

THE RETURN OF THE SMALL RANUNCULUS

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HECATERA DYSODEA ([Denis & Schiffermüller]) the Small Ranunculus is a noctuid moth which was resident in Britain during the last century and in the early part of this century, occasional specimens being recorded up until 1939. The history of the species was described in some detail with distribution maps by Pratt (1986) and a shorter account with a distribution map of all historical records was given by Bretherton *et al.* (1979).

Rediscovery in 1997-98

A fresh female specimen was taken in DJLA's garden m.v. trap on 26 June 1997 and another, a very worn male, on 6 August. These were reported in *The British Journal of Entomology & Natural History* **10**: 236-7. A further specimen was taken at Charlton by WMS on 14 July 1997, identified rather later. The spread of dates over five weeks suggested that the species was resident in the Thames Estuary, rather than immigrant.

Details of adults known to the authors to have been taken in 1998 are given in Table 1.

Early stages

On 15 July 1998, Mark Parsons, Geoff Martin & Ruud Schilder visited a quarry near Gravesend and as well as the adult noted above found about 20 larvae on great lettuce *Lactuca virosa* and several eggs on flowerheads of prickly lettuce *Lactuca serriola* at a site in Swanscombe. On 18 July Mark Parsons, Bernard Skinner, John Chainey and Jenny Spence visited north-west Kent and found larvae or eggs at Dartford Marshes, Stone and Gravesend. Searches in Essex on the north bank of the Thames yielded no evidence of eggs or larvae. They then joined DJLA at Gravesend where eggs and larvae were abundant on land adjoining DJLA's garden, and at Swanscombe many larvae were noted.

Larvae were of all ages from very small to final instar, large larvae being very variable in colour, the majority being some shade of olive green, whilst some were brown. The larger larvae were found on *Lactuca virosa*, whilst most small larvae and eggs were on *L. serriola*, this suggests that when the earliest moths are ovipositing only *L. virosa* is available to them. To the rear of DJLA's garden are a few plants of garden lettuce *L. sativa*, close to plants of *L. serriola*, but no eggs or larvae were found on these.

The full grown larva is illustrated by Buckler (1893) and described in Barrett (1897). Porter (1997) contains a photograph of the brown form of the larva. Since no descriptions of eggs or juvenile larvae appear in British literature these are now given.

Table 1: Adults of *Hecatera dysodea* (D.& S.) recorded in Britain in 1998.

Date	Number recorded	Capture method	Recorder
5th July	1 Gravesend	m.v.	D. Agassiz
12th	2 Gravesend	m.v.	D. Agassiz , trap emptied by J. Parkes
15th	1 Gravesend	dusk	M. Parsons & B. Skinner
15th	1 Gravesend	m.v.	R. Kiddie
17th	1 Dartford	m.v.	B.K. West
18th	3 Swanscombe	dusk	M. Parsons, B. Skinner, J. Chainey, J. Spence
18th	1 Gravesend	m.v.	D. Agassiz
19th	1 Gravesend	m.v.	J. Parkes
25th	3 Gravesend	m.v.	D. Agassiz (1), J. Parkes (2)
26th	2 Gravesend	m.v.	D. Agassiz
30th	1 Gravesend	m.v.	R. Kiddie
1st August	1 Gravesend	m.v.	D. Agassiz
9th	1 Gravesend	m.v.	J. Parkes
10th	1 Gravesend	m.v.	R. Kiddie

The eggs are laid in clusters on the flower buds of *Lactuca* spp.; some authors cite also *Crepis* or *Sonchus* spp. Each is roughly spherical with ridges down the sides, giving the appearance of a canteoupe melon. At first they are whitish, but change through yellow to a pinkish brown before hatching. First instar larvae are pale greenish yellow with four longitudinal rows of small black pinacula, two placed obliquely on each segment; the head is black and there is a black dorsal mark in the middle of the prothoracic plate. Middle instar larvae are dull green, with a pale greenish yellow line immediately beneath the spiracles, this line is brightest in the second instar, after which it gradually darkens.

The pupa is 16mm in length, smooth and brown; the wing cases and antennae reaching almost to the posterior margin of the fourth abdominal segment; abdominal segments have minute pockmarks towards the anterior edge of each. The cremaster gives the appearance of a strong single spine, but upon close inspection it is found to be divided into two about halfway along its length, the two prongs being held close together and bearing slight hooks; at the base the cremaster is broadened and on the dorsal surface flattened bearing longitudinal ridges. Bernard Skinner kept pupae from early larvae at a constant temperature of 24-25°C and adults emerged from

them in early August. Since the species is double brooded in southern Europe this was not surprising.

Distribution

Although abundant where it has become established, the species appears to be confined to a fairly small area on the south bank of the Thames between Erith and Gravesend, stretching inland a few km along the Darenth Valley. Searches for larvae in 1998 at Charlton near where the 1997 specimen was taken yielded no evidence of larvae, although WMS found larvae at Erith marshes in low density (in the same 10km OS grid square). Similarly the species could not be found on suitable land to the east of Gravesend nor to the south at Meopham. However Bernard Skinner found that it has spread up the Darenth valley, larvae were noted at Longfield and Horton Kirby; Peter Harvey also found larvae at Bexley in the Cray valley. This means that the 1998 distribution occupies five 10km grid squares: TQ47, 56, 57, 66 and 67.

Discussion

The origin of these specimens remains a matter of speculation. This area, the Thames Estuary, was one of the strongholds of the species a century earlier, as can be seen by reference to the distribution maps in the articles cited, but it is scarcely conceivable that it has remained undetected for so long; in the Gravesend site a trap had been operated regularly in 1995-6, that of R. Kiddie for the last 20 years and that of B.K. West for 30 years. The last recorded specimen from Kent was at Dartford in 1909 (Chalmers-Hunt, 1968). The species, although not strongly attracted to light, is conspicuous as a larva and in its former days was often seen flying at dusk in gardens; even in a very restricted locality it could hardly have gone undetected for 88 years. Moreover the current population explosion is characteristic of a newly establishing species.

Migration is a term sometimes used for any movement of species, but such a broad definition is unhelpful. In its normal sense as associated with regular migratory species it is not appropriate for the occurrence of this species. The 1997 specimens were at different dates, not associated with other migratory species; in addition the species is not known for migratory habits. Importation of the species with plants at some stage of its development is possible, but unprovable.

The remaining option is re-establishment as a breeding species by a northerly extension of its range. In 1997 the species was also reported from Denmark for the first time (O. Karsholt, *pers. comm.*) which makes this explanation the most likely.

Nomenclature

In Karsholt & Razowski (1996), and followed by Bradley (1998) the generic name is given as *Aetheria* Hübner (*sic*). We are informed by Martin Honey that this is incorrect; *Aethria* Hübner, [1821] is not available since it is preoccupied by *Aethria* Hübner, [1919].

Acknowledgements

Thanks to Bernard Skinner for confirming the identity of WMS's specimen and for providing data, to Julian Parkes for operating DJLA's trap during a week's absence, to Mark Parsons, John Chainey, B. K. West, Roger Kiddie and Julian Parkes for allowing us to publish their data, and to Martin Honey for providing advice on nomenclature.

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EDITORIAL COMMENT

The return of the Small Ranunculus is indeed an interesting event. The precise recording of the dates and very restricted locality of its occurrence in this paper affords us an opportunity to monitor the spread of this species, assuming it does spread, so gaining valuable ecological information that may have a wider significance. With this in mind, it would be a great pity if any of the very many people who have already visited the area to collect larvae were to liberate the insect, in any of its stages, to the wild in areas away from the capture site. Apart from being contrary to the spirit of the *Code for Insect Collecting* such an action would make interpretation of future records difficult. I strongly urge collectors not to liberate specimens. If anyone has already done so, or if any moths manage to escape to the wild, it would be important to record the fact and I therefore invite them to send details of any such events to me at the editorial address. Contributions may be anonymous if you so wish, but the approximate date, a locality name or approximate grid reference and the stages and numbers of specimens involved should be reported.

The Sloe Pug *Chloroclystis chloerata* (Mabile) (Lep.: Geometridae) new to the Isle of Wight

On both 12 and 18 April 1998, Brian Warne and Tony Redfern beat the flowers of blackthorn *Prunus spinosa* bushes with the hope of obtaining larvae of *Chloroclystis chloerata*. They were successful in beating two such larvae from bushes at Knighton Down and one from bushes at Brading Down. The first moth emerged on 2 May 1998. This is the first time that this species has been recorded from the Isle of Wight.— S.A. KNILL-JONES, Roundstone, 2 School Green Road, Freshwater, Isle of Wight PO40 9AL.



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