

### RARE SPECIES RECORDING FORM (PAGE 1 of 4)

#### **METHOD**

**Aims:** To find out if Yellow Centaury is i) present, ii) get an approximate idea of its location and abundance, iii) collect physical data that can be used to assess the reasons for any change recorded on future visits, and iv) look in any adjacent sites to see if Yellow Centaury is present or absent.

- **Equipment:** It's helpful to take a camera (e.g. mobile phone camera) to take confirmatory photos of Yellow Centaury, to take photos of your survey site for the record, and to take a photograph of your sketch maps if you don't have access to a scanner alternatively you can give your survey forms to your regional officer.
- **Survey timing:** Yellow Centaury is a short-lived flowering plant, which can be hard to find due to its small size. It is best surveyed between August and September, although seed pods may still be visible in October.
- Where to look: Yellow Centaury typically grows on the sparsely vegetated edges of heathland trackways, pinch points
  around gateways, serpentine heaths and acid grassland pools and ruts; where the ground has been hard grazed by
  livestock.
- Likely habitats: The habitat is best described as winter wet; where standing water collects during the winter, draining
  away to leave sandy patches of bare ground in the summer. Typical plant associates to look out for include coral necklace
  Illecebrum verticillatum, knotgrass Polygonum aviculare, marsh cudweed Gnaphalium uliginosum, allseed Radiola
  linoides, chaffweed Anagallis minima and toad rush Juncus bufonius.
- Survey the area indicated on your map: The site will have a previous record for Yellow Centaury, although the plant
  may not have been recorded since the 1980s. Search the area indicated in your site pack for Yellow Centaury plants, and
  if found, estimate the number of plants (see below). Draw a sketch map to show the location and extent of Yellow
  Centaury this may help you and others in the future to search the same area. Fill out the survey form overleaf.
- How to estimate abundance: It can be hard to count the number of plants, especially if they are closely growing or very numerous. The best approach is to count the plants in a small area (e.g. 10 cm² or 1 m²), and multiply this by the area in which Yellow Centaury plants are found. If Yellow Centaury occurs in different densities within the area searched, make separate calculations for each area, and sum them to give a total (see table over page). Note: we only need the overall total for the area surveyed.

If Yellow Centaury is **not found**, please record this, and continue to fill out the environmental sheet. The findings will help identify reasons for the plant's absence.

Check other likely habitats in the surrounds: Finding out if Yellow Centaury occurs in other likely habitats within the
same site helps us to understand if the species is part of a larger population, which may be important for its survival. Visit
other likely habitats patches within the site to see if Yellow Centaury is present. You don't need to record numbers, or
environmental data at these other sites, just the presence/absence of Yellow Centaury.

It will be helpful to revisit these other areas in future years. So, to ensure they can be found again by yourself or others please (a) provide an accurate grid reference and/or mark the locations on your PondNet base map, or (b) make a sketch of the locations where you have searched and (c) take photos. Then, upload the maps and photos to the website.

What it looks like: Yellow Centaury can be distinguished by its diminutive size and lemon-yellow flowers which only open on sunny days. Yellow Centaury is a small erect annual plant which grows between 2-12cm tall, but usually <10cm. The pale yellow flowers, consisting of four petals, grow at the end of single or branched pinkish/green stems. The small basal leaves grow flat to the ground and small linear leaves grow along the stem at intervals, although all the leaves tend to disappear as the plant ages. Later in the season, small seed pods ripen at the end of each stem.

We have produced a "Species Information Sheet" and "How to . . ." identification guide if you need some more hints and tips to recognise Yellow Centaury <a href="https://www.freshwaterhabitats.org.uk/projects/pondnet.">www.freshwaterhabitats.org.uk/projects/pondnet.</a>





Yellow Centaury: (a) Pale yellow with four petals Yellow Centaury flowers open to the sun © D. Gaudefroy; (b) Yellow Centaury plants growing in sparsely vegetated winter wet habitat © Bradford Botany Group and (c) seed pods developing on the tips of a Yellow Centaury plant.





# RARE SPECIES RECORDING FORM (PAGE 2 of 4)

Your name				Date			
Square: 4 figu e.g. SP1243 (s				cation: 8 figure grid ref			
Site name (if known)							
Determiner name (optional - if			Voucher material (optional - ament if you've taken a photo to confirm identification)				
Number of \	∕ellow Centaur	y in your search area					
Record the number of Yellow Centaury plants found in your search area using the following <b>categories</b> :  1, 2-5, 6-10, 11-20, 21-50, 51-100, 101-200, 201-500, 501-1000, 1000+. If there are many plants, count the number in a small area and multiply up. We've put a table below to help you keep track and make notes, but for the analysis we only need a total. If you find Yellow Centaury please take a confirmatory photo, especially if it's the first time the area has been surveyed for PondNet. You can also take a photo of your site or your maps (or scan them if you have a scanner) and upload them with the record.							
Habitat type or	r areas where the	plant is found (list): use this others can re-find plants		T T			
1.	tions, and so you?	others can re-find plants					
2.							
3.							
4.							
		Total number of Yellov	/ Centau	ry plants (category)			
Yellow Centaury looked for, but not found: (tick box if none found)  Note if you don't find evidence of Yellow Centaury, this is an important result so please still enter these findings online							
		vs on site condition for Yellow be abundant / declining /	Centau covered few pla	h map: Use this box to s ry plants in your search a d a broad area, or x mark nts (an extra map space ng form).	rea. Use shading s the spot if there	if they were just a	
Search other	likely habitat	in the surrounds					
Please search other likely habitat patches in the area to see if Yellow Centaury is present or absent. Then complete the following summary questions about the additional search.  To help re-find these other areas: (a) mark their locations on your PondNet base map (in your site information pack) and indicate whether Yellow Centaury was present or absent.							
1. Was Yellow Centaury found in any additional locations?							
Yes	Yes No (tick)						
2. How many additional areas did you search (if no other areas were searched put a zero in both these boxes)?							
Number of additional locations with a <u>positive</u> record for Yellow Centaury.  Excluding the original search area, how many other locations within the site <i>had</i> Yellow Centaury?							
Number of additional locations with a <a href="negative">negative</a> record for Yellow Centaury.  Excluding the original search area, how many other locations within the site <i>did not have</i> Yellow Centaury?							



### RARE SPECIES RECORDING FORM (PAGE 3 of 4)

#### YELLOW CENTAURY HABITAT SURVEY:

This is a really important part of the survey. Please complete this Habitat Survey for <u>your search area, whether or not you find Yellow Centaury at the site.</u>

Each variable provides information known to be linked to habitat quality and community type, and can be used to investigate the reason for change in Yellow Centaury occurrence.

Altitude											
m	You can find altitude using a GPS, mobile phone app, OS map, or online resources such as 'Google Earth' or 'Grid reference finder'.										
Area											
surveyed	pond, or a	s is the <i>total ar</i> series of winto wet depressio	er wet depre	ssions wi	thin grassla						
m²		by pacing (sing				maps.					
Does the a	rea dry out p 1 = never dri 2 = rarely dri 3 = sometim 4 = annually	periodically? es es	1 = Never 2 = Rarel 3 = Some 4 = Dries and person	r dries , y dries: n etimes dri annually onal judge	o more that ies: dries b Deduce p ment e.g. v y have a ha	n 2 years etween th ermanend vater level	ree years ce from lo	s in ten to cal knowl	most yea edge (e.g	irs, j. landowr	ner)
Overhangi	ng trees & sl								$\bigcirc$ $\mathcal{C}$		
	% of area surveyed overhung by trees and shrub. This is an estimate of how much of the area is <i>direc</i> trees and shrubs, i.e. that would be shaded if the structure (use the diagram (right) as a guide).				ctly overhun	g by	30%		() (: () (§		
Aquatic ve	getation: inc	ludes emerger	nt, floating ar	nd subme	rged plants	<b>.</b>	60%		∩ ∰		
%	% of the who	ole area (wet a asses, water n or submerged	nd dry) occu nint and rush	pied by <u>vo</u> nes, and a	egetation - any floating	incl.	80%		Ŏ		
Grazing											
	Tick if there is	s evidence the	area is graz	ed by live	estock. If ye	es comple	te the foll	owing box	kes:		
%	% of whole a	rea grazed (no	te: stock car	n wade in	to shallow	oonds to g	ıraze).				
	Grazing inter	sity: rank 1-5	(1=infrequen	t or low ir	tensity to	5 = margin	s heavily	poached	and almo	ost bare).	
Manageme	ent (tick): Use	the tick boxes	to list manag	ement in t	the search	area within	the last 1	2 months.			
	dredged		dredged		5% vegetation				egetation i	removed	
Tree	s planted	Trees	clear-felled	Tr	ees cut bac	k / coppice	d	Area m	own		
Add other or	r more detail										
Water cher (or leave bla		lete this sectio	n if suitable	kits and a	ıre availabl	e, and wat	ter is still	present ir	the habi	tat	
	рН										
	Conductivi	ity (μS cm <sup>-1</sup> )									
Nitrate (NO	<sup>)3-</sup> - <b>N ppm):</b> PF	PW kits provide	ed by FHT		Phosph	ate (PO <sub>4</sub> 3-	-P ppm):	PPW kits	provided	by FHT	
,		ng range categ	•		`	from the	•	•	,		
<0.2	0.2-0.5 0.5-1	1-2 2	-5 5-10	10 +	<0.02	0.02-0.05	0.05-0.1	0.1-0.2	0.2-0.5	0.5-1	1+
							<u> </u>				
Turbidity /	1	: Estimate turb				-	iter.				
	1 = clear; 2	= moderately	clear; $3 = m$	noderately	turbid; 4	= turbid					



## **RARE SPECIES RECORDING FORM (PAGE 4 of 4)**

Substrate:	
This refers to the <i>geology</i> (i.e. rock-type) that immediately underlies the area searched.	You may know, or be able to see the underlying

geology. If not, check a geology map or leave this section blank.							
Choose one of the following to categorise the % composition of the area searched: 1= 0-32%, 2= 33-66%, 3= 67-100%  Silt/ clay  Sand, gravel, cobbles  Hard rock  Peat  Other (please specify)							
<b>Surrounding land use:</b> Estimate the <i>percentage</i> of surrounding land-use in distance zones from the perimeter of your search area.							
Habitat	0-5m	0-100m	Examples				
Trees, woodland & scrub	%	%	Deciduous and coniferous woodland, individual trees, scrub and hedgerows.				
Heath & moorland			Lowland and upland heathland, moorland and mountain; includes bracken.				
Rank vegetation			Unmanaged grass, neglected and abandoned land, set-aside, verges and buffer strips.				
Unimproved grassland			Herb-rich, calcareous and acid grassland (good quality plant indicators usually present). Low percentage of agricultural grasses. Not fertilised, little or no drainage.				
			A transition category. Grasslands modified by fertilisers, drainage, herbicides or intensive grazing, but retaining elements of natural grassland types in the area.				
Improved grassland			Fertile agricultural grass, often bright green and lush; including parks and golf greens.				
Arable	Arable All crops. Includes flower and fruit crops (e.g. strawberries) and ploughed land.						
Urban buildings & gardens Areas in			reas in curtilage (associated with buildings); including glass-houses and farm yards.				
Roads, tracks & paths			Including car-parks and footpaths.				
Rock, stone & gravel			Cliffs, rock-outcrops, gravel-pits, quarries, areas of sand and gravel or stone.				
Bog, fen, marsh & flush			Wetland vegetation and blanket bog.				
Ponds & lakes			Permanent and seasonal waterbodies; including trackway pools.				
Streams & ditches			Rivers, streams, ditches, springs and canals.				
Other (state)	E.g. maritime vegetation, saltmarsh, sand-dune, orchards and railways.						
Is the search area in a protected site? (e.g. nature reserve, SSSI, etc.) (choose one option - yes, no, unknown)							
Comments box: e.g. new ownership, changes since previous visit, any other information.							

**Sketch map (cont. from page 2):** Use this box to show the location of Yellow Centaury plants in your search area. Use shading if they covered a broad area, or x marks the spot if there were just a few plants.

