

## ***Atlides halesus* (Cramer, 1777) (Lycaenidae: Theclinae) and American Mistletoe in northern Virginia.**

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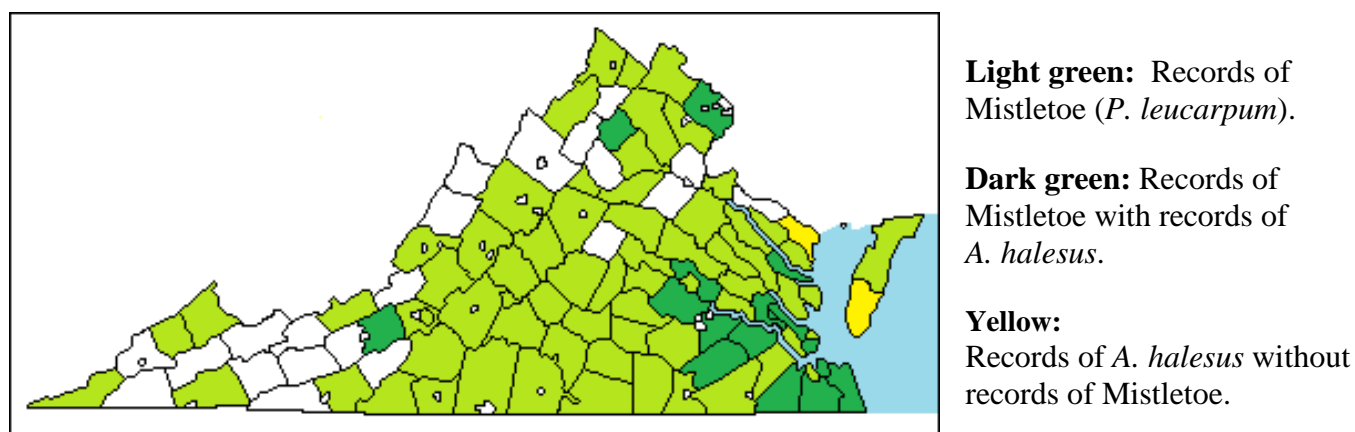
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**ABSTRACT.** *Atlides halesus halesus* (Great Purple Hairstreak) is documented from three sites in western Fairfax County, VA. The host American Mistletoe (*Phoradendron leucarpum*) is widespread in this area, forming dense infestations on trees which certainly supports a resident population of the butterfly as evidenced by several records over a 13-year span.

### **INTRODUCTION**

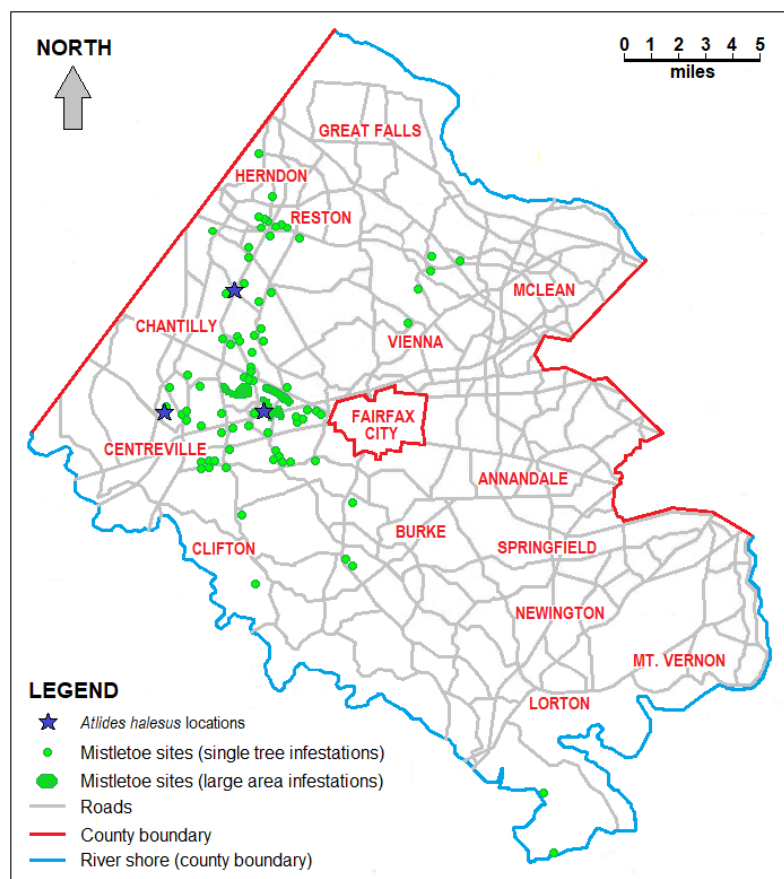
*Atlides halesus* (Great Purple Hairstreak) is a familiar species of the southern United States, ranging north to southern Maryland and Delaware, with historic records as far north as New Jersey (Gochfeld & Burger, 1997) and Long Island, New York (Shapiro, 1974). The butterfly is most common on the southeastern Atlantic Coastal Plain and Gulf Coast region, where the host *Phoradendron leucarpum* Mistletoe ) is widespread. Note there are several synonyms of *P. leucarpum* in the literature (USDA, 2021): *P. eatonii*, *P. flavescens*, *P. macrotomum*, *P. serotinum*.] *A. halesus* is most frequently seen as far north as southeastern Virginia, where is it common in the Great Dismal Swamp, and occurs as isolated reports inland to around Richmond City. In the northeastern United States, isolated inland records were reported from Montgomery County, VA. (Wood & Gottschalk, 1942) and Cumberland County, PA. (Monroe & Wright, 2017). The present case study reveals strong evidence for an undocumented resident population in northern Virginia, associated with the widespread presence of the host Mistletoe in western Fairfax County, VA. Mistletoe is found throughout Virginia (**Fig. 1**), which is indicative that additional records could be documented well beyond the current known range of *A. halesus*.



**Fig. 1.** Distribution of *Phoradendron leucarpum* and *Atlides halesus* in VA.

## OBSERVATIONS

The senior author has documented Mistletoe in Fairfax County, in northern Virginia since 1995 (**Fig. 2**). Mistletoe was generally found on *Acer rubrum* (Red Maple) (**Fig. 3**), located along forest edges, in tree rows, in isolated trees, and in suburban neighborhoods when leafless trees were identifiable in winter. Mistletoe was rarely found deep within forests. It was also found on *Acer platanoides* (Norway Maple) and has been reported growing on *Quercus* sp. (Oaks) in the county.



**Fig. 2.** Distribution of *P. leucarpum* in Fairfax County, VA.



**Fig. 3.** *P. leucarpum* on *Acer rubrum*, Reston, VA.

The junior author observed and collected several specimens of *halesus* (**Figs. 4 & 5**). All sites were near Mistletoe-infested trees. Dates of capture: 6 Aug 1998 (1 female), Centerville, on *Hylotelephium telephium* (Sedum); 5 Sep 1998 (1 female), Centerville; 15-24 Aug 2004 (2 males, 4 females), Fair Lakes, on *Aralia spinosa* (Hercules Club). Mona Miller observed *A. halesus* individual resting on a *Dipsacus* sp. (Teasel) flowerhead, which had gone to seed, in Herndon on 14 Sep 2010. A tree infested with Mistletoe was nearby.



**Fig. 4.** *Atlides halesus*, male, 15 Aug 2004, Fair Lakes, VA.

**Fig. 5.** *Atlides halesus*, female, 6 Aug 1998, Centerville, VA.

## DISCUSSION

The present study area lies at the northern periphery of the range of *Atlides halesus* on the outer Piedmont region of Virginia. Observations of the butterfly indicate a resident population in northern Virginia amidst a relatively large regional presence of the host plant *Phoradendron leucarpum*. This suggests the butterfly is likely more widely-distributed in Virginia than currently documented. Other inland areas having a presence of the *P. leucarpum* may yet yield additional records. Though records of the butterfly recorded in the study are from August to September, a resident population should follow the species emergence pattern in neighboring states. Clark & Clark (1951) described three broods in Virginia: “The mistletoe hairstreak first appears at the end of March or early in April; the second brood is on the wing in July; and the third brood flies from the latter part of August until the end of the season late in October.” This was corroborated by LeGrand & Howard (2021) with flight phenograms from three physiographic provinces of the Carolinas, showing three distinct flight peaks in March-April, a weak flight in May-June, and a strong prolonged flight from July through October which may actually consist of two overlapping broods.

In Fairfax County, several of the documented sites of Mistletoe have been converted to commercial development, including the collection site at Fair Lakes. Other individual trees hosting Mistletoes have been lost over time due to a variety of factors. However, there remains a sufficient presence of Mistletoe at the time of this writing (2021) to maintain its survival, along with the butterfly, in a rapidly-developing suburban region. The presence of Mistletoe in this region is dependent on the presence of birds which consume and spread the seeds to new host trees.

## ACKNOWLEDGMENTS

Thanks go to Mona Miller for providing locations, and for discussions of *Atlides halesus* and Mistletoe in Virginia. Thanks also to Alonso Abugattas, Janet Bruner, Ineke Dickman, Dan Dueweke, Buz Groshong, Pam Hebert, Jenny Meyer, Sheryl Pollock and Christine Sauer for additional Mistletoe locations and for comments. Finally, Thanks are extended to David M. Wright for review of the manuscript.

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Artikel/Article: [Atlides halesus \(Cramer, 1777\) \(Lycaenidae: Theclinae\) and American Mistletoe in northern Virginia 17-19](#)