Rival Webs: UK Native Spider Playing Cards Jack Williams, Lakeland Wildlife Oasis
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About Rival Webs: UK Native Spider Playing Cards

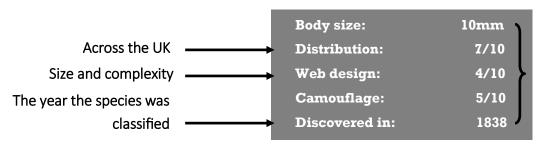
Aims:

- Display the diversity of UK spiders/arachnids and encourage positive perception of native Arachnida.
- Bring attention to lesser known or overlooked UK spiders.
- To form clear links with national KS2, KS3 and KS4 national curriculum e.g. variation and classification, living things in their environment (adaptation and camouflage), biodiversity.

Intended age group: 7-15 years old (KS2-4).

How to play:

The pack of playing cards may be dealt out to 2/3 students. Students take turns to choose a category displayed on their card e.g. camouflage. The figure displayed (e.g. 8/10) is announced to the other players. The student which has the highest figure in that categories wins the card of the other players. If the figure of both/all players is equal (for example, both players have 8/10 web design on their cards) then both cards should be placed in the centre of the table. The winner of the next round will obtain the cards placed in the centre. The student which is able to gain the most cards in a given time (or the student which is able to gain all of the cards) wins the game.



The card with the higher figure is the winning card. The card with the lower figure (and therefore the weaker card) is passed onto the individual with the winning

Pages 3-9 are intended to be 'student' playing cards (playing cards with a pattern on the rear). Pages 9-14 are intended as 'teacher' playing cards (playing cards with added information on the rear). Either can be used dependent on lesson plan.

For intended use, this document should be printed both sided (flip sheets on long edge). Please consider the environment when printing and only print the number of copies required. Playing cards can be printed on card and/or laminated to increase longevity of the game when used regularly.

A list of references and photographer acknowledgements can be found at the end of this document. This playing card game is intended for use in educational facilities only and should be exchanged freely/not sold for profit.

For further enquiries please contact Jack Williams, Lakeland Wildlife Oasis (mail@wildlifeoasis.co.uk).

Woodlouse hunting spider

Dysdera crocata

2. Steatoda grossa (Cupboard spider)

3. Steatoda nobilis (False widow spider)

Distribution:

Web design:

Camouflage:

Discovered in:

4. Misumena vatia (Flower crab spider)



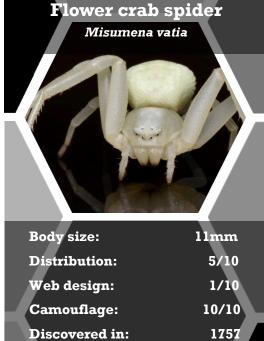


5/10

5/10

1875

Noble false widow spider









4/10

9/10

1951



1802





1790

Web design:

Camouflage:

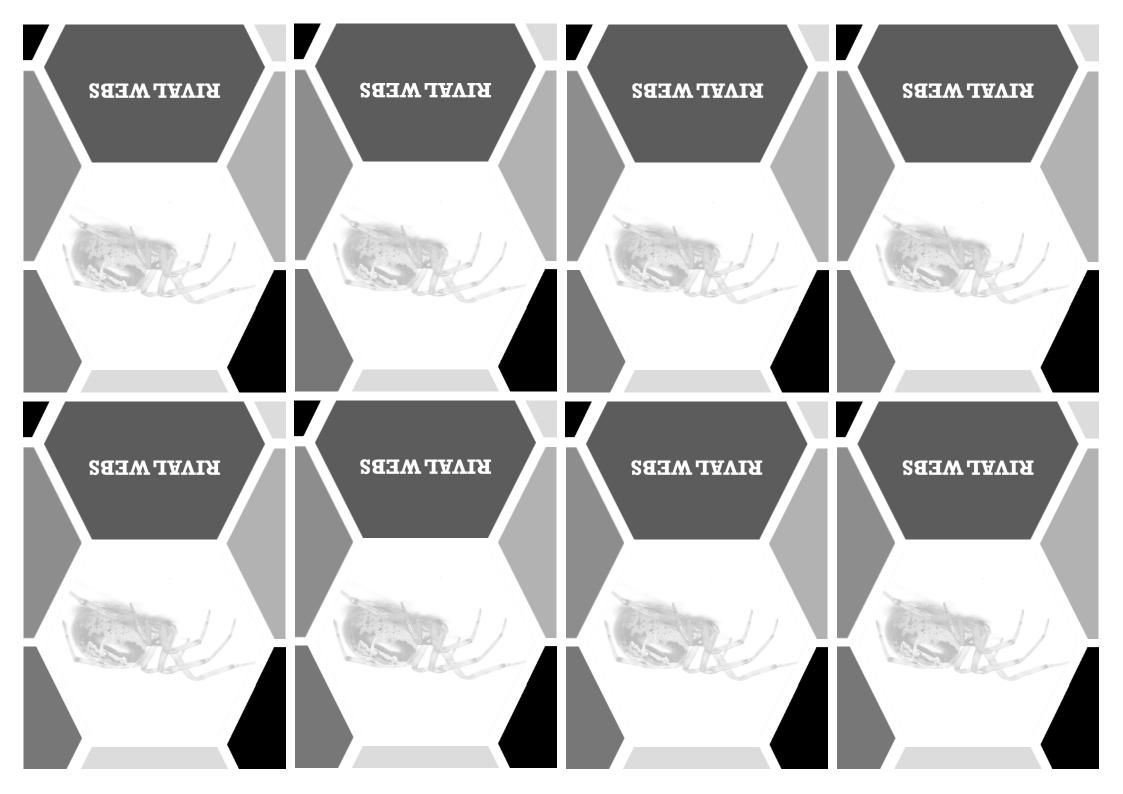
Discovered in:

Discovered in:

7. Tegenaria domestica (House spider)

8. Segestria florentina (Tube web spider)

Discovered in:



10. Scytodes thoracica (Spitting spider)

11. Diaea dorsata (Green crab spider)

12. Heliophanus cupreus (Sunshine jumping spider)





Body size: 11mm

Distribution: 9/10

Web design: 5/10

Camouflage: 10/10

Discovered in: 1785



Body size: 5mm
Distribution: 8/10
Web design: 0/10
Camouflage: 2/10
Discovered in: 1802



Green crab spider

Body size: 6mm

Distribution: 6/10

Web design: 0/10

Camouflage: 9/10

Discovered in: 1777



Sunshine jumping spider

Body size: 6mm
Distribution: 6/10
Web design: 0/10
Camouflage: 9/10
Discovered in: 1802

Zebra jumping spider Salticus scenicus



Body size: 7mm

Distribution: 8/10

Web design: 0/10

Camouflage: 5/10

Discovered in: 1875

Nursery web spider Pisaura mirabilis



Body size: 15mm
Distribution: 8/10
Web design: 5/10
Camouflage: 4/10
Discovered in: 1757



Body size: 18mm
Distribution: 4/10
Web design: 6/10
Camouflage: 6/10
Discovered in: 1772

Garden orb spider Araneus diadematus

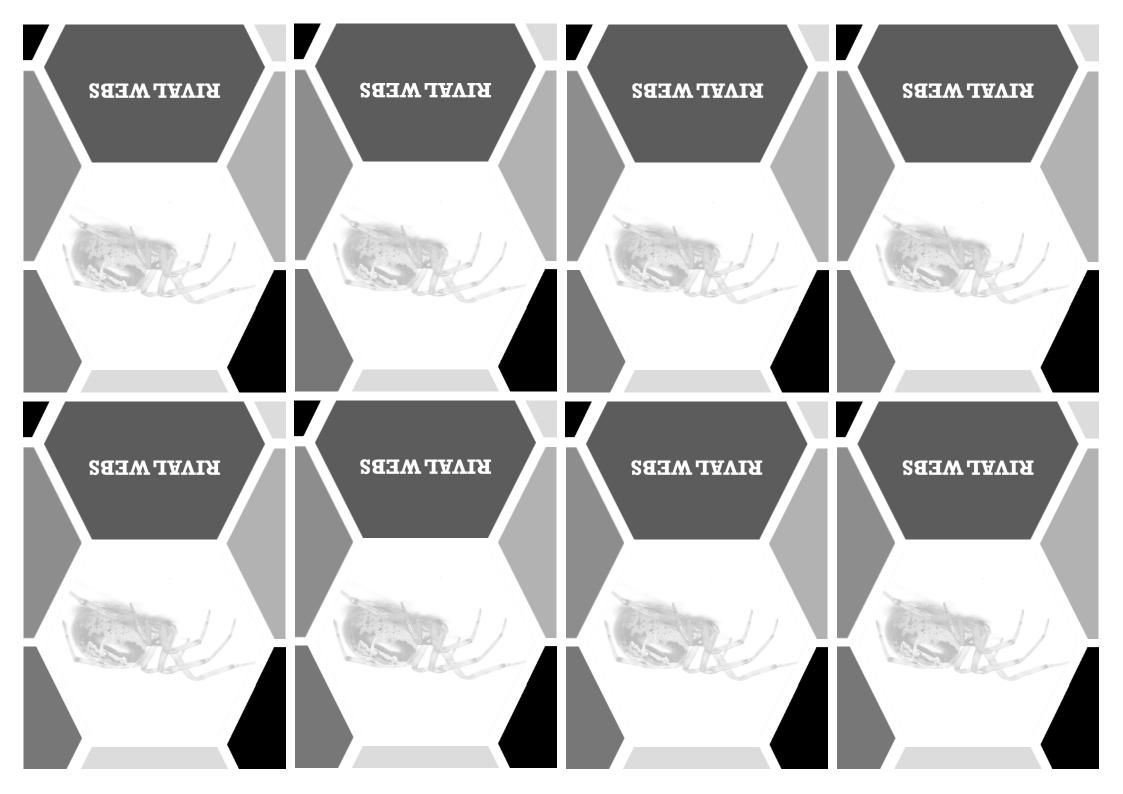


13. Salticus scenicus (Zebra jumping spider)

14. Pisaura mirabilis (Nursery web spider)

15. Argiope bruennichi (Wasp spider)

15. Araneus diadematus (Garden orb spider)



18. Nigma puella (Mesh weaver)

Body size:

19. Pseudeuophrys lanigera (House jumping spider)

20. Marpissa muscosa (Fencepost jumping spider)

Fencepost jumping spider

Marpissa muscosa



Body size: 2mm

Distribution: 9/10

Web design: 1/10

Camouflage: 2/10

Discovered in: 1841

Mesh weaver spider Nigma puella



Distribution: 3/10
Web design: 4/10
Camouflage: 6/10
Discovered in: 1870

18mm



House jumping spider

Pseudeuophrys lanigera

Body size: 4mm
Distribution: 8/10
Web design: 0/10
Camouflage: 8/10
Discovered in: 1871



Body size: 13mm
Distribution: 5/10
Web design: 0/10
Camouflage: 6/10
Discovered in: 1757

Fen raft spider Dolomedes plantarius



Body size: 23mm

Distribution: 1/10

Web design: 1/10

Camouflage: 5/10

Discovered in: 1751

Walnut orb-weaver spider



Body size: 15mm
Distribution: 7/10
Web design: 5/10
Camouflage: 6/10
Discovered in: 1757

Labyrinth spider

Agelena labyrinthica



Body size: 18mm
Distribution: 7/10
Web design: 7/10
Camouflage: 6/10
Discovered in: 1757

Candy stripe spider

Enoplognatha ovata



Body size: 7mm

Distribution: 9/10

Web design: 3/10

Camouflage: 5/10

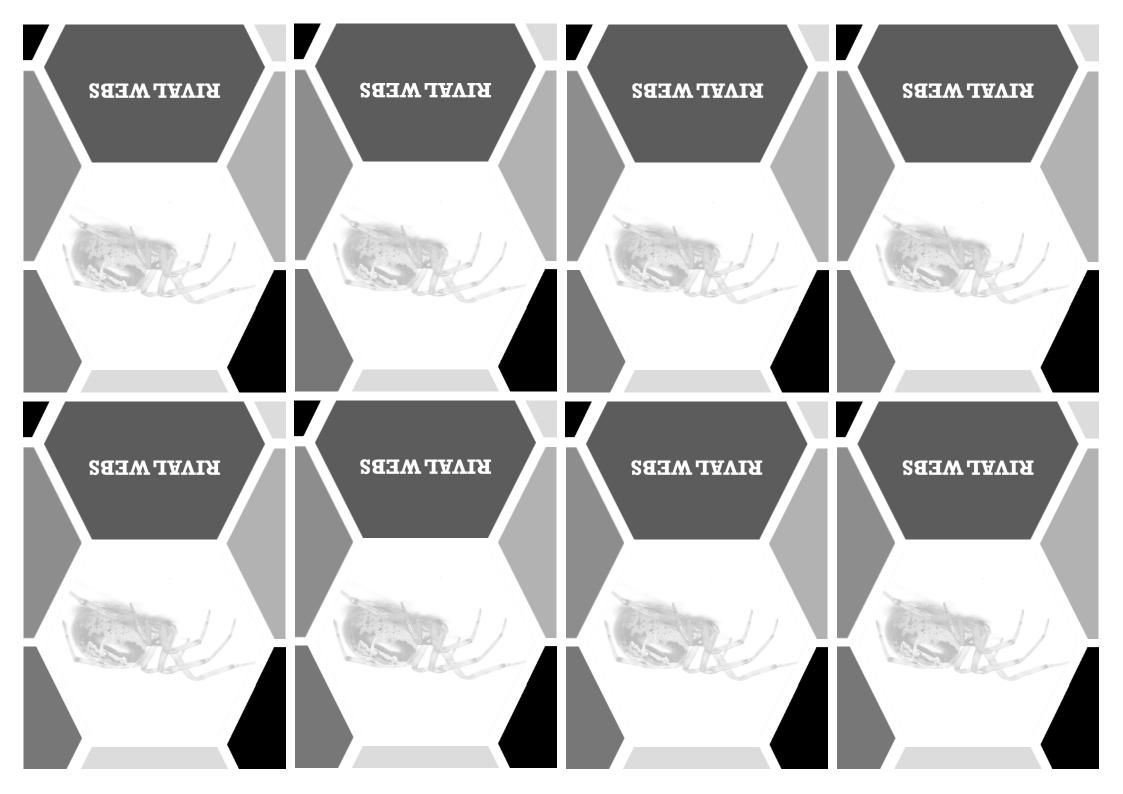
Discovered in: 1757

21. Dolomedes plantarius (Fen raft spider)

22. Nuctenea umbratica (Walnut orb weaver)

23. Agelena labyrinthica (Labyrinth spider)

24. Enoplognatha ovata (Candy stripe spider)



2. Steatoda grossa (Cupboard spider)

pider) 3. Steatoda nobilis (False widow spider)

oda nobilis (False widow spider) 4. Misumena vatia (Flower crab spider)

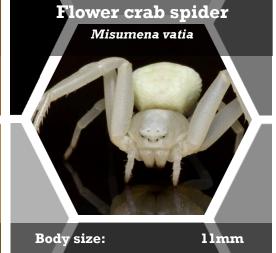
14mm

Noble false widow spider Steatoda nobilis



Distribution: 3/10
Web design: 5/10
Camouflage: 5/10
Discovered in: 1875

Body size:



Body size: 11mm

Distribution: 5/10

Web design: 1/10

Camouflage: 10/10

Discovered in: 1757



Web design:

Camouflage:

Discovered in:

0/10

2/10

1838

4/10

9/10

1951



Cupboard spider

Steatoda grossa







Body size:	5mm
Distribution:	6/10
Web design:	-\
Camouflage:	6/10
Discovered in:	1802





10mm
9/10
2/10
1/10
1757



2/10

4/10

1790

5. Nigma walckenaeri (Green mesh weaver)

Web design:

Camouflage:

Discovered in:

6. Drassodes lapidosus (Stone spider)

7. Tegenaria domestica (House spider)

8. Segestria florentina (Tube web spider)

Web design:

Camouflage:

Discovered in:

Order: Araneae	Order: Araneae	Order: Araneae	Order: Araneae
Suborder: Araneomorphae	Suborder: Araneomorphae	Suborder:	Suborder:
Family: Dictynidae	Family: Gnaphosidae	Family: Agelenidae	Family: Segestriidae
ളംus: ഗ്വ <u>ി</u>	ღenus: <i>Drassodes</i>	Genus: Tegenaria	Genus: Segestria
Species: Nigma walckenaeri	Species: Drassodes lapidosus	Species: Tegenaria domestica	Species: Segestria florentina
Green mesh weaver (Roewer, 1951)	Stone spider (Walckenaer, 1802)	House spider (Clerck, 1757)	Tube web spider (Rossi, 1790)
4 I 1-15mm / & 9-10mm body length.	Գ 6.5- 10mm / Ժ 4-6mm body length.	Գ 8.5- 14mm / Ժ 7-10mm body length.	գ 9-11 mm / Ժ 3-4mm body length.
ont a web.	sheltered spots outside.	species are false!	ly member of its genus here in the UK.
stones and actively hunts at night with-	bing to catch prey and often lives in	er the majority of the facts circling this	found in southern England. It is the on-
Individuals can be found under logs or	The cupboard spider uses scaffold web-	from the press due to its's bite, howev-	The species does not use a web and is
body of woodlouse.	stigma from the media.	The species receives negative stigma	white/yellow flowers.
strong chelicerae to pierce into the	and as a result receive much negative	100 years ago.	match the colour of it's background;
spread throughout Britain and have	ber of the false widow genus Steatoda	have been introduced to England over	flage as it is able to alter it's colours to
Woodlouse hunting spider are wide-	The cupboard spider is another mem-	The false widow spider is thought to	This species has remarkable camou-
סו מבו י עו מו ובמב	Order: Araneae	Order: Araneae	
Suborder: Araneomorphae Order: Araneae	Suborder:	Suborder:	Suborder: Order: Araneae
Family: Dysderidea	Family: Theridiidae	Family: Theridiidae	Suborder:
Genus: Dysdera	Genus: Steatoda	Genus: <i>Steatoda</i>	Cends: Misuriend Family: Thomisidae
Species: Dysdera crocata	Species: Steatoda grossa	Species: Steatoda nobilis	Species: Misumena Genus: Misumena
Spocioc: Diredora crocata	- pasoas apotasta 13012003		Species: Misumena vatia
Woodlouse hunting spider (Koch, 1838)	Cupboard spider (Koch, 1838)	False widow spider (Thorrell, 1875)	Flower crab spider (Clerck, 1757)

The green mesh weaver spins a web on ported. ties, leading some to believe it was imfound in London and surround coun-Prior to 1993 this species was only

4.5-5 mm / & 3.5-4mm body length. to twice their size. the surface of leaves to catch prey up

> Individuals are often found in stony ardecrease further north.

> the south of England however numbers

This species of spider is widespread in

gle beaches. eas, including towards the rear of shin-

10-18mm body length.

UK spider species! one the largest and most well known UK, Europe and even worldwide. It is The house spider is found through the

small insects. which it uses to catch and size it's prey; The spider lays a sheet of flat silk,

4 9-10 mm / & 6-9mm body length.

found in the south of England. The green-fanged tube web spider are

near. alert the spider when prey is passing/ the tube is lined with 'trip wires' which tubes made from silk. The entrance of They are large spiders which construct

4 ~22mm / of ~15mm body length.

10. Scytodes thoracica (Spitting spider)

11. Diaea dorsata (Green crab spider)

12. Heliophanus cupreus (Sunshine jumping spider)





Body size: 11mm

Distribution: 9/10

Web design: 5/10

Camouflage: 10/10

Discovered in: 1785



Body size: 5mm
Distribution: 8/10
Web design: 0/10
Camouflage: 2/10
Discovered in: 1802



Green crab spider

Body size: 6mm

Distribution: 6/10

Web design: 0/10

Camouflage: 9/10

Discovered in: 1777



Sunshine jumping spider

Body size: 6mm
Distribution: 6/10
Web design: 0/10
Camouflage: 9/10
Discovered in: 1802

Zebra jumping spider Salticus scenicus



Body size: 7mm

Distribution: 8/10

Web design: 0/10

Camouflage: 5/10

Discovered in: 1875

Nursery web spider Pisaura mirabilis



Body size: 15mm
Distribution: 8/10
Web design: 5/10
Camouflage: 4/10
Discovered in: 1757



Body size: 18mm
Distribution: 4/10
Web design: 6/10
Camouflage: 6/10
Discovered in: 1772

Garden orb spider Araneus diadematus



13. Salticus scenicus (Zebra jumping spider)

14. Pisaura mirabilis (Nursery web spider)

15. Argiope bruennichi (Wasp spider)

15. Araneus diadematus (Garden orb spider)

Stretch spider (Linnaeus, 1758)	Spitting spider (Latreille, 1802)	Green crab spider (Fabricius, 1777)	Sunshine spider (Walckenaer, 1802)	
Species: Tetragnatha extensa	Species: Scytodes thoracica	Species: Diaea dorsata	Species: Heliophanus cupreus	
Genus: Tetragnatha	eeuns: ვ <i>ა</i> ბჯი <i>gs</i>	Genus: Diaea	Genus: Heliophanus	
Family: Tetragnathidae	Family: Scytodidae	Family: Thomisidae	Family: Salticidae	
Suborder:	Suborder:	Suborder:	Suborder:	
Order: Araneae	Order: Araneae	Order: Araneae	Order: Araneae	

body resembling a stick. stretched out in front and behind their leaves and near water, with their legs Stretch spiders are often found on

to spot. As a result they are often very difficult

Zebra jumping spider (Clerck, 1757) 4 11mm / & 9mm body length.

Order: Araneae Suborder: Family: Salticidae евииs: Salticus Species: Salticus scenicus

proach with caution to prevent being males with their front legs, and ap-During courtship, males signal to feing ability to catch prey instead. prey using a web, they use their jump-Jumping spiders do not catch their

4 5-7mm / of 5-6mm body length. mistaken for prey.

> jaws) which acts as a glue to trap and adhesive spray from it's chelicerae (or ate, considering this species sprays an The name spitting spider is appropri-

conuțies. The species is found mainly in southern

Mursery web spider (Clerck, 1757) 4-6mm / of 3-5mm body length.

Order: Araneae Suborder: Family: Pisauridae Genus: Pisaura Species: Pisaura mirabilis

slow down it's prey.

tion or nettle beds. UK and is often found in dense vegeta-This species is widespread across the

guard until the spiders emerge. web, around their egg sacs, which they Female's spin a protective 'nursery

\$ 12-15mm \ o 10-13mm body length.

.nebiqer. scattered further north, the Green crab Widespread in southern England and

nifers and woodland edges. liantly and are found in hedgerows, co-Green crab spiders camouflage bril-

գ 6mm / Ծ 4mm body length.

Wasp spider (Scopoli, 1772)

Order: Araneae 2nporder: Family: Araneidae Genus: Argiope

ators. its wasp-like appearance to deter predwasp spider is harmless and likely uses Despite it's bright colouration, the

prey. the ground which it uses to catch its The species spins large webs close to

4 18mm / & 5mm body length.

erae. disabling them with their strong chelicthey hunt their prey and jump on them, use a web to catch its prey' instead The sunshine jumping spider does not

4.5-6mm / of 3.5-4mm body length. hedgerows and woodland edges. They can be found through the UK in

Garden orb spider (Scopoli, 1772)

Order: Araneae Suborder: Family: Araneidae Genus: Araneus Species: Argiope bruennichi Species: Araneus diadematus

catch its prey. complex orb-webs which it uses to garden orb spider constructs large ly throughout mainly UK gardens, the A large orb web spider, found common-

web up and down to deter predators. When threatened, the spider shakes its

\$ 10-13mm / & 4-8mm body length.

Body size:

Distribution:

Web design:

Camouflage:

Discovered in:

Money spider

Bathyphantes gracilis

18. Nigma puella (Mesh weaver)

19. Pseudeuophrys lanigera (House jumping spider)

20. Marpissa muscosa (Fencepost jumping spider)

Fencepost jumping spider

Marpissa muscosa

Mesh weaver spider Nigma puella



Body size: 4mm

Distribution: 3/10

Web design: 4/10

Camouflage: 6/10

Discovered in: 1870



House jumping spider

Pseudeuophrys lanigera

Body size: 4mm

Distribution: 8/10

Web design: 0/10

Camouflage: 8/10

Discovered in: 1871



Body size: 13mm
Distribution: 5/10
Web design: 0/10
Camouflage: 6/10
Discovered in: 1757

Fen raft spider Dolomedes plantarius

2mm

9/10

1/10

2/10

1841



Body size: 23mm

Distribution: 1/10

Web design: 1/10

Camouflage: 5/10

Discovered in: 1751

Walnut orb-weaver spider Nuctenea umbratica



Body size: 15mm
Distribution: 7/10
Web design: 5/10
Camouflage: 6/10
Discovered in: 1757

Labyrinth spider

Agelena labyrinthica



Body size: 18mm
Distribution: 7/10
Web design: 7/10
Camouflage: 6/10
Discovered in: 1757

Candy stripe spider

Enoplognatha ovata



Body size: 7mm

Distribution: 9/10

Web design: 3/10

Camouflage: 5/10

Discovered in: 1757

21. Dolomedes plantarius (Fen raft spider)

22. Nuctenea umbratica (Walnut orb weaver)

23. Agelena labyrinthica (Labyrinth spider)

24. Enoplognatha ovata (Candy stripe spider)

The fen raft spider is one of the largest and rarest species of spider in the UK. Fen rafts hunt from perches at the waters edge and can rush across water to seize prey. They occur only in select seize prey. They occur only in select	The walnut orb-weaver is widespread species occurring across the UK. It is also known as the 'evening weaver' due to its tendency to spin a new web in the evening and sit out in the centre awaiting prey items, such as flies	The labyrinth spider occur in England and the southern counties of Wales and catch prey using a sheet web; a flat sheet of silk. They live close to the ground in sunny grasslands.	The candy stripe spider may occur with two red stripes on its abdomen, giving the impression/appearance of candy cane. The species is common throughout The species is common throughout
Fen raft spider (Clerck, 1757) Species: Dolomedes Genus: Dolomedes Family: Pisauridae Suborder: Order: Araneae	Walnut orb-weaver (Clerck, 1757) Species: Nuctenea umbratica Genus: Nuctenea Family: Araneidae Suborder: Order: Araneae	Labyrinth spider (Clerck, 1757) Species: Agelena labyrinthica Family: Agelenidae Suborder: Order: Araneae	Candy stripe spider (Clerck, 1757) Species: Enoplognatha Genus: Enoplognatha Family: Theridiidae Suborder: Order: Araneae
Չ 2-2.5 mm / Ծ 1.5-2mm body length.	3.5-4mm body length.	ֆ 3.5-6mm / Ժ Հ.5-5mm body length.	ֆ 8-13mm / Ժ 6-8mm body length.
Commonly found in grasslands and undergrowth, adult individuals of this species can be found all year round. Despite its small size, this species is common and found throughout the UK.	This small species of spider forms lace like webs in curled up leaves and is found not only in the UK but also Europe and Northern Africa. Females are often green however males are often red/brown.	Widespread in southern England, the house jumping spider like other jumping spider like other jumping spiders hunts and catches its prey via jumping, instead of using a web. This species is commonly found in and around houses	This species is widespread in England. Both sexes are coloured grey to brown. The Salticidae family, in which this species belongs to, is one of the largest spider families including 13% of all spider species.
Money spider (Blackwall, 1841) Species: Bathyphantes Genus: Bathyphantes Family: Linyphiidae Suborder: Order: Araneae	Mesh weaver spider (Simon, 1870) Species: Nigma puella Genus: Nigma Family: Dictynidae Suborder: Order: Araneae	House jumping spider (Simon, 1871) Species: Pseudeuophrys lanigera Genus: Pseudeuophrys Family: Salticidae Suborder: Order: Araneae	Fencepost spider (Clerck, 1757) Species: Marpissa muscosa Genus: Marpissa Family: Salticidae Suborder: Order: Araneae

18mm body length.

6mm body length.

lands.

գ 14-15 mm / Ծ 9-11mm body length.

and other insects.

4 17-22 mm \ & 3.5-4mm body length.

KS2/3 Living things in their environment; adaptations for survival

Many of the species included in this pack of playing cards are excellent examples of how even invertebrates adapt to their environment, in order to survive, disguise themselves, hunt and predate.

A number of playing cards may be spread out across a table. Students can they be asked what adaptations they believe each species has in order to aid survival, based on their common names and appearance etc.

Woodlouse hunting spider Dysdera crocata



The woodlouse hunting spider specific morphological features, such as enlarged chelicerae (jaws) and fangs. It is hypothesised that these are adaptations have evolved specifically for holding and piercing the body of woodlouse; their prey.

This species also has a lower preferred temperature than many other spiders, suited to the preferred temperature of the woodlouse.



Many invertebrates mimic other species in order to gain protection from predators by deterring them. Others use bright colours as warning signals to deter predators (such as the Cinnabar moth caterpillar, Tyria jacobaeae).

Fen raft spider Dolomedes plantarius

The fen raft spider has small hairs on each of its legs that it uses to detect the movement of their prey on the water, enabling them to successfully hunt and catch prey items. As a result they have even been able to catch tadpoles!

Furthermore, those fine hairs also aid their ability to comfortably sit and move across the surface of the water.



Many species of crab spider are able to camouflage perfectly on the surface of plant leaves or even flowers and petals due to their bright colouration.

Because of this the spider does not need to spin a web; instead it can wait in ambush on the surface of plants and allow prey, to come to them!

KS3/KS4 Classroom Activity: Animal Classification and Variation

All 24 species displayed within this playing card pack are within the Order 'Araneae.' Multiple species within those 24 are within the same Family (e.g. three species belong to 'Salticidae.' Two species fall into the same genus; 'Steatoda.'

A series of the 'student' playing cards may be set out on a table. Students can be asked to group species which in their opinion are similar in appearance/phylogeny and which they believe will be in the same genus, family or order. Answers can then be revealed to students using the 'teachers' playing cards. This activity may be used a (starter) activity to KS3/4 animal classification/variation in order to introduce the subject matter or reinforce aspects of classification already taught.

False widow spider (Thorrell, 1875)

Species: Steatoda nobilis

Genus: *Steatoda*Family: Theridiidae

Suborder: Order: Araneae Cupboard spider (Koch, 1838)

Species: Steatoda grossa

Genus: *Steatoda*Family: Theridiidae

Suborder:

Order: Araneae

Wasp spider (Scopoli, 1772)

Species: Argiope bruennichi

Genus: *Argiope*Family: Araneidae

Suborder:

Order: Araneae

Garden orb spider (Scopoli, 1772)

Species: *Araneus diadematus*

Genus: *Araneus*Family: **Araneidae**

Suborder:

Order: Araneae

All 24 species in the playing card pack are fall into this order Araneae.

A number of species within the pack are within the same family, for example the wasp spider, the walnut orb-web and the garden orb are all members of the Araneidae family.

Some species within the pack are within the same genus, such as the cupboard spider and the false widow spider

Example:

Kingdom - Animalia

Phylum - Arthropoda

Class - Arachnida

Order - Araneae

Family - Araneidae

Genus - Argiope

Species - A. bruennichi



Body size: 18mm
Distribution: 4/10
Web design: 6/10
Camouflage: 6/10
Discovered in: 1772

Online resources:

Spider and Harvestman Recording Scheme website: http://srs.britishspiders.org.uk/

British Arachnological Society website: http://britishspiders.org.uk/

The IUCN Red List of Threatened Species website: http://www.iucnredlist.org/

The Fen Raft Spider website: http://www.dolomedes.org.uk/

NatureSpot: Recording the Wildlife of Leicestershire and Rutland website: http://www.naturespot.org.uk/home

ARKive website: http://www.arkive.org/

Buglife website: https://www.buglife.org.uk/

Photographer acknowledgement:

Agelena labyrinthica, Bathyplantes gracilis, Diaea dorsata, Drassodes lapidosus, Dysdera crocata, Heliophanus cupreus, Misumena vatia, Nigma puella, Nigma walckenaeri, Pisaura mirabilis, Pseudeuophrys lanigera, Salticus scenicus, Scytodes thoracica, Steatoda grossa, Steatoda nobilis by Tone Killick, The Silk Road

The Silk Road:

http://tonekillick.blogspot.co.uk/

https://www.facebook.com/TurnFear2Fascination

Araneus diadematus, Enoplognatha ovata, Tegenaria domestica, Tetragnatha extensa by Phillip Wain

Argiope bruennichi by Will Tranter

Dolomedes plantarius by Dr Helen Smith, www.dolomedes.org.uk

Marpissa muscosa by Gemma Gates

Nuctenea umbratica by Christ Stringfellow

Segestria florentina by Marc Mayhew