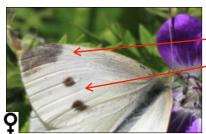


Firstly, use these diagnostic features to determine if it is a Pieris. Page 3 shows similar species and second broods which may confuse.

FEMALE Pieris fore-wing upperside



All females usually have dark wing-tips and two black-grey spots on the fore-wing.

[Note: Krueper's Small White has only one spot]

MALE Pieris fore-wing upperside

All males usually have dark wing-tips and one or no black-grey spots on fore-wing





MALE & FEMALE Pieris underside

Fore-wings usually have yellowish wing-tips

Hind-wings are creamy-white or have streaks/ blotches of greenish grey.



Next, establish if it is one of the three very common species of Pieris below which are found THROUGHOUT MAINLAND EUROPE. If unsure, then follow notes to the numbered species on the next page which are mainly found LOCALLY IN SOUTHERN EUROPE.

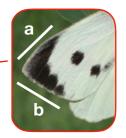
1. Large White [Pieris brassicae]



Size is main indicator, usually significantly larger than all other species of Pieris

MALE & FEMALE upperside





Wing-tip marking of roughly equal length along edges [a] and [b]. The marking is usually more extensive and blacker than other species of Pieris. Compare with Small White

MALE & FEMALE underside



Similar to Small White

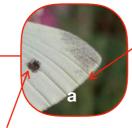
Fore-wing with two dark spots, frequently hidden

Hind-wing creamy white

2. Small White [Pieris rapae]







This spot is rounded Compare with 4

If wing-tip marking has black triangles like this



Usually significantly smaller than Large White

Wing-tip marking fainter than Large

White. Usually ends around here, well above the vein marked [a] If mark

goes further down, compare with 4

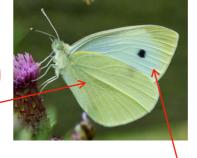
MALE & FEMALE underside

Dense grey dusting below this vein is distinctive

If dusting appears equally dense above and below compare with 4



If hind-wings have greenish marks like these, go to 6



Fore-wing with one or two dark spots, often hidden If no dark spots, go to 5

3. Green-veined White [Pieris napi]



Similar in size to Small White

MALE & FEMALE upperside

Wing-tip markings variable but veins usually lined grevish unlike Small and Large White.



[Note: Around the Arctic Circle females may be much darker, similar to 7]

MALE & FEMALE underside



Prominent greenish grey veins on hind-wing are distinctive and easily distinguished from Small and Large White



[Note: In southern Europe the grey veins can be very faint causing confusion with Small Whitel

If you are in the Alps, Jura Mountains or the Carpathians, compare with 7

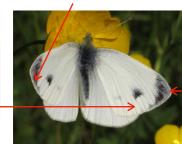
4. Southern Small White [Pieris mannii]



Similar in size to Small White

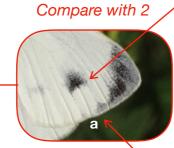
MALE & FEMALE uppersides very similar to Small White. At least three of the features below should be visible for a positive identification.

This wing edge is rounded compared to straight on Small White.



Faint black streaks here reliably

This spot is often concave outward or straight on its outer edge here.



Wing-tip marking is usually black ending in faint grey triangles about here, close to vein [a]. Compare with 2

MALE & FEMALE underside

distinguishes from Small White.

Grey dusting equally dense above and below this vein is distinctive



Usually found on dry and stony grasslands. Small White prefers flowery grassy places.

Formerly only in southern

Fore-wina

with one or

two dark

spots, often

hidden

Europe. Now present farther north. See map on page 4.

5. Mountain Small White [Pieris ergane]

Smaller than Small White with weaker flight than other species of Pieris.

MALE & FEMALE upperside





Wing-tip marking shaped like a square

MALE & FEMALE underside



Fore-wing with no dark spots is distinctive

Don't be confused by dark spots from upperside showing through to underside.

Only found locally in southern Europe, more common in Balkan peninsula. See map on page 4.

6. Krueper's Small White [Pieris krueperi]



Similar in size to Small White

MALE & FEMALE upperside





Wing-tip marking like row of black triangles is distinctive

MALE & FEMALE underside



Greenish marks here are distinctive

This outlined area is light greenish in the summer brood, as shown here. Darker green in the spring brood, similar in colour to the greenish marks above.

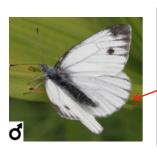
Only found locally in south Balkan peninsula. See map on page 4

7. Mountain Green-veined White [Pieris bryoniae]



Similar in size to Small White

MALE upperside



Ends of veins lined with black. on hindwing is distinctive

FEMALE upperside



Pale brown or vellowish/whitish with prominent brown-grey veins is distinctive

MALE & FEMALE underside



Thickness of grey veins continuing to wing edge is distinctive

Compare with 3

Only found locally in the Alps, Jura Mountains, and the Carpathians, usually above 700m. Possibly Pyrenees?

8. Balkan Green-veined White [Pieris balcana]



Due to the wide variation amongst Green-veined Whites it is almost impossible to accurately identify most specimens of this provisional species. Visit the EBG website for links to more information [see page 4].

All species of Pieris [except the Mountain Green-veined White] have at least two broods which can vary in intensity of colouring and markings. To assist in identification, below are some examples of marked differences between the spring and summer broods.

Small White [Pieris rapae]



Spring



Summer

The spring brood is usually lightly marked compared to summer.



Spring



Summer

Green-veined White [Pieris napi]



Spring



Summer

Upperside of spring brood, especially females, is more heavily dusted than in summer when it is more cleanly marked [photos above]. Underside markings usually lighter in summer [photos below]



Spring



Summer

Southern Small White [Pieris mannii]



Spring

Spring butterflies usually have paler markings than summer broods.



Summer

Mountain Small White [Pieris ergane]



Spring

Spring brood underside often has denser grey dusting than in summer.



Summer

Below are some similar species which might be confused with Pieris

Species of genus Euchloe The Dappled and Green-striped Whites



Large white.





Unlike Pieris, the upperside fore-wing usually has a white spot near the tip and a single dark linear mark, whilst the underside hind-wing is dappled with extensive



yellow/greenish blotches stripes.



Species of genus Pontia The Bath Whites and Peak White



Single dark linear mark here distinguishes from Pieris. Markings on male upperside fainter and less extensive than female.

Unlike Pieris, the underside hind-wing usually has a pattern of substantial greenish/ vellow blotches or



markings resembling arrowheads.





Orange Tip [Anthocharis cardamines] female





Fore-wing marking gives appearance of tiny 'white dots' on edge of wing



Greenish marbling on underside hind-wing different from any Pieris.

Black-veined White [Aporia crataegi]

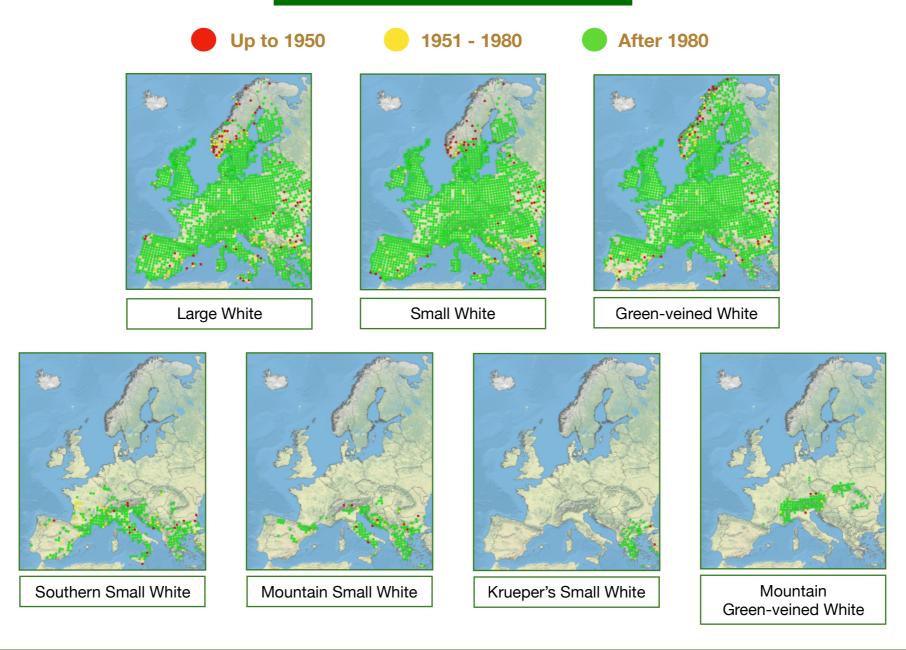


Upperside and underside have all the veins lined black which is distinctive.



There are no other significant markings to confuse with Pieris.

Distribution Maps



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

Guide designed by Bill Raymond.

With thanks for use of photographs to: Matt Rowlings from <u>eurobutterflies.com</u>, Roger Gibbons from <u>butterfliesoffrance.com</u> and Vincent Baudraz from <u>lepido.ch</u>