Vouchers for treehoppers (Hemiptera: Membracidae) collected in 2018 from Jackson County, Oregon

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In 2016, research scientists at University of California-Davis found that the insect species *Spissistilus festinus* (Say) (Hemiptera: Membracidae: Smiliinae: Ceresini), a treehopper native to southeast North America and now found across the continent, is a competent vector of Grapevine red blotch virus (GRBV) under greenhouse conditions (Bahder et al. 2016). Subsequently, Oregon State University researchers determined that GRBV was present in viticultural regions of Oregon and was found to be spreading in multiple locations (Dalton et al. 2019). It is known more generally in vector ecology that a narrow taxonomic group is typically capable of transmitting a particular virus (Whitfield et al. 2015). Taken together, these observations gave credence to the possibility of a smiliine treehopper acting as the agent responsible for the observed spread of GRBV in Oregon wine grape vineyards.

Insect trapping surveys were conducted in southern Oregon to determine the composition of treehopper species in areas of commercial wine grape production. Multiple morphotypes were discovered in an alfalfa field near Central Point, Oregon, on two dates in late July 2018. Voucher specimens were sent to Dr. Dennis Kopp, Volunteer Curator of Hemiptera at the Smithsonian National Museum of Natural History in Washington, D. C., who identified them to species based on external morphology and characters on the male genitalia. Three specimens of *S. festinus* (Fig. 1) were collected by Mariana Stowasser using a sweep net on 21 July 2018. Sweep net samples by the same collector on 27 July 2018 revealed the presence of *Stictocephala bisonia* (Kopp & Yonke) (Fig. 2) and *Tortistilus albidosparsus* (Stål) (Fig. 3).

This publication documents the deposition of exemplar specimens for these species in a public research collection. All of the specimens were assigned unique identifiers that were then printed as human-readable and a 2D matrix codes on acid free labels affixed to the specimens and deposited in the Oregon State Arthropod Collection on 6 November 2019 (Table 1).

Figure 1. Oregon State Arthropod Collection (OSAC) voucher specimens: (a) *Spissistilus festinus* female, OSAC_0001229067, (b) male, OSAC_0001229069, abdomen removed. Scalebar = 1 mm.

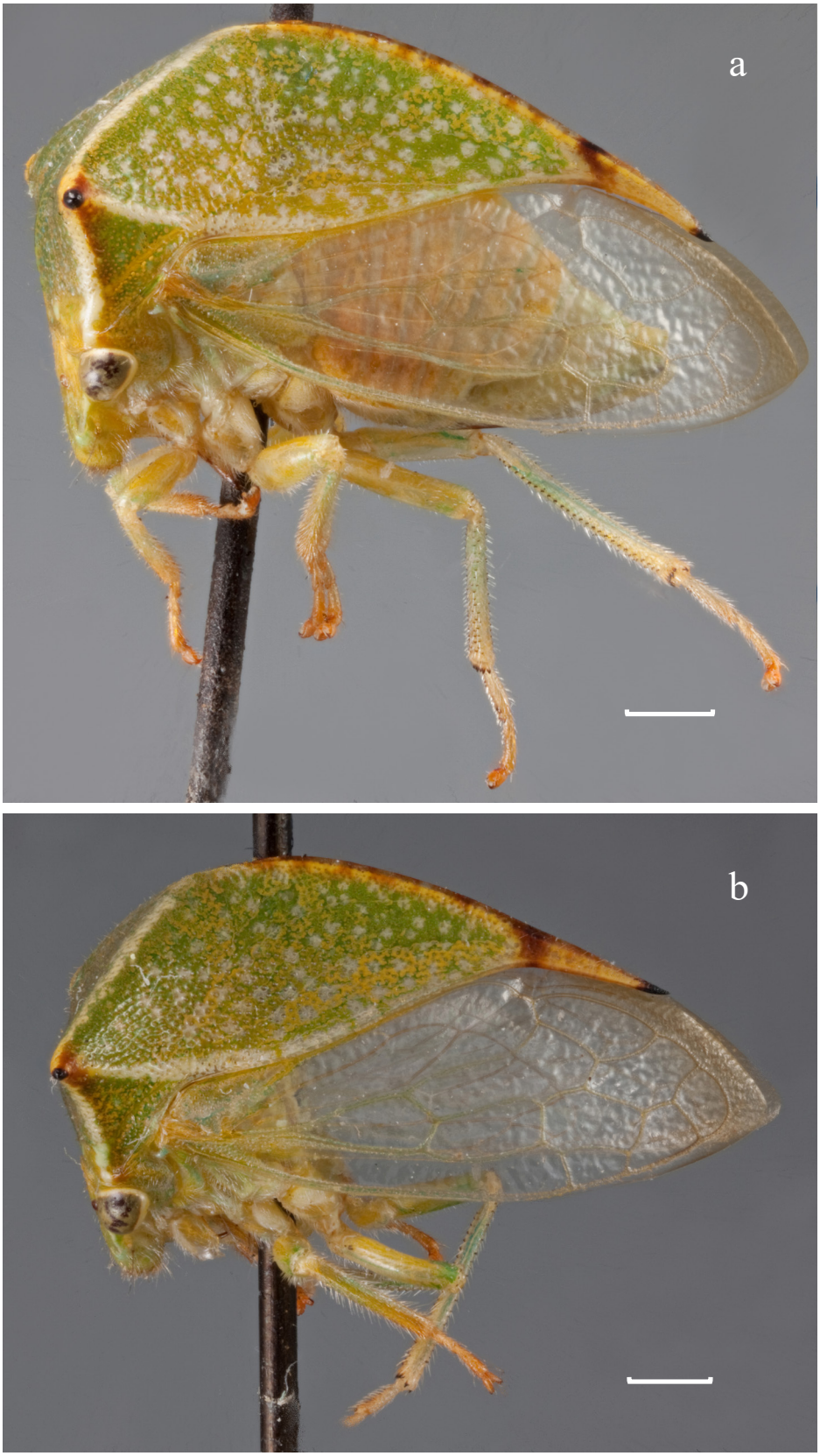

Figure 2. Oregon State Arthropod Collection (OSAC) voucher specimens: (a) *Stictocephala bisonia* female, OSAC_0001229075; (b) male, OSAC_0001229071, abdomen removed. Scalebar = 1 mm.

Figure 3. Oregon State Arthropod Collection (OSAC) voucher specimens: (a) *Tortistilus albidosparsus* female, OSAC_0001229080; (b) male, OSAC_0001229079, abdomen removed. Scalebar = 1 mm.

Table 1. List of voucher specimens. All were collected on *Medicago sativa*, in Jackson County, Oregon (42.389° N 122.940° W) by M. Stowasser and determined by D. Kopp in 2018.

Specimen#	Species	Sex	Date
0001229067	*Spissistilus festinus*	female	21 July 2018
0001229068	*Spissistilus festinus*	female	21 July 2018
0001229069	*Spissistilus festinus*	male	21 July 2018
0001229070	*Stictocephala bisonia*	male	27 July 2018
0001229071	*Stictocephala bisonia*	male	27 July 2018
0001229072	*Stictocephala bisonia*	female	27 July 2018
0001229073	*Stictocephala bisonia*	female	27 July 2018
0001229074	*Stictocephala bisonia*	female	27 July 2018
0001229075	*Stictocephala bisonia*	female	27 July 2018
0001229076	*Stictocephala bisonia*	female	27 July 2018
0001229077	*Stictocephala bisonia*	male	27 July 2018
0001229078	*Stictocephala bisonia*	male	27 July 2018
0001229079	*Tortistilus albidosparsus*	male	27 July 2018
0001229080	*Tortistilus albidosparsus*	female	27 July 2018

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