



Teleiopsis diffinis (Haworth, 1828) (Lepidoptera: Gelechiidae: Gelechiinae), a new record of the genus and species from Iran

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ABSTRACT. *Teleiopsis diffinis* (Haworth) was identified based on a single male specimen collected in Khakak, Mazandaran Province, deposited in the Hayk Mirzayans Insect Museum, Iranian Research Institute of Plant Protection. The genus *Teleiopsis* Sattler and *T. diffinis* are newly reported for the fauna of Iran. Taxonomic characterization of the species is provided and the examined adult male and its genitalia are illustrated.

Key words: *Teleiopsis*, new record, Mazandaran, Iran

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Introduction

The genus *Teleiopsis* Sattler comprises 17 identified species worldwide (Pitkin, 1988; Ponomarenko & Park, 2007; Lee & Brown, 2008; Schmid, 2011; Bidzilya, 2012; Huemer & Mutanen, 2012; Karsholt et al., 2013; de Jong et al., 2014) and it belongs to the tribe Litini (former Teleiodini) in the subfamily Gelechiinae. The Litini is one of seven tribes of Gelechiinae and includes 63 species in 19 genera in the Palaearctic Region (Elsner, 1995 [1996]; Huemer & Karsholt, 1999). Larvae of the tribe Litini are known to feed mostly in folded or rolled leaves that they have webbed together. Some species are leaf or needle miners, and some others feed in buds, flowers, stems, seeds, and cones (Huemer & Karsholt, 1999). The *Teleiopsis* species are relatively large-sized compared to the other genera of Litini. This genus is superficially similar to *Xenolechia* Meyrick, 1895, however it can easily be distinguished from the latter genus by having the following characteristics in the male and female genitalia: the costal and saccular parts of valva, not bifid apex of uncus, and ductus bursae without microtrichia (Lee & Brown, 2008). According to Huemer & Karsholt (1999), the *Teleiopsis* species are mostly distributed in the Holarctic Region with the Mediterranean area as their center of evolution.

During the study of Gelechiinae species deposited in the Hayk Mirzayans Insect Museum (HMIM), Iranian Research Institute of Plant Protection (IRIPP), a single *Teleiopsis* specimen was found and identified as *T. diffinis*. This is the first report of the genus and species from Iran.

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Material and methods

Methods of genitalia dissections followed those of [Clarke \(1941\)](#), [Robinson \(1976\)](#) and the unrolling technique as described by [Pitkin \(1986\)](#) and [Huemer \(1988\)](#). Photographs were taken with a digital camera DSC-F717 and a Dino-Eye microscope eye-piece camera. The software Combine ZP was also used to stack some images. The single examined material is deposited in the HMIM Lepidoptera Collection.

Results

The adult examined male and its genitalia are illustrated as follows:

Genus *Teleiopsis* Sattler, 1960

Teleiopsis diffinis (Haworth, 1828) (Figs. 1A–C)

Material examined: Māzandarān Prov.: 1 ♂, Kandovān, Khākak, 2560 m, 9.vii.1977, Pāzuki, Mortazavihā leg. (gen. prep. No. HA-2634, HMIM).

Diagnosis: Frons with smooth dirty-cream scales; vertex with slightly appressed cream scale admixed with light brown ones; labial palpus dagger-shaped, upturned, first and second segment dirty-cream admixed with light brown laterally, third segment dirty-cream widely ringed with brown scales; antenna with distinct brown rings, male with short cilia; forewing (Fig. 1A) elongate, pointed apically, slightly arched outwards at costa near the apex, with length of 9.0 mm in the single examined male. Wingspan 13–18 mm ([Huemer & Karsholt, 1999](#)); as stated by [Huemer & Karsholt \(1999\)](#), forewing brownish mottled with white, ochreous and black scales, an outwardly oblique fascia of raised, black scales at one quarter, 2–3 spots of black, raised scales with ochreous edge in middle of wing, and two similar spots behind indistinctly angled, white subfascial fascia, termen with white and black spots, fringes gray with blackish base. Hindwing gray (Fig. 1A).

Male genitalia (Fig. 1B) with uncus moderately narrow, apex rounded; gnathos apically rounded, in the same width as uncus, but slightly shorter; valva (costa) digitate, base of costa well posterior to sclerotized teguminal margin; sacculus extending distinctly beyond apex of costa, basally rounded, narrowing distally, with strongly sinuous inner margin, serrate apex; phallus long and slender, distinctly curved, without cornuti ([Huemer & Karsholt, 1999](#)). Last abdominal segment with prominent scale tufts; tergite VIII with two pairs of long coremata, posterior one attached to lateral lobes of tergite (Fig. 1C).

Distribution: Europe, North Africa, south-western and Central Asia ([Huemer & Karsholt, 1999](#)).

Remarks: This species has two or more probable overlapping generations per year ([Huemer & Karsholt, 1999](#); [Kimber, 2020](#)). According to [Huemer & Karsholt \(1999\)](#), it is similar to *T. bagriotella* (Duponchel, 1840) and *T. latisacculus* Pitkin, 1988 externally; however can easily be separated from them by the outwardly directed oblique fascia of raised, black scales at one quarter of the forewing. Moreover, uniformly rounded uncus and the more posterior position of the costa in the male genitalia of *T. diffinis* separate it from its closely related species, *T. bagriotella* and *T. albifemorella* (E. Hofmann, 1867). It can also be distinguished from *T. rosabella* (Fologne, 1862) by having distinctly longer gnathos ([Huemer & Karsholt, 1999](#)).

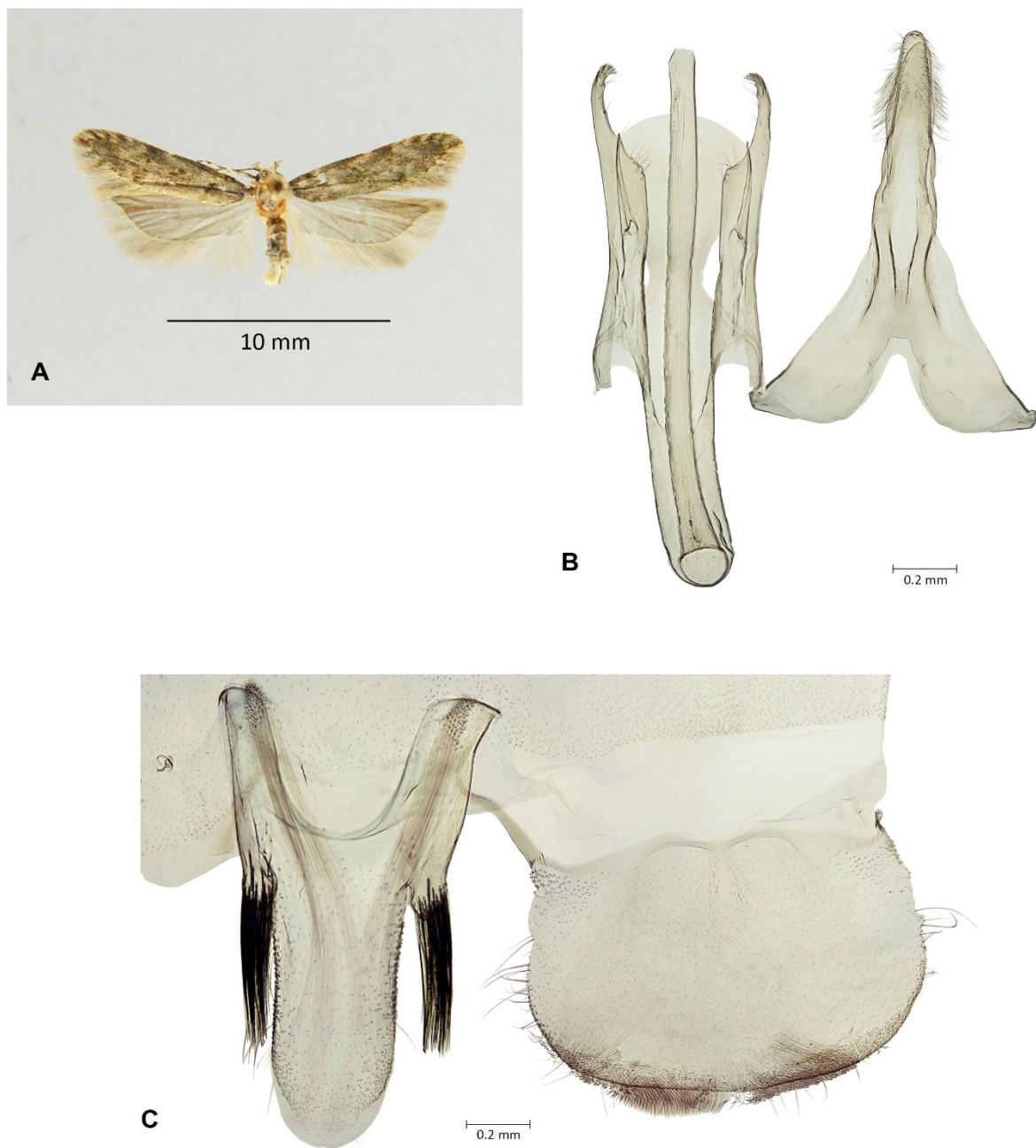


Figure 1. *Teleiopsis diffinis* (Haworth), adult male, male genitalia and abdomen. **A.** Adult male, upperside; **B.** Male genitalia, main body and phallus; **C.** Last abdominal sternite (right) and tergite (left).

Discussion

The known host plants of *Teleiopsis* species mostly belong to two families Anacardiaceae and Polygonaceae (Lee & Brown, 2008). However, the single examined male in this study was collected using light trap. Although most of the gelechiids can be collected using artificial light, more specimens would be expected to be collected if we considered their host plant specialization and habitat restrictions.

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Conflict of Interests

The author declares that there is no conflict of interest regarding the publication of this paper.

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اولین گزارش جنس و گونه شب‌پره (*Teleiopsis diffinis* (Haworth, 1828) Lepidoptera: Gelechiidae: Gelechiinae) از ایران

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چکیده: گونه (*Teleiopsis diffinis* (Haworth)) بر مبنای یک نمونه نر که از منطقه خاکک در استان مازندران جمع‌آوری و در موزه حشرات هایک میرزایانس مؤسسه تحقیقات گیاه‌پزشکی کشور نگهداری می‌شود، شناسایی شد. جنس *Teleiopsis* Sattler و گونه *T. diffinis* برای اولین بار از ایران گزارش می‌شوند. در این مقاله، صفات تاکسونومیک گونه به همراه تصاویر نر بالغ و اندام تناسلی نر ارائه شده‌اند.

واژگان کلیدی: *Teleiopsis*، گزارش جدید، مازندران، ایران