



## A CUCKOO BEE *Nomada ferruginata*

### 1. INTRODUCTION

*Nomada ferruginata* (previously known as *N. xanthosticta*) is one of the rarest of around 30 species of 'nomad' cuckoo bees. Nomad bees are wasp-like bees that are parasites of various mining bees. They can often be found swarming around mining bee nesting colonies and entering the host nest entrances to lay their eggs. The resulting larva then devours the contents of the host cell (cleptoparasitism).



© Steve Falk

*Nomada ferruginata* is classified as Nationally Threatened and is the cleptoparasite of *Andrena praecox* which flies mainly in March and April, foraging exclusively on willow and salix catkins.

The host nests in dry soils fully exposed to the sun, especially sparsely-vegetated clay or sand slopes, and has its strongest Warwickshire populations in limestone quarries, though it also occurs along some disused railway lines and old industrial sites, and occasionally within the wider countryside. This cuckoo bee also visits willow blossom. Three Warwickshire localities are currently known. Other scarce cuckoo bees within the sub-region include *Nomada flavopicta* (Nationally Scarce), *N. hirtipes* (Nationally Rare), *N. lathburiana* (Nationally Rare) and *N. pleurosticta* (Nationally Scarce).

### 2. OUR OBJECTIVES & TARGETS

	Target
A. To monitor and maintain up-to-date listings of Warwickshire sites.	biannually
B. To maintain the size and range of known populations of <i>N. ferruginata</i> and its host.	2003-2015
C. To encourage strong host populations at known Warwickshire sites and increase population size and range by encouraging 5 new colonies.	by 2010
D. To raise awareness of this bee and its life cycle and habitat requirements.	2005

**ASSOCIATED HABITAT PLANS**

- Quarries & Gravel Pits
- Disused Industrial & Railway land

**ASSOCIATED SPECIES PLANS**

- Dotted Bee-Fly
- Rare Bumblebees
- Small Blue
- Chalk Carpet
- Rare Bumblebees

**3. NATIONAL BAP OBJECTIVES & TARGETS**

- *Maintain the range of Nomada ferruginata*

**4. CURRENT STATUS**

*Nomada ferruginata* was first discovered in Warwickshire in 1996, when many were observed at the upper sections of Napton Quarry, swarming around the host nesting areas and visiting willow blossom. This colony was checked in 2002 and was still strong. During 2002, single specimens were also encountered at Bishops Bowl (which has a strong host population that forages on both willow and white willow) and a small quarry at Lighthorne (bearing only a weak host population and limited willow). Another 10 large limestone quarries were also checked during 2002, without success, though such sites need to be monitored as many support strong host colonies. *N. ferruginata* has been recorded sparingly across southern England, though the Warwickshire sites are the most northerly confirmed ones in Britain. There is some evidence to suggest that it has increased in status over recent years following a period of great rarity, and it is currently graded as Nationally Threatened (Red Data Book category 1) by Falk (1991). The host is widespread but local in the south and east of Warwickshire (about 20 known sites), with the majority of its sites on brown-field land such as limestone quarries, old industrial sites and disused railway lines.

**4.1 Legal and Policy Status**

No legal protection exists for the fly itself, though Napton Quarry and Bishops Bowl each contain a geological SSSI (which only represent a tiny part of the sites). All three sites are county Ecosites, though not formally designated SINCs. As a Red Data Book species, the bee can be used to support SSSI and SINC designation.

**4.2 Current Factors Affecting The Species**

- **Threat of development** facing many biodiverse brown-field sites. Bishops Bowl has been subject of some recent development proposals.
- **Scrub encroachment and other successional processes** that result in the loss of host nesting colonies (the host requires reasonable expanses of open habitat for nesting).
- **Excessive removal of willow** (though some control is often essential to maintain the long-term quality of a site).

## Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

- **Excessive disturbance of sites** where this leads to catastrophic habitat loss (though piecemeal disturbance can be beneficial by creating new nesting habitat for the host).
- **The lack of formal designation** (SSSI or SINC) for the three known sites (the geological SSSI status affecting two of the sites affords little protection for the bee).

## 5. CURRENT LOCAL ACTION

- Ongoing survey work by Steven Falk, Warwickshire Museum is clarifying our understanding of the cuckoo bee's status in the county.
- There is currently scope for sympathetic management at Napton Quarry to enhance the wildlife value of the site.
- Ongoing SINC designation should soon allow assessment and formal designation of known *N. ferruginata* sites, and possibly the consideration of some new SSSIs.

## 6. PROPOSED LOCAL ACTIONS (some dates amended - Core Steering Group - Feb 2008)

ACTION	Lead	Partners	By	Meets objective
<b>Policy &amp; Legislation</b>				
<b>PL1.</b> Ensure that all relevant policy is included in Local Planning Documents (see ODPM Planning Policy Statement PPS9) to safeguard and promote <i>N. ferruginata</i> and its habitat.	LBAPSG	WM NE WWT SDC	2003 - 2015	B
<b>PL2.</b> Designate known sites as SINC's or SSSIs (as appropriate) at the earliest instance.	WSP	NE WWT	2003 - 2015	B
<b>PL3.</b> Consider the habitat requirements of <i>N. ferruginata</i> in the management agreements of agri-environment schemes.	NE	WM	2003 - 2015	B, C
<b>Site / Species Safeguard &amp; Management</b>				
<b>SM1.</b> Contact owners/managers of known <i>N. ferruginata</i> sites and explain the significance of the populations on their land.	WM		2005	B,D

<b>SM2.</b> Where possible, prepare and implement site management plans that cater for the needs of the <i>N. ferruginata</i> and its host, and attempt to increase the quality of such sites for the bee (bearing in mind that known sites have a broader ecological value).	WM	LOs ECs NE WWT	2003-2015	B, C
<b>SM3.</b> Work with quarrying companies and other key landowners to produce new sites suitable for the <i>N. ferruginata</i> (a process that can be integrated with the promotion of a much broader nature conservation agenda).	WM	WWT NE	2003-2015	C
<b>SM4.</b> Identify opportunities for funding site management and creation.	WM	NE WWT	2004	B, C
<b>Advisory</b>				
<b>A1.</b> Provide advice to landowners, managers and local authorities with respect to best practice management for the benefit of <i>N. ferruginata</i> .	WM		2003-2015	C, D
<b>Research &amp; Monitoring</b>				
<b>RM1.</b> Maintain an up-to-date listing of <i>N. ferruginata</i> sites and monitor losses and gains.	WM		2003-2015	A
<b>RM2.</b> Monitor the effectiveness and success of habitat management, enhancements and creation undertaken.	WM		2003-2015	B, C
<b>RM3.</b> Encourage more local naturalists to record groups such as bees, even if this just amounts to key species within their local patch.	WM		2003-2015	A, D
<b>Communication &amp; Publicity</b>				
<b>CP1.</b> Raise the profile of <i>N. ferruginata</i> and similar species in the sub-region, using it as a flag-ship species for limestone habitats, brown-field issues and the complicated inter-dependence of bees, their parasites and the habitats they occupy.	WM		2003-2015	B, D
<b>CP2.</b> Maintain communication with the Bee, Wasp and Ant Recording Society (the national recording scheme) and the relevant staff/representatives of English Nature.	WM		2003-2015	D

**Abbreviations:** EA - Environment Agency, EC – Extraction Company, NE – Natural England,, FWAG – Farming & Wildlife Advisory Group, LBAPSG – Local Biodiversity Action Plan Steering Group, , LO – landowner, SDC – Stratford District Council, WM - Warwickshire Museum, WSP – Wildlife Sites Project, WWT – Warwickshire Wildlife Trust

**7. REFERENCES** (also see **LBAP Bibliography** web page)

Falk, S. J. (1991). *A review of the scarce and threatened bees, wasp and ants of Great Britain. Research & survey in nature conservation. No. 35.* Natural England, Peterborough.

**8. FURTHER INFORMATION** (see separate **Links** web page for links to web sites)

UK Biodiversity Action Plan no.478

**9. CONTACT**

[stevenfalk@warwickshire.gov.uk](mailto:stevenfalk@warwickshire.gov.uk)