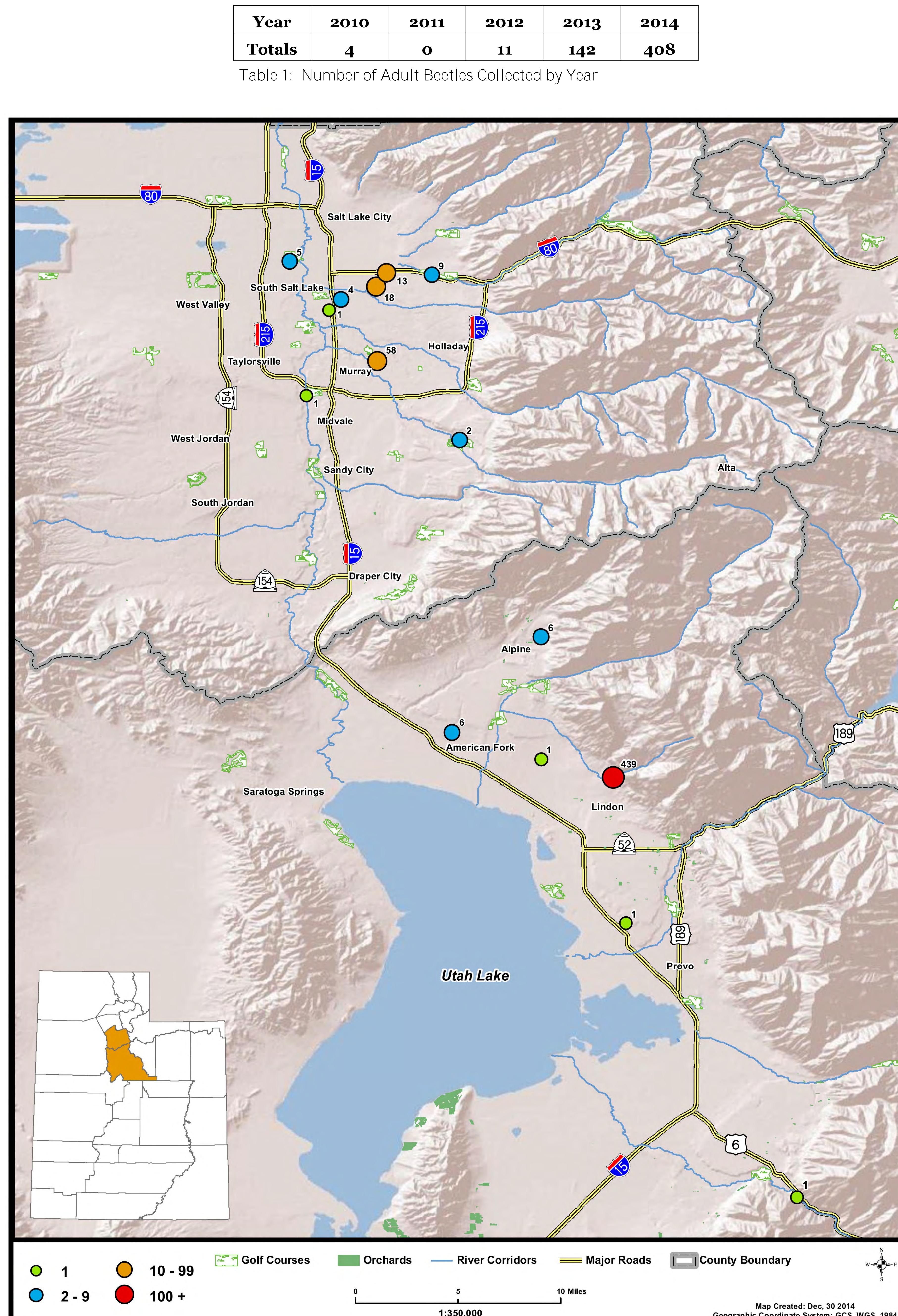
Photo 2: Larva Life Stage



Photo 3: Newly Emerged Adult Life Stage Next to Pupal Chamber

Surveillance and Monitoring Activities

UDAF continues to gather information on the distribution of *Trichoferus campestris* in Utah. To date 565 adult specimens of this exotic wood borer have been collected from 15 sites, in two Utah counties. The sites where this beetle have been detected are orchards, riparian areas (golf courses), and industrial sites. Ongoing research and development must continue in effort to understand the biology of the insect and risk that the pest imposes socially, environmentally and economically. Currently, Otis laboratory is in the process of trying to establish a colony for further research. The exotic wood borer survey was completed as a cooperative project by UDAF with funding from USDA APHIS PPQ.



Betula spp. (Birch)
Broussonetia spp. (Paper mulberry)
Gleditsia spp. (Honeylocust)
Malus spp. (Apple/Crabapple) [preferred host]
Morus spp. (Mulberry) [preferred host]
Picea spp. (Spruce)
Pinus spp. (Pine)
Salix spp. (Willow)
Sorbus spp. (Mountain-ash, rowan)
Prunus spp. (cherry, peach)

Table 2: Living Hosts

Trap Type	Year	Totals
Lindgren Funnel Trap	2010	4
Lindgren Funnel Trap	2012	11
Lindgren Funnel Trap	2013	142
Lindgren Funnel Trap	2014	286
Cross Vane Panel Trap	2014	107
Sleeve Collection	2014	8
Light Trap	2014	3
Visual Survey	2014	1
Rearing Cage Collection	2014	1
Japanese Beetle Trap	2014	1
Gypsy Moth Delta Trap	2014	1

Table 3: Number of Adult Beetles by Collection Method per Year

Citations:

Grebennikov, V.V., Gill, B.D. & Vigneault, R. (2010). *Trichoferus campestris* (Faldermann) (Coleoptera: Cerambycidae), An Asian wood-boring beetle recorded in North America. *The Coleopterists Bulletin*, 64 (1).13-20.

Kostin, I.A. (1973). The Dendrophagous beetles of Kazakhstan (Buprestidae, Cerambycidae, Ipidae). Nauka, Alma-Ata, 286 pp. (In Russian.) Translation by Marina Zlotina (PPO-CPHST Risk Analyst and Entomologist), April 22, 2011, Translation of page 162 of Kostin, I.A. (1973).

Cavey, J. F. (1998). Solid wood packing material from China, initial pest risk assessment on certain wood boring beetles known to be associated with cargo shipments: Asian Longhorned Beetle (*Anoplophora glabripennis*), *Cerambyx*, *Monochamus* and *Hesperorophanes*. USDA PPQ, 22pp.

Blackwood, J.S. (2010). Survey activities conducted in response to detections of Chinese longhorned beetle, *Hesperorophanes* (*Trichoferus*) *campestris*, in Schiller Park, Illinois in 2009. Internal report submitted September 16, 2010.

Spears, L.R., Ramirez, R.A. (2014). Invasive Insect Field Guide for Utah 2014. Utah State University Extension Publication.

Substantial contributions to the methods for field sampling were provided by: USDA APHIS PPQ - CPHST Otis laboratory, 2014.

Photos taken by UDAF entomology staff members.