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## HADENINI AND GLOTTULINI OF THE SALENTO (SOUTH ITALY) (LEPIDOPTERA, NOCTUIDAE)

### RIASSUNTO

Da un elenco ragionato dei Noctuidae del Salento, si sono estrapolati i dati relativi alle tribù Hadenini e Glottulini (sottofamiglia Hadeninae, *old sense*).

Le raccolte hanno occupato l'arco di un decennio e hanno evidenziato la presenza di 32 specie della sottofamiglia Hadeninae *o.s.*, cioè circa il 28% della fauna delle Hadeninae *o.s.* delle tre regioni Puglia, Basilicata e Calabria e quasi il 56% della sola Puglia. Si sottolinea la presenza di tre elementi appartenenti alla fauna afrotropicale *Mythimna prominens*, *Leucania joan-nisi* e *Brithys crini*, pari quasi al 9% del totale di Hadeninae *o.s.* del Salento ( $n = 32$ ) o addirittura a quasi il 16% qualora si aggiungano *Leucania loreyi* e *Mythimna languida* che estendono il proprio areale a tutto (o a buona parte) il Paleotropico.

### SUMMARY

During the preparation of a complete list of the Noctuidae of the Salento peninsula, the authors examined the data regarding the tribes Hadenini and Glottulini (subfamily Hadeninae, *old sense*), due to their relative comprehensiveness. The purpose of this paper and of the others that will follow is to provide a more complete picture of the distribution of Noctuidae species in the examined territory, due to the scarcity and fragmentation of the information and records currently available.

In total the collections were conducted over a decade and were made in highly diverse environments: urbanized areas, cultivated fields, olive groves, garrigues, Mediterranean maquis, *Quercus ilex* groves, pinewoods, drainage channels, coastal wetlands, retrodunal areas. The collections revealed the presence in the Salento of 32 species of the subfamily Hadeninae *o.s.*, which is about 28% of the Hadeninae *o.s.* of the three Italian regions Puglia, Ba-

silicata and Calabria, and about 56% of the Hadeninae o.s. of Puglia alone.

The authors call attention to the presence of three Afrotropical species, *Mythimna prominens*, *Leucania joannisi* and *Brithys crini*, accounting for almost 9% of the total Hadeninae o.s. of the Salento (n = 32) and almost 16% if we add *Leucania loreyi* and *Mythimna languida*, whose distribution includes the entire (or almost) Palaeotropical Region.

The reasons for the high percentage of Tropical species need to be studied further.

## INTRODUCTION

During the preparation of an annotated list of the Noctuidae of the Salento peninsula (*in prep.*), the data on the tribes Hadenini Guenée, 1837 and Glottulini Guenée, 1852 (subfamily Hadeninae Guenée, 1837, *old sense*, actually in Noctuidae Latreille, 1809) was examined, due to their relative completeness.

As will be better specified in a forthcoming study of the whole family, papers on the entomological fauna of the Salento are rather scarce and, in most cases, limited to single records or to a few small areas.

Studies dealing with the entire Salento area include PARENZAN (1994) on Geometridae, DURANTE and PANZERA (2004) on Pterophoridae and the more recent DURANTE (2009) on the superfamilies Papilionoidea and Hesperioidea.

On the Noctuidae, PARENZAN's various important studies (e.g. PARENZAN, 1979; 1984; PARENZAN and PORCELLI, 1993; PARENZAN and SCALERCIO, 1996) deal only marginally with the Salento: the fundamental study of 1979 provides data for few areas and the subsequent papers do not expand the geographical range of the research, except for sporadic and occasional records. Regarding the distribution in the Salento peninsula, the present study takes due account of PARENZAN and PORCELLI (2006).

Therefore the reasons for this paper and those that follow lie in the need to provide a more complete framework of the distribution of the Noctuidae in the investigated area.

## MATERIAL AND METHODS

Specimens were collected by two methods: using a vertical cotton sheet, and by means of a light-trap positioned on a white sheet on the ground; in both cases a 250 watt blended-light lamp powered by a portable generator was used. The two methods were often combined in the same collection site, with the vertical sheet facing towards an open area with no obstacles

or towards a wide clearing, and putting the light trap in narrow clearings, in dense bush or undergrowth.

The collections started at dusk and continued until 11:00 pm in winter and until 2:00 am in summer. In some cases, a light trap was left working all night. In San Donato di Lecce, the trap was allowed to work all night throughout the year, twice a month in winter, four to eight times a month in summer.

The collections lasted a decade.

The photographic images were obtained by digital camera and processed using Photoshop CS4. The images of genitalia are not proportional.

Genitalia dissection followed standard methods, with hot maceration in 10% sodium hydroxide solution: abdomens, entirely removed from the metathorax, were left in the solution for 15 to 25 minutes depending on size. For cleaning, dissection of male and female genitalia, vesica eversion and slide preparation, various authors were taken into account (e.g. HARDWICK, 1950; BIRKET-SMITH, 1959; BERIO, 1985; DANG, 1993; WINTER, 2000).

The systematic list for the subfamily Hadeninae *s.s.* basically follows the FIBIGER and HACKER (2005) list, although other authors were examined (KITCHING and RAWLINS, 1999; RONKAY *et al.*, 2001; HACKER *et al.*, 2002).

For genitalia nomenclature, reference was made to KLOTS (1970) and BERIO (1985); for wing pattern, to BERIO (1985); and for wing venation, to WOOTTON (1979).

The Italian distribution is derived mainly from BERIO (1985) and PARENZAN and PORCELLI (2006), whereas the Salento distribution and the flight period are based only on the authors' observations, unless otherwise specified.

This research was carried out in the Salento Peninsula, especially its southern part, as specified below.

From an orographic and phytogeographical point of view, the Salento is defined, according to BALDACCIO (1962) and MARCHIORI and TORNADORE (1988), as the area south of a line joining the town of Torre Sabina (just north of Torre Guaceto) on the Adriatic Sea to the town of Taranto on the Ionian Sea, following the 200 m elevation contour for part of its length. (we remark that some areas of Taranto province, while lying below or on that contour, are not included in this study, because they are *de facto* phytogeographically different from the rest of the Salento peninsula). The Salento peninsula is also subdivided into the northern Salento (the area lying between the 200m contour in the North and the 100m contour in the South) and the southern Salento (from the 100m contour in the North to Cape of Santa Maria di Leuca in the South).

The Salento Peninsula is the most easterly part of Italy (Capo d'Otranto: 40° 06' 26" N; 18° 31' 14" E). In terms of orography, it is generally flat with ridges of up to 200 m a.s.l (the Salento Serre) converging towards Cape of Leuca.

The collections were carried out in various environments: urbanized areas, cultivated fields, olive groves, garrigues, Mediterranean maquis, *Quercus ilex* groves, pinewoods, drainage channels, coastal wetlands and retrodunal areas.

## RESULTS AND DISCUSSION

The collections of moths carried out in the Salento Peninsula over the course of a decade showed the presence of 32 species of the subfamily Hadeninae o.s. (this amount comprises both species collected during the present research, and from bibliography). PARENZAN (1979) listed 59 of them in Puglia, Basilicata and Calabria, and 44 in Puglia alone. Subsequent papers (PARENZAN, 1981a; 1982; 1984; PARENZAN and PORCELLI, 1993; PARENZAN and SCALERCIO, 1996; PARENZAN and PORCELLI, 2006) added 56 Hadeninae o.s. to the three regions considered together and 13 to Puglia, making a total of 115 and 57 respectively (Fig. 1).

At this provisional stage of the investigation of the Noctuidae of the Salento, it can be observed that the Salento Hadeninae o.s. account for about 28% of those of Puglia, Basilicata and Calabria and nearly 56% of Puglia alone.

Table 1, in which species are divided into chorological categories, shows the scarcity of species with very wide distributions (Holoartic or Palaearctic) and the presence of two major clusters: one with Eurasian distribution (10

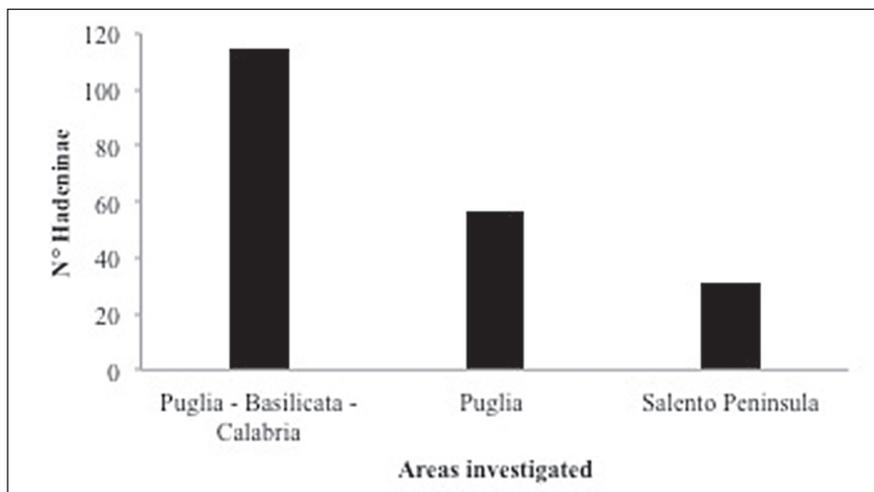


Fig. 1 - Number of Hadeninae o.s. species recorded in Salento, compared with Puglia alone and with Puglia, Basilicata and Calabria considered together.

species) and the other with Mediterranean distribution, with various extensions of the range (17 species in total).

A more detailed discussion of chorotypes will be necessary in the future. It will suffice here to highlight the presence of three Afrotropical species: *Mythimna prominens* (Walker, 1856), *Leucania joannisi* (Boursin and Rungs, 1952) and *Brithys crini* (Fabricius, 1775), accounting for almost 9% of the total number of Hadeninae *o.s.* in the Salento (n = 32), or almost 16% if we include *Leucania loreyi* (Duponchel, 1827) and *Mythimna languida* (Walker, 1858), whose range extends to all (or most) of the Palaeotropical Region. In the table of macrolepidopterans proposed by PARENZAN (1991) Mediterranean-African-Indian or Indian elements account for 1.29% and Palaeartic-African-Indians 1.19% account of all Italian Macrolepidoptera taxa. If we consider southern Italy alone, the percentage rises to only about 2%.

Although the data on a small group such as the Salento Hadeninae *o.s.* are not easily comparable with the full list of Italian Macrolepidopteran fauna examined by Parenzan, they should at least be the subject of further reflection and comparison, due to the high presence, at least for this taxon, of tropical elements.

Distribution	Number of species	Species
Holarctic	2	<i>A. trifolii</i> ; <i>M. unipuncta</i>
Holarctic-Indian	1	<i>M. brassicae</i>
Palaeartic	1	<i>L. oleracea</i>
Palaeotropical	1	<i>L. loreyi</i>
Eurasian	10	<i>A. stigmosa</i> ; <i>C. luteago</i> ; <i>H. bicolorata</i> ; <i>H. dysodea</i> ; <i>H. perplexa</i> ; <i>L. splendens</i> ; <i>M. straminea</i> ; <i>M. albipuncta</i> ; <i>M. l-album</i> ; <i>L. obsoleta</i>
Transionian	1	<i>C. hartigi</i>
Mediterranean-Asian	7	<i>H. magnolii</i> ; <i>H. silences</i> ; <i>m. vitellina</i> ; <i>M. riparia</i> ; <i>L. zaeae</i> ; <i>L. putrescens</i> ; <i>L. punctosa</i>
Ponto-Mediterranean	3	<i>L. blenna</i> ; <i>H. syriaca</i> ; <i>M. sicula</i>
Mediterranean-African	3	<i>M. prominens</i> ; <i>L. joannisi</i> ; <i>B. crini</i>
Mediterranean-Afro-Indian	1	<i>M. languida</i>
Atlantic-Mediterranean	1	<i>H. bicruris</i>
North-Mediterranean-Maghrebian	1	<i>M. congrua</i>

Tab. 1 - General distribution of the Salento Hadeninae *o.s.*.

## SPECIES ACCOUNT

### SUBFAMILY NOCTUINAE Latreille, 1809

#### TRIBUS HADENINI Guenée, 1837

##### ***Anarta (Caloestra) trifolii* (Hufnagel, 1766)**

Species included in the genus *Discestra* Hampson, 1905 by BERIO (1985) and RANIERI and ZILLI (1995), and in *Hadula* Staudinger, 1889 by HACKER *et al.* (2002) and PARENZAN and PORCELLI (2006), both considered synonyms of *Anarta* Ochsenheimer, 1816 in FIBIGER and HACKER (2005).

The high variability of colour and pattern throughout its range (HACKER *et al.*, 2002) is also seen in the Salento specimens.

Species with Holarctic distribution, common and widespread throughout Italy, it is also present throughout the Salento.

Several generations from March to October.

##### ***Anarta (Caloestra) stigmosa* (Christoph, 1887)**

Eurasian, halophilic, rare and isolated species. It is recorded in Italy in the following regions: Veneto, Emilia Romagna, Toscana, Lazio, Molise, Basilicata, Calabria and Puglia. Specifically, regarding Puglia and the Salento area in particular, this species is reported around Mar Piccolo, on the northern border of the region (PARENZAN, 1979; BERIO, 1995; PARENZAN and PORCELLI, 2006). Not found in our observations.

Two generations from May to October (HACKER *et al.*, 2002).

##### ***Lacanobia (Diataraxia) oleracea* (Linnaeus, 1758)**

The Salento specimens do not differ from the typical form.

Palearctic species widespread in Italy (BERIO, 1985), it does not seem common in the Salento. PARENZAN (1979) records it for Torre Guaceto as the most southern locality; PARENZAN and PORCELLI (2006) report it for Gallipoli and more precisely in the Baia Verde area; our findings are limited to the Adriatic coast (San Cataldo and Le Cesine).

According to BERIO (1985) it has two generations from April to October. Our specimens were collected in June and July.

##### ***Lacanobia (Diataraxia) blenna* (Hübner, 1823-1824)**

**Fig. 2**

The one specimen caught has a slightly darker coloration than the series illustrated by HACKER *et al.* (2002), but nothing else can be said until the examination of more material.

Ponto-Mediterranean species, rather rare in Italy: PARENZAN (1979) reports it only for ZAPPONETA (Foggia), while BERIO (1985) adds the Venice lagoon. The

distribution map in HACKER *et al.* (2002) reports the species for the entire Italian coastline, but does not provide the sources. PARENZAN and PORCELLI (2006) report it for Veneto, Liguria, Emilia Romagna, Lazio, Molise, Puglia, Sicilia and Sardegna. In the Salento it has been found only in Presicce Marina (PARENZAN and PORCELLI, 2006) and San Cataldo.

This species has two generations (HACKER *et al.*, 2002): our specimen was collected in May.

***Conisania (Luteohadena) luteago* (Denis and Schiffermüller, 1775)**

Species that presents a certain variability with subspecies in France and Sardegna. The Salento specimens are attributable to nominotypical subspecies.

Eurasian species, common throughout Italy. It is also present in the Salento (PARENZAN and PORCELLI, 2006).

It has a single generation according to HACKER *et al.* (2002), but BERIO (1985) notes a second generation in August. Our specimens were collected in April and May.

***Hecatera (Hecatera) bicolorata* (Hufnagel, 1766)**

Eurasian species, in Italy widespread in all regions. In the Salento, it is recorded in Villa Castelli, Veglie and Baia Verde, Gallipoli (LE) (PARENZAN, 1979; BERIO, 1985; PARENZAN and PORCELLI, 2006). We extend its range to include the localities of San Donato, San Cataldo, Laghi Alimini (Otranto) and Cesine (Vernole). Two generations: from late April to mid-July and August-September.

***Hecatera (Hecatera) dysodea* (Denis and Schiffermüller, 1775) Fig. 3**

This species should have some yellow or orange spots on the forewings along the transversal lines or near the orbicular and reniform marks, but the only specimen collected has a fairly uniform gray colour. Examination under the stereomicroscope reveals a very small number of ochre scales on the edges of the reniform.

The species can be confused with *Hecatera weissii* (Draut, 1934), but the valvar shape clearly differentiates it from its congeners (genitalia shown in HACKER *et al.*, 2002); female with ductus bursae much tighter than *weissii*.

Eurasian species common throughout Italy. In the Salento, it is not very widespread. PARENZAN (1979) reports it in Veglie and we have collected it only in San Cesario near Lecce.

Two generations in summer. Our specimen collected in May; PARENZAN's record (1979) is for June.

***Hadena (Hadena) bicruris* (Hufnagel, 1766) Fig. 4**

Species similar to *Hadena capsicola* (Denis and Schiffermüller, 1775), it can be distinguished with difficulty by examination of the genitalia, especially of the

female. The three specimens that we have are all males and two of them have genitalia with intermediate features between the two. Unfortunately, to enable a decision some females need to be examined, along with some more males. For the moment, we prefer to attribute our specimens to *bicruris*, which has already been recorded in the Salento (PARENZAN, 1979), while *capsincola* is believed to be found on the other side of the Adriatic (see map in HACKER *et al.*, 2002: 112). Atlantic-Mediterranean species, widespread throughout Italy. In the Salento it has been found only in San Cataldo, Le Cesine, and San Donato; PARENZAN (1979) records it in Veglie.

At the southern end of its range, *bicruris* is believed to have two generations, as opposed to the single generation in the North. Our three specimens confirm this hypothesis and suggest there may even be a third: one already old specimen is of 16<sup>th</sup> May, whereas one of July and another of September are both newly hatched.

***Hadena (Hadena) magnolii* (Boisduval, 1829)**

**Figs. 5, 6**

The Salento series examined show a tendency to lose the white markings which usually accompany the ante- and post-median lines, as well as the sub-terminal line. In contrast, the white markings remain along the costa and in the basal area.

The genitalia do not present significant differences with respect to other populations. We confirm the variability of the number of thorn-like cornuti on the vesica (from two to four), as already observed by HACKER *et al.* (2002).

Mediterranean-Asian species widespread almost throughout Italy. In the Salento it had not yet been reported: it was found in San Cataldo, Laghi Alimini, and San Donato.

Univoltine moth, believed to be on the wing from April to August; our specimens caught in April and May.

***Hadena (Anepia) perplexa* (Denis and Schiffermüller, 1775)**

Eurasian species, common and widespread throughout Italy. In the Salento it is not very common: reported for Torre Guaceto, Veglie (PARENZAN, 1979), Taranto: Mar Piccolo (PARENZAN and PORCELLI, 2006) and San Donato.

Believed to have two generations: specimens collected in April and July.

***Hadena (Anepia) syriaca* (Osthelder, 1933)**

**Fig. 7**

It differs from *H. perplexa* by having less well-defined patterns on the forewings, which appear to have more compact coloration.

According to HACKER *et al.* (2002) the Italian populations belong to the subspecies *podolica* (KREMKY, 1937), and examination of the male genitalia indeed leads in this direction (see drawing in HACKER *et al.*, 2002: 296).

Ponto-Mediterranean species, recorded in Italy only in Lazio and Sicily (IP-



Figg. 2-6 - Adults and genitalia. 2: *Lacanobia (Diataraxia) blenna*, ♀. Italy, Puglia, San Cataldo (province of Lecce), 17-5-1991 Durante legit. 3: *Hecatera (Hecatera) dysodea*, ♀. Italy, Puglia, San Cesario (province of Lecce), 13-5-1991 [Durante legit]. 4: *Hadena (Hadena) bicruris*, ♂. Genitalia prep. n. 482 MAD. Italy, Puglia, Vernole (province of Lecce), Le Cesine, 4-7-1991 [Durante legit]. 5: *Hadena (Hadena) magnolii*, ♂. Italy, Puglia, San Donato (province of Lecce), 13-4-2007 Durante legit. 6: *Hadena (Hadena) magnolii*, ♀. Italy, Puglia, San Donato (province of Lecce), 23-4-2007 Durante legit.

POLITO and PARENZAN, 1998; PARENZAN and PORCELLI, 2006). It is recorded here for the Salento, San Cataldo and Laghi Alimini. New record for Southern peninsular Italy.

Univoltine rather rare species; only three specimens collected, in May.

***Hadena (Anepia) silenes* (Hübner, [1822])**

Mediterranean-Asian species, in Italy it is present in Piemonte, Lombardia, Toscana, Umbria, Abruzzo, Molise, Lazio, Campania, Basilicata, Calabria, Sicilia (PROVERA, 1977; 1978; PARENZAN, 1979; 1984; GRILLO *et al.*, 1996; BELLA *et al.*, 1999; PARENZAN and Porcelli, 2006).

In Puglia it is common (PARENZAN and SCALERCIO, 1996; PARENZAN and PORCELLI, 2006) (in BERIO 1985 it is reported as *Anepia variegata* ([Wagner, 1929]), currently considered synonymous with *silenes*), but it has not previously been reported for the Salento, although this sub-region is included in the distribution map in HACKER *et al.* 2002. Our records are from San Cataldo, San Cesario and San Donato.

Univoltine species, recorded only in March and April.

***Cardepia (cardepia) hartigi* (Parenzan, 1981)**

Transionian species, described by PARENZAN (1981) based on specimens from Puglia and coastal marshes in Western Greece (Preveza and Pontilago). Regarding Puglia and the Salento it is recorded near Mar Piccolo (Taranto) in the "La Vela" marshes (PARENZAN and PORCELLI, 2006). Not recorded South of Taranto.

According to PARENZAN (1981) it has more than one generation from May to August.

***Lacanobia (Diataraxia) splendens* (Hübner, 1808)**

Eurasian species, rare and typically located in wetlands. Superficially similar to the common *L. oleracea* (Linnaeus, 1758), from which it differs in terms of its bright colour and submarginal line without the W-shaped mark between M2 and Cu1b (ZILLI, 1990).

It is present in Piemonte, Lombardia, Trentino-Alto Adige, Veneto (ZILLI, 1990; PARENZAN and PORCELLI, 2006). Also recorded in Puglia in Laghi Alimini (Lecce) (ZILLI, 1990; PARENZAN and PORCELLI, 2006). Not recorded during our survey.

Two generations from April to October (BERIO, 1985).

***Mamestra (Mamestra) brassicae* (Linnaeus, 1758)**

Polyphagous species, often damaging to vegetable and forage crops, sugar beet, orchards, etc.

Holoarctic-Indian species present in all Italian regions. In the Salento it is reported for Veglie (PARENZAN, 1979; PARENZAN and SCALERCIO, 1996; PARENZAN and PORCELLI, 2006). Not recorded in our survey.

Two or three generations from June to October (BERIO, 1985).

***Mythimna (Mythimna) straminea* (Treitschke, 1825)**

Eurasian species, widespread in Northern and Central Italy, Sicilia and Sardegna (BERIO, 1985).

It was recorded for the first time in the Salento by PARENZAN (1979) in Torre Guaceto. Our records and new data in PARENZAN and PORCELLI (2006) extend the range southward, reaching Laghi Alimini (Otranto), Serra degli Angeli (Porto Cesareo), Baia Verde (Gallipoli).

Believed to have two generations from May to September.

***Mythimna (Mythimna) vitellina* (Hübner, [1808])**

Mediterranean-Asian species, common and widespread throughout Italy (PARENZAN, 1979; BERIO, 1985; PARENZAN and PORCELLI, 2006). It should be pointed out that HACKER *et al.* (2002) do not mention it for Central-Southern Italy.

In the Salento it is present everywhere.

Two generations from April to August, but it seems plausible that in June there is another generation, taking the total to three.

***Mythimna (Pseudaletia) unipuncta* (Haworth, 1809)**

Holarctic species, widespread throughout Italy (PARENZAN, 1979; BERIO, 1985; HACKER *et al.*, 2002).

In the Salento it is present everywhere.

Several generations throughout the year, including the cooler months.

***Mythimna (Sablina) sicula* (Treitschke, 1835)**

According to various authors this species could be divided into two distinct species: *sicula* (Treitschke, 1835) and *scirpi* (Duponchel, 1836). In the present list we follow HACKER *et al.* (2002), who considers the two entities to be forms of the same species. Specifically, our specimens exhibit characteristics of both forms (although with a clear dominance of *sicula*), corroborating the view of HACKER *et al.* (2002), although it may be considered an open question.

Eurasian species, widespread almost throughout Italy (BERIO, 1985; PARENZAN and PORCELLI, 2006). In the Salento it is present everywhere; it was recorded by PARENZAN (1979) as *Mythimna scirpi* in Lido Silvana, Torre Guaceto, Villa Castelli and Veglie.

Three generations from March to September.

***Mythimna (Prodigithymna) prominens* (Walker, 1856)**

**Fig. 8**

Often in 20<sup>th</sup>-century catalogues it is reported as *hispanica* (Bellier, 1863), separating the Mediterranean populations from the African ones; here *hispanica* is considered to be synonymous with *prominens* in agreement with HACKER *et al.* (2002). Some hesitation, however, remains: the clasper of the specimens from the Salento is clearly similar to the valva of *hispanica* shown

in Berio (1995). Moreover, there are some differences with respect to the available figures (BERIO, 1995: 356; HACKER *et al.*, 2002: 315), for example regarding the clavar process of the valva. In both cases (*clasper* and *clavus*) however, we do not have long series for comparison, so neither of the two hypotheses can be accepted with certainty.

Moth with Mediterranean-African distribution, rather rare in Italy, recorded in Toscana, Lazio, Campania, Basilicata, Calabria, Puglia as far as Manduria (Taranto), Sicilia and Sardegna (PARENZAN, 1979; BERIO, 1985; PARENZAN and SCALERCIO, 1996; PARENZAN and PORCELLI, 2006).

Our data extend the range to the whole of the Salento.

Believed to have two separate generations; however, specimens captured in May, July, August and October suggest that it has a third generation in the Salento. Together with the differences in genital morphology, this would further differentiate the Salento population from other populations in Italy.

***Mythimna (Morphopoliana) languida* (Walker, 1858) Figs. 9, 10**

This species cannot be confused with other noctuids, mainly due to the dark suffusion around the orbicularis and reniform marks and distally with respect to them.

The male genitalia are also well differentiated from other *Mythimna*, in terms of the shape of the cucullus and its dimensional ratio to the entire valve, the shape of the sacculus and clasper, and the presence of four separate groups of cornuti on the vesica (HACKER *et al.*, 2002).

Species with Mediterranean-African-Indian distribution, already reported as a new record for Calabria and for Italy as a whole by PARENZAN and SCALERCIO (1996) and subsequently for Sicilia (BELLA *et al.*, 1999), it was then found in Lazio, the Tuscan archipelago and Toscana (ZILLI *et al.*, 2001; DAPPORTO, 2003; PARENZAN and PORCELLI, 2006). Recorded in the Salento in San Donato di Lecce and Calimera.

According to HACKER *et al.* (2002), the species has three generations, so our two specimens collected on 12<sup>th</sup> April and 29<sup>th</sup> October should respectively belong to the first and third generations, but PARENZAN and SCALERCIO (1996) admit only two generations.

***Mythimna (Hyphilare) albipuncta* (Denis and Schiffermüller, 1775) Fig. 11**

The wingspan of the *albipuncta* population in the Salento (from 28 to 35 mm) is slightly smaller than that reported by BERIO (1985) and HACKER *et al.* (2002) (respectively 36 mm and 30-38mm).

A postmedian series of dots on the veins is present on the hind wings of one specimen, in which the vesica of the aedeagus has two small sclerifications. As these character states are not found in other specimens and the remaining characters of the habitus and genitalia closely match those of the other specimens,

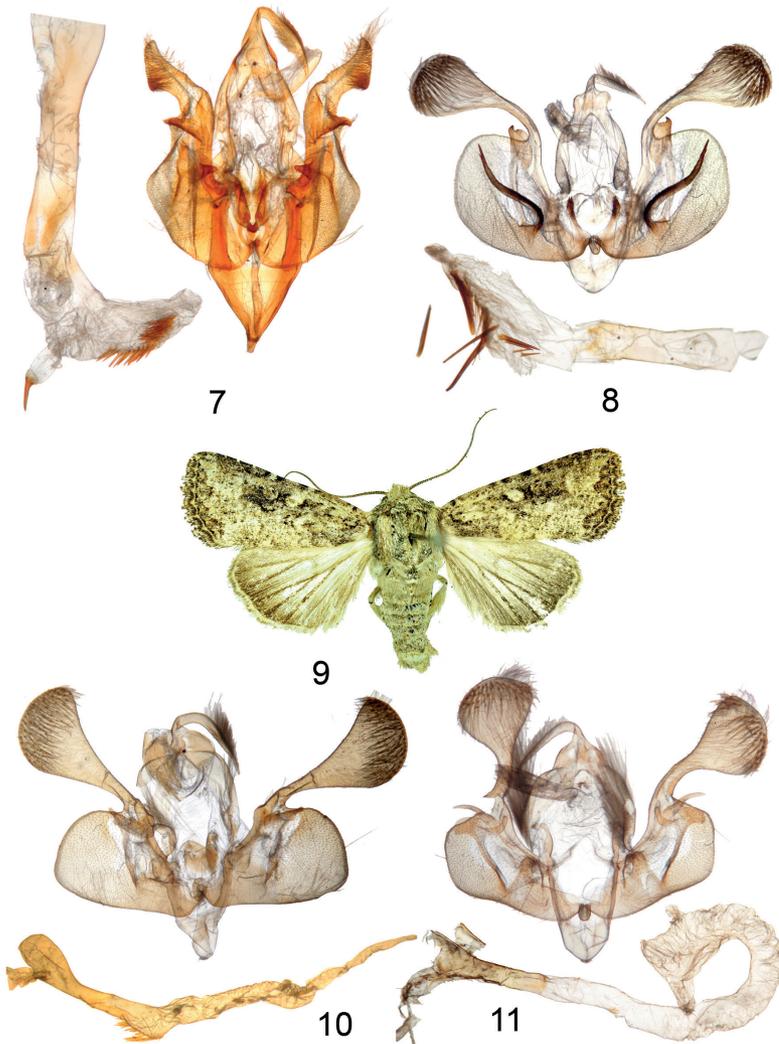


Fig. 7-11 - Adults and genitalia. 7: *Hadena (Anepia) syriaca*, ♂. Genitalia prep. n. 201 MAD. Italy, Puglia, San Cataldo (province of Lecce), 16-5-1991 Durante legit. 8: *Mythimna (Prodigithymna) prominens*, ♂. Genitalia prep. n. 45 MAD. Italy, Puglia, Mass. Serra d'Angeli, Veglie, (province of Lecce), 17-10-1994 Durante and Panzera legit. 9: *Mythimna (Morphopoliana) languida*, ♂. Italy, Puglia, San Donato (province of Lecce), 12-4-2001 Durante legit. 10: *Mythimna (Morphopoliana) languida*, ♂. Genitalia prep. n. 491 MAD. Italy, Puglia, Calimera (province of Lecce), 29-10-2000 Durante and Panzera legit. 11: *Mythimna (Hyphilare) albipuncta*, ♂. Genitalia prep. n. 497 MAD. Italy, Puglia, Mass. Le Cesine, Vernole (province of Lecce), 14-7-2000 Durante and Panzera legit.

we currently believe they have minor diagnostic value at the population level. Eurasian species, common and widespread throughout Italy (BERIO, 1985; PARENZAN and PORCELLI, 2006).

PARENZAN (1979) recorded it in Torre Guaceto, Villa Castelli and Veglie. PARENZAN and PORCELLI (2006) also report it for Baia Verde near Gallipoli.

Collected in Le Cesine, Laghi Alimini, San Donato.

Believed to have at least two generations from April to July, as fresh specimens collected in July demonstrate, but it could also have a third generation.

***Mythimna (Hyphilare) congrua* (Hübner, 1817)**

North Mediterranean-Maghrebian species, widespread in North-Central Italy. It is also present in Campania, Basilicata, Calabria, Puglia, Sardegna and Sicilia (BERIO, 1985; PARENZAN and SCALERCIO, 1996; PARENZAN and PORCELLI, 2006); in the Salento it is common and widespread.

Two generations from May to September.

***Mythimna (Hyphilare) l-album* (Linnaeus, 1767)**

Eurasian species, common and widespread throughout Italy (PARENZAN, 1979; BERIO, 1985; PARENZAN and PORCELLI, 2006) and throughout the Salento.

Believed to have two generations from spring to autumn (BERIO, 1985; HACKER *et al.*, 2002), but our records are limited to specimens of the first generation from April to July.

***Mythimna (Anapoma) riparia* (Rambur, 1829)**

Mediterranean-Asian species, it is widespread almost throughout Italy (BERIO, 1985; HACKER *et al.*, 2002; PARENZAN and PORCELLI, 2006).

PARENZAN (1979) reports it for Torre Guaceto; our records and new data in PARENZAN and PORCELLI (2006) extend its range to the whole of the Salento.

Two generations in May-June and August-September.

***Leucania (Leucania) obsoleta* (Hübner, 1803)**

Eurasian species. PARENZAN (1979) and BERIO (1985) report it for some Central and Northern Europe locations and a few locations in Southern Italy. Specifically, PARENZAN (1979: 201) cites MARTELLI G. and G.M. (1965), according to whom the species is present in Mesagne (Brindisi) and Galatina (Lecce) in Puglia and is damaging for tobacco crops. PARENZAN and PORCELLI (2006) recorded it for Gallipoli and Baia Verde (Gallipoli).

From our data it appears to be a fairly common and widespread species in the Salento. Two generations in May-June and August-October.

***Leucania (Leucania) zae* (Duponchel, 1827)**

Mediterranean-Asian species, uncommon in Italy, present in Veneto, Emi-

lia Romagna, Toscana, Marche, Lazio, Abruzzo, Molise, Basilicata, Campania, Puglia, Calabria, Sicilia, Sardegna (BERIO, 1985; PARENZAN and SCALERCIO, 1996; PARENZAN and PORCELLI, 2006).

In the Salento it is reported by PARENZAN (1979) for Torre Guaceto and Mar Piccolo (Taranto) and by PARENZAN and SCALERCIO (1996) for Gallipoli: Baia Verde. To these data we add San Cataldo (Lecce).

Two generations; only one specimen, of the first generation, collected in May.

***Leucania (Leucania) putrescens (Hübner, 1824)***

Mediterranean-Asian species, present in most of Italy (PARENZAN, 1979; BERIO, 1985; PARENZAN and PORCELLI, 2006).

Recorded in the Salento only for Torre Guaceto by PARENZAN (1979); our records are from Masseria Serra d'Angeli, San Cataldo, Torre Specchia and Laghi Alimini.

One generation from August to October.

***Leucania (Leucania) punctosa (Treitschke, 1825)***

Mediterranean-Asian species, rather fragmentarily distributed in Italy (PARENZAN, 1979; IPPOLITO and PARENZAN, 1981; BERIO, 1985; PARENZAN and PORCELLI, 2006). In Southern Italy it is present, although quite localized (no records for Campania). In the Salento it is uncommon; PARENZAN and SCALERCIO (1996) report it for Monteroni (Lecce).

Not observed during our research.

According to PARENZAN and SCALERCIO (1996) it has one generation from September to October.

***Leucania (Leucania) joannisi (Boursin and Rungs, 1952)***

West Mediterranean-African species, rather rare and localized. It was recorded for the first time in Puglia by PARENZAN (1977) in Torre Guaceto. This datum is confirmed by PARENZAN and PORCELLI (2006), who add a new record from Gallipoli (Lecce).

The species was classified by BERIO (1985) as *Leucania arbia* (Boursin and Rungs, 1952), but in this paper we follow HACKER *et al.* (2002) who define *arbia* as a synonym of *joannisi*.

The few Italian records are from Lazio, Basilicata, Puglia, Calabria, Sicilia and Sardegna (PARENZAN, 1977; 1979; 1998; BERIO, 1985; BELLA *et al.*, 1999; PARENZAN and PORCELLI, 2006).

Collected around Le Cesine wetland: Torre Specchia and San Cataldo.

It has two generations: recorded in May and August-September.

***Leucania (Acantholeucania) loreyi (Duponchel, 1827)***

In the specimens from the Salento the postmedian series of dots is almost totally obliterated.

Palaeotropical and South-European species, rather common and widespread throughout Italy (BERIO, 1985; PARENZAN and PORCELLI, 2006), already recorded for the Salento by PARENZAN (1979) in Torre Guaceto and by BERIO (1985) in Veglie.

Our data extend the species range along the Adriatic coast (Le Cesine; Laghi Alimini) and to the central Salento (San Donato di Lecce).

Two generations from July to September.

### **TRIBUS GLOTTULINI Guenée, 1852**

#### ***Brithys (Brithys) crini* (Fabricius, 1775)**

The evaluation of the presence of this species in Italy has been affected by its long taxonomic history, due to the presence of two phenotypes, often isolated from each other. The two forms, one light and one dark, were interpreted as distinct species: *B. encausta* (Hübner, [1803-1808]) and *B. pancratii* (Cyrillo, 1787) respectively, until ZILLI and ROMANO (1992), who clarified the situation by classing the two names as synonymous. Currently, as FIBIGER and HACKER (1991) have already stated, *pancratii* is considered synonymous with *crini* (Fabricius, 1775).

The Salento population exhibits only the *encausta* phenotype.

Afro-Mediterranean and Oriental species, in Italy it is present along the Tyrrhenian coast and the Ionian and Adriatic coasts in Puglia (PARENZAN, 1979; 1981; BERIO, 1985; DURANTE and PANZERA 1995; PARENZAN and PORCELLI, 2006; FIBIGER and HACKER 2007). In the Salento the only record to date (as *pancratii*) was reported near Lecce by FAGGIOLI (1933-1934), cited in PARENZAN (1979); PARENZAN and PORCELLI (2006) record it for Presicce Marina (Lecce) and our data extend the range of this species (*encausta* phenotype) all along the Salento coastline.

Believed to have three generations; our specimens are all of the third generation, born in captivity in August and September from larvae collected in July on food plants (*Pancratium maritimum*).

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