

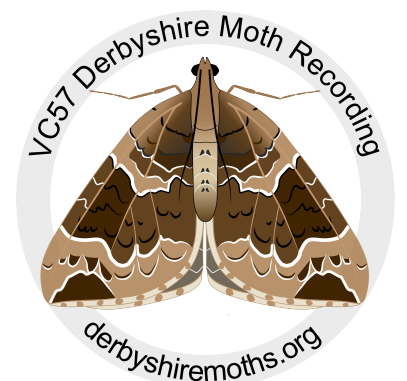
# The Pugs of Derbyshire

## A simple identification guide

**By the Derbyshire Moth Verification & Recording Team**



Edited by Tony Davison, Dave Evans and Steve Thorpe.



## Introduction

The Pug moths (Larentiinae) are a group of moths that are generally small, having a wingspan of between 1.5cms - 3cms, long-winged, and can be intricately marked. When at rest they lay flat, with their wings spread out, on their chosen surface. They are also some of the most difficult of the macrolepidoptera to identify with confidence. Even the most experienced recorders can find themselves head-scratching, trying to decide one way or the other, as to what species they are looking at. It is often the so-called "Little Brown Jobs" that cause the confusion.

There are a number within the group which are so similar in appearance that they are very often confused or misidentified. This guide is intended to provide some firmer guidance within a Derbyshire context, but there are other good resources available to help with Pug moth identification and we thank those other authors for their tireless work in this field. This guide is designed to help both beginners, as well as the more experienced moth-ers, get to grips with some key features of the Pug family which will help towards a more confident identification.

The county of Derbyshire currently has 40 species of Pug on its macro moth list, with **Lead-coloured Pug** now considered extinct. When the Butterflies and Moths of Derbyshire was first published, (Harrison & Sterling, 1986), the species had not been recorded in the county since the latter half of the eighteenth century. That still remains the case to-day.

There are 10 species listed as common, 12 as scarce and 17 as rare, detailed in Table 1. **Cypress Pug** was only added to the county list in 2022, and with just a handful of records since, its status in Derbyshire remains uncertain. It is worth mentioning here that whilst not currently Derbyshire species, both Cloaked and Shaded Pugs are now in VC55 (Leicestershire), and therefore could appear in Derbyshire in the foreseeable future. Two Pugs to keep a look out for.

The status of species has been based on previous published literature, annual reports, and current records on iRecord to end of 2023. Any species with less than 10 records has been graded as Rare, 11-150 records as Scarce, 151 and above as Common. Some flexibility has been used. It is recognised that some species are governed by their habitat requirements, which can often be away from gardens, where most moth trapping seems to take place these days. Along with a much reduced level of field trapping in these specialised areas, which will have an impact on some Pug species, the above mentioned have all been considered when grading the status.

The **Red List Category Codes** are shown where applicable and these appear in the Status Column in the List of species at Table 1. Codes are Highlighted and listed as Nationally Scarce = **R**, Endangered = **EN**, Near Threatened = **NT**, Vulnerable = **VU**.

It is fair to say that many pug species recorded in Derbyshire, especially within the last decade, are from garden moth traps, which today is by far the most popular form of moth trapping. As such, the more specialised species, such as Haworth's, Thyme, Sloe, Pimpinel and Bilberry, are seldom seen or recorded. An analysis of records shows that some species are simply not being recorded due to their particular habitat requirements and a lack of field moth trapping. There seems to be a paucity of regular "Field Moth Trapping" taking place within the county, and that could account for low numbers of records.

Some of the pugs are fairly straight forward to identify, such as V-Pug, Green Pug, Netted Pug, Cypress Pug, Lime-speck Pug, Double-striped Pug, Thyme Pug and Narrow-winged Pug, so are included with a description and an image for the sake of completeness in the guide. The bulk of the guide will concentrate on the trickier to identify Pugs within the county. The first seven pages of the identification and species accounts have been put together as confusion species pairs, with the remainder listed in the new decimal number order and in line with the list at Table 1.

Pug numbers may be under-represented because of the difficulty of determining their identifications, and this is one of the main reasons why a guide like this is hugely important, especially in a local context such as at county level. The purpose was to produce a simplistic guide, rather than a scientific one, so that all moth enthusiasts, whether beginner or experienced, can easily use and understand. To the beginner, the taxonomic jargon can be quite bewildering at times and a figure detailing the different parts of a pug moth is included (see The Pug Schematic at Figure 1 kindly produced by Christian Heintzen©).

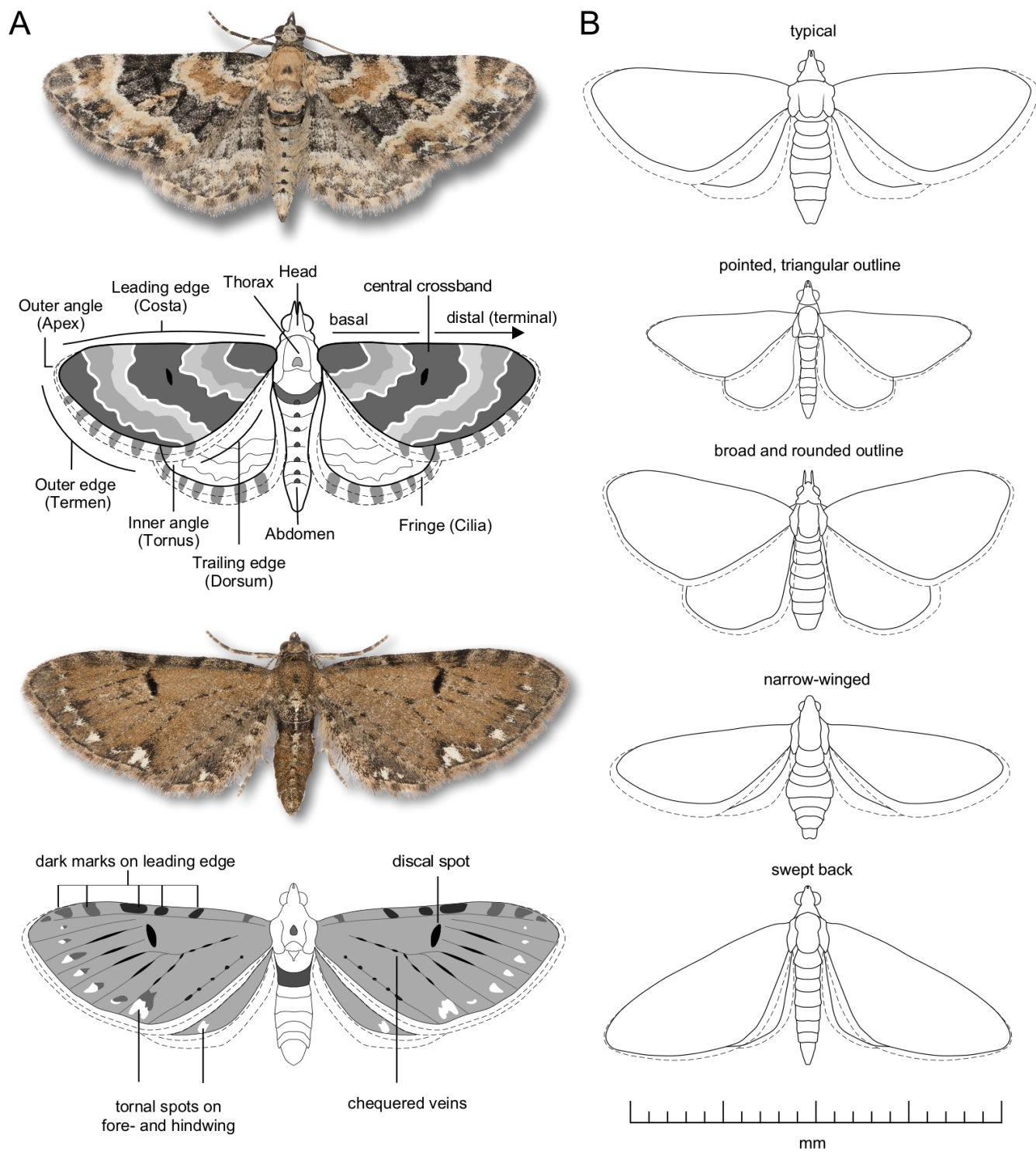
As with many species of moth, faded or worn individuals can pose extremes of difficulty in identification. Pugs are no exception, and are a classic example of this problem. Sometimes individuals can be impossible to determine to species, in addition they also have "melanic" forms (notably Grey Pug & Golden-rod Pug) and in these cases it is often best to simply record them as "pug species". The wingspan has been shown against each species, as this can be a key factor to help with identification in some cases. The flight seasons are also rapidly changing and now vary year on year under the current, seemingly annual, unusual and severe, weather conditions.

Richard South who published, **The Moths of the British Isles** (First published in 1908), wrote in his book, *"Technicalities have been avoided as far as possible, the main object being to provide a guide to the identification of our moths, together with a simple account of the whole or a part of their earlier stages. The author is fully aware that this method of treatment only enables him to touch the fringe of the subject, as it were, but he has been content to deal with it in this way, as it appeared to be the kind of information that would most nearly meet the requirements of the majority"*.

A very fitting set of words which describes exactly what we set out to achieve, when putting this guide together. We really hope we have managed to meet our objectives, and that this guide will prove to be a useful document to the many Derbyshire moth recorders, and of course to the wider audience.

*Tony Davison, Dave Evans, Steve Thorpe* - **Members of the Derbyshire Moths Recording Team.**





**Fig. 1: Key features of Pugs that aid in identification.** A. Photos and schematics of Foxglove Pug (*Eupithecia pulchellata*) and Currant Pug (*Eupithecia assimolata*) illustrating some of the features of a typical Pug. B. Characteristic shapes, postures and sizes of Pugs.

There are a number of colourful and distinctly marked pug species that will be straight-forward to identify but many pug species are rather plainly marked and coloured and can be tricky to tell apart. In these cases it is important to pay attention to detail. Figure 1 illustrates some of the key features that are often useful for identification. These can be found on the wings, thorax and abdomen of a pug. A good starting point is to look for a discal spot on the forewing and note its shape and size (or absence). Then check for the presence or absence of crossbands, make a note of white or dark marks on the wing or abdomen and colouration of wing veins. Other features, such as wing shape, size and resting posture can be important in the identification too. Finally, pay attention to the habitat and the time of year the moth was found as it will help you in narrowing down the list of candidate species. It is worth keeping in mind that key identification features may be lost either because the moth is very worn or because your specimen is one of the very uniformly marked dark colour morphs. Such dark and rather featureless morphs are not uncommon in pugs and other moth groups. In these cases most of the useful identification features may be lost and a positive identification could be very difficult or impossible without dissection. Short of killing and dissecting these moths, they are probably best left unidentified.



**Table 1 - List of Derbyshire Pug species.**

ABH No:	Common Name	Latin Name	Status	No of Records	Page No:
70.141	Double-striped Pug	<i>Gymnocelis rufifasciata</i>	Common	667	14
70.142	V-Pug	<i>Chloroclystis v-ata</i>	Common	158	14
70.143	Sloe Pug	<i>Pasiphila chloerata</i>	Rare	2	7
70.144	Green Pug	<i>Pasiphila rectangulata</i>	Common	238	7
70.145	Bilberry Pug	<i>Pasiphila dibilata</i>	Rare	3	15
70.146	Haworth's Pug	<i>Eupithecia haworthiata</i>	Rare	7	15
70.147	Slender Pug	<i>Eupithecia tenuiata</i>	Scarce	14	8
70.148	Maple Pug	<i>Eupithecia inturbata</i>	Scarce (EN)	17	8
70.150	Toadflax Pug	<i>Eupithecia linariata</i>	Scarce (NT)	50	9
70.151	Foxglove Pug	<i>Eupithecia pulchellata</i>	Common	420	9
70.153	Lead-coloured Pug	<i>Eupithecia plumbeolata</i>	EXTINCT (R)	0	16
70.154	Marsh Pug	<i>Eupithecia pygmaeata</i>	Rare	5	16
70.155	Netted Pug	<i>Eupithecia venosata</i>	Rare	2	17
70.156	Brindled Pug	<i>Eupithecia abbreviata</i>	Common	206	10
70.157	Oak-tree Pug	<i>Eupithecia dodoneata</i>	Scarce	113	10
70.158	Juniper Pug	<i>Eupithecia pusillata</i>	Rare (VU)	5	17
70.159	Cypress Pug	<i>Eupithecia phoeniceata</i>	Rare	3	18
70.160	White-spotted Pug	<i>Eupithecia tripunctaria</i>	Common (NT)	122	18
70.161	Golden-rod Pug	<i>Eupithecia virgaurata</i>	Scarce	26	11
70.162	Dwarf Pug	<i>Eupithecia tantillaria</i>	Rare	5	19
70.163	Larch Pug	<i>Eupithecia lariciata</i>	Rare (NT)	2	19
70.164	Pauper (Fletcher's) Pug	<i>Eupithecia egenaria</i>	Rare (R)	2	20
70.165	Pimpinel Pug	<i>Eupithecia pimpinellata</i>	Rare (R)	0	20
70.166	Plain Pug	<i>Eupithecia simpliciatia</i>	Rare	10	21
70.168	Narrow-winged Pug	<i>Eupithecia nanata</i>	Scarce	67	21
70.169	Angle-barred Pug (Ash Pug)	<i>Eupithecia innotata</i>	Rare	2	22
70.171	Ochreous Pug	<i>Eupithecia indigata</i>	Scarce	17	22
70.172	Thyme Pug	<i>Eupithecia distinctaria</i>	Rare (R)	3	23
70.173	Lime-speck Pug	<i>Eupithecia centaureata</i>	Common	182	23
70.175	Triple-spotted Pug	<i>Eupithecia trisignaria</i>	Rare	0	24
70.176	Freyer's Pug	<i>Eupithecia intricata</i>	Common	148	13
70.177	Satyr Pug	<i>Eupithecia satyrata</i>	Rare (VU)	2	13
70.179	Wormwood Pug	<i>Eupithecia absinthiata</i>	Scarce	49	12
70.181	Valerian Pug	<i>Eupithecia valerianata</i>	Rare	3	24
70.182	Currant Pug	<i>Eupithecia assimilata</i>	Scarce	89	12
70.183	Common Pug	<i>Eupithecia vulgata</i>	Common	535	25
70.184	Mottled Pug	<i>Eupithecia exiguata</i>	Common	202	25
70.187	Tawny-speckled Pug	<i>Eupithecia icterata</i>	Scarce (NT)	60	26
70.188	Bordered Pug	<i>Eupithecia succenturiata</i>	Scarce (NT)	24	26
70.190	Grey Pug	<i>Eupithecia subfuscata</i>	Scarce (NT)	61	11

## A simple Gantt Chart to show the flight periods of the Pug species of Derbyshire

ABH No:	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
70.141	Double-striped Pug												
70.142	V-Pug												
70.143	Sloe Pug												
70.144	Green Pug												
70.145	Bilberry Pug												
70.146	Haworth's Pug												
70.147	Slender Pug												
70.148	Maple Pug												
70.150	Toadflax Pug												
70.151	Foxglove Pug												
70.153	Lead-coloured Pug												
70.154	Marsh Pug												
70.155	Netted Pug												
70.156	Brindled Pug												
70.157	Oak-tree Pug												
70.158	Juniper Pug												
70.159	Cypress Pug												
70.160	White-spotted Pug												
70.161	Golden-rod Pug												
70.162	Dwarf Pug												
70.163	Larch Pug												
70.164	Pauper (Fletcher's) Pug												
70.165	Pimpinel Pug												
70.166	Plain Pug												
70.168	Narrow-winged Pug												
70.169	Angle-barred Pug (Ash Pug)												
70.171	Ochreous Pug												
70.172	Thyme Pug												
70.173	Lime-speck Pug												
70.175	Triple-spotted Pug												
70.176	Freyer's Pug												
70.177	Satyr Pug												
70.179	Wormwood Pug												
70.181	Valerian Pug												
70.182	Currant Pug												
70.183	Common Pug												
70.184	Mottled Pug												
70.187	Tawny-speckled Pug												
70.188	Bordered Pug												
70.190	Grey Pug												



## Identification and Species Accounts

Colour circles = **Red** rare/**Orange** scarce/**Green** common

### 70.143 Sloe Pug - *Pasiphila chloerata* v 70.144 - Green Pug - *Pasiphila rectangulata*

**Key identifiers to determine between the two species. Wing-span - 9-10mm / 8-11mm**

Of the green-tinged pugs, the Sloe Pug and the Green Pug are similar and can pose identification problems, and both are small to medium sized. Green Pug has a wavy cross-band, a dark abdominal stripe and a light horizontal streak near the costa. Sloe Pug has a very obvious pinkish-brown abdominal stripe and lacks the white streak and wavy cross-band.



Sloe Pug - *Pasiphila chloerata*  
Image by Clive Ashton©

Sloe Pug has two diagnostic features which separates it from Green Pug.

An obvious **salmon-pink to brown abdominal stripe or belt**, which is striking in fresh individuals.

Sloe Pug **lacks the white streak and wavy cross-band** of Green Pug.

Flight period May - July 



Green Pug - *Pasiphila rectangulata*  
Image by Dave Evans©

Green Pug has a **very obvious green colouration** to the forewings and abdomen.

Green Pug has a **wavy cross-band** and a **light horizontal streak** near the costa.

Green Pug has a **dark abdominal stripe or band**.

Flight period May - July 

**70.147 - Slender Pug - *Eupithecia tenuiata* v 70.148 - Maple Pug - *Eupithecia inturbata***

**Key identifiers to help determine between the two species. Wing-span 8-10mm / 8-10mm**

Slender Pug and Maple Pug have a number of subtle differences.



**Slender Pug - *Eupithecia tenuiata***  
Image by Christian Heintzen©

**Slender Pug is a more greyish brown with weakly defined markings and a rounded forewing.**

**The discal spot has a dot-like appearance.**

**The wavy subterminal line is less well-marked than on Maple Pug.**

**Flight period July - August** 🕒



**Maple Pug - *Eupithecia inturbata***  
Image by Tony Davison©

**Maple Pug has an overall yellowish-brown colouration.**

**Maple Pug has a more rougher and blotchy appearance, with the wing more pointed than Slender Pug.**

**The discal spot is generally absent.**

**A conspicuous zig-zag subterminal line, especially around the wing apex and a scalloped edge to the central band across the forewing.**

**Flight period July - August** 🕒



## 70.150 Toadflax Pug - *Eupithecia linariata* v 70.151- Foxglove Pug - *Eupithecia pulchellata*

**Key identifiers to help determine between the two species, Wing-span 9-10mm / 10-12mm**

One of the most asked questions when it comes to identifying one of the more common garden moth species - "Is this Foxglove or Toadflax Pug?"

Both species look very similar in colour, but getting to know the subtle differences will help with the ID process. The key difference between the two species is the **shape of the outer part of the black central band**. This is the part that reaches towards the leading edge of the wing (near what is called the costa).



Toadflax Pug - *Eupithecia linariata*  
Image by Brian Hallam©

On Toadflax Pug the cross-band is **straight** towards the costa (The leading edge of the forewing).

Toadflax Pug is also **much cleaner with respect to patterning** than Foxglove Pug, and **slightly smaller** but this may not always be the case. Many records in May are in fact small Foxglove Pugs and most confirmed records are in August when Foxglove Pug is rare.

Flight period May - September 🟡



Foxglove Pug - *Eupithecia pulchellata*  
Image by Tony Davison©

Foxglove Pug has a **distinct kink** on the outer-edge of the **black central cross-band** around the distal margin.

The dark central cross-band is often interrupted by a **reddish streak cutting across it**.

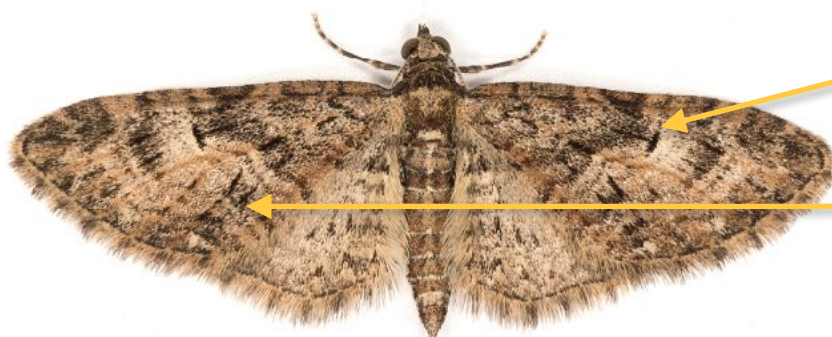
Foxglove Pug is **generally larger** than Toadflax Pug. Foxglove is rare in August.

Flight period May- June 🟢

**70.156 - Brindled Pug - *Eupithecia abbreviata* v 70.157 - Oak-tree Pug - *Eupithecia dodoneata***

**Key identifiers to help determine between the two species. Wing-span 10-12mm / 8-11mm**

Two Pug species that are often confused with each other, and this is exacerbated by their crossover in flight periods. However, there are some key areas which will help to determine them apart.



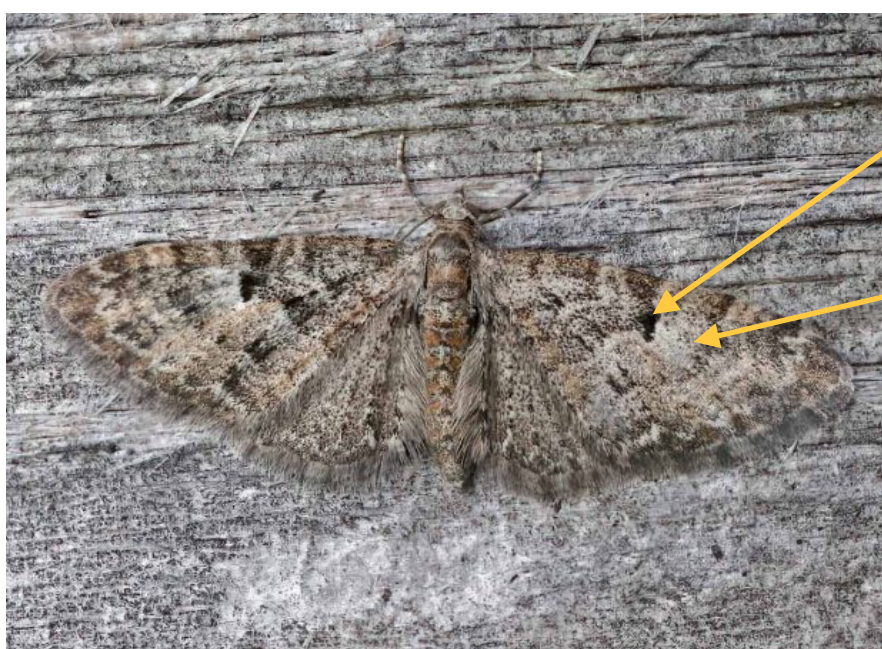
Brindled Pug - *Eupithecia abbreviata*  
Image by Christian Heintzen©

The discal spot on Brindled Pug is **usually much smaller** than Oak-tree pug and has a **thinner-looking, and slit-like appearance**.

Also on Brindled Pug there are **two parallel 'dashes' beyond the discal spot, that project inwards**.

Brindled Pug can sometimes also have a **pale area** but normally it is far more prominent on Oak-tree Pug. On Brindled Pug the wings tend to look **more elongated and less rounded**.

Flight period March - May 



Oak-tree Pug - *Eupithecia dodoneata*  
Image by Tony Davison©

On Oak-tree Pug the **discal spot on the forewing is more rounded** and wider than on Brindled Pug

On Oak-tree Pug there is usually a **pale area just beyond the discal spot**.

On the whole, Oak-tree Pug has **shorter and more rounded wings**.

Flight period April - June 



**70.161 - Golden-rod Pug - *Eupithecia virgaurata* v 70.190 - Grey Pug - *Eupithecia subfuscata***

**Key identifiers to help determine between the two species. Wing-span 10-11mm /10-12mm**

Golden-rod Pug can be tricky to identify from Grey Pug but there are some key pointers to help guide you through the identification process. Note that melanic and worn specimens of both species usually have to be dissected to ascertain a correct identification.



**Golden-rod Pug - *Eupithecia virgaurata***  
Image by Christian Heintzen©

On Golden-rod Pug the **cross-lines are far fewer and much less obvious** than Grey Pug. Can look similar to White-spotted Pug

The **discal spot** is usually **larger** on Golden-rod Pug. **Sometimes** there is a **thoracic spot** and a **tornal spot** which can be fairly prominent.

Golden-rod Pug often shows very **prominent chequered veins**. The **white spot on the side of abdomen is absent**.

**Flight Period May-June & August** 🌕



**Grey Pug - *Eupithecia subfuscata***  
Image by Dave Evans©

The Grey Pug can be **rather nondescript** with mostly **grey** forewings, a **small discal spot** and **fairly distinct and numerous cross-lines**.

The **tornal spot** is **nondescript**, and the **thoracic spot** is **absent**. On fresh specimens of Golden-rod Pug the **thoracic spot** is **sometimes very visible**.

On Grey Pug the **chequered veins are absent**.

**Flight period May - June** 🌕



**70.182 - Currant Pug - *Eupithecia assimilata* v 70.179 - Wormwood Pug - *Eupithecia absinthiata***

**Key identifiers to help determine between the two species. Wing-span 9-12mm / 11-13mm**

Two similar-looking species but both have some key diagnostic features that help tell them apart. There is a variety of Wormwood Pug known as Ling Pug, which feeds on heather. It is smaller and greyer, sometimes with a mauvish tint when fresh. It is probably locally common on the gritstone moorlands.



**Currant Pug - *Eupithecia assimilata***  
Image by Dave Evans©

Currant Pug has a **warm chestnut colouration** with **two large and elongated discal spots** and a **prominent ternal spot** that has a **“toothed” appearance**. Currant Pug has a **white and broken subterminal line**, and more **rounded wings** than Wormwood Pug.

Currant Pug is overall **a smaller looking pug** than Wormwood, but be aware there is always **cross-over in smaller individuals**, and second generation and older generation specimens can have **faded or reduced markings**.

**Flight period May - June & August** 🌕



**Wormwood Pug - *Eupithecia absinthiata***  
Image by Tony Davison©

Wormwood Pug has **more pointed, longer and wider wings**, giving it a less **‘dumpy’ appearance** than Currant Pug.

On Wormwood Pug the discal **spot is prominent**, but the **ternal spot is less obvious** than on Currant Pug.

There are **obvious dark spots along the edge of the forewing (the costa)**, but Currant Pug can also show this feature. The **subterminal line is generally unbroken**.

**Flight period June - July** 🌕



## 70.176 - Freyer's Pug - *Eupithecia intricata* v 70.177 - Satyr Pug - *Eupithecia satyrata*

**Key identifiers to help determine between the two species. Wing-span 12-13mm / 9-13mm**

The only real confusion species for Freyer's Pug is with Satyr Pug. However, the Freyer's Pug is common and widespread whilst Satyr Pug tends to be scarcer and a lot more localised.

There appears to be only one site in Derbyshire where the Satyr Pug is regularly recorded. Heather is present within 0.5miles from the recorders garden.



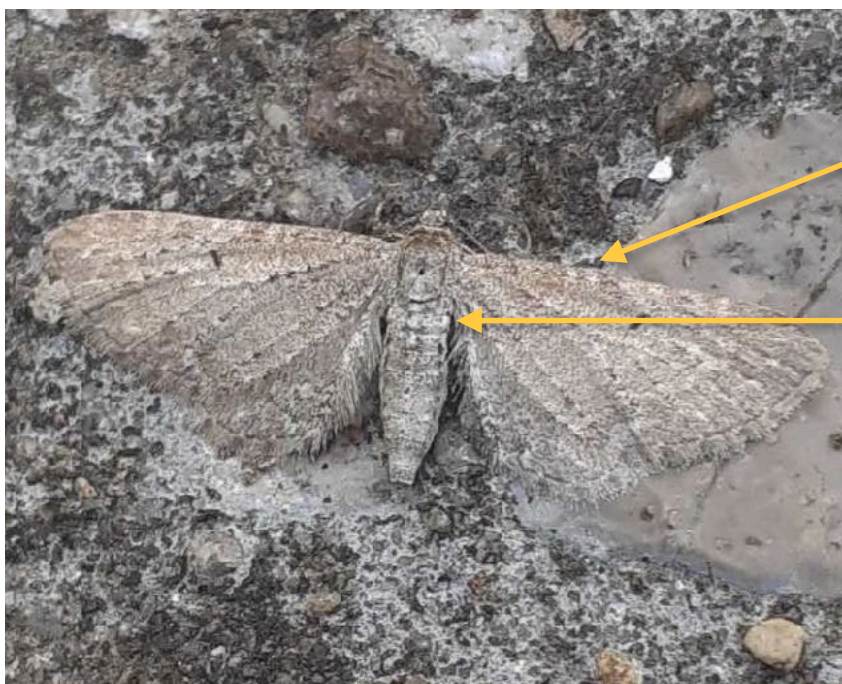
**Freyer's Pug - *Eupithecia intricata***  
Image by Dave Evans©

Freyer's Pug is a **much larger species** with a **longer, elongated wing aspect** than Satyr Pug.

Freyer's Pug has a **dark abdominal band**, and **distinct cross-lines**.

On Freyer's Pug the **tornal spot is absent**.

Flight period May-June



**Satyr Pug - *Eupithecia satyrata***  
Image by Clive Ashton©

Satyr Pug has a **more rounded appearance** than Freyer's Pug, with the **leading edge of the forewing quite straight looking**.

Satyr Pug has a **pale nondescript abdominal band**, and a **small, pale tornal spot**.

The **cross-lines have a far less distinctive pattern**.

Flight period May-June





### 70.141 - Double-striped Pug - *Gymnocellis rufasciata*

**Key identifiers to help determine the species. Wing-span 8-10mm**

A small pug with a distinctive wing shape and can be identified from its outline alone.



Double-striped Pug - *Gymnocellis rufasciata*  
Image by Tony Davison©

Double-striped Pug is a **small and variably marked pug**. Fresh specimens can be brightly coloured, and marked in a variety of shades of brown, grey-brown, and reddish-brown.

A **straight and distinct wing shape**, with the **discal spot** absent, and there are **two black-edged cross-lines** with a mix of reddish and white cross-bands. Later generations can be much smaller in size.

Flight period March-May & July- August 

### 70.142 - V - Pug - *Chloroclystis v-ata*

**Key identifiers to help determine the species. Wing-span 8-11mm**

A resident species that is widespread in Derbyshire, but generally uncommon. Recorded in small numbers each year. A very attractive and unmistakable Pug.



V-Pug - *Chloroclystis v-ata*  
Image by Tony Davison©

V-Pug has a **triangular resting posture** and a **green ground colour**.

Small in size and a **distinct V shaped mark in the central area of the forewing**, that runs upwards, joining the costa (the leading edge of the forewing).

Flight period May - August 

### 70.145 - Bilberry Pug - *Pasiphila debiliata*

**Key identifiers to help determine the species. Wing-span 9-11mm**

An easy to identify broad-winged pug with a very pale green ground colour, making it very distinctive. Only added to the Derbyshire list in 2023. Probably under-recorded, as it is restricted to the Bilberry moorland areas of north Derbyshire. Often found at dusk.



Bilberry Pug - *Pasiphila debiliata*  
Image by Christian Heintzen©

Bilberry Pug is a **medium-sized** pug with a **pale-green forewing**.

A conspicuous broken dark fasciae make this an unmistakable species.

There is also a **small but distinct dark discal spot**.

Flight period June - July 

### 70.146 - Haworth's Pug - *Eupithecia haworthiata*

**Key identifiers to help determine the species. Wing-span 8-9mm**

Haworth's Pug is one of our smallest species but still retains quite a broad-looking wing.



Haworth's Pug - *Eupithecia haworthiata*  
Image by Clive Ashton©

Haworth's Pug is **small in size** and has **weakly defined cross-lines** on a greyish-brown forewing. **A faint, or even absent, discal spot**.

The most obvious feature on Haworth's Pug is the **orange-pink abdominal band**, which can stretch into the thorax.

Flight period June-July 

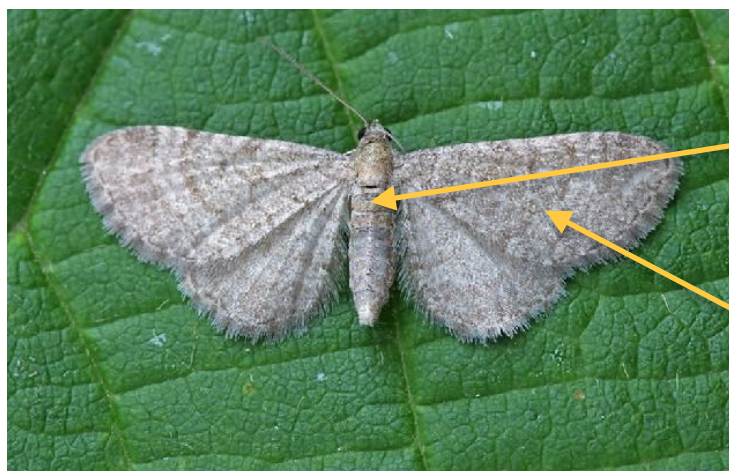


### 70.153 - Lead-coloured Pug - *Eupithecia plumbeolata*

**Key identifiers to help determine the species. Wing-span 9-10mm**

This species was last recorded in the county during the latter part of the 19th century, and is now thought to be extinct in Derbyshire.

The food plant is Common Cow Wheat, so a lack of it may be the main reason for its decline.



Lead-coloured Pug - *Eupithecia plumbeolata*  
Image by Steve Nash©

Very similar to Haworth's Pug but without the **orange-pink or reddish band on the abdomen**. The **discal spot** is faint or absent.

A **straighter leading edge** to the more pointed forewing.

The **cross-lines** are **wavy** and the overall ground colour is a **pale yellowish- brown to yellowish- grey**.

Flight period - May - June



### 70.154 - Marsh Pug - *Eupithecia pygmaeata*

**Key identifiers to help determine the species. Wing-span 8-9mm**

A small-sized day-flying Pug with mostly nondescript markings. An uncommon resident and locally distributed in Derbyshire. Has only been recorded from a few areas, mainly in the north of the county.



Marsh Pug - *Eupithecia pygmaeata*  
Image by Bryan Barnacle©

Markings on the Marsh Pug range from a **dull brown overall colouration**, to a more **rich brown**, with a **well-marked pattern of white spots**, giving it a **speckled-like appearance** on fresh individuals.

The leading edge of the forewing can show a **chequered-like appearance** on fresh specimens, and there is a prominent but **small pale tornal spot**.

Flight period May-June



### 70.155 - Netted Pug - *Eupithecia venosata*

**Key identifiers to help determine the species. Wing-span 10-14mm**

There are very few Derbyshire records of this attractive looking pug. During the last Derbyshire Macro Moth Report (Budworth 2013-2018), there were only two records published, one in 2013 & one, when it was last recorded at Shirland on 7th July 2016.



**Netted Pug** - *Eupithecia venosata*  
Image by Nikki Mahadevan©

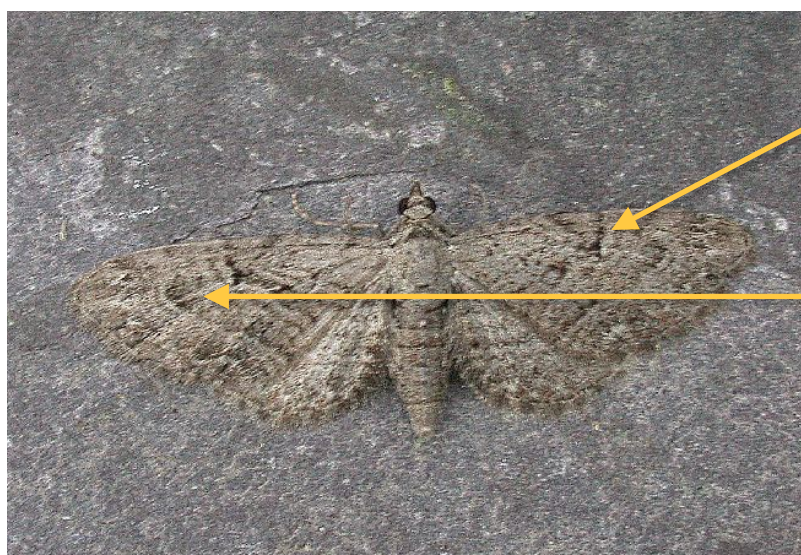
The Netted Pug is a **large** and fairly unmistakable species, which is attractively marked with **black and white lines**, creating a **net-like appearance across a pale grey upper-wing surface**.

**Flight period May - June** ●

### 70.158 - Juniper Pug - *Eupithecia pusillata*

**Key identifiers to help determine the species. Wing-span 9-11mm**

A medium-sized pug with a mid to dark grey wing colour with a series of variable dark markings. The Juniper Pug is widely distributed and locally common throughout Derbyshire. Predominantly located in parks and gardens where species of ornamental Juniper are found.



**Juniper Pug** - *Eupithecia pusillata*  
Image by Tony Davison©

On Juniper Pug a **dark patch, and wavy cross-line** runs through the **inner-part of the dark discal spot**. A **small pale patch** is immediately distal to the discal spot.

There are a series of **black dashes** in the area beyond the discal spot and **two more dark dashes** towards the inner part of the central wing area.

The cross-lines are **sharply angled**, especially near the distal spot.

**Flight period July - September** ●



### 70.159 - Cypress Pug - *Eupithecia phoeniciata*

**Key identifiers to help determine the species. Wing-span 10-11mm**

The Cypress Pug was a new species for Derbyshire on 13th, 14th August 2022, when an individual was recorded from an overnight light trap at Allestree, Derby. There have been six further records to the end of 2023, from Allestree, Newall, Sheffield. Sandiacre and Cromford.



Cypress Pug - *Eupithecia phoeniciata*  
Image by Stephen Plant©

An unmistakable pug with **blackish horizontal streaks** running through the central area of the forewing. A **blackish band** across the abdomen

The wings are very narrow with a **pale brownish ground colour**.

Flight period July - September 

### 70.160 - White-spotted Pug - *Eupithecia tripunctaria*

**Key identifiers to help determine the species. Wing-span 10-12mm**

A dull greyish brown medium-sized species with few or absent cross-lines. Well-marked specimens are readily identifiable from the white spots at the tornus on both fore and hindwing, with the tornal spot usually being the most prominent.



White-spotted Pug - *Eupithecia tripunctaria* -  
Image by Dave Evans©

White-spotted Pug has a **distinct white thoracic spot** normally present.

There are also **two white spots that are usually present on the side of the abdominal section**. **White tornal spots are on both fore and hind wings**.

**Note: The spots on faded or melanic specimens may be absent, so these individuals would require dissection to determine to species level.**

Flight period May - June & August 

### 70.162 - Dwarf Pug - *Eupithecia tantillaria*

**Key identifiers to help determine the species. Wing-span 9-11mm**

A distinctive species with strong cross-lines. When at rest the leading wing edge has a gentle curve. A species that is locally common across the county, where there are conifer plantations.



**Dwarf Pug - *Eupithecia tantillaria***  
Image by Christian Heintzen©

A **dark abdominal band** and a **large elongated discal spot**

The **cross-line immediately beyond the discal spot is wavy.**

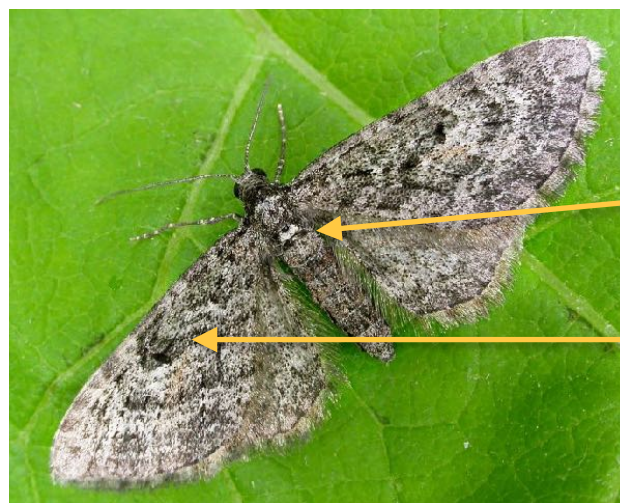
There is sometimes an **indistinct tornal spot**, which can be seen at the end of a long non-chequered vein.

**Flight period May - June** ●

### 70.163 - Larch Pug - *Eupithecia lariciata*

**Key identifiers to help determine the species. Wing-span 10-12mm**

A scarce to medium sized pug that is rare in Derbyshire, with very few records. The last record since 2009 was from Findern in June 2022.



**Larch Pug - *Eupithecia lariciata***  
Image by Graham Finch©

Fresh specimens of this **medium-sized pug** have **distinct and well marked cross-lines**. Larch Pug has a **very prominent white thoracic spot** and a **wavy outer subterminal line**.

There is a **sharp angle in the outer cross-band**, as well as a **sharp angle immediately beyond the discal spot**.

In worn specimens the thoracic spot may be faint or even absent.

**Flight period May - June** ●



### 70.164 - Pauper Pug (Fletcher's Pug) - *Eupithecia egenaria*

**Key identifiers to help determine the species. Wing-span 11-13mm**

Also known as Fletcher's Pug, this species is nationally rare and localised. There are six known records in Derbyshire, between 2002 and 2024, most coming from two sites . One record in October 2023 was well outside of the known flight period.



Pauper (Fletcher's) Pug - *Eupithecia egenaria*  
Image by Clive Ashton©

Pauper Pug (Fletcher's Pug) is a **large sized** pug with **long pointed wings** and an **overall pale greyish** colouration.

A prominent **dark discal spot** with a **dual wavy cross-line** immediately beyond it.

Flight period May - June 

### 70.165 - Pimpinel Pug - *Eupithecia pimpinellata*

**Key identifiers to help determine the species. Wing-span 11-12mm**

A species restricted to the Carboniferous Limestone Dales in Derbyshire, and to date there are no modern day records for this species. According to the publication, Butterflies and Moths of Derbyshire (Harrison & Sterling 1986), it was believed to be uncommon and very localised. A lack of records is probably due to a lack of field trapping in suitable areas. Dusking where there is Burnet Saxifrage may prove productive.



Pimpinel Pug - *Eupithecia pimpinellata*  
Image by Dave Grundy©

Pimpinel Pug is a **well marked** and **large-sized** pug, with a **warm brown and greyish** overall colouration.

Fresh specimens have a series of **distinct cross-lines** and a prominent **black discal spot**.

It has an obvious **wavy subterminal line**.

On the wing June - July. 

### 70.166 - Plain Pug - *Eupithecia simpliciata*

**Key identifiers to help determine the species. Wing-span 11-13mm**

One of the more distinctively marked pugs, which makes it easy to identify. It was once a common species in Derbyshire, but now is scarce and localised, mainly on the coal measures.



Plain Pug - *Eupithecia simpliciata*  
Image by Tony Davison©

Plain Pug is a **large sized, brown coloured** pug with a **broad wing**.

A **small discal spot** and a **white wavy line** in the outer part of the **fore and hind wing**.

Flight period June - August ●

### 70.168 - Narrow-winged Pug - *Eupithecia nanata*

**Key identifiers to help determine the species. Wing-span 9-12mm**

This medium-sized Pug is usually straight-forward to identify. Has very well-marked wings, a narrow more pointed wing shape, and wing markings are angular with a white and brown overall look.



Narrow-winged Pug - *Eupithecia nanata*  
Image by Brian Hallam©

Narrow-winged Pug has an **unusual resting position**, with the forewing costae at a 90 degree angle to each other. Most pugs adopt a 180 degree angle.

There is a **white patch/spot** in trailing corner of forewing.

The complex forewing **marbling and white edging to the tightly packed cross-lines** is a diagnostic feature.

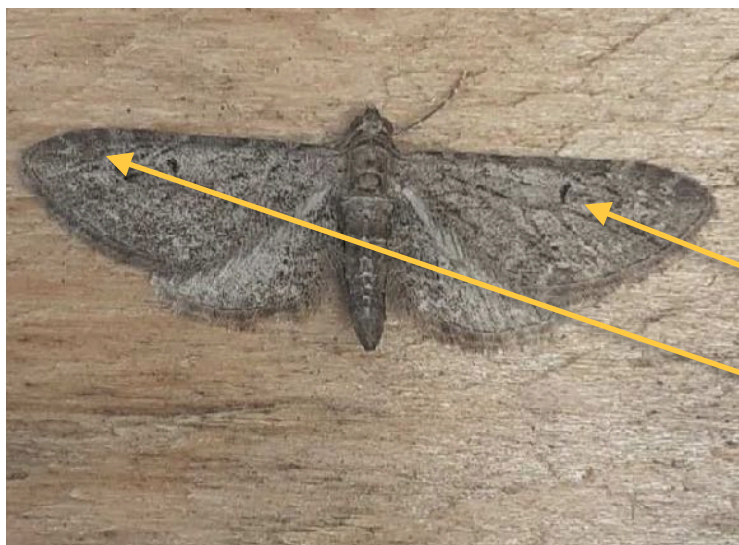
Flight period April - late September ●



### 70.169 - Angle-barred Pug - *Eupithecia inotata*

**Key identifiers to help determine the species. Wing-span 10-12mm**

The form that we know of in Derbyshire as Angle-barred Pug, is most likely to be Ash Pug *E. innotata f. fraxinata*. Another species with very few records, being last recorded in October 2023 from Cromford.



Ash Pug - *Eupithecia innotata f. fraxinata*  
Image by Clive Ashton©

Ash Pug, the form *E. innotata f. fraxinata* of Angle-barred Pug is a **large pug** species with a **long and narrow wing**.

An overall **plain to greyish-brown colouration**. A distinctive dark, but **small and elongated discal spot**.

The cross-line is **sharply angled towards the costa**, and the **pale subterminal line is more prominent towards the tornus**.

Flight period June - July 

### 70.171 - Ochreous Pug - *Eupithecia indigata*

**Key identifiers to help determine the species. Wing-span 8-10mm**

A small and rather nondescript species with an overall grey brown wing colour.



Ochreous Pug - *Eupithecia indigata*  
Image by Dave Evans©

The most striking feature is the **large and dark discal spot**, which stands out against the pale brown or sandy-brown forewing.

This is another pug species that holds its wings in a **swept-back position**.

There are usually **small spots along the costa**.

Flight period April - May 

### 70.172 - Thyme Pug - *Eupithecia distinctaria*

**Key identifiers to help determine the species. Wing-span 8-10mm**

This species is scarce and local in Derbyshire, being restricted mainly to the limestone dales. Possibly under-recorded, as very few records. It was last recorded in July 2023 from Cromford.



Thyme Pug - *Eupithecia distinctaria*  
Image by Rowan Wakefield©

Thyme Pug is a **small sized** pug with a **grey forewing colour**, **bold elongated discal spot** and quite distinct **dark costal spots**.

The upper forewings are well patterned with **four or five wavy cross-lines**.

Flight period June - July

### 70.173 - Lime-speck Pug - *Eupithecia centauriata*

**Key identifiers to help determine the species. Wing-span 10-12mm**

A very distinctive and slender-winged pug, which is a resident species in Derbyshire. It is locally common and well distributed across the south and the Coal Measures, but scarce in the north and seems to be absent from the high peak gritstone area.



Lime-speck Pug - *Eupithecia centauriata*  
Image by Tony Davison©

Overall **white upper forewing surface** with a prominent **black slender shaped discal spot** that is bordered by a **bluish-grey blotch**, reaching the costa.

It is the only white pug to show these features.

Flight period April - October



### 70.175 - Triple-spotted Pug - *Eupithecia trisignaria*

**Key identifiers to help determine the species. Wing-span 10-11mm**

The Butterflies and Moths of Derbyshire (Harrison & Sterling 1986), described this species as a resident that is widely distributed and fairly common locally. In the last Macro Moth report (Budworth 2013-2018) only 2 reports in 2016 (Grindleford and Millers Dale) and one reported in 2018 (Buxton). Since then there have been no further records of this species in Derbyshire.



Triple-spotted Pug - *Eupithecia trisignaria*  
Image by Steve Nash©

Triple-spotted Pug is a **medium-sized greyish-brown pug**.

The main identifying feature is the **triangle of spots**, two on the **leading edge of the forewing** and the **larger discal spot** below.

Triple-spotted Pug lacks the **white tornal spot** that similar patterned species usually show.

Flight period June - July

### 70.181 - Valerian Pug - *Eupithecia valerianata*

**Key identifiers to help determine the species. Wing-span 8-10mm**

A relatively bland looking and weakly marked species of Pug. With very few records, the Valerian Pug is probably uncommon and locally distributed in Derbyshire. The only recent record is of one attracted to a light trap at Buxton on 17th June 2023.



Valerian Pug - *Eupithecia valerianata*  
Image by Rowan Wakefield©

Valerian Pug is a **medium-sized pug** which is **generally poorly-marked**.

Little or **no discal spot** present on a uniform grey-brown forewing colouration. The **wavy zig-zag outer cross-line** is diagnostic. More obvious in fresh specimens.

The hind-wing has a **tornal spot**, albeit less obvious than the forewing spot.

Flight period June - July

### 70.183 - Common Pug - *Eupithecia vulgata*

**Key identifiers to help determine the species. Wing-span 10-12mm**

This is probably one of most confusing of all the Pug species due to its great degree of variability within the species. Common Pug can go from well-marked individuals, right the way through to plain melanic forms. However, there are some key identifying features that usually remain present to some degree across all forms.



Common Pug - *Eupithecia vulgata*  
Image by Dave Evans©

A **white or pale subterminal band** which is present on both forewing and hindwing.

On the forewing the subterminal band ends with a **distinct white tornal spot**. Common Pug also has a very **small discal spot**.

There is a **double-angle in the post median line**, but intensity may vary through individuals.

Flight period May - June 

### 70.184- Mottled Pug - *Eupithecia exiguata*

**Key identifiers to help determine the species. Wing-span 11-12mm**

A large and distinctive species that is common and widespread.



Mottled Pug - *Eupithecia exiguata*  
Image by Dave Evans©

The most reliable identification feature are the **two pale bands** which extend to the **outer margin of the wing**.

This feature creates a **series of dark wedges**, giving it an almost **chequered/mottled effect** to the inner part of the subterminal line. The **pale post-median line** is **angled** near the costa.

Flight period May - June 



### 70.187 - Tawny-speckled Pug - *Eupithecia icterata*

**Key identifiers to help determine the species. Wing-span 11-13mm**

A large and easily recognisable species with an orange brown central wing area.



Tawny-speckled Pug - *Eupithecia icterata*  
Image by Dave Evans©

The intensity of the **orange-brown wing panels** can vary, and those displaying less of the colour intensity can look very different with a series of **very irregular cross-lines**, especially in the area beyond the **small dark discal spot**. There is a form that doesn't show the rusty-red panel.

A **creamy white** colouration is present on the **top part of the abdomen**, extending into the **thorax and basal area** on the leading edge of the forewing.

**Flight period July - August** 🕒

### 70.188 - Bordered Pug - *Eupithecia succenturiata*

**Key identifiers to help determine the species. Wing-span 12-13mm**

A large and recognisable pug species with very distinctive grey and brown borders to the forewing, with white central patches.



Bordered Pug - *Eupithecia succenturiata*  
Image by Dave Evans©

Bordered Pug has a **very conspicuous white thorax** that contrasts with the brown head and abdomen. It **extends into the basal area of the forewing**.

It also has a large and **prominent dark discal spot**.

**Flight period July - August** 🕒

## ACKNOWLEDGEMENTS

The editorial of this document has been a combined effort from the following members of the Derbyshire Moths Recording Team. **Tony Davison**, for the species layout plates, the Gantt Chart, preparation of the Pug List, acknowledgements and references and gathering and editing the images, **Dave Evans**, for the words on identification pointers on each species, **Christian Heintzen**, for the preparation and words on the Schematic Plate on Taxonomy and Anatomy of a Pug, **Emily Louise Milnes**, for the statistics on the Pug List, **Steve Thorpe**, for the introduction text, proof reading the text, and offering ideas on the species lay-outs, and last but not least to the photographers for their support and kind permission to use their images.

We are very grateful to **Brian Hancock**, **Mark Skevington**, **Les Evans-Hill** and **Steve Mathers** for reviewing this document, and for their honest and complimentary comments. They all made some very valid suggestions, which have all been taken on board and put in place, all of which have definitely improved the document.

The images in this guide carry copyright as indicated and have been provided by the following photographers:- *Clive Ashton, Bryan Barnacle, Tony Davison, Dave Evans, Graham Finch, Dave Grundy, Brian Hallam, Christian Heintzen, Nikki Mahadevan, Steve Nash, Stephen Plant, Rowan Wakefield.*

## REFERENCES

**The Atlas of Britain & Ireland's Larger Moths.** Z.Randle., L.J. Evans-Hill, M.S.Parsons, A.Tyner, N.A.D.Bourne, T.Davies, E.B.Dennis, M.O'Donnell, T.Prescott, G.M.Tordoff and R.Fox.

**Derbyshire Macro Moth Reports for years 2006-2018** - (Derbyshire & Nottinghamshire Entomological Society Journals) - The late D. Budworth.

**Butterflies and Moths of Derbyshire Part 2 & Part 3** - (Derbyshire Entomological Society 1986 & 1988) F. Harrison and M.J.Sterling.

**The Derbyshire Moths Facebook Group.**

**Simply Birds and Moths - A Website by Tony Davison** - [www.simplybirdsandmoths.co.uk](http://www.simplybirdsandmoths.co.uk)

**A Checklist of Lepidoptera of the British Isles 2013.** D. J. L. Agassiz, S.D.Beavan, R.J.Heckford 2013.

**Field Guide to the Moths of Great Britain & Ireland (Third Edition).** P.Waring, M.Townsend, R.Lewington.

**The Moths of the British Isles (1939 edition).** Richard South F.R.E.S.

**Pug Moths of North West England.** Brian Hancock (2018).



