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Remarks on european Myxinia species

(Lepidoptera, Noctuidae)

by

ALBERTO ZILLI

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Abstract: Following a re-examination of the situation in Sicily of species of the genus *Myxinia* BERIO, 1980, some aspects relevant to their taxonomy and distribution are highlighted: 1) after BERIO's (1980) neotype designation and transference of *enceladaea*, TURATI, 1909 to *M. rufocincta* (GEYER, [1827-28]), a recommendation to avoid the combination of *enceladaea* with *M. flavicincta* ([DENIS & SCHIFFERMÜLLER], 1775) is advanced; 2) *M. rufocincta enceladaea* (TURATI, 1909) is synonymized with the nominate subspecies; 3) as all the suspect sicilian specimens of *flavicincta* examined are conspecific with *M. sublutea* (TURATI, 1909), the occurrence of *flavicincta* in Sicily becomes doubtful; 4) there is therefore evidence that the name *Polia calvescens* BOISDUVAL, 1840, routinely considered to represent a sicilian subspecies or a junior synonym of *flavicincta*, might be a senior synonym of *sublutea*; 5) accordingly, *calvescens* is provisionally considered as a nomen dubium; 6) since many records of *flavicincta* from Italy were based upon misidentifications with other species, the distribution of *flavicincta* is revised.

Introduction

Three species belonging to the genus *Myxinia* BERIO, 1980 are currently considered to occur in Italy and Europe (BERIO, 1980; FIBIGER & HACKER, 1991), namely *M. flavicincta* ([DENIS & SCHIFFERMÜLLER], 1775), *M. rufocincta* (GEYER, [1827-28]) and *M. sublutea* (TURATI, 1909). According to PLANTE (1986) and YELA GARCIA (1986), *M. lajonquierei* (BOURSIN, 1963) known only from the type specimen (BOURSIN, 1963, 1967), is conspecific with *M. flavicincta*.

Because of the external similarity between species, ans a remarkable phenotypic plasticity as well, specimens of *Myxinia* were often misidentified in the past, with unfortunate consequences for biogeographic research. Particularly, Sicily is involved with a rather complex situation which is also going to affect nomenclature.

Nominal taxa described from Sicily

Polia calvescens BOISDUVAL, 1840
Type locality: "Sicilia" (1 ♂, 1 ♀)

BOISDUVAL (1840:127) described *calvescens* stressing its close resemblance with *flavicincta*. GUENÉE (1852:40), following examination of the types (2 ♀♀, after him), downgraded *calvescens* as a variety of *flavicincta*, with which it is currently synonymized (e.g. POOLE, 1989; HACKER, 1990) or ranked as a subspecies (HACKER & RONKAY, 1992).

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Polia flavicincta enceladaea TURATI, 1909
Type locality: "Etna, Zafferana Etnea (Prov. di Catania)"
= *enceladea* Culot, 1909–13 [misspelling]

Note: According to ARNONE & ROMANO (1984), TURATI's (1909) work should be dated 1910. Nevertheless, the writer has recently come into possession of a reprint signed and dated 1.XII.1909 by TURATI himself.

Within a series of 28 specimens labelled *"flavicincta"* in coll. FAILLA TEDALDI, BERIO (1980) discovered some specimens identified by TURATI as *"flavicincta calvescens", "flavicincta"* and *"flavicincta enceladea"* [sic], accordingly to their increasingly darker ground colour. As all these specimens were conspecific with *rufocincta*, BERIO (1980) made by implication a new specific combination, since he transferred *enceladaea* to *rufocincta* as a subspecies and designated a neotype upon a male ideotype (viz. a not topotypic specimen successively identified by TURATI himself). In fact, TURATI (1909) explicitly stated that *enceladaea* was a dark race from Etna, while there is evidence that all the specimens in coll. FAILLA TEDALDI are from Madonie Mountains (probably S. Guglielmo near Castelbuono) (BERIO, 1980, 1990).
The neotype designation by BERIO (1980) (cf. also BERIO, 1990) has to be considered valid, although through this act the new type locality for *enceladaea* unfortunately becomes "[Madonie]" (Code, art. 75(f)), a mountain range where dark specimens are not the rule. Nevertheless, it should be noted that BERIO (1985, 1990) still considers *enceladaea* as an etnean race but at the same time he identifies as *enceladaea* all the 28 specimens of coll. FAILLA TEDALDI (BERIO, 1990).
Unfortunately, relying routinely on the original combinations, the nominal taxon *enceladaea* is still put into combination or synonymized with *flavicincta* (e.g. POOLE, 1989; HACKER, 1990), or synonymized with *flavicincta calvescens* (cf. HACKER & RONKAY, 1992).

Literature and field data for Sicily

The confusion regarding identifications of sicilian *Myxinia* is clearly revealed by a short compendium of faunistic records: *flavicincta* (MINA PALUMBO & FAILLA TEDALDI, 1988 [confusing too with *flavicincta minor* ESPER, 1790 = *Hecatera dysodea* ([DENIS & SCHIFFERMÜLLER], 1775)]; MARIANI, 1941); *flavicincta calvescens* (FAILLA TEDALDI, 1890; PIONNEAU, 1908–09; TURATI, 1909; MARIANI, 1939); (*flavicincta* vel *rufocincta*?) *calvescens* (CURO, 1877; MINA PALUMBO & FAILLA TEDALDI, 1888); *flavicincta meridionalis* BOISDUVAL, 1840 (MINA PALUMBO & FAILLA TEDALDI, 1888; TURATI, 1909; MARIANI, 1939); *flavicincta enceladaea* (TURATI, 1909; MARIANI, 1939); *rufocincta* (MANN, 1859; MINA PALUMBO & FAILLA TEDALDI, 1888; MARIANI, 1939, 1941; BERIO, 1985); *rufocincta enceladaea* (BERIO, 1980, 1985, 1990); *sublutea* (BERIO, 1980, 1985, 1990).

Following the examination of extensive material the occurrence of only two species can be so far confirmed in Sicily, namely *rufocincta* GEYER and *sublutea* TURATI.

Myxinia rufocincta shows in Sicily a huge chromatic variability: whitish, yellowish, greyish and nearly black specimens have been examined, including all sort of intergradations. The darkest specimens come from the Etna region, sometimes being much darker than the specimens depicted by TURATI (1909) in his description of *enceladaea*, and represent one

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of the several examples of background melanism (cf. FORD, 1955) in this volcanic area. Seemingly, the frequency of melanics on Etna rapidly decreases when leaving the major lavic bulk, as at low altitude in the surroundings of Taormina normal phenotypes are also present.
It is now evident that a great part of the confusion made with the species-group names by the elder authors reflected the attempts to visually separate phenotypic classes within *rufocincta*, a very common species in Sicily.

Myxinia sublutea is much less variable, being as a rule pale with a more or less marked yellowish ground colour. Single specimens can be, however, very light or irrorated with black. In general appearance *sublutea* is so closely resembling to nominate *flavicincta* that it is not surprising that it may have been misidentified for the latter one. As a matter of fact, *sublutea* was described by TURATI (1909) as a yellowish subspecies of *flavicincta* from Algeria and it is subsequently recognized as a valid species by BOURSIN (1967) through genitalic dissection. The species is at present known only from North Africa (Morocco, Algeria, Tunisia) and Sicily (TURATI, 1909; BOURSIN, 1967; PLANTE, 1875; BERIO, 1985). *Myxinia flavicincta* and *M. sublutea* do not replace each other, as they both occur in Morocco and Algeria (cf. PLANTE, 1975).

Nomenclatural notes

As far as the melanism is concerned, the examination of a alrge series of *M. rufocincta enceladaea* from Etna a reveals that quantitative inheritance is involved. The species is thence affected by polyphenism and, as usual, the geographic boundaries of the various darkening factors do not precisely correspond to each other. Accordingly, even though the darkest specimens come from Etna, dark specimens of *rufocincta* also occur elsewhere in Sicily, whereas both pale and dark specimens were collected at the foothills of the volcano. Maintaining *enceladaea* as a distinct subspecies to depict what in reality is a set of melanic forms appears misleading for a correct appreciation of the geographic variability of the species in Sicily, not to consider the change of the type locality of *enceladaea* after BERIO's neotype designation (see before).

Accordingly:
Noctua rufocincta GEYER, [1827–28] = *Polia [rufocincta] enceladaea* TURATI, 1909 (syn. nov.).

Since there is no reliable record of *M. flavicincta* from Sicily, all the specimens so far examined belonging either to *rufocincta* or *sublutea*, a question arises to the identity of *Polia calvescens* BOISDUVAL, 1840. This name might in ifact represent a senior subjective synonym of *sublutea* TURATI, 1909, a junior subjective synonym of *rufocincta* GEYER, [1827–28], or a name referable to unlikely sicilian populations of *flavicincta* [DENIS & SCHIFFERMÜLLER], 1775.

As *flavicincta* was never recorded with certainty from Sicily and *rufocincta* is, on external appearance, the most dissimilar of the three *Myxinia*, it can be suspected that *calvescens* is a name originally applied to the species currently recognized as *sublutea*. It should be noted that a keen observer such as GUENÉE (1982) transferred *calvescens* to *flavicincta* as a variety by virtue of their close similarity.

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Polia calvescens BOISDUVAL, 1840 is therefore here provisionally discussed as a nomen dubium, further nomenclatural acts pending on tracing and examination of the types (probably in NHM, London, via coll. C. OBERTHÜR, cf. CULOT, 1909–13).

Biogeographic remarks

The range of *Myxinia flavicincta* was selected in a popular textbook of zoogeography to outline the distribution of expansive atlanto-mediterranean type (DE LATTIN, 1967:362). Nevertheless, the distribution of *flavicincta* is far from being adequately assessed, particularly along its south-eastern border (cf. HEINICKE & NAUMANN, 1980–82; HACKER, 1989). The species was also reported for more or less whole Italy but almost none of the records has been successfully corroborated after the examination of the relevant specimens, including some recently reported ones (e.g. TEOBALDELLI, 1976; BERIO, 1980, 1985), and with detailed faunistic researches. Therefore, the examined material and a "parsimonious" appreciation of the literature allow to confirm *flavicincta* in Italy only for Isola di Montecristo (6 ♂♂, 1 ♀, M. COBOLLI leg.) and Sardinia (with Corsica), where the species occurs with dark specimens corresponding to f. *meridionalis* BOISDUVAL, 1840.

Myxinia rufocincta is widespread over whole Italy, Sardinia and Sicily included, whereas *M. sublutea* is at present known only from Sicily (provinces of Palermo, Messina, Catania, Caltanissetta).

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adress of the author

Dr. ALBERTO ZILLI
c/o Dipartimento di Biologia Animale e dell'Uomo
Viale dell'Università 32
I-00185 Roma

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