SHORT COMMUNICATIONS

A record of *Cydia cosmophorana* (Treitschke) (Lep.: Tortricidae) attracted as by-catch to a pheromone lure. – Having initially been used principally for the monitoring and management of pest species, synthetic pheromone lures are now recognised as valuable conservation tools for surveying insect species that are hard to detect by other methods (Larsson 2016). In recent years an increasing range of synthetic moth pheromone lures has become commercially available, and their use has become popular with amateur as well as professional lepidopterists. Pheromone lures are designed to be specific to the target species, but it is apparent that they can attract non-target species to some extent. On May 25 this year I was deploying an Emperor Moth *Saturnia pavonia* lure in an area of coniferous woodland (regenerating clear fell and mature tree stands) in Northumberland and was surprised by the arrival of several small tortricid moths at the lure. These were subsequently identified as *Cydia cosmophorana*, which appears to be a new record for VC67 (South Northumberland).

The moths were clearly in an excited state, running franticly around the stone on which the lure was resting whilst vibrating their wings rapidly. I believe it could be of interest to establish a data-base of the by-catch species found to be associated with different pheromone lures. – JONATHAN WALLACE, 50 Cherryburn Gardens, Fenham, Newcastle upon Tyne, NE4 9UQ

REFERENCE

Larsson, M. C. 2016 Pheromones and Other Semiochemicals for Monitoring Rare and Endangered Species. *J Chem Ecol* **42**, 853–868. https://doi.org/10.1007/s10886-016-0753-4

***Dieckmaniellus gracilis* (Redtenbacher) (Nanophyidae) & *Pelenomus olssoni* (Israelson) (Curculionidae) in Essex.** – Adults of both *Dieckmaniellus gracilis* & *Pelenomus olssoni* were abundant on water purslane (*Lythrum portula*) growing in seasonal rut pools on trackways south of the A13 west of Arena Essex (TQ 5879). The former appears to be the first for Essex and the latter the first since the 19th century (Peter Harvey pers. comm.) – JONTY DENTON, 31 Thorn Lane, Four Marks, Hants GU34 5BX.

THE CURRENT DISTRIBUTION AND DENSITY OF THE SHINING POT BEETLE, *CRYPTOCEPHALUS NITIDULUS* (FABRICIUS), IN THE NORTH DOWNS OF SURREY

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ABSTRACT

This study is the first detailed investigation into the distribution of the shining pot beetle *Cryptocephalus nitidulus* (Fabricius) on the North Downs of Surrey since 1999/2000. The main population centres remain those at East and West White Down and at Headley Warren, but there appears to have been a shift since 2000 in relative densities with West White Down now showing higher beetle counts than East White Down. There was no significant difference in counts on the main host scrub species, birch and hazel, but densities were significantly higher at locations where both were present. There were significantly higher counts on scrub with foliage not exceeding 4 metres above ground level compared to scrub with foliage above that level. It is concluded that habitat management for the beetle should maintain a mix of intermittent birch and hazel scrub with a range of maturities. Active management may be needed to combine continuing presence of early scrub with preservation of adjacent open grassland.

1. INTRODUCTION

This paper reports on the distribution and relative population density of *Cryptocephalus nitidulus* (Fabricius), based on surveys of ten sites on the North Downs between mid-May and the end of June 2022.

There are 22 species of *Cryptocephalus* in the UK, almost all of which are rare or localised (Hackston, 2019). The shining pot beetle (*C. nitidulus)* is a UK Biodiversity Action Plan Priority species (JNCC, 2007) and is classified as Endangered on the JNCC's GB Red List using IUCN guidelines on the grounds of low area of occupancy, few recorded sites and continuing declines in both factors (JNCC, 2023).

C. nitidulus is an insect of successional scrubland, typically a grass-scrub mosaic, and of woodland edge ecotones bordering such habitat (JNCC, 1999). It is associated particularly with silver birch, *Betula pendula* Roth, and hazel, *Corylus avellana* L., but also common hawthorn, *Crataegus monogyna* Jacq., and wild privet, *Ligustrum vulgare* L. (JNCC, 1999) as food plants. It is not thought to be a species of dense woodland and so is dependent on transitory habitat, meaning populations must either have the capacity to disperse to new areas as early successional scrubland develops into woodland, or the scrubland character must be maintained through active intervention (Piper & Compton, 2010).

C. nitidulus was once relatively widely distributed across central and southern England (JNCC, 1999) but the only records in the last 40 years, as far as can be ascertained from available sources, have been in the North Downs in Surrey (JNCC, 1999; Natural England, 2014; SBIC, 2022; NBN Atlas, 2023; iRecord, 2023). The targeted removal of scrub for restoration of open chalk downland and the discontinuation of woodland coppicing are two possible causes for population

declines (JNCC, 1999). Clearly, it is also possible that the recording effort for the species has declined, although we can see no particular reason why this should be so.

Despite a dependence on transitory habitat, a number of Cryptocephalinae are thought to have poor dispersal capability. In some species, it is rarely more than a few tens of metres but is possibly much less than that for *C. nitidulus* itself (Key, 2001; Piper & Compton, 2010). Evidence in Piper & Compton (2003) of genetic separation between sub-populations of Cryptocephalinae isolated by only narrow barriers of apparently unsuitable habitat is consistent with low dispersal. However, sample sizes in this study were small and there were some conflicting results: *C. nitidulus* showed closer relatedness between two more widely separated populations than between two adjacent sub-populations. An argument has been made (Piper & Compton, 2003) that the sub-populations of rarer Cryptocephalinae, including *C. nitidulus,* should be regarded as separate evolutionary significant units (ESUs) in order to preserve what may be unique adaptations to specific local conditions. A countervailing concern is the risk to the survival of small populations from inbreeding depression, genetic drift and stochastic environmental and demographic factors (Caughley, 1994). From either perspective, maintenance and, ideally, expansion of habitat to support local population sustainability are the main conservation objectives.

The purpose of this study was to gain an up-to-date record of distribution and comparative population densities of *C. nitidulus* across a range of sites on the North Downs of Surrey and to gauge the extent to which densities may be related to habitat variables such as scrub composition. It is hoped the data will be used to inform future management strategies for the conservation of the beetles at these sites.

2. Methodology

2.1 Study area

Surveys were undertaken across ten sites on the North Downs in Surrey from Hackhurst Down in the west to Dawcombe nature reserve in the east (Figure 1). Common features across these sites are chalk substrate (parts of Hackhurst and Blatchford Downs are exceptions in this regard) and areas of open, south-facing grassland bordered by woodland and/or tree-lined hedges. Within these areas, there is scattered scrub both along the woodland edges and often further into the open grassland, which includes some or all of silver birch, hazel, common hawthorn and wild privet.

2.2 Data collection

Selection of Recording Locations

Recording Locations (meaning specific individual trees or small group of trees at which a timed survey was undertaken) were selected that had birch and hazel trees with an open, south-facing aspect, which were sufficiently accessible for visual inspection and use of a beating tray and which had sufficient foliage for surveying below 3m above ground level. Recording Locations included isolated, individual trees and small clumps of trees within grassland, and trees at woodland edges facing grassland (example in Figure 2).

Recording Location data

Data on scrub species composition were recorded at each Recording Location. An assessment of the percentage of understorey bare ground, which may influence larval

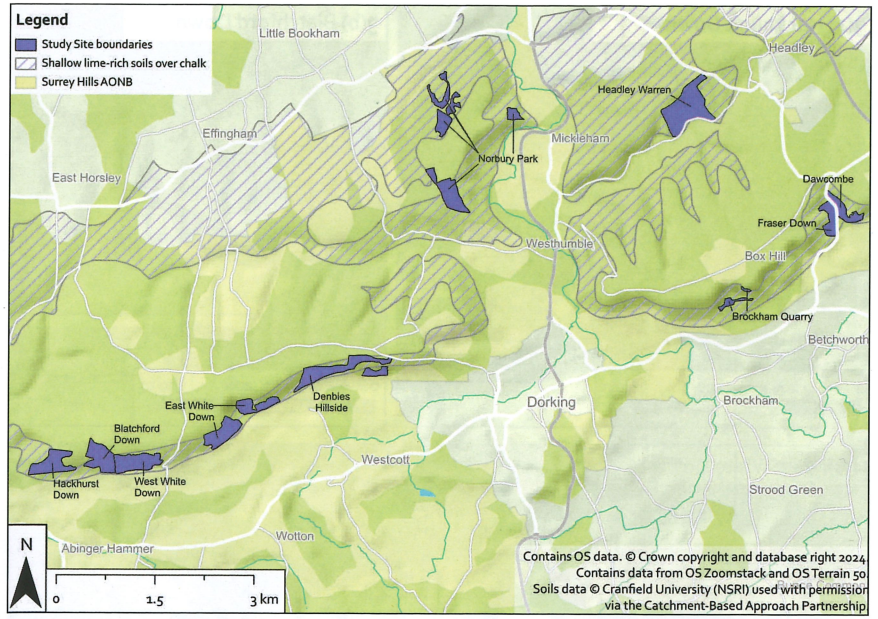


Figure 1. Map (QGIS, 2021) of the ten North Downs Study Sites (blue) against the background distribution of chalk downland (diagonal lined areas). The Study Site boundaries indicate areas within which Recording Locations were selected (see Data Collection) and not necessarily the whole of the site from which the names are taken. Norbury Park in total covers a much larger area, for example.

survival, was also made at Recording Locations in Headley Warren, and East and West White Down. All Recording Locations were recorded on site maps (Figure 3) and geolocated.

While the majority of birch trees surveyed were *B. pendula*, the possibility of hybrids with *Betula pubescens* Ehrh. cannot be ruled out. *Cryptocephalus coryli* (Linnaeus), which shares some host plant preferences with *C. nitidulus*, has been found to feed readily on *B. pubescens* (Owen, 2000) and it cannot be assumed the

Figure 2. Part of West White Down viewed from the south showing intermittent scrub, predominantly birch, within chalk grassland, with woodland above and below. The picture shows most of the central and eastern areas of West White Down mapped in Figure 3.

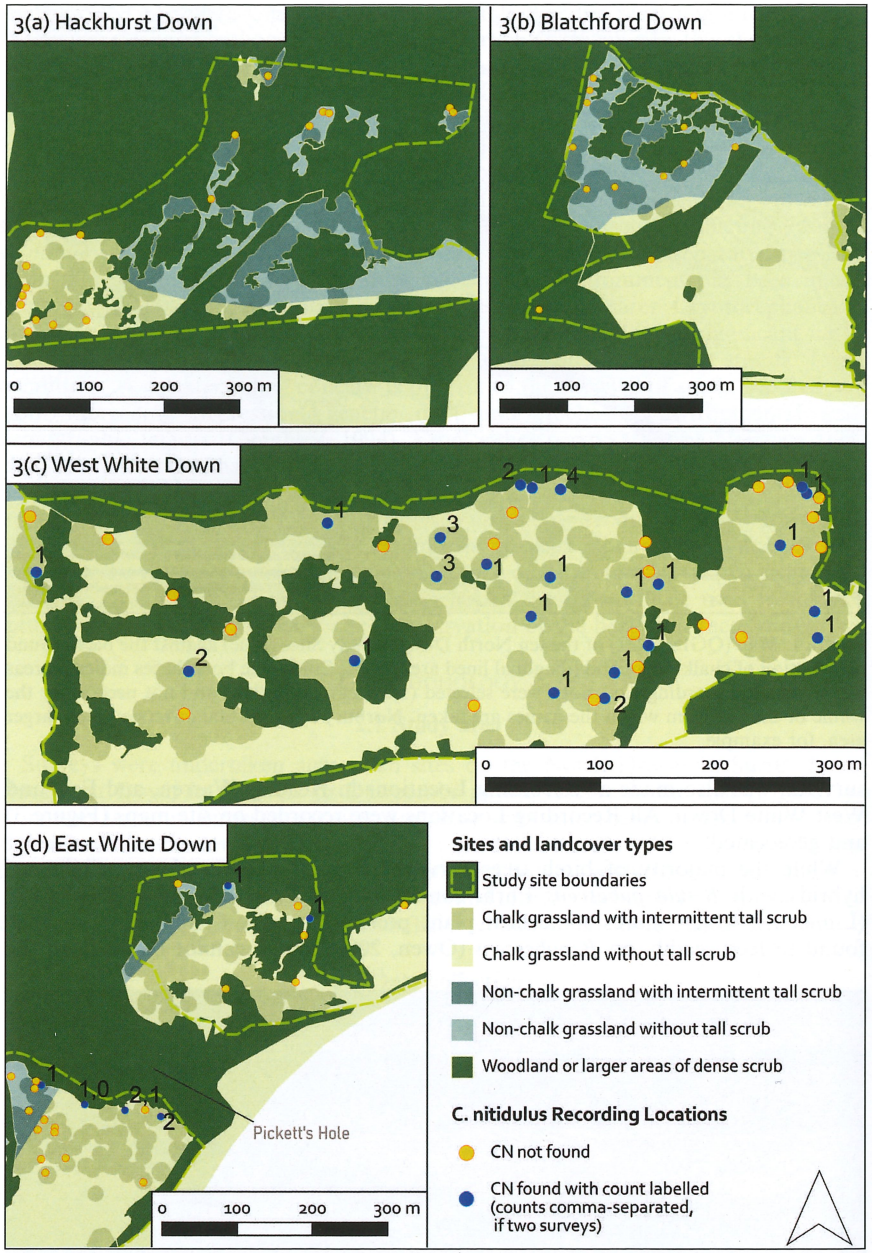
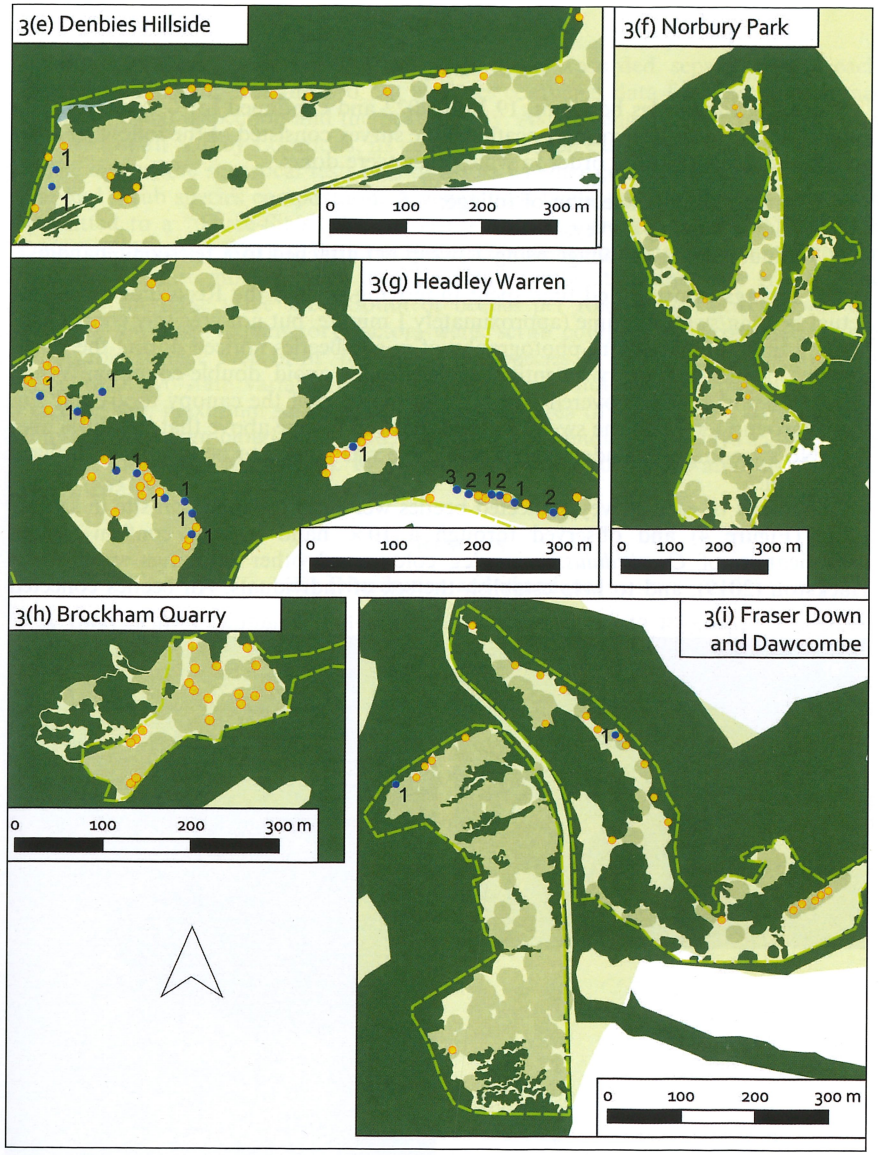


Figure 3. Maps of the ten Study Sites (Fraser Down and Dawcombe as a single image) showing individual Recording Locations: yellow dots – no *C. nidulus* observed; blue dots – *C. nidulus* observed with number of observations shown, separated by a comma if more than one survey at that location. The Norbury Park map (3f) shows only the northern area: there were an additional three Recording Locations in the eastern block and three in the southern. (*continued*)



(Figure 3, *continued*) Three Recording Locations at Denbies Hillside (3e) also fall outside the area shown. No *C. nitidulus* were recorded at any of the Recording Locations omitted from the maps. The order of lettering 3a–3i is west to east. The data on soil type is Soils data © Cranfield University (NSRI) used with permission via the Catchment Based Approach Partnerships. The maps were created in QBIS version 3.22.12 Bialowieza.

same is not true of *C. nitidulus*. In this paper, the common name "birch" is used in a general sense.

Beetle survey method

Surveying for beetles began on 19 May 2022 and continued for 6 weeks until 26 June 2022. At most Recording Locations, the survey consisted of the following three components, listed in the order in which they were done:

A 6-minute visual inspection of foliage;
A 4-minute beating survey;
A 3-minute sweep of foliage using a sweep net attached to a telescopic handle.

The timings incorporated time spent in moving around the Recording Location, actual beating/sweeping time (approximately 1 minute, but not precisely controlled), beating tray/net inspection, photography of *in situ* beetles noticed during the visual inspection and temporary retention of beetles to avoid double-counting. Visual inspection and beating covered foliage from the base of the canopy to around 3 m above ground level and the sweep netting surveyed foliage above that to a little over 5 m. No sweeping was undertaken where there was judged to be insufficient foliage above 3 m.

At the end of each survey, collected beetles were photographed on-site in sample tubes (Figure 4) and observed through a 10× hand lens to confirm species identification of *C. nitidulus*, using leg colour and other markings specified in Hackston (2019), and to help establish the sex of individuals. All beetles collected

Figure 4. *C. nitidulus* specimens from West White Down. (a) individual showing heart-shaped pale mark on the frons (9.vi.2022) (b) mating pair (15.vi.2022).

were released immediately after identification on the same tree or shrub on which they were found.

2.3 Data analysis

Counts of male and female *C. nitidulus* were recorded separately for each Recording Location and method but analyses combined data for sexes and counts from the visual inspection and the beating tray. As the long-handled sweep net was not used in all Survey Locations, its counts have been excluded.

The aim of the statistical tests was to assess whether counts are related to Study Site and scrub species composition. A generalised linear model with Poisson errors was fitted to a "Three-Sites" dataset using data only from East and West White Down and Headley Warren, both because the counts from other sites are very low or zero and because more detailed data on scrub composition and bare ground was recorded for these three sites. Count of beetles per Recording Location was the response variable. Explanatory factors were: scrub composition (expressed as the surveyable surface area in m^2 for each scrub species at a Recording Location); a categorical two-state variable indicating whether or not maximum foliage height exceeded 4m; maximum scrub height; percentage area of understorey bare ground; abiotic factors (sun/cloud/rain, wind, temperature, humidity); and days elapsed since the first survey (19 May 2022). R version 4.1.2 was used for the analysis (R Core Team, 2021).

3. Results

3.1 Distribution and abundance

A total of 67 *C. nitidulus* individuals were recorded at 49 Recording Locations across six Study Sites, the greatest concentration of individuals and survey locations being at West White Down and Headley Warren (Table 1). No individuals were recorded at four sites. The sex ratio of the combined dataset was approximately equal.

Table 1. Number of timed surveys undertaken at each Study Site, number of Recording Locations at which *C. nitidulus* (CN) were found, the total numbers counted and counts of females and males separately.

Study Sites	No. of surveys	Recording Locations CN found	Total no. of CN counted
Hackhurst Down	19	0	0
Blatchford Down	13	0	0
West White Down	45	23	33
East White Down	28	6	9
Denbies Hillside	25	2	2
Norbury Park	24	0	0
Headley Warren	57	16	21
Brockham	18	0	0
Fraser Down	6	1	1
Dawcombe	20	1	1
Totals	**255**	**49**	**67**
Females			*30*
Males			*37*

Table 2. Total *C. nitidulus* individuals recorded by dominant scrub tree species at Recording Location (DAFOR scale). "Other" category refers to locations where birch and/or hazel was present but not dominant. Birch-dominant locations could have hazel present and hazel-dominant locations could have birch. Of only those locations at which *C. nitidulus* was recorded, there were three birch-dominant locations at which hazel was at least Frequent and four hazel-dominant locations at which birch was at least Frequent. The species on which *C. nitidulus* was recorded is therefore also shown and there are two cases in which birch-dominant locations recorded counts on hazel.

	Recording Location scrub type		
	Birch dominant	Hazel dominant	Other
Surveys made	148	89	18
Locations with CN	31	16	2
Total CN counts	44	21	2
Count on birch	*42*	*0*	*2*
Count on hazel	*2*	*21*	*0*
CN Female	*18*	*10*	*2*
CN Male	*26*	*11*	*0*

Table 3. *C. nitidulus* (CN) counts by survey method. There was one location at which visual inspection was carried out, but no beat, and forty-two locations at which the long-handled sweep net was not used. This was in most cases because of the absence of sufficient foliage above 3m above ground level or occasionally because of the onset of rain.

Method	Total number of surveys with this method	Locations CN found with this method	Total CN counted with this method
Visual inspection	255	20	25
Beating	254	29	36
Long-handled sweep net	213	5	6

Not included in Table 1, or in Tables 2 and 3 and Figure 3, but worth noting, is a single record of a male *C. nitidulus* on birch on a chalk slope of Box Hill on 24 May 2023 (TQ1766252170).

All *C. nitidulus* were recorded on leaves of either birch (44) or hazel (23) (Table 2). Hawthorn trees were present at 58 Recording Locations and wild privet at 21 locations (25 and 12 respectively in the three-sites dataset), but *C. nitidulus* was not recorded on any of them. The majority of *C. nitidulus* individuals were recorded by visual inspection or beating (Table 3).

3.4 Modelling

The model-fitting used the *C. nitidulus* datasets for the three Study Sites having more than two observations: East White Down, Headley Warren and West White Down, which were also the Study Sites for which more detailed scrub composition and bare ground data was recorded. *C. nitidulus* counts in this analysis were only those from the survey of scrub foliage up to 3 m above the ground as the long-

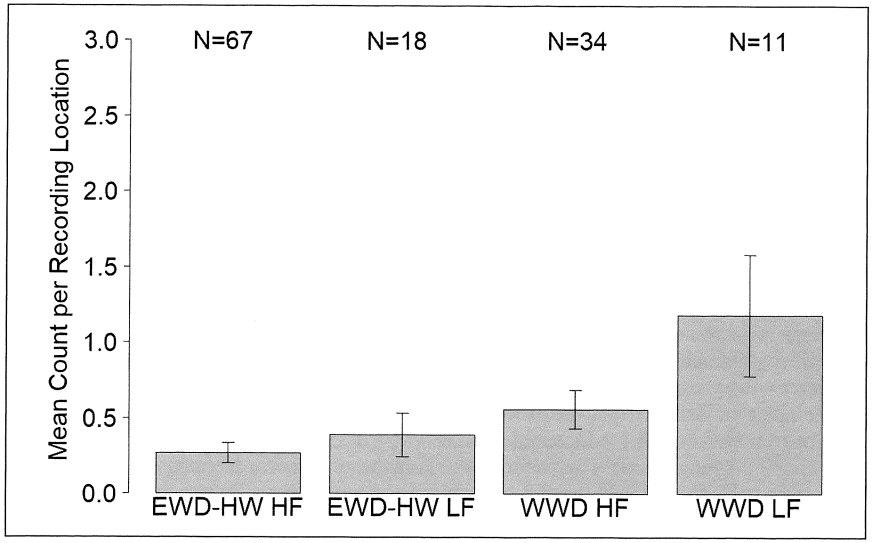


Figure 5. Mean counts (with standard errors) of *C. nitidulus* per Recording Location, excluding long-handled sweep net counts, at East White Down and Headley Warren combined (EWD-HW) and at West White Down (WWD) split between Recording Locations having high foliage (HF) exceeding 4 m and Recording Locations with low foliage (LF) not exceeding 4 m.

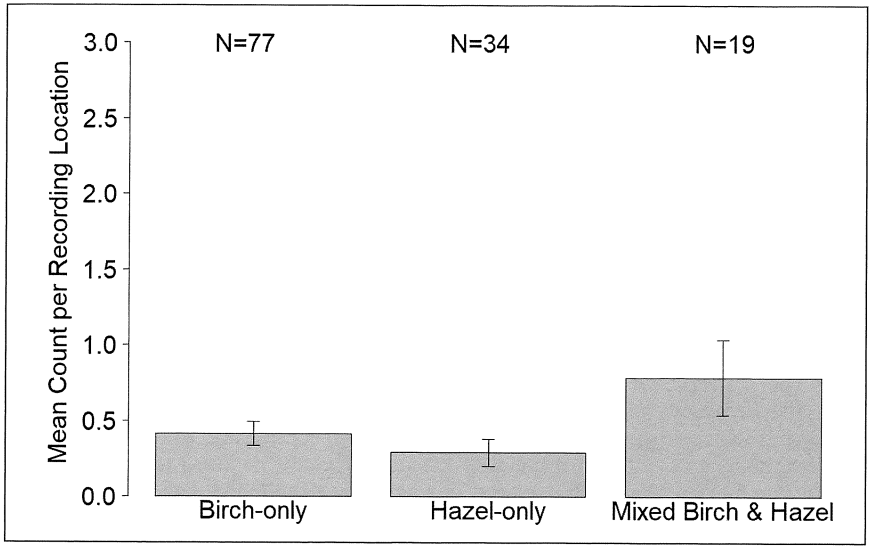


Figure 6. Mean counts (with standard errors) of *C. nitidulus* per Recording Location excluding counts from the long-handled sweep net and shown separately for Recording Locations having birch but no hazel ('Birch-only'), hazel but no birch ('Hazel-only') and both birch and hazel ('Mixed Birch & Hazel'). In all three cases, other scrub species were present at some Locations.

handled sweep net records were excluded, but the presence or not of high foliage (taken to be above 4 m) was a variable.

Figure 5 shows mean counts data for the Three-Sites dataset. The minimal adequate model (Poisson GLM, $\chi^2 = 27.669$, df = 6, p = 0.0001, N = 130) showed significantly lower counts from Recording Locations with scrub exceeding 4 m (p = 0.0104). There were significantly higher counts at West White Down than at Headley Warren and East White Down (p = 0.0018).

The separate extents of birch or hazel at a Recording Location were not significant factors but both were retained in the final model because the interaction between the two did have a significant positive effect on counts (p = 0.0218, see also Figure 6.). Counts reduced significantly with the number of days elapsed since the start of the survey on 19 May 2022 (p = 0.0322).

There was no statistically significant difference between counts per Recording Location at Headley Warren and East White Down and no effect on the number of beetles counted of components of scrub composition at the Recording Locations (other than as noted above), of the extent of understorey bare ground or of any of the abiotic environmental factors measured at the time of the surveys: temperature, humidity and general weather conditions (sunshine and windiness).

4. Discussion

Prior to this one, the last extensive survey of *C. nitidulus* in the North Downs of Surrey was undertaken in 1999 and 2000 (Piper, 2002). The 2022 survey shows a consistent picture in terms of the main three population centres: East and West White Down and Headley Warren all yielded "many" observations in 1999 and 2000 (Piper, 2002) and were the locations for almost all records in the 2022 survey as well. However, there appears to have been a slight westward shift in the relative densities. In 2022, West White Down had the highest total count and the highest mean count per Recording Location. In 2000, comparing six sites across East and West White Down, Piper & Compton (2010) identified an area in the eastern block of East White Down as having the strongest *C. nitidulus* population. In 2022, two individuals were recorded on birch on the woodland edge in that area, but otherwise all East White Down observations were on the western side of Pickett's Hole, where the habitat character is closer to that at West White Down. It appears that the scrub character of the eastern block has changed from dispersed birch scrub within grassland to quite dense low-level (mostly less than 1.5 m) common hawthorn and wild privet. Except in one small area, immature birch is absent and there is no hazel. Only the mature birch at the woodland edge remains to support a *C. nitidulus* population.

C. nitidulus was found in two locations not previously recorded: Dawcombe and Fraser Down. No records have been found for Denbies Hillside, but the possibility exists that *C. nitidulus* has been found there in the past without notification to a formal record centre (Jeffcoate, *pers. comm.*, 2023).

There is no contiguous grassland/scrub habitat connecting Fraser Down and Dawcombe to other known populations: that at Headley Warren is the closest, at 2km away. Given what is understood of the beetle's limited capacity for dispersal (Piper & Compton, 2010), the most plausible assumption is that these observations were members of an isolated, most likely long-standing population rather than recent colonisers. However, if that is the case, it is perhaps a little surprising more observations were not made in this survey, especially at Dawcombe. In almost all other places at which multiple surveys were made, if *C. nitidulus* was found, it was found several times (one field at Headley Warren was an exception – see Figure 3).

At Dawcombe, 20 surveys yielded just one. Random variation in sampling could be the reason but a single observation, and the absence of prior records of the beetle at the site despite a degree of prior survey effort, perhaps lowers the likelihood of this being a member of a relict population. Instead, it may be a fortuitous observation of a recent arrival. Further survey work would be needed to reach firmer conclusions one way or the other.

In terms of implications for habitat management strategy, the survey found no significant dependence on birch as a host tree as opposed to hazel and some evidence of greater densities where both were present. This differs somewhat from the 1999/2000 survey, in which observations were very largely on birch (Piper, 2002), although that could partly be explained by differences in survey effort allocated to birch versus hazel. Despite the dry heat that characterised much of the late spring and summer of 2022, unseasonally cool weather with frequent passing showers was experienced in the first half of the survey period. It is possible that the beetle might move between these two tree species (where the opportunity exists), depending on weather conditions, with hazel affording more shelter than birch. This could be an area for further investigation. A number of Recording Locations had hawthorn or wild privet, both of which have been associated with *C. nitidulus* (JNCC, 1999). The 1999/2000 study recorded *C. nitidulus* on hawthorn (Piper, 2002). In this study, all *C. nitidulus* were recorded on leaves of either birch or hazel.

The survey showed significantly higher *C. nitidulus* counts associated with less mature birch and hazel, with foliage broadly between 1.5 and 4 m above ground. This is consistent with an understanding that the beetle favours less mature scrub (JNCC, 1999) and is a useful guide for targeted habitat management. However, mature trees do nonetheless provide habitat – all but one of the East White Down observations, for example, were from mature trees (immature birch and hazel scrub is comparatively rarer there) and also some from West White Down and Headley Warren.

Adult Cryptocephalinae, including *C. nitidulus*, have been found to be strongly thermophilic (Piper, 2002) and, following that understanding, this study focused on predominantly south-facing locations open to sunlight for much of the day. No quantitative analysis on the spatial distribution of Recording Locations and *C. nitidulus* records has been undertaken in this survey, but the mapping does appear to show a general tendency for the beetle to be found on scrub close to woodland edges in all cases. West White Down is different in also having observations on scrub in more open locations. All East White Down observations were on trees within 10m of woodland or actually part of the woodland edge. This could either be because the topography at East White Down renders scrub in the more open locations too exposed for the beetle (whilst this is not the case at West White Down), or it could be that the beetles simply cannot reach it; there is a minimum c.30m gap between the birch and hazel near the Pickett's Hole woodland and that further out in the open grassland.

The number of *C. nitidulus* recorded using the long-handled sweep net was very substantially lower than the other two methods. It is not possible to determine whether the net is ineffective for surveying this beetle or there were simply very few beetles to be found on foliage above 3m. This may be an area for further work. While the beating tray yielded more records, visual inspection was nonetheless reasonably effective as a survey technique and has the advantage of being both species-focused and less intrusive. The statistically significant reduction in counts between mid-May and end-June is consistent with the known adult phenological dynamics of the species (Piper, 2002).

5. Conclusions

The main conclusion from this survey and prior studies to inform future habitat management for *C. nitidulus* is that a combination of birch and hazel scrub is preferable to birch in isolation, and that there is no reason to exclude either common hawthorn or privet given their association with the beetle (JNCC, 1999; Piper, 2002). Trees with a range of maturities should be encouraged to ensure that a succession of immature scrub is maintained. Mature trees within grassland should be a part of the habitat structure too and because they provide the main seed-source for future seedlings. Locations near to woodland providing some shelter from adverse weather may be preferable, but scrub further from woodland is also valuable, especially if the local conditions mean it is not too exposed. In view of previous work on dispersal capability (Piper & Compton, 2010) and circumstantial evidence from East White Down in this survey, distances between suitable stands of scrub should not exceed 10m. In areas where there are larger gaps, consideration should be given to permitting natural succession to provide connectivity.

These recommendations are naturally concerned with the habitat requirements of *C. nitidulus*, given that has been the focus of this study. It is recognised that all sites at which it survives also have other species conservation objectives which may conflict with these management recommendations to some extent. The maintenance of an inherently unstable emerging scrub habitat requires ongoing careful and focused site manipulation.

Acknowledgements

Our thanks to Ross Piper, who kindly joined a call in March 2022 to provide guidance on survey methods, and to Headley Warren's manager, Tim Mackworth-Praed, who facilitated the essential access to that site. Gail Jeffcoate provided additional records, sight of several papers otherwise not accessible and pointed out where to look on Box Hill in 2023. The National Trust kindly provided access to White Down and Denbies Hillside and Surrey County Council to Norbury Park: our thanks to both.

References

Caughley, G. (1994.) 'Directions in conservation biology.' *Journal of Animal Ecology*. **63**: 215–244

Hackston, M. (2019). Mikes Insect Keys for subfamily Cryptocephalinae (2022). https://sites.google.com/view/mikes-insect-keys/mikes-insect-keys/keys-for-the-identification-of-british-beetles-coleoptera/keys-for-the-identification-of-british-chrysomelidae

iRecord. (2023). Confirmed records for *Cryptocephalus nitidulus*. Accessed 8 September 2023. https://irecord.org.uk/all-records?filter-date_age=&filter-taxon_meaning_list=99101

JNCC (Joint Nature Conservation Committee). (1999.) 'UK Biodiversity Group: Tranche 2 Action Plans, Invertebrates.' Volume 4. https://data.jncc.gov.uk/data/9c2e576a-31b7-4bae-a620-972d99177a1f/UKBAP-Tranche2-ActionPlans-Vol4-1999.pdf

JNCC (Joint Nature Conservation Committee). (2007.) 'UK Biodiversity Action Plan: list of UK BAP priority terrestrial invertebrate species.' https://hub.jncc.gov.uk/assets/98fb6dab-13ae-470d-884b-7816afce42d4#UKBAP-priority-terrestrial-invertebrates.pdf

JNCC Conservation Designations for UK Taxa spreadsheet. Reference date 10 January 2023. https://hub.jncc.gov.uk/assets/478f7160-967b-4366-acdf-8941fd33850b

Key, R. (2001.) *'Pot beetles – Cryptocephalus spp.'* in the Proceedings of the 10th anniversary conference of The Species Recovery Programme 5–7 December 2001. English Nature.

Natural England. (2014). 'Commissioned Report NECR161. A review of the scarce and threatened beetles of Great Britain. The leaf beetles and their allies Chrysomelidae, Megalopodidae and Orsodacnidae. Species Status No.19.' http://publications.naturalengland.org.uk/file/6244884977549312

NBN Atlas. (2023). Records for *Cryptocephalus nitidulus*. Accessed 8 September 2023. https://records.nbnatlas.org/occurrences/search?q=lsid:NHMSYS0020151867&fq=occurrence_status:present&nbn_loading=true#tab_recordsView

Owen, J. A. (2000.) 'Adult feeding and egg-laying in *Cryptocephalus coryli* (Linnaeus) (Coleoptera: Chrysomelidae)' *Entomologist's Gazette*. **51:** 195–201.

Piper, R. W. (2002). 'Conservation Biology of *Cryptocephalus* Species and Other Threatened UK Beetles.' PhD thesis, University of Leeds, UK.

Piper, R. W. Compton, S. G. (2003). 'Subpopulations of *Cryptocephalus* beetles (Coleoptera: Chrysomelidae): geographically close but genetically far.' *Diversity and Distributions*. **9**: 29–42

Piper, R. W. Compton, S. G. (2010). 'Population size and dispersal ability of *Cryptocephalus nitidulus*' *Entomologist's Record and Journal of Variation*. **122**: 257–264

QGIS (2021). QGIS Geographic Information System version 3.22.12-Bialowieza. Open Source Geospatial Foundation Project. http://qgis.org

R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.

SBIC (Surrey Biodiversity Information Centre). (2022). Data export for records of *Cryptocephalus coryli* and *nitidulus* observations dated 23 March 2022.

SHORT COMMUNICATION

A male *Dahlicha lichenella* (Stainton) (Lepidoptera: Psychidae) in Berkshire. – On the night of 13 March 2024 I ran a 6w 12v MV actinic Hearth Trap on the patio in my back garden at Lower Earley, Berkshire (SU 760 707). The weather that night was cloudy, mild for the time of year, and calm. The following morning, at around 09.30, I observed a small dark moth or caddis (Fig. 1) gyrating along on a paving slab about 0.5 m from the trap. It was behaving rather oddly, in a similar manner to that of the crambid *Acentria ephemerella* ([D. & S.]) Water Veneer attracted to MV light. This odd behaviour drew my attention to it. Having tubed it I was surprised to find, by its antennae, that it was a male dahlichid (Fig. 1, centre). Initially I believed it to be *D. inconspicuella* (Stainton) Lesser Lichen Case-barer, our only sexually reproducing member of this genus. However, comparing it with two examples of male *D. lichenella* Lichen Cace-barer from Niedersachsen, Lower Saxony, Germany (Fig. 1, LH side), sent me by U. Widowski while I was conducting my PhD on this family, and with examples of *D. inconspicuella* from Dungeness sent me by D. O'Keeffe (Fig. 1 RH side), it became apparent that it was a male *D. lichenella*. Both it, and my German reference specimens, agree with the examples illustrated and described in Arnscheid & Weidlich (2017), and on the UK moths website. Hättenschwiler (1985) does not illustrate the male as it did not occur in Britain, though the male is illustrated on the UK moths website: www.ukmoths.org.uk/species/dahlica-lichenella/ where again the male is stated not to occur in the Britain. Also illustrated on that web site is the male of *D. inconspicuella*: www.ukmoths.org.uk/species/dahlica-inconspicuella/