



***Nomada sexfasciata* and *Eucera longicornis* at  
Prawle Point, South Devon  
Report on surveys and work undertaken in 2017**

**September 2017  
Catherine Mitson**

***Saving the small things that run the planet***

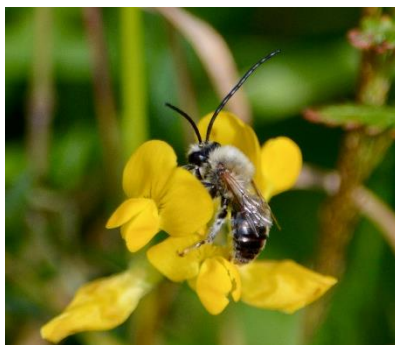
## ***Nomada sexfasciata* and *Eucera longicornis* at Prawle Point, South Devon**

### **Report on surveys and work undertaken in 2017**

**Catherine Mitson, Buglife**

With previous records scattered across southern England, the nationally rare (RDB1) Six-banded nomad bee (*Nomada sexfasciata*) (Falk, 1991) is now confined to a short stretch of soft cliffs east of Prawle Point on the South Devon coast. *N. sexfasciata* is a cleptoparasite of the Long-horned bee *Eucera longicornis* (listed as a Notable A species, Falk, 1991) and is dependent on strong populations of its host. *E. longicornis* is a species in decline and a conservation priority in its own right, but despite *E. longicornis* being recorded in various locations along the south west coast, *N. sexfasciata* is restricted to one known site at Prawle Point.

Both species have been highlighted as being priorities for conservation in the South West (Horsley *et al*, 2013). It is our opinion that, if urgent action is not undertaken, *N. sexfasciata* will be nationally extinct by 2020.



A conservation action plan for both *E. longicornis* and *N. sexfasciata* was put together by Buglife with advice from local and national experts, with a focus on the soft cliffs between Prawle Point and Start Point (Appendix 1). Our immediate aims are as follows:

- Survey *E. longicornis* and *N. sexfasciata* populations at Prawle Point during the flight season of 2017 to improve our understanding of the status and distribution of the two species along this section of coast.
- Initiate discussions with local landowners and land managers to identify opportunities to restore and enhance habitat for *E. longicornis* and *N. sexfasciata*.
- To collect local seeds from the following species of plants: Narrow-leaved everlasting-pea (*Lathyrus sylvestris*), Meadow vetchling (*L. pratensis*), Bush vetch (*Vicia sepium*), Tufted vetch (*V. cracca*), White clover (*Trifolium repens*) and Kidney vetch (*Anthyllis vulneraria*). The collected seeds will be used to grow plug plants ready for planting in Autumn 2018.

## 2017 surveys at Prawle Point

Surveys were undertaken by Buglife volunteers and other local entomologists. Data collated in 2017 is presented in table 1.



**Fig. 1.** A heat map showing where *E. longicornis* was recorded this year. The most concentrated area (indicated by yellow) is where the main nest site is found. This is also where *N. sexfasciata* was recorded.



A nesting female *E. longicornis* at the main nest site.

It was very heartening to see a seemingly successful population of *E. longicornis* this season. Both males and females were recorded from the end of May right through to the end of July and records did stretch a considerable distance along the coast. Many records are concentrated in the main nest site area, as efforts were concentrated here in order to increase chances of observing *N. sexfasciata* but there is seemingly good nesting habitat along other areas of the cliff face. For instance, many females were observed feeding in a plentiful patch of narrow-leaved everlasting-pea immediately in front of Maelcombe House and the cliff face directly below this looks to be an ideal nesting area, but unfortunately is less accessible for observations.

*N. sexfasciata* was observed on five occasions between 14<sup>th</sup> June and 13<sup>th</sup> July, observations were concentrated in June and specifically at the main nest site. Next season, surveys for this species should be widened to other nesting aggregations of *E. longicornis*, and other locations where good habitat exists.

**Table 1:** *Nomada sexfasciata* records 2017

Location	Grid Ref.	Date	Observation	Observer
Main nest site	SX785357	14.06.2017	A fresh individual carrying <i>Meloe proscarabeus</i> triungulins	John Walters
Main nest site	SX785357	17.06.2017	Brief individual sighting around a nest entrance	Philip Strange
Main nest site	SX785357	21.06.2017	Two individuals spotted	Lee Dingain and Rachel Ward
Main nest site	SX785357	23.06.2017	Four sightings, unsure if four different individuals	Philip Strange
Main nest site	SX785357	13.07.2017	One individual at main nest site around midday	John Walters

**Table 2:** *Eucera longicornis* records 2017 ([P.P]: Prawle Point)

Location	Grid Ref.	Date	Observation	Observer
[P.P] Main nest site	SX785357	24.05.2017	First known sighting of the year, male	Philip Strange
[P.P] Coastal footpath		14.06.2017	Both females and males along the coastal footpath	John Walters
[P.P] Main nest site	SX785357	16.06.2017	Females at the main nest site	Philip Strange
[P.P] Along coastal footpath		23.06.2017	Both females and males along the coastal footpath	Philip Strange
[P.P] Main nest site and coastal footpath	SX785357	02.07.2017	Feeding females at multiple locations, along fenced footpath, coastal footpath and the main nest site	Philip Strange
[P.P] Main nest site and coastal footpath	SX785357	06.07.2017	Multiple females seen at the main nest site. Feeding males and females along cliff top	Catherine Mitson and John Walters
[P.P] Main nest site and Maelcombe House	SX785357-SX790362	10.07.2017	Only females seen, both at the main nest site and by Maelcombe House feeding on narrow-leaved everlasting-pea	Catherine Mitson and Poppy Collins
Gara Rock, East Portlemouth	SX754368	16.07.2017	Nesting females by the steps leading down to Gara Rock beach	Emily Reed
[P.P] Along coastal footpath and Maelcombe House	SX790362-SX777354	23.07.2017	Females feeding along coastal footpath, on narrow-leaved everlasting-pea patch by Maelcombe House and one female towards the Coastguard cottages on tufted vetch. Some females seen using nest holes at main nest site	Steven Falk and the FSC Bee Identification Course members



### Habitat availability

Opportunities for aculeates along this stretch of coast are not limited by availability of nest sites, they are limited by the amount and quality of the cliff-top wildflower resource. In past years, there have been concerns about the level of cliff-top grazing between Prawle Point and Start Point. Grazing has occurred right up to the cliff edge in some areas, including in the immediate vicinity of the main nest site, and results in the loss of nectar and pollen sources.

Visits this year however have been more promising. Sections of the grassland have been left to flower, with many pockets of tufted vetch, white clovers and narrow-leaved everlasting-pea growing along the cliff top. Grazing seems to be absent and livestock hasn't really been seen on the land along the cliff edge. This is good news for now, as this year's brood (for both *E. longicornis* and *N. sexfasciata*) will benefit. It is unknown however, how different this may be next year.



### Habitat enhancements

Initial enquiries with landowners did not bear fruit. However, when approached, the owners of Maelcombe House were very receptive to the idea of undertaking habitat enhancements on their land, which is adjacent to a known nesting aggregation of *E. longicornis*. After a first site visit it was agreed that Buglife could plant some plants which form important food sources for *E. longicornis* and *N. sexfasciata* on their land. The land owners prepared a strip of land along a fence separating their field from the coastal footpath. We planted 65 narrow-leaved everlasting-pea plug plants along this strip – these were grown by volunteers from seed collected from Prawle Point in 2016. The landowners are extremely keen to be involved, and are happy for Buglife to return to plant more necessary food sources for the long-horned bee and its cuckoo; an extremely encouraging opportunity. There is potential here to restore approximately 1 hectare of wildflower-rich grassland in the future.



A prepared strip of land to be used for the planting of narrow-leaved everlasting-pea at Maelcombe House.

### **Further opportunities for habitat enhancement**

Restoration of wildflower-rich cliff top grassland is a priority for this stretch of coast, to support the target species plus a long list of other hymenoptera of conservation concern. Engagement with landowners to restore habitat should be explored, working with partners who already have relationships would be a good starting point.

As mentioned above, Buglife will continue to work with the owners of Maelcombe house to plant more food sources for these species, with the possibility of converting some of their land in to an entire wildflower-rich meadow.

One approach that has not been explored as of yet is to engage the local village. As *E. longicornis* has been recorded in the village before, it would be a fantastic opportunity to get the community involved in planting the appropriate food plants in their gardens and parks. This could then have the potential to involve people in a local recording scheme for these species in this area, helping us to see if there are other nest sites along this stretch of coastline.

### **Recommendations for further work**

Implementing an annual survey of both *N. sexfasciata* and *E. longicornis* will not only help monitor the populations of both of these species at Prawle Point but can potentially aid in the identification of new nesting sites. As well as this, searching for opportunities for further habitat enhancement is a big priority, with a particular focus on connecting fragmented habitat. Buglife's [South Devon B-Lines project](#) has created an opportunity map for the creation and restoration of wildflower-rich grasslands across South Devon, with the aim of providing networks of suitable habitat for bees and other pollinators.

### **Acknowledgements**

My deepest gratitude to those who assisted with field surveys, submitted records, and helped with planting this year: John Walters, Philip Strange, Emily Reed, Lee Dingain and Rachel Ward. I would like to thank those at the National Trust and Natural England for their thoughts and advice and to Steven Falk for offering his knowledge and advice on these threatened species. Also, many thanks to Andrew Whitehouse for his continuing guidance with this project. Finally, I deeply grateful to the owners of Maelcombe House for allowing Buglife to direct planting on their property.

## **Appendix 1**

### **The Six-banded nomad bee (*Nomada sexfasciata*) - species information and conservation action, 2016**

Catherine Mitson & Andrew Whitehouse, Buglife



© Steven Falk

With previous records scattered across southern England, the nationally rare (RDB1) cuckoo bee *Nomada sexfasciata* (Falk, 1991) is now confined to the soft cliffs east of Prawle Point on the South Devon coast. *N. sexfasciata* is a cleptoparasite of the Long-horned bee *Eucera longicornis* (listed as a Notable A species, Falk, 1991) and is dependent on strong populations of its host. Despite *E. longicornis* being recorded in other areas along the south coast of England, *N. sexfasciata* seems to be confined to this one short stretch of coast.

Both species have been highlighted as being priorities for conservation in the South West (Horsley *et al*, 2013). It is our opinion that, if urgent action is not undertaken, *N. sexfasciata* will be nationally extinct by 2020.

The soft cliffs stretching from Prawle Point and Start Point provide an extremely important habitat. Not only is the cliff material friable, they are south-facing and sheltered, and therefore maintain higher temperatures (Whitehouse, 2007). This creates the ideal conditions for nesting solitary bees such as *E. longicornis*. As well as this, many of the legumes that can be found growing along the cliff tops of Prawle Point are critical nectar and pollen sources for foraging *N. sexfasciata* and *E. longicornis* adults, such as: Narrow-leaved Everlasting-pea (*Lathyrus sylvestris*), Meadow Vetchling (*L. pratensis*), Kidney Vetch (*Anthyllis vulneraria*), Bush Vetch (*Vicia sepium*), Tufted Vetch (*V. cracca*) and White clover (*Trifolium repens*) (Falk, 2015). *N. sexfasciata* has also been observed visiting Bloody Crane's-bill (*Geranium endressii*) and sowthistles (*Sonchus* sp.) (Falk, 2015).

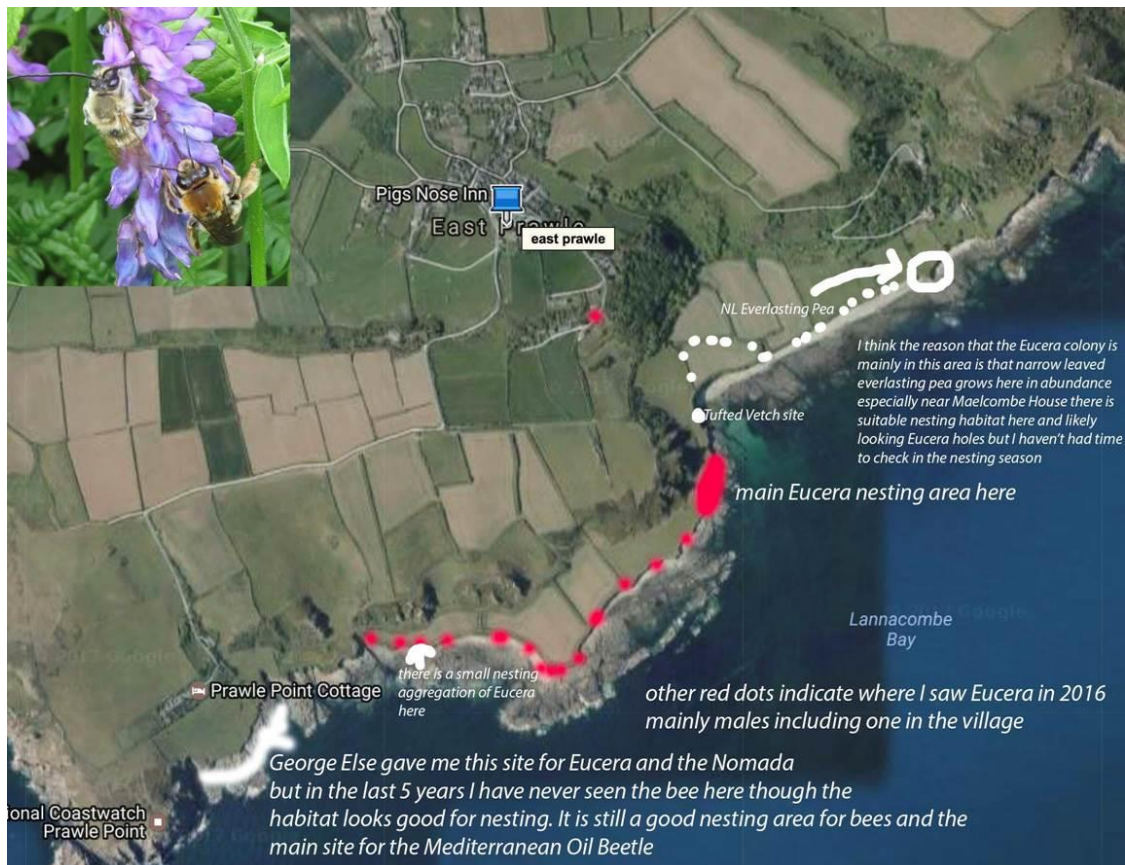
The main threat that faces both *E. longicornis* and *N. sexfasciata* is the loss of these vital wildflowers along the cliff tops. There is plenty of nesting habitat, however appropriate forage is in short supply.

Recent field visits in 2014 and 2016 have shown that the main site where *N. sexfasciata* has been previously recorded (SX 78524 35692, Fig. 1) (Dimond *et al*, 2014) is surrounded by land that is subjected to grazing which extends to the cliff edge. Creating legume-rich wildflower strips along the cliff edges in these heavily grazed areas would be an extremely important and relatively simple first step in the conservation of this species. This may also provide crucial ecological links to other areas



of suitable habitat. These wildflower strips would not have to be massively wide and there is also the possibility of utilising the field margins already put in place to enhance Cirl bunting habitats. *E. longicornis* and *N. sexfasciata* have flight periods between mid-May and mid-July (Falk, 2015), and so suspension of grazing during this time if possible would also be very beneficial.

Putting these measures in place requires the cooperation and permission from landowners and land managers who manage sites along the Prawle cliffs. Setting grazing boundaries back from the cliff edge to allow for the recovery of wildflower-rich cliff top grassland, would be not only valuable for *N. sexfasciata* and *E. longicornis* but for many species at Prawle Point, which has been recognised as being nationally important for supporting a rich assemblage of aculeate Hymenoptera (Stubbs, 1994).



A site map produced by John Walters showing where *E. longicornis* has been observed. The planting of legume-rich wildflower meadows should be prioritised around the main nesting site.

### Proposed action

Urgent action is required to prevent the extinction of *N. sexfasciata*. We propose to collect seeds of the key plants currently growing at this site to grow plug plants offsite. Plug planting can then begin at selected sites in 2018 to provide a boost in availability of suitable forage for *E. longicornis* and *N. sexfasciata*. Regular surveying of both *E. longicornis* and *N. sexfasciata* will begin immediately in May 2017 and this will continue after plug planting in 2018.

Longer-term, cliff top management around Prawle Point and beyond must be targeted at restoring wildflower-rich cliff top grassland to increase the amount of habitat for cliff nesting aculeates, and to reverse habitat fragmentation. This will enable populations of *E. longicornis* and other solitary bees to recover, grow, and recolonise sections of coast from where they have been lost.



## Immediate action

We propose to collect seeds from the following species of native wildflowers to begin the growing of plug plants offsite ready for planting in 2018 in order to boost the amount of available forage in the immediate vicinity of known nesting aggregations of *E. longicornis*:

- Narrow-leaved Everlasting pea (*Lathyrus sylvestris*)
- Meadow vetchling (*L. pratensis*)
- Bush vetch (*Vicia sepium*)
- Tufted vetch (*V. cracca*)
- White clover (*Trifolium repens*)
- Kidney vetch (*Anthyllis vulneraria*)

A small group of Buglife volunteers will collect the seeds of native wildflower plants from selected sites at Prawle Point and used to grow plug plants offsite. Buglife volunteers will begin surveying of adult *E. longicornis* and *N. sexfasciata* in May 2017 and continue until the end of the adult flight period.

The most important site for planting will be focussed around the main *Eucera* nesting site (as shown above). Where shown by the red highlighted sections on the map above, many of the grazing boundaries end close to cliff edge and so planting here would also be a priority.

Permission will be sought from land owners and land managers. As these sites are within the boundary of the SSSI, consent from Natural England will be required for the collection of seeds and for planting to go ahead. The sensitivity of this area has been taken in to consideration and so no plug plant material sourced from outside these sites will be used and only locally collected seeds will be used.

If successful, we will seek further funding to repeat this in subsequent years, gradually expanding the planting areas, and adding new sites along the coast.

## Longer-term

Longer-term, cliff top management around Prawle Point and beyond must be targeted at restoring wildflower-rich cliff top grassland to increase the amount of habitat for cliff nesting aculeates, and to reverse habitat fragmentation. This will enable populations of *E. longicornis* and other solitary bees to recover, grow, and recolonise sections of coast from where they have been lost. Towards the end of the summer, seeds can be collected from the wildflowers and used to grow plug plants to be planted the following spring to continue habitat restoration.

Buglife's [South Devon B-Lines project](#) has created an opportunity map for the creation and restoration of wildflower-rich grasslands across South Devon, prioritising resources to deliver habitat work along the B-Lines network will benefit widespread pollinators, and other wildlife, as well as rare and threatened bees.

## References and further reading:

Bees, Wasps & Ants Recording Society <http://www.bwars.com/> Aculeate Information Sheets

Buglife information sheets:

- [Case study: Long-horned bee at Gatwick Airport](#). Buglife- The Invertebrate Conservation Trust, Peterborough.

- [Long-horned bee \(\*Eucera longicornis\*\)](#). Species Management Sheet. Buglife- The Invertebrate Conservation Trust, Peterborough.

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