

# A simplified key to the Butterflies of Aquitaine

Butterflies are distinguished from most moths by their club-ended thread-like antennae, their wings closed together above the body at rest and their absence of a system of coupling between the anterior and posterior wings. Butterflies are active by day, whereas moths generally fly at night. Note that the separation of these two sub-orders has no real scientific basis but remains an accepted convention.

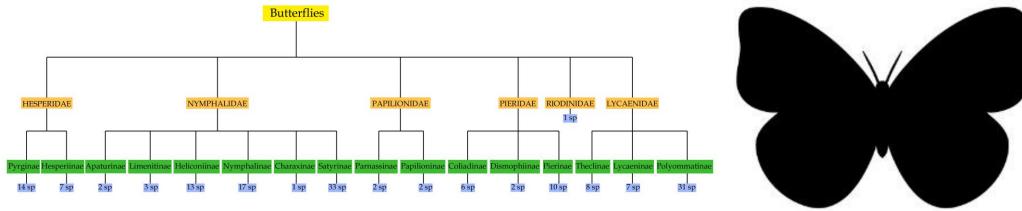
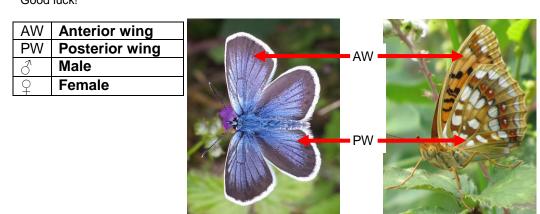


Table 1: Butterflies in Aquitaine

Approximately 159 species of butterflies found in Aquitaine. Knowledge of their geographical distribution is still fragmentary and there are still potentially other species present. The production of this key aims to support recording for the first Aquitaine atlas of butterflies – a joint project by CEN Aquitaine and LPO Aquitaine which will provide an important monitoring baseline.

This key provides a simple way to identify the different species of butterflies in Aquitaine. It has been constructed in such a way as to display all closely related species on each page. It must be remembered that a key such as this cannot provide all of the criteria for confirming the identification of every species. It is intended as a simplified key which for many species should be sufficient though it will sometimes have to be supplemented by reference to other more specialized works as indicated. Distributional information by Department is provided to help you to determine your identifications.

Good luck!

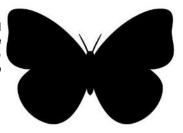


## **GENITALIA**

Means that validation requires genitalia analysis either in the hand or (most often) later with a voucher specimen.



Means that the species is protected and its capture prohibited.

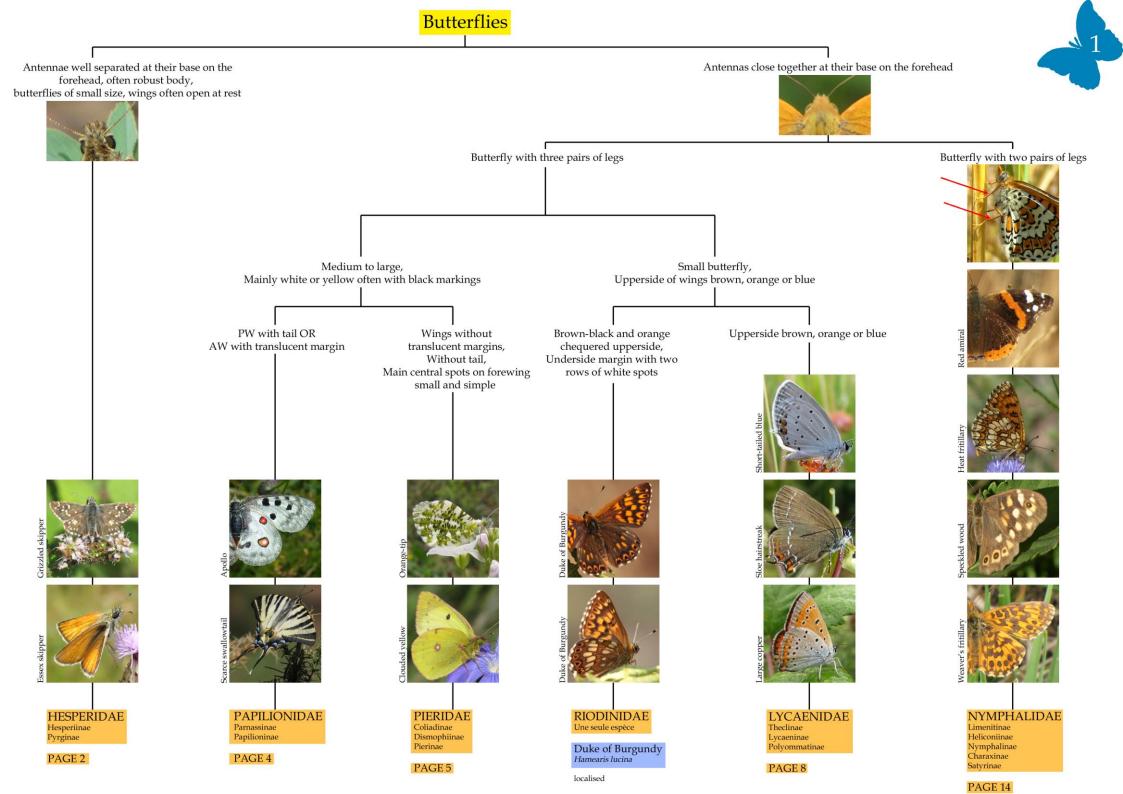


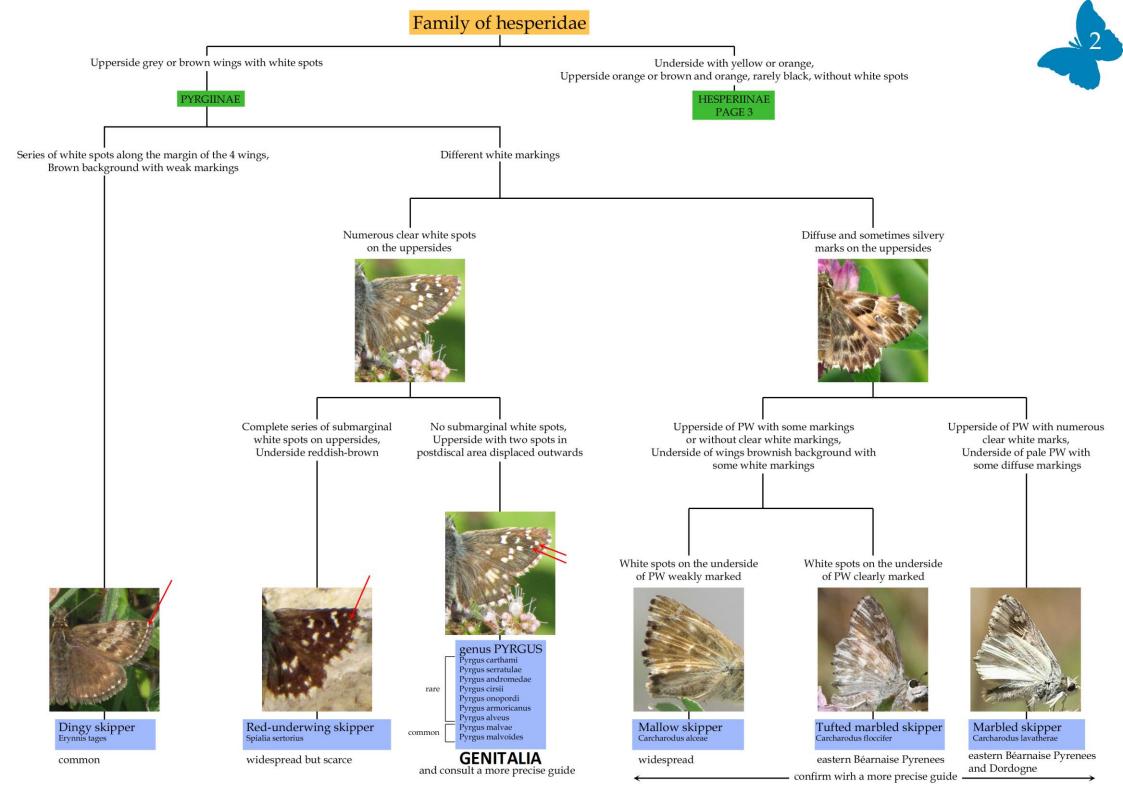
Large: 7-9 cm

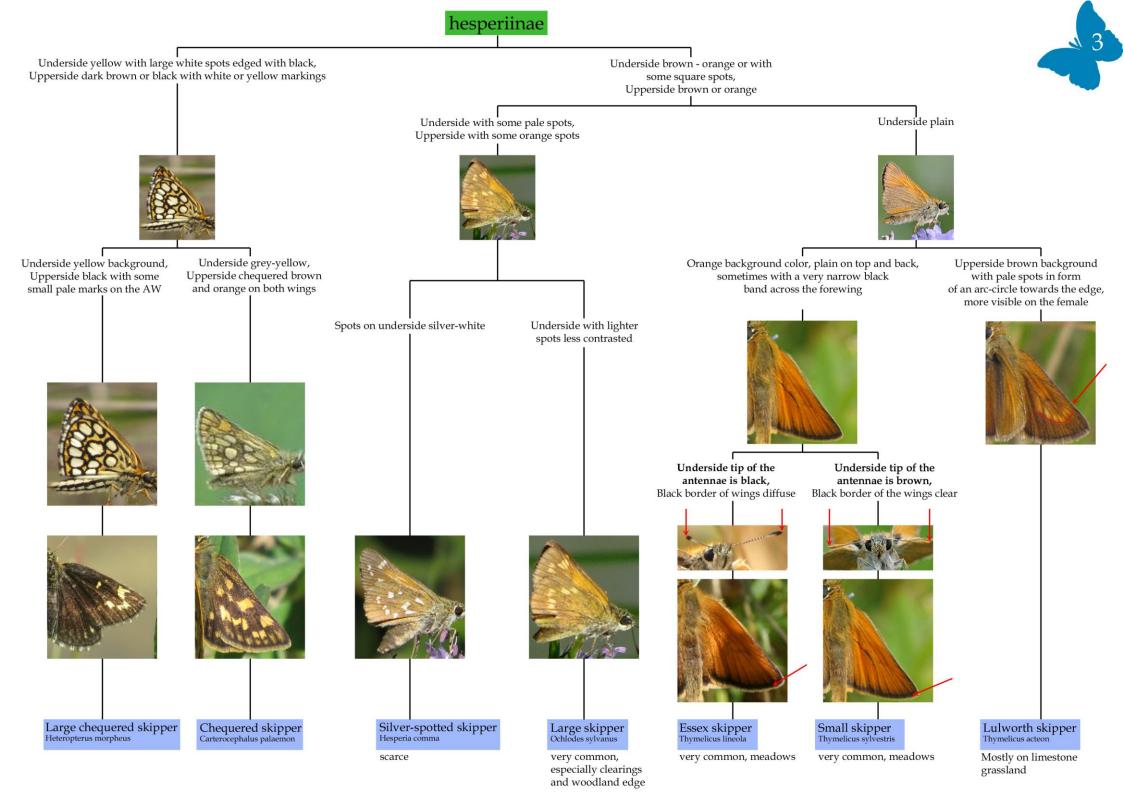
Medium: 3-7 cm

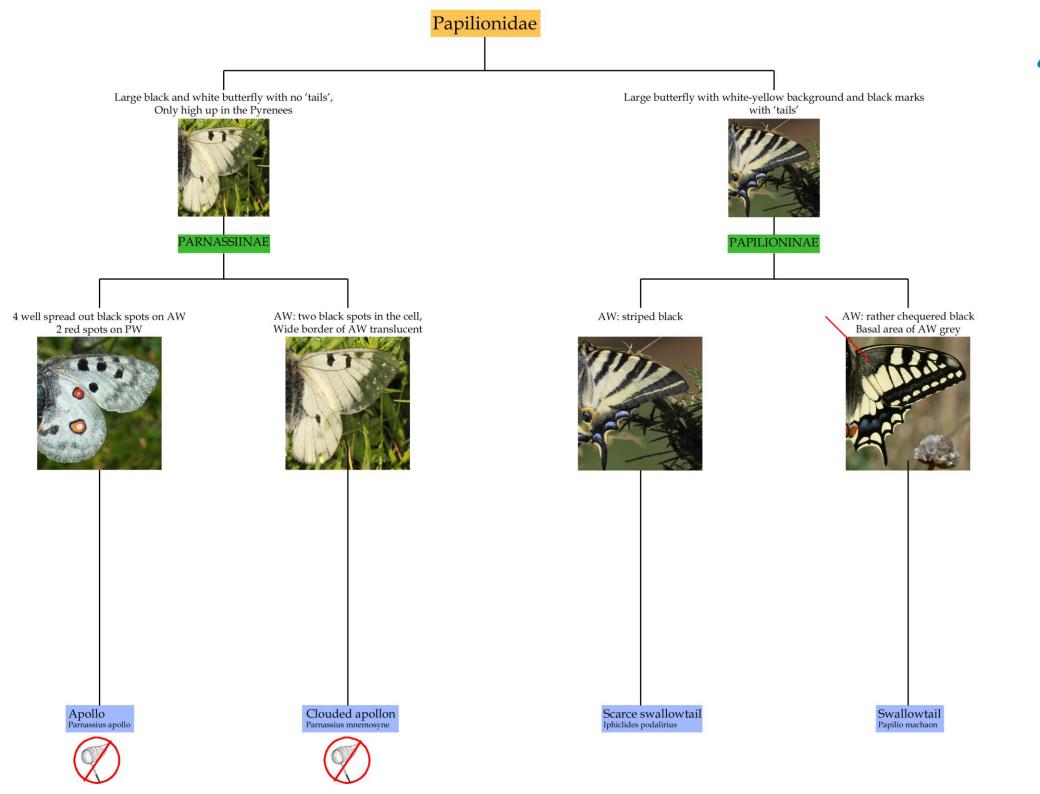


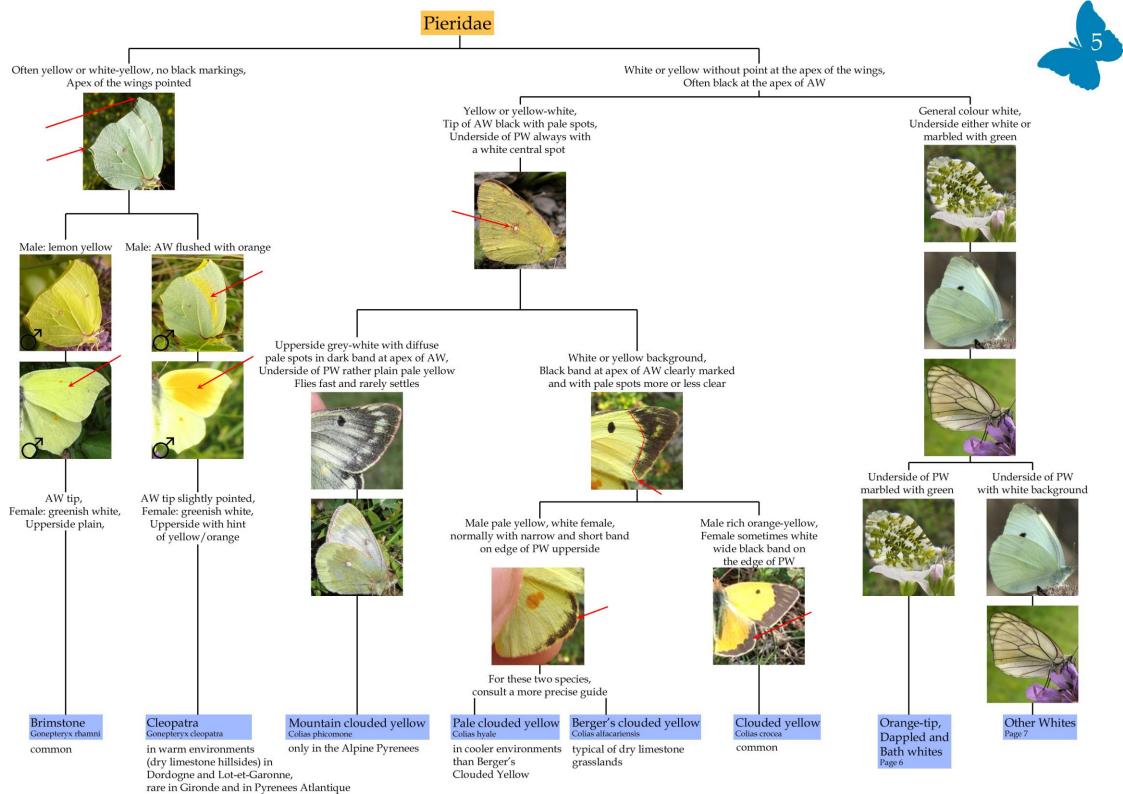
Small: 2-3 cm

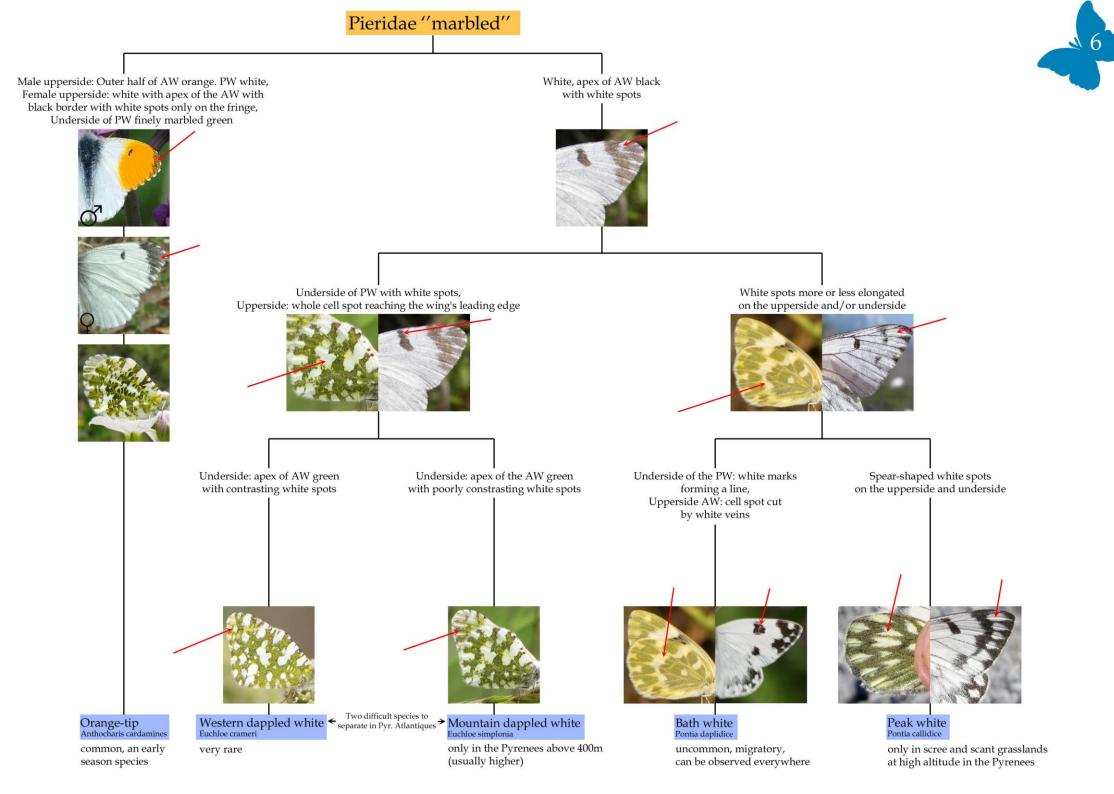




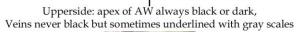


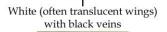






Small-sized. AW much larger than PW, Apex very rounded and narrow, Upperside white with a single black patch at the apex of the AW which can be very pale









Medium-sized. AW apex with a black mark generally of different shape: square or triangular and often less defined

Larger size,

Black apical mark different if present





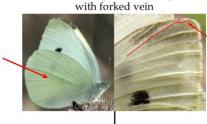
PW underside white-yellow, sometimes slightly shaded grey



PW underside with the veins sharply edged with grey



ATTENTION: "Wood Whites" are present throughout Aquitaine but the determination of the true Leptidea species is only possible by analysis of genitalia



Small white

PW yellow underside slightly

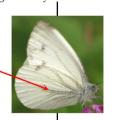
and irregularly shaded grey,

Underside tip of the AW apex

PW white-vellow underside uniformly grey shaded, Underside tip of the AW apex with un-forked vein



PW white-yellow underside with little (or sometimes no) grey shading and only on the veins



AW: Spot larger and blacker than Small White's, Female can look rather a small Large White

Summer Spring generation generation

common

Green-veined white

Southern small white Pieris napi

Réal's wood white Leptidea reali Wood white

> Pieris brassicae very common

Large white

very common **GENITALIA** (when in dry stony very rare in dry stony limestone grassland:

Aporia crataegi woodland edge, hedges with fruit trees/bushes

Black-veined white

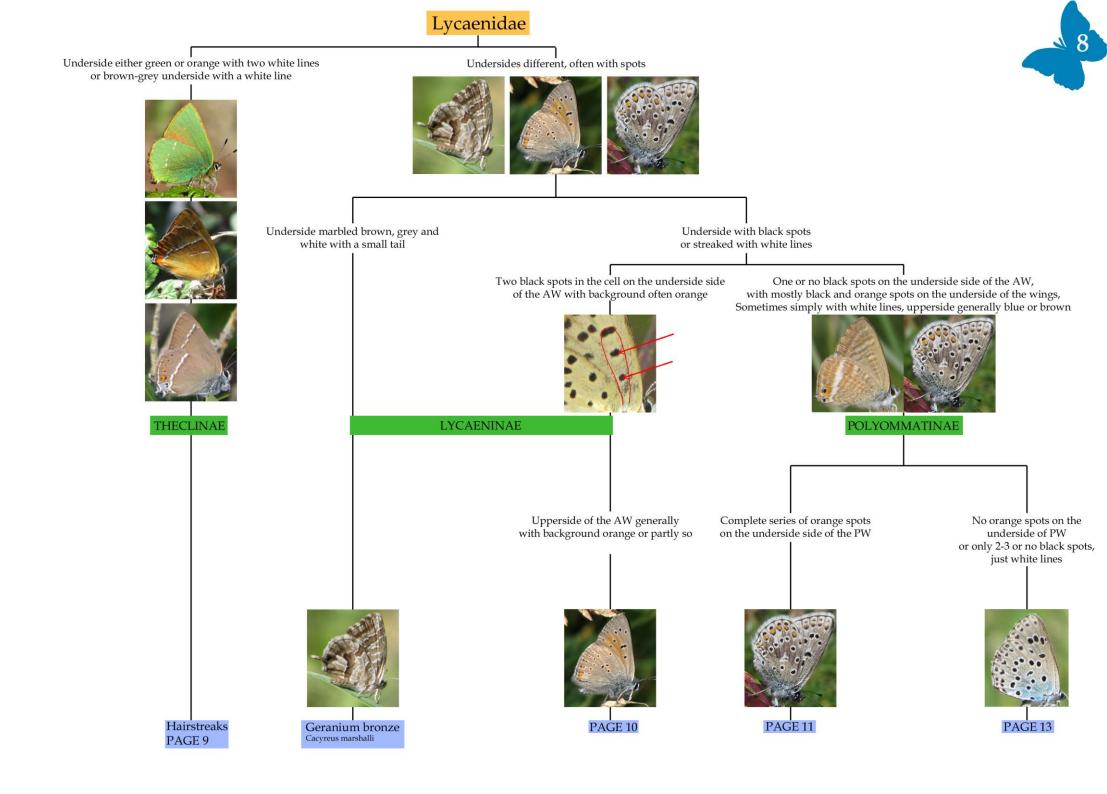
Pieris rapae

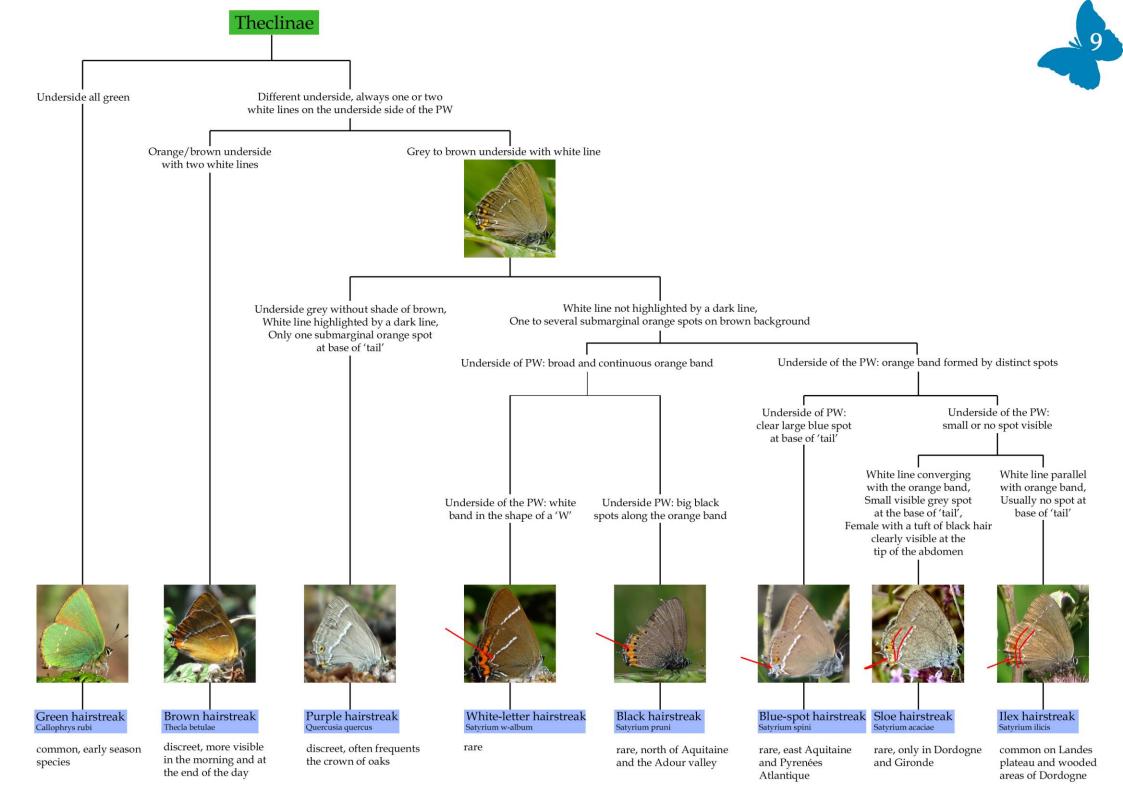
only in Dordogne and Lot-et-Garonne

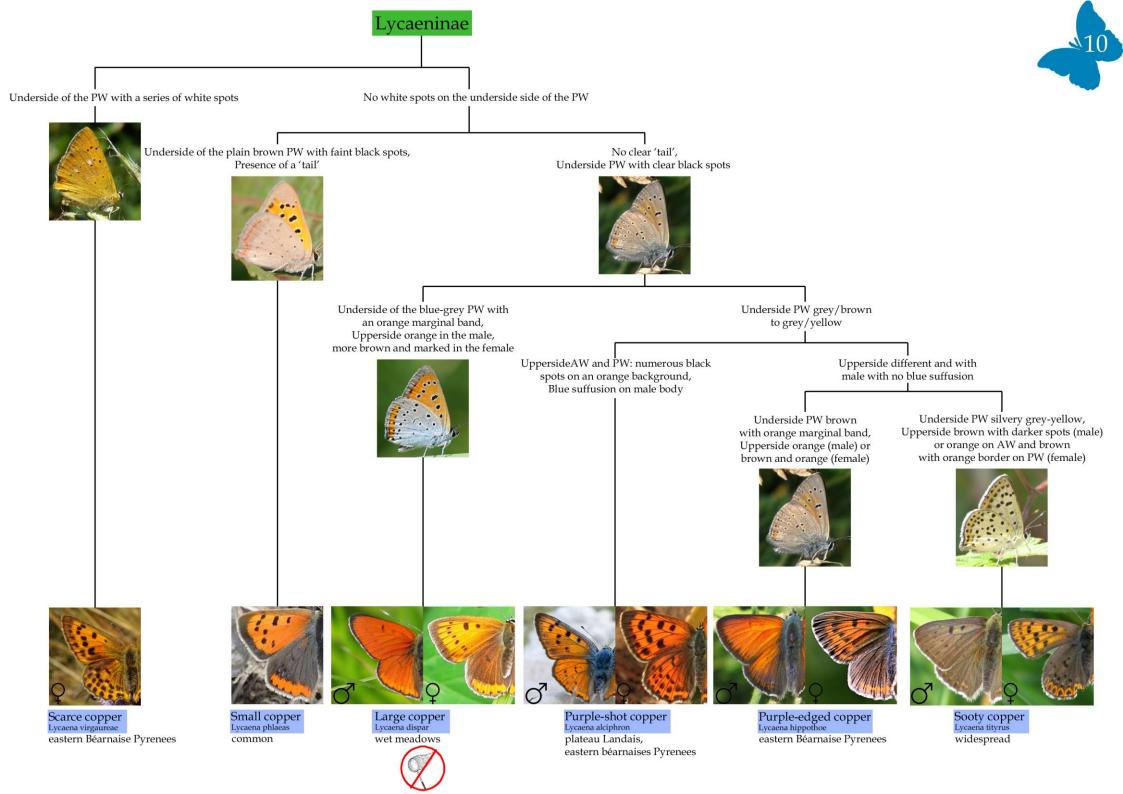
habitats in Dordogne and Lot-et-Garonne)

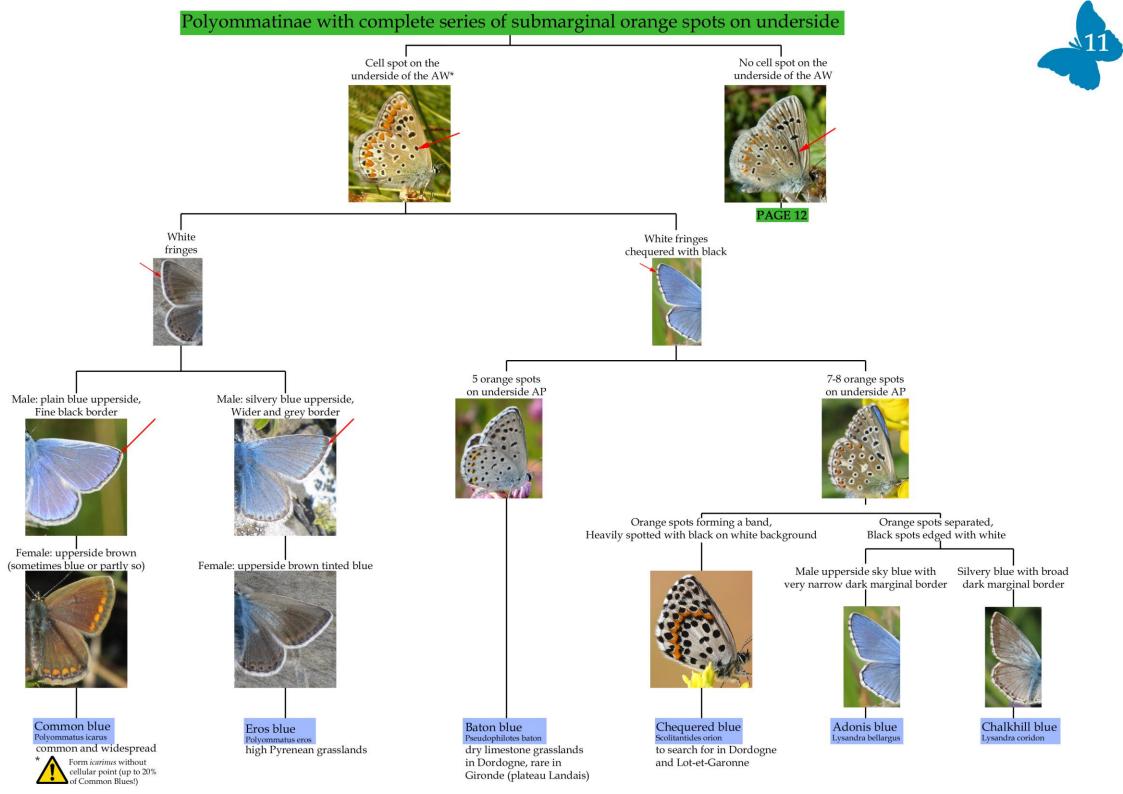
**GÉNITALÍA** 

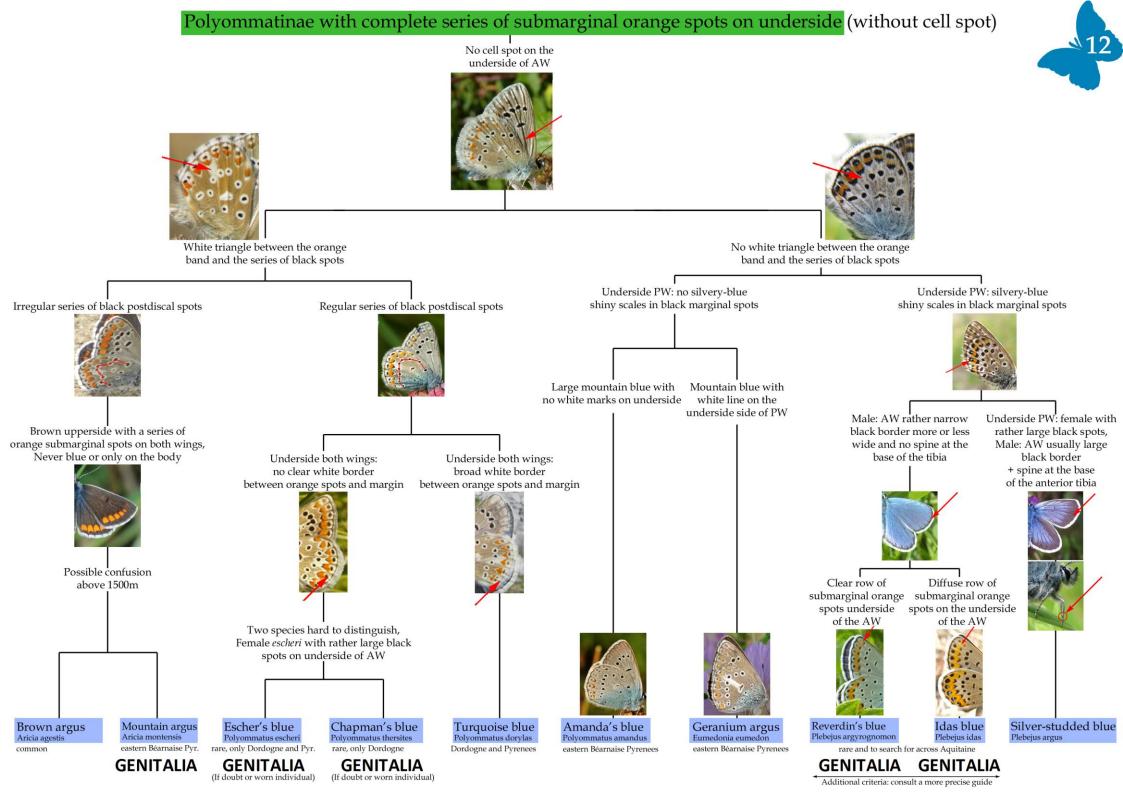
## Leptidea sinapis **GENITALIA**



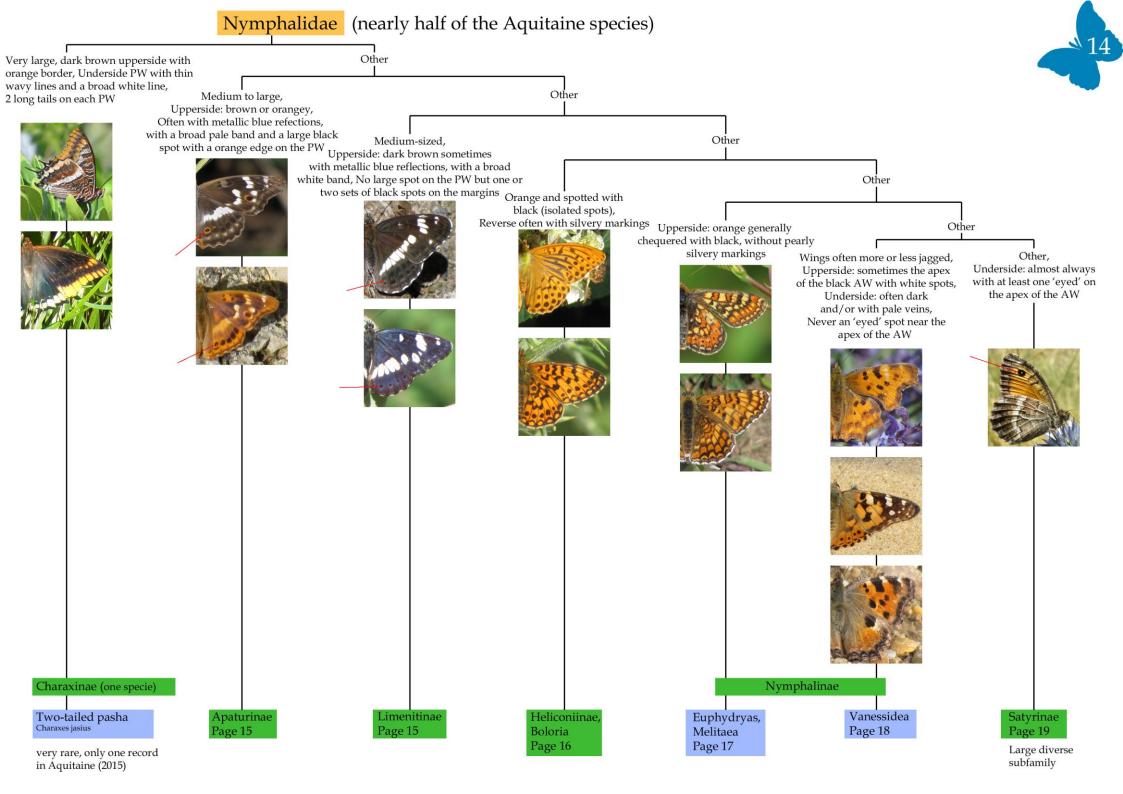


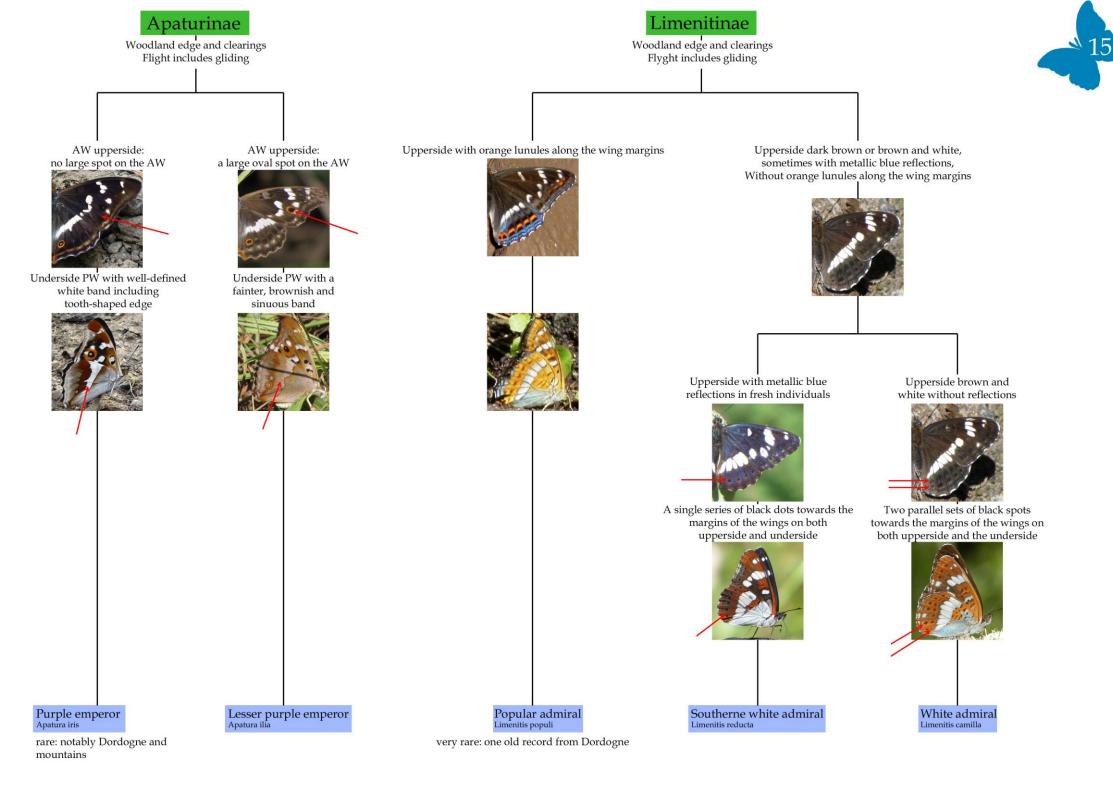


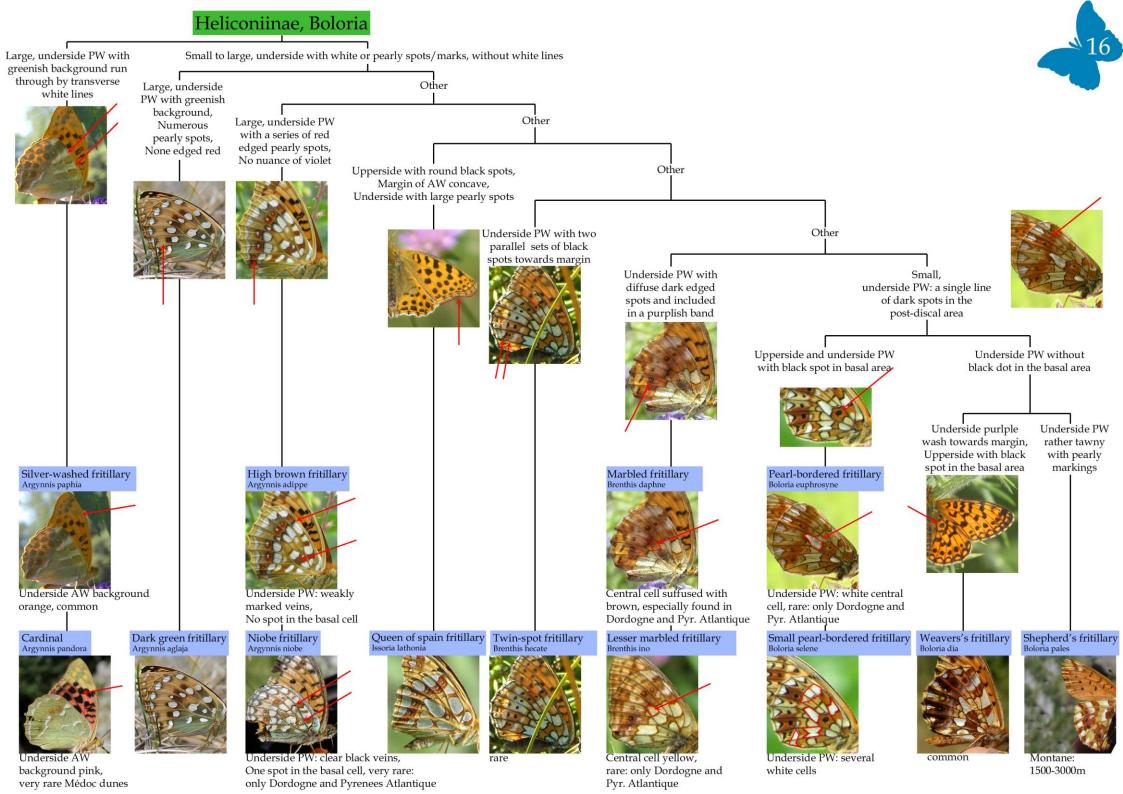


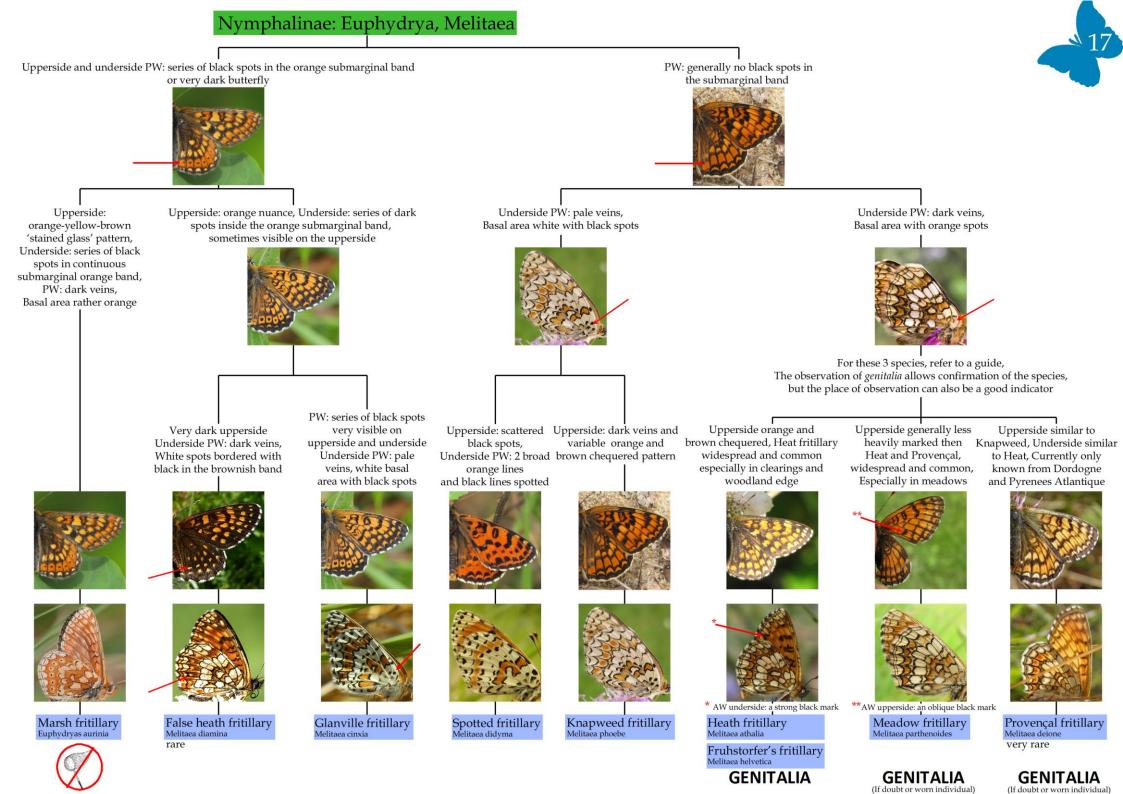


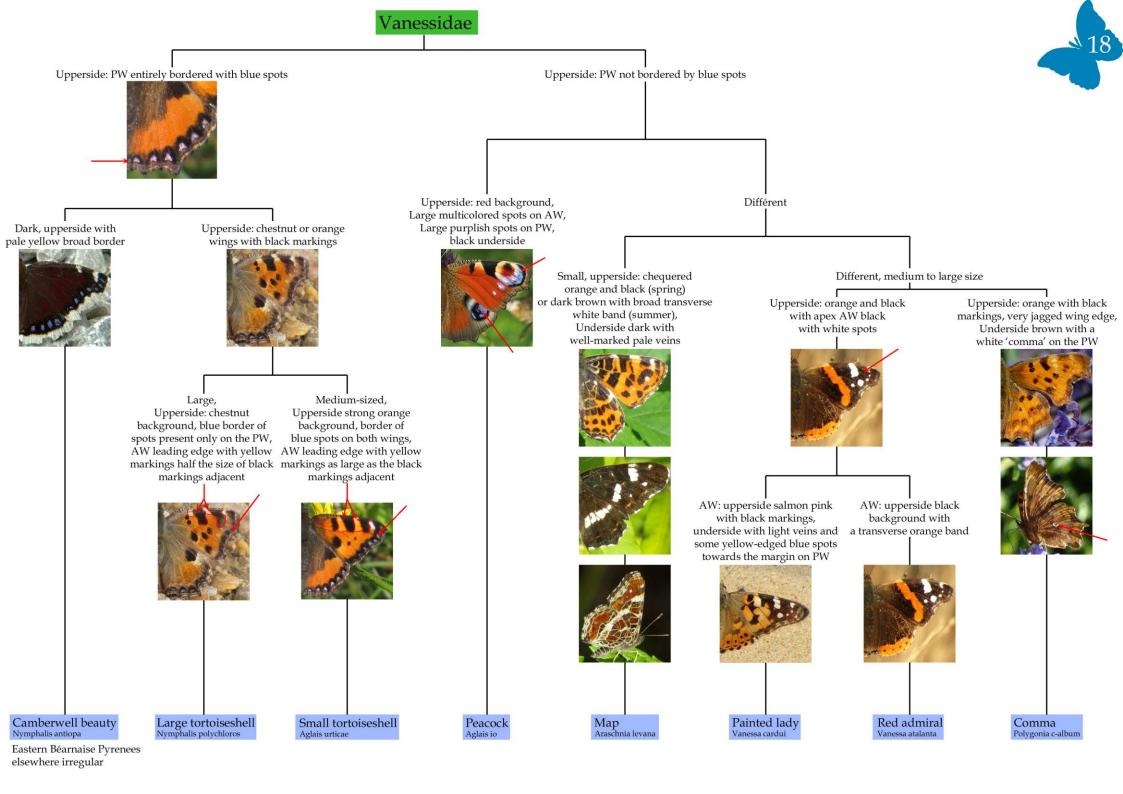
#### Polyommatinae without orange spots on underside or only two to three 'Tail' on hind wing Lack of 'tail' on hindwing Cell spot on the AW underside No cell spot on the AW underside Underside wings with Underside wings Underside PW with Underside with large black Black submarginal spots No submarginal spots on parallel white lines with black spots white spots and one or spots and no orange spots, on the underside of the wings the underside of the wings two orange spots Upperside with strong black markings on blue bakground Underside light grey Under brown or grey-brown Submarginal spots Spots significantly Spots of the same size on Underside PW Underside PW Underside: faint marked on the underside submarginal spots on bigger on the AW AW and PW underside, without white line with white line the underside of the wings, of the wings, Often spots underside very small butterfly AW with chequered fringe on the upperside Long-tailed blue Lampides boeticus Short tailed-blue Gavarnie Blue Cupido argiades Agriades pyrenaica with one thick small tail, one to three clear east of the Béarnaise Pyrenees white band Green-underside blue orange spots near 'tail' on PW underside Glaucopsyche alexis turquoise-blue suffusion at the base of PW Alcon/Rebel blue Maculinea alcon alcon/rebeli rare, sometimes with cell spot Large blue Scarce large blue Holly blue Black-eyed blue Small blue Mazarine blue Damon blue Lang's short-tailed blue Glandon blue Provencal short-tailed blue Leptotes pirithous Maculinea teleius Glaucopsyche melanops Cupido alcetas Agriades glandon Maculinea arion Celastrina argiolus Cupido minimus Cyaniris semiargus Polyommatus damon all equal-sized white bands, very rare, two sites known common, underside only in Pyrenees-Atlantique, underside AW underside AW very small tail, east of the Béarnaise Pyrenees eastern Béarnaise more common in Gironde, (within Dordogne and Gironde) speckled with small rare, little grey-blue suffusion postdiscal spots in postdiscal line curved Pyrenees orange spot often absent rare in dordogne and slightly elongated at base of PW underside a straight line Lot-et-Garonne black spots

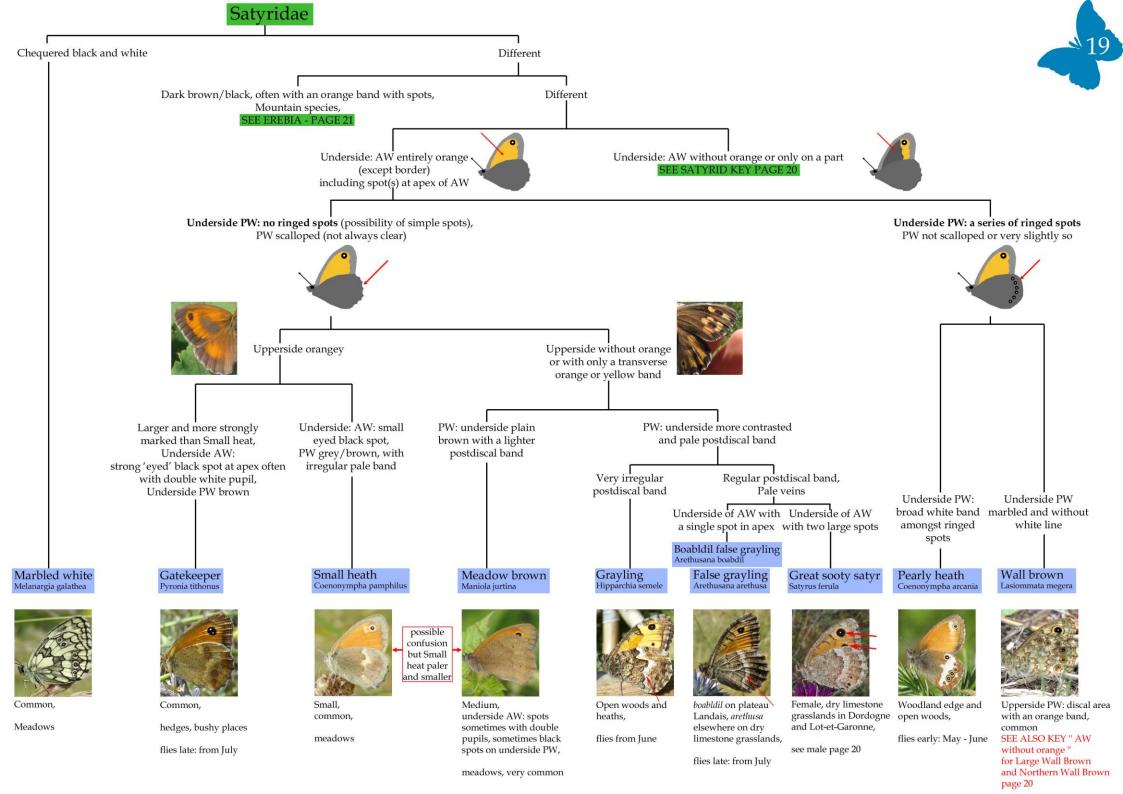












#### Satyridae without orange or only on a part on the AW underside PW: Never spots with pupils on the underside, PW: A series of spots with pupils towards the margin Normally scalloped margin on the underside not scalloped or very slightly so PW underside with PW underside without a series of white spots, spots or only 1-2 Upperside chequered brown and orange Upperside plain and dark with the exception of the spots Upperside traversed by a pale band PW underside: PW underside: spots separated spots almost adjoining AW underside: 'eyed' spot in AW underside: 'eyed' spot in apex apex within a continuous within a light patch white-yellow band, OR in a pale zone that Basal and discal areas entirely dark extends across the wing Tree grayling Hipparchia statilinus Speckled wood Woodland grayling Great banded grayling Ringlet Wall brown False ringlet Hipparchia fagi Aphantopus hyperantus Coenonympha oedippus Underside PW with 4 Large, black and white, Underside apex AW: PW upperside discal PW: underside with eyed' spot circled yellow, white spots in the area with orange band, white band postdiscal oost-discal area, two white spots between common and short discal band this spot and the next **GENITALIA** 'eved' spot below, mainly Landes plateau 2-4 black sticks on Julien organs Dryad PW underside: two PW underside: one Large wall brown Minois dryas The hermit Rock grayling Hipparchia alcyone spots displaced silver line between Large, dark brown, Chazara briseis PW upperside discal inwards, woodland spots and margin, 'eyed' black spot at apex Underside PW with PW: underside with area brown, edge and clearings heaths with molinia of AW with blue centre postdiscal area creamy and brown Pyrenees and without white spots, markings in male, Dordogne Woodland brown GENITALIA rather plain brown in Lopinga achine 15-20 black sticks on female, woodland lulien organs, very rare (Dordogne only) Great sooty satyr Satyrus ferula Northern wall brown

PW slightly scalloped,

on PW underside,

'eyed' black spot at apex of AW

with white centre, pale line

rare, only dry limestone

grasslands in Dordogne



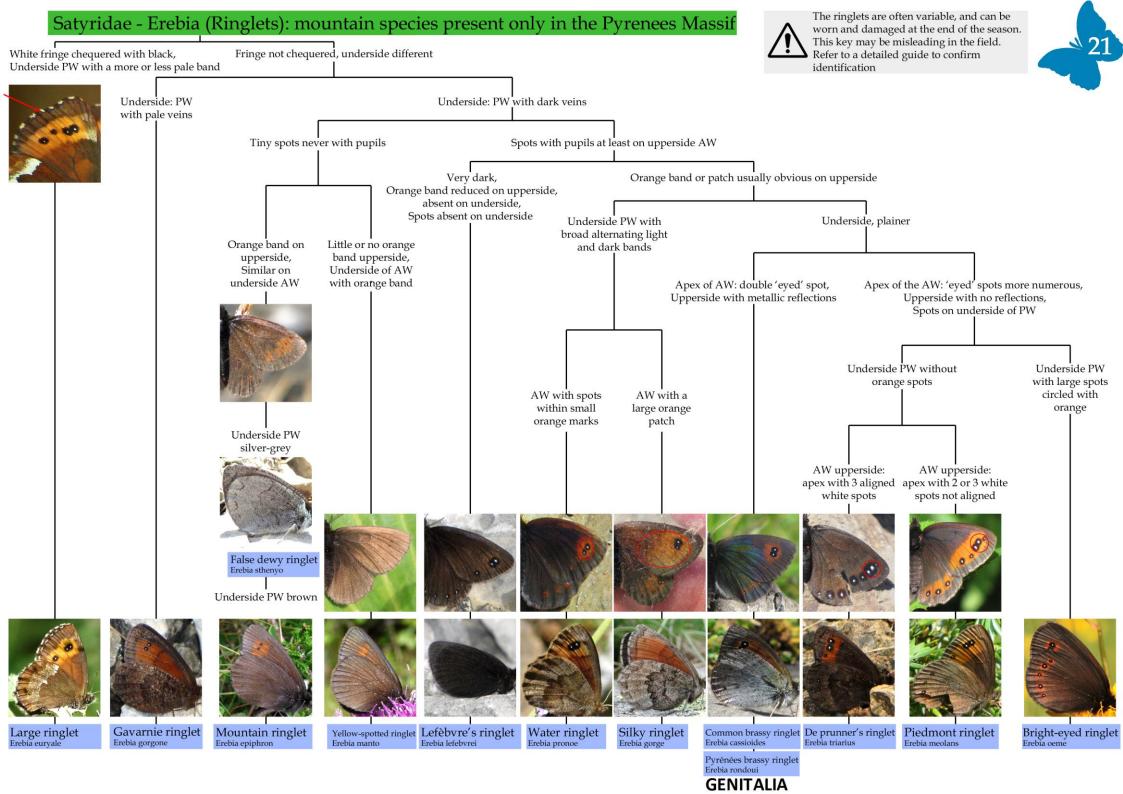
PW underside: three

brown lines between

Rare (only 24 and 47)

spots and margin,

PW upperside discal area brown with a darker line <u>AND</u> AW never fully orange, eastern Béarnaise Pyrenees



# Appendix 1 : Summary of recommendations for identification

Vernacular name	Latin Name	View	Photo recommended	Capture recommended	Genitalia recommanded
Adonis Blue	Lysandra bellargus	Х			
Alcon Blue	Maculinea alcon	Х	Х	Protected species	Protected species
Alpine Grizzled Skipper	Pyrgus andromedae		Х	Х	
Amanda's Blue	Polyommatus amandus	Х	Х		
Apollo	Parnassius apollo	Х		Protected species	Protected species
Argus andalou	Aricia montensis		Х	X	(between 450 and 1500m)
Bath White complex Pontia	Pontia daplidice	Х	Х		
Baton Blue	Pseudophilotes baton		Х		
Berger's Clouded Yellow	Colias alfacariensis		Х	Х	
Black Hairstreak	Satyrium pruni	Х			
Black-eyed Blue	Glaucopsyche melanops		Х	Х	
Black-veined White	Aporia crataegi	Х			
Blue-spot Hairstreak	Satyrium spini	Х	Х		
Boabdil's False Grayling	Arethusana boabdil		X		
Bright-eyed Ringlet	Erebia oeme	Х	Х	Х	
Brimstone	Gonepteryx rhamni	Х			
Brown Argus	Aricia agestis	Х		(between 450 and 1500m)	(between 450 and 1500m)
Brown Hairstreak	Thecla betulae	Х			·
Camberwell Beauty	Nymphalis antiopa	Х			
Cardinal	Argynnis pandora		Х		
Chalkhill Blue	Lysandra coridon	Х			
Chapman's Blue	Polyommatus thersites		Х	X	
Chequered Blue	Scolitantides orion		Х		
Chequered Skipper	Carterocephalus palaemon	Х			
Cinquefoil Skipper	Pyrqus cirsii		Х	Х	Х
Cleopatra	Gonepteryx cleopatra	Х		(females)	
Clouded Apollo	Parnassius mnemosyne	Х		Protected species	Protected species
Clouded Yellow	Colias crocea	Х		·	
Comma	Polygonia c-album	Х			
Common Blue	Polyommatus icarus	Х		(form icarinus)	
Common Brassy Ringlet	Erebia cassioides			,	Х
Damon Blue	Polyommatus damon	Х			
Dark Green Fritillary	Argynnis aglaja	Х			
de Prunner's Ringlet	Erebia triarius	Х	Х	Х	
Dingy Skipper	Erynnis tages	Х			
Dryad	Minois dryas	X			
Duke of Burgundy Fritillary	Hamearis lucina	X			
Eros Blue	Polyommatus eros	Х	Х	Х	
Escher's Blue	Polyommatus escheri		X	X	

Vernacular name	Latin Name	View	Photo recommended	Capture recommended	Genitalia recommanded
Essex Skipper	Thymelicus lineola	Х	Х	Х	
False Dewy Ringlet	Erebia sthennyo		Х	Х	
False Grayling	Arethusana arethusa	Х	Х		
False Heath Fritillary	Melitaea diamina	Х		Х	
False Ringlet	Coenonympha oedippus	Х	Х	Protected species	Protected species
Fruhstorfer's Fritillary	Melitaea helvetica			·	X
Gatekeeper	Pyronia tithonus	Х			
Gavarnie Blue	Agriades pyrenaica	Х	Х	Х	
Gavarnie Ringlet	Erebia gorgone		Х	Х	
Geranium Argus	Eumedonia eumedon		Х		
Geranium Bronze	Cacyreus marshalli	Х			
Glandon Blue	Agriades glandon	Х	Х	Х	
Glanville Fritillary	Melitaea cinxia	Х			
Grayling	Hipparchia semele	Х	Х	Х	
Great Banded Grayling	Brintesia circe	Х			
Great Sooty Satyr	Satyrus ferula	Х	Х		
Green Hairstreak	Callophrys rubi	Х			
Green-underside Blue	Glaucopsyche alexis	Х			
Green-veined White	Pieris napi	Х			
Grizzled Skipper	Pyrqus malvae				Х
Heath Fritillary	Melitaea athalia				Х
High Brown Fritillary	Argynnis adippe	Х			
Holly Blue	Celastrina argiolus	Х			
Idas Blue	Plebejus idas		Х	Х	(if in doubt)
Ilex Hairstreak	Satyrium ilicis		Х	Х	,
Knapweed Fritillary	Melitaea phoebe	Х			
Lang's Short-tailed Blue	Leptotes pirithous	Х			
Large Blue	Maculinea arion	Х	Х	Protected species	Protected species
Large Chequered Skipper	Heteropterus morpheus	Х			
Large Copper	Lycaena dispar	Х		Protected species	Protected species
Large Grizzled Skipper	Pyrgus alveus			·	X
Large Ringlet	Erebia euryale	Х	Х	Х	
Large Skipper	Ochlodes sylvanus	Х			
Large Tortoiseshell	Nymphalis polychloros	Х			
Large Wall Brown	Lasiommata maera	X			
Large White	Pieris brassicae	X			
Lefèbvre's Ringlet	Erebia lefebvrei	X	Х	Х	
Lesser Marbled Fritillary	Brenthis ino	Х			
Lesser Purple Emperor	Apatura ilia	X	Х		
Long-tailed Blue	Lampides boeticus	X			
Lulworth Skipper	Thymelicus acteon	X		X	
Mallow Skipper	Carcharodus alceae	X		X	

Vernacular name	Latin Name	View	Photo recommended	Capture recommended	Genitalia recommanded
Мар	Araschnia levana	Х			
Marbled Fritillary	Brenthis daphne	Х			
Marbled Skipper	Carcharodus lavatherae	Х	X		
Marbled White	Melanargia galathea	Х			
Marsh Fritillary	Euphydryas aurinia	Х		Protected species	Protected species
Mazarine Blue	Cyaniris semiargus	Х			
Meadow Brown	Maniola jurtina	Х			
Meadow Fritillary	Melitaea parthenoides			Х	
Mountain Clouded Yellow	Colias phicomone		X	Х	
Mountain Dappled White	Euchloe simplonia		Х	Х	
Mountain Ringlet	Erebia epiphron	Х	Х	Х	
Niobe Fritillary	Argynnis niobe		Х	X	
Northern Wall Brown	Lasiommata petropolitana		Х		
Oberthür's Grizzled Skipper	Pyrgus armoricanus				Х
Olive Skipper	Pyrqus serratulae		Х	X	X
Orange-tip	Anthocharis cardamines	Х			
Painted Lady	Vanessa cardui	X			
Pale Clouded Yellow	Colias hyale		X	X	
Peacock	Aglais io	Х			
Peak White	Pontia callidice	X	Х		
Pearl-bordered Fritillary	Boloria euphrosyne	X	X	X	
Pearly Heath	Coenonympha arcania	X			
Piedmont Ringlet	Erebia meolans	X	Х	X	
Poplar Admiral	Limenitis populi	, , , , , , , , , , , , , , , , , , ,	X		
Provençal Fritillary	Melitaea deione		X	X	X
Provençal Short-tailed Blue	Cupido alcetas	Х	^		χ
Purple Emperor	Apatura iris	X	Х		
Purple Hairstreak	Quercusia quercus	X	^		
Purple-edged Copper	· · · · · · · · · · · · · · · · · · ·	X			
Purple-shot Copper	Lycaena hippothoe	X			
	Lycaena alciphron	^			V
Pyrénées Brassy Ringlet	Erebia rondoui	V			X
Queen of Spain Fritillary	Issoria lathonia	X			V
Real's White	Leptidea reali				X
Red Admiral	Vanessa atalanta	X			
Red-underwing Skipper	Spialia sertorius	Х	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		(14 to 1 a color)
Reverdin's Blue	Plebejus argyrognomon	V	X	X	(if in doubt)
Ringlet	Aphantopus hyperantus	Х	,,,	(, FOC. )	
Rock Grayling	Hipparchia alcyone		X	(>500m)	•
Rosy Grizzled Skipper	Pyrgus onopordi		X	X	X
Safflower Skipper	Pyrgus carthami		X		
Scarce Copper	Lycaena virgaureae	X			
Scarce Large Blue	Maculinea teleius	X	X	Protected species	Protected species

Vernacular name	Latin Name	View	Photo recommended	Capture recommended	Genitalia recommanded
Scarce Swallowtail	Iphiclides podalirius	Х			
Shepherd's Fritillary	Boloria pales	Х			
Short-tailed Blue	Cupido argiades	Х			
Silky Ringlet	Erebia gorge		X	X	
Silver-spotted Skipper	Hesperia comma	Х			
Silver-studded Blue	Plebejus argus	Х		Х	
Silver-washed Fritillary	Argynnis paphia	Х			
Sloe Hairstreak	Satyrium acaciae		Х	X	
Small Blue	Cupido minimus	Х			
Small Copper	Lycaena phlaeas	Х			
Small Heath	Coenonympha pamphilus	Х			
Small Pearl-bordered Fritillary	Boloria selene	Х	Х	X	
Small Skipper	Thymelicus sylvestris	Х	Х	X	
Small Tortoiseshell	Aglais urticae	Х			
Small White	Pieris rapae	Х		Х	
Sooty Copper	Lycaena tityrus	Х			
Southern Grizzled Skipper	Pyrgus malvoides				Х
Southern Small White	Pieris mannii		Х	Х	
Southern White Admiral	Limenitis reducta	Х			
Speckled Wood	Pararge aegeria	Х			
Spotted Fritillary	Melitaea didyma	Х			
Swallowtail	Papilio machaon	Х			
The Hermit	Chazara briseis		X		
Tree Grayling	Hipparchia statilinus	Х	Х	X	
Tufted Marbled Skipper	Carcharodus floccifer	Х		X	
Turquoise Blue	Polyommatus dorylas	Х			
Twin-spot Fritillary	Brenthis hecate	Х	Х		
Wall Brown	Lasiommata megera	Х			
Water Ringlet	Erebia pronoe	Х	Х	Х	
Weaver's Fritillary	Boloria dia	Х			
Western Dappled White	Euchloe crameri	(plain)	(>400m)	(>400m)	
White Admiral	Limenitis camilla	Х			
White-letter Hairstreak	Satyrium w-album	Х			
Wood White	Leptidea sinapis				X
Woodland Brown	Lopinga achine	Х	Х	Protected species	Protected species
Woodland Grayling	Hipparchia fagi		Х	(>500m)	
Yellow-spotted Ringlet	Erebia manto	Х	Х	Х	

Appendix II: Code of ethics for the prospecting of species in the framework of the Atlas of Butterflies and Burnet Moths of Aquitaine.

**I.** In the collective inventory program, each participant takes the scientific and moral responsibility for the data he/she provides. He/she undertakes to provide only sincere and genuine data, that is to say, which respects the form in which it was collected without modification.

### **II.** Collection and capture of species:

Contributors undertake not to capture or take protected species, except with an ad hoc prefectoral authorization. For other species, they undertake to <u>capture only for identification purposes and only as strictly necessary</u>, i.e. a maximum of 2 individuals of the same complex (or assumed species) per site, any other purpose being contradictory to the ethos of this atlas project. A majority of the species of butterflies and burnets of Aquitaine can be identified by sight or using photography. For species difficult to identify, it is recommended to refer to the pre-atlas species sheets and other guides.

In all cases, contributors agree not to capture in protected or managed areas for biodiversity unless the manager agrees.

- **III.** Any data provided must be verified, if necessary, by a recognized expert appointed by the inventory.
- IV. Those responsible for the inventory are free to refuse contributions which they consider unfounded or which are not freely provided.
- **V.** During individual or collective surveys, contributors undertake to respect private property (always request the owner's permission).
- **VI.** The above rules apply to any data, in the framework of the Inventory of Butterflies and Burnet Moths of Aquitaine whether it is used for the future atlas or any other published synthesis, or that has been provided previously at any time. These constitute the general rules but may, by collective decision of all interested parties, be adapted on a case-by-case basis.





To participate in furthering our knowledge of butterflies and other wildlife in Aquitaine, 'do the click': I observe, I click! <a href="https://www.faune-aquitaine.org">www.faune-aquitaine.org</a>

Or directly on the mobile application: Naturalist



For more information, download the pre-atlas of rhopaloceres and zygens of Aquitaine on www.faune-aquitaine.org ou sur www.cen-aquitaine.org

This key was written by: Mathieu Sannier (LPO Aquitaine)

Translation and editing: David Simpson

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# Review committee:

Gourvil P-Y, Sannier M, Simpson D, Soulet D, Van Halder I, Couanon V

# Bibliography / resources:

This key has been adapted to the Aquitaine context from the following documents:

LAFRANCHIS T. (2014) Papillons de France, Guide de détermination des papillons diurnes (Rhopalocères, Zygènes et Hétérocères diurnes) LAFRANCHIS T, JUTZELER D, GUILLOSSON J-Y, KAN B & P (2015) La vie des papillons, Ecologie, Biologie et Comportement des Rhopalocères de France

# Photographs:

Gibbons R, Gourvil P-Y, Pitt D, Sannier M, Simpson D, Soulet D, Van Halder I

faune-aquitaine.org: Bargeault L, Bourgeois M, Couanon V, Damian S, Dupuy F, Genoud D, Jelf S, Jourdain B, Luzzato T, Naves A, Pauchet N, Sannier D, Tillo S

faune-auvergne.org : Guelin F, Peyrache P, Véron D

faune-Ir.org: Caminade F, Champion E, Sauvage A

faune-paca.org : Alcouffe S, Delorme C, Fievet C, Guillée B, Fortini P