Lepidoptera recorded during a visit to Montechoro, Algarve, Portugal in June 2024. *Eupithecia minusculata* Alphéraky, 1883 (Geometridae, Larentiinae) is reported from Portugal for the first time.

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Abstract

Moth-trapping results from a week in Algarve in June 2024 produced the first published records of *Eupithecia minusculata* Alphéraky, 1887 and *Reisserita haasi* (Rebel, 1901).

Introduction

In June 2024 I spent a week on holiday with my family at a rented villa in the Algarve region of Portugal. As a keen lepidoperist I always try to combine holidays with some casual recording of the local moth and butterfly fauna. We stayed at Villa do Vale, Montechoro (37.09855, -8.22200), on the outskirts of Albufeira between 02 and 09.vi.2024. During the visit, I ran a portable 2x2W LED Skinner light trap (Anglian Lepidopterist Supplies) (fig. 1), deployed six funnel traps baited with various pheromone lures and made frequent rounds of the outside lamps around the villa. Other records were made by casual observations around the villa. The villa is part of an urbanisation of similar properties with very little natural habitat nearby and is situated about 1.5 km from the Algarve coast. The garden of the villa is mostly paved with only a small area planted with palms and other non-native plants.

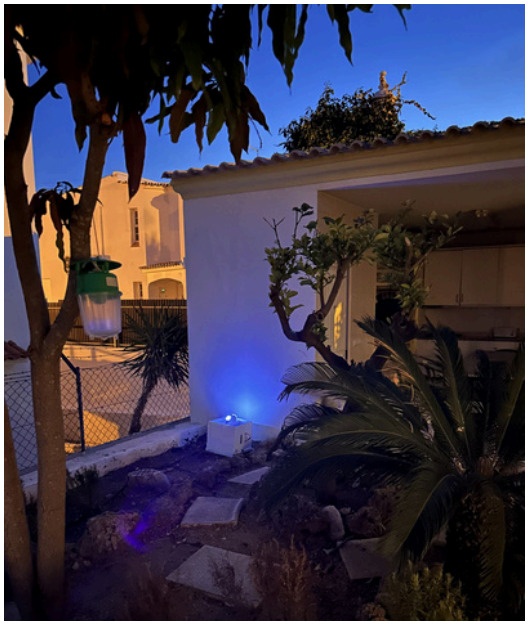

Figure 1. Site of moth trap.

Moths were recorded as totals by species on a daily basis. Most were photographed and where identity required further examination, a specimen was retained and if necessary a subsequent genitalia preparation was made by the author to confirm the determination. A total of 327 moths of 78 species were recorded during the week. As a visiting English recorder, many species (30) were new to me but there were a significant number of familiar species that are resident in the UK or visit as immigrants. A provisional list of the records was sent to Martin Corley for review and several of my initial identifications were challenged. Photos of adult moths and genitalia preparations were sent to Martin so that records could be validated or alternative identifications established. The full list of species recorded is shown in Table 1 and totals recorded during the week and the first date recorded are shown. The check list number refers to that used by Corley (2015). Where dissections were performed, the genitalia preparation ID is shown alongside the sex of the specimen.

Table 1: List of Species Recorded

Check list No.	Species	Family	Total	First Date	Genitalia prep. ID	Gen. Det
0119	*Placodoma calpella* Sobczyk, 2013	Psychidae	4	02.vi.2024	Q-240602-05 Q-240605-10	m m
0178.1	*Reisserita haasi* (Rebel, 1901)	Tineidae	5	02.vi.2024	Q-240602-01 Q-240603-09 Q-240603-12 Q-240603-13 Q-240605-08	m m m m m
0195	*Phereoeca lodli* Vives, 2001	Tineidae	1	04.vi.2024		
0264	*Phyllonorycter mespilella* (Hübner, 1805)	Gracillariidae	1	03.vi.2024	Q-240604-81	m
0309	*Zelleria oleastrella* (Millière, 1864)	Yponomeutidae	6	02.vi.2024		
0326	*Plutella xylostella* (Linnaeus, 1758)	Plutellidae	9	02.vi.2024		
0333	*Glyphipterix umbilici* M. Hering, 1927	Glyphipterigidae	1	04.vi.2024	Q-240604-09	m
0363	*Prays citri* (Millière, 1873)	Praydidae	2	03.vi.2024		
0365	*Bedellia somnulentella* (Zeller, 1847)	Bedelliidae	1	04.vi.2024		
0377	*Oegoconia novimundi* (Busck, 1915)	Autostichidae	1	03.vi.2024	Q-240603-03	f
0380	*Symmoca signatella* Herrich-Shäffer, 1854	Autostichidae	13	02.vi.2024		
0390	*Symmocoides oxybiella* (Millière, 1872)	Autostichidae	7	04.vi.2024	Q-240604-21 Q-240604-22 Q-240604-23	m m m
0460	*Agonopterix subpropinquella* (Stainton, 1849)	Depressariidae	2	03.vi.2024		
0484	*Ethmia bipunctella* (Fabricius, 1775)	Depressariidae	13	02.vi.2024		
0501	*Anatrachyntis badia* (Hodges, 1962)	Cosmopterigidae	1	06.vi.2024	Q-240606-13	m
0555	*Platyedra subcinerea* (Haworth, 1828)	Gelechiidae	5	03.vi.2024		
0611	*Ptocheuusa paupella* (Zeller, 1847)	Gelechiidae	1	03.vi.2024		

0674	*Tuta absoluta* (Meyrick, 1917)	Gelechiidae	3	04.vi.2024		
0839	*Coleophora deviella* Zeller, 1847	Coleophoridae	1	03.vi.2024	Q-240603-01	m
0896	*Blastobasis maroccanella* Amsel, 1952	Blastobasidae	5	02.vi.2024	Q-240602-02 Q-240602-03 Q-240604-08 Q-240605-07 Q-240605-09	f f f f f
0922	*Agdistis heydeni* (Zeller, 1852)	Pterophoridae	1	06.vi.2024	Q-240606-14	m
0967	*Emmelina monodactyla* (Linnaeus, 1758)	Pterophoridae	2	07.vi.2024		
0990	*Archips xylosteana* (Linnaeus, 1758)	Tortricidae	1	06.vi.2024		
1007.1	*Clepsis coriacanus* (Rebel, 1894)	Tortricidae	10	02.vi.2024	Q-240602-04 Q-240602-09 Q-240605-11 Q-240606-15	f f f f
1106	*Lobesia botrana (Denis & Shiffermüller,* 1775)	Tortricidae	1	03.vi.2024		
1146	*Crocidosema plebejana Zeller, 1847*	Tortricidae	9	02.vi.2024		
1222	*Paranthrene tabaniformis* ssp. *synagriformis* (Rambur, 1866)	Sesiidae	1	05.vi.2024		
1310	*Pararge aegeria* (Linnaeus, 1758)	Nymphalidae	8	02.vi.2024		
1413	*Endotricha flammealis* (Denis & Shiffermüller, 1775)	Pyralidae	1	03.vi.2024		
1414	*Hypsopygia costalis* (Fabricius, 1775)	Pyralidae	8	02.vi.2024		
1422	*Bostra obsoletalis* (Mann, 1864)	Pyralidae	4	03.vi.2024		
1442	*Ematheudes punctella* (Treitschke, 1833)	Pyralidae	2	03.vi.2024		
1446	*Cryptoblabes gnidiella* (Millière, 1867)	Pyralidae	2	06.vi.2024	Q-240606-05 Q-240606-06	f f
1506	*Acrobasis glaucella* Staudinger, 1859)	Pyralidae	1	02.vi.2024	Q-240602-11	f
1514	*Apomyelois ceratoniae* (Zeller, 1839)	Pyralidae	2	02.vi.2024	Q-240602-10	f
1538	*Phycitodes saxicola* (Vaughan, 1870)	Pyralidae	2	03.vi.2024	Q-240603-08 Q-240604-18	m m

1544	*Ephestia disparella* Hampson, 1901	Pyralidae	3	05.vi.2024	Q-240605-06 Q-240607-04 Q-240607-05	m f f
1550	*Cadra figulilella* (Gregson, 1871)	Pyralidae	6	02.vi.2024	Q-240602-06 Q-240604-16 Q-240604-17 Q-240605-03 Q-240605-05 Q-240606-09	f f m f m m
1552	*Cadra calidella* (Guenée, 1845)	Pyralidae	4	04.vi.2024	Q-240604-15 Q-240605-04 Q-240607-02 Q-240607-03	f m m m
1556	*Achyra nudalis* (Hübner, 1796)	Crambidae	2	04.vi.2024		
1567	*Uresiphita gilvata* (Fabricius, 1794)	Crambidae	2	02.vi.2024		
1578	*Udea ferrugalis* (Hübner, 1796)	Crambidae	1	03.vi.2024		
1594	*Palpita vitrealis* (Rossi, 1794)	Crambidae	7	05.vi.2024		
1603	*Nomophila noctuella* (Denis & Shiffermüller, 1775)	Crambidae	3	03.vi.2024		
1736	*Hyles livornica* (Esper, 1780)	Sphingidae	1	06.vi.2024		
1747	*Idaea ochrata* (Scopoli, 1763)	Geometridae	1	06.vi.2024		
1762	*Idaea elongaria* (Rambur, 1833)	Geometridae	1	05.vi.2024		
1766	*Idaea blaesii* Lenz & Hausmann, 1992	Geometridae	1	02.vi.2024	Q-240602-12	m
1777	*Idaea minuscularia* (Ribbe, 1912)	Geometridae	4	04.vi.2024	Q-240604-04 Q-240606-02 Q-240606-03 Q-240606-04	f f f m
1790	*Idaea ostrinaria* (Hübner, 1813)	Geometridae	1	03.vi.2024		
1810	*Scopula marginepunctata* (Goeze, 1781)	Geometridae	1	07.vi.2024		
1823	*Cyclophora pupplillaria* (Hübner, 1799)	Geometridae	5	02.vi.2024		
1831	*Rhodometra sacraria* (Linnaeus, 1767)	Geometridae	12	02.vi.2024		
1893	*Gymnoscelis rufifasciata* (Haworth, 1809)	Geometridae	84	02.vi.2024		

1900	*Eupithecia ultimaria* Boisduval, 1840	Geometridae	1	03.vi.2024	Q-240603-14	f
1900.1	*Eupithecia minusculata* Alphéraky, 1883	Geometridae	1	07.vi.2024	Q-240607-01	f
1950	*Chiasmia aestimaria* (Hübner, 1809)	Geometridae	1	07.vi.2024		
2001	*Menophra japygiaria* (Costa, 1849)	Geometridae	1	04.vi.2024		
2090	*Zebeeba falsalis* (Herrich-Shäffer, 1839)	Erebidae	1	02.vi.2024		
2142	*Eilema caniola* (Hübner, 1808)	Erebidae	1	03.vi.2024	Q-240603-10	m
2154	*Nodaria nodosalis* (Herrich-Shäffer, 1851)	Erebidae	1	04.vi.2024		
2176	*Eublemma ostrina* (Hübner, 1808)	Erebidae	3	02.vi.2024		
2191	*Catocala nymphagoga* (Esper, 1787)	Erebidae	1	05.vi.2024		
2214	*Thysanoplusia orichalcea* (Fabricius, 1775)	Noctuidae	1	09.vi.2024		
2217	*Ctenoplusia limbirena* (Guenée, 1852)	Noctuidae	1	06.vi.2024		
2233	*Tyta luctuosa* (Denis & Shiffermüller, 1775)	Noctuidae	1	05.vi.2024		
2251	*Aegle vespertinalis* (Rambur, 1858)	Noctuidae	1	03.vi.2024		
2285	*Heliothis peltigera* (Denis & Shiffermüller, 1775)	Noctuidae	1	06.vi.2024		
2289	*Helicoverpa armigera* (Hübner, 1808)	Noctuidae	4	05.vi.2024		
2290	*Condica viscosa* (Freyer, 1831)	Noctuidae	1	05.vi.2024		
2303	*Spodoptera exigua* (Hübner, 1808)	Noctuidae	3	04.vi.2024		
2304	*Spodoptera cilium* Guenée, 1852	Noctuidae	4	06.vi.2024		
2315	*Caradrina clavipalpis* (Scopoli, 1763)	Noctuidae	18	02.vi.2024	Q-240606-10 Q-240606-11 Q-240606-12	m f f
2318	*Hoplodrina ambigua* (Denis & Shiffermüller, 1775)	Noctuidae	1	06.vi.2024		
2490	*Mythimna unipuncta* (Haworth, 1809)	Noctuidae	2	06.vi.2024		

2507	*Peridroma saucia* (Hübner, 1808)	Noctuidae	1	02.vi.2024		
2537	*Agrotis spinifera* (Hübner, 1808)	Noctuidae	1	07.vi.2024		
2577	*Nola infantula* Kitt, 1926	Nolidae	1	06.vi.2024		

The following species were not recorded in the light trap and were only seen at rest on walls or plants in the garden – *Catocala nymphagoga* (Esper, 1787), *Thysanoplusia orichalcea* (Fabricius, 1775), *Ctenoplusia limbirena* (Guenée, 1852) and *Mythimna unipuncta* (Haworth, 1809). Only one species was recorded as an early stage. Larval cases of *Phereoeca lodli* Vives, 2001 were found on 06.vi.2024 on a window frame behind shutters, although these were all vacated. An adult of this species was also recorded in the light trap on 04.vi.2024.

As expected, the pheromone traps had limited success, with only two specimens recorded. However, both of these were not seen at light traps or by casual observations. These are both considered to be positive responses to the lures. The *C. nigricana* lure is well-known as a lure for several *Phyllonorycter* spp. (Green, T. unpublished information).

Phyllonorycter mespilella (Hübner, 1805)
A single male *Phyllonorycter mespilella* came to a funnel trap containing a lure for *Cydia nigricana* overnight on 03.vi.2024 and was confirmed by dissection.

Paranthrene tabaniformis ssp. *synagriformis* (Rambur, 1866)
A male *Paranthrene tabaniformis* responded to the target lure for that species at 1600hrs on 05.vi.2024.

Moths attracted to the LED Skinner trap were often collected during the evening as it quickly became apparent that with high overnight temperatures retention in the trap was quite poor and many specimens initially attracted were no longer in the trap in the morning. As the trap was run adjacent to a white wall, many moths settled on the wall and could be photographed or tubed. The most frequently recorded species was *Gymnoscelis rufifasciata* (Haworth, 1809) with 84 specimens comprising over a quarter of the moths recorded. 38 of the 77 species recorded were represented by single specimens.

There were several records of national of regional significance which are reported below.

Eupithecia minusculata Alphéraky, 1883
A single specimen of *Eupithecia minusculata* was recorded at the LED trap on 07.vi.2024 and is new for Portugal. The specimen (figs 2, 3) was a female and was dissected to confirm its identity. This species is a member of the '*ultimaria*' group and, like the other two European species in the group, feeds on *Tamarix* spp. (Tamaricaceae). In Spain, *E. minusculata* is known to feed on *Tamarix gallica* (Gómez de Aizpurua, 1994). This species has a rather strange and disjunct

distribution, being known in Europe only from Spain and European Russia. Elsewhere, it is found in North Africa, the Middle East and from Turkey eastwards. Its existence in Portugal is therefore not entirely unexpected. Its close relative and species group member, *Eupithecia ultimaria* Boisduval, 1840, has a wider distribution in Western Europe and is known from Spain, Portugal, France, UK, Belgium and Italy. It is reported to be oligophagous on a wider range of *Tamarix* spp. (Mironov, 2003). A single female of the latter species was taken in the LED trap on 03.vi.2024 (figs 4, 5). This was a larger individual when compared to the *E. minusculata* specimen (17.3 mm vs. 13.6 mm wingspan respectively) which is consistent with the size ranges of the two species reported by Mironov (2003). The genital preparations of the two specimens revealed clear differences and allowed confirmation that the two species were present.

Figure 2. *Eupithecia minusculata*

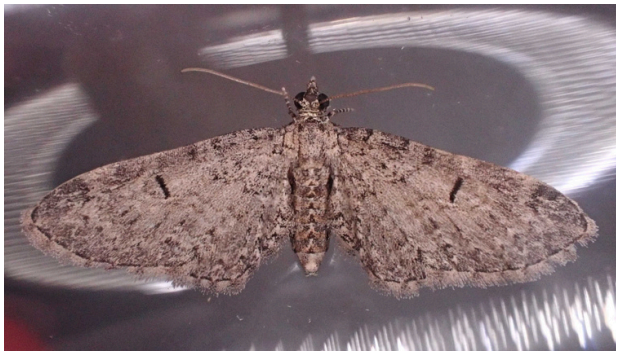

Figure 4. *Eupithecia ultimaria*

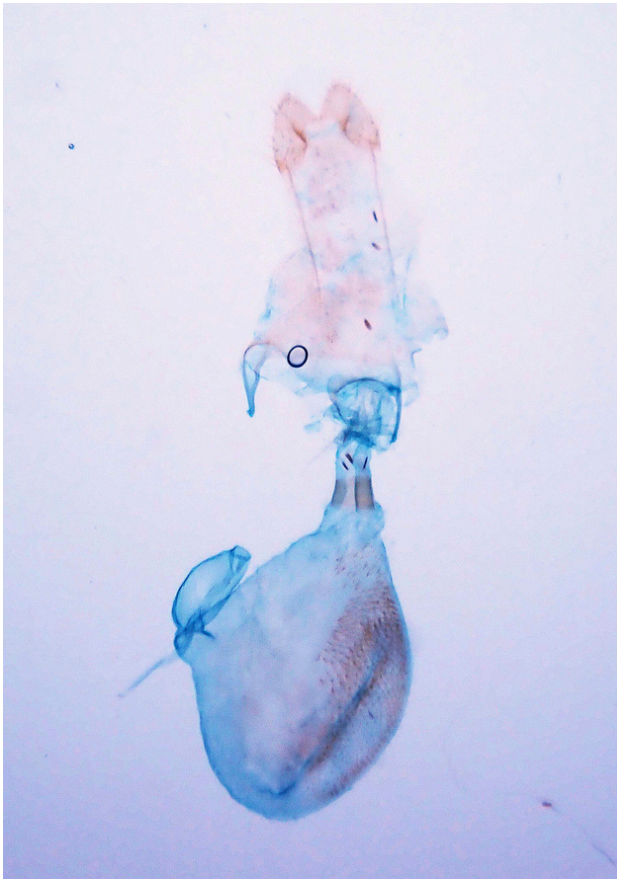

Figure 3. *Eupithecia minusculata* female gen. prep. Q-240607-01.

Figure 5. *Eupithecia ultimaria* female gen. prep. Q-240603-14.

Reisserita haasi (Rebel, 1901)

A series of five small dark tineids were taken in and around the LED trap between 02.vi.2024 and 05.vi.2024. The moths had dark-grey to black unicolorous forewings and a yellowish-brown head brush. After much searching, they were tentatively identified as *Reisserita haasi* and dissection of the specimens revealed that all were males of this species (figs 6, 7). *Reisserita haasi* is not listed in the checklist of Portuguese Lepidoptera (Corley, 2015), nor are Portuguese records shown on the Lepiforum site (https://lepiforum.org/wiki/page/Reisserita_haasi). However, Gaedike (2019), states that the species is known from the Iberian Peninsular. A record from the Algarve, pre-dating the Montechoro records by a few weeks, has been reported (Corley, pers. comm.).These records therefore represent the second occurrence of the species in Portugal. There appears to be no data on the larval pabulum for any of the *Reisserita spp.* (Gaedike, 2019).

Figure 6. *Reisserita haasi*

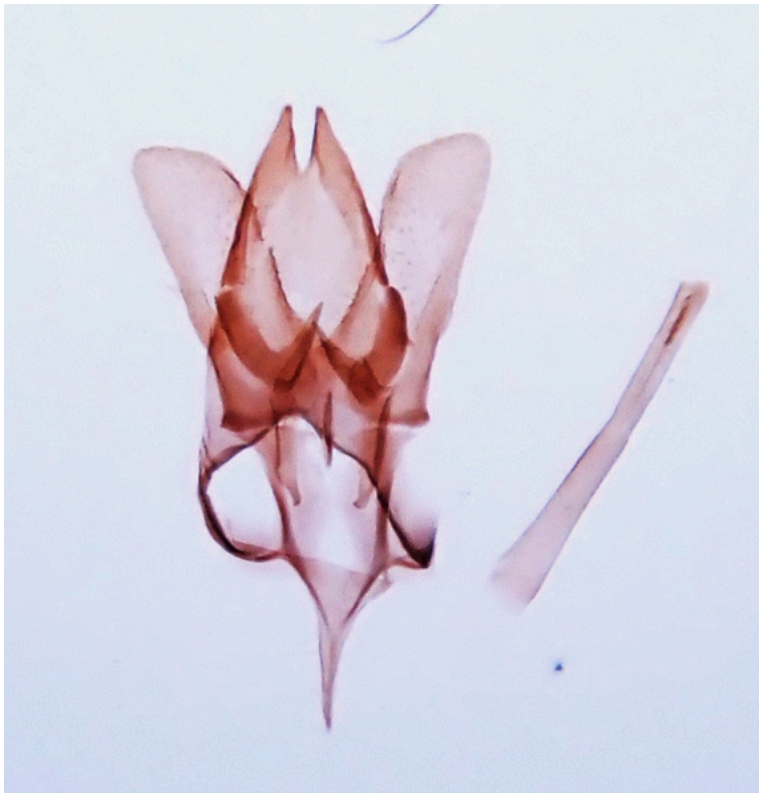

Figure 7. *Reisserita haasi* male gen. prep. Q-240603-13.

Phereoeca lodli Vives, 2001

A single specimen of *Phereoeca lodli* was found on the wall next to the trap on 04.vi.2024 (fig. 8). The adult has not been dissected and was identified by morphology. This species was first described in 2001 from material collected in Huelva Province in Spain and is one of only two representatives of the genus in Europe. The other, *P. allutella* (Rebel, 1892), is found in the Canary Islands, Sardinia and Madeira. *P. lodli* is known from France, Spain, Portugal, Canary Islands and Malta. The presence in Portugal was published by Billi & Nel (2014) who give details of a specimen captured in Lisbon in 2013. A few days after the adult specimen was found, several cases of the same species were discovered. The characteristically shaped cases (fig. 9) were found attached to walls and window frames around the villa. All had been vacated so the opportunity to rear adults for examination was not possible. These records are the first for the Algarve region of Portugal.

Figure 8. *Phereoeca lodli*

Figure 9. *Phereoeca lodli* 3 case on window frame.

Placodoma calpella Sobczyk, 2013

A series of Psychid moths were taken at light between 02.vi.2024 and 06.vi.2024 (fig. 10). They were initially identified as a *Placodoma* sp. Chrétien, 1915. Of the three European species, *P. ragonoti* (Rebel, 1901) was immediately ruled out as the heavily marked forewings of this species didn't match my specimens. Both *P. veletaella* Sobczyk, 2013 and *P. calpella* Sobczyk, 2013 are known from Portugal. The former has been recorded from the Alto Alentejo region in 2014 (Corley *et al*., 2015) and the latter from the Beira Baixa region in 2007 (Corley *et al.*, 2013). Dissection of two of the specimens, and reference to Sobczyk & Nuss (2013), revealed that my specimens were both males of *Placodoma calpella*. These are the first records from the Algarve region.

Figure 10. *Placodoma calpella*

Coleophora deviella Zeller, 1847

The only member of the Coleophoridae to be encountered was a male *Coleophora deviella* which came to light on 03.vi.2024. The identity was confirmed by dissection. This species is well distributed in Western Europe but this capture is only the third record for Portugal. The two previous records are both from the Algarve region (Corley, 2005).

Oegoconia novimundi (Busck, 1915)

A female specimen of *Oegoconia novimundi* was taken at light on 03.vi.2024 and confirmed by dissection. This appears to be the first record for the Algarve region.

Anatrychyntis badia Meyrick, 1915

A male *Anatrychyntis badia* was taken at light on 06.vi.2024 and confirmed by dissection. This species originates from the United States and is known from Portugal, being first recorded in 2011 (Corley *et al.*, 2012).

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