Invertebrate Surveys of Snipe Meadow and Mill Meadow Witney for Witney Town Council 2023

Invertebrate surveys, concentrating mainly on Arachnids, were carried out on 25th May 2023 (Snipe Meadow) and 15th September 2023 (Mill Meadow). The weather was warm and dry on both dates although the ground vegetation was damp due to heavy and persistent rainfall during preceding periods.

Collecting was mainly carried out using a sweep net and a suction sampler (adapted garden leafblower/vacuum). Specimens discovered were examined and identified on site where possible. Otherwise, where microscopic examination was required for identification, specimens were collected in tubes of 70% ethanol for later examination.

28 species of spider and 9 other invertebrate species were identified from the two meadows. Of the spiders 20 were identified to species level from Snipe Meadow and just 10 from Mill Meadow. Large numbers of immature species were collected (particularly from Mill Meadow) but in most cases could only be identified to family level. These figures are rather low and I would have expected the two visits to have yielded a larger total. Possible reasons for the low numbers are:

- Throughout the year rainfall levels were very high and therefore the growth of dominant grasses on both meadows was considerable. This resulted in very thick and impenetrable ground vegetation on both meadows on each of the survey dates, making productive collection from large areas of each site extremely problematic. Accessing the ground layer of vegetation with a suction sampler was almost impossible. Even moving around away from the cut rides presented considerable difficulty.
- The number of immature spiders as a proportion of the total was larger than I would have expected but on consideration of the vegetation conditions and the inability to use suction sampling to collect ground layer species, particularly adult Linyphiidae, it is perhaps not too surprising.
- For the Mill Meadow survey there were fewer orb web spiders than I would have expected on a meadow survey in mid-September. With climate change the old seasonal differences are becoming less clear and it is possible that several species are maturing later in the year (13 immature Araneids – orb-web spiders were recorded from mill Meadow).

However, I think the main difficulty was the inability to access large areas of each of the meadows due to the very dense and quite high vegetation cover. If further surveys are proposed I recommend them taking place early on in Spring before the dominant grasses overwhelm the site/s and after the cutting date in September when much larger areas are accessible to suction sampling.

Of the spiders identified (see species list pp.3-4) the majority are common in the southern half of the UK. A good range of *Pardosa* (Wolf spider) species were present on Snipe Meadow. Also, it was interesting to find two crab spiders, *Xysticus kochi* and *Xysticus ulmi* on Snipe Meadow – the latter having a scattered distribution away from southeast England. Similarly, the orbweb spider, *Mangora acalypha* (unlike the majority of orbweb spiders, maturing in late spring/early summer) is widespread in the southeast of England but is probably near northern limit here on Snipe Meadow, although over recent years it has appeared to be extending its range.

All the non-arachnid species recorded are commonly found in this type of habitat.

Recommendations

To enhance the meadows for arachnid species the development in the long term of a more structurally diverse habitat would be recommended. If further survey work is envisaged the recommendations of different survey times has already been mentioned, but if this were not possible the cutting of rides through the areas of dense dominant grass growth could, in the early stages of management, begin to provide a little more structural diversity and may enable a more comprehensive arachnid survey to take place. Developing access routes into any wet flushes or drier areas within the meadow areas would enable more extensive survey work to take place. In general, any attempt to increase the variety of habitat structure would benefit both meadows enormously for both arachnids and other invertebrates.

Lawrence Bee 27 November 2023

INVERTEBRATE SURVEYS WITNEY LAKES MEADOWS 2023

Type	**Snipe Meadow 25.5.2023**	**Mill Meadow 15.9.23**
ARACHNIDAE		
THERIDIIDAE		
Enoplognatha ovata		2f
Theridiidae spp.	2 imm.	3 imm.
LINYPHIIDAE		
Pocadicnemis juncea	1m	
Dismodicus bifrons	1m	
Centromerus sylvaticus		1f
Bathyphantes gracilis		1m
Tenuiphantes tenuis		7m 10f
Neriene clathrata		1m 5f
TETRAGNATHIDAE		
Tetragnatha extensa	1m 2f	
Tetragnatha montana	2m 6f	
Pachygnatha degeeri	1m 2f	10m 12f
Pachygnatha clerki		1m 2f
ARANEIDAE		
Araneus diadematus		1f
Larinoides cornutus	2m 2f	1 imm.
Mangora acalypha	4m	
Araneid spp.		13 imm.
LYCOSIDAE		
P*ardosa palustris*	1f	
Pardosa pullata	1m 2f	
Pardosa prativaga	5m 8f	
Pardosa nigriceps	2m 4f	
Pardosa hortensis	1f	
Pirata latitans	2f	
Trochosa ruricola	1m 2f	
Lycosid spp	7 imm.	60 imm.
PISAURIDAE		
Pisaura mirabilis		31 imm.

DICTYNIDAE		
Dictyna arundinacea	1m 1f	
Dictynid spp.		2 imm.
CLUBIONIDAE		
Clubiona reclusa	1f	
Clubionid spp.		12 imm.
CHEIRACANTHIIDAE		
Cheiracanthid spp		10 imm.
MITURGIDAE		
Miturgid spp.	1 imm.	2 imm.
PHILODROMIDAE		
Tibellus oblongus	1m	
Philodromid spp.	7 imm.	2 imm.
THOMISIDAE		
Xysticus cristatus	2f	
Xysticus kochi	1m	
Xysticus ulmi	1m	
Thomisid spp.		8 imm.
NON ARACHNIDS		
COLEOPTERA		
7 Spot Ladybird *Coccinella septempunctata*		1
24 Spot Ladybird *Subcoccinella vigintiquattuorpunctata*		2
14 Spot Ladybird *Propylea quattuordecimpunctata*	3	
Weevil *Apion frumentarium*		1
Pale Tortoise Beetle *Cassida flaveola*		1
HEMIPTERA Heteroptera		
Hairy Shield Bug *Dolycoris baccarum*		1
Dock Bug *Coreus marginatus*		1
Blue Shield Bug *Zicrona caerulea*		1
HEMIPTERA Auchenorrhyncha		
Red-and-black Froghopper *Cercopis vulnerata*	1	0