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REVEALING MIRACLE: NEWS ON THE DALMATIAN GEOMETRID MOTH *MIRLATIA ARCUATA* HAUSMANN, MAYR, LÁSZLÓ & HUEMER, 2023 (LEPIDOPTERA: GEOMETRIDAE)

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Tóth, B., Enyedi, R., Katona, G. & Korompai, T.: Revealing miracle: news on the Dalmatian geometrid moth *Mirlatia arcuata* Hausmann, Mayr, László & Huemer, 2023 (Lepidoptera: Geometridae). Nat. Croat., Vol. 34, No. 2, _____, 2025, Zagreb.
Targeted field survey in Dalmatia to locate *Mirlatia arcuata* Hausmann, Mayr, László & Huemer, 2023 resulted in the capture of a single male specimen, rising the number of known specimens in collections to three. Physical and ecological aspects of the collection site are discussed. It is concluded that the species was able to survive more than 40 years in Dalmatia, it is more or less attracted to artificial light and, in accordance with the original description, shows particular sexual dimorphism in wing pattern and is confined to rocky habitats with sparse vegetation.
Key words: Croatia, faunistics, rock, scree, *Dasycorsa modesta*

Tóth, B., Enyedi, R., Katona, G. & Korompai, T.: Otkriveno čudo: vijesti o dalmatinskoj grbici *Mirlatia arcuata* Hausmann, Mayr, László & Huemer, 2023 (Lepidoptera: Geometridae). Nat. Croat., Vol. 34, No. 2, _____, 2025, Zagreb.
Ciljano terensko istraživanje u Dalmaciji za lociranje Mirlatia arcuata Hausmann, Mayr, László & Huemer, 2023 rezultiralo je hvatanjem jednog mužjaka, čime se broj poznatih primjeraka u zbirkama povećao na tri. Raspravlja se o fizičkim i ekološkim aspektima mjesta sakupljanja. Zaključuje se da je vrsta uspjela preživjeti više od 40 godina u Dalmaciji, da je manje-više privlači umjetno svjetlo i, u skladu s izvornim opisom, pokazuje poseban spolni dimorfizam u uzorku krila te je ograničena na kamenita staništa s rijetkom vegetacijom.
Ključne riječi: Hrvatska, faunistika, stijene, točilo, *Dasycorsa modesta*

INTRODUCTION

Mirlatia arcuata Hausmann, Mayr, László & Huemer, 2023 was described in November 2023 as the type species of its new genus (HAUSMANN *et al.*, 2023) and until now was known only from two specimens collected in Dalmatia – the Holotype: male, collected on 19.iii.1983 by Robert Hentscholek (Linz, Austria) and retained in the collection of Tiroler Landesmuseum Ferdinandeum, Innsbruck and the Paratype: female, collected 27.iii.1982, and recently discovered in the Pinker Collection deposited in the Natural History Museum, Vienna.

After the surprising discovery of these species, efforts were made by Stanislav Gomboc to find the species again in 2022. Despite deploying no less than 21 light sources over three nights (HAUSMANN *et al.*, 2023), his quest was unsuccessful.

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The aim of our paper is to validate the Dalmatian authenticity of *Mirlatia arcuata* and to summarise potentially relevant data concerning the capture locality and the composition of the moth fauna at that locality, along with details of the vegetation in order to characterise potential habitats and establish the exploration of its bionomy.

MATERIAL AND METHODS

Locality

The type locality of *Mirlatia arcuata* is "Podgora–Drvenik". The location of Gomboc's subsequent attempts to re-find the species was in Podgora, a small town on the Dalmatian coast, ca. 11 km southeast from Makarska, at the western border of Biokovo National Park. Instead of following Gomboc to Podgora, we hypothesised that Hentscholek's collecting site had actually been in Drvenik, a village further 22 km away along the coast, while "Podgora" in the original labels referred to either the closest town or the name of the municipality, not the collecting site. We could not exclude the possibility that the label had to be interpreted as "somewhere between Podgora and Drvenik". HAUSMANN *et al.* (2023) did not help in the clarification of the actual collecting site, stating it either as Podgora or Drvenik.

With regard to the potential habitat of the species, we hypothesised that the coastal area with macchia vegetation and semi-natural habitats was too accessible and well-known to hide an undescribed species of an unknown genus in a region that has been affected by intensive lepidopterological activity for more than a century (ABAFI *et al.*, 1896). Therefore we concentrated our attention on less accessible habitats, such as the steep slopes, cliffs and screes high above the otherwise busy public roads.

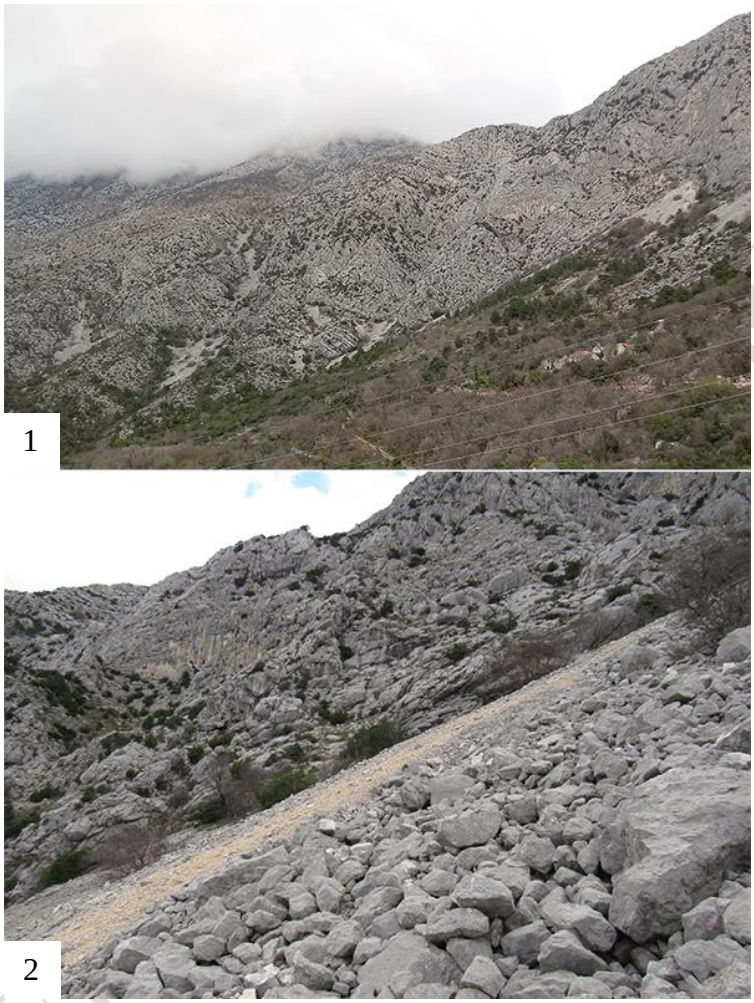
Phenology

The type specimens were collected on 19 and 27 March, in two different years. We undertook our trip earlier, in mid-March. This was in part because the holotype male was slightly worn and so perhaps had been collected after the peak of flight time. Our choice of an earlier date was also influenced by the fact that in Hungary we have experienced a general shift in adult flight periods, so that the start of the flight periods of late winter moths had shifted earlier than in the 1980s. A similar phenological shift has been observed in Britain – especially in the south-east area of England, including the London area. Data are not fully analysed, but for many species can be assessed visually at https://hertsmiddxmoths.uk/ (Colin W. Plant, personal communication).

Quantitative recording on the moth fauna was performed, and the phenophases of some plant species were recorded.

Collecting methods

We found apparently suitable localities for installing our traps near a gravel road running towards the northwest from Drvenik (Fig. 1). This was situated around 43.1713°N, 17.2355°E (Fig. 2) and this area became the trapping site on 14 and 16 March.



Figs 1–2. Locality of *Mirlatia arcuata* Hausmann, Mayr, László & Huemer, 2023. **1.** View of the habitat from a distance of ca. 500 m **2.** Collecting site: location of the light trap.

Four portable light traps ("bucket traps") were used. One of them was operated with a 20 W BL368 compact tube with inverter, two traps were operated with T5 8W BL tubes and one with a 15 W BLB compact tube; each from a 12V battery. The traps were deployed to different habitat patches to maximise the chance of recording the species. One trap was set right at the edge of a scree, two traps in forest patches with *Ostrya carpinifolia* Scop. and one trap in herbaceous vegetation with *Erica* spp. All these lights were positioned at around 360 m a.s.l and the greatest distance apart from each other was approximately 50 m. The light traps were operated from dusk to sunrise. Chloroform ($CHCl_3$) was used as anaesthetic agent in order to avoid escape of specimens from inside the trap. Sugar ropes were applied from sunset for two

hours at the edge of a forest patch, draping the ropes over twigs, approximately 1.5 m above ground level. The syrup was made by heating 0.75 l red wine and 1 kg crystalline sugar (sucrose) until the complete dissolution of the latter, but without boiling.

Documentation

Photographs of set specimens were taken using a Nikon D 7200 digital camera with Helicon Focus software. Genitalia images were prepared with an Olympus SZX12 photographic microscope using DPController and DPManager software.

Two legs were removed from the new specimen and placed in vials with 96% Ethanol in the field and sent to the Canadian Centre for DNA Barcoding, Ontario, Canada, with the kind help of Axel Hausmann (SNSB–Bavarian State Collections of Natural History, München). Collected material was deposited in the Hungarian National Museum, Public Collection Centre – Hungarian Natural History Museum, Budapest (HNHM).

RESULTS

Material examined

Mirlatia arcuata Hausmann, Mayr, László & Huemer, 2023: one male; Croatia, Dalmatia, Drvenik, southern slope; ca. 360 m; light trap; 43.1713°N, 17.2355°E; 14.iii.2024; leg. Róbert Enyedi, Gergely Katona, Tamás Korompai & Balázs Tóth; id. Nos HNHM-LEP-12109 to 12110 (coll. HNHM).

We recorded one male of *M. arcuata* at the light trap at the scree, during the night of 14 to 15 March 2024. This specimen represents the second available male and the third specimen of the species. The co-occurring moth fauna was represented by altogether 274 specimens of 50 species, dominated by *Eupithecia oxycedrata* (Rambur, 1833) (47 specimens), *Spudaea ruticilla* (Esper, 1791) (42 specimens) and *Pachycnemia hippocastanaria* (Hübner, 1799) (33 specimens) (Tab. 1).

Efforts to elucidate molecular data from the two specimens of the type series was not successful (HAUSMANN *et al.*, 2023). The genetic studies on the new specimen are currently underway.

DISCUSSION

External morphology of the new *Mirlatia arcuata* specimen compared to the holotype

The wingspan of this specimen is 30 mm, which is larger by 10% than the holotype, and even slightly larger than the female paratype. The proboscis is yellow. Scaling on the vertex seems to be intact both on the holotype and the new specimen, but the scale cover of the notum is less

worn (close to intact) in our specimen than in the holotype. Most scales are of the same colour as the ground colour of the wings; a few scales are dark, sparsely distributed over the entire notum. The basal three abdominal tergites of the new specimen display pairs of dark patches at the distal edges; the first two pairs are visible also on the holotype (its other segments were removed during dissection). Each remaining tergite has a narrow band along its distal edge, greyish in colour, much lighter than the basal patches. The ground colour of abdomen is like those of the wings.

- The wing pattern of our specimen is very similar to that of the holotype, with the following differences: Forewing basal field below cell as well as marginal field have more dark scales than in the holotype, but the two dark spots of the holotype in the marginal field between veins M1–M2 and M2–M3 are completely absent from the new specimen.
- Hindwing of the new specimen overall has slightly more dark scales than that of the holotype, with a more conspicuous dark patch on postmedian fascia between veins M1–M2.
- Fringes of all wings are slightly less worn in the new specimen (Fig. 3) than in the holotype.

Fig. 3. *Mirlatia arcuata* Hausmann, Mayr, László & Huemer, 2023, male, Drvenik, Dalmatia, Croatia, 14.iii.2024. Scale bar: 10 mm.

- We could not find any difference in the wing shapes, but the drawing of the wing venation (HAUSMANN *et al.,* 2023: Fig. 6) shows much deeper incision on hindwing margin between tips of veins Sc + R1 and Rs than the holotype itself (and also the new specimen). The apparently asymmetrical hindwing shape of our specimen is an artefact: the area above vein Sc + R1 of the right hindwing was curled under the wing plate

during spreading, and after several attempts of smoothing we did not take the risk of tearing the membrane.

This comparison suggests that the species shows particular sexual dimorphism in wing pattern and, in accordance with HAUSMANN *et al.* (2023), the pale appearance of males is apparently not the result of their worn state.

Bionomics and faunistics

The specimen, after being taken out from the trap, was placed on a rock native to the locality and photographed in "semi-natural position" (Figs 4–5). The wing surfaces perfectly camouflaged the specimen against the rock. We suggest that the natural resting position could be very similar, as Larentiinae species with apparently similar habitat requirements and colouration (e.g. *Nebula nebulata* (Treitschke, 1828), *Colostygia sericeata* (Schwingenschuss, 1926)) rest in almost identical position. This is supported by the darker forewing and lighter hindwing of *Mirlatia arcuata*. Thus, we agree with HAUSMANN *et al.* (2023) in the suggested habitat and behaviour of the adults.

We found several noctuid specimens (especially *Perigrapha rorida* (Frivaldszky, 1835)) with yellow colouration on the ventral side of their body, caused by pollen adhering to hair scales, indicating nectar feeding. On the contrary, we could not find any pollen on the *Mirlatia arcuata* specimen and the sugar ropes did not attract the species. As its proboscis is well-developed (HAUSMANN *et al.*, 2023, present paper: Figs 4, 5) the adult is expected to feed, however, its food source remains unknown.

The species composition of the co-occurring moth fauna included overwintering examples, several typical of late winter and others of early and mid-spring. The first category included e.g. *Conistra* spp. and *Agriopis bajaria* ([Denis & Schiffermüller], 1775) (a late autumn species in Hungary). Late winter species, at least in our term, start their flight time earlier than early spring species in Hungary. An example for the former category is *Alsophila aescularia* ([Denis & Schiffermüller], 1775), the latter includes e.g. *Lycia graecarius* (Staudinger, 1862) (Fig. 6), *Perigrapha rorida* or *Panolis flammea* ([Denis & Schiffermüller], 1775). Based on experience in Hungary, we place *Saturnia pyri* ([Denis & Schiffermüller], 1775) (Fig. 8) in the last category (mid-spring species). This action supports the opinion of PITTAWAY (2025), who indicates "late March" as the start of its flight period. Co-occurrence of these species lead us to suggest that congestion happened in their flight periods in 2024: mid-spring species started their flight time perhaps somewhat earlier than usual. Despite this variation we still believe that our study on

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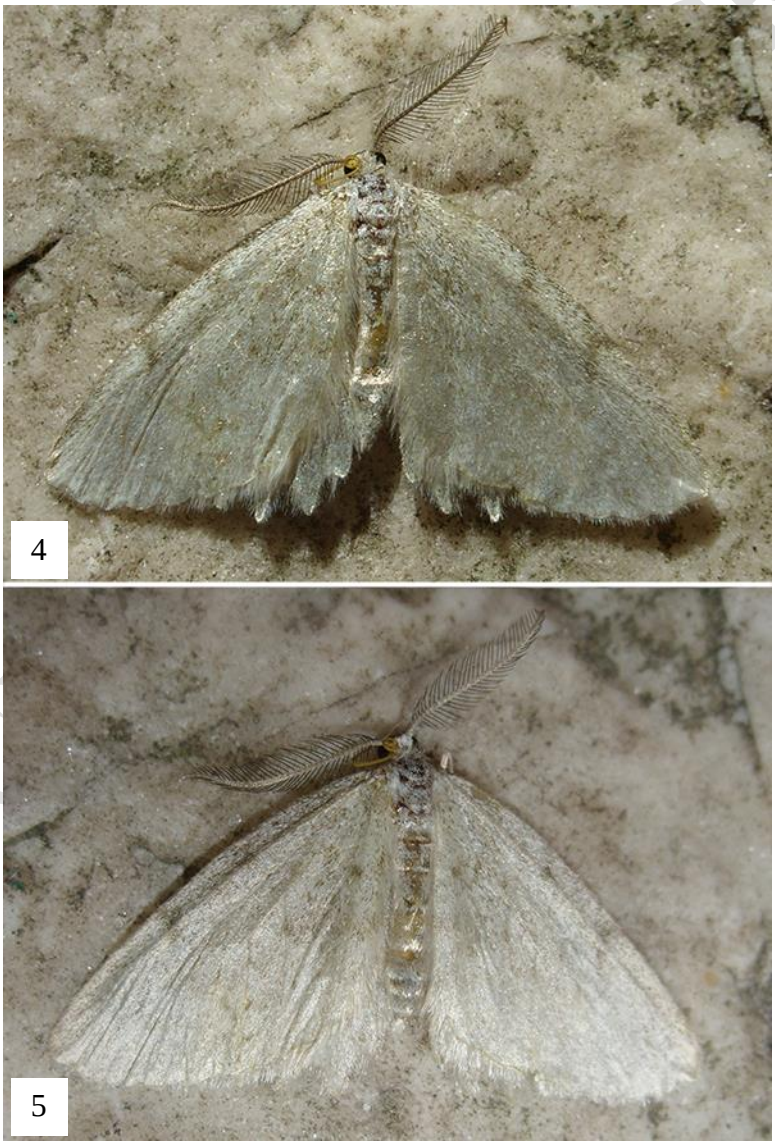
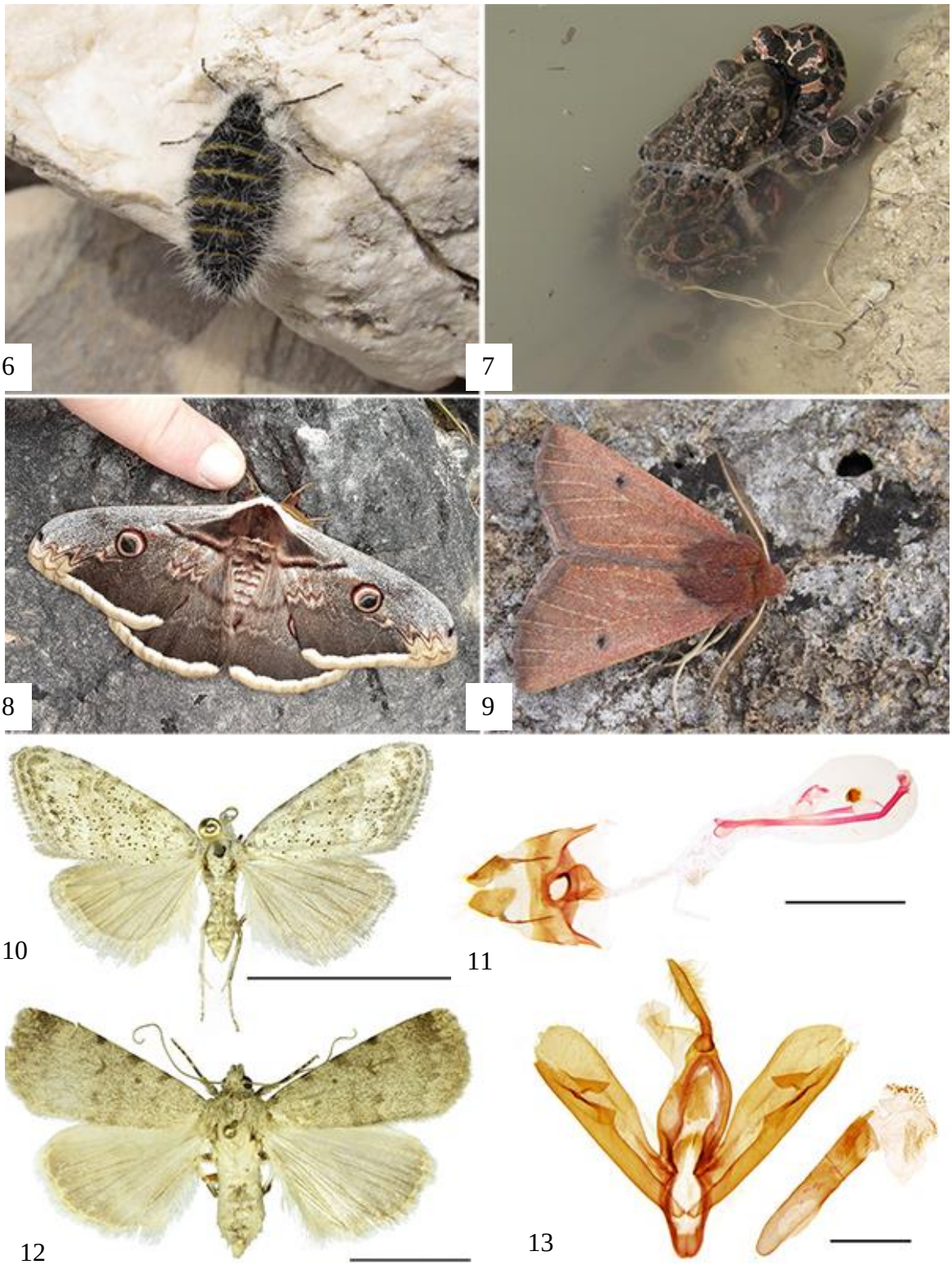


Figs 4–5. Male specimen of *Mirlatia arcuata* Hausmann, Mayr, László & Huemer, 2023 before setting, placed on a rock. Note the striking similarity of not only the wing ground colour and the rock colour, but of the patches on the wing and the lichens on the rock. **4.** Photographed in sunshine, without flashlight, to emphasise wing shape **5.** Photographed with flashlight, to emphasise pattern.



Figs 6–13. Recorded species (selected) in Drvenik, Dalmatia, Croatia, from 14 to 16.iii.2024 (figures are not to scale). **6.** *Lycia graecarius* (Staudinger, 1862) female **7.** *Bufotes viridis* (Laurenti, 1768) in amplexus **8.** *Saturnia pyri* ([Denis & Schiffermüller], 1775), resting specimen **9.** *Dasycorsa modesta* (Staudinger, 1879), resting specimen **10.** *Nola subchlamydula* Staudinger, 1870, adult **11.** *Ditto*, female genitalia (slide No. TB2362f) **12.** *Autophila dilucida* (Hübner, 1808), adult **13.** *Ditto*, male genitalia (slide No. TB2433m). Scale bars: 10 mm (10, 12); 1 mm (11, 13).

The weather was the most optimal for moth collecting during the first night. The second night was somewhat colder, and during the third day light rain and mist drizzle occurred several times. The vegetation became wet and did not dry off until sunset – this phenomenon, combined with the often cloudless night, resulted in the least collected specimens at the last night.

With regard to the vegetation we found *Laurus nobilis* L. trees and shrubs of *Coronilla valentina* L. in full bloom. The olive trees were being trimmed during the trip. Flowers of *Ophrys sphegodes* Mill. and *Iris tuberosa* L. were also observed. Blooming of *Cerasus mahaleb* (L.) Mill. was in the initial phase. *Persica vulgaris* Mill. and *Forsythia suspensa* (Thunb.) Vahl were in full bloom. *Cornus mas* L. had more or less finished flowering. *Amygdalus communis* L. was overblown. Other phenomena, which may help determine the flight time of *M. arcuata*, are (1) the reproduction period of *Bufotes viridis* (Laurenti, 1768): individuals in amplexus as well as egg strings were recorded (Fig. 7), and (2) the call of *Bubo bubo* (Linnaeus, 1758) was heard on all nights.

Altogether 526 specimens of 69 moth species were recorded at the traps and the ropes. Further 18 butterfly and moth species were observed daytime and additional seven species were found in immature stages. All of them are shown in Tab. 1.

It is worth mentioning the occurrence of *Dasycorsa modesta* (Staudinger, 1879) (Fig. 9) in our sample. This provides the northernmost observation of that species in Croatia (*vide* KOREN 2020) and within the larger area of the western Balkan Peninsula (SKOU & SIHVONEN 2015).

Nola subchlamydula Staudinger, 1870 (Figs 10, 11) was not recorded by FIBIGER *et al*. (2009) in Croatia but Õunap *et al*. (2021) used material of that species from the country for their studies; here we give further data.

GOATER *et al*. (2003) did not record *Autophila dilucida* (Hübner, 1808) (Figs 12, 13) in Croatia but this species was reported generally from the Balkans by RONKAY *et al*. (2014). Additional data are included in the present paper.

The species composition of the recorded moth assemblage and the vegetation suggest that *Mirlatia arcuata* is confined to the Mediterranean zone.

Further studies

Our finding of *Mirlatia arcuata* proved that the species was able to survive more than 40 years at (around) its type locality, which suggests that it is a native, perhaps endemic species of the Dalmatian coast. The species is apparently attracted to light. In order to map the actual distribution of *Mirlatia arcuata* we suggest collecting at light along the full length of the mountain range, from Omiš to Gradac, on the slopes facing to the coast. Perhaps the slopes

from Split to Omiš could also be taken into consideration because their appearance, exposure and orientation are similar to the discovered habitat of the species. Daytime search on shaded rocks is less likely to be effective, but is nevertheless worth including. Light sources with considerable emittance of UV light (BL and BLB types) should be deployed as close as possible to large bare rock surfaces and screes. Spectra and power of these light sources should be the identical to standardise the trapping process that different trap sites can be properly compared. Traps must be examined immediately at dawn breaks to avoid losses of specimens resting outside or on objects nearby. The vertical range should extend above the plantations to physical ridges. To clarify the flight time, visits might ideally run from late November. Captured female specimens should be kept alive for egg deposition. The potential pool of larval host plants should include any plants growing on rocks, including mosses, lichens, spleenworts (*Asplenium* spp., Aspleniaceae) and similar ferns, but also *Ephedra* spp. (Ephedraceae) as well as angiosperms.

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Tab. 1. List of collected and observed Lepidoptera species in Croatia, from 14 to 16 March 2024

	Collecting or observation events with abundances						
	No. 1	No. 2a	No. 2b	No. 2c	No. 2d	No. 3a	No. 3b
Acronicta euphorbiae ([Denis & Schiffermüller], 1775)		1		1			
Agriopis bajaria ([Denis & Schiffermüller], 1775)	2			2			
Agriopis leucophaearia ([Denis & Schiffermüller], 1775)				1			
Agriopis marginaria (Fabricius, 1777)				1			
Agrotis segetum ([Denis & Schiffermüller], 1775)	1						
Alsophila aescularia ([Denis & Schiffermüller], 1775)	3			4			
Apocheima hispidaria ([Denis & Schiffermüller], 1775)	1	2		1			
Apopestes spectrum (Esper, [1787])	1		2				
Asphalia ruficollis ([Denis & Schiffermüller], 1775)	2	4		1			2
Autophila anaphanes Boursin, 1940				1			
Autophila dilucida (Hübner, 1808)	9	3		7			
Autophila limbata (Staudinger, 1871)	1			6			
Biston strataria (Hufnagel, 1767)	6			2			
Caradrina flavirena Guenée, 1852	1			1			
Cerastis rubricosa ([Denis & Schiffermüller], 1775)		1					
Charissa intermedia (Wehrli, 1917)		1					
Charissa variegata (Duponchel, 1830)	2			2			
Chemerina caliginearia (Rambur, 1833)		3		7			
Chesias rufata (Fabricius, 1775)	1			10			
Chloantha hyperici ([Denis & Schiffermüller], 1775)	2			1			
Cleora cinctaria ([Denis & Schiffermüller], 1775)							1
Coenotephria ablutaria (Boisduval, 1840)	5			10		1	
Colocasia coryli (Linnaeus, 1758)							1
Conistra rubiginea ([Denis & Schiffermüller], 1775)	5			4			
Conistra veronicae (Hübner, 1813)	1			1			
Cyclophora puppillaria (Hübner, 1799)	12			1			1
Dasycorsa modesta (Staudinger, 1879)	8			10			
Egira conspicillaris (Linnaeus, 1758)	5	1		2			2

Epimecia ustula (Freyer, 1835)	3		1			
Ethmia pusiella (Linnaeus, 1758)	1					
Etiella zinckenella (Treitschke, 1832)	1					
Eublemma ostrina (Hübner, 1808)			1			
Eupithecia centaureata ([Denis & Schiffermüller], 1775)					1	
Eupithecia dodoneata Guenée, 1858	5		3			
Eupithecia oxycedrata (Rambur, 1833)	47	5	23		2	
Gymnoscelis rufifasciata (Haworth, 1809)	3	1	2			
Harpyia milhauseri (Fabricius, 1775)	1					
Heliothis nubigera Herrich-Schäffer, 1851	1					
Horisme vitalbata ([Denis & Schiffermüller], 1775)	2		3			
Hypena palpalis (Hübner, 1796)			1			
Lithophane ornitopus (Hufnagel, 1766)		1				
Lycia graecarius (Staudinger, 1861)	1	4	6		2	
Lycia hirtaria (Clerck, 1759)	2		2			
Lygephila procax (Hübner, [1813])	1	1				
Menophra abruptaria (Thunberg, 1792)	1	2	4			1
Mirlatia arcuata Hausmann, László, Mayr & Huemer, 2023	1					
Mythimna l-album (Linnaeus, 1767)	1					
Mythimna sicula (Treitschke, 1835)	4	3	4			
Mythimna unipuncta (Haworth, 1809)	1	1				
Nebula nebulata (Treitschke, 1828)		1	4			
Nola subchlamydula Staudinger, 1870	1		4		3	
Nomophila noctuella ([Denis & Schiffermüller], 1775)	1			5-10		
Nycteola revayana (Scopoli, 1772)	1	1	1			
Orthonama obstipata (Fabricius, 1794)	1					
Orthosia cerasi (Fabricius, 1775)	19	3	2			
Orthosia cruda ([Denis & Schiffermüller], 1775)	8	1	3			1
Orthosia miniosa ([Denis & Schiffermüller], 1775)	1	3				
Pachycnemia hippocastanaria (Hübner, 1799)	33	4	9			
Panolis flammea ([Denis & Schiffermüller], 1775)	3	1				2

Peribatodes rhomboidaria ([Denis & Schiffermüller], 1775)				1			
Peridroma saucia (Hübner, 1808)				2			
Perigrapha rorida (Frivaldszky, 1835)	16		1	4			
Plutella xylostella (Linnaeus, 1758)	3						
Saturnia pyri ([Denis & Schiffermüller], 1775)	2						
Scopula marginepunctata (Goeze, 1781)	1	2					
Spudaea ruticilla (Esper, 1791)	42	4		12			3
Thera cupressata (Geyer, 1831)						1	
Valeria oleagina ([Denis & Schiffermüller], 1775)		1					
Watsonalla uncinula (Borkhausen, 1790)				1			
Phalacropterix praecellens (Staudinger, 1870)				1 pupa			
Pachythelia villosella (Ochsenheimer, 1810)				1 pupa			
Canephora hirsuta (Poda, 1761)				1 pupa			
Synopsia sociaria (Hübner, 1799)	1 larva						
Dicrognophos sartata (Treitschke, 1827)				1 larva			
Eilema caniola (Hübner, 1808)					1 larva		
Arctia villica (Linnaeus, 1758)					1 larva		
Callophrys rubi (Linnaeus, 1758)					1		
Celastrina argiolus (Linnaeus, 1758)					1-5		
Colias croceus (Geoffroy in Fourcroy, 1785)					1-5		
Ematurga atomaria (Linnaeus, 1758)					1-5		
Glaucopsyche alexis (Poda, 1761)					1-5		
Gonepteryx cleopatra (Linnaeus, 1767)					1		
Gonepteryx rhamni (Linnaeus, 1758)					5-10		
Iphiclides podalirius (Linnaeus, 1758)					1-5		
Lasiommata megera (Linnaeus, 1767)	1-5				30<		
Libythea celtis (Laicharting, 1782)					1-5		
Macroglossum stellatarum (Linnaeus, 1758)					1-5		
Nymphalis antiopa (Linnaeus, 1758)					2		
Papilio machaon Linnaeus, 1758					1-5		
Pararge aegeria (Linnaeus, 1758)					1-5		

Pieris brassicae (Linnaeus, 1758)	1-5
Pieris napi (Linnaeus, 1758)	10-30
Pieris rapae (Linnaeus, 1758)	5-10
Vanessa atalanta (Linnaeus, 1758)	1
Vanessa cardui (Linnaeus, 1758)	1-5

No. 1	Croatia, Dalmatia, Drvenik, southern slope, ca. 360 m, light trap, 43.1713°N, 17.2355°E, 14.iii.2024, leg. Róbert Enyedi, Gergely Katona, Tamás Korompai & Balázs Tóth
No. 2a	Croatia, Dalmatia, Drvenik, Divići, tourist trail, ca. 290 m, light trap, 43.1729°N, 17.2234°E, 15.iii.2024, leg. Róbert Enyedi, Gergely Katona, Tamás Korompai & Balázs Tóth
No. 2b	Croatia, Dalmatia, Drvenik, Divići, road to an abandoned house, ca. 280 m, sugar rope, 43.1723°N, 17.2227°E, 15.iii.2024, leg. Róbert Enyedi, Gergely Katona, Tamás Korompai & Balázs Tóth
No. 2c	Croatia, Dalmatia, Drvenik, Osmina, tourist trail, ca. 600 m, light trap, 43.1768°N, 17.2300°E, 15.iii.2024, leg. Róbert Enyedi, Gergely Katona, Tamás Korompai & Balázs Tóth
No. 2d	Croatia, Dalmatia, Drvenik, gravel road between Petrovići and Divići, 210–270 m, daytime, 15.iii.2024, observed by Róbert Enyedi, Gergely Katona, Tamás Korompai & Balázs Tóth
No. 3a	Croatia, Dalmatia, Drvenik, southern slope, ca. 360 m, light trap, 43.1713°N, 17.2355°E, 16.iii.2024, leg. Róbert Enyedi, Gergely Katona, Tamás Korompai & Balázs Tóth
No. 3b	Croatia, Dalmatia, Drvenik, oak woodland, ca. 200 m, light trap, 43.1718°N, 17.2243°E, 16.iii.2024, leg. Róbert Enyedi, Gergely Katona, Tamás Korompai & Balázs Tóth