

### ***Lasioglossum***

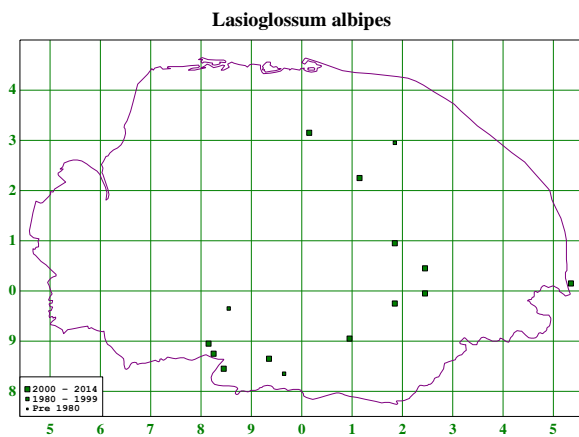
This genus consists of mostly small dark bees which have a rima at the end of the abdomen. They differ from *Halictus* in (nearly all) having the hair bands on the tergites only at the base and not on the hind margin. The hair bands (consisting of hairs pressed down on the cuticle) become more exposed as the abdomen is stretched. Four Norfolk species have a metallic green/blue cuticle. The tongue is short. Pollen is collected on the hind legs and nesting is in the ground often in aggregations, with some species being eusocial. Mated females survive the winter, with males usually first appearing in early summer. Bees in the genus *Sphecodes* are often cleptoparasites, as is *Nomada shappardana*. The wasp, *Cerceris rybyensis* often preys on *Lasioglossum* species. Thirty four species have been recorded in the British Isles, with 22 recorded in Norfolk, 21 post-2000. Many are difficult to identify without looking at microscopic features.

### ***Lasioglossum albipes***

This species closely resembles the much commoner *L. calceatum* (qv). *L. albipes* is smaller with a longer face. Microscopic examination is needed to confirm identity.

**Flight times** May – September with males recorded only in August - September.

**Distribution** Widely distributed but not common.



**Habitat** Brecks, cliffs, commons, parkland, woodland rides.

**Flowers visited** Yellow Asteraceae, Bramble.

**Nesting** No Norfolk records.

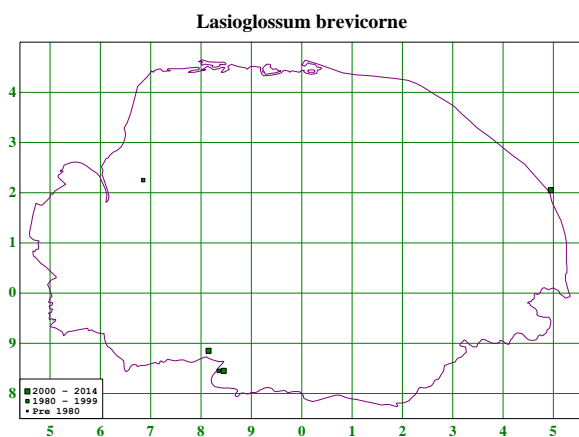
**Parasites** *Sphecodes monilicornis* (SF).

### ***Lasioglossum brevicorne***

Microscopic examination is needed to confirm identity. **Females** have a shiny thorax and pale wing stigmas. There are hair patches on T2 and T3 and the end of the abdomen has many white hairs. **Males** have short antennae. The mandibles and lower clypeus are yellow but the labrum is black (SF).

**Flight times** Females recorded May – September.

**Distribution** Recorded from Roydon Common 1996 (MEA), Thetford Warren 1983 (Brecks Project), Santon Warren 2011, 2014, 2015 (TS) and Winterton Dunes 2014 (TS). A scarce species nationally.



**Habitat** Sandy heathland.

**Flowers visited** No information.

**Nesting** No information.

**Parasites** Possibly *Sphecodes puncticeps* (BWARS).

### *Lasioglossum calceatum*

**Females** The face is round with dense punctation. The body hair is pale rusty brown and there are white hair patches on the tergites. These show through the transparent margin of the preceding tergite, making the edges look orange. **Males** are long and slim with dark antennae and yellow markings on the legs. Some have red areas of cuticle on the abdomen.



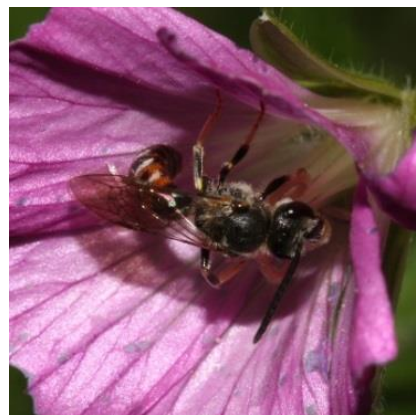
*Lasioglossum calceatum* female. Thriplow, Cambridgeshire 24<sup>th</sup> March 2012.



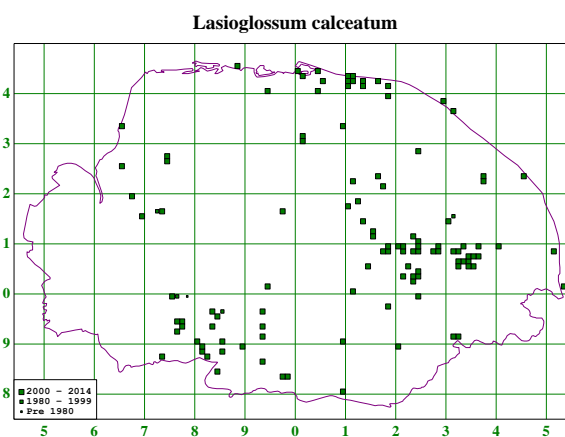
*Lasioglossum calceatum* male. Weybourne 25<sup>th</sup> August 2009.

**Flight times** April – September. Males from June.

**Distribution** Widespread: probably the commonest member of the genus in the county.



*Lasioglossum calceatum* male, red form. Cley 5<sup>th</sup> August 2015.



**Habitat** Commons, heathland, parkland, gardens, river valleys, green lanes, coastal sites but not dunes.

**Flowers visited** Angelica, Aster, Yellow Asteraceae, Catsear, Cherry Plum, Cinquefoil, Fennel, Corn Marigold, **Germander Speedwell**, Greater Spearwort, Hawkweed, **Hemp Agrimony**, Hogweed, Ivy, Marsh Helleborine, Mullein, Ragwort, **Rowan**, garden Sea Holly, Small Scabious, Field Scabious, Spear Thistle, Speedwell, Thyme, Tormentil.

**Nesting** Nest aggregations observed on track Weybourne Camp, path at Wymondham and in a garden lawn, where each hole had 3-4cm turrets (TS).

**Parasites** *Sphecodes monilicornis* and possibly *S. ephippius* (SF).

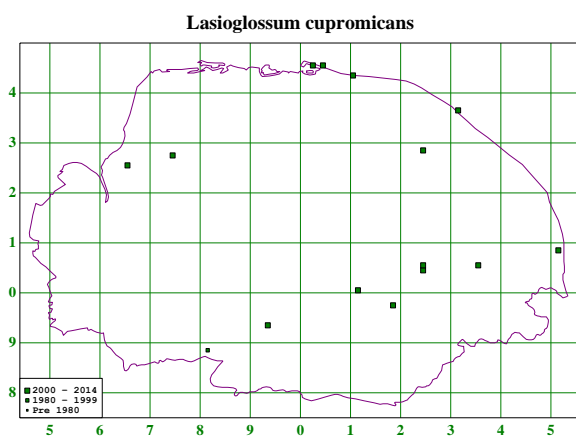
### ***Lasioglossum cupromicans***

One of four species with a metallic cuticle.

**Females** have a long face, shiny punctured thorax and poorly defined white anterior hair bands on the abdomen. **Males** are similar with pale yellow undersides to the antennae.

**Flight times** May – September. Males from July.

**Distribution** Widely scattered across the county but not common.



**Habitat** Hot sandy places such as Blakeney Point, Weybourne Camp, Caistor Quarry and Santon Warren, but also Flordon Common and Wymondham Cemetery.

**Flowers visited** No information.

**Nesting** No records.

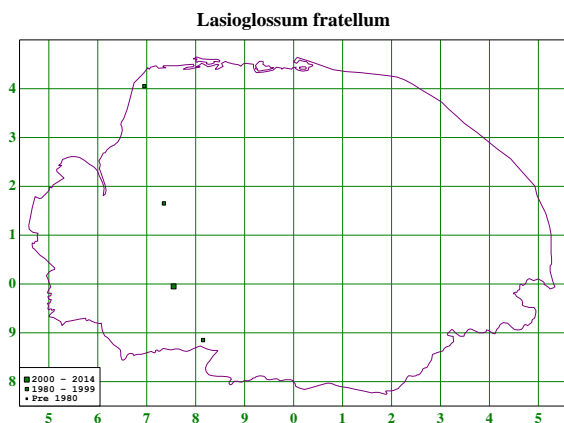
**Parasites** Possibly *Sphecodes geoffrellus* (SF).

### ***Lasioglossum fratellum***

This species requires microscopic examination for identification. **Females** have an oval face, a dull thorax and shiny first tergite, but no obvious hair patches on the tergite margins. The wing stigmas are pale brown. **Males** have very long antennae which are orange beneath; a feature shared with *L. fulvicorne*. The labrum is orange and the tip of the clypeus is pale yellow. The tarsi are also orange-yellow.

**Flight times** Recorded in July.

**Distribution** Four records, all from the west of the county.



**Habitat** Sites include chalk grassland (Ringstead Downs) and base poor sites (Santon Warren, East Walton Common).

**Flowers visited** No information.

**Nesting** No records. A eusocial species (BWARS).

**Parasites** *Sphecodes hyalinatus* is a cleptoparasite (BWARS).

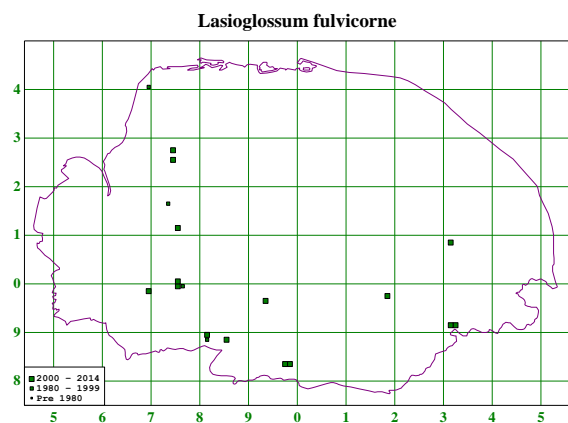
### ***Lasioglossum fulvicorne***

This species requires microscopic examination for identification, and is similar to *L. fratellum*.

**Females** have a rounder face than *L. fratellum* and a paler wing stigma. There are hair patches at the edges of T2 and T3. **Males** have very long antennae which are orange beneath, as in *L. fratellum*. There is a yellow spot at the base of the clypeus, but the labrum and mandibles are black. The tarsi and parts of the tibiae are yellow.

**Flight times** April – August. Males from July.

**Distribution** Most records are from the west of the county, but also found farther east, for example at Ditchingham.



**Habitat** Recorded from calcareous sites such as Ringstead Downs, Middle Harling Heath and Flitcham, but also on short grasslands which appear more acidic such as East Walton Common. At Ditchingham it is present on a rabbit nibbled grassy bank.

**Flowers visited** Wild Mignonette.

**Nesting** No records. A solitary species (BWARS).

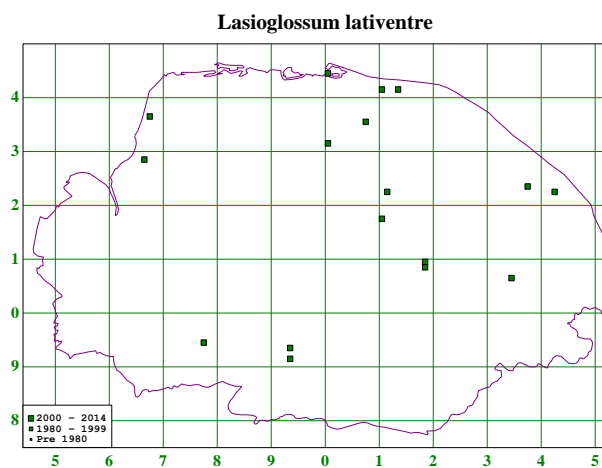
**Parasites** *Sphecodes hyalinatus* is a cleptoparasite (BWARS).

### ***Lasioglossum lativentre***

This species requires microscopic examination for identification. **Females** have a shiny punctured thorax and anterior hair bands on T2 – T4 and are very similar to *L. quadrinotatum*. The latter has a pale wing stigma – brown in *L. lativentre*. **Males** have similar punctation and hair patches. The labrum and tip of the clypeus are pale yellow as are the tarsi and each end of the tibiae; a pattern seen in the males of several species.

**Flight times** April – September. Males from August.

**Distribution** Widespread but not common.



**Habitat** Broads, river valleys, coastal marshes, brownfield sites, woodland rides, heathland.

**Flowers visited** Dandelion, Ragwort, Corn Sowthistle (male).

**Nesting** No Norfolk information.

**Parasites** *Sphecodes ehippius* and *S. puncticeps* are cleptoparasites (SF).



### ***Lasioglossum leucopus***

One of four species with a metallic sheen.

**Females** have a round face and a dull punctate thorax. The tergites have shiny margins and lack clear hair bands. The body and leg hairs are white. The very similar *L. morio* is slimmer with a longer face and the tergite margins have microscopic sculpturing.

**Males** The undersides of the antennae are buff. The labrum and lower clypeus and the tarsi and each end of the tibiae are yellow. The tergite margins are shiny as in females.

**Flowers visited** Corn Sowthistle and other yellow Asteraceae.

**Nesting** At nest site on 3<sup>rd</sup> October 2012 on a sloping sandy cliff on Kelling Heath.

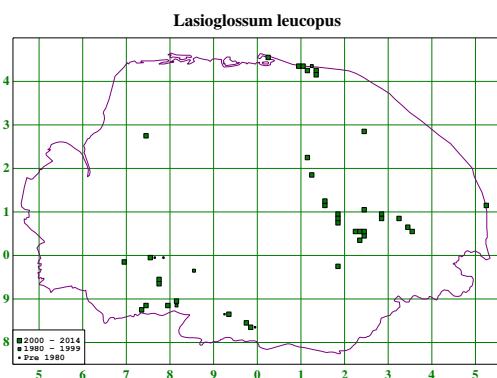
**Parasites** Possibly *Sphecodes geoffrellus* (BWARS).



*Lasioglossum leucopus* female. Weybourne Beach 27<sup>th</sup> March 2012.

**Flight times** March – October. Males from June.

**Distribution** Widespread and common.



**Habitat** Places with light soils including coastal sites, quarries, heathland and chalk grassland.

### *Lasioglossum leucozonium*

**Females** One of the larger more robust species with a round face and bold hair bands on the anterior edges of the tergites. The thorax punctures are surrounded by micro-reticulation making it look dull. **Males** are similar. The tip of the clypeus is pale but the labrum is black. The mid and hind basitarsi are white and there are white marks at the top of each tarsus.



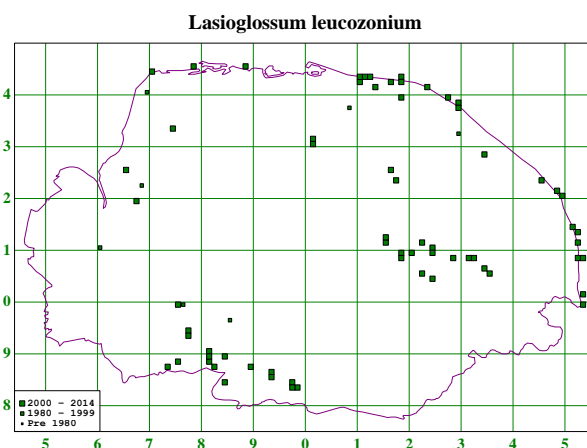
*Lasioglossum leucozonium* female. Kelling Heath 18<sup>th</sup> August 2013

**Flight times** May – September. Males from late June.

**Distribution** One of the commoner *Lasioglossum* species in the county with most records coming from the west Norfolk heaths, the Brecks, the Cromer Ridge, the coast and the Norwich area.



*Lasioglossum leucozonium* male. Beeston Common 27<sup>th</sup> August 2009



**Habitat** Lighter soils of gardens, quarries, heathland, soft cliffs, saltmarsh, chalk grassland, dunes.

**Flowers visited** Mostly Asteraceae including Catsear, Corn Sowthistle, Fleabane, Knapweed, Nipplewort, Ragwort, Oxford Ragwort. Also Creeping Thistle (male).

**Nesting** On hard packed gravel on pill box, Weybourne cliff edge. Sometimes nests in aggregations (BWARS).

**Parasites** *Sphecodes ephippius* (BWARS).

### *Lasioglossum malachurum*

**Females** The head is broad and the thorax is dull and punctured. The pronotum forms prominent angles at the corners, just behind each eye. There are hair patches in the corners of T2 and T3 and the tergite margins look brownish where the hair bands show through. The body and leg hairs are pale brown. **Males** have ochre coloured undersides to the antennae and have protonal angles similar to those of females. The mandibles, labrum and tip of the clypeus are yellow. The tarsi are white except for the final segment. The tibiae are also white with a dark marking.



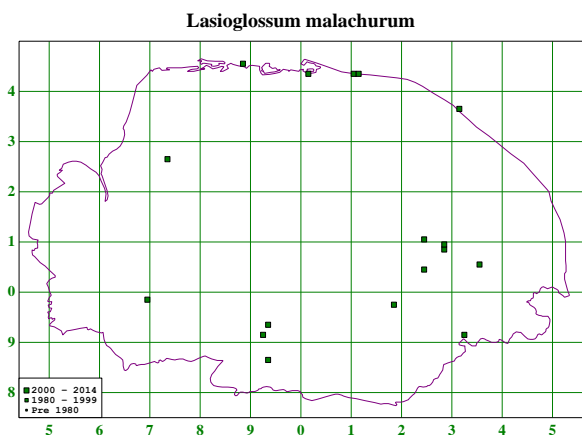
*Lasioglossum malachurum* female at nest hole. Weybourne cliff 22<sup>nd</sup> May 2015



*Lasioglossum malachurum* female. Weybourne beach 27<sup>th</sup> March 2012

**Flight times** March – August. Males from July.

**Distribution** Widely distributed in the county. This species has expanded its range northwards since the 1990s though it was recorded in the county in the 19thC. North Norfolk is at the northern edge of its current British range.

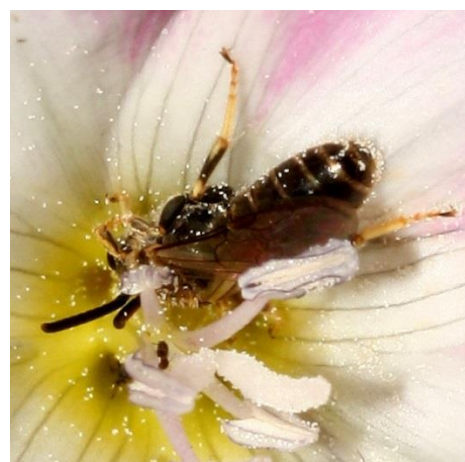


**Habitat** Quarries, commons, chalk grassland, heathland, woodland rides.

**Flowers visited** Field Bindweed (male).

**Nesting** Nests made in gravelly well trodden path by Weybourne cliff, May 2015. The nests were scattered among those of *Andrena humilis*. This is a eusocial species (BWARS).

**Parasites** *Sphecodes monilicornis* (BWARS).



*Lasioglossum malachurum* male on Field Bindweed. Weybourne Camp 8<sup>th</sup> August 2010.

### ***Lasioglossum minutissimum***

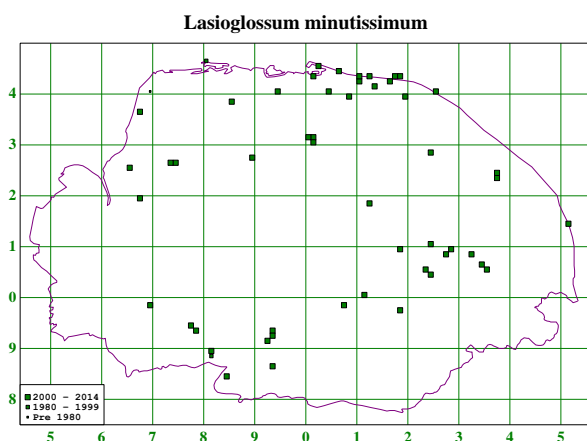
This is a very small species as its name suggests. **Females** look black and shiny with a dark wing stigma and white body hairs. There are no clear hair bands on the rather broad abdomen. **Males** are similar and the cuticle is entirely black.



*Lasioglossum minutissimum* female. Beeston Common 24<sup>th</sup> May 2012.

**Fight times** March – September. Males from June.

**Distribution** Common and widespread.



**Habitat** Gardens, commons, heathland, woodland (sometimes under canopy), coastal sites.

**Flowers visited** Catsear, Lesser Celandine, Corn marigold, Lesser Celandine, Wild Parsnip, Ramsons.

**Nesting** Nesting aggregations observed on sloping or vertical banks on heathland and coastal paths.

**Parasites** *Sphecodes longulus* (SF).

### *Lasioglossum morio*

This is one of the four species with a metallic sheen. **Females** have a slim build and a long face. The thorax is a dull green and there are hair bands on T2 – T4. **Males** are similar but very slender with long antennae with ochre coloured undersides and a yellow mark on the clypeus.



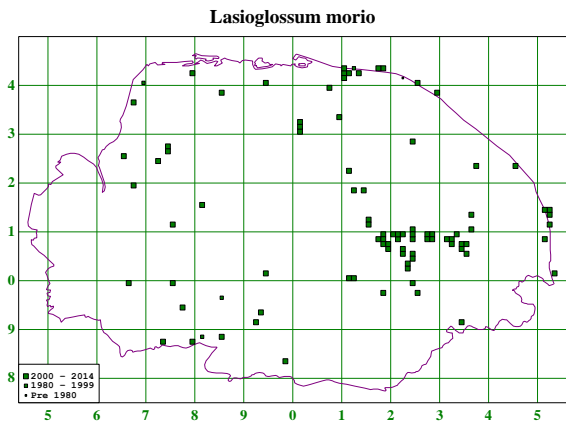
*Lasioglossum morio* female. Thriplow, Cambridgeshire 19<sup>th</sup> June 2011.



*Lasioglossum morio* male. Thriplow, Cambridgeshire 19<sup>th</sup> June 2011.

**Flight times** March – October. Males from June.

**Distribution** Widespread and common.



**Habitat** Gardens, parkland, quarries, commons, cliffs, heathland, chalk grassland, river valleys, woodland rides.

**Flowers visited** Yellow Asteraceae, Cinquefoil, Cornflower, Creeping Thistle, Dandelion, Fennel, Germander Speedwell, Ground Ivy, Hogweed, Lavender, Ragwort, Ramsons, garden Sea Holly, Sowthistle.

**Nesting** Nesting aggregation on bare ground, Cut-off Channel, Stoke Ferry and in cliff at Overstrand. A eusocial species (BWARS).

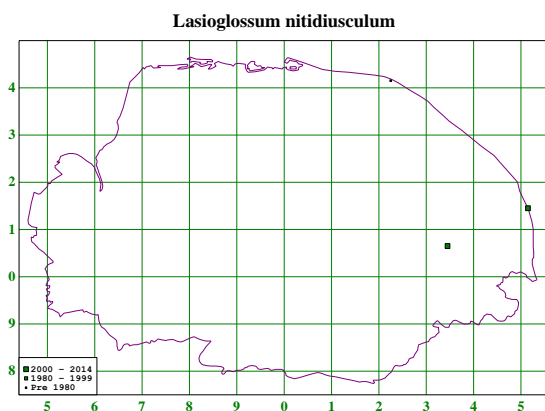
**Parasites** *Sphecodes niger* and possibly other *Sphecodes* species. (BWARS).

### ***Lasioglossum nitidiusculum***

This species requires microscopic features for identification. **Females** have a round face and no hair bands on the tergites. **Males** have long antennae and partially yellow legs (SF).

**Flight times** March – August

**Distribution** There is a male specimen from Cromer August 1971 in the Norwich Castle Museum (KD confirmed TS), annotated 'nest hole in cliff face'. A female was recorded in March and another in May at Strumpshaw Fen 2006 (TS). Another female was recorded at California Cliffs in July 2015 (TS). The species has declined nationally (BWARS).



**Habitat** Coastal cliffs, river valleys.

**Flowers visited** No records.

**Nesting** Cliff faces.

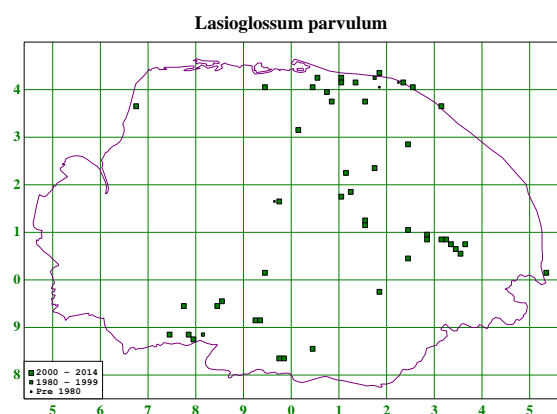
**Parasites** Small *Sphecodes* species and *Nomada sheppardana* (BWARS).

### ***Lasioglossum parvulum***

This species requires microscopic features for identification. **Females** have a round face and dull thorax. The wing stigma is mid-brown and there are no hair bands on the abdomen. T1 has few punctures and looks shiny. **Males** have long antennae which are yellow ochre beneath. The mandibles and the tip of the clypeus are yellow but the labrum is dark. The tarsi are partially orange and each end of the tibia is orange/brown.

**Flight times** March – October. Males from July.

**Distribution** Common but few records in the west of the county.



**Habitat** Gardens, quarries, commons, heathland, woodland rides, river valleys, Brecks. No records from the Broads.

**Flowers visited** Corn Sowthistle, Dandelion, Gipsywort, **Hogweed**, Purple Loosestrife, Red Dead-nettle, Snowdrop, White Dead-nettle.

**Nesting** Nest aggregations in sand pits at Stanta, Strumpshaw Fen and Kelling Heath and cleared ground at Sheringham Park; also in root plates at Stanta and Hoe Rough. Males patrolling gorse at Holt Lowes.

**Parasites** Several small *Sphecodes* species reported and *Nomada sheppardana* (BWARS).

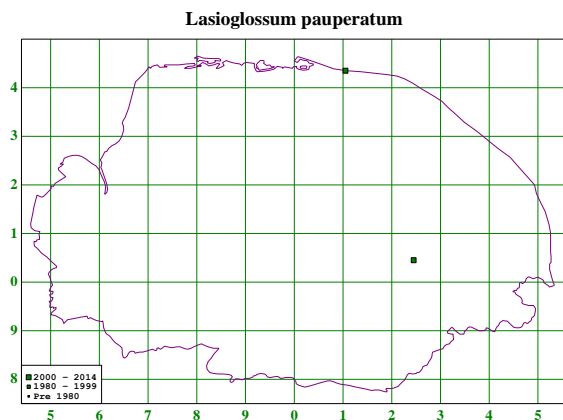
### ***Lasioglossum pauperatum***

**Females** A small squat species with a wide head and no clear hair bands on the tergites.

**Males** have yellow mandibles, labrum and lower clypeus. The tarsi are also pale.

**Flight times** May – August. Males from August.

**Distribution** Recorded at Caistor Quarry 2008, 2010, 2012 (TS). A male was recorded at Weybourne Camp 2013. A scarce species nationally, confined to the south and east.



**Habitat** Quarry and sandy coastal grassland.

Flowers visited No records.

**Nesting** Upto 15 females recorded at Caistor Quarry so presumably breeding there.

**Parasites** None known (SF).



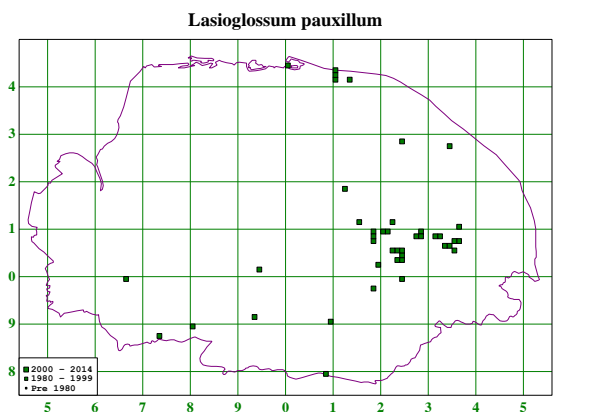
### ***Lasioglossum pauxillum***

**Females** have a round face and the tips of the antennae are partially yellow beneath. The thorax is dull and punctate and there are no obvious hair bands on the abdomen. The wing stigmas are pale yellow-brown with a darker hind margin. The hind tibial spur is lobed: a microscopic feature which is diagnostic.

**Males** The undersides of the antennae are yellow and there is a yellow mark on the clypeus and sometimes the labrum and mandibles are also yellow. The tarsi are yellow and the tibiae sometimes partially so.

**Flight times** April – September. Males from June.

**Distribution** Fairly common in the county. A southerly species nationally which is increasing.



**Habitat** Commons, quarries, gardens, river valleys, parks, heathland.

**Flowers visited** Wild Carrot, Yellow Asteraceae, Hogweed, Yarrow.

**Nesting** No Norfolk information. A eusocial species which nests in aggregations (BWARS).

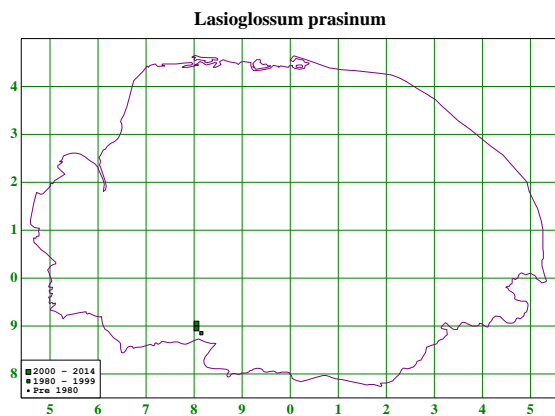
**Parasites** No British information (BWARS).

### ***Lasioglossum prasinum***

**Females** have very broad hair bands on the tergite margins with further white hair on the front edges of T1 and on the surface of T3 – T5, making the hind parts of the abdomen look whitish. **Males** have red cuticle on T7, which is downcurved (SF).

**Flight times** May – August.

**Distribution** Recorded at Santon Warren 1986 (Brecks Project) and at Weeting 2011 and Grimes Graves 2009, 2011 (GN).



**Habitat** Forest rides and glades in the Brecks.

**Flowers visited** No information.

**Nesting** No nests recorded.

**Parasites** Possibly *Sphecodes reticulatus* and *S. pellucidus* (BWARS).

### ***Lasioglossum punctatissimum***

**Females** have a long face with a raised clypeus and supraclypeus and short antennae. Most of the body surface is covered in dense punctures. There are hair bands on the front corners of T2 and T3. The wing stigmas are dark. **Males** have short antennae with rather bulging segments, partially orange beneath. The basitarsi are yellow with the lower tarsi being yellow suffused with black.



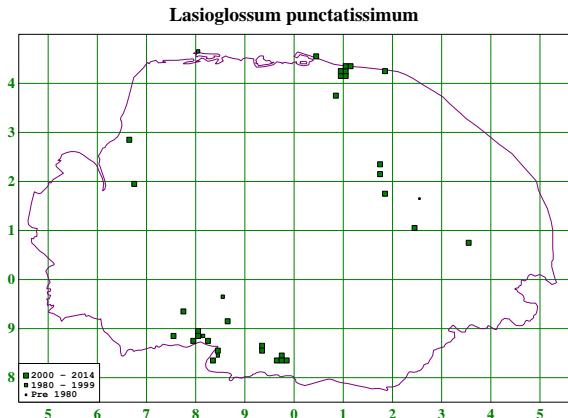
*Lasioglossum punctatissimum* female. Kelling Heath 27<sup>th</sup> April 2011.



*Lasioglossum punctatissimum* male. Kelling Heath 30<sup>th</sup> July 2012.

**Flight times** March – August. Males from July.

**Distribution** Widely distributed but with no records for central Norfolk or the east coast.

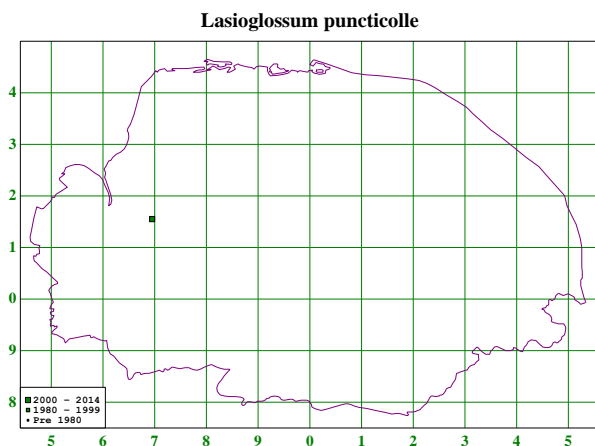


### ***Lasioglossum puncticolle***

This species requires microscopic examination for identification. **Females** are similar to *L. villosulum* in having a shiny thorax with widely spaced deep punctures, but *L. puncticolle* has ridges under the sides of the head beneath the eyes. **Males** have similar but with less marked features. The mandibles, labrum and base of the clypeus are yellow as are the tarsi and parts of the tibiae (SF).

**Flight times** July.

**Distribution** There is only one county record, a female from East Winch Common July 2012 (TS). The species is largely confined to the south-east of England.



**Habitat** Acidic grassland with heather and gorse.

**Flowers visited** No records.

**Nesting** No records.

**Parasites** None known (BWARS).

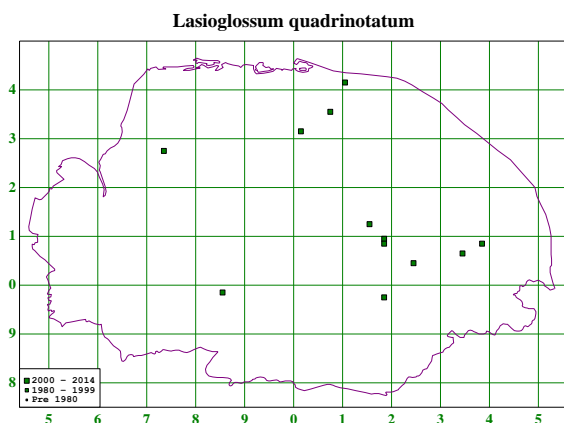
### ***Lasioglossum quadrinotatum***

**Females** There are prominent hair bands on the anterior part of T2 and T3. The wing stigmas are pale orange (darker in the similar *L. lativentre*) and there are differences in the punctation of T1, visible with magnification.

**Males** The antennae are black. The tip of the clypeus and labrum are yellow as are the tarsi and both ends of the tibiae. These features are very similar to those of *L. lativentre*, but they can be distinguished from differences in their genitalia.

**Flight times** April – July.

**Distribution** Widely scattered but not common. This is a scarce species nationally.



**Habitat** Green lanes, woodland rides, churchyards, quarries, commons, river valleys.

**Flowers visited** Dandelion, Hogweed, White Bryony.

**Nesting** No records.

**Parasites** Possibly *Sphcodes ephippius* and *S. puncticeps* (SF).

***Lasioglossum sexnotatum***

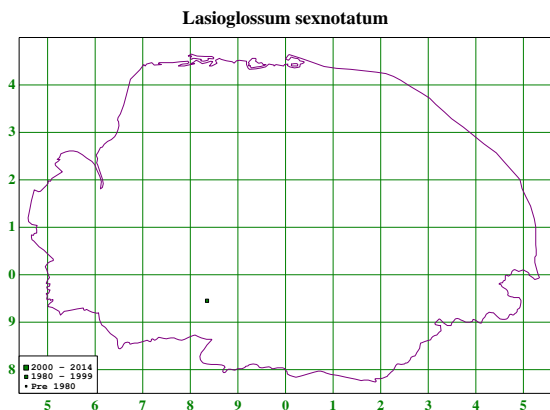
**Females** A large species with a dull punctured thorax and a shiny abdomen with striking white hair patches on T2 – T4. **Males** are similar with long antennae which are yellow beneath (SF).



*Lasioglossum sexnotatum* female. Ipswich May 2006. (N. Sherman)

**Flight times** Recorded in April and August.

**Distribution** Two Norfolk records: TL88 in April 1913 and at Buckenham Tofts TL89 August 1985 (AF). The species was recorded just over the county border at Center Parks, Eleveden, Suffolk in August 2015 with more recent records in the south of Suffolk. This is a rare species nationally.



**Habitat** Buckenham Tofts is in the Stanford Training Area. The habitat is grassland, woodland and scrub with sheep grazing.

**Flowers visited** Observed on thistles at Elveden.

**Nesting** No information.

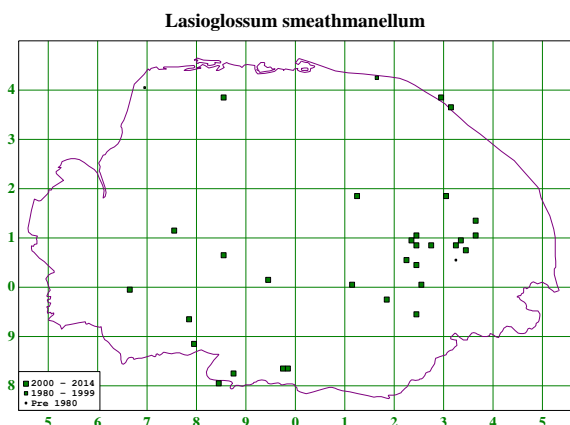
**Parasites** None known (SF).

### ***Lasioglossum smeathmanellum***

One of four species with a metallic sheen: very similar to *L. cupromicans* and requiring microscopic features to separate. **Females** have an oval head (narrower in *L. cupromicans*), a shiny punctured thorax and metallic green tergites (black in *L. cupromicans*) with a hair bands on T2 – T4 (hair less marked in *L. cupromicans*). **Males** have a yellow spot on the clypeus (usually absent in *L. cupromicans*).

**Flight times** April – September. Males from July.

**Distribution** Widely distributed but few recorded in the coastal zone (a record from Mundesley Cliffs only) despite comments by BWARS that it often nests in soft cliffs.



**Habitat** Quarries, gardens, churchyards, chalk grassland, forest rides.

**Flowers visited** Garden Bellflower, Flixweed, Oxeye daisy, Yarrow.

**Nesting** Nests observed in a brick wall and in the mortar of several stone churches (TS). Not eusocial (BWARS).

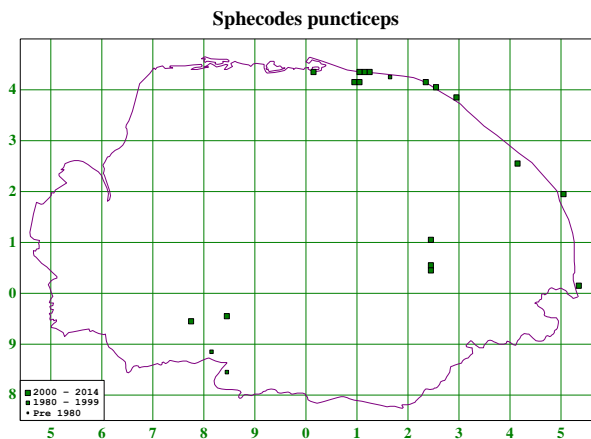
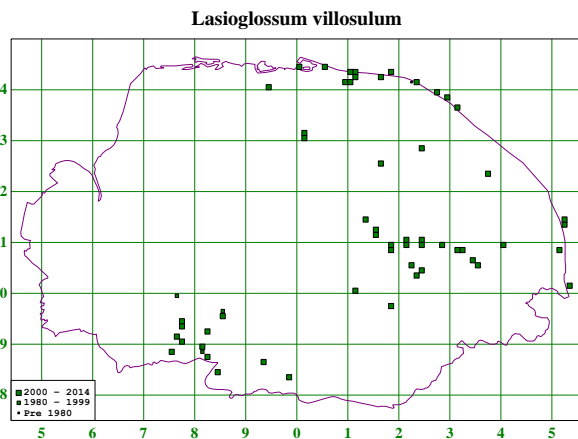
**Parasites** None known (BWARS)

### ***Lasioglossum villosulum***

**Females** The face is round and the thorax has widely spaced punctures. The body hair is white but there are no hair bands on the abdomen. **Males** The antennae are yellow beneath but there are no yellow markings on the face or legs.

**Flight times** April – September. Males from July.

**Distribution** Widespread and common but with few records for central and western areas.



**Habitat** Brownfield sites, commons, quarries, cliffs, heathland, woodland rides, chalk grassland, Brecks.

**Flowers visited** Yellow asteraceae including Corn Sowthistle, Hawkbit (*Leontodon sp.*), Hawksbeard (*Crepis sp.*) and Catsear (*Hypochaeris radicata*).

**Nesting** Observed at a sandpit at Strumpshaw (TS). Not eusocial (BWARS).

**Parasites** Possibly *Sphecodes puncticeps* (SF). The distribution of *S. puncticeps* in Norfolk is consistent with this.



### ***Lasioglossum Xanthopus***

This is the largest British *Lasioglossum*.

**Females** The thorax has red hair and there are broad hair bands on T2 – T4. The hind tibiae and tarsi are orange. They resemble *Halictus rubicundus* but in *L. xanthopus* the hair bands are at the anterior edge of the tergites rather than the hind margin. **Males** are large with brown hair on the thorax (SF).



*Lasioglossum xanthopus* female on Greater Knapweed. Heydon Essex 14<sup>th</sup> June 2011.

**Flight times** April – August. Males from August (BWARS).

**Distribution** There is one county record, from Caister 1902 (TS 2011). This species has been found recently in the Suffolk Brecks and the

Newmarket area. Its specific parasite, *Sphecodes spinulosus*, was recorded at Fritcham in 2013. It is a scarce species nationally.

**Habitat** Chalk grassland and soft cliffs.

**Flowers visited** A wide variety (BWARS).

**Nesting** Forms nesting aggregations (BWARS).

**Parasites** *Sphecodes spinulosus* (BWARS).

***Lasioglossum zonulum***

**Females** are very similar to *L. leucozonium* but have sparser punctation on T1 (requires microscope) and a paler wing stigma. **Males** have black legs (*L. leucozonium* has white basitarsi).

**Flight times** April – October. Males from June (BWARS).

**Distribution** There is one record, from West Runton 1900 (Strudwick 2011).

**Habitat** Woodland rides and coast avoiding calcareous soils (BWARS).

**Flowers visited** A wide range of species (BWARS).

**Nesting** A solitary species (BWARS).

**Parasites** *Sphcodes scabricollis* (BWARS).