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Micropterix cassinella sp.n.

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Kurz M. A., M. E. Kurz & H. C. Zeller-Lukashort:
Micropterix cassinella sp.n.

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Micropterix cassinella Kurz M. A., M. E. Kurz & Zeller, 2010

General information:

Micropterix cassinella Kurz, M.A., M.E. Kurz & Zeller 2010. Taxonomy Online.

Type locality: Italy, Lazio, Monte Cassino, Terelle, 900 m

Type: Holotype ♂: "Italia, Terelle, Mte.; Cassino, 24.6.1970; 900m, J. Klimesch"; ID-Nr. www.nkis.info MEK Z4810; coll. ZSM

Synonyms, misspellings, wrong determinations, etc.:

Micropterix wockei sensu auctorum nec Staudinger, 1871: Missidentification

Habit:



♂ HOLOTYPE: IT, Monte Cassino, Terelle, 1970.06.24, leg. Josef Klimesch; coll. Zoologische Sammlung des Bayerischen Staates, Munich (ZSM)

Picture from: Michael Kurz
[Detailed view](#)



♂ PARATYPE: Lazio, Frosinone, Capo d'Acqua, 1200 m, 1982.07.08, leg. Josef Klimesch, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



♀ ALLOTYPE: IT, Monte Cassino, Terelle, 1970.06.24, leg. Josef Klimesch; coll. Zoologische Sammlung des Bayerischen Staates, Munich (ZSM)

Picture from: Michael Kurz
[Detailed view](#)



♀: Campania, San Salvatore Telesino, 2000.06.10, leg. Lastuvka, coll. Jan Liska

Picture from: Michael Kurz
[Detailed view](#)

Scheme of wing pattern:



Description of adults: Examined: 16 ♂, 12 ♀. Forewing length: ♂ 2.7 - 3.3 mm; ♀ 3.0 - 4.0 mm. Head black-brown; vestiture of hair-like scales on the head dirty yellowish-white; antennae golden brown, 4/5 (♂), respectively, 1/2 (♀) of forewing length; thorax bronzy golden, posteriorly often purplish; tegulae coppery to purple; forewings bronzy golden at the basis of the costa, otherwise reddish-golden to purple-violet with whitish-golden to golden markings: At 1/4 a fascia across the whole wing width, bent inwards at the inner margin and distinctly broadened in the posterior half, sometimes significantly constricted at the costa or not even reaching the costa; at 1/2 a modestly to significantly broad fascia, slightly bent outwards and slightly constricted medially; at 2/3 sometimes a faint costal spot; a broad, ovate or rectangular fascia at 3/4, inwardly oblique and reaching across approximately 3/4 of the wing width; outer margin, aside from the purple wing tip, sometimes more or less bronzy golden, often only as extending spots from the outer fascia; fringe whitish-golden to grey-golden with faint reddish to purple tinge at the basis; hindwings bronzy golden, with more or less reddish tinge; fringe grey-golden to whitish-golden; legs light brown, golden shining; abdomen brownish golden.

Distribution:

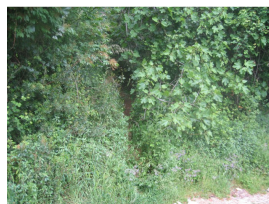
The species is restricted to Italy. To present, it is only known from the provinces of Lazio and Campagna in the central Apennines. Vertically, records are known from 200 - 2000 m a.s.l. (Kurz et al. 2009).

Biology:



Biotope of *M. cassinella*: Italy, Lazio, Montecassino, 6.5.2006

Picture from: Christof Zeller
[Detailed view](#)



Detail of the preceding photo: Italy, Lazio, Montecassino, 6.5.2006

Picture from: Christof Zeller
[Detailed view](#)



Flowering bush of *Pistacia lentiscus*, the collection site of *M. cassinella*: Italy, Lazio, Montecassino, 6.5.2006

Picture from: Christof Zeller
[Detailed view](#)

The flight time of the imagines lasts from May to late July, depending on the altitude (Kurz et al. 2009). *M. cassinella* was found swarming around tall herbaceous vegetation and around flowers of *Pistacia lentiscus*.

Stages in development:

The early stages are unknown.

Anatomy:



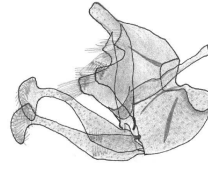
♂, scheme of cuticle

Picture from: Michael Kurz
[Detailed view](#)



♂-genitalia, prep.-no. 765 M. Kurz: PARATYPE; Lazio, Frosinone, Capo d'Acqua, 1200 m, 1982.07.08, leg. Josef Klimesch, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



♂-genitalia, prep.-no. 328, M. Kurz: PARATYPE; "Italia, Terrelle, M[on]te; Cassino 24.6.1970; J.Klimesch", coll. Zoologische Sammlung des Bayerischen Staates, Munich

Picture from: Michael Kurz
[Detailed view](#)



♀-genitalia, preparation in caustic potassium, prep.-no. 759 M. Kurz: Campania, San Salvatore Telesino, 2000.06.10, leg. Lastuvka, coll. Jan Liska

Picture from: Michael Kurz
[Detailed view](#)



♀-genitalia, prep.-no. 759 M. Kurz: Campania, San Salvatore Telesino, 2000.06.10, leg. Lastuvka, coll. Jan Liska

Picture from: Michael Kurz
[Detailed view](#)



♀-genitalia, receptaculum seminis in higher magnification, prep.-no. 759, M. Kurz: Italy, Campania, San Salvatore Telesino, 2000.06.10, leg. Lastuvka, coll. Jan Liska

Picture from: Michael Kurz
[Detailed view](#)

♂ genitalia. Uncus elongate with spatulate tip; beyond uncus, a triangular lobe at each side of the tegumen with several normal, as well as some elongated, thickened setae at the posterior margin; accessory claspers trapezoid, with a row of 8 longer, stout and thickened setae at their distal margin and slightly proximally a second bent row of 5 - 6 T-shaped, stout and thickened setae; valves moderately long, basally inflated, distinctly constricted towards the middle, their distal parts somewhat bent downwards and shaped like a hammer with rounded edges; the distal part at their inner surface with two irregular rows of short, straight, stout and thickened setae at the posterior margin; valves postbasally also with an elongated group of short setae at the inner surface.

♀ genitalia. Tergite IX missing; sternite IX much reduced, but not diagnostic; papillae anales with band-like sclerotization; receptaculum seminis relatively short, like an elongated bag with distinct, but weak striation.

Diagnosis:



M. cassinella ♀: Campania, San Salvatore Telesino, 2000.06.10, leg. Lastuvka, coll. Jan Liska

Picture from: Michael Kurz
[Detailed view](#)



M. myrtetella ♂: Lower Austria, Wiener Becken, Gumpoldskirchen, 1941.06.25, coll. NHMW

Picture from: Michael Kurz
[Detailed view](#)



M. trinacriella ♀: Sicilia, surrounding of Mount Ätna, Mandanici, 2000.06.13, leg. Lastuvka, coll. Jan Liska

Picture from: Michael Kurz
[Detailed view](#)



M. tuscaniensis ♂: Toscana, Alpi Apuane, near Massa, Campareccia, 1992.05.30, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



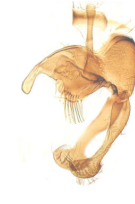
M. klimeschi klimeschi ♂: Turkey, Anatolia, Pisidia, Beysehir Gölü, Dedegöl dag, 1966.06.15, leg. Josef Klimesch, coll. Zoologische Sammlung des Bayerischen Staates, Munich

Picture from: Michael Kurz
[Detailed view](#)



M. wockei ♂: Greece, Epirus, near Ioannina, Kalenzi, 2002.05.11, leg. Hausenblas & Zeller, coll. Christof Zeller

Picture from: Michael Kurz
[Detailed view](#)



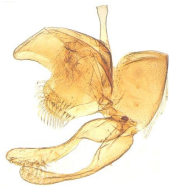
M. cassinella, ♂-genitalia, prep.-no. 765 M. Kurz: PARATYPE; Lazio, Frosinone, Capo d'Acqua, 1200 m, 1982.07.08, leg. Josef Klimesch, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



M. myrtetella, ♂-genitalia, prep.-no. 754, M. Kurz: Croatia, Kvarneric islands, Krk, Baska, 2002.04.30, leg. Jan Liska, coll. Jan Liska

Picture from: Michael Kurz
[Detailed view](#)



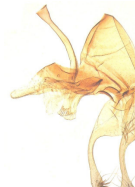
M. trinacriella, ♂-genitalia, prep.-no. 578, M. Kurz, HOLOTYPE: Sicilia, northern coast, Cefalù, 1982.04.22, leg. J. Klimesch, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



M. tuscaniensis, ♂-genitalia, prep.-no. 894, M. Kurz: Toscana, Alpi Apuane, near Massa, Campareccia, 1992.05.30, leg. H/Z/K, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



Micropterix klimeschi rhodiensis Kurz, Kurz & Zeller, 1993, ♂-genitalia, prep.-no. 504, M. Kurz, PARATYPE: Greece, Aegean islands, Rhodos, Faliraki, 1983.04.15, leg. Josef Klimesch, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



M. wockei, ♂-genitalia, prep.-no. 766, M. Kurz: Greece, Epirus, near Ioannina, Kalenzi, 2002.05.11, leg. Hausenblas & Zeller, coll. Christof Zeller

Picture from: Michael Kurz
[Detailed view](#)



M. cassinella, ♀-genitalia, prep.-no. 759 M. Kurz: Campania, San Salvatore Telesino, 2000.06.10, leg. Lastuvka, coll. Jan Liska

Picture from: Michael Kurz
[Detailed view](#)



M. myrtetella f. idae ♀-genitalia, prep.-no. 896, M. Kurz: Greece, Peloponnes, Taygetos, Kastanea, 1999.05.24, leg. Puchmayr & Kurz, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



M. trinacriella, ♀-genitalia, prep.-no. 909, M. Kurz: Sicilia, northern coast, Cefalù, leg. J. Klimesch, coll. ZSM, Munich

Picture from: Michael Kurz
[Detailed view](#)



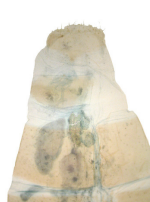
M. tuscaniensis ♀-genitalia, prep.-no. 895, M. Kurz: Toscana, Alpi Apuane, near Massa, Campareccia, 1992.05.30, leg. H/Z/K, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



M. klimeschi rhodiensis, ♀-genitalia, prep.-no. 516, M. Kurz, PARATYPE: Greece, Aegean islands, Rhodos, city of Rhodos, Mount Smith, 1987.05.13, leg. Josef Klimesch, coll. Michael Kurz

Picture from: Michael Kurz
[Detailed view](#)



M. wockei ♀-genitalia, prep.-no. 717, M. Kurz: "Griechenland; Parnaß 1200 m; 16. - 18.6.96; Dr. Grünewald", coll. Theo Grünewald, Landshut

Picture from: Michael Kurz
[Detailed view](#)

Micropterix myrtetella Zeller, 1850 and *Micropterix trinacriella* Kurz, Zeller & Kurz, 1997 are externally very similar to *M. cassinella*, although normally distinctly smaller. In both species, the outer golden margin is usually missing. *M. trinacriella* also seems to be allopatric from *M. cassinella*. *Micropterix tuscaniensis* Heath, 1960, is distinctly larger, the fascia at 3/4 being smaller, like a great costal spot not reaching quite as far across the wing as in *M. cassinella*. Two species from Greece and Turkey also are quite similar to *M. cassinella*: *Micropterix klimeschi* Heath, 1973 differs from *M. cassinella* by the broader fasciae. *Micropterix wockei* Staudinger, 1871 cannot be separated from *M. cassinella* externally with certainty, although the outer golden margin normally is not developed. All mentioned species are easily separable by characters of the male genitalia. The male genitalia of *M. wockei* figured by Kozlov (1989), obviously belong to *M. cassinella*. In the female genitalia, *M. myrtetella* and *M. trinacriella* have the papillae anales, as well as sternite IX only weakly sclerotized,

whereas in *M. cassinella* these parts are normally distinctly sclerotized. *M. tuscaniensis* is nearly indistinguishable in the female genitalia, although the receptaculum seminis seems to be even shorter than in *M. cassinella*. The female of typical *M. klimeschi* is unknown, but it is assumed, that its genitalia completely resemble those of *Micropterix klimeschi rhodiensis* Kurz, Kurz & Zeller, 1993, which are characterized by the extremely long receptaculum seminis.

Phylogeny: Due to the lack of DNA-data, the phylogenetic position of *M. cassinella* is unclear. Morphologically, there are some similarities to *M. tuscaniensis*, especially in the shape of the valva in the male genitalia, but this must not indicate a closer relationship.

Sources:

- Kozlov, M. V. 1989. Short review and key for determination of *Micropterix* Hbn. (Lepidoptera, Micropterigidae) species of Palaearctic. 2. Key for determination (pt. 1). – Vestnik zoologii (Kiev) 1989, (6): 26–31 [In Russian, English summary].
- Kurz, M. A., M. E. Kurz & H. C. Zeller-Lukashort 2000–2009. Naturkundliches Informationssystem. – URL: <http://www.nkis.info> [online 14 December 2009].
- Staudinger, O. 1871. Beitrag zur Lepidopterenfauna Griechenlands. Horae Societas Entomologica Rossica, 7: 3-303.

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