

# THE KENT CAREX KEY

Botanical terminology has been kept to a minimum to avoid referral to a glossary, however two terms will be mentioned here as to reduce unnecessary text within the key. For other terms regarding the structure of sedges these will be dealt with prior to this key.

**Glaucous:** Bluish-green or bluish-grey, usually in reference to leaf colour.

**Hyaline:** Thin, more or less transparent to colourless, usually in reference to glumes.

## KEY 1

- 1 Flowers/fruits attached individually to the one single stem, separate clusters not being formed; no bracts; very rare, Hothfield Bog [C. pulicaris](#)
- 1 Flowers/fruits attached in groups off from the main stem, forming distinct separate clusters, loose to very dense; plants with bracts 2
  - 2 Spikes all looking similar in fruit, obviously not composed of two different types; the top most spike with at least some female florets (*C. arenaria* being the only exception) 3
  - 2 Spikes looking different in fruit, male florets mostly above, female florets mostly below [KEY 2](#)
- 3 All spikes with female florets on the end of each spike 4
- 3 At least one spike with a male floret on the end 8
  - 4 Fruits clearly winged on the body edge on at least the upper half; spikes at maturity shaped like bristly eggs; not in very wet places [C. leporina](#)
  - 4 Fruits not winged on the body, only sometimes narrowly so on the beak; spikes at maturity not shaped as above; usually in or by wet places 5
- 5 Lowest bract leaf-like, clearly exceeding the inflorescence; lower spikes widely spaced apart [C. remota](#)
- 5 Lowest bract usually bristle-like, shorter than the inflorescence; spikes more or less crowded 6
  - 6 Spikes forming spiky star-shapes at maturity; ligule 1mm, rounded [C. echinata](#)
  - 6 Spikes not as above; ligule 2-8mm, acutely pointed 7
- 7 Fruits dark reddish to dark brown, strongly ribbed, strongly spreading out from the stem axis at maturity; glumes reddish-brown [C. elongata](#)
- 7 Fruits whitish, pale green or pale yellow-brown, not strongly ribbed, not strongly spreading out from the stem axis at maturity; glumes completely hyaline [C. canescens](#)
- 8 Plants with long creeping rhizomes; stems arising more scattered or very loosely tufted 9
- 8 Plants with short rhizomes; stems forming dense tufts or tussocks 11

- 9 Top most spike with mixed male and female florets; inflorescence distinctly purplish-brown, up to 3cm; fruits not winged on the body [C. divisa](#)
- 9 Top most spike not with mixed male and female florets; inflorescence pale to dark red-brown, up to 8cm; fruits distinctly winged, although maybe only narrowly so, on all or most of the body 10
- 10 Top most spike entirely male, middle spikes male above and female below; lower leaf-sheaths with inner faces a hyaline membrane (becoming brown later) [C. arenaria](#)
- 10 Top most spike entirely female, middle spikes entirely male; leaf-sheaths with inner faces entirely green (except for the hyaline concave apex) [C. disticha](#)
- 11 Plants eventually forming dense tussocks to 150cm; fruits weakly to strongly convex on the inward side, strongly convex on the outward side [C. paniculata](#)
- 11 Plants forming tufts to 100cm; fruits flat on the inward side, weakly convex on the outward side 12
- 12 Stems more than 2mm wide; leaves up to 10mm wide; fruits with obvious veins more or less throughout 13
- 12 Stems less than 2mm wide; leaves no more than 5mm wide; fruits without veins or with only obscure veins at the base 14
- 13 Ligule obtuse, wider than long, overlapping the edges of the leaf-blade; stems sharply three-angled and strongly winged; fruits dull, with a split down the back face of the beak [C. vulpina](#)
- 13 Ligule acute, longer than wide, not overlapping the edges of the leaf-blade; stems not so sharply three-angled and only slightly winged; fruits more or less shiny, beak without a split [C. otrubae](#)
- 14 Ligule 4-10mm, acute, distinctly longer than wide; fruits more than 4.5mm with the body evenly tapering into the beak to look like a long teardrop; roots purple-tinged; lower parts of the stem, sheaths and glumes also **sometimes** purple-tinged [C. spicata](#)
- 14 Ligule up to 3.5mm, obtuse, not or hardly longer than wide; fruits less than 4.5mm with the body pinched in below the neck to form 'shoulders' to look like a plump pear ; roots and rest of plant not purple-tinged 15
- 15 Inflorescence usually more than 6cm with the gap between the lowest two or three spikes very distinctive, much more than their own length; stems quite limp, drooping; **fruits appressed to the stem axis at maturity, not spreading outwards = (Erroneous?)** [C. divulsa subsp. divulsa](#)
- 15 Inflorescence less than 6cm with the gap between the lowest two or three spikes not or not as distinctive as above, usually less than their own length; stems more rigid, erect; fruits spreading out from stem axis at maturity 16
- 16 Inflorescence up to 4.5cm; base of fruits flat or rounded, not narrowing; mostly on sandy soils [C. muricata subsp. pairae](#)
- 16 Inflorescence **usually** more than 4.5cm; fruits narrowed at the beak and base to look more or less diamond shaped ; mostly on chalky soils [C. divulsa subsp. leersii](#)

## KEY 2

- 1 Fruits hairy or perhaps seeming hairy 2
- 1 Fruits not hairy but maybe rough or with protuberances 5
- 2 Leaves and sheaths hairy; fruits with an obvious long bifid beak to 2 mm [C. hirta](#)
- 2 Leaves and sheaths not hairy; fruits with a short beak no more than 0.5mm, either notched or ending abruptly 3
- 3 Female spikes clearly spaced, the lowest clearly stalked, usually pendant; leaves glaucous beneath [C. flacca](#)
- 3 Female spikes more or less clustered together, the lowest shortly stalked, not pendant; leaves green on both sides 4
- 4 Plants loosely tufted, with creeping rhizomes; stems more or less straight; lowest bract sheathing the stem for 3-5mm; on dry open grassland, mostly on chalk [C.caryophyllea](#)
- 4 Plants densely tufted, without creeping rhizomes; stems usually curving; lowest bract sheathing the stem 0-2mm; on dry heaths and in open woodland [C. pilulifera](#)
- 5 Stigmas two; fruits not three-angled 6
- 5 Stigmas three; fruits three-angled 10
- 6 Female glumes distinctly acutely pointed at apex, red- or purple-brown; fruits with beak distinctly notched or forked more than 0.3mm <sup>1</sup>[C. acutiformis](#)
- 6 Female glumes obtuse to sub-acute at apex, black or purple-black, fruits without beak or with beak less than but including 0.3mm 7
- 7 Plants forming tussocks 8
- 7 Plants loosely tufted, not or very rarely forming tussocks 9
- 8 Lowest bract much shorter than the inflorescence; stomata on lower leaf surface only [C. elata](#)
- 8 Lowest bract more or less equal to inflorescence; stomata mostly on upper leaf surface  
Tussock form of [C. nigra](#)
- 9 Lowest bract much longer than the inflorescence [C. acuta](#)
- 9 Lowest bract more or less equalling the inflorescence (beware of shrivelled bracts) [C. nigra](#)

---

<sup>1</sup> Stigmas usually 3; fertile plants with 2 stigmas might be derivatives of *C. acutiformis* x *C. acuta*. STACE, C.A. (2010). *New Flora of the British Isles* 3rd edition. Cambridge University Press, Cambridge.

This hybrid is only known from Holborough marshes so far and plants should be checked for a mixture of two and three stigmas.

- 10 Lower leaf-sheaths and underside of leaves hairy; fruits without a beak, just rounded on top resembling light green tic tacs [C. pallescens](#)
- 10 Leaf-sheaths and leaves not hairy; fruits with a beak, long to very short 11
- 11 Top female spike forming a distinctive spiky globular head rarely twice as long as wide, female spikes below usually not more than twice as long as wide 12
- 11 Top female spike not forming a distinctive globular head, usually more than twice as long as wide, if not then lower spikes usually distinctly more than twice as long as wide 14
- 12 Fruits greyish-green, sometimes brownish, with beak to 0.75mm; leaves glaucous and deeply channelled; salt-marshes at the mouth of the Great Stour [C. extensa](#)
- 12 Fruits bright green or yellow-green with beak 1.5-2mm; leaves bright green or yellow-green, more or less flat or V-shaped; not in saline areas, away from the Great Stour estuary 13
- 13 Fruits 3-5.5mm with beak 1.5-2mm, sometimes curved; male spike with stalk usually sticking out at an angle away from the line of the stem; bracts usually narrow, almost bristle-like, stiff; leaves usually no more than half as long as the stems; in calcareous fens; very rare [C. lepidocarpa](#)
- 13\_ Fruits 3-4mm with beaks about 1mm, straight; male spike with stalk continuing the line of the stem; bracts usually wider, grass-like and more flaccid; at least some leaves more than half as long as stems; usually preferring more acid conditions ; quite common [C. demissa](#)
- 14 Lowest female spike separated from those above by an obvious gap, usually more than and including twice its own length 15
- 14 Lowest female spike not separated from those above by an obvious gap, either overlapping those above, more or less reaching them or separated by a gap less than twice its own length 17
- 15 Leaves 5-12mm wide; female glumes tapering to a long fine point; ligule 7-15mm [C. laevigata](#)
- 15 Leaves 2-6(8)mm wide; female glumes either narrowed to a short point or more or less rounded with a projecting short point; ligule 1-3mm 16
- 16 Decaying leaves persisting turning a pinkish orange-brown colour, sometimes with wine-red blotches; female spikes 1.5-4.5cm; female glumes without or with only a slight hyaline apical margin; fruits with 2 conspicuous green ribs running up into the beak ; on acid soils of heaths and woodlands [C. binervis](#)
- 16 Decaying leaves grey, without pinkish orange colouring; female spikes 1-2cm; female glumes with a quite obvious hyaline margin; fruits with several more or less equally prominent ribs; mostly by or near the coast [C. distans](#)
- 17 Plants with two or more female spikes with long exposed stalks, longer than or as long as the spikes 18
- 17 Plants with female spikes without stalks or shortly stalked, if with a stalk as long as the spike then usually restricted to the lowest spike only and mostly contained within the sheath 19

- 18 Female spikes cylindrical with fruits densely packed; female glumes with a very long fine bristle; ligule 10-15mm; lowest bract 3-4 times longer than the inflorescence [C. pseudocyperus](#)
- 18 Female spikes narrow with fruits loosely arranged; female glumes pointed but without a long bristle; ligule 2-4mm; lowest bract sometimes longer than the inflorescence [C. sylvatica](#)
- 19 Female spikes distinctly long and narrow, at least some more than 15 times longer than wide 20
- 19 Females spikes perhaps quite long and narrow but certainly less than 15 times as long as wide 21
- 20 Stems 35-70cm; female spikes erect to slightly pendant with fruits quite loosely arranged; leaves 15-40cm long with 2 prominently raised longitudinal lines; ligule 5-8mm [C. strigosa](#)
- 20 Stems 60-230cm or more; female spikes becoming very pendant with fruits densely packed; leaves 20-120cm long without raised lines; ligule 40-80mm [C. pendula](#)
- 21 Leaves glaucous on at least one surface 22
- 21 Leaves not glaucous on any surface 26
- 22 Leaves glaucous on the upper side only, shiny green below [C. rostrata](#)
- 22 Leaves glaucous on both sides or only on the lower side 23
- 23 Leaves glaucous on lower side only; fruits with minute protuberances, sometimes rough to the touch [C. flacca](#)
- 23 Leaves glaucous on both sides; fruits more or less smooth 24
- 24 Lowest bract shorter than the inflorescence with a distinct sheathing base 10-15mm; fruits looking inflated, quite loosely arranged along the spike [C. panicea](#)
- 24 Lowest bract longer than the inflorescence not or hardly sheathing the base; fruits not looking inflated, densely packed along the spike 25
- 25 Male glumes 7-9mm, tapering to a long fine point; female glumes longer than fruit; fruit widest below middle to look more or less like a teardrop [C. riparia](#)
- 25 Male glumes 3-7mm, obtuse to acute; female glumes shorter than fruit; fruit widest about midway to look more elliptical [C. acutiformis](#)
- 26 Fruits 3.5-5mm, not inflated, beak 0.5mm; leaves becoming dull green [C. acutiformis](#)
- 26 Fruits 6-8mm, inflated, beak 2mm; leaves mid green to yellow-green [C. vesicaria](#)