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Natural Resources Wales

A survey of the arachnids (spiders & harvestmen) of Morfa Dyffryn National Nature Reserve, 2017–2019

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1. Crynodeb gweithredol

Er mwyn gwella ein gwybodaeth am ffawna Gwarchodfa Natur Genedlaethol Morfa Dyffryn sy'n arachnidau, cynhaliwyd pedwar ymweliad arolygu â'r warchodfa: 27 Hydref 2017; 1 Ebrill 2018; 30 Medi 2018; 3 Awst 2019. Arolygwyd arachnidau o 33 o fannau samplu gwahanol ar draws y safle er mwyn cael golwg eang ar y ffawna. Gwnaed y gwaith samplu yn bennaf gan ddefnyddio sugnwyr samplu (*G-vac 2–stroke* a pheiriannau *E-vac* a bwerir gan fatri lithiwm-ïon), er y chwiliwyd â llaw mewn ardaloedd â thywod mwy symudol.

Cofnodwyd cyfanswm o 63 o rywogaethau pryfed cop a phedair rhywogaeth ceirw'r gwellt, gan ychwanegu 17 o bryfed cop ac un carw'r gwellt at restr rhywogaethau'r safle. Mae rhestr y warchodfa bellach yn cynnwys 123 o rywogaethau pryfed cop a saith o rywogaethau ceirw'r gwellt. O'r 123 o rywogaethau pryfed cop a gofnodir ar y safle erbyn hyn, mae tair ohonynt yn brin yn genedlaethol ac mae 18 yn anfynych yn genedlaethol.

Mae'r arolwg hwn yn cadarnhau presenoldeb parhaus y ddau bryf cop sy'n brin yn genedlaethol a gofnodwyd o'r blaen: *Agyneta mollis* (bron dan fygythiad yn ôl yr Undeb Rhyngwladol dros Gadwraeth Natur (IUCN)) a *Styloctetor romanus*; ac mae hefyd yn ychwanegu *Rhysodromus fallax* (bregus yn ôl IUCN) at restr y safle. Mae hefyd yn ailgadarnhau presenoldeb saith pryf cop sy'n anfynych yn genedlaethol (*Cheiracanthium virescens*, *Mecopisthes peusi*, *Parapelecopsis nemoralioides*, *Typhochrestus digitatus*, *Walckenaeria monoceros*, *Scotina gracilipes*, *Xerolycosa miniata*) ac mae'n ychwanegu dau bryf cop newydd sy'n anfynych yn genedlaethol at y rhestr (*Allomengea vidua*, *Styloctetor compar (=stativa)*). Roedd naw pryf cop sy'n anfynych yn genedlaethol na chawsant eu hailddarganfod yn ystod yr arolwg hwn (*Argenna subnigra*, *Zelotes electus*, *Agyneta cauta*, *Araeoncus crassiceps*, *Bathyphantes setiger*, *Walckenaeria incisa*, *Alopecosa cuneata*, *Pardosa tenuipes (=proxima)*, *Xysticus bifasciatus*).

Darperir gwybodaeth gyd-destunol sy'n cwmpasu cofnodion blaenorol o'r safle a hoffterau ecolegol yr holl arachnidau sy'n hysbys o'r safle ac sy'n fregus, bron dan fygythiad, yn brin yn genedlaethol, ac yn anfynych yn genedlaethol.

2. Executive summary

In order to improve our knowledge of the arachnid fauna of Morfa Dyffryn NNR four survey visits were made to the reserve: 27th October 2017; 1st April 2018; 30th September 2018; 3rd August 2019. Arachnids were surveyed from 33 different sample points across the site to gain a broad insight into the fauna. Sampling was largely undertaken using vacuum samplers (G-vac 2-stroke and E-vac Lithium-ion battery powered machines), although hand searching was employed in areas with more mobile sand.

In total 63 spider species and four harvestmen species were recorded, adding 17 spiders and one harvestman to the site's species list. The reserve list now stands at 123 spider species and seven harvestmen species. Of the 123 spider species now recorded from the site, three are Nationally Rare and 18 are Nationally Scarce.

This survey confirms the continued presence of both previously recorded Nationally Rare spiders: *Agyneta mollis* (IUCN Near Threatened) and *Styloctetor romanus*, and also adds *Rhysodromus fallax* (IUCN Vulnerable) to the site's list. It also reconfirms the presence of seven Nationally Scarce spiders (*Cheiracanthium virescens*, *Mecopisthes peusi*, *Parapelecopsis nemoralioides*, *Typhochrestus digitatus*, *Walckenaeria monoceros*, *Scotina gracilipes*, *Xerolycosa miniata*) and adds two new Nationally Scarce spiders to the list (*Allomengea vidua*, *Styloctetor compar (=stativa)*). Nine Nationally Scarce spiders were not rediscovered during this survey (*Argenna subnigra*, *Zelotes electus*, *Agyneta cauta*, *Araeoncus crassiceps*, *Bathyphantes setiger*, *Walckenaeria incisa*, *Alopecosa cuneata*, *Pardosa tenuipes (=proxima)*, *Xysticus bifasciatus*).

Contextual information is provided covering previous site records and the ecological preferences of all the Vulnerable, Near Threatened, Nationally Rare and Nationally Scarce arachnids known from the site.

3. Introduction

Morfa Dyffryn NNR is a large sand dune system on the west coast of North Wales. The earliest arachnid records from the site on the Spider Recording Scheme are from 1969, representing 12 species recorded by John Murphy. On the 15th June 2002 the British Arachnological Society visited Morfa Dyffryn, recording 64 different spiders and one harvestman (Gallon, 2003).

Dick Loxton (2018) undertook a pitfall trap survey at Morfa Dyffryn during two periods: 22nd April to 23rd July 2015 and 1st September to 22nd October 2015. During his survey he recorded 67 spider species and four harvestmen species (Table 1).

Reviewing the available arachnid records (NRW's Welsh Invertebrate Database and the National Spider Recording Scheme) revealed that Morfa Dyffryn supported 106 spider species and six harvestmen species.

Figure 1 *Rhysodromus fallax* immature from Morfa Dyffryn NNR displaying its cryptic colouration on sand. © Richard Gallon

Table 1a and 1b. Arachnids recorded from Morfa Dyffryn. Species highlighted in orange and marked 'N' are newly recorded to the reserve from this survey. * = presence. SRS = Spider Recording Scheme.

Harvestman Family	Scientific Name	Status	Earliest Year	Latest Year	SRS Records	Loxton 2015	Survey 2017–19
Leiobunidae	*Leiobunum blackwalli*	-	2015	2018	-	*	*
Leiobunidae	*Leiobunum rotundum (N)*	-	2018	2019	-	-	*
Phalangiidae	*Lacinius ephippiatus*	-	2015	2015	-	*	-
Phalangiidae	*Mitopus morio*	-	2002	2002	*	-	-
Phalangiidae	*Opilio saxatilis*	-	2015	2019	-	*	*
Phalangiidae	*Phalangium opilio*	-	2015	2019	-	*	*
Phalangiidae	*Platybunus triangularis*	-	2009	2009	*	-	-
-	-	-	-	-	**2**	**4**	**4**

Spider Family	Scientific Name	Status	Earliest Year	Latest Year	SRS Records	Loxton 2015	Survey 2017–19
Agelenidae	*Agelena labyrinthica (N)*	-	2019	2019	-	-	*
Agelenidae	*Eratigena saeva*	-	2002	2002	*	-	-
Araneidae	*Agalenatea redii*	-	2002	2018	*	-	*
Araneidae	*Araneus diadematus*	-	2002	2002	*	-	-
Araneidae	*Zygiella atrica (N)*	-	2018	2018	-	-	*
Araneidae	*Zygiella x-notata (N)*	-	2018	2018	-	-	*
Cheiracanthiidae	*Cheiracanthium virescens*	Nationally Scarce	2015	2018		*	*
Clubionidae	*Clubiona diversa*	-	1969	1969	*	-	-
Clubionidae	*Clubiona neglecta*	-	1969	2017	*	*	*
Clubionidae	*Clubiona reclusa*	-	2002	2002	*	-	-
Clubionidae	*Clubiona subtilis*	-	2002	2002	*	-	-
Dictynidae	*Argenna subnigra*	Nationally Scarce	1969	2002	*	*	-
Dysderidae	*Harpactea hombergi*	-	2002	2002	*	-	-
Gnaphosidae	*Haplodrassus signifer*	-	2015	2015	-	*	-
Gnaphosidae	*Micaria pulicaria*	-	2002	2018	*	*	*
Gnaphosidae	*Zelotes electus*	Nationally Scarce	2002	2002	*	-	-
Gnaphosidae	*Zelotes latreillei*	-	2015	2015	-	*	-
Hahniidae	*Antistea elegans*	-	2015	2015	-	*	-
Hahniidae	*Hahnia nava (N)*	-	2017	2017	-	-	*
Linyphiidae	*Agyneta cauta*	Nationally Scarce	2015	2015	-	*	-
Linyphiidae	*Agyneta conigera*	-	2002	2002	*	-	-
Linyphiidae	*Agyneta mollis*	NT, Nationally Rare	2015	2019	-	*	*
Linyphiidae	*Agyneta rurestris*	-	2015	2015	-	*	-
Linyphiidae	*Allomengea vidua (N)*	Nationally Scarce	2018	2018	-	-	*
Linyphiidae	*Araeoncus crassiceps*	Nationally Scarce	2015	2015	-	*	-
Linyphiidae	*Bathyphantes gracilis*	-	2002	2019	*	*	*
Linyphiidae	*Bathyphantes parvulus*	-	2002	2002	*	*	-
Linyphiidae	*Bathyphantes setiger*	Nationally Scarce	2002	2002	*	-	-
Linyphiidae	*Bolyphantes luteolus (N)*	-	2017	2017	-	-	*
Linyphiidae	*Centromerita concinna*	-	2015	2017	-	*	*
Linyphiidae	*Centromerus prudens*	-	2015	2015	-	*	-
Linyphiidae	*Ceratinella brevipes*	-	2002	2018	*	-	*
Linyphiidae	*Cnephalocotes obscurus*	-	2002	2019	*	*	*
Linyphiidae	*Collinsia inerrans*	-	2002	2019	*	*	*
Linyphiidae	*Dicymbium nigrum*	-	2002	2018	*	*	*
Linyphiidae	*Diplocephalus permixtus (N)*	-	2017	2017	-	-	*
Linyphiidae	*Dismodicus bifrons*	-	2002	2002	*	-	-
Linyphiidae	*Erigone arctica*	-	2015	2015	-	*	-
Linyphiidae	*Erigone atra*	-	2015	2018	-	*	*
Linyphiidae	*Erigone dentipalpis*	-	2002	2019	*	*	*
Linyphiidae	*Gongylidiellum vivum*	-	2015	2017	-	*	*
Linyphiidae	*Linyphia triangularis*	-	2002	2018	*	-	*
Linyphiidae	*Lophomma punctatum*	-	2015	2015	-	*	-
Linyphiidae	*Maso sundevalli*	-	1969	2018	*	*	*
Linyphiidae	*Mecopisthes peusi*	Nationally Scarce	2015	2018	-	*	*
Linyphiidae	*Micrargus herbigradus*	-	2015	2015	-	*	-
Linyphiidae	*Micrargus subaequalis*	-	2002	2019	*	-	*
Linyphiidae	*Microlinyphia pusilla*	-	2002	2002	*	-	-
Linyphiidae	*Microneta viaria (N)*	-	2018	2018	-	-	*

Spider Family	Scientific Name	Status	Earliest Year	Latest Year	SRS Records	Loxton 2015	Survey 2017–19
Linyphiidae	*Monocephalus fuscipes (N)*	-	2018	2018	-	-	*
Linyphiidae	*Neriene clathrata*	-	2002	2018	*	-	*
Linyphiidae	*Neriene peltata*	-	2002	2002	*	-	-
Linyphiidae	*Oedothorax fuscus*	-	2015	2018	-	*	*
Linyphiidae	*Oedothorax retusus*	-	1969	1969	*	*	-
Linyphiidae	*Palliduphantes ericaeus*	-	2002	2017	*	-	*
Linyphiidae	*Parapelecopsis nemoralioides*	Nationally Scarce	1969	2018	*	-	*
Linyphiidae	*Peponocranium ludicrum*	-	2002	2002	*	*	-
Linyphiidae	*Pocadicnemis pumila*	-	1969	2002	*	*	-
Linyphiidae	*Poeciloneta variegata*	-	2002	2002	*	-	-
Linyphiidae	*Porrhomma pygmaeum (N)*	-	2017	2017	-	-	*
Linyphiidae	*Savignia frontata*	-	2015	2018	-	*	*
Linyphiidae	*Silometopus elegans*	-	1969	1969	*	-	-
Linyphiidae	*Stemonyphantes lineatus*	-	2002	2018	*	*	*
Linyphiidae	*Styloctetor compar (=stativa) (N)*	Nationally Scarce	2019	2019	-	-	*
Linyphiidae	*Styloctetor romanus*	Nationally Rare	2002	2019	*	*	*
Linyphiidae	*Tapinocyba praecox*	-	2002	2002	*	-	-
Linyphiidae	*Tenuiphantes mengei*	-	2002	2019	*	-	*
Linyphiidae	*Tenuiphantes tenuis*	-	2002	2019	*	*	*
Linyphiidae	*Tenuiphantes zimmermanni*	-	1969	1969	*	-	-
Linyphiidae	*Tiso vagans*	-	2002	2018	*	*	*
Linyphiidae	*Troxochrus scabriculus*	-	1969	2019	*	*	*
Linyphiidae	*Typhochrestus digitatus*	Nationally Scarce	2002	2018	*	*	*
Linyphiidae	*Walckenaeria acuminata*	-	2015	2015	-	*	-
Linyphiidae	*Walckenaeria antica*	-	2002	2018	*	*	*
Linyphiidae	*Walckenaeria atrotibialis*	-	2002	2002	*	*	-
Linyphiidae	*Walckenaeria incisa*	Nationally Scarce	2015	2015	-	*	-
Linyphiidae	*Walckenaeria monoceros*	Nationally Scarce	2015	2018	-	*	*
Linyphiidae	*Walckenaeria nudipalpis*	-	2015	2015	-	*	-
Linyphiidae	*Walckenaeria unicornis*	-	2002	2002	*	-	-
Linyphiidae	*Walckenaeria vigilax*	-	2015	2017	-	*	*
Liocranidae	*Agroeca proxima*	-	2015	2017	-	*	*
Liocranidae	*Scotina gracilipes*	Nationally Scarce	2015	2019	-	*	*
Lycosidae	*Alopecosa cuneata*	Nationally Scarce	2015	2015	-	*	-
Lycosidae	*Alopecosa pulverulenta*	-	2002	2019	*	*	*
Lycosidae	*Arctosa leopardus*	-	2002	2002	*	*	-
Lycosidae	*Arctosa perita*	-	2001	2018	*	*	*
Lycosidae	*Pardosa agricola*	-	2002	2002	*	-	-
Lycosidae	*Pardosa amentata*	-	1969	1969	*	-	-
Lycosidae	*Pardosa monticola*	-	2002	2019	*	*	*
Lycosidae	*Pardosa nigriceps*	-	2015	2015	-	*	-
Lycosidae	*Pardosa palustris*	-	2002	2019	*	*	*
Lycosidae	*Pardosa pullata*	-	2002	2019	*	*	*
Lycosidae	*Pardosa purbeckensis*	-	2002	2002	*	-	-
Lycosidae	*Pardosa tenuipes (=proxima)*	Nationally Scarce	2015	2015	-	*	-
Lycosidae	*Pirata piraticus*	-	2002	2002	*	-	-
Lycosidae	*Piratula latitans*	-	2015	2015	-	*	-
Lycosidae	*Trochosa ruricola*	-	2015	2015	-	*	-
Lycosidae	*Trochosa terricola*	-	2002	2002	*	*	-
Lycosidae	*Xerolycosa miniata*	Nationally Scarce	1969	2019	*	*	*
Mimetidae	*Ero cambridgei*	-	2002	2002	*	-	-
Mimetidae	*Ero furcata (N)*	-	2018	2018	-	-	*
Philodromidae	*Philodromus cespitum*	-	2002	2002	*	-	-
Philodromidae	*Rhysodromus fallax (N)*	VU, Nationally Rare	2017	2019	-	-	*
Philodromidae	*Tibellus maritimus*	-	1969	2019	*	-	*
Pholcidae	*Pholcus phalangioides*	-	2002	2002	*	-	-
Pisauridae	*Pisaura mirabilis (N)*	-	2018	2019	-	-	*
Salticidae	*Euophrys frontalis*	-	2002	2019	*	*	*
Tetragnathidae	*Metellina mengei*	-	2002	2002	*	-	-
Tetragnathidae	*Metellina merianae*	-	2002	2002	*	-	-
Tetragnathidae	*Pachygnatha clercki*	-	2002	2018	*	-	*
Tetragnathidae	*Pachygnatha degeeri*	-	2002	2019	*	*	*
Tetragnathidae	*Tetragnatha extensa*	-	2002	2002	*	-	-
Theridiidae	*Enoplognatha latimana (N)*	-	2019	2019	-	-	*
Theridiidae	*Enoplognatha ovata (N)*	-	2018	2018	-	-	*

Spider Family	Scientific Name	Status	Earliest Year	Latest Year	SRS Records	Loxton 2015	Survey 2017–19
Theridiidae	*Enoplognatha thoracica*	-	2015	2015	-	*	-
Theridiidae	*Neottiura bimaculata*	-	1969	2019	*	-	*
Theridiidae	*Pholcomma gibbum*	-	2002	2002	*	-	-
Theridiidae	*Phylloneta impressa (N)*	-	2019	2019	-	-	*
Thomisidae	*Ozyptila sanctuaria*	-	2015	2015	-	*	-
Thomisidae	*Xysticus bifasciatus*	Nationally Scarce	2015	2015	-	*	-
Thomisidae	*Xysticus cristatus*	-	2002	2002	*	*	-
Thomisidae	*Xysticus erraticus*	-	2015	2015	-	*	-
Thomisidae	*Xysticus kochi*	-	2015	2015	-	*	-
-	-	-			**71**	**67**	**63**

4. Methods

Morfa Dyffryn NNR was surveyed on four dates: 27th October 2017; 1st April 2018; 30th September 2018; 3rd August 2019. A variety of survey methods were employed across the site, depending on the particular habitat being investigated. In areas of fixed dune grassland and dune slack it was possible to use vacuum samplers (G-vac & E-vac, Figure 2), but where sand was more mobile, hand sampling and grubbing were undertaken. The aim was to explore a representative range of habitats and locations across the NNR, since most previous arachnid records were concentrated in the southern, more accessible part of the site. Although sampling duration was not timed, effort was made to ensure that all the different arachnid species encountered were recorded. Samples were made at 33 different locations (Figure 3).

Figure 2. Battery-powered E-vac sampling at Morfa Dyffryn NNR. © Richard Gallon

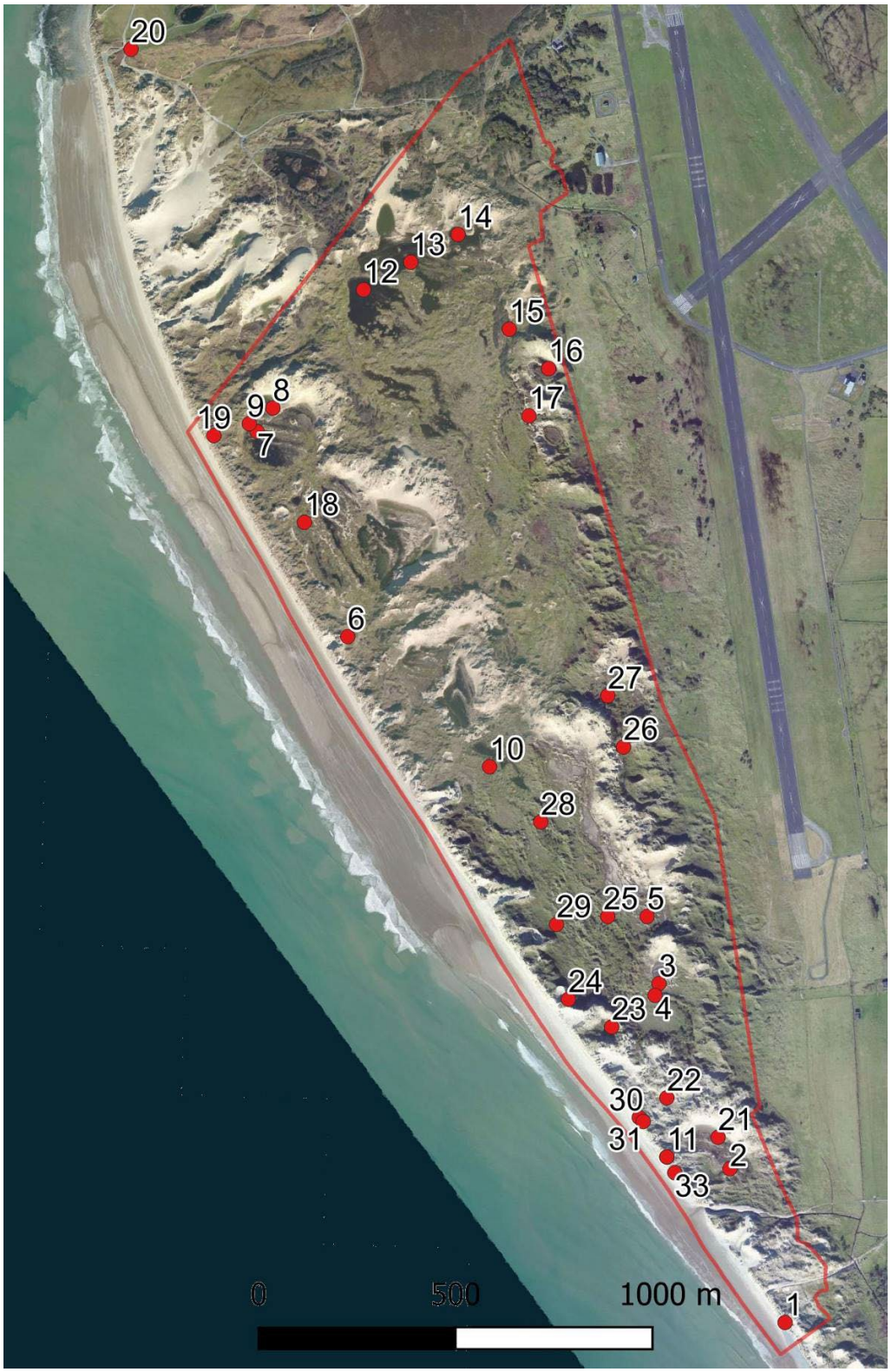

Figure 3 Arachnid survey site locations at Morfa Dyffryn. Note point 32 is also at the point 11 location.

5. Results

5.1 Arachnid survey results

During this survey of Morfa Dyffryn, 63 spider species and four harvestmen species were recorded from 33 different sample site locations (Table 1). This survey adds 17 spiders and one harvestman to the Morfa Dyffryn list. The reserve list now stands at 123 spider species and seven harvestmen species. No pseudoscorpions appear to have been recorded from the NNR. Of the 123 spider species now recorded from the site, three are Nationally Rare and 18 are Nationally Scarce (Table 2) (Harvey *et al*., 2017).

This survey confirms the continued presence of the two Nationally Rare spider species known from Morfa Dyffryn (*Agyneta mollis* and *Styloctetor romanus*) and adds a third - *Rhysodromus fallax*. It also confirms the presence of seven Nationally Scarce spiders known from the site (*Cheiracanthium virescens*, *Mecopisthes peusi*, *Parapelecopsis nemoralioides*, *Typhochrestus digitatus*, *Walckenaeria monoceros*, *Scotina gracilipes*, *Xerolycosa miniata*) and adds two new Nationally Scarce spiders to the list: *Allomengea vidua*, *Styloctetor compar (=stativa)*. Nine Nationally Scarce spiders were not rediscovered during this survey; *Argenna subnigra*, *Zelotes electus*, *Agyneta cauta*, *Araeoncus crassiceps*, *Bathyphantes setiger*, *Walckenaeria incisa*, *Alopecosa cuneata*, *Pardosa tenuipes* (=*proxima*), *Xysticus bifasciatus.*

Table 2. IUCN Threatened, Nationally Rare and Nationally Scarce Arachnids recorded from Morfa Dyffryn NNR. P = presence. VU = Vulnerable, NT = Near Threatened, NR = Nationally Rare, NS = Nationally Scarce. SRS = Spider Recording Scheme.

Species	Family	SRS	Loxton 2015	Survey 2017–19
Agyneta mollis NT/NR	Linyphiidae	-	P	P
Styloctetor romanus NR	Linyphiidae	P	P	P
Rhysodromus fallax VU/NR	Philodromidae	-	-	P
Cheiracanthium virescens NS	Cheiracanthiidae	-	P	P
Argenna subnigra NS	Dictynidae	P	P	-
Zelotes electus NS	Gnaphosidae	P	-	-
Agyneta cauta NS	Linyphiidae	-	P	-
Allomengea vidua NS	Linyphiidae	-	-	P
Araeoncus crassiceps NS	Linyphiidae	-	P	-
Bathyphantes setiger NS	Linyphiidae	P	-	-
Mecopisthes peusi NS	Linyphiidae	-	P	P
Parapelecopsis nemoralioides NS	Linyphiidae	P	-	P
Styloctetor compar (=stativa) NS	Linyphiidae	-	-	P
Typhochrestus digitatus NS	Linyphiidae	P	P	P
Walckenaeria incisa NS	Linyphiidae	-	P	-
Walckenaeria monoceros NS	Linyphiidae	-	P	P
Scotina gracilipes NS	Liocranidae	-	P	P
Alopecosa cuneata NS	Lycosidae	-	P	-
Pardosa tenuipes (=proxima) NS	Lycosidae	-	P	-
Xerolycosa miniata NS	Lycosidae	P	P	P
Xysticus bifasciatus NS	Thomisidae	-	P	-
-	-	**7**	**15**	**12**

5.2 Arachnid sample site results

Sample 1 (Figure 4)
27/10/2017
SH56822290
Frontal dunes. Grubbing marram.

Table 3. Arachnids recorded at Sample Point 1. M = male, F = female, i = immature.

Family	Species	Sex	Notes
Araneidae	*Agalenatea redii*	1iM	-
Clubionidae	*Clubiona neglecta*	1F	-
Linyphiidae	*Bathyphantes gracilis*	1M 3F	-
Linyphiidae	*Centromerita concinna*	1F	-
Linyphiidae	*Erigone atra*	1F	-
Linyphiidae	*Erigone dentipalpis*	1M 3F	-
Linyphiidae	*Palliduphantes ericaeus*	1F	-
Linyphiidae	*Parapelecopsis nemoralioides*	1F	Nationally Scarce
Linyphiidae	*Tenuiphantes tenuis*	2M 2F	-
Linyphiidae	*Typhochrestus digitatus*	1M 1F	Nationally Scarce
Lycosidae	*Arctosa perita*	1F	-
Philodromidae	*Rhysodromus fallax*	8i	Nationally Rare Recorded by Richard Gallon, Mike Howe & Rhodri Dafydd
Phalangiidae	*Phalangium opilio*	1F	-

Figure 4 Sample Point 1, Morfa Dyffryn, SH56822290. © Richard Gallon

Sample 2 (Figure 5)
27/10/2017
SH56682329
Dune slack. G-vac.

Table 4. Arachnids recorded at Sample Point 2. M = male, F = female, i = immature.

Family	Species	Sex	Notes
Linyphiidae	*Bathyphantes gracilis*	2F	-
Linyphiidae	*Centromerita concinna*	3M 6F	-
Linyphiidae	*Diplocephalus permixtus*	1M 1F	-
Linyphiidae	*Erigone dentipalpis*	1F	-
Linyphiidae	*Porrhomma pygmaeum*	1M 1F	-
Linyphiidae	*Stemonyphantes lineatus*	1F	-
Linyphiidae	*Tenuiphantes tenuis*	1M	-
Linyphiidae	*Walckenaeria vigilax*	1F	-
Tetragnathidae	*Pachygnatha degeeri*	1M 1F	-

Figure 5. Sample Point 2, Morfa Dyffryn, SH56682329. © Richard Gallon

Sample 3 (Figure 6)
27/10/2017
SH56502376
Dune slack. G-Vac.

Table 5. Arachnids recorded at Sample Point 3. M = male, F = female, i = immature.

Family	Species	Sex	Notes
Araneidae	*Agalenatea redii*	1iF	-
Hahniidae	*Hahnia nava*	1M	-
Linyphiidae	*Agyneta mollis*	1M 1F	Near Threatened, Nationally Rare
Linyphiidae	*Bathyphantes gracilis*	3M	-
Linyphiidae	*Bolyphantes luteolus*	1F	-
Linyphiidae	*Centromerita concinna*	3M 2F	-
Linyphiidae	*Erigone atra*	4F	-
Linyphiidae	*Gongylidiellum vivum*	1F	-
Linyphiidae	*Mecopisthes peusi*	1M 1F	Nationally Scarce
Linyphiidae	*Tenuiphantes tenuis*	1M 2F	-
Linyphiidae	*Troxochrus scabriculus*	1F	-
Liocranidae	*Agroeca proxima*	1M	-
Tetragnathidae	*Pachygnatha degeeri*	1M 1F	-

Figure 6. Sample Point 3, Morfa Dyffryn, SH56502376. © Richard Gallon

Sample 4 (Figure 7)
27/10/2017
SH56492373
Short dune grassland. G-vac.

Table 6. Arachnids recorded at Sample Point 4. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Mecopisthes peusi*	2M 1F	Nationally Scarce
Linyphiidae	*Typhochrestus digitatus*	3M 7F	Nationally Scarce

Figure 7. Sample Point 4, Morfa Dyffryn, SH56492373. © Richard Gallon

Sample 5 (Figure 8)
27/10/2017
SH56472393
Dune slack. G-vac.

Table 7. Arachnids recorded at Sample Point 5. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Centromerita concinna*	2M 1F	-
Linyphiidae	*Cnephalocotes obscurus*	1M	-
Linyphiidae	*Mecopisthes peusi*	1F	Nationally Scarce
Linyphiidae	*Palliduphantes ericaeus*	1M	-
Linyphiidae	*Styloctetor romanus*	1F	Nationally Rare
Linyphiidae	*Tenuiphantes tenuis*	1F	-
Liocranidae	*Scotina gracilipes*	1F	Nationally Scarce
Lycosidae	*Arctosa perita*	1M	-

Figure 8. Sample Point 5, Morfa Dyffryn, SH56472393. © Richard Gallon

Sample 6 (Figure 9)
01/04/2018
SH55712464
Yellow dunes. Grubbing marram.

Table 8. Arachnids recorded at Sample Point 6. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Agyneta mollis*	1F	Near Threatened, Nationally Rare
Linyphiidae	*Bathyphantes gracilis*	1F	-
Linyphiidae	*Troxochrus scabriculus*	1M	-

Figure 9. Sample Point 6, Morfa Dyffryn, SH55712464. © Richard Gallon

Sample 7 (Figure 10)
01/04/2018
SH55482516
Creeping willow in dune slack. G-vac.

Table 9. Arachnids recorded at Sample Point 7. M = male, F = female.

Family	Species	Sex	Notes
Araneidae	*Agalenatea redii*	1iM	-
Gnaphosidae	*Micaria pulicaria*	1M	-
Linyphiidae	*Mecopisthes peusi*	1M	Nationally Scarce
Linyphiidae	*Savignia frontata*	1F	-
Linyphiidae	*Troxochrus scabriculus*	1M	-
Tetragnathidae	*Pachygnatha degeeri*	1M	-

Figure 10. Sample Point 7, Morfa Dyffryn, SH55482516. © Richard Gallon

Sample 8 (Figure 11)
01/04/2018
SH55522522
Wet dune slack. G-vac.

Table 10. Arachnids recorded at Sample Point 8. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Bathyphantes gracilis*	3F	-
Linyphiidae	*Oedothorax fuscus*	1F	-

Figure 11. Sample Point 8, Morfa Dyffryn, SH55522522. © Richard Gallon

Sample 9 (Figure 12)
01/04/2018
SH55462518
Fixed dune grassland. G-vac.

Table 11. Arachnids recorded at Sample Point 9. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Mecopisthes peusi*	1M 4F	Nationally Scarce
Linyphiidae	*Styloctetor romanus*	1F	Nationally Rare
Linyphiidae	*Tenuiphantes mengei*	1F	-
Linyphiidae	*Tenuiphantes tenuis*	2F	-
Linyphiidae	*Troxochrus scabriculus*	1M 3F	-

Figure 12. Sample Point 9, Morfa Dyffryn, SH55462518. © Richard Gallon

Sample 10 (Figure 13)
01/04/2018
SH56072431
Fixed dune grassland. G-vac.

Table 12. Arachnids recorded at Sample Point 10. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Agyneta mollis*	2M	Near Threatened, Nationally Rare
Linyphiidae	*Tenuiphantes tenuis*	2F	-
Linyphiidae	*Troxochrus scabriculus*	1F	-

Figure 13. Sample Point 10, Morfa Dyffryn, SH56072431. © Richard Gallon

Sample 11 (Figure 14)
01/04/2018
SH56522332
Frontal dunes. Grubbing marram.

Table 13. Arachnids recorded at Sample Point 11. F = female.

Family	Species	Sex	Notes
Linyphiidae	*Dicymbium nigrum*	1F	-
Linyphiidae	*Tenuiphantes mengei*	1F	-

Figure 14. Sample Point 11, Morfa Dyffryn, SH56522332. © Richard Gallon

Sample 12 (Figure 15)
30/09/2018
SH55752552
Dry dune slack with thick creeping willow and moss. G-vac.

Table 14. Arachnids recorded at Sample Point 12. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Agyneta mollis*	1M	Near Threatened, Nationally Rare
Linyphiidae	*Allomengea vidua*	1F	Nationally Scarce
Linyphiidae	*Bathyphantes gracilis*	2M	-
Linyphiidae	*Ceratinella brevipes*	1F	-
Tetragnathidae	*Pachygnatha clercki*	1F	-

Figure 15. Sample Point 12, Morfa Dyffryn, SH55752552. © Richard Gallon

Sample 13 (Figure 16)
30/09/2018
SH55872559
Dune slack with short turf. G-vac.

Table 15. Arachnids recorded at Sample Point 13. F = female.

Family	Species	Sex	Notes
Tetragnathidae	*Pachygnatha degeeri*	2F	-

Figure 16. Sample Point 13, Morfa Dyffryn, SH55872559. © Richard Gallon

Sample 14 (Figure 17)
30/09/2018
SH55992566
Dune slack with Sharp Rush. G-vac.

Table 16. Arachnids recorded at Sample Point 14. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Agyneta mollis*	2M 1F	Near Threatened, Nationally Rare
Linyphiidae	*Bathyphantes gracilis*	1M 1F	-
Linyphiidae	*Erigone atra*	1M	-
Linyphiidae	*Tenuiphantes tenuis*	2F	-
Tetragnathidae	*Pachygnatha degeeri*	1M	-

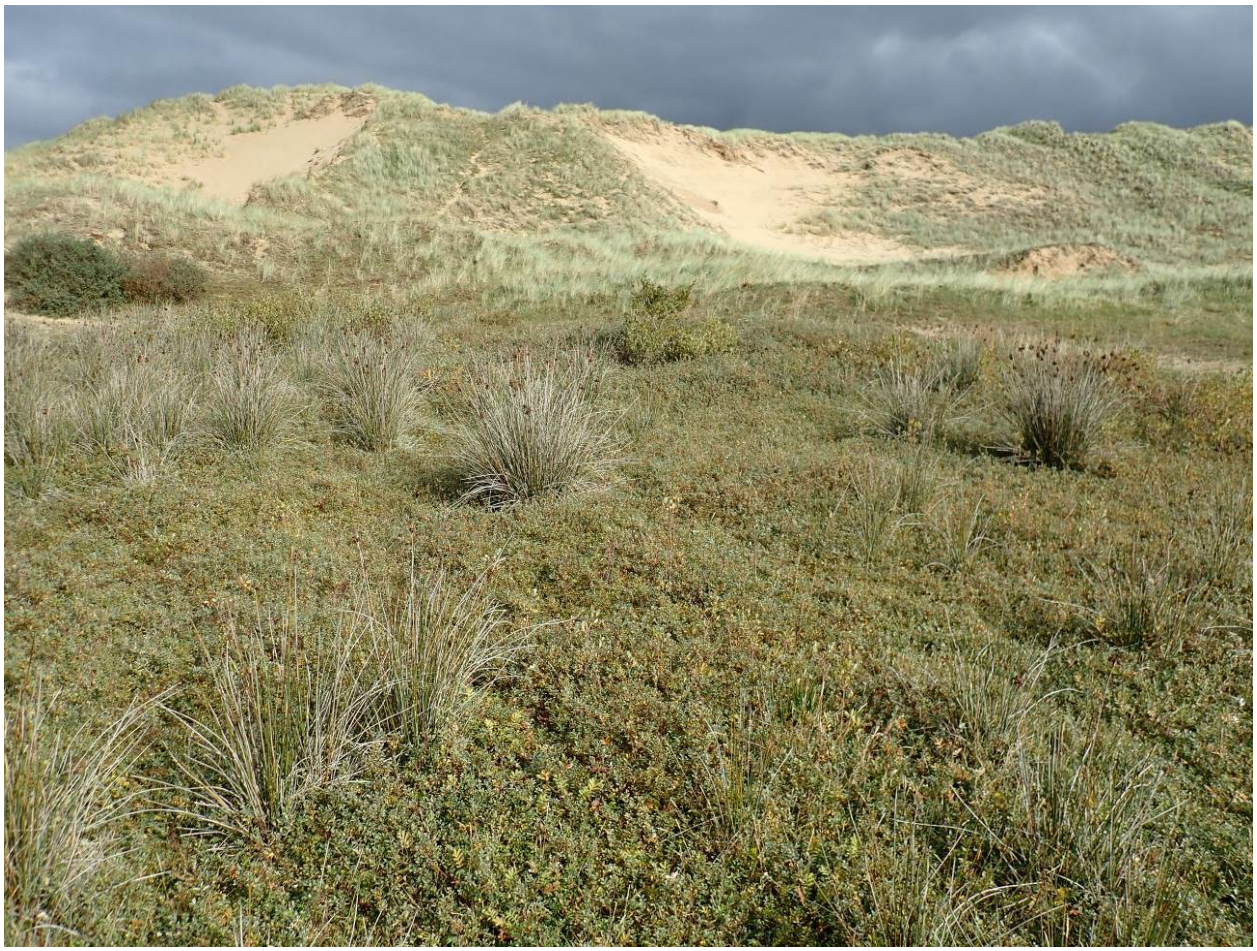

Figure 17. Sample Point 14, Morfa Dyffryn, SH55992566. © Richard Gallon

Sample 15 (Figure 18)
30/09/2018
SH56122542
Grey willow carr. G-vac.

Table 17. Arachnids recorded at Sample Point 15. M = male, F = female, i = immature.

Family	Species	Sex	Notes
Linyphiidae	*Ceratinella brevipes*	1M 1F	-
Linyphiidae	*Cnephalocotes obscurus*	1M 2F	-
Linyphiidae	*Linyphia triangularis*	1F	-
Linyphiidae	*Maso sundevalli*	1F	-
Linyphiidae	*Microneta viaria*	4M 5F	-
Linyphiidae	*Monocephalus fuscipes*	5M 5F	-
Linyphiidae	*Neriene clathrata*	1M 1F	-
Linyphiidae	*Stemonyphantes lineatus*	1M	-
Linyphiidae	*Tiso vagans*	1M	-
Linyphiidae	*Walckenaeria antica*	1M 4F	-
Mimetidae	*Ero furcata*	1F	-
Pisauridae	*Pisaura mirabilis*	1i	-
Tetragnathidae	*Pachygnatha degeeri*	4F	-
Leiobunidae	*Leiobunum blackwalli*	1F	-

Figure 18. Sample Point 15, Morfa Dyffryn, SH56122542. © Richard Gallon

Sample 16 (Figure 19)
30/09/2018
SH56222532
Dune slack with *Typha* dry. G-vac.

Table 18. Arachnids recorded at Sample Point 16. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Bathyphantes gracilis*	2M 4F	-
Linyphiidae	*Erigone atra*	1M 3F	-

Figure 19. Sample Point 16, Morfa Dyffryn, SH56222532. © Richard Gallon

Sample 17 (Figure 20)
30/09/2018
SH56172520
Fixed dunes. G-vac.

Table 19. Arachnids recorded at Sample Point 17. M = male, F = female, i = immature.

Family	Species	Sex	Notes
Cheiracanthiidae	*Cheiracanthium virescens*	1iM	Nationally Scarce
Linyphiidae	*Stemonyphantes lineatus*	1F	-
Linyphiidae	*Styloctetor romanus*	1F	Nationally Rare
Linyphiidae	*Tenuiphantes tenuis*	1F	-
Linyphiidae	*Typhochrestus digitatus*	1M	Nationally Scarce
Linyphiidae	*Walckenaeria antica*	1F	-
Linyphiidae	*Walckenaeria monoceros*	1F	Nationally Scarce
Liocranidae	*Scotina gracilipes*	2F	Nationally Scarce
Lycosidae	*Arctosa perita*	1i	-
Theridiidae	*Enoplognatha ovata*	1F	With egg-sac
Phalangiidae	*Phalangium opilio*	1M	-

Figure 20. Sample Point 17, Morfa Dyffryn, SH56172520. © Richard Gallon

Sample 18 (not photographed)
30/09/2018
SH55602493
Gorse. Beating.

Table 20. Arachnids recorded at Sample Point 18. M = male.

Family	Species	Sex	Notes
Araneidae	*Zygiella atrica*	4M	-

Sample 19 (Figure 21)
30/09/2018
SH55372515
Frontal dunes. Marram grubbing.

Table 21. Arachnids recorded at Sample Point 19. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Parapelecopsis nemoralioides*	2M 4F	Nationally Scarce
Linyphiidae	*Tenuiphantes tenuis*	1F	-
Linyphiidae	*Troxochrus scabriculus*	2F	-
Lycosidae	*Arctosa perita*	1i	-
Leiobunidae	*Leiobunum rotundum*	1M	-
Phalangiidae	*Opilio saxatilis*	1M	-

Figure 21. Sample Point 19, Morfa Dyffryn, SH55372515. © Richard Gallon

Sample 20 (not photographed)
30/09/2018
SH55162613
Campsite toilet block.

Table 22. Arachnids recorded at Sample Point 20. F = female.

Family	Species	Sex	Notes
Araneidae	*Zygiella x-notata*	1F	-

Sample 21 (Figure 22)
03/08/2019
SH56652337
Dune slack with creeping willow. E-vac.

Table 23. Arachnids recorded at Sample Point 21. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Bathyphantes gracilis*	1M 2F	-
Linyphiidae	*Erigone dentipalpis*	3F	-
Linyphiidae	*Tenuiphantes tenuis*	1F	-
Linyphiidae	*Troxochrus scabriculus*	1F	-
Theridiidae	*Neottiura bimaculata*	2F	-

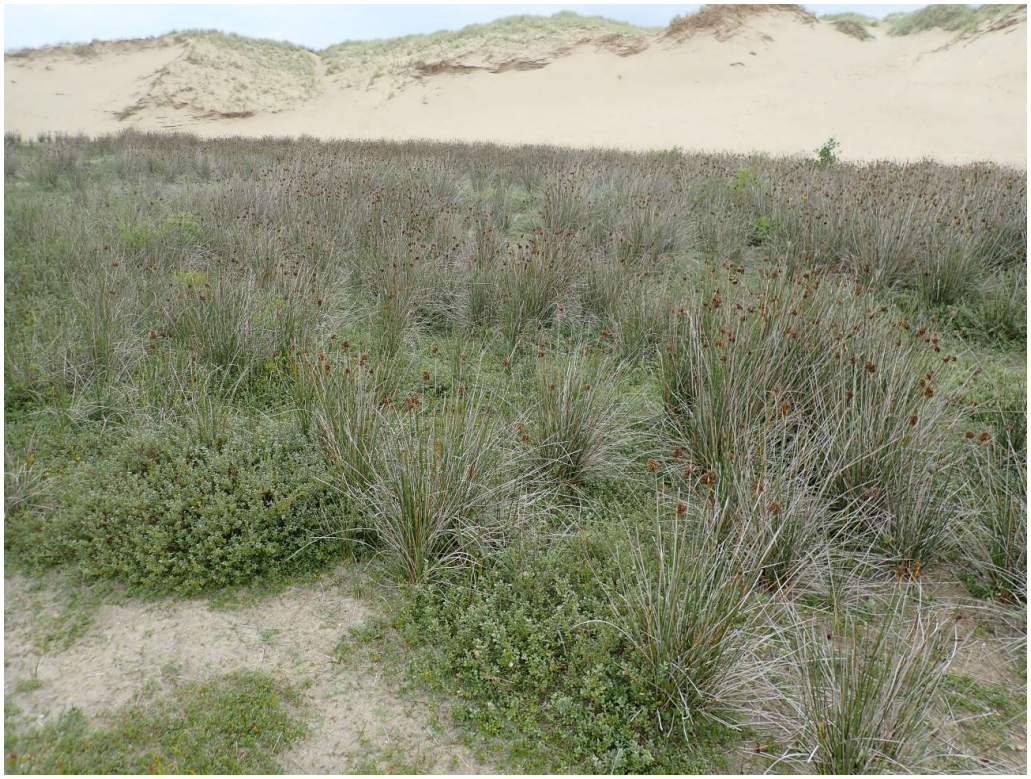

Figure 22. Sample Point 21, Morfa Dyffryn, SH56652337. © Richard Gallon

Sample 22 (Figure 23)
03/08/2019
SH56522347
Dense marram. E-vac.

Table 24. Arachnids recorded at Sample Point 22. F = female.

Family	Species	Sex	Notes
Linyphiidae	*Collinsia inerrans*	1F	-

Figure 23. Sample Point 22, Morfa Dyffryn, SH56522347. © Richard Gallon

Sample 23 (Figure 24)
03/08/2019
SH56382365
Fixed dune grassland. E-vac.

Table 25. Arachnids recorded at Sample Point 23. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Erigone dentipalpis*	1F	-
Linyphiidae	*Styloctetor romanus*	3F	Nationally Rare
Linyphiidae	*Tenuiphantes tenuis*	1M 1F	-
Lycosidae	*Pardosa palustris*	1F	-
Theridiidae	*Neottiura bimaculata*	1F	-
Phalangiidae	*Phalangium opilio*	1M	-

Figure 24. Sample Point 23, Morfa Dyffryn, SH56382365. © Richard Gallon

Sample 24 (Figure 25)
03/08/2019
SH56272372
Yellow dunes. Marram grubbing.

Table 26. Arachnids recorded at Sample Point 24. M = male, F = female.

Family	Species	Sex	Notes
Linyphiidae	*Tenuiphantes tenuis*	1F	-
Linyphiidae	*Troxochrus scabriculus*	1F	-
Philodromidae	*Tibellus maritimus*	1F	-
Theridiidae	*Neottiura bimaculata*	1F	-
Leiobunidae	*Leiobunum rotundum*	2F	-
Phalangiidae	*Opilio saxatilis*	1M 2F	-
Phalangiidae	*Phalangium opilio*	2M 1F	-

Figure 25. Sample Point 24, Morfa Dyffryn, SH56272372. © Richard Gallon

Sample 25 (Figure 26)
03/08/2019
SH56372393
Fixed dune grassland. E-vac.

Table 27. Arachnids recorded at Sample Point 25. M = male, F = female, i = immature.

Family	Species	Sex	Notes
Linyphiidae	*Cnephalocotes obscurus*	3M 5F	-
Linyphiidae	*Micrargus subaequalis*	2F	-
Linyphiidae	*Styloctetor compar* (=*stativa*)	2F	Nationally Scarce
Linyphiidae	*Tenuiphantes tenuis*	1M	-
Lycosidae	*Pardosa monticola*	4F	-
Lycosidae	*Pardosa pullata*	1F	-
Pisauridae	*Pisaura mirabilis*	1i	-
Salticidae	*Euophrys frontalis*	1M 2iM 1iF	-

Figure 26. Sample Point 25, Morfa Dyffryn, SH56372393. © Richard Gallon

Sample 26 (Figure 27)
03/08/2019
SH56412436
Dense dune grassland.

Table 28. Arachnids recorded at Sample Point 26. F = female.

Family	Species	Sex	Notes
Agelenidae	*Agelena labyrinthica*	1F	-

Figure 27. Sample Point 26, Morfa Dyffryn, SH56412436. © Richard Gallon

Sample 27 (Figure 28)
03/08/2019
SH56372449
Dune slack with creeping willow. E-vac.

Table 29. Arachnids recorded at Sample Point 27. M = male, F = female, i = immature.

Family	Species	Sex	Notes
Linyphiidae	*Agyneta mollis*	2F	Near Threatened, Nationally Rare
Linyphiidae	*Bathyphantes gracilis*	2F	-
Linyphiidae	*Collinsia inerrans*	2F	-
Linyphiidae	*Tenuiphantes tenuis*	1F	-
Linyphiidae	*Tenuiphantes mengei*	1M	-
Lycosidae	*Pardosa monticola*	1F	-
Lycosidae	*Pardosa pullata*	1M 2F	-
Lycosidae	*Xerolycosa miniata*	1iM	-
Tetragnathidae	*Pachygnatha degeeri*	3F	-
Theridiidae	*Enoplognatha latimana*	1M 2F	-
Theridiidae	*Neottiura bimaculata*	1F	-

Figure 28. Sample Point 27, Morfa Dyffryn, SH56372449. © Richard Gallon

Sample 28 (Figure 29)
03/08/2019
SH56202417
Short grass.

Table 30. Arachnids recorded at Sample Point 28. F = female.

Family	Species	Sex	Notes
Lycosidae	*Pardosa monticola*	1F	-
Lycosidae	*Pardosa pullata*	1F	-
Theridiidae	*Phylloneta impressa*	1F	On Carline thistle with egg-sac

Figure 29. Sample Point 28, Morfa Dyffryn, SH56202417. © Richard Gallon

Sample 29 (Figure 30)
03/08/2019
SH56242391
Short rabbit-grazed dune grassland. E-vac.

Table 31. Arachnids recorded at Sample Point 29. M = male, F = female.

Family	Species	Sex	Notes
Liocranidae	*Scotina gracilipes*	1M	Nationally Scarce
Lycosidae	*Alopecosa pulverulenta*	1F	-
Lycosidae	*Pardosa monticola*	3F	With egg-sac

Figure 30. Sample Point 29, Morfa Dyffryn, SH56242391. © Richard Gallon

Sample 30 (Figure 31)
03/08/2019
SH56452342
Frontal dunes. Bare sand.

Table 32. Arachnids recorded at Sample Point 30. F = female, i = immature.

Family	Species	Sex	Notes
Philodromidae	*Rhysodromus fallax*	1iF 1i	Vulnerable, Nationally Rare

Figure 31. Sample Point 30, Morfa Dyffryn, SH56452342. © Richard Gallon

Sample 31
03/08/2019
SH56462341
Frontal dunes. Bare sand.

Table 33. Arachnids recorded at Sample Point 31. i = immature.

Family	Species	Sex	Notes
Philodromidae	*Rhysodromus fallax*	1i	Vulnerable, Nationally Rare

Sample 32
03/08/2019
SH56522332
Frontal dunes. Bare sand.

Table 34. Arachnids recorded at Sample Point 32. i = immature.

Family	Species	Sex	Notes
Philodromidae	*Rhysodromus fallax*	1i	Vulnerable, Nationally Rare

Sample 33
03/08/2019
SH56542328
Frontal dunes. Bare sand.

Table 35. Arachnids recorded at Sample Point 33. i = immature.

Family	Species	Sex	Notes
Philodromidae	*Rhysodromus fallax*	1i	Vulnerable, Nationally Rare

6. Discussion

Morfa Dyffryn NNR supports a rich arachnid fauna with 123 spiders and seven harvestmen now known from the site, the current survey adding 17 spiders and one harvestman. Of the 123 spiders, twelve are considered by NRW to be dune associates (Table 36), with this survey adding the Vulnerable/Nationally Rare *Rhysodromus fallax* which has been defined as a SSSI Qualifying feature of Morfa Dyffryn SSSI in its own right (Mike Howe, pers. comm.). The current survey also found the Near Threatened/Nationally Rare *Agyneta mollis* which, although not a strong dune associate in the UK, is a feature of Morfa Dyffryn SSSI as recent Welsh records are restricted to here and the neighbouring Morfa Harlech (Gallon, 2019).

The fauna also includes 18 Nationally Scarce species, nine of which were recorded during the current survey including two new to Morfa Dyffryn (*Allomengea vidua, Styloctetor compar (=stativa)*). A fuller account of these species is provided below.

Table 36. Dune-associated spider species considered to be part of Welsh SSSI dune invertebrate assemblages found on Morfa Dyffryn (P). Species in red marked (N) do not occur in Wales.

Species	Family	NRW assemblage	Loxton, 2015	Gallon, 2019	2019 assemblage
Mangora acalypha	Araneidae	-	-	-	-
Cheiracanthium virescens	Cheiracanthiidae	-	P	P	P
Clubiona frisia (N)	Clubionidae	-	-	-	-
Clubiona pseudoneglecta (N)	Clubionidae	-	-	-	-
Argenna patula	Dictynidae	-	-	-	-
Argenna subnigra	Dictynidae	-	P	-	P
Haplodrassus dalmatensis	Gnaphosidae	-	-	-	-
Haplodrassus minor	Gnaphosidae	-	-	-	-
Zelotes electus	Gnaphosidae	P	-	-	P
Baryphyma maritimum (N)	Linyphiidae	-	-	-	-
Styloctetor romanus	Linyphiidae	-	P	P	P
Mecopisthes peusi	Linyphiidae	-	P	P	P
Parapelecopsis nemoralioides	Linyphiidae	-	-	P	P
Silometopus incurvatus (N)	Linyphiidae	-	-	-	-
Troxochrus scabriculus	Linyphiidae	P	P	P	P
Agroeca dentigera	Liocranidae	-	-	-	-
Agroeca lusatica (N)	Liocranidae	-	-	-	-
Alopecosa cuneata	Lycosidae	P	P	-	P
Arctosa perita	Lycosidae	P	P	P	P
Xerolycosa miniata	Lycosidae	P	P	P	P
Rhysodromus fallax	Philodromidae	P	-	P	P
Thanatus striatus	Philodromidae	-	-	-	-
Marpissa nivoyi	Salticidae	-	-	-	-
Phlegra fasciata	Salticidae	-	-	-	-
Attulus saltator	Salticidae	-	-	-	-
Synageles venator	Salticidae	-	-	-	-

Species	Family	NRW assemblage	Loxton, 2015	Gallon, 2019	2019 assemblage
Cryptachaea riparia	Theridiidae	-	-	-	-
Steatoda albomaculata	Theridiidae	-	-	-	-
Xysticus acerbus	Thomisidae	-	-	-	-
Xysticus kochi	Thomisidae	-	P	-	P
-	-	**6**	**9**	**8**	**12**

6.1 Nationally Rare spiders recorded during current survey

Agyneta mollis (O. P. -Cambridge, 1871) – IUCN status Near Threatened.

Agyneta mollis was found at six sample locations across the NNR during this survey: 1 male and 1 female (sample location #3, SH56502376, 27th October 2017); 1 female (SL #6, SH55712464, 1st April 2018); 2 males (SL #10, SH56072431, 1st April 2018); 1 male (SL #12, SH55752552, 30th September 2018); 2 males and 1 female (SL #14, SH55992566, 30th September 2018); 2 females (SL #27, SH56372449, 3rd August 2019).

The only previous site record was made by Loxton (2018) who recorded 11 adults in 2015 (SH560255) at the northern end of the NNR from pitfall material.

Four of the Morfa Dyffryn sites were from dune slacks, one from fixed dune grassland and another from yellow dunes. This species appears to have declined in the UK, and in the recent Status Review was listed as Near Threatened.

The Morfa Harlech and Morfa Dyffryn populations are the only recent Welsh records (previous Welsh records are all pre-1987 from other sites).

Figure 32. *Agyneta mollis* record locations at Morfa Dyffryn.

Styloctetor romanus (O. P. -Cambridge, 1873)

Styloctetor romanus was found at four sample locations during this survey: 1 female (SL #5, SH56472393, 27th October 2017); 1 female (SL #9, SH55462518, 1st April 2018); 1 female (SL #17, SH56172520, 30th September 2018); 3 females (SL #23, SH56382365, 3rd August 2019).

This species was first recorded from Morfa Dyffryn on the 15 June 2002 by Ian Dawson who found a female at SH569227 during a British Arachnological Society survey. Dick Loxton pitfalled a single adult at SH555252 in 2015 (Loxton, 2018).

The SL #5 site was a dune slack, but the others were from fixed dunes.

Figure 33. *Styloctetor romanus* record locations at Morfa Dyffryn.

Rhysodromus fallax (Sundevall, 1833) – IUCN status Vulnerable.

Rhysodromus fallax was found at five sample locations on the frontal dunes in the south of the NNR: 8 immatures (SL #1, SH56822290, 27th October 2017); 2 immatures (SL #30, SH56452342, 3rd October 2019); 1 immature (SL #31, SH56462341, 3rd October 2019); 1 immature (SL #32, SH56522332, 3rd October 2019); 1 immature (SL #33, SH56542328, 3rd October 2019).

This species has not been recorded from Morfa Dyffryn previously.

In the recent spider Status Review (Harvey *et al*., 2017) it was listed as Vulnerable.

Figure 34. *Rhysodromus fallax* record locations at Morfa Dyffryn.

6.2 Nationally Scarce spiders recorded during current survey

Cheiracanthium virescens (Sundevall, 1833)

A single immature male *Cheiracanthium virescens* was vacuumed from fixed dunes at SH56172520 on the 30th September 2018.

The only other site record was made by Loxton (2018) who pitfalled 12 adults at SH558250 in 2015.

In Wales this species is almost exclusively coastal, inhabiting sand dune systems and coastal heath, where it favours drier areas.

Figure 35. *Cheiracanthium virescens* record locations at Morfa Dyffryn.

Allomengea vidua (L. Koch, 1879)

During this survey a female *Allomengea vidua* was recorded from a single location at SH55752552 (30th September 2018). It was vacuumed from a dry dune slack with thick creeping willow and moss.

This species has not been recorded from Morfa Dyffryn previously.

This wetland spider has a narrow maturity season, peaking during August and September.

Figure 36. *Allomengea vidua* record locations at Morfa Dyffryn.

Mecopisthes peusi Wunderlich, 1972

This small money spider was vacuumed from five locations on the NNR: 1 male and 1 female (SL #3, SH56502376, 27th October 2017); 2 males and 1 female (SL #4, SH56492373, 27th October 2017); 1 female (SL #5, SH56472393, 27th October 2017); 1 male (SL #7, SH55482516, 1st April 2018); 1 male and 4 females (SL #9, SH55462518, 1st April 2018);

The only other site record was made by Loxton (2018) who pitfalled two adults at SH555252 in 2015.

It is a species strongly associated with larger sand dunes in North Wales and Northwest England but occupies heathland in the south of England.

Figure 37. *Mecopisthes peusi* record locations at Morfa Dyffryn.

Parapelecopsis nemoralioides (O. P. -Cambridge, 1884)

This species was found on frontal dunes at two sample locations during the survey: 1 female (SL #1, SH56822290, 27th October 2017); 2 males and 4 females (SL #19, SH55372515, 30th September 2018).

Parapelecopsis nemoralioides was first recorded from Morfa Dyffryn by John Murphy on the 21st September 1969. It was not recorded during Loxton's 2005 survey.

It is a species strongly associated with sand dunes.

Figure 38. *Parapelecopsis nemoralioides* record locations at Morfa Dyffryn.

Styloctetor compar (=stativa) (Westring, 1861)

Two female *Styloctetor compar* were vacuumed from fixed dune grassland at SH56372393 on the 3rd August 2019.

This species has not been recorded from Morfa Dyffryn previously.

It is largely a species associated with old unimproved grassland and in Wales is mainly found in coastal situations.

Figure 39. *Styloctetor compar (=stativa)* record locations at Morfa Dyffryn.

Typhochrestus digitatus (O.P.-Cambridge, 1872)

Typhochrestus digitatus was recorded from three sample locations: 1 male and 1 female (SL #1, SH56822290, 27th October 2017); 3 males and 7 females (SL #4, SH56492373, 27th October 2017); 1 male (SL #17, SH56172520, 30th September 2018).

The only previous record of this species from Morfa Dyffryn was by Loxton in 2005 when a single adult was found at SH560244.

This species is associated with sparsely vegetated dry habitats and is more frequently found in autumn, winter and early spring.

Figure 40. *Typhochrestus digitatus* record locations at Morfa Dyffryn.

Walckenaeria monoceros (Wider, 1834)

One female *Walckenaeria monoceros* was discovered during this survey at SH56172520 (30th September 2018).

The only other site record was made by Loxton (2018) where he pitfalled 3 adults from SH555252 in 2015.

The species is characteristic of dry open habitats including short calcareous grassland, heathland and sand dunes.

Figure 41. *Walckenaeria monoceros* record locations at Morfa Dyffryn.

Scotina gracilipes (Blackwall, 1859)

Scotina gracilipes was located at three sample locations during the survey: 1 female at SH56472393 (27/10/2017); 2 females at SH56172520 (30th September 2018); 1 male at SH56242391 (3rd August 2019).

The only other site record was made by Loxton (2018) where he pitfalled 6 adults from SH555252 in 2015.

The species is more typically associated with heathery sites, although it is known from other large dune systems in North Wales.

Figure 42. *Scotina gracilipes* record locations at Morfa Dyffryn.

Xerolycosa miniata (C. L. Koch, 1834)

Xerolycosa miniata was found at one sample point during the survey: SH56372449 (3rd August 2019) in a dune slack with creeping willow.

Loxton (2018) collected numerous specimens at SH555252 in 2015 using pitfall traps.

The species has been recorded several times since its first site record in 1969. It is almost exclusively a sand dune specialist in Britain.

Figure 43. *Xerolycosa miniata* record locations at Morfa Dyffryn.

6.3 Nationally Scarce spiders not recorded during current survey

Argenna subnigra (O.P.-Cambridge, 1861)
This species has been recorded at Morfa Dyffryn on three occasions. Single females were found by John Murphy in 1969 and Richard Gallon on the 15th June 2002. Loxton (2018) recorded 76 adults in pitfall traps at SH560256 in 2015. In Wales, this species is essentially restricted to sand dune systems where it favours drier habitats.

Zelotes electus (C. L. Koch, 1839)
The only record for this species from Morfa Dyffryn was made by Peter Harvey on the 15th June 2002 during a British Arachnological Society survey. *Zelotes* spp. are more easily found using pitfall traps, which were not deployed during the current survey. It is a species which is essentially restricted to sand dunes, although it is also known from the Brecklands.

Agyneta cauta (O. P. -Cambridge, 1903)
The only site record for this species was made by Loxton (2018) in 2015 at SH558250 when a single adult was pitfalled.

Araeoncus crassiceps (Westring, 1861)
The only site record for this species was made by Loxton (2018) in 2015 at SH558250 when a single adult was pitfalled. It tends to favour wetland habitats.

Bathyphantes setiger F.O.P.-Cambridge, 1894
This species has only been recorded once at Morfa Dyffryn by Stan Dobson during the British Arachnological Society 2002 survey (1 female, 15 June 2002). It is a wetland species but has been found in wet dune slacks at other sites.

Walckenaeria incisa (O. P. -Cambridge, 1871)
This species is rarely recorded and the only Morfa Dyffryn record was made by Loxton (2018) in 2015 when a single adult was pitfalled at SH555252. It has been recorded from a variety of habitats, but its microhabitat is unknown.

Alopecosa cuneata (Clerck, 1757)
The only site record for this species was made by Loxton (2018) in 2015 at SH560256 when 44 adults were pitfalled.

Pardosa tenuipes (=*proxima*) C. L. Koch, 1847
The only site record for this species was made by Loxton (2018) in 2015 at SH558250 when 27 adults were pitfalled. The species is rarely recorded in North Wales but is more widespread in southern Britain.

Xysticus bifasciatus C. L. Koch, 1837
The only site record for this species was made by Loxton (2018) in 2015 at SH560255 when six adults were pitfalled.

6.4 Other Dune spiders recorded during current survey

Arctosa perita (Latreille, 1799)

Arctosa perita was found at four locations during this survey.

Loxton (2018) collected numerous specimens at SH560244 in 2015 using pitfall traps.

The species has been recorded from the site on several occasions since its first record in 1991 by Alan Scott.

This cryptic species inhabits open sparsely vegetated areas like sand dunes, mineral spoil heaps and heaths.

Figure 44. *Arctosa perita* record locations at Morfa Dyffryn.

Troxochrus scabriculus (Westring, 1851)

Troxochrus scabriculus was found at eight locations across the NNR during this survey.

Loxton (2018) pitfalled 27 adults at SH560255 in 2015 using pitfall traps. The earliest site record for this species was made by John Murphy (5 females) in 1969. It was also recorded by Peter Harvey (2 females) and Richard Gallon (6 females) on the 15th June 2002 during a British Arachnological Society survey.

This money spider inhabits open, dry habitats like sand dunes, calcareous grassland, quarries and gravel.

Figure 45. *Troxochrus scabriculus* record locations at Morfa Dyffryn.

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8. References

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9. Data Archive Appendix

The data archive contains:

[A] The final report in Microsoft Word and Adobe PDF formats.

[B] Species records, which are held on the NRW Recorder 6 database.

Metadata for this project is publicly accessible through Natural Resources Wales' Library Catalogue http://libcat.naturalresources.wales or http://catllyfr.cyfoethnaturiol.cymru by searching 'Dataset Titles'. The metadata is held as record no. 124736.