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Bugs and Beasties of the Western Rhodopes
(a photoguide to some lesser-known species)

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At Honeyguide, we aim to help you experience the full range of wildlife in the places we visit. Generally we start with birds, flowers and butterflies, but we don't ignore 'other invertebrates'. In the western Rhodopes they are just so abundant and diverse that they are one of the abiding features of the area.

While simply experiencing this diversity is sufficient for some, as naturalists many of us want to know more, and in particular to be able to give names to what we see. Therein lies the problem: especially in eastern Europe, there are few books covering the invertebrates in any comprehensive way. Hence this photoguide – while in no way can this be considered an 'eastern Chinery', it at least provides a taster of the rich invertebrate fauna you may encounter, based on a couple of Honeyguide holidays we have led in the western Rhodopes during June. We stayed most of the time in a tight area around Yagodina, and almost anything we saw could reasonably be expected to be seen almost anywhere around there in the right habitat.

Most of the photos were taken in 2014, with a few additional ones from 2012. While these creatures have found their way into the lists of the holiday reports, relatively few have been accompanied by photos. We have attempted to name the species depicted, using the available books and the vast resources of the internet, but in many cases it has not been possible to be definitive and the identifications should be treated as a 'best fit'.

Indeed, in some cases it is not strictly possible to be certain of identification without microscopic or even internal examination, which relies on actual specimens rather than photos. That, in our view, is incompatible with the enjoyment of these natural riches. We consider ourselves to be advocates of ethical entomology, and believe that the welfare of the subject overrides the need for taking specimens for absolutely definitive identification. No killing, no pins – just photos.

What follows is therefore a snapshot of the sometimes overlooked invertebrates of the western Rhodopes in June. The adult stages of butterflies are not included, as they are well provided for in readily-available books; likewise macro-moths, apart from those which are not found extensively in Britain or western Europe. The photos are not always the highest quality, but hopefully will act as a guide to what may be found.

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COLEOPTERA – BEETLES

A very large group of insects, many of the beetles are small and/or difficult to identify, especially from photographs. However, for some families (eg Longhorns and Chafers), their size, shape, colour and pattern is often sufficient to secure a name, while for some of the more diverse families, the food plant and/or habitat can be a considerable help.

Cerambycidae – Longhorn Beetles

The most attractive group of beetles, often relatively large, with more-or-less long antennae, longhorns are also of considerable conservation significance. A large proportion have larvae which live by boring into dead wood, and are important indicators of ancient or continuously wooded habitat. In Europe, their diversity is greatest in central and eastern parts and there are several websites from those areas which are a superb identification resource.

Agapanthia kirbyi

Agapanthia cynarae

Agapanthia intermedia

Agapanthia violacea

Stenurella septempunctata

Stenurella melanura

Dinoptera collaris

Paracorymbia maculicornis

Phytoecia nigripes

Cerambycidae – Longhorn Beetles (cont'd)

Pachyta quadrimaculata

Rutpela maculata

Dorcadion pedestre

Monochamus sartor

Rhagium inquisitor

Longhorn sp.

Scarabeidae – Chafers

Rather dumpy, sometimes quite large beetles, chafers are distinguished by their antennae, the end segments of which are expanded into flattened plates which lie together, giving the appearance of a terminal club. Chafer larvae are generally subterranean grubs, feeding on roots.

Cetonia aurata Rose chafer

Eupotosia mirifica

Oxythyrea funesta

Left:
Hoplia argentea

Right:
Hoplia graminicola

Coccinellidae – Ladybirds

Well-known beetles, usually feeding upon aphids and other insects. Some species are notoriously variable in colour and spotting.

Coccinella septempunctata
7-spot ladybird

Psyllobora vigintiduopunctata
22-spot ladybird

Subcoccinella vigintiquattuorpunctata
24-spot ladybird

Left:
Harmonia axyridis
Harlequin Ladybird
(two colour forms)

Chrysomelidae – Leaf- and Flea- beetles

Chrysolina polita

Chrysomela populi (adults) (larva)
Red Poplar Leaf-beetle

Sometimes large, with often bright or metallic colours, but there are very many of them. Food plant is a good clue to identity. Flea-beetles have swollen, muscular hind-legs, allowing them to jump well.

Chrysolina graminis
Tansy Beetle

Chrysolina fastuosa

Chrysomela aenea
Alder Leaf-beetle

Chrysomelidae – Leaf- and Flea- beetles cont'd

Leptinotarsa decemlineata
Colorado Beetle

Crepidodera aurata
Willow Flea-beetle

Malachiidae – Malachite Beetles

Often to be seen sitting on flowers, where they eat pollen, nectar and other visiting insects, Malachite Beetles are often brightly coloured and/or metallic. Typically the abdomen protrudes beyond the end of the wing-cases. The unidentified species has some resemblance to *Malachius aeneus* (Scarlet Malachite-beetle), a rare British species, although the scarlet colour is not extensive enough.

Malachius bipustulatus
Common Malachite Beetle

Malachius scutellaris

Malachius sp.

Cantharidae – Soldier Beetles

Soldier Beetles, often patterned in red (or orange) and black, are a familiar sight on meadow flowers, especially those like umbellifers or members of the daisy family that have 'open' flowers which don't use floral structures to restrict the range of insect visitors and pollinators.

Although not shown here, another common species in the Rhodopes is *Rhagonycha fulva*, the 'Hogweed Bonking-beetle', which really lives up to its informal name, and is orange-red, with dark brown patches at the end of its wing-cases.

Cantharis livida

Cantharis rustica

Curculionoidea – Weevils

Despite being a readily recognisable group, with a more-or-less elongate snout and elbowed antennae, weevils in the families which make up the superfamily Curculionoidea are very difficult to identify: there are simply so many of them, they are often rather small, and the differences between species can be very subtle. Even the larger ones (see *Lixus* and *Liparus* below) proved impossible to track down specifically.

Pissodes pini

? *Otiorhynchus* sp.

Liparus sp.

Left:
Lixus sp.

Right:
Another *Lixus* sp.

Left:
Phyllobius sp.

Right:
Weevil sp.

Meloidae – Oil-beetles

A family named after the pungent oily liquid within their body, which can be secreted in defence against predators.

Cerocoma cf. *schaefferi*

Mylabris polymorpha

Other beetle families

The ground-beetle *Carabus intricatus* was one of the largest beetles we have ever seen, being around 4cm in length, with lovely purple reflections.

Anthaxia helvetica
(Buprestidae)

Prosternon tessellatum
(Elateridae)

A click beetle
(**Elateridae**)

Trichodes apiarius
(**Cleridae**)

Trypocopris vernalis
(**Geotrupidae**)

Carabus intricatus
(Carabidae)

HEMIPTERA – BUGS

The true bugs all have sucking mouthparts, to feed on the contents of animal or plant tissues. The nymphal (immature) stages are often rather different in appearance from the adults, and readily recognisable.

Pentatomoidea – Shield-bugs

Carpocoris purpureipennis (adult)

(nymph)

Peribalus strictus
Vernal Shield-bug

Dolycoris baccarum (adult)

(nymph)
Hairy Shield-bug

Tritomegas sexmaculatus
Rambur's Pied Shield-bug

Pentatoma rufipes (nymph)
Forest Bug

Eysarcoris venustissimus
Woundwort Shield-bug

Eurydema ornata

(pale morph)

Graphosoma italicum 'Millwall Bug'

The two species above are example of insects which show typical red-and-black warning colouration, alerting potential predators to their noxious defensive chemicals. There are also several examples of this in other bug families (see next page).

Coreidae – Squash-bugs

Coreus marginatus Dock Bug

Syromastus rhombeus Rhombic Leather-bug

Pyrrhocoridae – Fire-bugs

Pyrrhocoris apterus Firebug (adult)

(nymph)

Rhopalidae – Scentless Plant-bugs

Corizus hyoscyami

Lygaeidae – Ground-bugs

Lygaeus equestris

Lygaeus saxatilis

Miridae – Plant-bugs

Deraeocoris ruber (two of several colour forms)

Lygus sp.

All of the families above are members of the Sub-Order **Heteroptera**, in which the front wings of the adult are partly leathery and partly membranous. The remaining families are in the 'Homoptera', in which the front wings are either all hardened or all membranous. 'Homoptera' consists of two Sub-Orders: **Auchenorrhyncha** (cicadas and hoppers, as below, whose forewings are usually leathery and pigmented) and **Sternorrhyncha** (aphids, plant lice, white-flies and scale-insects, which, if they have wings, are all membranous, and often lack significant pigmentation). Also, the Auchenorrhyncha have short, bristle-like antennae, whereas those of the Sternorrhyncha are longer, and hair-like.

Aphrophora alni Alder Spittle-bug (**Aphrophoridae**)

Cercopis vulnerata (**Cercopidae**)

Froghoppers in the Aphrophoridae are often conspicuous as nymphs: they secrete the surplus plant fluids as 'cuckoo-spit', defence for the soft-bodied nymphs against environmental extremes. Those fluids are considered to be surplus as they need to process large volumes of the sap in order to gain sufficient nitrogenous compounds for growth.

A leafhopper **(Cicadellidae**)

A cicadellid nymph

While leafhoppers often have distinctive dark markings on the head, thorax or wings, there are no readily available guides to the huge number of European species.

LEPIDOPTERA – BUTTERFLIES & MOTHS

Adult **Butterflies** are not included in this guide, as there is a plethora of readily-available guides to them throughout Europe. The early stages are however less well covered. The two species shown are distinctively fritillaries, from their complex protuberances; the foodplant is also a helpful guide to their identity.

Above: Twin-spot Fritillary on Medick

Left:
Lesser Spotted Fritillary on Mullein

Likewise many of the **Macromoths** are to be found in the British and western European guides, so the ones shown here are those which are not. That is, apart from the burnets (including foresters) and superficially similar nine-spotteds, which are notoriously variable and often difficult to identify – all of those we photographed are shown.

Left:
Acronicta cinerea

Right:
Carnation Cleophane
Teinoptera olivina

Mountain Marble *Elophos dilucidaria*

Dotted Wave *Idaea rufaria*

Woodland Burnet
Zygaena osterodenis

Slender Scotch Burnet
Zygaena loti

Scarce Forester
Adscita globulariae

Nine-spotted Moth *Syntomis phegea*

Nine-spotted caterpillar

Krueger's Nine-spotted Moth *Syntomis kruegeri*

Hyaline Brown Burnet *Dysauxes famula*

Bottom of the lepidopteran pile however are the **Micromoths**: their small size, numerous species, and a near-absence of comprehensive identification books and websites mean they are often overlooked. But what a shame! The photos below indicate that some are indeed identifiable, and many are exquisitely beautiful.

Chrysocrambus craterella

Pyrausta cingulata

Large White Plume *Pterophorus pentadactylus*

Triangle Plume *Platyptilia gonodactyla*

Epiblema turbidana

Epiblema sticticana

Dichrorampha petiverella

Olethreutes arcuella

Isophrictis anthemidella

The next two demand some explanation. *Coleophora* species are case-bearing moths, whose larvae construct distinctive protective cases from the tissue of their food-plant, while *Taleporia* is one of the bag-worms (Psychidae) in which the larva, pupa (and in some species, flightless adult females) inhabit a silken tube which is adorned with detritus from their surrounding environment.

Coleophora vibicella

Taleporia tubulosa

Finally, a couple of attractive micros which have hitherto evaded our effort at identification:

? *Mompha* sp. ?

?

DIPTERA – FLIES

Hoverflies and bee-flies are perhaps the two families of true flies which most grab one's attention, from their habits of resting conspicuously on flowers or sunny patches of ground respectively, often with distinctive hovering flight-action. These are followed by a small selection of species from the many other families of flies.

Syrphidae – Hoverflies

Volucella pellucens

Eristalis pertinax

Melanostoma scalare

Syrphus ribesii

Sphaerophoria cf. *scripta*

Syrphidae sp.

Bombyliidae – Bee-flies

All are parasitoids in the nests of bees and wasps, their larvae eating the host larvae. The lower four species are fearsome-looking with strongly marked wings, resembling Horse-flies, but they are not biters.

Bombylius minor

Left:
Hemipenthes morio

Right:
Hemipenthes maura

Left:
Exoprosopa capucina

Right:
Anthrax anthrax

Aslidae – Robber-flies

Dioctria atricapilla

Neoitamus socius

Tephritidae – Picture-winged Flies

Urophora quadrifasciata

Xyphosia sp.

Other families

A couple of Parasitic-flies (**Tachinidae**) – usually parasitic upon lepidopteran larvae

Sicus ferrugineus
a Thick-Headed Fly (**Conopidae**)

Sepsis sp.
an Ensign-fly (**Sepsidae**)

A Grass-fly (**Chloropidae**)

HYMENOPTERA – BEES, WASPS & ANTS

Our biggest blind-spot among the major insect groups, the Hymenoptera constitute probably the largest Order of insects in the area. Bumblebees *Bombus* spp., Honeybees *Apis mellifera* and Wood Ants *Formica rufa* were abundant but somehow evaded our cameras.

Otherwise, there were numerous parasitic wasps, sawflies and solitary bees and wasps, all of which require considerably greater expertise than ours for identification.

A parasitic wasp

A sawfly *Tenthredo* cf. *mesomela*

A sawfly larva

? A solitary wasp ?

A long-horned bee *Eucera* sp.

ODONATA – DRAGONFLIES & DAMSELFLIES

Although well covered in several books, the Odonata of the region include several less familiar forms and species among those we see at home.

Southern Skimmer *Orthetrum brunneum*

Four-spotted Chaser *Libellula quadrimaculata*

Eastern Spectre *Caliaeschna microstigma*

White-legged Damselfly *Platycnemis pennipes*

Southern Beautiful Demoiselle *Calopteryx virgo meridionalis*

ORTHOPTERA – GRASSHOPPERS & CRICKETS

Along with Longhorn Beetles, the Orthoptera are perhaps the most remarkable group of 'other insects' we encounter in the Rhodopes, in terms of their unfamiliarity, diversity and sheer abundance.

Field Crickets are ubiquitous, although more often heard than seen:

Field Cricket *Gryllus campestris*

Likewise, there are numerous grasshoppers, including this large species from the steppe grassland of Bessapari:

Asiotmethis limbatus

But the bush-crickets are most noticeable, and most easily photographed:

Pholidoptera aptera female

male

Pholidoptera cf. *femorata*

Rhacocleis neglecta

Wart-biter
Decticus verrucivorus

Decticus albifrons

Poecilimon thoracicus

Poecilimon macedonicus

Poecilimon orbelicus

Speckled Bush-cricket *Leptophyes punctatissima*

Leptophyes cf. *albovittata*

Saw-tailed Bush-cricket *Polysarcus denticauda*

Psorodonotus fieberi
Abundant in the Rhodope Lily field at Stoykite

Isophya sp.

Isophya speciosa

Ephippiger sp.

OTHER INSECT ORDERS

Representatives of several other small Orders are occasionally encountered.



Panorpa meridionalis (**Mecoptera**) – a scorpion-fly with more heavily spotted wings than the three British species. These examples are all females, and so lack the distinctive scorpion-like tail of the male; the extended snout is used to extract flies out of spiders' webs.

Species in the Order **Neuroptera** (lacewings and allies) range from the familiar (though very similar) green lacewings to the often colourful and dramatic ant-lions and ascalaphids. Ascalphids are most often seen whizzing around in sunny weather and rarely at rest. The unfortunate individual below right was dead and being demolished by ants, the ultimate act of revenge, given that its larvae are predators of ants.

Chrysopa carnea
a green lacewing

Pennant-winged Ant-lion
Nemoptera sinuata

Libelloides macaronius
an ascalaphid

Raphidioptera is a small Order of woodland insects which share a distinctive adult characteristic of an elongate thorax which can be held upright, resembling a striking snake, hence the name snake-flies.

Two Orders with aquatic early stages, the mayflies **Ephemeroptera** and stoneflies **Plecoptera** have little in the way of easily-accessible identification resources, and so remain unidentified. Both have long 'tails' but stoneflies are flattened, whereas mayflies hold their wings vertically at rest.

Phaeostigma notata

A mayfly

A stonefly

MOLLUSCS

Just a couple of species we were able to identify, one very familiar and readily recognisable by virtue of its size.

Roman Snail *Helix pomatia*

Zebrina detrita

SPIDERS

For us, the most attractive and distinctive spiders are the **crab-spiders**, which tend to sit around on flowers, sometimes camouflaged to match the flower colour, waiting for their unsuspecting prey to arrive.

Heriaeus hirtus

Diaea dorsata

Thomisus onustus

Xysticus cristatus

Synaema globosum

Misumena vatia (male)

Another well-known family, masters of the art of web construction, are the **orb-web spiders**:

Garden Spider *Araneus diadematus*

Araneus angulatus

Oak spider *Aculepeira ceropegia*

Cucumber Spider *Araniella cucurbitina*

The rest of the spiders here are single species from a diverse range of families, characterised by different hunting or feeding habits:

Agelena orientalis – a funnel-web spider

Ladybird Spider *Eresus cinnaberinus*

Evarcha falcata - a jumping spider

Oxyopes heterophthalmus – a lynx-spider

Enoplognatha ovata – a comb-footed spider.
Also comes in white, red and striped forms.

Tetragnatha extensa – a stretch-spider

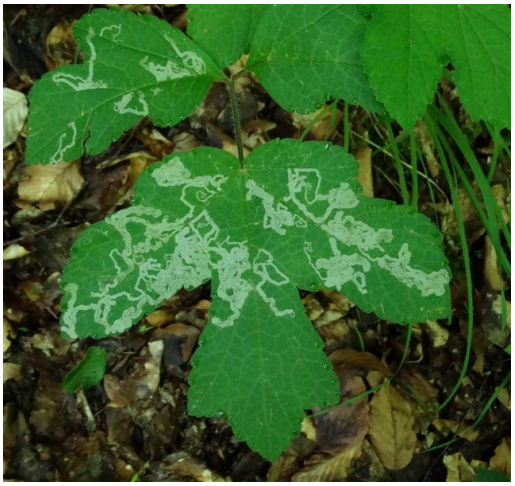
LEAF-MINES

Some insects are so small that they live, usually in the larval stages, between the upper and lower surfaces of a leaf, eating the internal tissues and creating a leaf-mine. Such mines are usually identifiable by a combination of the plant affected and the form of the mine – most leaf-miners have a defined host range, often just a single species.

Leaf-miners come from several Orders of insects, including Lepidoptera, Coleoptera and Diptera: the ones shown here are all fly mines.

Aulagromyza cornigera on Honeysuckle

Phytomyza fulgens on Wild Clematis



Left:
Phytomyza spondylii
on Hogweed

Right:
Chromatomyia syngenesiae
on Sow-thistle

GALLS

Another expression of the interaction between organisms and disciplines, galls are abnormal growths in plants triggered by the interaction with another organism. Gall-causers include insects, mites, fungi and bacteria; while the causers are often microscopic, they are often identifiable through a combination of the host plant and the symptoms (form, location, colour etc).

Mite galls

Aceria exilis on Lime

Nail-gall *Eriophyes tiliae* on Lime

Mite galls (cont'd)

Eriophyes diversipunctatus on Aspen

Phyllocoptes populi on Aspen

Sawfly galls - all on Willows

Pontania proxima

Pontania pedunculi

Pontania virilis

Gall-wasp galls

Robin's-pincushion *Diplolepis rosae* on Rose

Gall-midge galls

Mikiola fagi on Beech