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BREAKING WESTERN LIMITS: REPEATED OCCURRENCES OF THE OLEANDER HAWK-MOTH *DAPHNIS NERII* (LEPIDOPTERA, SPHINGIDAE) INTO THE IBERIAN PENINSULA EXTEND ITS DOCUMENTED EUROPEAN RANGE

E. Marabuto^{1,*} & A. Soares²

¹ MNHNC — Museu Nacional de História Natural e da Ciência, Universidade de Lisboa, Lisboa, Portugal, Leibniz Institute for the Analysis of Biodiversity Change, Museum Koenig, Bonn; and Museum of Zoology, Senckenberg Natural History Collections Dresden, Germany
E-mail: eduardo.marabuto@gmail.com

² TAGIS — Centro de Conservação das Borboletas de Portugal, Rua das Portas de Évora, 3 7480-152 Avis, Portugal
E-mail: albano.apoidea@gmail.com

* Corresponding author

E. Marabuto (<https://orcid.org/0000-0001-7017-8451>)

A. Soares (<https://orcid.org/0000-0002-9002-0333>)

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Breaking western limits: repeated occurrences of the oleander hawk-moth *Daphnis nerii* (Lepidoptera, Sphingidae) into the Iberian Peninsula extend its documented European range. Marabuto, E., Soares, A. — The oleander hawk-moth *Daphnis nerii* (Linnaeus, 1758) is a strongly migratory sphingid whose occurrence in western Europe is typically sporadic. We report the first confirmed records of the species in Portugal, based on isolated adult observations and the discovery of larvae and pupae on *Nerium oleander*, and improve on what is known in Spain. Additional adult records from 2018 and 2024 demonstrate repeated but irregular occurrence across the region. We discuss the recent findings within a broader European context and in relation to long-standing assumptions on the species' migratory origin, using records from 2018 onwards in both Spain and Portugal. Although local establishment cannot currently be confirmed, this may change under increasingly favourable climatic conditions.

Key words: oleander hawk-moth, faunistics, migration, range expansion, Portugal, Spain, *Nerium oleander*.

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Introduction

Daphnis nerii (Linnaeus, 1758) is a large sphingid moth of predominantly Afrotropical and Oriental distribution, extending from sub-Saharan Africa and the Mediterranean basin eastwards to Pakistan and the Philippines (Pittaway, 2025). The species is widely recognised as a strong migrant, capable of long-distance dispersal and irregular colonisation events beyond its core range.

Within Europe, *D. nerii* is considered resident in parts of the eastern Mediterranean, including Sicily, Crete, Cyprus, southern Italy and Greece (Lewandowski & Fisher, 2002; Pittaway, 2025). Elsewhere in Europe it is generally regarded as a vagrant species, unable to persist through colder winters (Leraut, 2006; Jailloux & Haxaire, 2025). Nevertheless, it has been recorded from most European countries, reaching as far north as the Shetland Islands, Sweden and Finland. Despite this broad European coverage, it has not been reliably recorded from mainland Portugal (Marabuto, 2006; Corley, 2015). Historical reports from the Azores (Morelet, 1860; Drouët, 1861), subsequently listed by Vieira (1997) and Pittaway (2025), remain unconfirmed.

Where resident, *D. nerii* inhabits lightly wooded areas, river valleys, oases and anthropogenic environments such as gardens, where host plants are available. Larvae feed primarily on Apocynaceae, especially *Nerium oleander* L., but also occasionally on *Vinca* spp. Young larvae begin by feeding on the terminal shoots and flowers, and as they grow, proceed to lower sections of the oleander bush, which becomes characteristically defoliated or scarred (Danner et al., 1998). After completing development, larvae descend to the base of the host plant and pupate within a loose cocoon composed of leaf-litter and silk. The species does not undergo diapause and may produce multiple generations annually under tropical conditions (Heinig, 1976). In temperate regions, however, its persistence depends entirely on recurrent immigration events.

Host-plant availability is unlikely to be limiting in southern Europe. *Nerium oleander* is naturally distributed along Mediterranean river systems and is widely cultivated throughout Iberia as an ornamental shrub. In Portugal it occurs both in natural riparian habitats and extensively in urban and peri-urban landscapes (Correia et al., 2026). Despite this widespread trophic availability, *D. nerii* has always remained a rare sight in Iberia, suggesting that other factors play a more decisive role.

At a broader scale, numerous studies have documented climate-driven shifts in Lepidoptera distributions, particularly among large, mobile species of African or Mediterranean origin which reach more northern latitudes almost every year. Recording schemes and naturalist-led initiatives track and record particularly favourable weather patterns which allow such 'migrant' or dispersive taxa to be recorded where they are not considered to be native, particularly in the UK and France. In Spain, although such an initiative is not centralised, the work of keen observers has produced many interesting observations over the last 20 years (e. g. Grundy et al., 2024). It is understood that these processes, involving an increased frequency of northward and westward movements, changes in phenology, and episodic breeding outside historical ranges, often linked to anomalously warm periods, extended summers, and persistent southerly airflow may eventually allow establishment of these species at some point (Parmesan et al., 1999; Hill et al., 2001; Battisti et al., 2005;

Wilson et al., 2007). Even if establishment has occurred in some species, such as *Eublemma baccatrix* (Knapp et al., 2023) recently in Spain, only a minority do so successfully, whilst many are still lacking evidence.

Within Western Europe, *D. nerii* has long been regarded as a rare visitor with widely scattered records both temporally and geographically (Warnecke, 1928). A marked change has occurred in recent years, with *D. nerii* records increasing substantially in several European countries such as in Germany (Trusch, 2016; Händel, 2017, 2019), Hungary (Haris et al., 2025), France and Belgium (Jailloux & Haxaire, 2025).

It was through the analyses of Jailloux & Haxaire (2025) that the real extent of the *D. nerii* influx could be understood. The authors have clearly demonstrated that the species experienced an irregular albeit stark increase in French records since 2013, producing at least four peaks of abundance: 2014, 2016, 2018 and by far the largest, in 2023–2024. Altogether in this period there were well above 300 observations of the species throughout the whole of continental France and Corsica.

In Spain, the recent literature reveals an increase of records in the same time-period yet represented by far smaller numbers. Altogether there are less than 20 observations in Spain prior to 2016, when the species began to be recorded after decades of absence: first from Castellón and the Basque country (Montagud & Engra, 2017; Alday & Gainzarain, 2020), then from Catalonia to Extremadura, Navarra and Murcia (Guzmán, 2018; Monasterio León et al., 2018; Pardo de Santayana Sanz & Pardo de Santayana Trueba, 2019) and even Mallorca in the Balearic Archipelago (Truyols Henares et al., 2019). More recently, and after a publishing hiatus, *D. nerii* was recorded as a novelty for the Campo de Gibraltar area in 2024 (Gaona Ríos & Tirado, 2024) and Málaga in 2025 (Gonella Gómez & Moreno-Benítez, 2026).

In Spain, records include both inland and northern localities, and both larval and pupal stages, besides imagoes, demonstrating that the species can complete its development locally when conditions allow. Particularly noteworthy are records from eastern Spain and the Balearic Islands, where larvae close to pupation and freshly emerged adults have been documented, providing unequivocal evidence of reproduction following arrival (Monasterio León et al., 2018; Montagud Alario & Engra, 2017; Pardo de Santayana and Pardo de Santayana, 2019; Tuyols-Henares et al., 2019; Gaona Ríos & Tirado, 2024).

Against this background, the possibility that *D. nerii* could reach Portugal through these dispersal events became real in 2014, followed by more records in 2018 and 2024. Here we document these first confirmed Portuguese records, including evidence of successful local development, and evaluate their significance within the broader western European context.

Material and Methods

Scope and data compilation

To document the occurrence of *Daphnis nerii* in Portugal and place it within a broader Iberian context, we compiled (1) all confirmed Portuguese records, and (2) published and publicly accessible Spanish records from 2010 onwards.

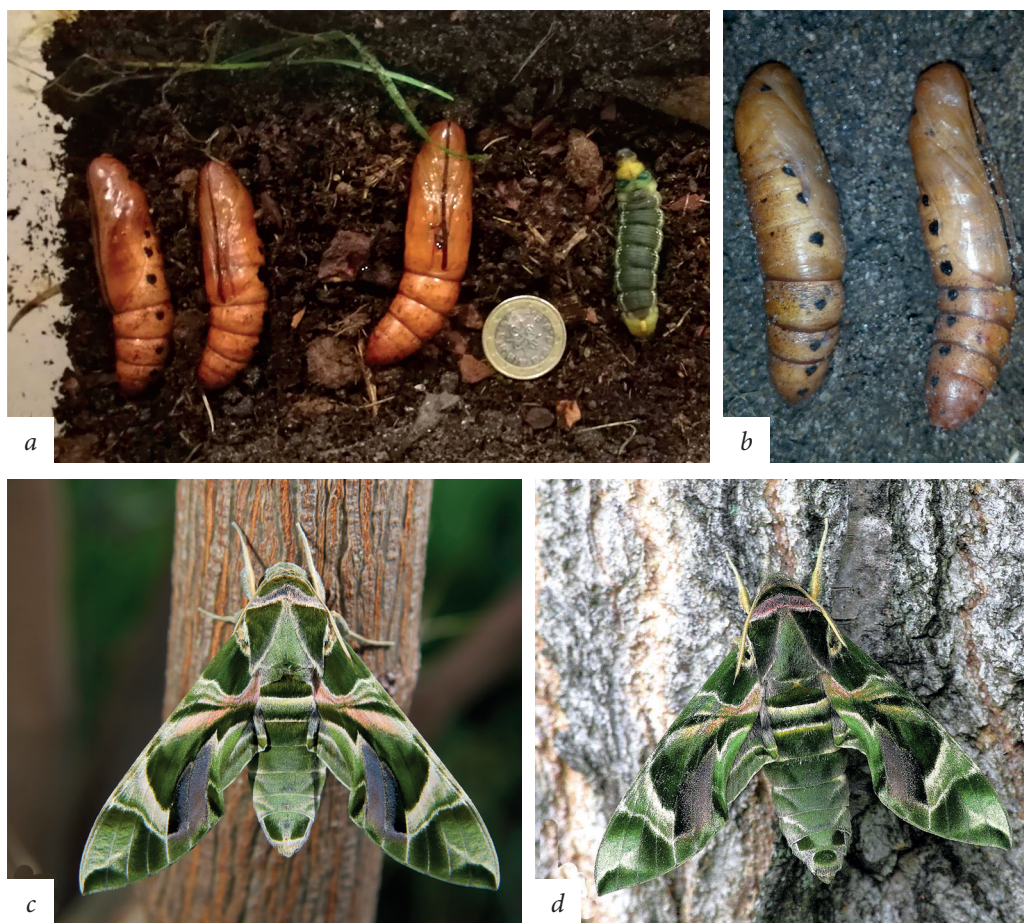


Fig. 1. *Daphnis nerii* from Montijo, Portugal (2018): *a, b* — pupae and pre-pupa; *c* — female; *d* — male. Photos: *a, c*: E. Marabuto; *b, d*: A. Soares

Portuguese records are based on examined material, verified photographic evidence, or the iNaturalist platform. Spanish records were gathered from peer-reviewed publications, or online platforms such as iNaturalist and Observation.org (iNaturalist community, 2026; Observation.org, 2026). Only observations supported by clear photographic documentation allowing reliable species-level identification were included.

All validated Iberian records were aggregated chronologically, together with relevant metadata to allow temporal comparison with documented western European peaks and are provided in Supplementary Material S1.

Portuguese records

On 26.11.2014, a female *D. nerii* was collected shortly after dusk at the Municipal Stadium of Seia (Guarda, central Portugal) (leg. António Rodrigues). The specimen was then delivered to Hugo Figueiredo and José Conde (Centro de Interpretação da Serra da Estrela, CISE) in Seia, and its identity confirmed by the authors. The specimen remains preserved in the institutional collection of CISE. This constitutes the earliest confirmed Portuguese record of the species.

In October 2018 (precise date unknown), larvae feeding on *Nerium oleander* were located in an urban area of Montijo (Setúbal, southern Portugal) (pers. comm. Tânia García to AS) and collected, after which a malformed adult emerged. Both authors inspected the site on 28.11.2018 and inspected four *N. oleander* shrubs bearing characteristic feeding traces. Although no larvae were located, eight fully formed pupae and one pre-pupa were located beneath one of the shrubs within the leaf-litter and upper soil layer. The collected pupae were maintained under indoor conditions until adult emergence between December 2018 and January 2019. Emerged adults were photographed and retained as voucher specimens in the authors’ personal collections and provide unequivocal evidence of successful local development in Portugal.

On 27.11.2018 an adult male was photographed in Benfica (Lisboa), photograph was shown to entomologist Dr. Amália Oliveira (University of Évora, Portugal), who relayed the information to the authors. The specimen remained *in situ* and was not collected.

On 29.11.2024 an adult female was photographed in São Mamede de Infesta (Porto) in an urban context and uploaded and is publicly available in the iNaturalist platform (observation no. 274013833). This represents the most recent confirmed Portuguese record.

A full list of the five Portuguese records is presented in Table 1. Some of the records are shown in Fig. 1.

Spanish records (published sources)

We reviewed Spanish records of *D. nerii* published since 2014. Sources include regional entomological bulletins and faunistic notes documenting adult and larval occurrences across the Iberian Peninsula and the Balearic Islands: (Montagud & Engra, 2017; Monasterio León et al., 2018; Guzmán, 2018; Pardo de Santayana & Pardo de

Table 1. Portuguese records of *Daphnis nerii*. Original exact coordinates have been converted to MGRS 1 km to account for original location uncertainty and the high mobility of *D. nerii*, rendering exact point data less relevant

Re-cord	Locality	MGRS 1km	Date	Observer	Source	Life stage
#1	Seia, Guarda	29TPE1074	26.11.2014	António Rodrigues	Pers comm.: Hugo Figueiredo & José Conde	Adult female
#2	Montijo, Setúbal	29SNC0184	10.2018	Tânia García	This work	3 larvae on <i>Nerium oleander</i>
#3	Parque Silva Porto, Benfica, Lisboa	29SMC8288	27.11.2018	Marisa Gomes	Pers. comm.: Amália Oliveira	Adult male
#4	Montijo, Setúbal	29SNC0184	28.11.2018	Eduardo Marabuto, Albano Soares	This work	8 pupae, 1 pre-pupa under <i>Nerium oleander</i>
#5	São Mamede de Infesta, Porto	29TNF3059	29.11.2024	António Sousa	iNaturalist (274013833)	Adult female

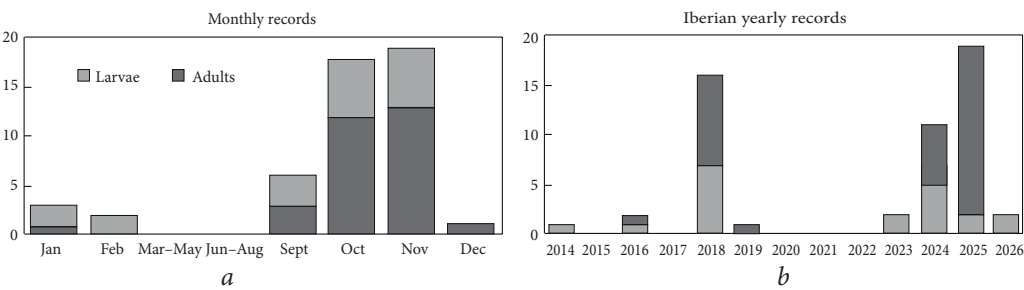


Fig. 2. Temporal distribution of Iberian (Portugal and Spain) records of *D. nerii*: *a* — monthly distribution; *b* — annual distribution

Santayana, 2019; Truyols-Henares et al., 2019; Alday & Gainzarain, 2020; Gaona Ríos & Tirado, 2024 and Gonella Gómez & Moreno Benítez, 2026). Altogether, 19 literature records were recovered, which capture the marked concentration of detections in autumns of 2018 and 2025, their occurrence in both coastal and inland regions, and multiple confirmed larval records, indicating successful oviposition and development following putative immigration, even over the winter.

Spanish records (Online)

For completeness, as not all observations are have been formally published, we further surveyed online biodiversity-recording platforms such as iNaturalist and Observation.org for Spanish observations between 2018 and early 2026. Only records supported by photographs permitting reliable identification were included. Observations lacking sufficient diagnostic detail were excluded, as well as cross-platform duplicates.

A total of 27 Spanish iNaturalist and three Observation.org records meeting these criteria were compiled. These include both adults and larvae, with geographic

Table 2. Summary of confirmed Iberian records of *D. nerii* (2014–2026)

Year	Portugal	Literature	Online	Total records	Larva / Pupa	Adult	Remarks
2014	1	0	0	1	0	1	Only PT
2015	0	0	0	0	0	0	No records
2016	0	2	0	2	1	1	E Iberia
2017	0	0	0	0	0	0	No records
2018	3	11	2	16	7	9	Strong influx
2019	0	0	1	1	0	1	Potential survival
2020	0	0	0	0	0	0	No records
2021	0	0	0	0	0	0	No records
2022	0	0	0	0	0	0	No records
2023	0	0	2	2	2	0	Minor influx
2024	1	1	9	11	5	6	Strong influx
2025	0	5	14	19	2	17	Potential local dispersal
2026	0	0	2	2	2	0	Potential survival
Totals	5	19	30	54	19	35	

representation across the whole of the Iberian Peninsula, from Catalonia to Andalucía, Galicia and the Balearic Islands.

While citizen-produced data may reflect variation in reporting effort, the repeated documentation of larvae across multiple years provides independent evidence of episodic reproduction within Iberia and an ongoing continuity of the presence of *D. nerii* in the region.

Data synthesis

All compiled, currently known 54 Iberian records (Portuguese and Spanish, published and platform-based) were aggregated chronologically and are available raw in Supplementary Material S1. The evolution of Iberian records in the period 2014–2026 is represented in Fig. 2, *b*, while their monthly appearance is shown in Fig. 2, *a*. Although recording effort could not be standardised, the resulting chronology highlights a first occurrence in the area in 2014, pronounced occurrence peaks in 2018, 2024 and 2025, and extended presence between 2023 and 2026. This closely corresponds to the pattern documented in France and Belgium (Jailloux & Haxaire, 2025). A summary of confirmed Iberian records of *D. nerii* in 2014–2026 is presented in Table 2.

Discussion

The confirmation of *Daphnis nerii* in Portugal represents a significant addition to the national Lepidoptera fauna and extends the documented western limit of the species in mainland Europe. Although long expected given the species' strong migratory capacity and its presence in neighbouring Spain, no verified Portuguese records had previously been published (Marabuto, 2006; Corley, 2015).

The Portuguese observations documented here span a ten-year period (2014–2024) and include both adult individuals and evidence of successful local development. The Montijo record (2018), supported by larval feeding traces, multiple pupae and successful rearing to adulthood, provides unequivocal confirmation that *D. nerii* is capable of completing its development in Portugal under favourable conditions, and the country lies within the potential reproductive envelope of the species during peak dispersal years. The 2014 and 2024 adult records further demonstrate that these vagrants are able to reach both inland and northern areas.

When placed in an Iberian context, these records coincide temporally with documented peaks of occurrence elsewhere in western Europe. Jailloux & Haxaire (2025) demonstrated a marked increase in French records since 2013, with pronounced peaks in 2014, 2016, 2018 and 2023–2024. The Portuguese records correspond closely with three of these years (2014, 2018, 2024), whereas the 2016 peak was barely recorded in the region, only in the Basque Country and Castellón (Montagud & Engra, 2017; Alday & Gainzarein, 2020), suggesting that although there might be a filtering effect through the Pyrenees, Iberia participates in broader dispersal episodes affecting much of western Europe.

Spanish data further reinforce this interpretation. Prior to 2018, *D. nerii* was considered a rare and irregular visitor to Spain, with scattered historical mentions (see

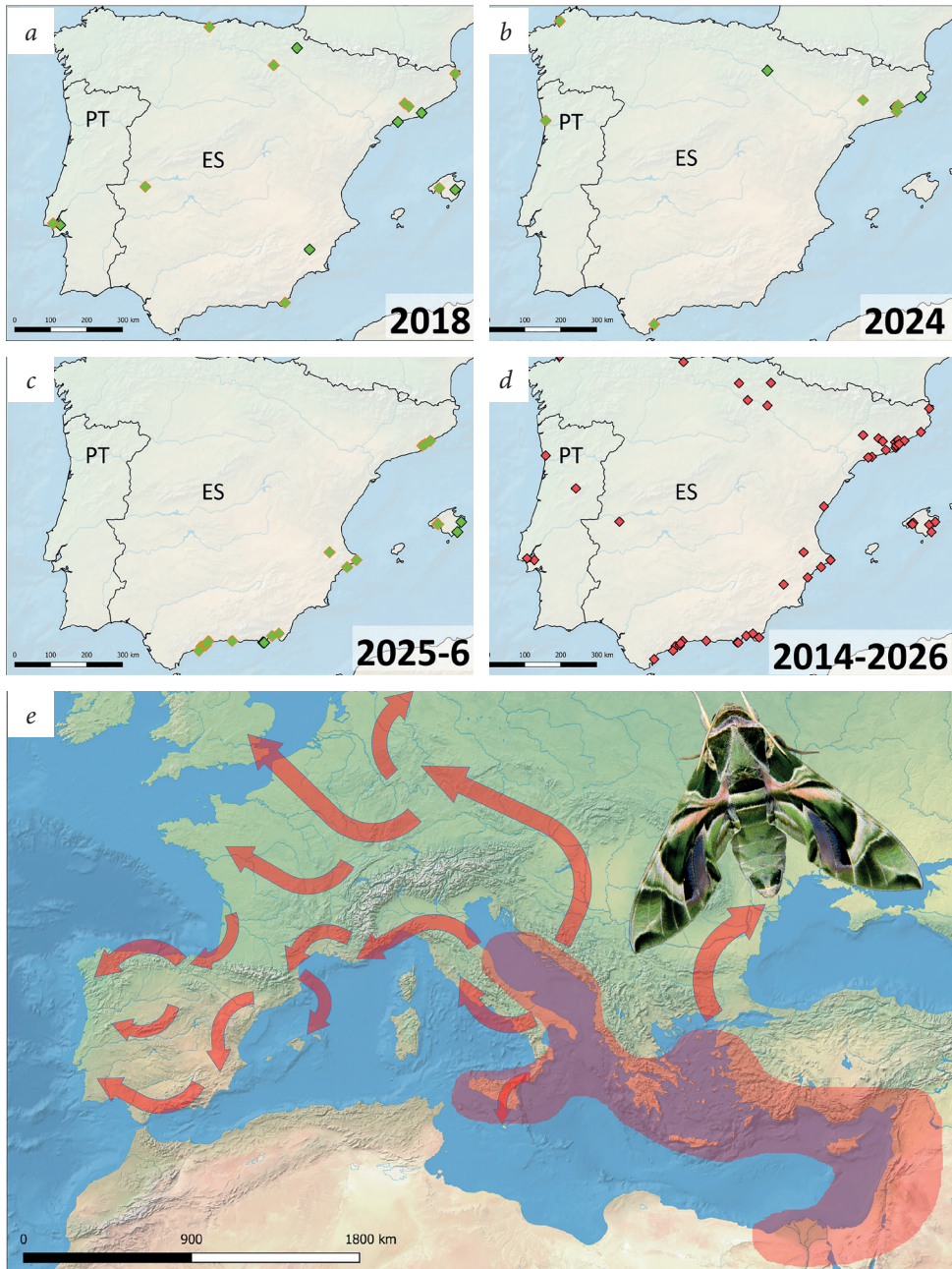


Fig. 3. Mapping of *D. nerii* in Iberia and beyond: *a* — 2018 records; *b* — 2024; *c* — 2025–2026; *d* — all records since 2014; *e* — putative migration routes of *D. nerii* across western Europe, out of resident or most often recorded range (in red)

Monasterio León et al., 2018). However, autumn 2018 produced a notable concentration of records across Catalonia, Valencia, Murcia, Extremadura, Navarra, the Basque Country and the Balearic Islands (Montagud & Engra, 2017; Monasterio León et al., 2018; Guzmán, 2018; Pardo de Santayana & Pardo de Santayana, 2019; Truyols-Henares et al., 2019) (Fig. 3, *a*). Many of these involved larvae or pre-pupal stages, demonstrating successful oviposition and development following immigration.

More recent Spanish observations (2023–2026), including numerous larval records from online platforms, indicate that such episodes have continued (e. g. Gaona Ríos & Tirado, 2024; Gonella Gómez & Moreno Benítez, 2026; iNaturalist community, 2026). Each migration wave has been slightly different. Whilst in 2024 the species appeared mostly in northern Iberia (Fig. 3, *a*), in 2025–2026 it remained mostly along the Mediterranean coasts and the Balearic Islands (Fig. 3, *c*). This might suggest that these observations unlikely correspond to fresh migrant arrivals but rather to survivors of previous dispersal events and dispersals within the region — as no records were obtained from the northern part of Iberia, from inland localities nor from western coasts.

Whilst the origin of western European influxes remains largely uncertain, available data supports a hypothesis that challenges the long-standing assumption that Iberian individuals originate primarily from North Africa (e. g. Varea de Luque, 1945; García de Viedma & Gómez-Bustillo, 1976, 1985; Gómez de Aizpúrua, 1986; Monasterio León et al., 2018). The close temporal correspondence between peaks in France and Iberia (perhaps slightly later in the latter), the overall rarity of the species in North Africa and its known at least transitory establishment in the south-eastern Mediterranean, especially in the Dalmatian coast, Crete, Cyprus, Sicily, etc. (Pittaway, 2025; Jailloux & Haxaire, 2025) may indicate a broader eastern Mediterranean source, from which dispersal progresses (north-)westwards and into France and Germany, the British Isles and Scandinavia (Fig. 3, *e*). Such pattern contrasts with the influx patterns and likely African origin of related species such as *Hippotion celerio* (Linnaeus, 1758), *Hyles livornica* (Esper, 1785) or *Acherontia atropos* (Linnaeus, 1758) (Gielen, 1988; Borg et al., 2022; Menz et al., 2022; Jailloux & Haxaire, 2025). This interpretation may help explain why the species has always been rare in Iberia, and why records cluster around the eastern part of the peninsula. At present, the available evidence remains circumstantial and this hypothesis would however require synoptic meteorological analysis and population-level genetic data for confirmation.

Despite the widespread availability of its principal host plant, *Nerium oleander*, in Portugal (Correia et al., 2026) and southern Spain (Ramos-Gutiérrez et al., 2021), there is no evidence that *D. nerii* maintains resident populations in the region. The absence of consistent annual records, coupled with the lack of confirmed overwintering, indicates that Portugal currently lies within a zone of episodic occupancy rather than permanent range expansion. Climatic constraints—particularly winter temperature minima affecting pupal survival — are likely to represent the principal limiting factor. Similar dynamics have been documented for other migratory Lepidoptera at the margins of their ranges (Parmesan et al., 1999; Hill et al., 2001; Battisti et al., 2005; Wilson et al., 2007). Recent records from southern Spain may indicate that at least part of the autumn offspring may be surviving near the coasts (e. g. Gaona Ríos & Tirado, 2024; iNaturalist, 2026 records from Almería).

Notably, *D. nerii* is not strongly attracted to artificial light compared with other large sphingids (Jailloux & Haxaire, 2025), which may contribute to under-detection unless larvae are observed on host plants in urban or garden settings. Consequently, the apparent increase in records may partly reflect improved reporting through digital platforms and greater awareness amongst observers.

In summary, the Portuguese records presented here confirm that *D. nerii* reaches the westernmost margin of continental Europe during periodic dispersal events and is capable of completing its development locally. However, there is currently no evidence of stable establishment. Continued monitoring, particularly of larval occurrences and potential overwintering success, will be necessary to determine whether future climatic conditions favour more persistent occupancy.

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Supplementary Material S1. Full list of Iberian records of *D. nerii* since 2014. Original coordinates have been converted to MGRS 10 km for standardisation purposes, to account for initial location uncertainty and easiness of mapping

Re- cord	Locality	Coun- try	MGRS 10k	Date	Life stage	Source
#1	Seia, Guarda	PT	29TPE17	26.11.2014	adult	new, Hugo Figueiredo & José Conde pers. comm.
#2	Montijo, Setúbal	PT	29SNC08	10.2018	larvae	new, Tânia Garcia pers. comm.
#3	Benfica, Lisboa	PT	29SMC88	27.11.2018	adult	new, Marisa Gomes, Amália Oliveira pers. comm.
#4	Montijo, Setúbal	PT	29SNC08	28.11.2018	pupae	new, Eduardo Marabuto & Albano Soares
#5	São Mamede Infesta, Porto	PT	29TNF35	29.11.2024	adult	iNaturalist (274013833)
#1	Castellón	ES	30SYK53	25.10.2016	larvae	Montagud & Engra, 2017
#2	Vitoria Gasteiz	ES	30TWN24	29.10.2016	adult	Alday & Gainzarain, 2020
#3	Berrioplano, Pamplona	ES	30TXN04	06.09.2018	larvae	Monasterio León et al., 2018
#4	Igualada, Girona	ES	31TCG80	27.09.2018	adult	Monasterio León et al., 2018
#5	La Portalada, Logroño	ES	30TWN40	29.09.2018	adult	Monasterio León et al., 2018
#6	La Isleta, Almería	ES	30SWF87	02.10.2018	adult	iNaturalist (173980712)
#7	Santiago del Campo, Cáceres	ES	29SQD29	04.10.2018	adult	Monasterio León et al., 2018

Continued Supplementary Material S1.

Record	Locality	Country	MGRS 10k	Date	Life stage	Source
#8	Villanueva de Labarces, Valdáliga	ES	30TUN89	06.10.2018	adult	Pardo de Santayana Sanz & Pardo de Santayana Trueba, 2019
#9	Archena, Murcia	ES	30SXH42	21.10.2018	larvae	Monasterio León et al., 2018
#10	Manacor, Mallorca	ES	31SED17	21.10.2018	larvae	Tuyols Henares et al., 2019
#11	Barcelona, Catalonia	ES	31TDF27	22.10.2018	larvae	Guzmán, 2018
#12	Palma, Mallorca	ES	31SDD78	22.10.2018	adult	Tuyols Henares et al., 2019
#13	Piera, Catalonia	ES	31TCF99	25.10.2018	adult	Guzmán, 2018
#14	Roses, Catalonia	ES	31TEG17	31.10.2018	adult	Guzmán, 2018
#15	Torredembarra, Tarragona	ES	31TCF65	19.11.2018	larvae	iNaturalist (18501646)
#16	Airport, Alicante	ES	30SYH44	09.01.2019	adult	Observation.org (304094502)
#17	El Garraf, Barcelona	ES	31TDF07	04.11.2023	larvae	iNaturalist (189934160)
#18	NE Tarragona	ES	31TCF55	12.11.2023	larvae	iNaturalist (190802840)
#19	Sotogrande, San Roque (Cádiz)	ES	30STF91	26.02.2024	adult	Gaona Ríos & Tirado, 2024
#20	Santiago, Ferrol, Galicia	ES	29TNJ61	18.09.2024	larvae	iNaturalist (242657253)
#21	Santiago, Ferrol, Galicia	ES	29TNJ61	20.09.2024	larvae	iNaturalist (243381647)
#22	Mollet del Vallés, Barcelona	ES	31TDF39	07.10.2024	adult	iNaturalist (246298454)
#23	Tàrrrega, Lleida	ES	31TCG41	09.10.2024	adult	iNaturalist (246501212)
#24	Santiago, Ferrol, Galicia	ES	29TNJ61	21.10.2024	adult	iNaturalist (248627184)
#25	Peralta, Navarra	ES	30TWM98	02.11.2024	larvae	iNaturalist (250117969)
#26	Tossa de Mar, Girona	ES	31TDG91	15.11.2024	larvae	iNaturalist (251787233)
#27	Cerdanyola del Vallés, Barcelona	ES	31TDF29	16.11.2024	larvae	iNaturalist (253190904)
#28	Barcelona, Catalonia	ES	31TDF38	21.11.2024	adult	iNaturalist (25287182)
#29	El Viso, Níjar, Almería	ES	30SWF68	12.02.2025	adult	iNaturalist (261470211)
#30	Vallada, Valencia	ES	30SYJ00	21.09.2025	adult	iNaturalist (315804314)
#31	Cala d'Or, Mallorca	ES	31SED25	13.10.2025	larvae	Observation.org (376242051)
#32	Barcelona, Catalonia	ES	31TDF38	19.10.2025	adult	iNaturalist (321815178)
#33	Moraira, Alicante	ES	31SBC58	21.10.2025	adult	iNaturalist (322226526)
#34	Son Servera, Mallorca	ES	31SED38	27.10.2025	larvae	iNaturalist (323441006)
#35	Palma, Mallorca	ES	31SDD68	07.11.2025	adult	iNaturalist (326393350)

End Supplementary Material S1.

Re- cord	Locality	Coun- try	MGRS 10k	Date	Life stage	Source
#36	Almería	ES	30SWF47	12.11.2025	adult	iNaturalist (326216139)
#37	Mijas, Málaga	ES	30SUF55	15.11.2025	adult	Gonella Gómez & Moreno Benítez, 2026
#38	Cabrera de Mar, Barcelona	ES	31TDF59	16.11.2025	adult	iNaturalist (327002678)
#39	Málaga	ES	30SUF76	20.11.2025	adult	iNaturalist (327386698)
#40	Churriana, Málaga	ES	30SUF65	20.11.2025	adult	Gonella Gómez & Moreno Benítez, 2026
#41	Almuñécar, Granada	ES	30SVF36	21.11.2025	adult	iNaturalist (327474014)
#42	Calahonda, Mijas, Málaga	ES	30SUF43	23.11.2025	adult	Gonella Gómez & Moreno Benítez, 2026
#43	Torremolinos, Málaga	ES	30SUF65	23.11.2025	adult	Gonella Gómez & Moreno Benítez, 2026
#44	Palma, Mallorca	ES	31SDD77	25.11.2025	adult	iNaturalist (328461345)
#45	Badalona, Barcelona	ES	31TDF38	25.11.2025	adult	iNaturalist (328194532)
#46	Benidorm, Alicante	ES	30SYH46	29.11.2025	adult	Observation.org (381439986)
#47	Airport, Málaga	ES	30SUF65	15.12.2025	adult	Gonella Gómez & Moreno Benítez, 2026
#48	Punta Entinas, Almería	ES	30SWF26	09.01.2026	larvae	iNaturalist (334142540)
#49	Punta Entinas, Almería	ES	30SWF26	09.01.2026	larvae	iNaturalist (334142541)