

**Report on findings of the 2005 field survey
for Rosser's Sac Spider *Clubiona rosserae***

For the *Clubiona rosserae* Partnership

Final Report

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1.0 INTRODUCTION

1.1 Background

Simon Colenutt of Ecological Survey & Assessment (ECOSA) was contracted to carry out continuing survey work on *Clubiona rosserae* in 2005. This work follows on from a review of the ecology of the species and field work carried between 2002 and 2004 and presented in four reports.^{1,2,3,4} This report should be read in conjunction with these three reports. The contract was carried out under the auspices of the *Clubiona rosserae* Partnership, a collaborative partnership between Buglife- The Invertebrate Conservation Trust, English Nature, the British Arachnological Society and Anglian Water. The aims and objectives of this partnership are;

Objectives;

- Continue a comprehensive survey of Chippenham Fen for *Clubiona rosserae*
- Undertake 3 day visit to Meijweg, Netherlands to survey for *C.rosserae*
- Undertake a 2 day survey visit to La Belle Fontaine, Brittany to survey for *C.rosserae*
- Survey potential areas for the species alongside the river at Tuddenham fen
- Survey of Thompson Common

This report details the findings of the field surveys for the species that were carried out during 2005.

¹ ECOSA (Sept 2003), *Report on findings of the 2002-2003 field survey for Rosser's Sac Spider Clubiona rosserae*, Privately published report.

² ECOSA (June 2003), *Review of the current known biology and distribution of Rosser's Sac Spider Clubiona rosserae*, Privately published report.

³ ECOSA (May 2003), *Clubiona rosserae Initial Surveys of potential sites*, Privately published report.

⁴ ECOSA (June 2005) *Report on findings of the 2003-2004 field survey for Rosser's Sac Spider Clubiona rosserae*, Privately published report.

2.0 METHODS

2.1 Introduction

As in 2004, the 2005 survey adopted a non-standardised approach which was aimed at allowing a more targeted approach to those methods that were producing higher numbers of *C.stagnatilis*. As a result cell searches, grubbing and sweep netting were adopted in the 2005 survey season. In addition limited, and non-standardised, use of pitfall and water traps was used. During all surveys only adult *Clubiona rosserae/stagnatilis* were collected, these were determined by examination with a 10x hand-lens in the field, all immature spiders were released.

2.2 Chippenham

In total 4 visits were made to Chippenham Fen between June and September 2004. During these visits much of the survey methodology was based on visual searching with sweep netting, grubbing and visual searches carried out. These four visits involved between 6 and 9 hours of constant survey effort. Habitats targeted included fen vegetation, reedbed, marginal habitat, cut sedge piles, saw sedge beds, wet grassland and rush-pasture. However, the majority of time was spent in compartments 8 and 11 where previous records of *C.rosserae* have come from.

In addition four water traps were run for a total of eight weeks over the summer season. The first session involved two traps being placed in compartment 8 and two in compartment 11 on 2nd July and the second session these were placed in different locations on 6th August. On both occasions only two traps were successfully retrieved, the other two had been spilled by animals possibly fox or badger. The trap areas are shown in Figure **.

2.3 Survey of Other sites

Tuddenham Fen was visited on 16th July during this survey visit the riparian vegetation alongside the river was thoroughly searched using a combination of visual searching for *Clubiona* cells and sweep netting. Only spiders that were identified as *Clubiona stagnatilis/rosserae* in the field were taken from the site.

Thompson Common was visited on 23rd July, during this survey visit the riparian fen and marsh vegetation was searched using a combination of visual searching for *Clubiona* cells and sweep netting. Only spiders that were identified as *Clubiona stagnatilis/rosserae* in the field were taken from the site.

2.4 Netherlands

During the field survey carried out in the Netherlands Simon Colenutt was accompanied by Peter Van Helsdingen of the European Invertebrate Survey, National Museum of Natural History. The site was surveyed on 25th, 26th and 27th July, surveys extended from 09:00 until 17:30, however on 26th heavy rain in the morning meant that survey extended from 12:30 until 18:45. During these surveys, field work was concentrated on two areas of the Meinweg these were Elfenmeer and Rolvennen.

The methodology adopted at these sites was essentially the same as for the UK surveys with an emphasis on searching for egg cells, sweep netting and grubbing.

3.0 RESULTS

3.1 Chippenham Fen

No *Clubiona rosserae* were recorded from Chippenham Fen during the course of the survey. A total of 83 *C.stagnatilis* have been identified to date from the site.

Numbers of *C.stagnatilis* were generally low through the survey season when compared to previous years. The reason for this is not known but may relate to climatic conditions or cycles of associated parasites.

Table 2 shows the number of *C.stagnatilis* collected using all search methods

	M	J	J	A	S	Total
Adult male	19	7	8	12	7	51
Adult female	2	6	6	5	11	22
Total	21	13	14	17	18	83

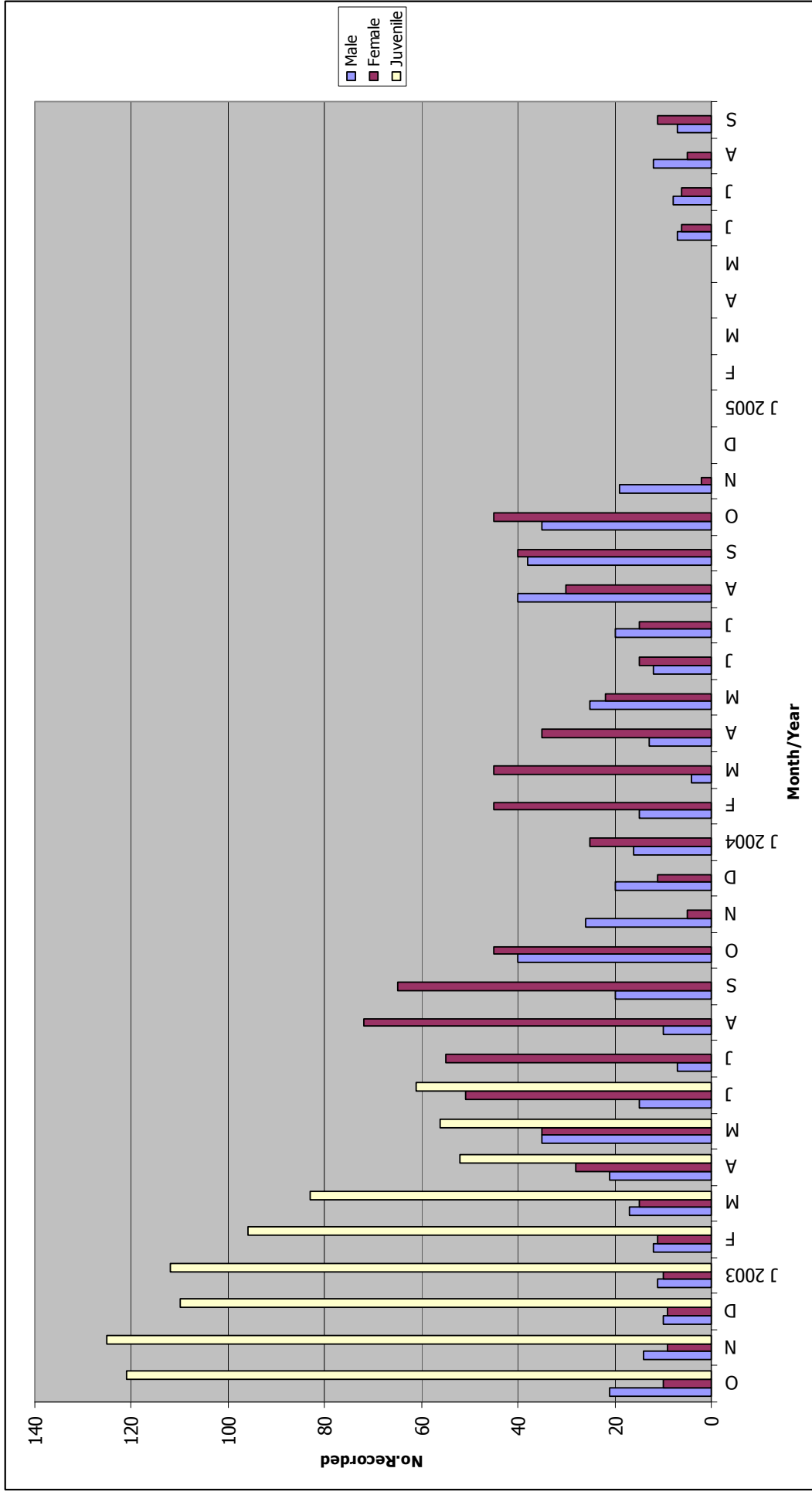
3.2 Other sites surveyed

No records of *C.rosserae* were forthcoming from any of the additional sites surveyed. *C.stagnatilis* was generally scarce at these two sites with Tuddenham Fen being dominated by *C.phragmitis*. At Thompson Common numbers of *C.stagnatilis* were similarly low with an abundance of *C.phragmitis*.

Table 3 Numbers of *C.stagnatilis* collected from other sites surveyed

Site	No. <i>C.stagnatilis</i> sampled
Tuddenham Fen	22
Thompson Common	15

Figure 1 Plot of *C.stagnatilis* samples since the beginning of the *C.rosserae* survey. Figures on the Y-axis are the number of *C.stagnatilis* recorded and figures on the X-axis are the months through which the field survey was carried out. This chart builds on Figure 1 in the 2002-03 survey report with month 1 being October 2002 and the final month being September 2005. Immature spiders were not recorded from July 2003.



3.3 Netherlands

The results of the field survey in the Netherlands are shown in **table 4**. One male *Clubiona rosserae* was found at Meinweg (Elfenmeer) at the same site as in 2004. This individual was taken from a purple moor-grass *Molinia caerulea* tussock located within scattered bog myrtle on 25th July 2005. Within this area there is a considerable build up of bog myrtle leaf litter, dead purple moor-grass litter and fallen and rotting silver birch *Betula pendula* limbs providing a structurally complex habitat. The soil consists of a deep layer of saturated peat which, although damp, had no standing water during the survey.

The specimen was taken at 17:30 and was thought to have been foraging. The animal was moving rapidly through the tussock and was initially detected prior to disturbance of the tussock. Figure 2 shows the location of the 2005 record.

Site	No. <i>C.stagnatilis</i> sampled	No. <i>C.rosserae</i> recorded
Elfenmeer	18	1
Rolvennen	7	0

Table 4 Numbers of *Clubiona* collected from sites surveyed in the Meinweg.



Figure 2 Site of the 2005 record of *C.rosserae*. The animal was taken from the purple moor-grass in the centre foreground.

Numbers of *C.stagnatilis* were very low during the survey with a total of only 12 adults being taken over the 3 day period. The reasons for this are not known but this may be climatic or due to a parasite life cycle.

3.4 La Belle Fontaine

This field visit was not carried out in 2005 due to problems in contacting the necessary authorities to gain access to the site. It is hoped that this visit can be carried out in 2006.

4.0 DISCUSSION

4.1 Surveys of UK sites

Surveys of UK sites during 2005 produced relatively few Clubiona and it proved difficult to locate many adults throughout the season. Water traps produced no adult Clubiona but only a small number were retrieved due to spillages caused by animals.

Based on the habitat where the species has been seen in the Meinweg and through inspection of sites where the species has previously been recorded in the UK it would appear that there are no remaining areas of suitable habitat. Much of the fenland habitat is thought to be either too dry or is dominated by greater pond-sedge or saw sedge, habitat that is not thought to be suitable for the species.

Habitat at Thompson Common would appear suitable, habitat is particularly suitable around the pingos where species rich fen vegetation occurs in an area of relative long term stability. In addition there is purple moor-grass dominated grassland much as that found at Meinweg. It is considered that the site provides a good opportunity to find the species.

4.2 Netherlands

As in 2005 the *C. rosserae* specimen was taken from an area of purple moor-grass dominated sward and was actually only approximately 20m away from the 2004 record. There appears to have been considerable growth of bog myrtle into the area where the species is recorded from with much of the grassland along the pond margin now dominated by a waist high growth of bog myrtle. The impact this is having on the *C.rosserae* is not known.