

# A Year Of Lithuanian Butterflies

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Primarily based on observations in 2016, the purpose of this list is to provide a detailed analysis of a year's observations to serve as a broad outline of the species that may be encountered by an observer in Lithuania, with notes detailing flight dates, approximate locations and abundance. Whilst not a comprehensive list of all species ever recorded in Lithuania, observations do cover 109 of the 126 species currently on the Lithuanian list. For completeness, an appendix of the remaining 17 species (mostly rare vagrants or historically-occurring species) will be added.

**Methodology**In this year of butterflies, I travelled extensively in Lithuania over the year, incorporating a total of 124 field visits, most lasting two to four hours, from the start of the butterfly season on 27 March till its conclusion on 13 October. In general, most sites visited were in eastern, central or southern parts of the country and each field visit could include several localities in close proximity. Additionally, I also visited eight localities in central and south-east Latvia on dates in June, July and August. During the season, I completed approximately 376 hours of fieldwork and covered a total of 16,820 km to reach the sites. Additionally, several outings (where no butterflies were recorded) were made on either side of the cut-off dates of the season and four visits to winter roost sites, primarily underground bunkers. Thus, in all, a total of 135 field visits were made during the year. At all sites, the numbers of individual butterflies of each species were recorded on each visit. In the cases of the more abundant species, counts were generally approximations and recorded as number of individuals per locality &ndash; this simply means the estimated number present per &ldquo;single locality&rdquo;; a term that I loosely define as an individual forest ride or single area of meadow generally, etc.

Frequently, in the course of a field visit, I would visit more than one single locality (e.g. several adjacent meadows or a series of forest rides) within the single area and the count is then an estimate of the average number of individuals per single locality, not the entire site. Clearly this method of counting results in lower totals than tallying all counts for a single day, but I believe the method gives a better indication of the relative abundance of butterflies on any given day rather than a reflection of the amount of time spent in the field. Size of localities varied, but generally I deemed a single locality as an entity up to about 500 metres in extent, whether this meant a linear length in habitat such as a forest ride or an approximate dimension in either way in open habitats such as meadows. It is worth mentioning that I was out of the Baltic States for a period of three weeks from 9-29 May and consequently spring data is incomplete in some cases &ndash; where this is considered to affect results, the relevant sections are marked with an asterisk. I was also out of the Baltic States for shorter periods from 14-17 April, 22-27 June and 24-27 August, though these were less likely to have had any overall impact on results.

**Weather**Weather patterns have considerable impact on the numbers of butterflies flying at any particular time, not only in terms of the warm sunny conditions required to bring butterflies onto the wing, but also in relation to periods of cool weather and heavy rain that can both delay emergences and also deplete numbers of butterflies already emerged, thereby reducing overall abundances and shortening flight seasons. 2016 was marked by a cold spring, a very variable summer and an exceptionally warm, sunny autumn, extending right through to early October. In more detail, spring temperatures remained below 10 C until the end of March, with consequently no butterflies seen until the 28th. Thereafter, lasting little over a week, a brief spell of warm weather saw temperatures rising to 16 C with considerable numbers of early butterflies appearing, most notably Small Tortoiseshells and Brimstones, but also Yellow-legged Tortoiseshell and Camberwell Beauty. From the 5th April, conditions again deteriorated, with the entire period until the 20th characterised by temperatures often below 6 C, along with frequent wind, rain and even snow on the 8th. In contrast to an average year, when quite a number of species can be seen during this period, butterflies were predictably almost totally absent, the only exceptions being occasional single Small Tortoiseshells and Brimstones noted in sheltered spots. From the last days of April, weather conditions settled and temperatures gradually rose from 16 C to 23 C in early May with frequent sun. Sixteen species of butterfly were seen in this period, the most notable being a very large emergence of Green Hairstreaks. For the remainder of the spring and indeed continuing right through to the middle of August, weather conditions were very mixed - temperatures rarely exceeded 25 C and extended periods of prolonged sunny dry weather were relatively few. More typically, sunny days were interspersed by cloud and rain, the latter sometimes heavy. Though species diversity seemed largely unaffected, with a total of 91 species noted during the five peak weeks from mid-June thorough to late July, flight seasons were possibly truncated to a degree in some species, with abundances tapering rather early in some cases. Also possibly weather related, numbers of Purple Emperors and Lesser Purple Emperors in particular appeared very low. In the later parts of the season, from mid-August right through to early October, the weather was exceptional &ndash; temperatures were far above average, even reaching 21 C on 2nd October, sunshine was predominant and rain very little. As a consequence, the butterfly season extended several weeks beyond the expected, with many species such as Queen of Spain Fritillaries, Eastern Bath Whites and Small Coppers appearing in good numbers in an autumn generation. Unprecedented in Lithuania, both Large Copper and Chestnut Heath were seen on the wing in early October, neither being species that generally appear in a second generation in the Baltic States. From 4 October onwards, temperatures dropped to highs of only 5 C, with days of heavy rain then followed by the first frosts on 13 October, thereby ending the butterfly season.

**Results** The results exceeded my expectations, not only were 109 species recorded (104 in Lithuania and 69 in Latvia), but also a new species for the Baltic States was discovered in the form of Meleager's Blue, plus quite a number of highly noteworthy butterflies, principally amongst them a mass arrival of at least 66 Marbled Whites (the only previous records in Lithuania being in three individuals in the 1920s and a single in 2001) and two Clouded Yellows (a rare non-annual vagrant). Additionally, 19 Red Data Book species were found, including several with extremely limited distributions in the Baltic

States. Table 1 illustrates the total number of species seen across the year on a half-monthly basis. Typical of the southern Baltic States, the peak of the season in terms of species diversity was in the period from the middle of June to the end of July (91 species in total, 60-63 species per two-week period). As previously mentioned, the beginning and end of the season were very much affected by the prevailing weather conditions (poor in the spring, very good in the early autumn) – the relatively low numbers of species in April and May can be partly explained by the prolonged periods of cold wet weather that characterised the two months, while by contrast the exceptionally high numbers of species noted in September (total of 27 species) and early October (16 species) can be directly related to the abnormally high temperatures of autumn 2016, this resulting in late emergences in quite a number of species and rare instances of out-of-season butterflies such as Large Copper and Chestnut Heath.

Table 1. Number of Species Recorded (per half month)

Systematic List The lists below details all the species seen during the year, providing English and scientific names, an indication of whether I saw them in Lithuania or Latvia, then brief comments on the species, approximate locations of sightings, dates and indications of abundance. Where available, a photograph is also provided – of the 109 species, only three were not photographed (Twinspot Fritillary, Frigga's Fritillary and Large Heath), while photographs of a fourth were only obtained outside the Baltic States (Purple Hairstreak).

#### Family PAPILIONIDAE: SWALLOWTAILS and Allies

Clouded Apollo *Parnassius mnemosyne* (Lithuania, Latvia) RED DATA BOOK SPECIES This is a species with an irregular distribution in Latvia and Lithuania, the main populations occurring in south-west Latvia and in northern and central Lithuania. 2016 sighting consisted of a minimum of 12 at a traditional site south-east of Riga on 4 June and one very faded individual at Ukmergė on 13 June, the latter near the southern edge of its Lithuanian range.

Swallowtail *Papilio machaon* (Lithuania) RED DATA BOOK SPECIES None recorded in the May-June flight period, but a typical scattering of 12 individuals seen between 6 July and 12 August at various widely dispersed localities, including Pabradė, Kernavė, Ropės Forest, Jurbarkas and various sites in the Druskininkai region.

#### Family PIERIDAE: WHITES, YELLOWS

Black-veined White *Aporia crataegi* (Lithuania, Latvia) Flight dates 4 June to 9 July, best totals were in Latvia where in excess of 30 individuals per locality were seen. In Lithuania, numbers appeared lower than in some years, but the species was noted at Kernavė, Vievis, Ropės Forest and Šepkėliai, with maximum counts of 12 per locality.

Large White *Pieris brassicae* (Lithuania, Latvia) Widespread species with prolonged flight period, small numbers (generally less than ten individuals/locality) seen regularly through the season from 29 May – 1 October. Small White *Artogeia rapae* (Lithuania, Latvia) Common and widespread, three main flight period noted: 5-8 May \* (peak: 40 individuals/locality), 12 June – 31 July (peak: 6 July-25 July, 40+ individuals/locality) and 12 August-3 October (peak: 29 August-3 September, 250 individuals/locality).

Green-veined White *Artogeia napi* (Lithuania, Latvia) Common, seen at all locations visited. Short flight period from 28 April, culminating with a minimum of 150 individuals/locality on 8 May \*. Second, more prolonged, flight from 29 June – 25 July, numbers generally below 20 individuals/locality. Third flight period from 4 August – 3 October, numbers rising to over 100/locality on 29 August. Eastern Bath White *Pontia edusa* (Lithuania) Localised species in Lithuania, but numbers appeared above average in 2016, including remarkable numbers very late in the season.

Recorded in two main areas – meadows near Ropės Forest (three on 8 May, four on 24 July, three on 29 August, at least 25 on 9 September, one on 18 September, 12 on 25 September, ten on 30 September, 18 on 1 October and five on 3 October) and at two localities south-west of Druskininkai (four on 30 July and three on 6 August). Orange Tip *Anthocharis cardamines* (Lithuania) A common early spring butterfly. Flight dates rather delayed by poor weather in 2016, but otherwise a typical spread of records with butterflies seen from 28 April-8 May \*, the peak being on 5 May when a minimum of 50 individuals per locality were noted.

Pale Clouded Yellow *Colias hyale* (Lithuania, Latvia) A common migrant species into the Baltic States, usually arriving in variable numbers from mid-summer. In 2016, six were unusually noted on 29 May, but otherwise all other records (minimum 377 individuals) were from 9 July – 3 October, with the highest counts being at least 60 on 5 August at Kernavė, 28 at Kernavė on 11 September and 55 at Ropės Forest on 1 October. Overall, a better than average year, especially in terms of late season records (225 of the 393 logged individuals being in September and October). Clouded Yellow *Colias crocea* (Lithuania) A rare non-annual vagrant to the Baltic States, one was seen on 20 August south-west of Druskininkai and another on 9 September in meadows near Ropės Forest.

Moorland Clouded Yellow *Colias palaeno* (Lithuania, Latvia) A localised, but moderately common species. A total of 27 individuals were noted during the season on dates from 4 June – 9 July. Localities in Lithuania included Šepkėliai, Labanoras and Rūdninkai. Brimstone *Gonepteryx rhamni* (Lithuania, Latvia) Widespread and abundant, recorded at all locations. Main flight dates in 2016 were 27 March-30 May (peak 170 individuals/locality on 4 April) and 29 July-29 August (minimum peaks 70 individuals/locality on 25 July, 50 individuals/locality on 21 August). Further scattered individuals culminated in five on 30 September, eight on 1 October and one on 13 October.

Wood White *Leptidea sinapis* (Lithuania, Latvia) A common and widespread species in woodland rides and meadows at woodland edges. A minimum of 290 logged during the season, with two generations noted: 30 April – 4 June (peak 35 individuals/locality on 7 May) and 29 June – 6 August (peak 35 individuals/locality on 24 July). Cryptic Wood White *Leptidea juvernica* (Lithuania) Not reliably recorded. Field identification of this species is highly problematic, the features to separate it from Wood White of questionable reliability. Based on the structure of the genitalia, Cryptic Wood White is reportedly the dominant species in the west of Lithuania, while Wood White is dominant in eastern areas. As my investigations were based purely on field observations and photographic evidence, they are

subject to error, but I am reasonably confident that the vast bulk of *Leptidea* individuals I saw during 2016 were indeed Wood White, this corresponding to the expected range (most of my observations were in the eastern and southern parts of Lithuania). However at least several individuals in the Jurbarkas area on 16 July were most likely Cryptic Wood White. My identification is based primarily on a curved discal strip on rear underwing running parallel to wing margin, rather than straight (ish) that is apparently more typical of Wood Whites. Tests on individuals further south in the range, specifically in Switzerland, seem to confirm this as a relatively reliable feature. The curved discal strip, as well as other supporting features such as a generally higher incidence of dark markings on the underwing and a marginally more expansive dark splotch at tip of forewing running along apex, seemed to characterise many of the Jurbarkas individuals, but not those seen in the east. Also, apparently of relevance, Jurbarkas individuals were commonly in open meadow rather than the preferred proximity to woodland of Wood White. This said, I do not consider my records of Cryptic Wood White as conclusive and therefore do not include this species amongst the 109 species of butterfly recorded during 2016.

#### Family LYCAENIDAE: COPPERS, HAIRSTREAKS, BLUES

**Brown Hairstreak** *Thecla betulae* (Lithuania) Recorded only at Dūkai; a single on 18 August, then two separate individuals on 11 September. **Green Hairstreak** *Callophrys rubi* (Lithuania, Latvia) During the early flight period, a very marked emergence in early May with counts of 70 and 50 noted at two locations in Labanoras on the 5th and 7th and a minimum of 180 at a single locality in Ropejos Forest on the 8th. No fieldwork in the period 9-28 May, but thereafter still three-four individuals per locality at both Labanoras and Ropejos Forest on 29 May. Later in the season, four were seen in south-east Latvia on 4 June, two at Cepkeliai on 5 June and another two at Cepkeliai on 16 June.

**Purple Hairstreak** *Favonius quercus* (Lithuania) Generally quite a common species in oak woodlands at the end of July, but highly arboreal, tending to stay in the canopy and thus rarely seen. Two individuals seen at Dūkai on 28 July, my only attempt to find the species during the season. **Ilex Hairstreak** *Satyrrium ilicis* (Lithuania, Latvia) Five seen in total – one near Vievis on 20 June, three in Latvia on 9 July and one near Dūkai on 11 July.

**Blue-spot Hairstreak** *Satyrrium spini* (Lithuania) Localised species, not common. A total of seven seen – three near Dūkai on 11 July, two near Ukmergė on 17 July, a single at another locality near Dūkai on 22 July and one near Druskininkai on 30 July. **White-letter Hairstreak** *Satyrrium w-album* (Lithuania, Latvia) A very good season for this species – a total of 48 individuals seen on dates from 8-25 July. Best totals were 12 at Ukmergė on the 12th, nine at Dūkai on the 11th and 17 near Verkiai on the 25th, with further records originating elsewhere in the Dūkai area, from Grigiškis and from central Latvia.

**Small Copper** *Lycaena phlaeas* (Lithuania, Latvia) Fairly common and widespread in dry grasslands and heaths. One seen on 29 May, but otherwise all (176 individuals) were noted in a protracted flight season from 2 July to 3 October, most frequently in the periods 17-31 July and 9 September-3 October. Rarely occurring in large numbers, peak locality counts were at Pabradė (12 on 12 August) and in Ropjės Forest (14 on 9 September, 18 on 18 September, 35 on 25 September, 15 on 30 September and 20 on 1 October). These aside, most other records were of one to three individuals per locality, up to six or eight in a few cases.

**Large Copper** *Lycaena dispar* (Lithuania, Latvia) RED DATA BOOK SPECIES Red Data Book species. Most records (six individuals) were in the typical period 2-24 July and consisted of two near Jurbarkas, one at Vievis, one south-west of Druskininkai and one near Ropjės Forest, plus one in central Latvia. Remarkably, two separate females were also noted near Ropjės Forest on the very late dates of 30 September to 1 October and 3 October – these constituting the latest ever records of this species in Lithuania (Large Copper is single-brooded in the Baltic States, though two past records do exist from early to mid-September, suggesting occasional partial second broods).

**Scarce Copper** *Lycaena virgaureae* (Lithuania, Latvia) Common and widespread, recorded at all main localities visited. A protracted flight season from 29 June to 26 September, with a peak of 100+ individuals/locality in the period 16-25 July. Very few seen after 20 August, most subsequent records being of very faded single individuals.

**Sooty Copper** *Lycaena tityrus* (Lithuania, Latvia) A fairly common species, seen at most localities visited. Two flight periods: 29 May – 17 June (peak 29 May, 15 individuals/locality) and 16 July – 25 September (peak 23-30 July, 25 individuals/locality).

**Purple-shot Copper** *Lycaena alciphron* (Lithuania, Latvia) Moderately widespread with butterflies seen from 5-8 June (total of four individuals) and 18 June-5 August (peak 29-30 June, max 20 individuals/locality). Best localities for this species were Rūdninkai, Ropjės Forest, Labanoras, Dūkai and Cepkeliai.

**Purple-edge Copper** *Lycaena hippothose* (Lithuania) Seen at two localities near Dūkai, at Kernavė and south-west of Druskininkai, but very few individuals seen and only in the limited dates of 5 June and 5-6 August.

**Brown Argus** *Aricia agestis* (Lithuania) Recorded only at Kernavė, where individuals were noted at several neighbouring locations. In total, one was seen on 5 August, one on 15 August, five on 11 September and two on the very late date of 1 October.

**Northern Brown Argus** *Aricia artaxerxes* (Lithuania, Latvia) Moderately common in Latvia, rare and localised in Lithuania. Eight were noted in central Latvia on 8 July, while single separate individuals were recorded in meadows near Jurbarkas on 2, 10 and 16 July.

**Geranium Argus** *Aricia eumedon* (Lithuania, Latvia) RED DATA BOOK SPECIES Localised, but moderately widespread in Lithuania. Four records in 2016: one at Dūkai on 18 June, eight at Margionys on 6 July, two in central Latvia on 9 July and one at Margionys on 23 July.

**Short-tailed Blue** *Everes argiades* (Lithuania) One at Labanoras on 30 June, but all other records in the period 11 July to 4 August. In this period, a total of 27 individuals were logged with records from Dūkai, Druskininkai, Sakalinis, Viesville, Ukmergė, Ropjės Forest and Labanoras. In all cases, one-three individuals were seen per site, with the exception of 11 puddling alongside a stream near Dūkai on 22 July.

**Little Blue** *Cupido minimus* (Lithuania, Latvia) A fairly localised species, generally occurring in small numbers (maximum six or seven per locality). In 2016, a total of 32 individuals recorded, localities being Rykantai, Vievis, Dūkai, Kernavė and Ukmergė, as well as south-east Latvia. Two main flight periods were noted: 30 May – 20 June and 28

July &ndash; 5 August, with one late individual on 15 August. Holly Blue *Celastrina argiolus* (Lithuania, Latvia) Fairly common and widespread. Two main flight periods noted &ndash; 28 April &ndash; 8 May \* (four-five per locality throughout) and 29 June &ndash; 31 July (peaks 2-6 July, 12 individuals/locality and 16-18 July, 35 individuals/locality). Recorded at many localities, including Labanoras, Rop jos Forest, Viesville, epkeliai, Ukmerg , Dkk&scaron;tos, Verkiai and Druskininkai. A late individual also seen in south-east Latvia on 14 August.

Eastern Baton Blue *Pseudophilotes vicrama* (Lithuania) Uncommon and localised. One individual seen in Rkdinkai Forest on 29 June. Alcon Blue *Maculinea alcon* (Lithuania) RED DATA BOOK SPECIES Known to occur in only a couple of localities in the Baltic States. Two seen in meadows near Dkk&scaron;tos on 18 June. Large Blue *Maculinea arion* (Lithuania, Latvia) RED DATA BOOK SPECIES An uncommon species, most widespread in southern and eastern Lithuania. Total records consisted on five individuals near Rykantai on 1 July, one in central Latvia on 9 July and two faded individuals near Margonys on 23 July.

Scarce Large Blue *Maculinea teleius* (Lithuania) RED DATA BOOK SPECIES Localised in Lithuania, mostly limited to central and south-western parts of the country. Despite repeated searches, I failed to locate them at localities along the Nemunas River near Jurbarkas where I have seen them in the past, but found one near Sakalin on 16 July. Silver-studded Blue *Plebejus argus* (Lithuania, Latvia) Flying from 18 June to 21 August, a common, fairly widespread species. With counts of 35-50+ individuals/locality regularly recorded throughout this period, the best sites for the species included Rop jos Forest, Rkdinkai, Cepkaliai, Viesville, Labanoras and Pabrad . Also seen at various localities in Latvia, plus in smaller numbers in Sakalin and Jurbarkas.

Idas Blue *Plebejus idas* (Lithuania) Only confirmed record was a single at Kernav on 18 June, though suspected individuals were also noted south-west of Druskininkai in late August.

Reverdin's Blue *Plebejus argyrognomon* (Lithuania) An above average number of records, but all at locations south-west of Druskininkai &ndash; one on 23 July, two on 30 July, five on 6 August, a total of 16 at two sites on 20 August, then single faded individuals on 3 September and 15 September.

Cranberry Blue *Vacciniina optilete* (Lithuania, Latvia) Localised species, mostly around raised bogs and similar habitat. Nine individuals seen: four in the epkeliai area on 6 July, then five in central Latvia on 9 July. Mazarine Blue

*Polyommatus semiargus* (Lithuania, Latvia) Typical wide scatter of records from localities across Lithuania and Latvia, with most records on dates from 8 June to 11 July. Numbers appeared low in 2016 with a maximum single locality count of eight at Dkk&scaron;tos on the 8 June and most other records of just two or three individuals per locality. Two isolated late records &ndash; singles at Labanoras on 17 July and south-west of Druskininkai on 6 August. Amanda's Blue *Polyommatus amandus* (Lithuania, Latvia) A fairly common species flying from 8 June to 11 July, with two late individuals on 17 July and 30 July. Recorded at nearly all localities visited, with the highest totals being in the Ukmerg area where upward of 20 individuals/locality were seen on 13 June and 19 June. Turquoise Blue *Polyommatus dorylas* (Lithuania) A localised species in Lithuania. Lower numbers than usual seen in 2016, though in part due to not visiting key localities for the species during the peak of their season. Total records consisted of a single at Dkk&scaron;tos on 11 July and eight at Rykantai on 5 August. Chalkhill Blue *Polyommatus coridon* (Lithuania) RED DATA BOOK SPECIES Restricted to a number of sites in southern Lithuania. During my investigations, found at two localities south-west of Druskininkai. Searched for, but not seen, on various dates in late July, but then three seen on 6 August, seven on 20 August and lone faded individuals on 3 September and 15 September.

Meleager's Blue *Polyommatus daphnis* (Lithuania) NEW SPECIES FOR THE BALTIC STATES A female was discovered close to the Belarusian border south-west of Druskininkai on 30 July, with a male 550 metres from this locality on 6 August. The nearest core populations to this site are in eastern Poland, but as a non-migrant species, it is likely that these findings actually represent a hitherto unknown population.

Common Blue *Polyommatus icarus* (Lithuania, Latvia) Abundant and widespread, recorded at most locations visited. Two main flight periods noted: 29 May \* &ndash; 19 June (max 15 individuals/locality) and 16 July &ndash; 15 September (peaks 30 July &ndash; 6 August, max 55+ individuals/locality and 15-20 August, max 35 individuals/locality).

#### Family RIODINIDAE

Duke of Burgundy *Fritillaria hamearis lucina* (Latvia) Extremely rare in Lithuania, most of the few known historic records originating in the Vilnius area. Localised in Latvia, but more regular. At a site known for the species, my only record was a single butterfly south-east of Riga on 4 June.

#### Family NYMPHALIDAE: BRUSHFOOTS

Purple Emperor *Apatura iris* (Lithuania, Latvia) Appeared to be a very poor season for this species, numbers well down on their usual abundance. All between 19 June and 9 July, a total of only 15 individuals seen, the typical scatter of localities including Rop jos Forest, Ukmerg , Labanoras, Jurbarkas, Vie&scaron;vil , Dkk&scaron;tos and sites in Latvia. Lesser Purple Emperor *Apatura ilia* (Lithuania) As with Purple Emperor, a poor season. One record only &ndash; a single at Dkk&scaron;tos on 11 July. Poplar Admiral *Limenitis populi* (Lithuania) A widespread, but moderately uncommon species. One record only in 2016 &ndash; a single at Dkk&scaron;tos on 18 June. White Admiral *Limenitis camilla* (Lithuania, Latvia) A scatter of records from 13 June through to 6 August, with a total of 53 individuals seen. Peak counts were in the Ukmerg area, where 18 were seen on 19 June, 12 on 4 July and 10 on 17 July. Elsewhere, numbers appeared rather low, with single figures noted several times in Rop jos Forest, Labanoras, Vie&scaron;vil and south-west of Druskininkai, as well as in central Latvia. Red Admiral *Vanessa atalanta* (Lithuania, Latvia) Common and widespread, especially in the latter parts of the year. Two flight periods: 16 June &ndash; 23 July (65 individuals seen, max count 20 at epkeliai on 6 July) and 7 August &ndash; 18 September (minimum 630 seen, max count an estimated 460 south-west of Druskininkai on 20 August. One lone individual also noted on the late date of 1 October.

Camberwell Beauty *Nymphalis antiopa* (Lithuania, Latvia) A very good season for this species &ndash; a total of 20 individuals seen during the year, three in the early spring (4 April-5 May), one in mid-summer (11 July) and 16 in late

summer (30 July-14 August). Best localities for the species were Labanoras, Pabrad , Rop jos Forest and pine forests near Druskininkai. Singles also seen at Dkk&scaron;tos and south-east of Riga.

Yellow-legged Tortoiseshell *Nymphalis xanthomelas* (Lithuania, Latvia) Good number of early spring records &ndash; all in the Labanoras area, a total of nine seen on dates between 4 April and 5 May. Three individuals also seen in central Latvia on 9 July. Large Tortoiseshell *Nymphalis polychloros* (Lithuania) One record only &ndash; a single at Labanoras on 30 April.

Small Tortoiseshell *Aglais urticae* (Lithuania, Latvia) Common and widespread, recorded at most localities visited. Three main flight periods &ndash; 28 March to 5 May (peak 40+ at Labanoras on 4 April), 12 June to 17 July (peak eight at Ukmerg on 19 June) and 14 August to 11 September (peak 17 near Druskininkai on 20 August). Also one individual near Druskininkai on 30 July. Peacock *Inachis io* (Lithuania, Latvia) Abundant species at all localities visited. Two main flight periods &ndash; 28 April to 8 May \* (commonly 30+ individuals/locality) and 10 July to 21 August (up to 150+ individuals/locality in the peak 16 July &ndash; 25 July). Outside these flight periods, single individuals also seen on 8 June, 2 July, 15 September and 17 September and a late flush of individuals between 30 September and 3 October, during which time 15 were noted. In addition, frequently encountered in underground winter roosts in Vilnius and Kaunas, where many tens could be found. Painted Lady *Cynthia cardui* (Lithuania, Latvia) A fairly average year in terms of dates with the bulk of records occurring in the period 19 June to 3 September, but with a few much later individuals, specifically two on 18 September, two on 30 September and three on 1 October. Overall, numbers in 2016 were lower than usual, with a total of 56 individuals logged, mostly singles on any one day, with maximums of 4-5 per locality in the period 20 August to 3 September.

Comma *Polygonia c-album* (Lithuania, Latvia) A fairly common widespread species. Three main flight periods: early spring, mid-summer and late summer/early autumn. Spring butterflies were noted in the period 4 April to 5 May (peak 10-15 individuals/locality on 28-30 April), while mid-summer butterflies were on the wing from 29 June to 31 July (peak 60+ individuals/locality on 17 July) and those in late summer from 20 August to 1 October (peak 10-16 individuals/locality on 9-15 September). Additionally, single individuals were noted on three dates in early August. Map Butterfly *Araschnia levana* (Lithuania, Latvia) Common and widespread, noted at all localities visited. Generation one butterflies were noted between 30 April and 8 May \*, peaking at about 20 individuals/locality on 5 May), while generation two butterflies were mostly noted between 30 June and 20 August. Within this summer period, numbers were generally above 25-40 individuals/locality in the period 9-25 July, peaking at around 150 individuals/locality on 16-17 July. Outside these periods, one unseasonal individual was also noted on 13 June, while late individuals were seen on 3 September, 11 September and 15 September.

Silver-washed Fritillary *Argynnis paphia* (Lithuania, Latvia) A common and widespread species, recorded at all localities visited. In 2016, the flight season lasted from 29 June to 21 August, with a very marked peak occurring from 9-17 July. In this short period, Silver-washed Fritillaries were often in their hundreds per locality, especially at Vie&scaron;vil on 16 July where many hundreds of individuals were estimated per kilometre of open forest ride. From the last week of July onwards, numbers were very low, all counts being less than ten individuals/locality. Small numbers of brown-phase individuals also seen, as pictured here.

Pallas's Fritillary *Argynnis laodice* (Lithuania, Latvia) A considerably below average number of records - only four individuals seen: singles at Vie&scaron;vil on 2 July, in central Latvia on 9 July, in Rop jos Forest on 14 July and at Labanoras on 31 July. Dark Green Fritillary *Argynnis aglaja* (Lithuania, Latvia) A fairly typical spread of records with individuals noted from 16 June to 9 July, localities including Rop jos Forest, Labanoras, Ukmerg , Dkk&scaron;tos, Rkdinkai, Jurbarkas, Vie&scaron;vil and epkeliai, as well as central Latvia. Numbers perhaps below average with generally below five individuals/locality recorded at most sites, except in Latvia where many dozens present.

High Brown Fritillary *Argynnis adippe* (Lithuania, Latvia) A widespread species with a protracted flight season from 29 June through to 3 September. Recorded at most localities visited, though in variable numbers - generally below 10 individuals/locality, except in the peak weeks of the season (30 June to 16 July) when numbers were up to 20+ individuals/locality and even 250+ on 9 July (at a locality in central Latvia).

Niobe Fritillary *Argynnis niobe* (Lithuania) Localised species, mostly on dry sandy areas. Three individuals seen &ndash; singles at Rkdinkai on 29 June and 18 July, plus one at Pabrad on 31 July. Queen of Spain Fritillary *Issoria lathonia* (Lithuania, Latvia) Uncommon in the first part of the summer (four on 29 May and one on 29 June, all at Rop jos Forest), but increasingly common and widespread in the later parts of the season &ndash; totals of one to six on an almost daily basis from 18 July to 15 August (Rkdinkai, Rop jos Forest, Druskininkai, Dkk&scaron;tos, Kernav , Rykantai, Pabrad and central Latvia), then a significant increase to 30-50 individuals/locality from 20 August right through to 3 October, the best sites being Rop jos Forest and localities south-west of Druskininkai. Directly relating to the abnormally warm early autumn, these numbers included a fresh generation of butterflies appearing on the wing in late September, a very unusual phenomenon in Lithuania.

Lesser Marbled Fritillary *Brenthis ino* (Lithuania, Latvia) Patchy distribution, abundant in some areas. On the wing from 12 June to 23 July, with a marked peak from 13 June to 9 July. Key sites included the Ukmerg area (80+ individuals on 13 June, 150+ on 19 June, 30+ on both 4 July and 17 July) and sites in central Latvia (many hundreds on 9 July). Elsewhere, the species was also noted in the Labanoras area (max 25 individuals/locality), Rop jos Forest, Vievis, Dkk&scaron;tos, Jurbarkas, Vie&scaron;vil , epkeliai and south-west of Druskininkai (all less than 10 individuals/locality).

Marbled Fritillary *Brenthis daphe* (Lithuania) RED DATA BOOK SPECIES Highly localised species in Lithuania, occurring mostly in south-western parts of the country. A population was discovered in meadows near Vie&scaron;vil &ndash; six individuals flying on 2 July, then at least 30 at the same location on 16 July. Twinspot Fritillary *Brenthis hecate* (Lithuania) RED DATA BOOK SPECIES Largely confined to meadows in the Ukmerg area, a single individual was found on 4 July (searches in the same area on dates in the middle and second half of June failed to locate the

species).

**Cranberry Fritillary *Boloria aquilonaris* (Lithuania)** Two noted adjacent to epkeliai on 6 July. **Bog Fritillary *Boloria eunomia* (Lithuania)** Recorded at epkeliai on two dates: one individual on 5 June and two on 16 June. **Titania's Fritillary *Boloria titania* (Latvia)** A minimum of 15 individuals seen at a known site in central Latvia on 9 July. **Pearl-bordered Fritillary *Boloria euphrosyne* (Lithuania, Latvia)** Noted at two locations only: in Lithuania, four in Rop jos Forest on 29 May and two on 9 June; in Latvia, a minimum of 30 at a single locality south-west of Riga on 4 June. **Small Pearl-bordered Fritillary *Boloria selene* (Lithuania, Latvia)** A moderately common species, with two flight periods noted. During the prolonged early summer flight, lasting from 29 May to 9 July, the species was noted almost daily at almost all localities, mostly 2-4 individuals/locality, but with higher counts including ten at Rop jos Forest on 29 May, a minimum of 25 at epkeliai on 5 June, nine near Marcinkonys on 16 June and at least 30 at a site in central Latvia on 9 July. Numbers were lower and more widely dispersed during the second flight periods, the totality of records consisting of three in Rop jos Forest on 24 July, five in south-east Latvia on 14 August and five south-west of Druskininkai on 20 August.

**Weaver's Fritillary *Boloria dia* (Lithuania, Latvia)** Localised, but common in places. Early season records consisted of two in meadows near Rop jos Forest on 29 May, one in the same place on 29 June and eight at epkeliai on 6 July. A more prolonged period of records dated from 24 July to 3 October, with individuals seen at Kernav , south-west of Druskininkai, in central Latvia and most particularly in the Rop jos Forest. At this latter location, numbers increased from six on 24 July to a minimum of 80 on 29 August, with numbers still at about 60 on 9 September. Numbers thereafter dropped dramatically, with the only subsequent records being one on 18 September, one on 25 September, two on 1 October and one on 3 October.

**Frigga's Fritillary *Boloria frigga* (Lithuania) RED DATA BOOK SPECIES** This species is known only from epkeliai in Lithuania. In rather poor weather, a single was found on 16 June.

**Glanville Fritillary *Melitaea cinxia* (Lithuania)** A rare species in Lithuania, one record only in 2016 &ndash; a single individual on 19 June. **Knapweed Fritillary *Melitaea phoebe* (Lithuania)** Four individuals seen at Dkk&scaron;tos on 8 June. **Spotted Fritillary *Melitaea didyma* (Lithuania)** A localised species, mostly occurring in heaths and sandy areas. Very low numbers seen in 2016 &ndash; six on 29 June and one on 18 July at Rkdninkai, plus four at epkeliai on 6 July. **Heath Fritillary *Mellicta athalia* (Lithuania, Latvia)** Abundant and widespread. Recorded on dates from 29 May to 30 July and noted at all localities visited. During the peak season, lasting from 19 June to 6 July, estimated numbers exceeded 500 individuals/locality on several dates. Outside this peak season, numbers were generally less than 10 individuals/locality.

**False Heath Fritillary *Melitaea diamina* (Lithuania, Latvia) RED DATA BOOK SPECIES** Apparently increasing in Lithuania, mostly in the north and east of the country, more common in Latvia. Probably overlooked to some degree. Only two identified individuals in 2016 &ndash; one in south-east Latvia on 4 June and one at Labanoras on 18 June.

**Nickerl's Fritillary *Meliciae aurelia* (Lithuania) RED DATA BOOK SPECIES** Rare and localised in Lithuania, mostly in central and northern parts of the country. Due to similarities to Heath Fritillaries flying in the same period, quite possibly under-recorded during my year. The only identified individuals were in the period 8-18 June: one at Dkk&scaron;tos on 8 June, six at the same locality on 18 June, one at Labanoras on 18 June.

**Marsh Fritillary *Euphydryas aurinia* (Latvia) RED DATA BOOK SPECIES** Localised, but widely distributed in parts of Lithuania, more abundant in Latvia. A minimum of 30 were seen at a raised bog in south-east Latvia on 4 June.

#### Family SATYRIDAE: BROWNS

**Marbled White *Melanargia galathea* (Lithuania)** Prior to 2016, the only records of this migratory species in Lithuania were of three individuals in Panev žys in 1925 and 1927 and one individual in Jurbarkas in 2001. During my observations however, a minimum of 66 individuals were discovered at four sites in southern Lithuania in the period 23-30 July. In detail, three and a minimum of 35 at were seen at two localities south-west of Druskininkai on 23 July, one at Margionys also on 23 July, then three, eight and 16 at three sites south-west of Druskininkai on 30 July. Mating and egg-laying was noted at one locality. **Scotch Argus *Erebia aethiops* (Latvia)** Common in parts of south-east Latvia, but no records in recent decades in Lithuania (though quite conceivably occurs, at least in the border areas near Latvia). A minimum of 60 seen south-east of Riga on 14 August.

**Arran Brown *Erebia ligea* (Latvia)** Occurs in northern Lithuania, but my only records were in Latvia, where at least 45 were seen in the central parts of the country on 9 July. **Meadow Brown *Maniola jurtina* (Lithuania Latvia)** A very common and widespread species, seen at all localities. Main flight period was 18 June to 7 August, with counts of up to 50+ individuals/locality in the peak 2-24 July. Beyond the main flight period, scattered records included one on 15 August, four on 20 August, one on 29 August and one very late individual on 10 September.

**Dusky Meadow Brown *Hyponphele lycaon* (Lithuania, Latvia)** Localised, but fairly common in dry sandy habitats. In 2016, noted between 6 July and 20 August, with numbers in excess of 30 individuals/locality in the peak week of 23-30 July and generally below 15 individuals/locality at other times. Recorded at Rkdninkai, Rop jos Forest, Pabrad and two sites near Druskininkai, plus one site in central Latvia. **Ringlet *Aphantopus hyperantus* (Lithuania, Latvia)** Widespread and abundant. Flying from 19 June to 5 August, this was one of the most common butterflies flying, totals including hundreds of individuals per locality from 6-9 July and 45-60+ individuals/locality in the more prolonged period from 30 June to 23 July.

**Large Heath *Coenonympha tullia* (Lithuania) RED DATA BOOK SPECIES** Localised species in Lithuania, more common in Latvia. Only records in 2016 were two near Ukmerg on 13 June and two near Baltoji Vok on 16 June.

**Small Heath *Coenonympha pamphilus* (Lithuania, Latvia)** Common and widespread in meadows and open forest rides, recorded at all localities visited. Two main flight periods: 29 May-19 June, peak in first days of June (30+ individuals per locality), then a more prolonged late summer flight from 22 July to 3 September, peaks 4-6 August and 18-20 August (up to 40 individuals per locality in both periods). Also one isolated single on 9 July. **Pearly Heath *Coenonympha arcania* (Lithuania, Latvia)** Common and widespread. Main flight period 3 June to 11 July, with a peak in the last ten days June

when counts included at least 70 individuals per locality at Rop jos Forest and Paluknys, plus 15-20 per locality at Vievis, Rkdinkai and Labanoras. A few isolated records also between 23-25 July, with a total of seven individuals seen near Druskininkai, at Margionys, in Paluknys and at Verkiiai.

**Chestnut Heath** *Coenonympha glycerion* (Lithuania, Latvia) A common widespread species. Typical of the species in the Baltic States, the main flight period was 13 June to 4 August, with a peak occurring 19 June to 9 July. During this period, notable counts included at least 180 at Ukmergė on 19 June, 60 at Labanoras on 30 June and about 40 both at Ukmergė on 4 July and at epkeliai on 6 July. Quite remarkably for the species, a single was also noted in the Paluknys meadows from 25 September to 1 October – this constitutes the first record of a second generation of this species in the Baltic States.

**Scarce Heath** *Coenonympha hero* (Latvia) RED DATA BOOK SPECIES Localised, but widespread species in Lithuania. My only records however were four seen at a raised bog south-east of Riga on 4 June. **Speckled Wood** *Pararge aegeria* (Lithuania) A total of 46 seen during the year, most in the period 16-31 July (34 individuals, with a peak of 14 at Dkk&scaron;tos on 22 July), but also lesser numbers from 5-7 May, one on 1 July and six individuals between 7 August and 15 September. Best localities for this species were Labanoras, Dkk&scaron;tos, Vie&scaron;vil and the Druskininkai area, with others also seen Kernavė, Rop jos Forest, Verkiiai and Rykantai.

**Wall Brown** *Lasiommata megera* (Lithuania, Latvia) A late season species, with a total of 34 individuals seen 28 July and 21 August. Total records consisted of eight at Dkk&scaron;tos on 5 August, six at Kernavė on the same date, 16 south-east of Riga on 14 August and singles at Kernavė on 28 July, Ukmergė on 4 August, Kernavė on 15 August and Pabradė on 21 August.

**Large Wall Brown** *Lasiommata maera* (Lithuania, Latvia) Much lower numbers than average seen in Lithuania, with the only records being one at Labanoras on 18 June, three at Rop jos Forest on 29 June and another two at Labanoras on 30 June. Better numbers seen in Latvia however with one south-east of Riga on 4 June and at least 40 at a single locality on central Latvia on 9 July. **Woodland Brown** *Lopinga achine* (Lithuania) RED DATA BOOK SPECIES A localised species in Lithuania, mostly in the east. Seen at two localities in 2016 – the Ukmergė area (two on 13 June and a single on 19 June) and Verkiiai (two on 17 June).

**Grayling** *Hipparchia semele* (Lithuania) With individuals recorded from 29 June through to 12 August, this species was commonly recorded at two localities – Rkdinkai (up to seven per visit, lower than average) and Pabradė (up to 12 per visit). **Rock Grayling** *Hipparchia hermione* (Lithuania) Occurring alongside Grayling, all records were from Rkdinkai and Pabradė and in the period 16 July to 12 August. At only six to seven individuals per visit, numbers appeared lower than average.

**Tree Grayling** *Hipparchia sttilinus* (Lithuania) RED DATA BOOK SPECIES Highly localised species in the Baltic States, known to occur only in a single area – restricted access military training grounds near Pabradė. After failed attempts to see the species on various dates from late July through early August, I found three on 12 August and four on 21 August.

**Baltic Grayling** *Oeneis jutta* (Lithuania, Latvia) RED DATA BOOK SPECIES Occurring on raised bogs, a rare species in Lithuania, localised but more common in Latvia. In 2016, my records consisted of approximately 20 individuals at the edge of a raised bog south-east of Riga on 4 June, then a single individual at epkeliai on 5 June.

#### Family HESPERIIDAE: SKIPPERS

**Grizzled Skipper** *Pyrgus malvae* (Lithuania, Latvia) Very limited series of records - a total of just four individuals between 29 May and 5 June: two in Rop jos Forest on 29 May, one on south-east Latvia on 4 June and one at epkeliai on 5 June.

**Large Grizzled Skipper** *Pyrgus alveus* (Lithuania, Latvia) A late season species, a total of 11 individuals noted on dates ranging from 24 July to 11 September. Other than three south-west of Druskininkai on 6 August, all records were of single individuals and were at Rop jos Forest (24 July), Labanoras (31 July, 7 August, 15 August), south-west of Riga (14 August), south-west of Druskininkai (3 September), Rykantai (7 September) and Kernavė (11 September).

**Large Chequered Skipper** *Heteropterus morpheus* (Lithuania) A moderately localised species with a short flight season. In total, 46 individuals were seen on dates between 12-29 June. Best counts were 12 at Rop jos Forest on 16 June, ten at Ukmergė on both 13 and 19 June, six at Labanoras on 18 June and four at Dkk&scaron;tos also on 18 June.

**Northern Chequered Skipper** *Carterocephalus silvicolus* (Lithuania) One record in 2016 – an individual near Ukmergė on 19 June. **Essex Skipper** *Thymelicus lineolus* (Lithuania, Latvia) A common species, recorded at all localities visited. Flying from 18 June to 20 August, the species was most abundant in the period 9-24 July, when up to 50+ individuals/locality were recorded. From late July onwards, less than ten individuals/locality were recorded, with the species becoming sporadic after 7 August (the only records being four on 14 August and two on 20 August).

**Small Skipper** *Thymelicus sylvestris* (Lithuania, Latvia) Common and widespread from 13 June to 17 July, with peaks of up to 40 individuals/locality in the period 2-6 July. Appeared to be considerably less common than Essex Skipper in 2016, with numbers generally around 10-15 individuals/locality during the second and third weeks of July. It should be noted however that relatively little attention was paid to separating Essex and Small Skippers on a consistent basis during the peak of the season and possibly Small Skippers were actually under recorded.

**Silver-spotted Skipper** *Hesperia comma* (Lithuania) A good showing for this species, with total of 28 individuals at three widely dispersed localities: Rop jos Forest (five on 18 July, four on 24 July), south-west of Druskininkai (eight on 30 July, five on 20 August) and Pabradė (six on 31 July). **Large Skipper** *Ochlodes venata* (Lithuania, Latvia) A common widespread species, recorded at all localities visited and flying from 4 June to 30 July. Peak numbers were in the period 13-29 June, when up to 45 individuals/locality were recorded. Outside this period, counts were generally below 15 individuals/locality and became sporadic from 17 July onwards (four on 17th, two on 22nd, three on 23rd and one on 30th).