

Short Communication

Field Observation of Larval Feeding by *Cimbex quadrimaculata* (Müller, 1766) (Hymenoptera: Cimbicidae) on Sour Cherry (*Prunus cerasus* L.) in Türkiye

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On 10 July 2026, five larvae identified as *Cimbex quadrimaculata* (Müller, 1766) (Hymenoptera: Cimbicidae) were observed feeding on the leaves of two sour cherry trees (*Prunus cerasus* L.), with three larvae on one tree and two on the other in Sütlüce Village, Elazığ Province, Türkiye. All five individuals were followed for approximately five minutes, and active feeding and associated leaf injury were documented photographically. The record provides a dated, locality-specific observation of a previously reported plant association. It is not presented as the first record on *P. cerasus*. The short observation establishes feeding activity but does not demonstrate successful development on this plant, host preference, or an economic impact. Identification was based on comparison with previously identified reference specimens from a TÜBİTAK 3001 project, and the observed specimens are retained at Firat University. Repeated surveys and rearing to adulthood would help establish the frequency of this association and the developmental suitability of *P. cerasus*.

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Introduction

Cimbicidae comprise a relatively small family that includes some of the largest living true sawflies^[1]. Their larvae are caterpillar-like external leaf feeders; the North American family account describes large larvae commonly resting curled beneath leaves and associations with several deciduous tree families^[2]. Family-level feeding diversity should be distinguished from the narrower host range of an individual

species. *Cimbex quadrimaculata* is associated with related rosaceous hosts and is described here as oligophagous rather than polyphagous. Its occurrence in almond orchards of eastern and southeastern Türkiye has been documented by Bolu et al.^[3].

Cherry associations also occur in the international literature. Chevin^[4], using the name *Palaeocimbex quadrimaculata*, described a larva collected on cherry in France that continued feeding on cherry in captivity and subsequently formed a cocoon; the cherry species was not specified in that account. Savina et al.^[5] explicitly reported two larvae on *Prunus avium* in France. In Türkiye, Bolu^[6] lists *Prunus cerasus* among larval food plants. The purpose of this communication is to document a dated, photographed observation of active feeding on *P. cerasus* in Sütölçe Village, together with retained specimens. It does not establish a new host association or a first national or provincial record.

Materials and Methods

The observation was made on 10 July 2026 in Sütölçe Village, Elazığ Province, Türkiye (approximate locality coordinates: 38°35'42"N, 38°58'49"E). Ten sour cherry trees were visually inspected. A total of five larvae were found actively feeding on two *Prunus cerasus* trees: three on one tree and two on the other. The five larvae were followed for approximately five minutes. Active feeding on leaves was directly observed and photographed. The nearest almond tree was approximately 30 m away; no infestation was observed on that tree during the inspection. The observation was descriptive and did not include replicated feeding trials or subsequent monitoring of larval development. Larvae were identified as *Cimbex quadrimaculata* by comparison with previously identified reference specimens from TÜBİTAK project 118O124 (3001 programme). The specimens from the present observation are preserved in 70% alcohol under collection reference BİYOENTO 1 and retained in the Department of Bioengineering, Faculty of Engineering, Fırat University, Elazığ, Türkiye.

The available photographs show a pale, robust body with numerous discrete dark markings and a curled posture. Chevin^[4] describes black and yellow markings arranged in longitudinal rows and distinguishes the larva by its distinctive coloration without a continuous dorsal band. These published recognition features provide a framework for documenting the specimen comparison; they are not all claimed here as characters examined in the present material. The observation was not designed to investigate temperature effects or larval developmental performance.

Results and Discussion

Five larvae were observed actively consuming *Prunus cerasus* leaves during the approximately five-minute observation. Irregular chewing injury was visible on the leaf lamina. Figure 1 documents larval appearance and the condition of the leaves. The photographs provide contextual evidence, while the statement of active feeding rests on direct observation. No standardized damage estimate, larval density per orchard, or yield effect was measured. During the inspection of ten sour cherry trees, larvae were noted qualitatively to occur more frequently on lower leaves of young trees. Although counts were three larvae on one tree and two on the other, a standardized comparison among tree ages or canopy positions was not undertaken, so this pattern is not interpreted as a demonstrated age or canopy preference. The association with *P. cerasus* was already reported by Bolu^[6], while Chevin^[4] and Savina et al.^[5] provide earlier cherry-associated observations outside Türkiye.

This communication documents a particular feeding event with a specified date and locality and retained material. Its contribution is incremental observational evidence, rather than a demonstrated change in host range or bioecology. Brief feeding does not establish that *P. cerasus* supports completion of larval development, pupation or adult emergence. Host suitability would require developmental evidence, preferably from replicated rearing trials. These data also do not establish host preference, regular use of sour cherry, or an expansion of the species' ecological amplitude. Bolu^[6] reports larvae between April and July. The observation on 10 July is consistent with that published interval and, by itself, is not evidence of unusual phenology. The present data cannot establish asynchronous development, an additional generation, or a temperature-driven extension of larval activity.

The nearest almond tree was approximately 30 m away and showed no infestation at the inspection. This does not establish the earlier feeding history of the larvae or movement between trees. Host switching remains untested; fruit maturity alone cannot establish that almond foliage had become unsuitable.

The observation concerns five larvae on two trees and cannot establish an economic risk to commercial sour cherry orchards or a need for phytosanitary action. Future surveys could assess how frequently larvae occur on *P. cerasus* and whether appreciable injury accompanies their presence. Rearing to adulthood would test developmental performance and provide further identification evidence; no such outcome is established by the present observation. The retained specimens provide material for further morphological examination. Molecular identification could offer supplementary evidence when suitable comparative reference sequences are available.



Figure 1. Larvae identified as *Cimbex quadrimaculata* on *Prunus cerasus* and associated leaf injury, Sütölçe Village, Elazığ Province, Türkiye, 10 July 2026. Feeding was confirmed by direct observation. The photographs illustrate larval appearance and leaf condition; they do not provide a complete differential diagnosis.

Conclusion

This communication documents active feeding by five larvae identified as *Cimbex quadrimaculata* on two *Prunus cerasus* trees (three larvae on one and two on the other) in Sütölçe Village on 10 July 2026. It adds a dated, locality-specific observation to an existing plant association. The evidence does not demonstrate successful development on *P. cerasus*, host switching, additional generations or commercial crop risk. Further diagnostic documentation and repeated field and developmental observations are needed to resolve these questions.

Statements and Declarations

Funding

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Competing interests

No potential competing interests to declare.

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Declarations

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