

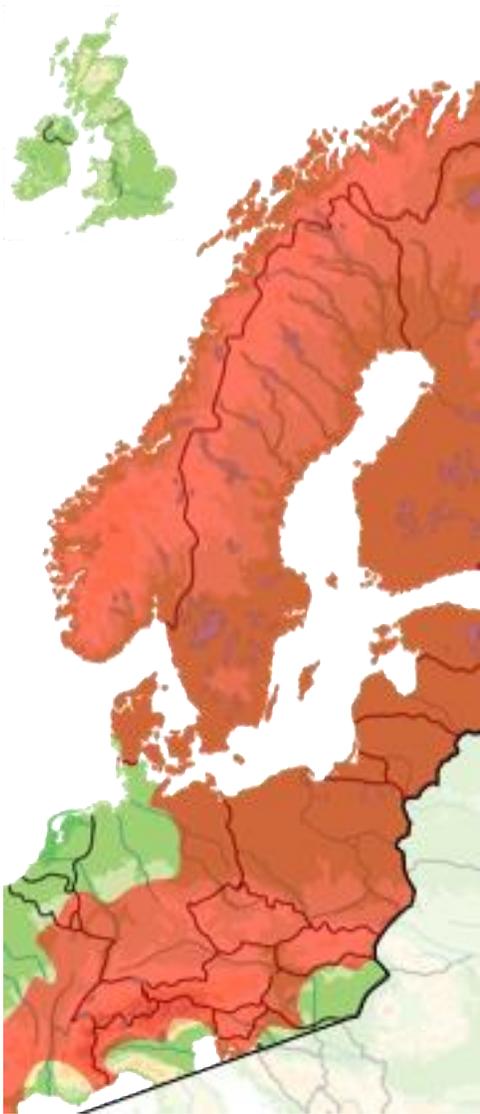
# Skandinavien 2025: die letzte Reise fürs große Tagfalter- und Widderchenbuch

Gregor Markl, Tübingen

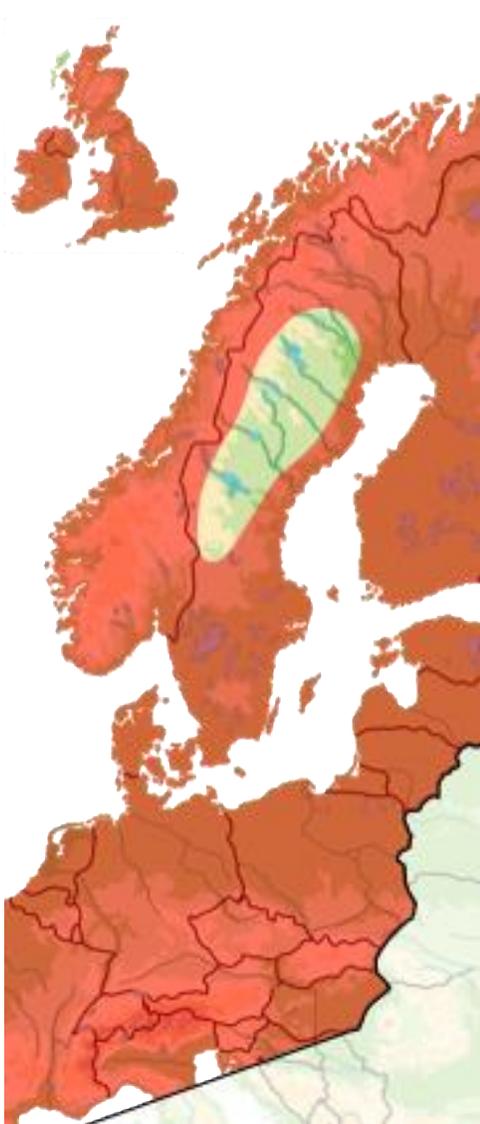
## Mitteleuropäische Arten in Lappland:

- *Lycaena hippothoe*
- *Lycaena phlaeas*
- *Hesperia comma*
- *Erebia medusa*
  - *Pieris napi*
- *Polyommatus icarus*
- *Agriades orbitulus*
  - *Aricia nicias*

*Lycaena hippothoe*



*Lycaena phlaeas*



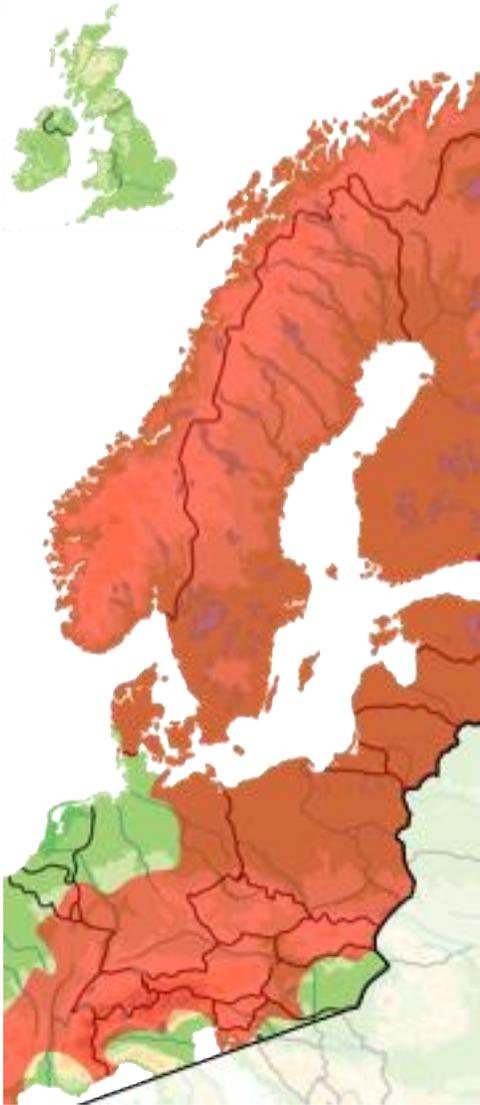
*Hesperia comma*



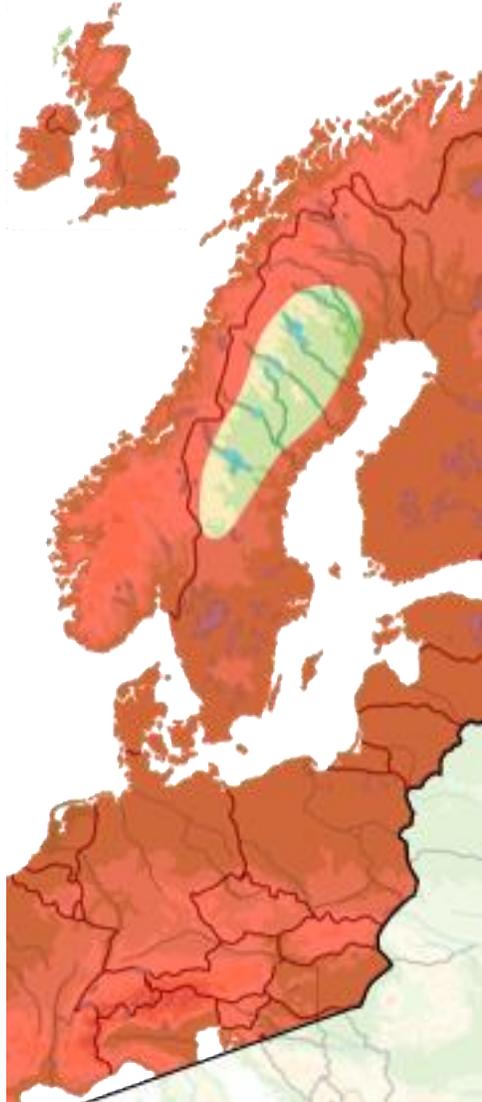
*Erebia medusa*



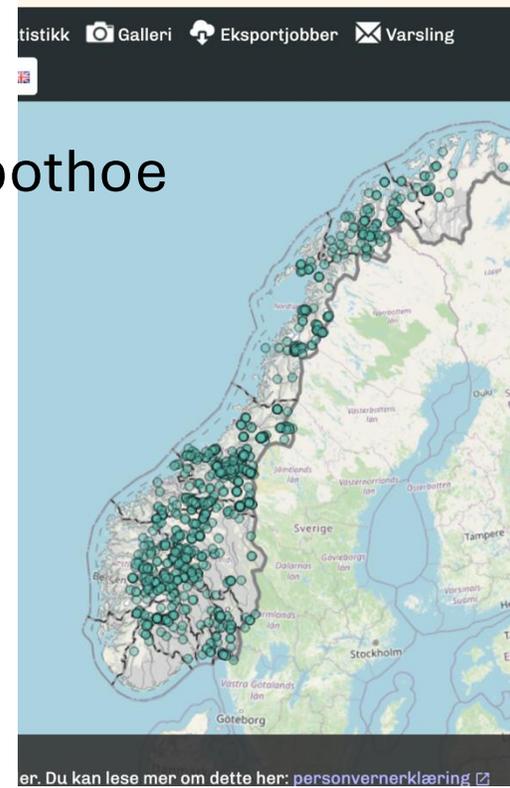
Lycaena hippothoe



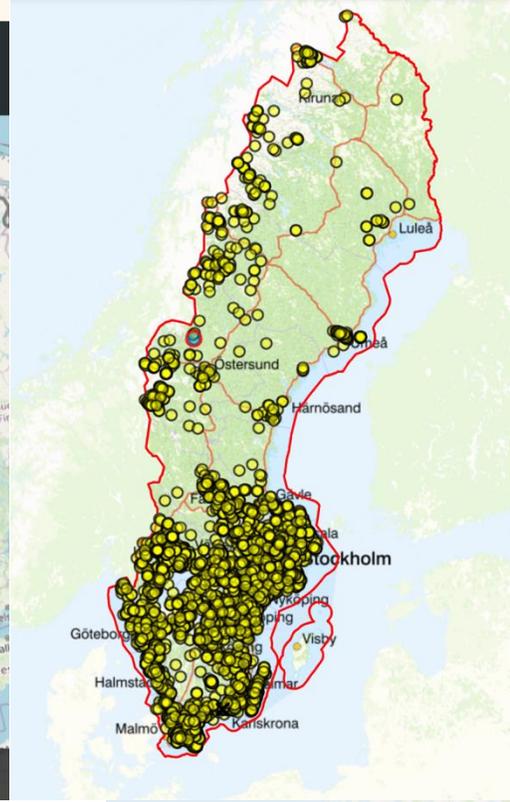
Lycaena phlaeas



hippithoe



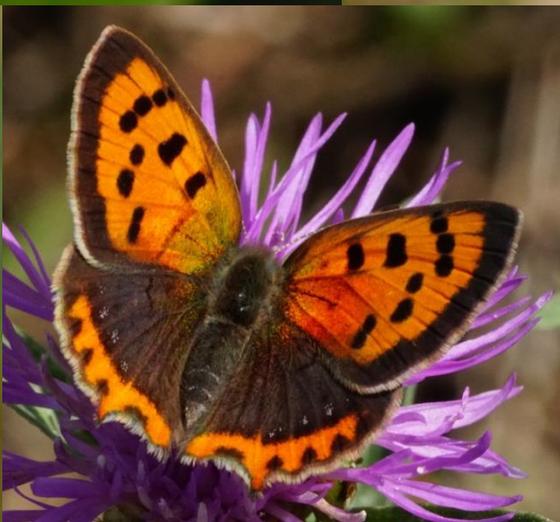
phlaeas



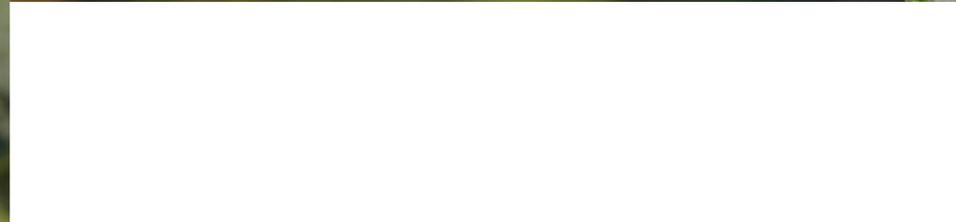
*Lycaena hippothoe stiberi*



*Lycaena phlaeas polaris*



Hesperia comma



*Erebia medusa polaris*



*Pieris napi lapponica/adalwinda*



Agriades orbitulus und Aricia nicias



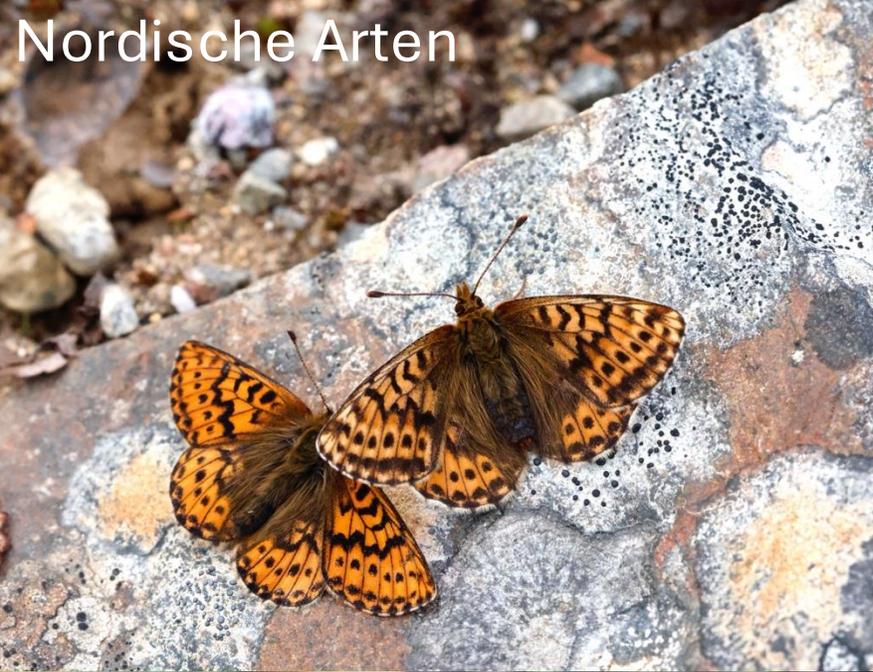
Blaue Weibchen



Südschweden



Nordische Arten



Nordische Arten – *Colias hecla*



# Habitate an der Troms- und Finnmark-Küste



# Habitate an der Troms- und Finnmark-Küste



# Habitats im Inland



# European Butterflies and Zygaenids

Gregor Markl & Wolfgang Wagner

20 Bände, insgesamt 8560 Seiten, in Englisch

Format: 25x30 cm

Raum: Rhone-Nordkap-Ostungarn-Kroatien-Marseille  
sowie alle Arten aus Rumänien

353 Arten, davon 42 Zygaenidae

Sämtliche Präimaginalstadien und Imagines  
sowie Larval- und Imaginalhabitate

# European Butterflies and Zygaenids

Band 1: Introduction; Life cycle; Threats and conservation

Band 2: Habitats

Band 3: Identification plates (imagines, eggs, pupae and mature larvae); Papilionidae

Band 4: HesperIIDae

Band 5: Zygaenidae I (ProcrIDinae, Chalkosiinae, Zygaeninae I)

Band 6: Zygaenidae II (Zygaeninae II)

Band 7: Zygaenidae III (Zygaeninae III)

Band 8: Pieridae

Band 9: Riodinidae and Lycaenidae I (Theclini, Eumaeini, Lycaenini)

Band 10: Lycaenidae II (Polyommadini I)

Band 11: Lycaenidae III (Polyommadini II)

Band 12: Lycaenidae IV (Polyommadini III)

Band 13: Nymphalidae I (Danainae, Charaxinae, Libytheinae, Nymphalini, Limenitidinae, Apaturinae)

Band 13: Nymphalidae II (Argynnini)

Band 14: Nymphalidae III (Melitaeini I)

Band 15: Nymphalidae IV (Melitaeini II, Coenonymphini)

Band 16: Nymphalidae V (Melanargiini, Maniolini, Elymniini)

Band 17: Nymphalidae VI (Satyrini I)

Band 18: Nymphalidae VII (Satyrini II)

Band 19: Nymphalidae VIII (Erebiini II)

Band 20: Nymphalidae IX (Erebiini III)

## *Boloria polaris* (BOISDUVAL, 1828)

*E Polar Fritillary, D Polar-Perlmutterfalter, F Le Nocté polaire*

**Characteristics:** This relatively small *Boloria* species can only be confused with the much more common species *Boloria napaea*, *Boloria freija* and *Boloria chariclea* in its northern Scandinavian tundra habitats (see at these species). All four species have relatively pointed wings. Characteristic of *Boloria polaris* are two distinctive white X on its hindwing underside and the T-shaped light spots in its marginal band. Males are more reddish than females.

**Larval habitats:** Rocky, low-growing tundra slopes with some sheltered depressions from sea level at the Arctic Ocean up to 1400 m. Often in the area of hilltops, but this is probably hill-topping behaviour rather than typical of its larval habitat. Together with *Boloria improba* and the two tundra *Colias* species, this is the butterfly species living in the most extreme and „hostile“ tundra habitats.

**Larval host plants:** Various tundra plants; *Dryas octopetala* is the only confirmed host plant in Scandinavia, but *Empetrum nigrum*, *Cassiope tetragona* and *Phyllodoce caerulea* have been named as potential host plants by various authors as well.

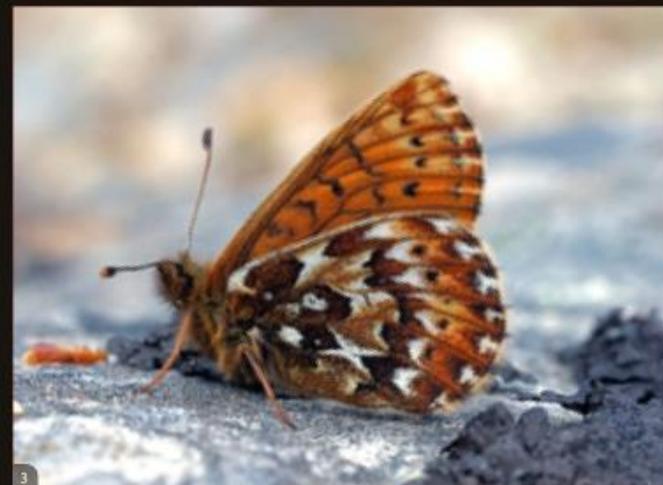
**Larval development and phenology:** The imagines fly from June to mid July, depending on the time of snowmelt. Eggs are deposited singly or in small groups (or not only?) on the larval host plants, but on other plants close to them. Nothing else is known about the pre-imaginal development, but it is highly probable that the development cycle is at least biennial. The imagines show a hilltopping behaviour which, however alternates with very rapid flight periods over large distances, relatively close to the ground (not as close, though, as *Boloria improba*). As is expected for species in extreme tundra habitats, imagines need only a very short time of sunshine to warm up before starting their very rapid flight. Males and females return to their larval habitats every now and then, on the order of tens of minutes; intermittently, they are found preferably around hilltops and in flower-rich patches. If a cloud obscures the sun, they immediately land on the ground.

**Threats and conservation:** This extremely rare *Boloria* species has only a handful of localities in northernmost Scandinavia. It has suffered devastating population declines at one of them (Utsjoki, Finland) and has not been recorded since 2020 at another long-standing of these localities (Torneträsk, Abisko, Sweden). It is unclear, whether this has to do with parasitoids, climate change or other environmental factors. Based on these facts and the very dispersed localities, this species must be considered critically endangered.

**Distribution:** From northernmost Scandinavia to the Kola Peninsula (Russia) and across Siberia and Alaska to the east coast of Greenland.



- 1 Male, Grønnåsen S Alta, Finnmark, N; 6.7.2025
- 2 Female, Lullehatjarro N Torneträsk near Abisko, S; 25.7.2017
- 3 Male, Karigasniemi SW Utsjoki, FIN; 12.7.2025
- 4 Female, Lullehatjarro N Torneträsk near Abisko, S; 25.7.2017
- 5 Habitat during flight period: tundra slop in the foreground with still large patches of snow in the background, Lullehatjarro N Torneträsk near Abisko, S; 5.7.2020
- 6 Tundra habitat at Mt. Aillikas, Utsjoki, FIN; 23.6.2020
- 7 Freshly laid egg, Utsjoki, FIN; 14.7.1997
- 8 Fully grown larva, Utsjoki, FIN; leg. Harry Lonka; 26.7.2005





1 Female, Karigasniemi, FIN; 12.7.2025



2 Male, Karigasniemi, FIN; 12.7.2025

3 Female, Karigasniemi, FIN; 12.7.2025

4 Habitat: flower-rich tundra with *Silene acaulis* and *Dryas octopetala*, Grønnåsen, Gargja S Alta, Finnmark, N; 6.7.2025

5 Courtship (male on the left), Karigasniemi, FIN; 12.7.2025

6 Habitat: flower-rich, rocky tundra slope with *Dryas octopetala*, Karigasniemi, FIN; 12.7.2025

7 Female, Karigasniemi, FIN; 12.7.2025



3



6



7



1 photo: K. Silvonien



2 photo: K. Silvonien



3 photo: K. Silvonien

- 1 L1 larva, Utsjoki, FIN; 19.7.1997  
 2 Freshly laid egg; Utsjoki, FIN; 14.7.1997  
 3 L1 larvae during hatching on *Phyllo-doce caerulea*, a possible, but not yet confirmed larval host plant; Utsjoki, FIN; 19.7.1997  
 4 Mature larva, Utsjoki, FIN; 26.7.2005  
 5 Half-grown larva, Utsjoki, FIN; 9.7.2005  
 6 and 7 Mature larva, Zackenberg Valley (74°30'N/21°00'W), Northeast Green

- land National Park, KN; 12.8.2009  
 8 Half-grown larva, Utsjoki, FIN; 9.7.2005  
 9 and 11 Half-grown larva, Zackenberg Valley (74°30'N/21°00'W), Northeast Greenland National Park, KN; 9.8.2008  
 10 Habitat: Tundra with dwarf willows, also habitat of *A. aquilo*, *B. improba*, *B. napaea* and *C. hecla*; Lullehatjarro N Torneträsk near Abisko, S; 3.7.2020



6 photo: K. Silvonien



7 photo: K. Silvonien



8 photo: K. Silvonien



9 photo: K. Silvonien



4 photo: K. Silvonien



5 photo: K. Silvonien



10



11 photo: K. Silvonien



1 and 2 Copula in clearcut habitat, Dirschingen near Heidenheim N Ulm, D; 13.06.2013

3 Potential hybrid between *Coenonympha hero* and *C. arcania*; Katzenstein near Heidenheim N Ulm, D; 28.5.2012

4 Larval habitat (clear-cut) in early spring; here, penultimate instar larvae were found on sprouting *Carex brizoides*; Heidenheim N Ulm, D; 24.4.2013



5 Copula, Heidenheim, D; 20.5.2009

6 Egg, Heidenheim, D; 24.5.2009

7 L1 larva, Heidenheim, D; 7.6.2009

8 Habitat: coppice forest with standards; Bad Windsheim, Bayern, D; 2.6.2018

9 L2 larva, Heidenheim, D; 30.6.2009

10 L3 larva, Heidenheim, D; 5.7.2009

11 and 12 Close-up of Fig. 4 with L4 larva on sprouting *Carex brizoides* and feeding marks; Heidenheim, D; 24.4.2013





1 and 2 Final instar larva (=L4) on sprouting *Carex brizoides*; Heidenheim N Ulm, D; 24.4.2013  
 3 Final instar larva (=L4, pinkish form); Heidenheim N Ulm, D; 24.4.2013  
 4 Half-grown larva (L3), Dischingen near Heidenheim N Ulm, D; 18.3.2010  
 5 to 8 Final instar larva (pink form); Heidenheim N Ulm, D; 15.4.2010  
 9 to 13 Fully grown larvae, Heidenheim N Ulm, D; 25.4.2006 and 28.4.2013  
 14 to 16 Pupae, variously marked; Heidenheim N Ulm, D; 10.5.2010



# European Butterflies and Zygaenids

Außer den Artseiten:

- Bestimmungsseiten sämtlicher Falterober- und Unterseiten für Weibchen und Männchen (wenn verschieden)
- Bestimmungsseiten für sämtliche ausgewachsenen Raupen, auch in verschiedenen Farbvarianten
- Übersichtsseiten aller Eier und Puppen für alle Familien und viele Unterfamilien
- Übersichtstabelle aller Raupenfutterpflanzen mit zugehörigen Falterarten
- Einführung und Lebensweise: alle Verhaltensweisen, reich bebildert
- Habitate mit den zugehörigen, typischen Falterarten

5 IDENTIFICATION PLATES

LYCAENIDAE - POLYOMMATINAE

5 IDENTIFICATION PLATES

LYCAENIDAE - POLYOMMATINAE

POLYOMMATUS ICARUS



POLYOMMATUS THERSITES



POLYOMMATUS EROS



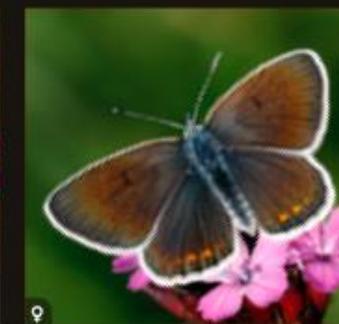
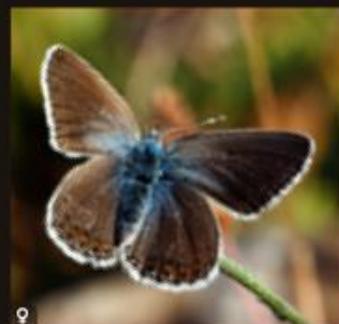
POLYOMMATUS ESCHERI



POLYOMMATUS AMANDUS



POLYOMMATUS DORYLAS





*Z. rumina*



*Z. rumina*



*Z. rumina*



*Z. polyxena*



*Z. polyxena*



*Z. cassandra*



*Z. cerisy*



*Z. cerisy*



*I. podalirius*



*I. podalirius*



*P. mnemosyne*



*P. mnemosyne*



*P. phoebus*



*P. phoebus*



*P. apollo*



*P. apollo*



*P. machaon*



*P. machaon*



*P. machaon*



*P. alexanor*

LYCAENIDAE



*P. orbitulius*



*P. thersites*



*S. acaciae*



*Lycaena phlaeas*

PAPILIONIDAE



*P. apollo*



*P. mnemosyne*



*I. podalirius*



*P. machaon*

PIERIDAE



*P. napi*



*G. rhamni*



*L. sinapis*



*A. cardamines*

HESPERIIDAE



*P. armicanus*



*S. sertorius*



*H. comma*



*T. acteon*



*A. crataegi*

NYPHALIDAE



*A. hyperanthus*



*H. alicyone*



*C. arcania*



*B. selene*

NYPHALIDAE



*E. epiphron*



*E. medusa*



*L. populi*



*A. ilia*

NYPHALIDAE



*A. laodice*



*M. britomartis*



*N. polychloros*

ZYGAENIDAE



*Z. minos (cocoon)*



*A. statice*



*Z. osteroidensis (cocoon)*



*Z. lomiceræ (cocoon with exuvia)*

## LYCAENIDAE



## LYCAENIDAE



## PIERIDAE



## ZYGAENIDAE



## HESPERIIDAE



## NYMPHALIDAE



## NYMPHALIDAE



## NYMPHALIDAE



## NYMPHALIDAE



## NYMPHALIDAE



## RIODINIDAE



## PAPILIONIDAE





photo: I. Seidel

- 1 So called „grey dunes“ are important habitats for the otherwise rare species *Fabriciana niobe* in Germany; Island of Norderney, Niedersachsen, D; 28.6.2015
- 2 *Lycæna phlaeas*, *Hipparchia semele* and *Fabriciana niobe* live in these dunes on the island of Spiekeroog, Niedersachsen, D; 25.4.2022
- 3 to 5 Various aspects of the coast near Loddin on Usedom, Mecklenburg-Vorpommern, D; 7.5.2017



#### Sand dunes (central and eastern Europe)

**Description:** Sand dunes offer particular habitats along the coasts and at large lakes, but only few species can cope with the harsh conditions there: salty soil and food, floods and especially the strong winds are of concern for Lepidoptera.

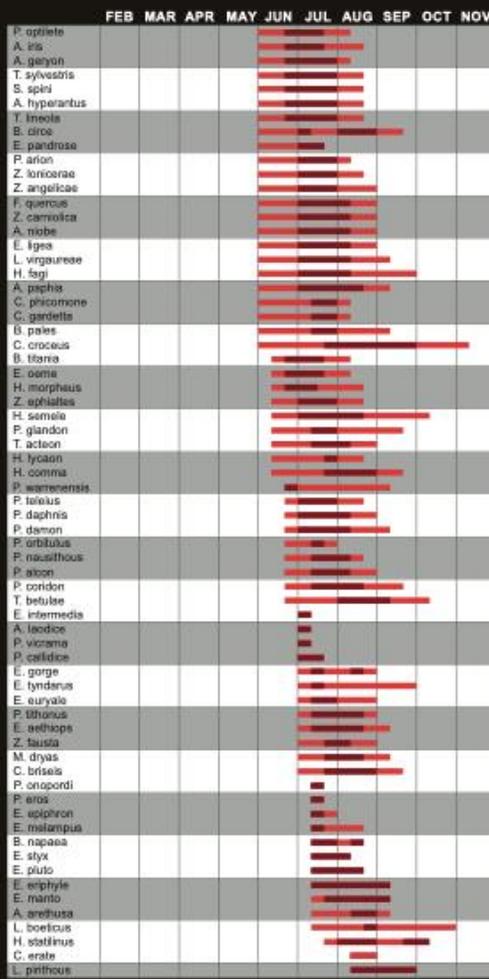
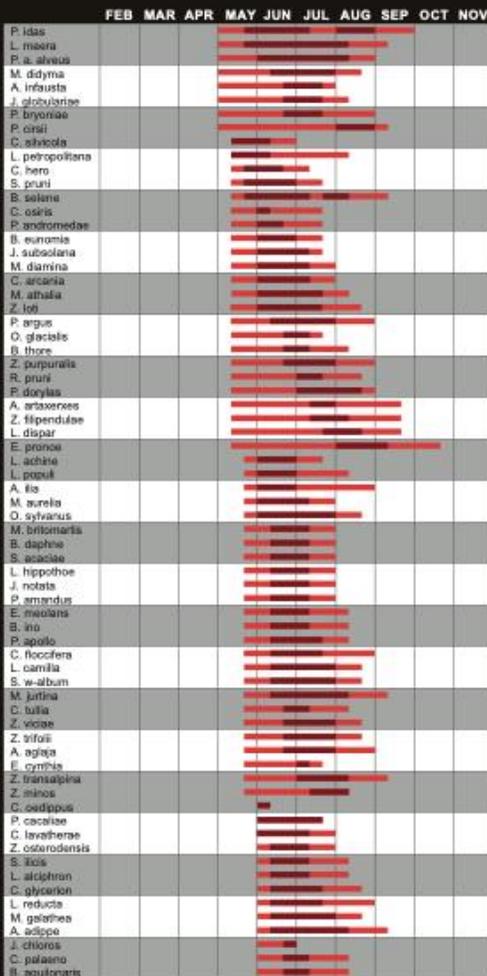
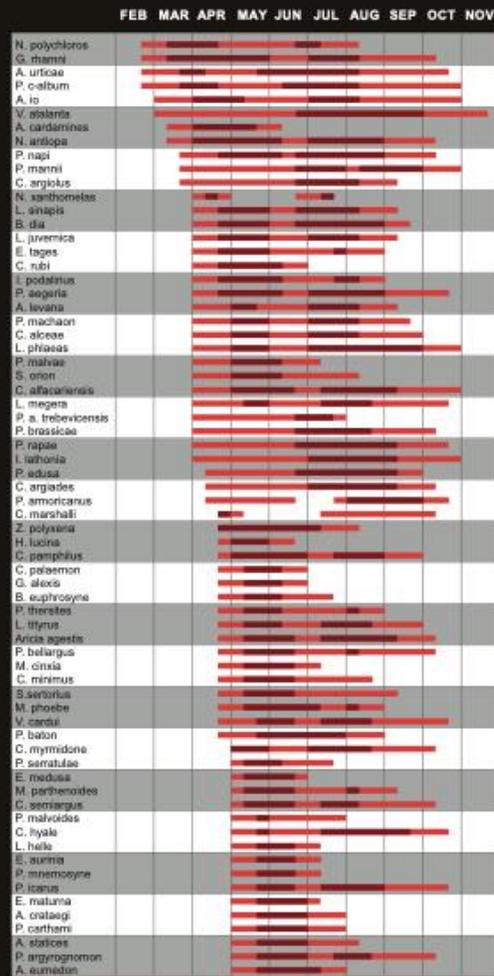
**Typical butterfly species:** *Fabriciana niobe*, *Lycæna phlaeas*, *Callophrys rubi*, *Hipparchia semele*, *Zygaena filipendulae*, *Adscita statice*, *Coenonympha pamphilus*, *Polyommatus icarus*.

## Flight times in central Europe

This double page shows the flight times of central European butterfly species based on data from [schmetterlinge-d.de](http://schmetterlinge-d.de). The red bars show the earliest and latest records, the brownish bars show 90% of all records. The times shown are based on all data between 1970 and 2020 and, hence, include data from before and after the onset of climate change. Note, that flight times today change continuously.



*Boloria aquilinaris copula*



*Lycaena hippothoe male*



*Coenonympha hero male*



*Favonita quercus male*



*Agriades glandon male*



# European Butterflies and Zygaenids

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