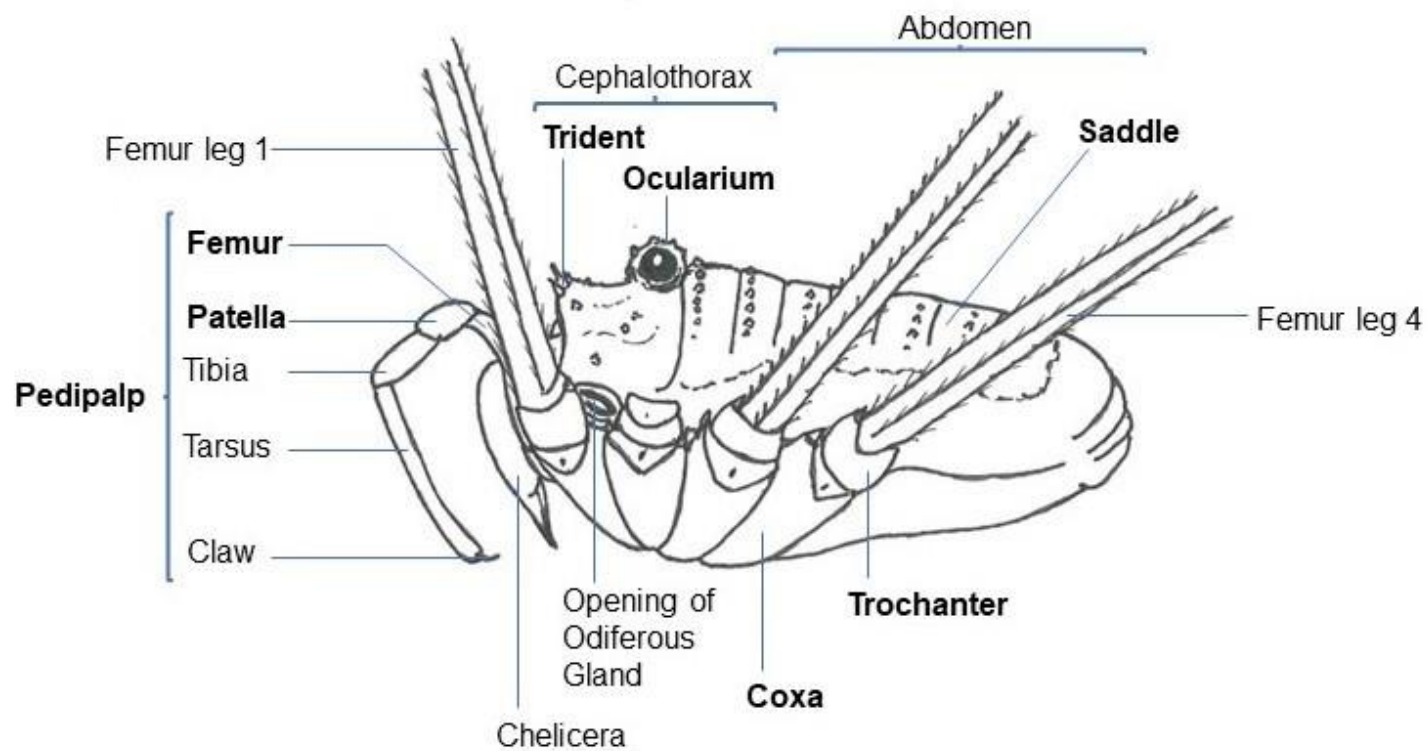


Harvestmen in Norfolk: a concise guide

Introduction.

This guide has been designed to be used on a mobile phone as a concise quick reference to Harvestmen species in Norfolk. While species can be identified with it, it is best used in conjunction with other reference material (see Further Resources). The species are grouped together with a colour-coded background based on shared characteristics.



Harvestman Anatomy. The diagram above shows the main features of a typical harvestmen (in this case *Oligolophus tridens*). Features labelled in **Bold** are the main ones used in identification. A glossary of terms can be found on the last page. Leg length is often a useful feature and is given as short, medium, long or very long. Sizes are given for body length with males generally smaller than females. NB Juvenile harvestmen are not always possible to identify to species.

Where and When. Harvestmen can be found in a variety of habitats. Species inhabit different vegetation layers from the ground where they live in leaf litter & can be found under fallen branches, to the shrub layer and or trees from where they can be beaten. They can also be found on walls. Harvestmen are prone to desiccation so most tend to prefer damper habitats; they are often more active at night.

Of the 34 species of Harvestmen found in the UK, 24 have so far been recorded in Norfolk and are covered in this guide.

Colour Key Codes

The species are split into the following 7 colour-coded groups based on shared characteristics to aid quick identification.

1st line lists the main characteristics.

2nd line states where they are commonly found.

3rd line gives an idea of how common they are.

These details combined should give a good idea of what group to look at to identify a harvestman.

The number of species in each group is also given.

Small Dark Species, No Trident, legs short or long
Ground layer, under logs/stones, in leaf litter **2 Species**
Common, widespread

Obvious Trident of at least 3 tubercles, legs medium
Ground layer, under logs, in leaf litter; shrubs/trees **7 Species**
Most Fairly to Very Common, 1 extremely rare.

Prominent Ocularium, Trident single spine or absent
Ground or Shrub Layer; Tree Trunks **2 Species**
1 Very Common, 1 Rare

Tubercles on ocularium & carapace, no Trident, legs long/very long
Ground layer; shrubs/trees, walls **5 Species**
Common or Scarce, widespread

Generally smooth appearance inc. ocularium, legs very long or long
Shrubs/trees, walls; Ground layer **3 Species**
2 Common, 1 Scarce

Tuning-fork pedipalps, smooth ocularium, legs very long or medium
Shrubs/trees, walls; Ground layer **3 Species**
Fairly Common, 1 restricted

Flattish body, often covered in soil
Ground layer, mostly leaf litter **2 Species**
Scarce – usually found by sieving leaf litter/using pitfall traps

Example: a harvestmen found running on the ground with very long legs and no obvious trident but with tubercles on the ocularium and carapace would fall into the 4th category coloured as below.

Species Description

Each species has a colour-coded background. The header line gives the name of the species, size, leg length and a specific main trait (eg presence of a trident). Similar species have the same colour background to allow easy comparison. The 2 photos depict either male & female where these differ greatly, or a general photo and a close-up to show a particular feature. Features to look for are highlighted with arrows or circles. Note on size: lower number is smallest male, higher number largest female.

Red Outline Text Box

This box gives details of any distinctive character that confirms identification (eg presence of 2 small tubercles above chelicerae on *Phalangium opilio*).

Main Text Box

This gives details of specific features to check, for example: (NB not all apply to every species).

Trident: size, presence of accessory tubercles.

Ocularium: size, armature.

Pedipalps: presence of apophysis or tubercles.

Trochanter: eg pale or with dark marks.

Coxae: presence of dark marks.

Saddle: shape, prominence.

Chelicerae: presence of dark bands.

Other: details any other specific character to check.

Where & When

This last box details the type of habitat where the species is most commonly found in Norfolk and the season in which it is adult.

Most harvestmen are adult from summer into autumn, often persisting into winter especially in milder weather. Some species require careful searching for and are generally only found when sieving leaf litter or are caught in pitfall traps.

Compare: this gives any similar species that need to be looked at & ruled out when identifying a harvestman. It also notes where microscopic examination may be required.

NB remember this guide only covers the species that have been recorded in Norfolk.

Nemastoma bimaculatum

2 – 2.8 mm, short legs. Small dark species.



Small; black except for 2 pale silvery patches. Often sits scrunched up before rapidly running off.

Ocularium: small, low.

Pedipalps: slender, with capitate setae.

Carapace: sclerotized, granular; dark except for 2 pale patches (very occasionally absent).



Where: under logs and stones; amongst leaf litter.

When: all year; common/widespread.

Compare: no similar species in Norfolk (as yet).

Mitostoma chrysomelas

1.5 – 2.5 mm, long legs. Small dark species.



Small body with long legs; long pedipalps held folded in characteristic way (arrowed below).

Ocularium: small, with bifid tubercles.

Pedipalps: Long & slender, with capitate setae; held up in front.

Other: dorsum with rows of broad-topped tubercles.



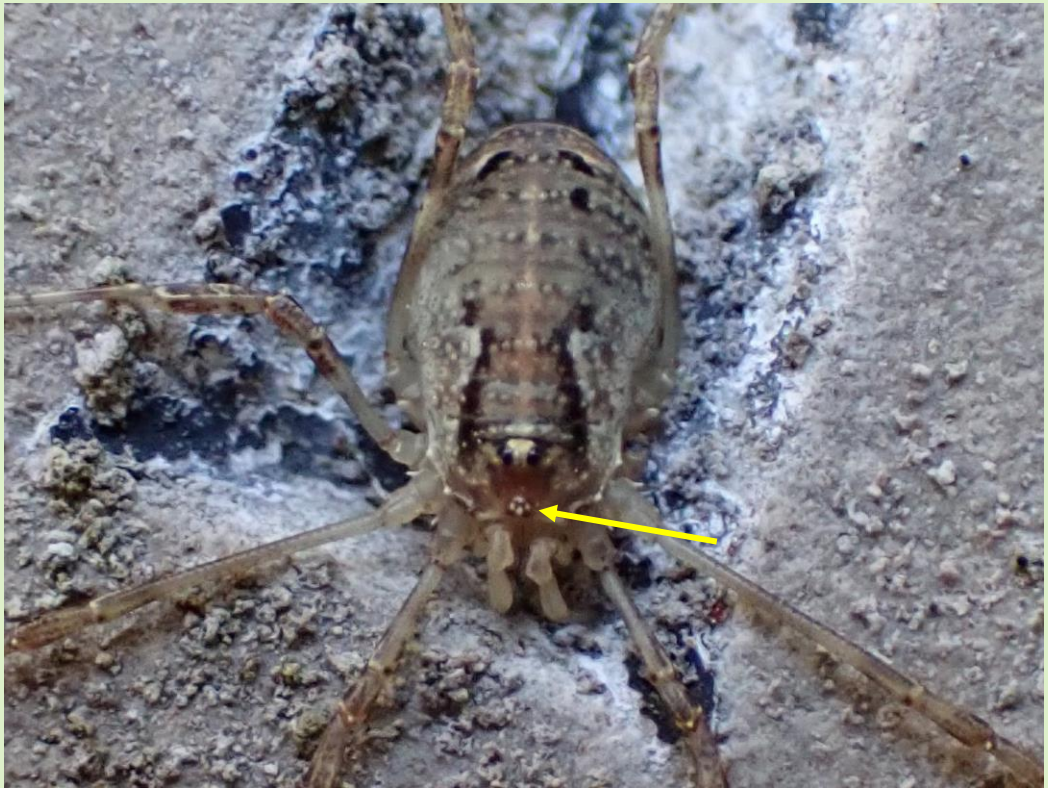
Where: under logs and stones; amongst leaf litter.

When: all year; fairly common/widespread.

Compare: no similar species.

Paroligolophus agrestis

3 - 5 mm, medium legs. Trident: 5 tubercles.

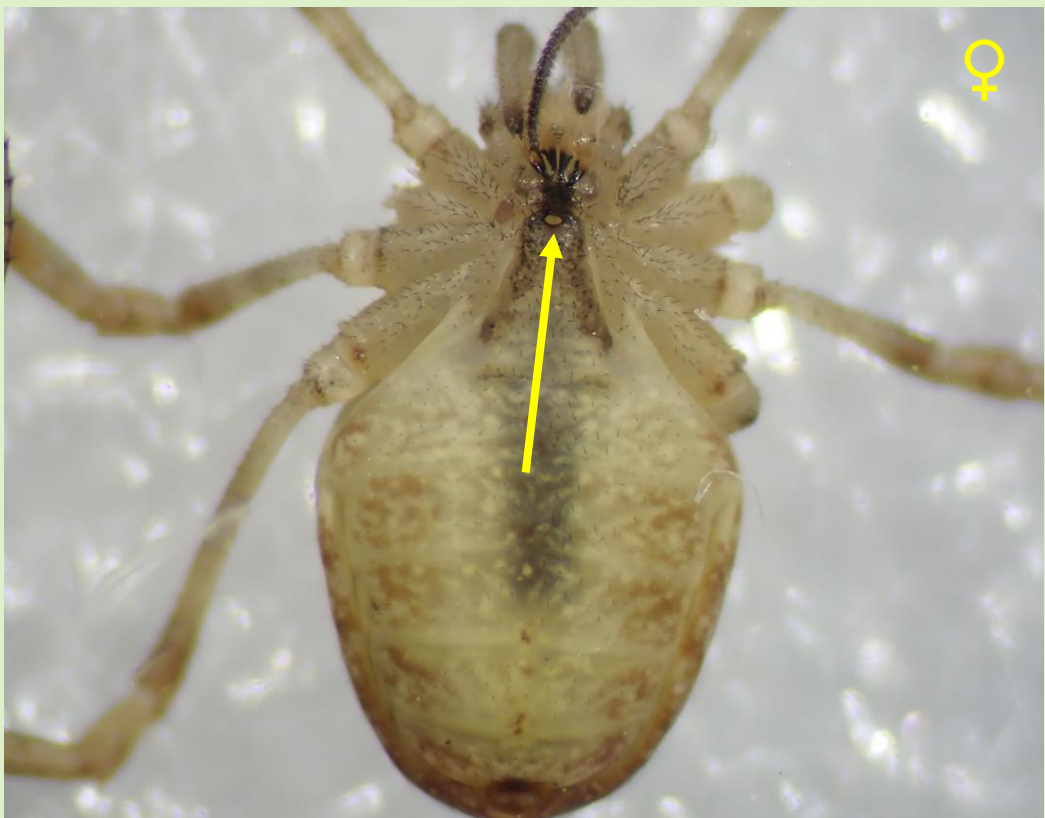


Female with dark pincer-like notch at front of genital operculum (arrowed below), less obvious in male.

Trident: cluster of 5 or 6 blunt tubercles, front 3 longest, particularly centre one (arrowed above).

Ocularium: pale, virtually smooth (a few spicules).

Saddle: usually present, often outlined with dark squares especially to rear; often with pale stripe down centre.



Where: on walls around houses; under fallen branches in woodland; on low vegetation.

When: summer - winter; very common/widespread.

Compare: *Paroligolophus meadii*, *Oligolophus tridens*.

Paroligolophus meadii

2.3 – 3.8 mm, medium legs. Trident: 3 tubercles, central longer.



Body with transverse rows of large tubercles; trident with central member twice as long as those to sides (arrowed below).

Trident: 3 tubercles, middle 1 twice as long as others.

Ocularium: pale, virtually smooth (a few spicules).

Saddle: outlined with dark squares.

Other: transverse rows of large blunt tubercles across dorsum (arrowed below).



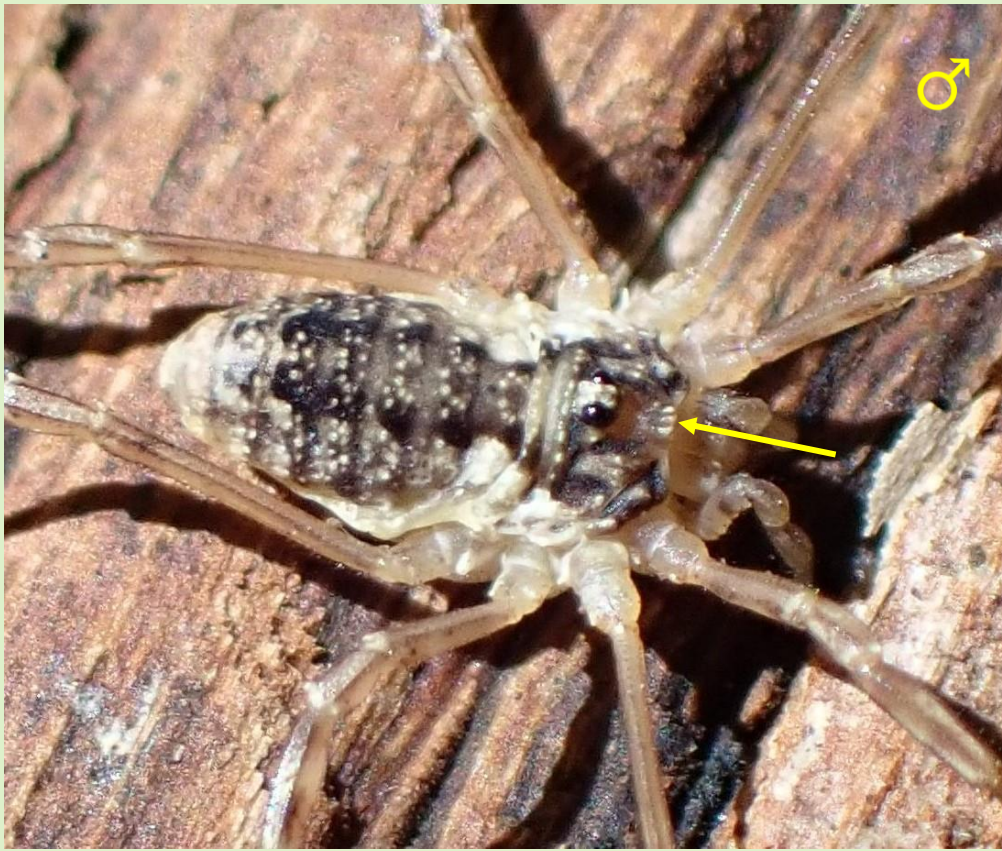
Where: ground layer.

When: summer - autumn; extremely rare.

Compare: *Paroligolophus agrestis*.

Oligolophus tridens

3.5 - 5.5 mm, medium legs. Trident: 3 upright tubercles



Trident 3 tubercles, almost vertical (see arrows).

Trident: upright; male members equal; female central member longest; 1 or 2 subsidiary tubercles to side.

Ocularium: pale with small tubercles.

Saddle: male obvious, dark, pinched in middle; female slight/absent.



Where: under fallen branches in woodland; on low vegetation.

When: summer - autumn; very common/widespread.

Compare: *Paroligolophus agrestis*, *Oligolophus hanseni*.

Oligolophus hanseni

3.3 – 5 mm, medium legs. Trident: 3 main tubercles + 2 smaller ones.



Dark saddle with transverse rows of white tubercles, bordered by white patches. Distinctive trident arrangement.

Trident: small, central member longest; several subsidiary tubercles to side/rear (circled below).

Ocularium: dark with pale tubercles.

Saddle: indistinct on dark individuals but usually outlined with broken white line.



Where: mostly pine/oak trees on heathland, also woodland.

When: summer – autumn/winter; scarce/very local.

Compare: *Oligolophus tridens*, *Paroligolophus agrestis*.

Lophopilio palpinalis

2.8 – 5 mm, medium legs. Trident: 3 tubercles, angled forwards.

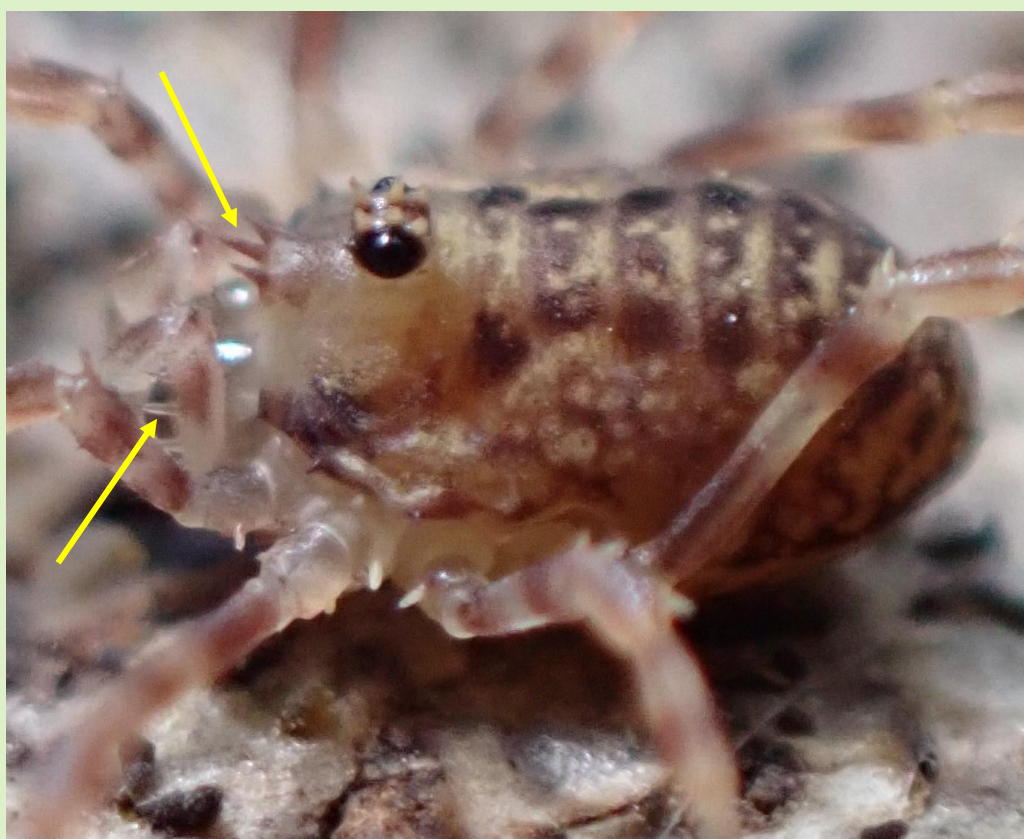


Long spine-tipped tubercles on pedipalp femur, tubercles on ocularium. Overall looks quite 'spikey'.

Trident: 3 tubercles, centre one longest, angled forwards (below).

Ocularium: with conspicuous tubercles (arrowed above).

Pedipalps: well armed with long spine-tipped tubercles on underside of femur (arrowed below).



Where: under fallen branches, often in damp woodland.

When: summer – autumn/winter; fairly common/widespread.

Compare: *Oligolophus tridens*.

Lacinius ephippiatus

3.5 – 5.5 mm, medium legs. Trident: 3 tubercles, 'handfork' prongs.



Prominent 3 pronged trident. Dark rectangular saddle (arrowed above). Adults found in summer, earlier than most other species.

Trident: conspicuous, 3 pronged 'handfork' (arrowed below).

Ocularium: dark with small tubercles.

Saddle: dark (especially male), rectangular, truncated.



Where: under fallen branches in damp woodland.

When: mostly summer; common/widespread.

Compare: *Odiellus spinosus*.

Odiellus spinosus

6.5 – 11 mm, medium legs. Trident: very robust, 3 tubercles.



Large size, prominent robust trident. Small ocularium (above).

Trident: robust, 3 members with subsidiary tubercles (below).

Ocularium: relatively small, with pointed tubercles.

Saddle: with dark outline.



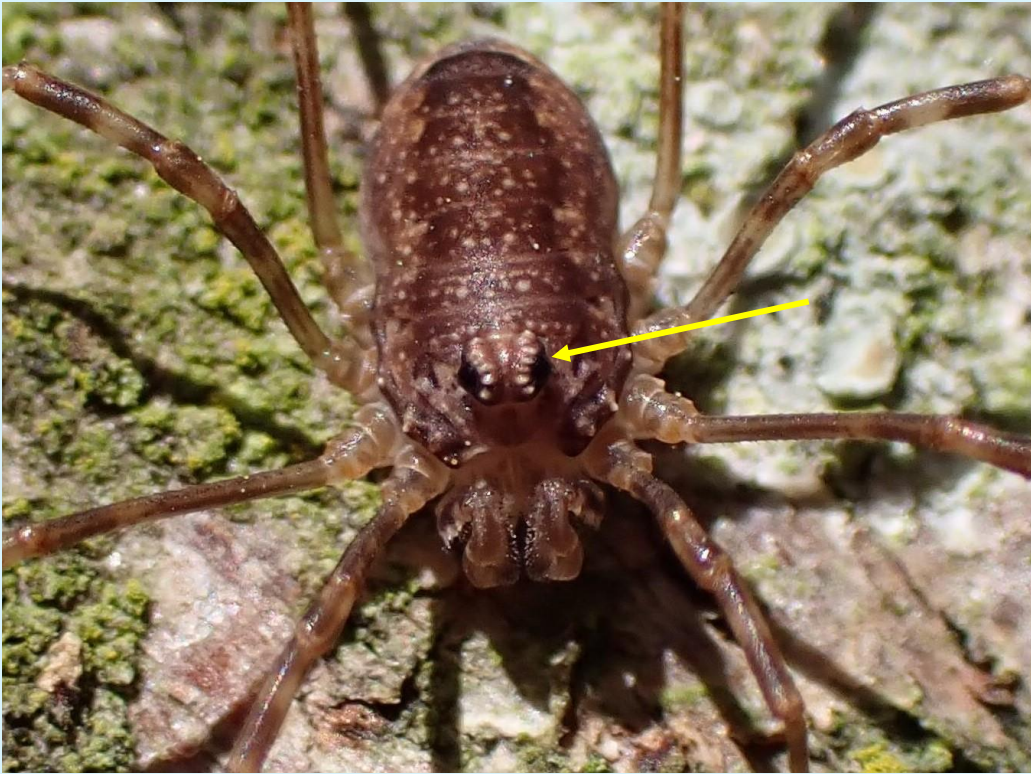
Where: largely synanthropic; mostly ground layer.

When: summer - autumn; scarce but locally frequent; widely scattered records.

Compare: *Lacinius ehippiatus*.

Rilaena triangularis

3.7 – 7 mm, long legs. Prominent ocularium.



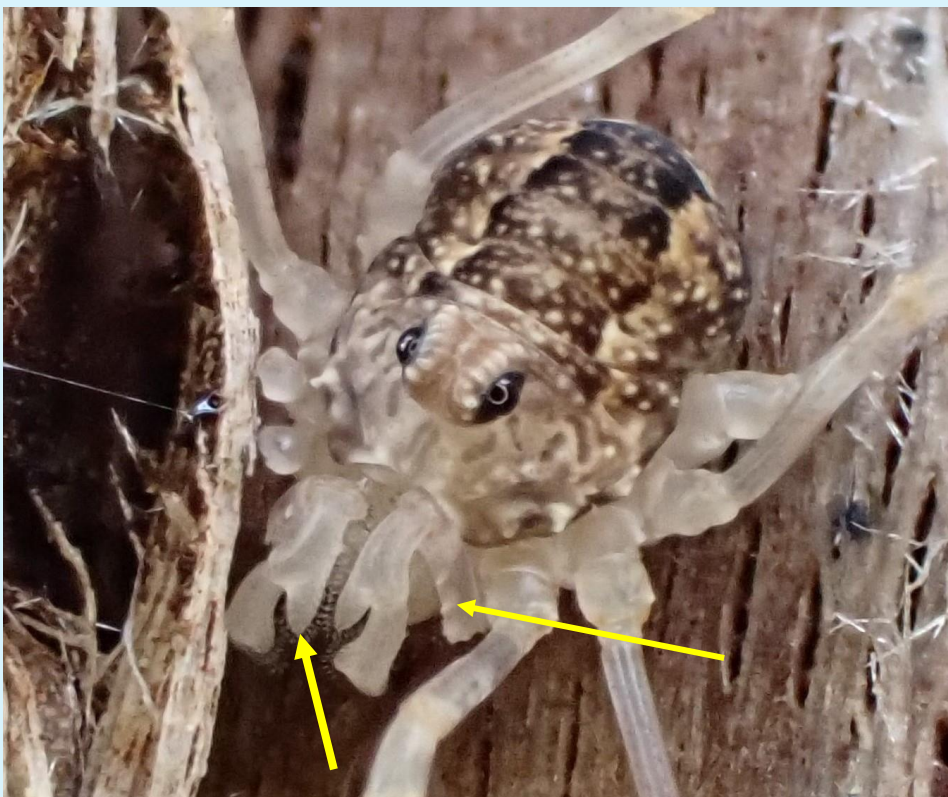
Pedipalps with prominent apophysis on patella and spine-tipped tubercles on femur (both arrowed below). Ocularium prominent (arrowed above), especially in juveniles. Adults in spring, unlike most other species.

Trident: small single tubercle lying in centre of dark band.

Ocularium: very prominent, especially in juveniles.

Pedipalps: large apophysis patella, spine-tipped tubercles femur.

Saddle: may be indistinct; often more obvious in juveniles.



Where: under fallen branches, on low plants.

When: juveniles winter, adults spring/summer; very common and widespread.

Compare: no similar species in Norfolk.

Megabunus diadema

2.6 – 4.8 mm, medium legs. Prominent ocularium.



Very prominent spined ocularium (arrowed below). Pedipalp with spine-tipped tubercles (arrowed below).

Trident: small single tubercle, may be absent.

Ocularium: prominent with very long spines.

Pedipalps: armed with spine-tipped tubercles.

Saddle: dark, contrasts with pale sides.



Where: on tree trunks, also leaf litter.

When: mostly spring; very rare.

Compare: no similar species in Norfolk.

Phalangium opilio

4 – 9 mm, very long legs. Tubercles on ocularium & carapace.



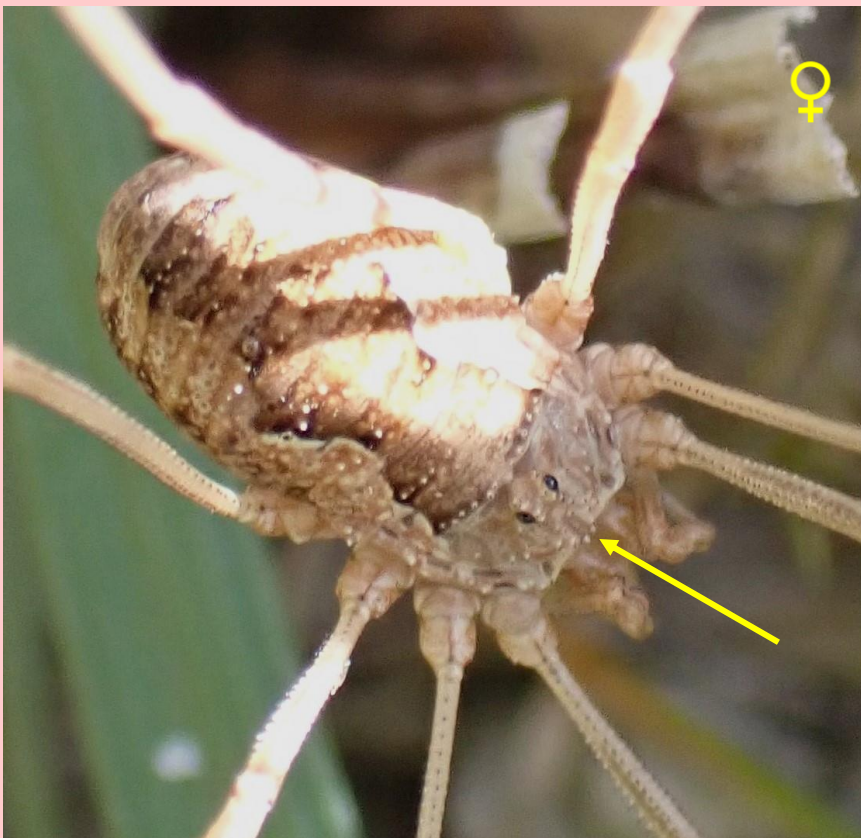
Male and Female: Pair of small pointed tubercles above chelicerae (arrowed below).

Male: horn-like extensions on top of chelicerae (arrowed above) and very long pedipalps.

Ocularium: with black-tipped tubercles; scattered black-tipped tubercles on carapace.

Saddle: often prominent with zig-zag outline.

Other: NB very variable in colour: can resemble *Mitopus morio*.



Where: dryish habitats including gardens & heathland; ground level or on vegetation.

When: summer - autumn; common/widespread.

Compare: *Mitopus morio* – care is required to separate females

Mitopus morio

4 – 8.5 mm, long legs. Tubercles on ocularium & carapace.



3 tubercles at front edge of carapace (arrowed above); often with prominent dark saddle.

Ocularium: with 2 rows of hair-tipped tubercles.

Other: 3 tubercles front edge of carapace (1 positioned centrally).

Saddle: can be obscure/absent; female often dark with zig-zag outline; typical male dark with 'pinched' middle. Variable colour.



Where: variety of habitats; ground/shrub layer.

When: summer - autumn; fairly common, widespread.

Compare: *Phalangium opilio* – care required to separate females.

Opilio canestrinii

5 - 9mm, very long legs. Tubercles on ocularium & carapace.



Pale trochanters (arrowed above) coloured as body and contrasting with long dark legs (especially in male).

Ocularium: pale with small tubercles.

Trochanters: pale, coloured as body.

Saddle: male absent; female paired light & dark bars (below).



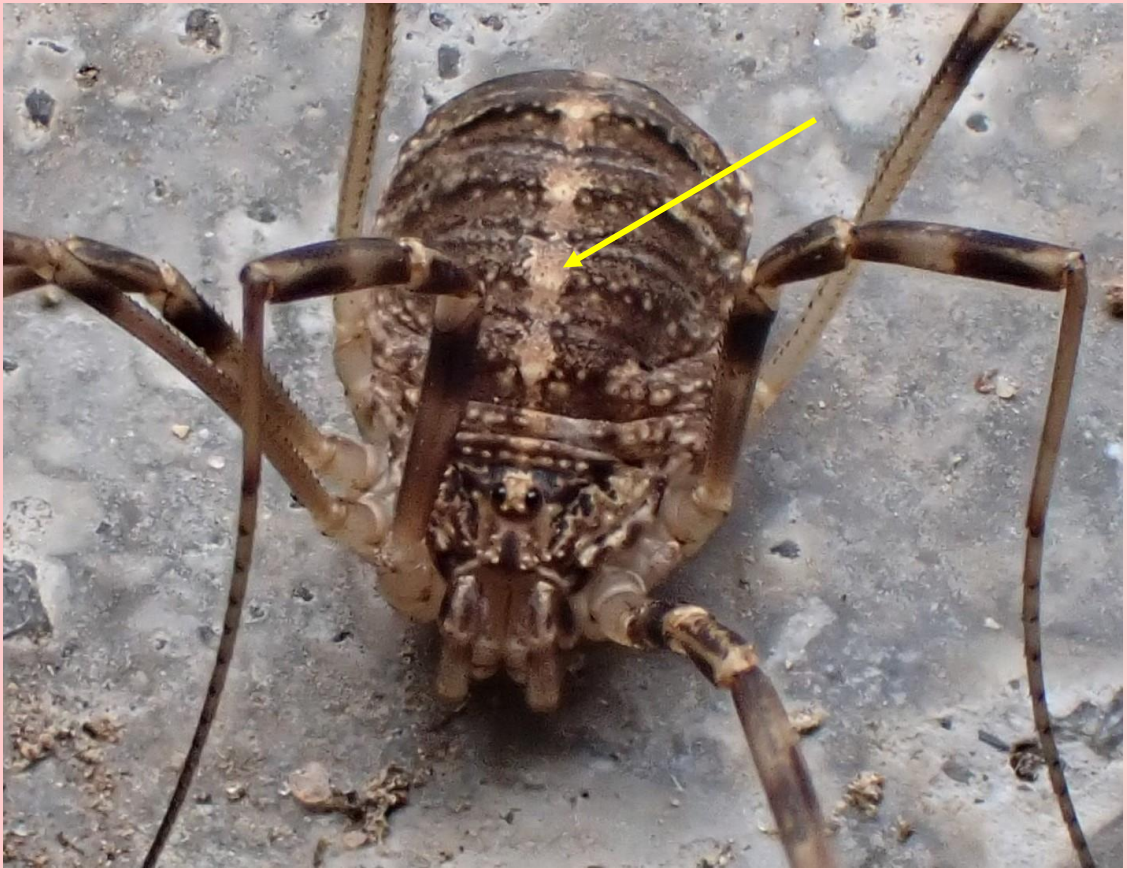
Where: mainly synanthropic but spreading into countryside.

When: summer - winter; common/widespread.

Compare: *Leiobunum* spp – these have smooth ocularium.

Opilio saxatilis

3.2 – 6 mm, long legs. Tubercles on ocularium & carapace.



Dark spots on coxae; pale central band on body (above).

Ocularium: with 2 rows of 3 to 4 tubercles (see *O. parietinus*).

Coxae: dark spots on coxae (arrowed below).

Saddle: obscure but with pale central band (sometimes broken).



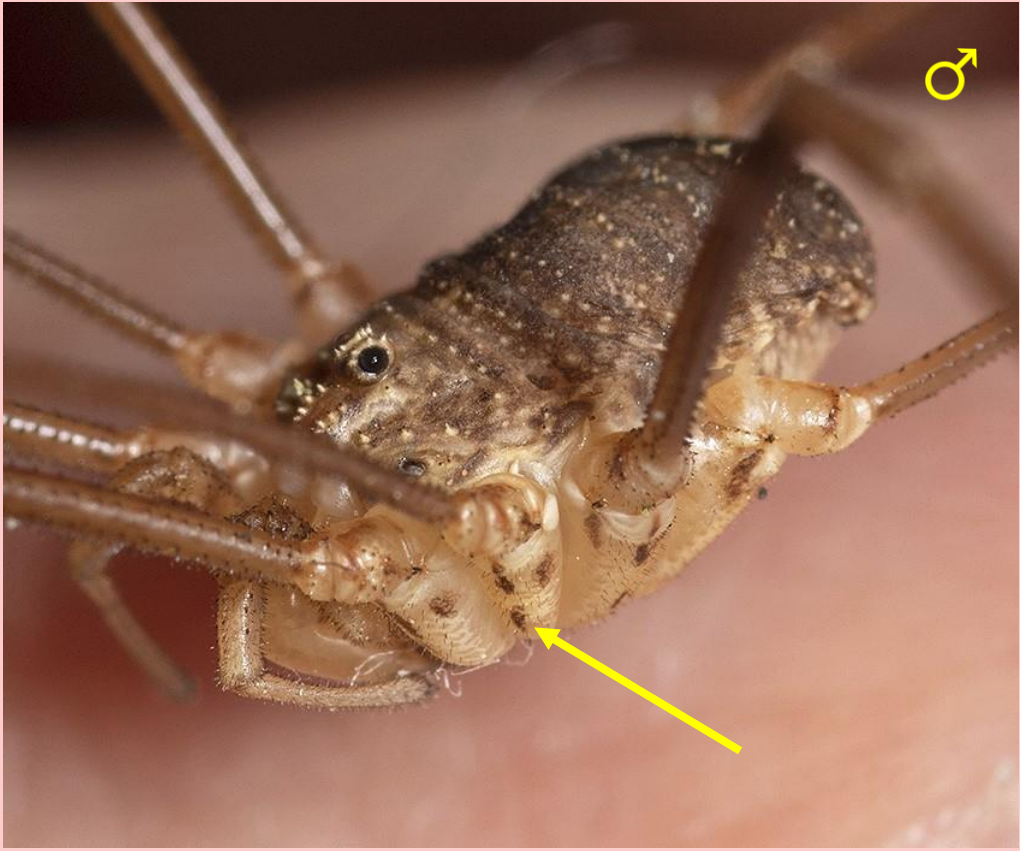
Where: grassland habitats including clifftops.

When: summer - autumn; scarce, scattered records.

Compare: *Opilio parietinus*, care required to separate.

Opilio parietinus

5 – 9 mm, very long legs. Tubercles on ocularium & carapace.



Dark spots on coxae (arrowed above).

Ocularium: with 2 rows of 5 to 7 tubercles (see *O. saxatilis*).

Coxae: dark spots on coxae.

Saddle: obscure, can have pale midline stripe.



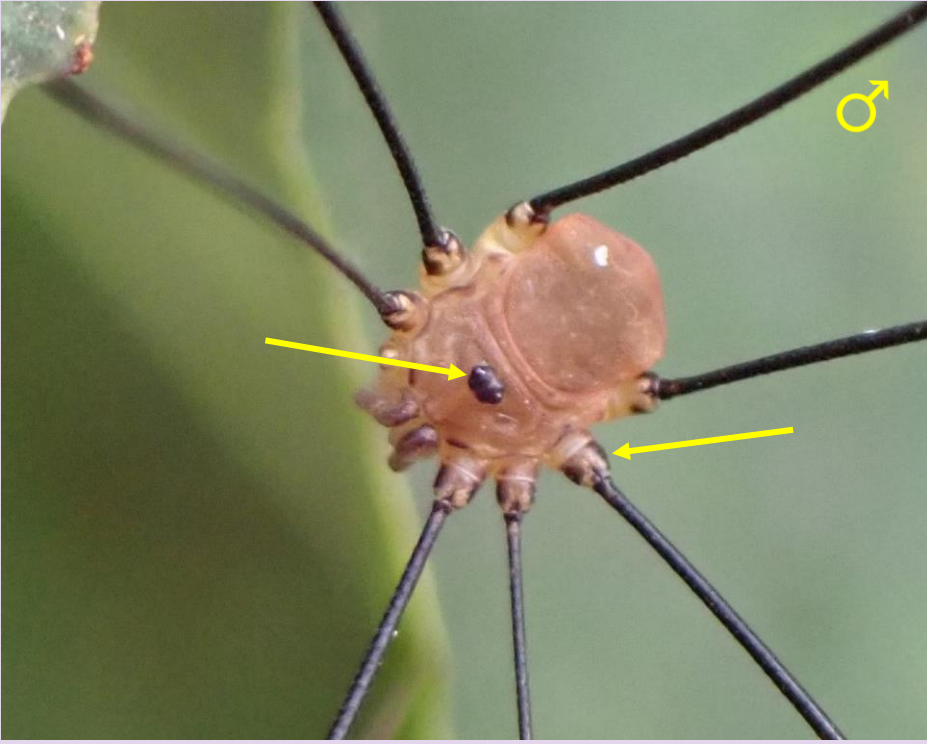
Where: previously synanthropic.

When: summer - autumn; very scarce; scattered records.

Compare: *Opilio saxatilis*, care required to separate.

Leiobunum rotundum

3 - 6.5 mm, very long legs. Smooth appearance inc. ocularium.



Smooth body with very long legs, smooth ocularium. Sexually dimorphic, male much smaller than female.

Ocularium: smooth; dark rings around eyes with thin pale line between (above). Female dark wedge in front of ocularium.

Other: pair of blunt projections above chelicerae.

Saddle: male absent; female dark, oblong (arrowed below).

Trochanters: pale with dark marks (arrowed above).



Where: in woodland, on trees bordering wetlands, usually in shrub layer.

When: summer - autumn; common/widespread.

Compare: *Leiobunum blackwalli*.

Leiobunum blackwalli

2.6 - 6 mm, very long legs. Smooth appearance inc. ocularium.



Smooth body with very long legs, smooth ocularium. Sexually dimorphic, male much smaller than female.

Ocularium: smooth; pale rings around eyes with thin dark line between (above). Female dark patch around pale ocularium.

Other: pair of blunt projections above chelicerae.

Saddle: male absent; female dark, triangular (arrowed below).

Trochanters: pale with dark marks (arrowed above).



Where: in woodland, on trees bordering wetlands, usually in shrub layer.

When: summer - autumn; fairly common/widespread.

Compare: *Leiobunum rotundum*.

Nelima gothica

2.5 – 4.5 mm, long legs. Smooth appearance inc. ocularium.



'White-kneed' appearance (arrowed below); rather nondescript although attractively marked.

Ocularium: pale with a few short spines & black hairs.

Other: white-kneed appearance from pale ends to leg segments.

Saddle: indistinct; body brown with pale patches & dark spots.

Trochanters: pale (arrowed above); dark mark on coxae.



Where: ground layer.

When: summer - autumn; scarce, scattered records.

Compare: *Leiobunum* spp.

Dicranopalpus ramosus

3 – 6 mm, very long legs. Tuning fork pedipalps, smooth ocularium.

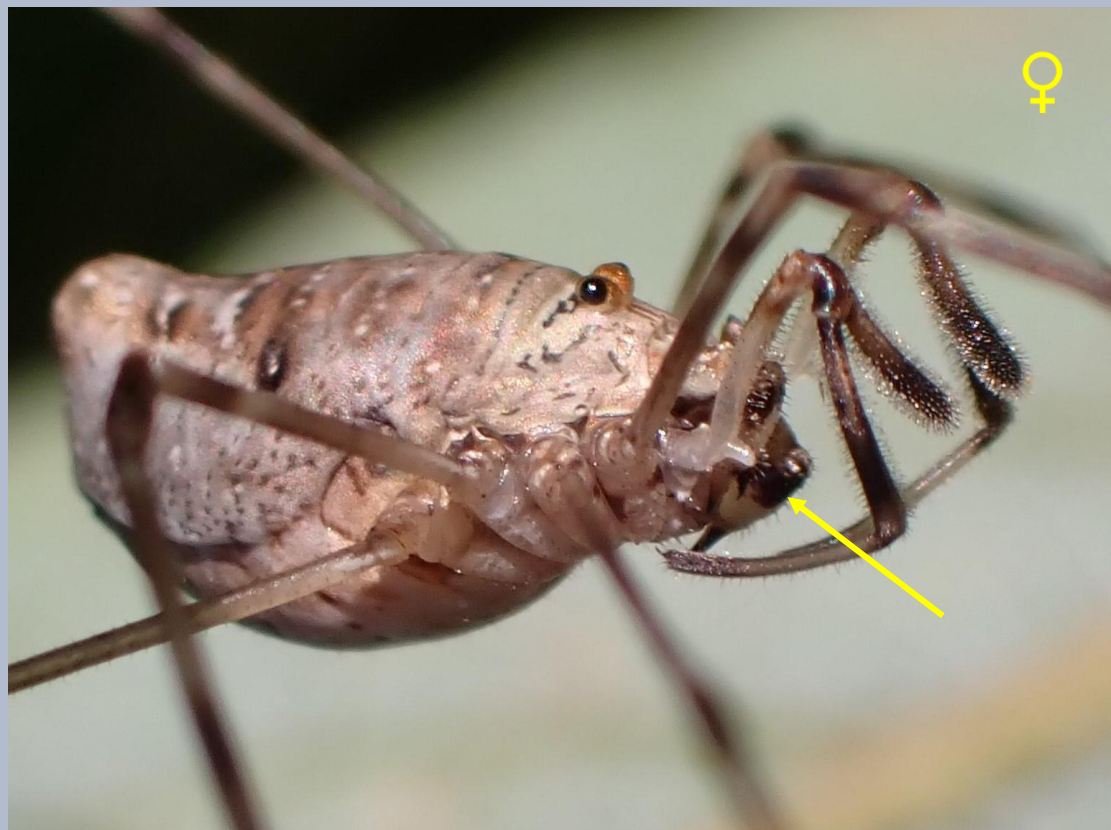


Tuning fork pedipalps. Very long legs held outstretched together when at rest. Male dark 'Zorro mask' (arrowed above).

Ocularium: smooth, pale to dark brown.

Pedipalps: elongate apophysis on patella giving 'tuning fork' appearance (arrowed above).

Chelicerae: adult female with glossy black band (arrowed below).



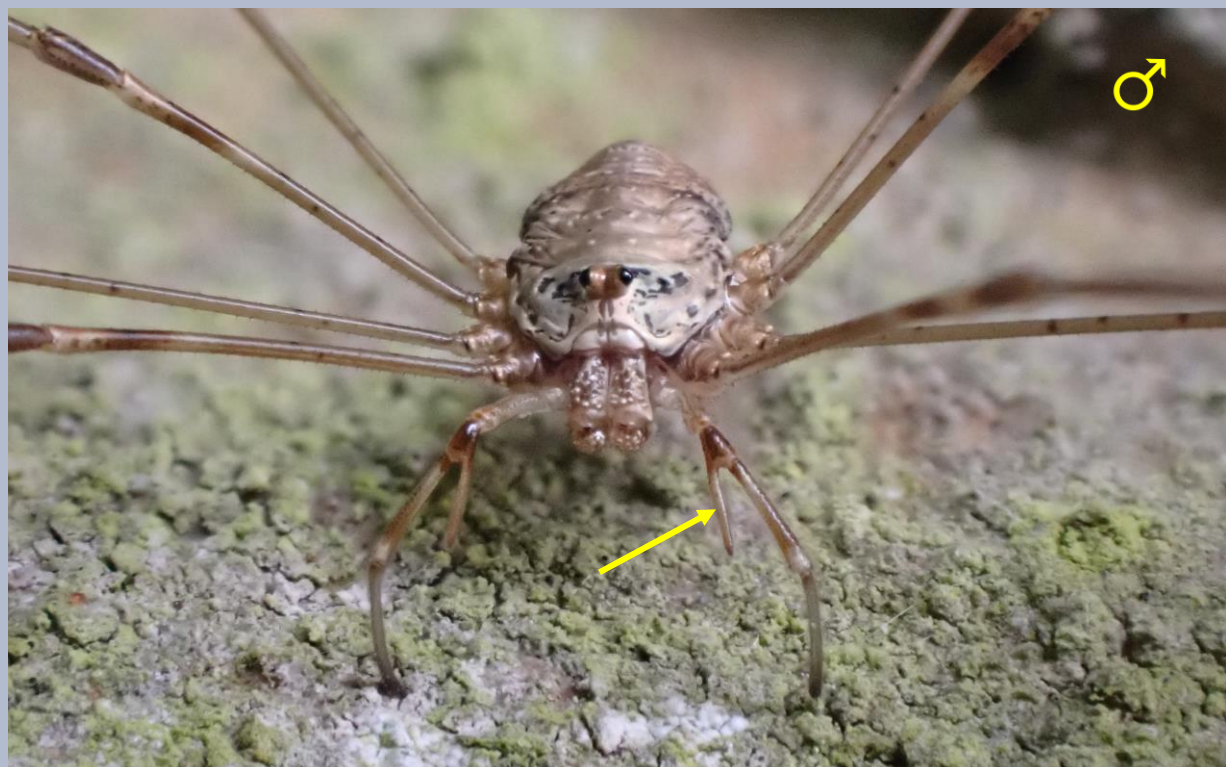
Where: around houses on walls; trees in woodland/heathland.

When: summer - winter; fairly common/widespread.

Compare: *Dicranopalpus caudatus*: females require care to separate; males require microscopic examination to determine.

Dicranopalpus caudatus

3 – 5 mm, very long legs. Tuning fork pedipalps, smooth ocularium.



Tuning fork pedipalps. Very long legs held outstretched together when at rest.

Ocularium: smooth, pale to dark brown.

Pedipalps: elongate apophysis on patella giving 'tuning fork' appearance (arrowed above).

Chelicerae: female with slightly darkened band (arrowed below).



Where: around houses on walls; trees/shrubs in parks, gardens.

When: summer - winter; status scarce/not known.

Compare: *Dicranopalpus ramosus*: females require care to separate; males require microscopic examination to determine.

Dicranopalpus larvatus

3 – 5 mm, medium legs. Tuning fork pedipalps, smooth ocularium.



Tuning fork pedipalps; sexually dimorphic: male 'pied', female purplish-brown with light bars/spots. Adult during winter.

Ocularium: smooth, very dark, blackish.

Pedipalps: elongate apophysis on patella giving 'tuning fork' appearance (arrowed below).

Other: male characteristic 'pied' appearance (above).



Where: ground layer, under fallen branches.

When: winter - spring; currently 1 known Norfolk site.

Compare: other *Dicranopalpus* spp.

Anelasmaocephalus cambridgei

2.8 – 4 mm, short legs. Flattish body.



Flattened body, covered in soil particles.

Ocularium: absent, eyes at base of 'hood'.

Other: hood over chelicerae (arrowed above).

Legs: robust, with long spines & setae embedded with soil particles.



Where: ground dwelling; amongst moss & leaf litter.

When: all year; scarce. Usually found by sieving/in pitfall traps.

Compare: no similar species in Norfolk.

Homalenotus quadridentatus

3.5 – 5 mm, short legs. Flattish body.



Flattened body, often covered in soil particles; trident single spine; 4 tubercles projecting from rear of carapace.

Trident: single spine pointing forwards (arrowed above).

Ocularium: small with tubercles

Other: 4 tubercles projecting from rear of carapace (arrowed below); pattern of dark & light squares on dorsum.



Where: ground dwelling; amongst moss & leaf litter.

When: all year; scarce. Usually found by sieving/in pitfall traps.

Compare: no similar species in Norfolk.

Acknowledgements and Further Resources

All photographs are copyright of the authors.

Grateful thanks to the following for use of their photos:

Ian Beddison (*Megabunus diadema*, *Mitopus morio* ♀, *Opilio parietinus* and *Nelima gothica*).

Martin Rejzek (*Anelasmacephalus cambridgei* and *Homalenotus quadridentatus*).

Paul Richards (*Paroligolophus meadii*).

Other photos by Vanna Bartlett.



A PDF guide to Harvestmen species in Norfolk can be found on the Norfolk and Norwich Naturalists' Society website:

<https://norfolknaturalists.org.uk/wp/publications/species-guides/>



More information on all UK species of Harvestmen can be found on the Field Studies Council (FSC) fold out chart by Paul Richards.

Harvestmen Records: please record your sightings on iRecord.

Glossary

- Apophysis** (plural apophyses) an extension, usually on part of the pedipalp.
- Armature** collective term for the various tubercles, spines etc on a harvestman.
- Bifid** of a structure, branched into 2 parts.
- Capitate** (of setae) tipped with a glandular secretion.
- Carapace** the tough top section of the cephalothorax.
- Cephalothorax** the front part of the body (head & thorax combined).
- Chelicerae** pair of pincer-like appendages used for feeding.
- Coxa** (plural coxae) the 1st or basal segment of a leg or pedipalp.
- Denticle** a short solid outgrowth of the cuticle.
- Dorsum** upper surface of the body.
- Genital operculum** forward opening flap on the underside of the body which conceals the ovipositor or penis depending on sex.
- Gravid** a female swollen with eggs
- Hood** extension of the cephalothorax covering the chelicerae in certain species.
- Ocularium** turret like structure housing the eyes
- Patella** 4th segment of leg or pedipalp, the 'knee'.
- Pedipalps** pair of appendages used to manipulate food, etc.
- Saddle** dark or patterned area on the dorsum on some species.
- Sclerotized** hardened.
- Seta** (plural setae) fine hair-like structure.
- Sexually dimorphic** a species where male & female differ significantly in appearance.
- Spine** sharp bristle-like structure.
- Spicule** a small, erect denticle.
- Synanthropic** found in association with people.
- Trident** group of three often long & pointed tubercles in the centre of the front edge of the carapace.
- Trochanter** the 2nd segment of a leg or pedipalp.
- Tubercle** a hollow projection of the cuticle; can be small or large, blunt or sharp; the trident characteristic of several species is made up of 3 long pointed tubercles.

Concept, text, layout and design by Vanna Bartlett with thanks to James Emerson and Ian Beddison for their input. Abundance based on records from Norfolk Biodiversity Information Service, iRecord and Harvestman Recording Scheme (data up to autumn 2023).

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