

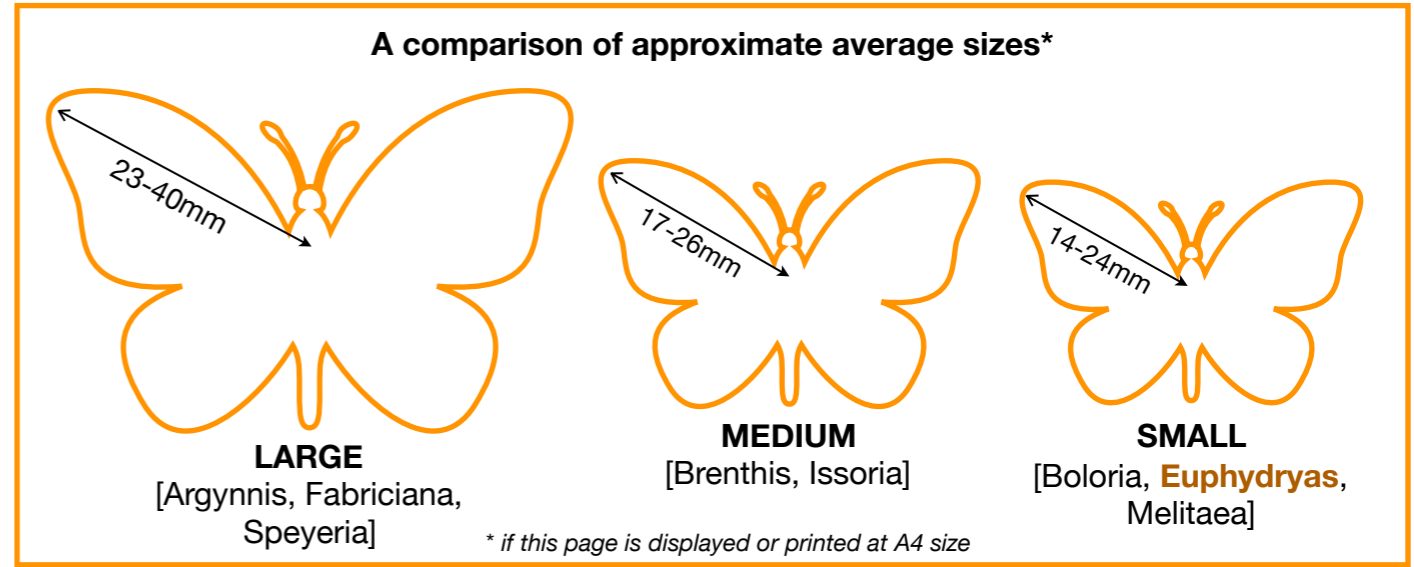


Identification Guide: Small Fritillaries - Euphydryas

Distinguishing Euphydryas by size

Identifying fritillaries* in Europe is difficult due to there being over 40 superficially similar species. As a starting point they are usually roughly divided by size into: 'large' fritillaries [Argynnis, Fabriciana, Speyeria], 'medium-sized' fritillaries [Brenthis, Issoria], and 'small' fritillaries [Boloria, Euphydryas, Melitaea]. Two separate guides in this series cover the Large/Medium Sized and Boloria. A future guide will cover the other small fritillaries, i.e. Melitaea.

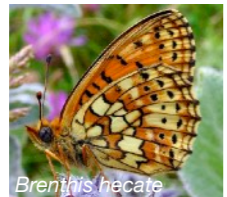
Euphydryas are noticeably smaller than Argynnis, Fabriciana and Speyeria (see diagram opposite) making confusion with these species very unlikely. However, the medium sized species, which are intermediates, can be comparable in size to Euphydryas with *Brenthis ino* and *Brenthis hecate* being most similar. * This is an arbitrary grouping, see note on page 4.



Distinguishing the six species of Euphydryas from Boloria, Brenthis, Issoria, and Melitaea

Boloria, Brenthis, Issoria

Euphydryas males and females usually have colourful uppersides resembling a grid or net-like pattern, which readily differentiates them from **Boloria, Brenthis** and **Issoria** which have an open pattern of marks and rounded spots.



Euphydryas Uppersides



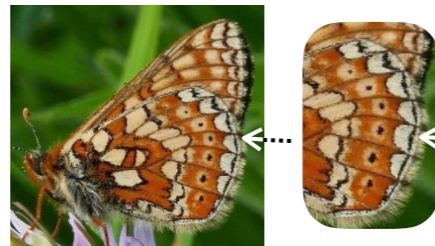
Euphydryas uppersides are usually bright and multicoloured whilst most* **Melitaea** males and females tend to be duller and uniformly coloured.



Some **Euphydryas** have a row of small black dots in a distinct orange band here on the upperside hind-wing. **Most* Melitaea do not have this feature.** * See below for species that may confuse.

Euphydryas Undersides

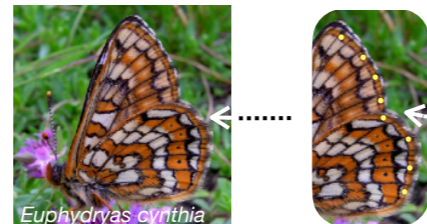
The diagnostic underside features that differentiate the six Euphydryas species are illustrated below.



Euphydryas aurinia and *desfontainii* have a **single row of black spots ringed pale yellow/white within a distinct orange band** here on the hind-wing.

Note: *Melitaea arduinna* and *cinxia* also have spots but noticeably different overall markings.

This feature will usually distinguish from Boloria, Brenthis, Issoria and Melitaea.



Euphydryas cynthia, iduna, intermedia and *maturna* have a **red/orange band [outlined by yellow dots in the photo opposite] on the outer edge of both underside wings**

Boloria, Brenthis, Issoria and Melitaea do not have this feature.

M. cinxia and *M. arduinna* have black spots here, similar to some Euphydryas. However, their less colourful uppersides should identify.



M. phoebe and *M. ornata* can **sometimes** have a row of black spots similar to *M. cinxia* above. Their more colourful uppersides might also confuse, but a careful



comparison of this area, especially the colour and size of the markings, should distinguish.

All six *Euphydryas* species are found in localised populations. However, as only the Marsh and Scarce Fritillary colonies are found across Europe [see distribution maps on page 4], it is best to begin the identification process by using the notes below to establish if your butterfly is one of these two species. If unsure, then follow the notes to the species with more restricted distributions on the next page.

1. Marsh Fritillary [*Euphydryas aurinia*]

Despite its name the Marsh Fritillary is found from sea level to high altitudes in diverse habitats including moorland, meadows, grassland and woodland.

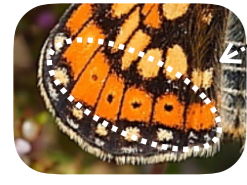
Male and female have similar upper and undersides. Female is usually larger than male.

MALE & FEMALE upperside

Hind-wing has a row of small black dots in this orange band.
Compare 2 and 4



Tips of antennae on both sexes are orange brown.
Compare with 2 and 4



Fore-wing usually has a row of pale yellow patches within the orange markings here.
Compare with 2, 4 and females of 5, 5a

MALE & FEMALE underside



This orange band on the hind-wing has a row of black spots ringed yellow. Only other *Euphydryas* with this feature is *desfontainii* [see page 3]

Note: *Aurinia* does not fly in the Iberian peninsula where it is replaced by the subspecies *beckeri* [see below]

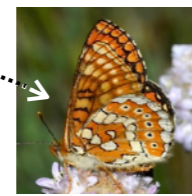
1a. subspecies *beckeri*



Upperside usually visibly larger with stronger reddish markings than *aurinia*.

Like *aurinia* males and females have similar upper and undersides with considerable variation in colour and markings.

Beckeri has the same underside as *aurinia*



Beckeri is only found in the Iberian peninsula and very locally in southern France [Roussillon]. This distribution overlaps with the Spanish Fritillary [*E. desfontainii*]. As *Beckeri* is similar to *desfontainii* they could be confused.
See 3 on next page for notes on differentiating.

1b. form *debilis/ glaciegenita*



Upperside shows greater contrast than *aurinia* with dark markings usually enlarged and paler red/yellow marks.

Compare with 4, 5 and 5a

Males and females have similar upper and undersides.

This montane form of *aurinia* is smaller and found above the tree line in the Central Alps and Pyrenees. Could be confused with *Melitaea asteria* but the black dots in orange band here identify *debilis/glaciegenita*.



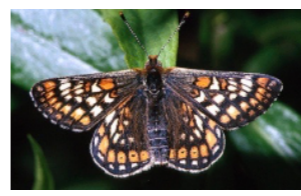
Underside paler than *aurinia* with reduced black markings.
Compare with 4, 5 and 5a

Variations

The upperside of *aurinia* shows considerable variation across its range. Also, like most *Euphydryas* species, there is a tendency to shed scales quickly with age, so losing their brightness. Examples are shown below.



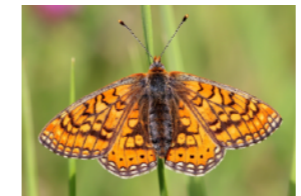
Uniform orange colouring



Colour contrast can be more vivid in colder climates



Sandy colouring with reduced dark markings



Paler with colour contrast reduced

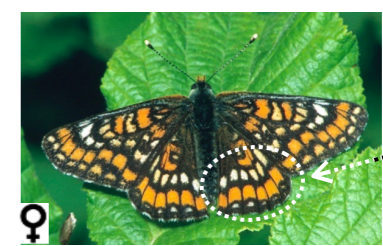
2. Scarce Fritillary [*Euphydryas maturna*]

Maturna is a lowland species* with scattered colonies across western Europe except the Iberian peninsula. More widespread in eastern Europe.

This distribution means that the only other *Euphydryas* species it is likely to be found flying with is *aurinia*.

Maturna is easily distinguished from *aurinia* by the features highlighted below.

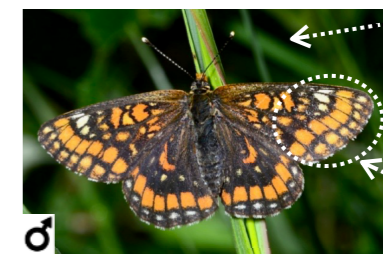
MALE & FEMALE upperside



Male and female similar but female usually larger with fewer white markings.



Hind-wing has no black dots in this orange band.
Compare with 1



No pale yellow patches in this row of orange markings
Compare with 1



Tips of antennae on both sexes are white.
Compare with 1

MALE & FEMALE underside hind-wing



This orange band on the hind-wing has no black spots.
Compare with 1

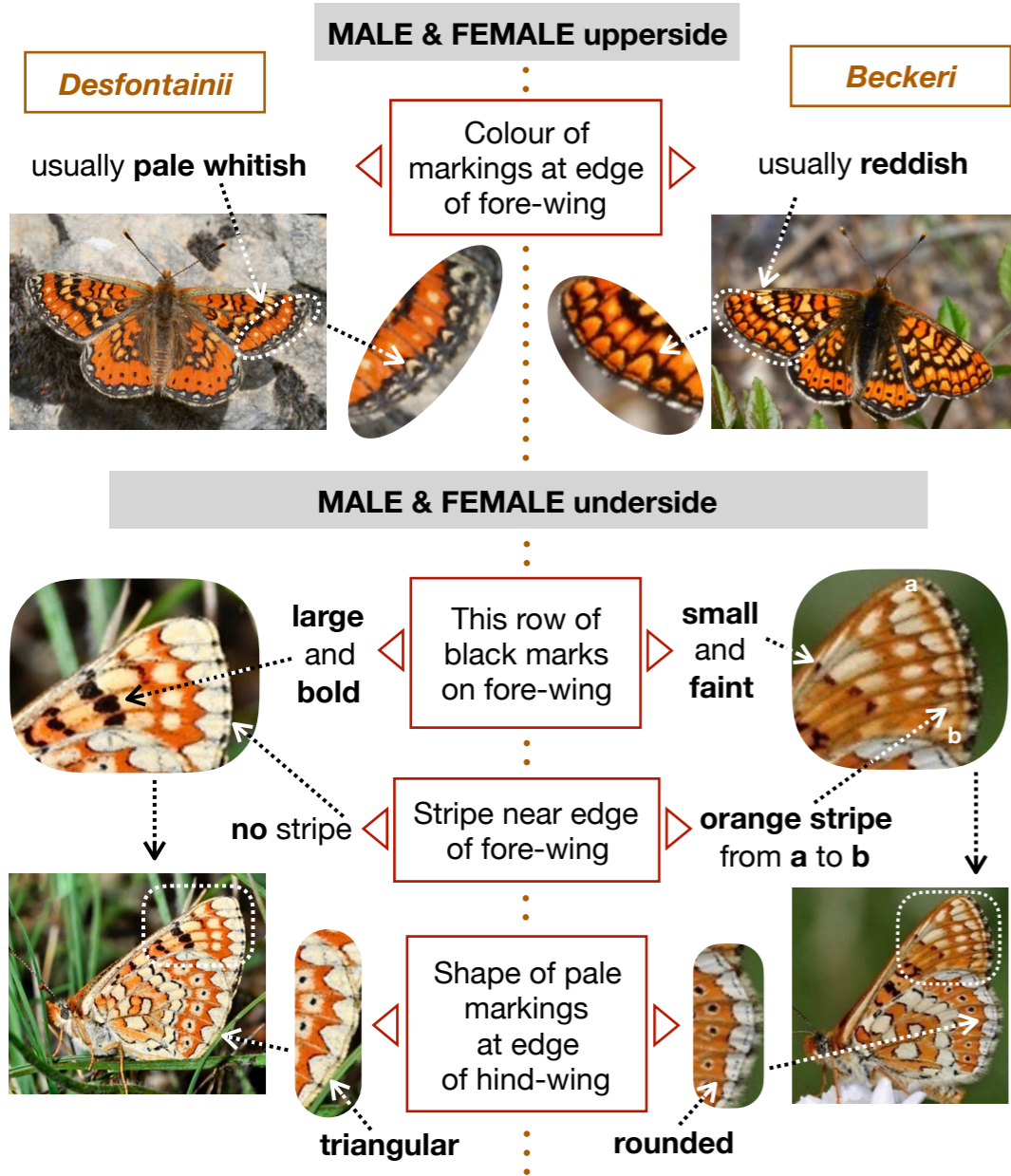
* Note: *Maturna* is similar to *Euphydryas intermedia* [page 3] which occurs above 1500 m. in the Central Alps. *Maturna* is invariably found below 1000 m. If needed, use location/altitude to identify

3. Spanish Fritillary [*Euphydryas desfontainii*]

Desfontainii is restricted to the Iberian peninsula and very locally in a small region of southern France [Roussillon]. See map on page 4.

The only other *Euphydryas* with a similar distribution is 1a *beckeri*.

Differentiating *desfontainii* and *beckeri* can sometimes be difficult as the males and females of both species have similar upper and undersides. Although not always present, the points below should aid identification:



4. Asian Fritillary [*Euphydryas intermedia*]

Intermedia, *cynthia* and its subspecies *alpicola* are usually found above 1500 m. in the Central Alps where they could be seen flying in the same area. **The only other *Euphydryas* which might also be present is 1 *aurinia* and its form 1b *debilis/glacieggenita*.** The points below should help differentiate.

Note: *Intermedia* is absent from Cottian Alps and north of the Rhone Valley in Switzerland.

♂ Uppersides of sexes similar but female larger with virtually no white marks.

♀ Uppersides of sexes similar but female larger with virtually no white marks.

Tips of antennae on male and female are white. Compare 1 and 1b

No black dots in this orange band. Compare 1, 1b and 5, 5a

MALE & FEMALE underside hind-wing

This line [shown by yellow dots] is usually weak with a roughly parallel thin line [shown by blue dots] alongside. Compare 5 and 5a

No spots in this orange band distinguishes from 1 and 1b

Note: Faint pale spots sometimes present

Note: *Intermedia* is similar to the lowland species *maturna*. See page 2.

5. Cynthia's Fritillary [*Euphydryas cynthia*] : 5a. subspecies *alpicola*

Note: The uncertain transitional boundary of distribution between *cynthia* and *alpicola* is roughly the eastern border of Switzerland. *Cynthia* is found eastwards including the Pirin and Rila mountains of Bulgaria whilst *alpicola* is found to the west.

Cynthia : **Alpicola**

MALE uppersides are distinctive with vivid white markings which readily distinguishes from 1, 1b and 4

Alpicola is duller than *cynthia* with reduced red markings and more extensive black suffusion on the fore-wing.

FEMALE uppersides: *cynthia* brighter than *alpicola*

No pale yellow patches within these orange markings on fore-wing here. Compare 1 and 1b

The presence of black dots in this orange band always distinguishes from 4. These dots are frequently absent from *alpicola* males and females [as in photo above].

MALE & FEMALE underside: *cynthia* and *alpicola** similar

The presence of black spots in this orange band [as shown] always distinguishes from 4. This can also differentiate from 1 and 1b which have spots with yellow rings.

This line [shown by yellow dots] is usually a single bold line. Compare 4

Note: The bold line can be more fragmented on males making this feature less distinct.

* Female *alpicola* can have finer dark marks.

6. Lapland Fritillary [*Euphydryas iduna*]

Identification is straightforward as the distinctive colouring of *iduna* is quite unlike any other butterfly found within its restricted range [see page 4]



Male and female upper and undersides are similar, displaying bright red/orange, white and black markings. However, *iduna* can appear grey coloured on the wing, whilst the bright appearance diminishes rapidly with age as wing scales are lost.



Distribution Maps

● Up to 1950 ● 1951 - 1980 ● After 1980



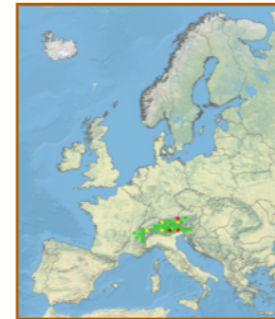
Marsh
Fritillary



Scarce
Fritillary



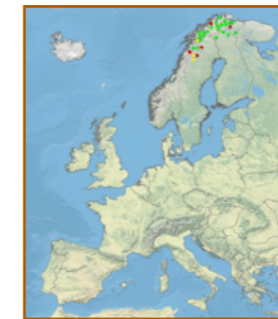
Cynthia's
Fritillary



Asian
Fritillary



Spanish
Fritillary



Lapland
Fritillary

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Fritillaries

It should be noted that 'fritillaries' is an arbitrary English term which encompasses over forty similar looking species from two different subfamilies: Heliconiinae and Nymphalinae.

For more information on all aspects of European butterflies please go to european-butterflies.org.uk including the other Guides in this series which are free to download at EBG Identification Guides

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