

**LUCAS 2022**  
**(Land Use / Cover Area Frame Survey)**

Technical reference document C6  
Grassland Survey - Identification Guide

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DOCUMENT CHANGE RECORD			
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V0.1	2017/05/03	Eurostat / E4.LUCAS	Transfer from original document. Introduction for LUCAS 2018.
V2	2021/02/12	Eurostat / E4.LUCAS	Reduced list of species, according to revised grassland module

## 2 Scope and Introduction

This document is part of a series of reference documents defining the framework of the Land Use / Cover Area frame statistical Survey (LUCAS). The document at hand provides images that will help in the identification of the different grassland survey species.

This photo guidance has been developed in the frame of the project “Coordination works on the LUCAS Surveys - Specifications for LUCAS 2018 grassland survey: lists of species and related protocol, list of structural parameters and protocol, plan for timing of survey”. The project has been carried out by the Institut für Agrarökologie und Biodiversität (IFAB) [Institute for Agroecology and Biodiversity] in Mannheim (D).

The surveyors who will have to record the key species can use this photo guidance as help for the identification of the key species. Please not

However, as most key species are species groups comprising a group of species of one or several genera, the photo guidance only comprises typical examples of the key species groups.

The LUCAS reference documents are periodically improved and adapted taking into account the experience from the implemented surveys and the requirements of the LUCAS data & information users.

LUCAS stands for Land use and land cover area frame survey. It is a survey that takes place in the field, and in the current form it has been run every 3/4 years since 2009.

LUCAS survey 2022 can be divided in 3 parts:

- LUCAS core (including extended grassland and Copernicus)
- LUCAS specific module on grassland (Grassland module)
- LUCAS specific module on soil (Soil module)
- LUCAS specific module on Landscape Features

LUCAS core includes the identification of the point, different aspects of land cover and land use information and land and water management.

The grassland module is implemented on 20 000 points.

The LUCAS survey is co-ordinated by the Statistical Office of the European Commission (Eurostat).

## 3 Examples of suitable field guides

If the surveyor wishes to have a closer look at the species, several field guides can be recommended:

For Northern Europe: Fitter, A., Attenborough, D. (1987): Wild flowers of Britain and Northern Europe. Collins, London.

For Central Europe: Fitter, R., Fitter, A., Blamey, M. (2007): Pary's Blumenbuch. Kosmos, Stuttgart.

For Mediterranean Regions: Blamey, M., Grey-Wilson, C. (2015): Wild Flowers of the Mediterranean. Bloomsbury, London.

## 4 Overview on the key species / key species groups in this guidance (inclusive the colour of their flowers and the plant families).

Selected species / species groups	English names	Colours of the flowers	Plant family (botanical name)	Plant family (English name)	Page
<i>Apiaceae</i>	Carrot family	white, yellow	Apiaceae	Carrot family	7
<i>Centaurea spec.</i> , <i>Serratula tinctoria</i>	Knapweed	red, pink	Asteraceae	Daisy family	8
<i>Campanula spec.</i>	Bellflower	blue, white	Campanulaceae	Bellflower family	9
<i>Cirsium spec.</i> , <i>Carduus spec.</i> , <i>Carlina spec.</i> , <i>Eryngium planum</i> , <i>Echinops spec.</i>	Thistle, Eryngo, Globe thistles	red, yellowish, blue	Apiaceae, Asteraceae	Carrot family, Daisy family	10
<i>Juncus spec.</i>	Rush	gree, brown	Juncaceae	Rush family	12
<i>Myosotis spec.</i>	Forget-me-not	blue	Boraginaceae	Borage family	13
<i>Orchidaceae spec.</i>	Orchid family	all colours	Orchidaceae	Orchid family	14
<i>Scabiosa spec.</i> , <i>Knautia spec.</i> , <i>Succisa spec.</i>	Scabious	blue, white	Dipsacaceae	Teasel family	15
<i>Silene spec.</i> - red flowering, <i>Lychnis flos-cuculi</i> , <i>Dianthus spec.</i>	Campion Pink	red, pink	Caryophyllaceae	Pink family	16
<i>Trifolium spec.</i> - red flowering	Clover	red	Fabaceae	Legume family	17
<i>Trifolium spec.</i> , <i>Medicago spec.</i> , <i>Lotus spec.</i> , <i>Coronilla spec.</i> - yellow flowering,	Trefoil, Vetch	yellow	Fabaceae	Legume family	18
<i>Vicia spec.</i> , <i>Lathyrus spec.</i> , <i>Astragalus spec.</i> - blue+purple flowers	Vetch	blue, purple	Fabaceae	Legume family	20

## 5 Photos of the key species

*Apiaceae*

## Carrot family



© Dalgial

*Anthriscus sylvestris* / Cow parsley

© Qwert1234



© Christian Fischer

*Heracleum sphondylium* / Common hogweed

© I. Noebse



© \$Mathe94\$

*Pimpinella saxifraga* /  
Burnet-saxifrage

© Michele Adorni

*Daucus carota* / Wild carrot

© Jcart1534



© Patrice78500

*Ferula communis* / Giant fennel© Jean-Pol  
GRANDMONT

*Campanula spec.*

Bellflower



*Campanula patula* / Spreading bellflower



*Campanula rotundifolia*  
/ Harebell



*Campanula glomerata* /  
Clustered bellflower



*Campanula sibirica* /  
Alpine Bellflower

*Centaurea* spec.,  
*Serratula tinctoria*

Knapweed &  
Saw-wort



© Franz Xaver

*Centaurea jacea* / Brown knapweed



© Kristian Peters



© MarkusHagenlocher

*Centaurea scabiosa* / Greater knapweed



© Kristian Peters



© Michele Adorni

*Centaurea deusta* / Pale knapweed



© Franz Xaver

*Serratula tinctoria* / Saw-wort



© Kristian Peters

*Cirsium* spec.,  
*Carduus* spec.,  
*Carlina* spec.

Thistle



© Pethan Utrecht



© Stefan Iefnaer



© Christian Fischer



© Franz Xaver

*Cirsium palustre* / Marsh thistle

*Cirsium rivulare* / Spear thistle

*Cirsium oleraceum* / Siberian thistle



© Michele Adorni

*Cirsium acaule* / Dwarf thistle



© Monedula

*Carduus crispus* / Welled thistle



© Dalgial



© Bernd Haynold

*Carlina vulgaris* / Carline thistle



© Hajothu



© Isidre blanc

*Carlina acaulis* / Silver thistle

*Eryngium planum*  
*Echinops spec.*

Blue eryngo  
Globe thistles



*Eryngium planum* / Blue eryngo



*Echinops ritro* / Southern globethistle



*Echinops exaltatus* / Tall globethistle



*Echinops bannaticus* / Blue globe-thistle

*Juncus spec.*

Rush



© James Lindsey



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© Kristian Peters

*Juncus squarrosus* / Heath rush

*Juncus conglomeratus* / Compact rush



© Christian Fischer



© Ivar Leidus



© Christian Fischer



© Peigimccann

*Juncus articulatus* / Jointleaf Rush

*Juncus effusus* / Common Rush

*Myosotis* spec.

Forget-me-not



© Sten



© I, KENPEI

*Myosotis palustris* / Forget-me-not



© AnRo0002



© Darkone

*Myosotis arvensis* / Field forget-me-not

Orchidaceae

Orchid family



© Liuthalas

*Orchis morio* /  
Green-winged orchid



© Jörg Hempel

*Dactylorhiza maculata* /  
Heath spotted-orchid



© Kriko

*Dactylorhiza sambucina* /  
Elder-flowered orchid



© Michele Adorni

*Ophrys apifera* /  
Bee orchid



© Michele Adorni

*Anacamptis pyramidalis* /  
Pyramidal orchid



© JostGudelius

*Cypripedium calceolus* / Lady's Slipper Orchid



© Sepulnation1986



© Orchi

*Listera ovata* / Eggleaf twayblade



© Hans Hillewaert

*Scabiosa spec.*,  
*Knautia spec.*,  
*Succisa spec.*

Scabious



© Kriss de Niort



© Stan Shebs



© Kriss de Niort



© Svdmolen

*Scabiosa columbaria* / Small scabious

*Knautia arvensis* / Field scabious



© Stefan.lefnaer



© H. Zell

*Succisa pratensis* / Devil's-bit scabious

***Silene spec.***

(only red flowering species),  
*Lychnis flos-cuculi* &  
*Dianthus spec.*

**Campion**

(only red flowering species),  
**Pink & Ragged-Robin**



*Silene dioica* / Red campion



*Lychnis flos-cuculi* / Ragged-Robin



*Dianthus carthusianorum* / Carthusian pink



*Dianthus superbus* / Large pink

*Trifolium spec.*  
(only red flowering species)

Clover  
(only red flowering species)



© Rob Hille

*Trifolium pratense* / Red clover



© H. Zell

*Trifolium medium* / Zigzag clover



© Christian Fischer



© Stefan.lefnaer

*Trifolium striatum* / Knotted clover



© Marco Iocchi

*Trifolium alpestre* / Alpine clover



© J. Denbert

*Trifolium arvense* / Hare's-foot clover



© Michael Becker



© Michele Adorni

*Trifolium resupinatum* / Reversed clover



© Christian Fischer

*Trifolium fragiferum* / Strawberry clover



© Franz Xaver

*Trifolium rubens* / Red feather



© Hans Hillewaert

*Trifolium stellatum* / Starry clover

*Trifolium spec.*,  
*Medicago spec.*,  
*Lotus spec.*  
 (only yellow flowering species)

Medick, Lucerne,  
 Clover, Trefoil, Vetch  
 & Dragon's teeth  
 (only yellow flowering species)



© Rasbak

*Medicago lupulina* / Black medick



© Sten



© Bogdan

*Medicago falcata* / Yellow lucerne



© Fornax

*Medicago minima* / Little bur-clover



© Fornax



© Pethan Utracht

*Melilotus officinalis* / Yellow sweet clover



© Bogdan



© Tocekas

*Trifolium campestre* / Hop trefoil



© Hopklaver

*Trifolium dubium* / Lesser trefoil



© I, Kenraiz



© Andreas Eichler

*Lathyrus pratensis* / Meadow vetchling



© Martin Olsson



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*Lotus corniculatus* / Common bird's-foot trefoil



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*Lotus angustissimus* / Slender Bird's-foot-trefoil



© Karwath



© Kristian Peters

*Lotus pedunculatus* / Big trefoil



© Stefan.lefnaer

*Lotus tenuis* / Narrowleaf trefoil



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*Hippocrepis comosa* / Horseshoe vetch



© Isidre blanc

*Anthyllis vulneraria* / Common kidneyvetch



© Stefan.lefnaer

*Tetragonolobus maritimus* / Dragon's teeth

*Vicia spec.*,  
*Lathyrus spec.*,  
*Astragalus spec.*  
 (only blue+purple flowering  
 species)

**Vetch**  
 (only blue+purple flowering  
 species)



*Vicia sativa* / Common vetch



*Vicia tenuifolia* / Bramble vetch



*Astragalus danicus* / Purple milk-vetch



*Vicia cracca* / Tufted vetch



*Vicia sepium* / Bush vetch



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**6 Overview on the species / species groups for structural characterization**

<b>Species / species groups</b>	<b>English names</b>	<b>Page</b>
	Shrub, Brushwood, Bramble	<b>22</b>
<i>Cirsium</i> spec., <i>Carduus</i> spec., <i>Carlina</i> spec. <i>Eryngium planum</i> <i>Echinops</i> spec.	Thistles,  Eryngo, Globe thistles	<b>23-24</b> <b>(see p. 10-11)</b>
<i>Rumex</i> spec.	Docks (no Sorrel)	<b>25</b>
<i>Juncus</i> spec.	Rushes	<b>26</b> <b>(see p. 12)</b>
<i>Carex</i> spec.	Sedges	<b>27</b>
<i>Calamagostis</i> spec.	Small-reed	<b>27</b>

## 7 Photos of the species / species groups for structural characterization

Shrub,  
brushwood,  
bramble



© András Schmotzer

Shrubs



© Byothe

*Rubus fruticosus* / Black berry



© Pléple 2000



© Juandev



© Michael Becker



© Sakurai Midori

*Rosa canina* / Dog rose

*Cirsium* spec.,  
*Carduus* spec.,  
*Carlina* spec.

Thistles



© Pethan Utrecht

*Cirsium palustre* / Marsh thistle



© Stefan.Iefnaer

*Cirsium rivulare* / Spear thistle



© Christian Fischer

*Cirsium oleraceum* / Siberian thistle



© Franz Xaver



© Michele Adorni

*Cirsium acaule* / Dwarf thistle



© Monedula

*Carduus crispus* / Welthed thistle



© Dalgial



© Bernd Haynold

*Carlina vulgaris* / Carline thistle



© Hajothu



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*Carlina acaulis* / Silver thistle

*Eryngium planum*  
*Echinops spec.*

Blue eryngo  
Globe thistles



© Bogdan



© Bernard Dupont

*Eryngium planum* / Blue eryngo



© Bjoertvedt

*Echinops ritro* / Southern globethistle



© McIntosh Natura

*Echinops exaltatus* / Tall globethistle



© Pethan

*Echinops bannaticus* / Blue globe-thistle

*Rumex spec.*

Docks



© Sten Porse



© Boris Gabersček

*Rumex obtusifolius* / Broad-leaved dock



© Ettore Balocchi



© Philmarin

*Rumex crispus* / Curled dock



© Burschik

no Sorrel



© Hajotthu

*Juncus spec.*

Rushes



© James Lindsey

*Juncus squarrosus* / Heath rush



© James Lindsey



© James Lindsey

*Juncus conglomeratus* / Compact rush



© Kristian Peters



© Christian Fischer

*Juncus articulatus* / Jointleaf Rush



© Ivar Leidus



© Christian Fischer

*Juncus effusus* / Common Rush



© Peigimccann



© Immanuel Giel

*Juncus spec.* / Rushes



© Kristian Peters

*Juncus infexus* / Hard rush

*Carex* spec.

Sedge



© Artem Topchiy  
*Carex acutiformis* / Lesser pond-sedge



© Christian Fischer  
*Carex arenaria* / Sand sedge



© Stemonitis  
*Carex hirta* / Hairy sedge



© Robert Flogaus-Faust  
*Carex flacca* / Blue sedge



© Kristian Peters  
*Carex panicea* / Carnation sedge

*Calamagrostis* spec.

Small-reed



© Botaurus  
*Calamagrostis epigejos* / Wood small-reed



© K. Lauber



© Sten



© Lazaregagnidze  
*Calamagrostis arundinacea*

**8 Overview on the legume species / species groups**

Most legume species / species groups are already part of the key species list and found in section 6 of this identification guide. For the coverage of legumes also white flowering legumes, like Mountain clover and White clover (not part of the key species list), are included. The indication of the coverage includes all parts of the plants (e.g. flowers, leaves, stems).

<b>Species / species groups</b>	<b>English names</b>	<b>Page</b>
<i>Astragalus spec.</i>	Miklvetch	<b>28/32</b> <b>(see also p. 20)</b>
<i>Coronilla spec.</i>		<b>28</b>
<i>Hedysarum coronaria</i>	Vetch	<b>29</b>
<i>Onobrychis spec.</i>	Sainfoin	<b>29</b>
<i>Trifolium spec.</i> (red)	Red-flowering clover	<b>30</b> <b>(see also p. 17)</b>
<i>Trifolium spec.</i> , <i>Medicago spec.</i> , <i>Lotus spec.</i> (yellow)	Medick, lucerne, clover, trefoil & vetch	<b>31</b> <b>(see also p. 17/18)</b>
<i>Lathyrus spec.</i> (yellow/purple)	Yellow sweet clover	<b>32/33</b>
<i>Trifolium spec.</i> (white)	White-flowering clover	<b>34</b>
<i>Lupinus spec.</i>	Lupine	<b>35</b>

9 Photos of legumes

*Astragalus* spec.,  
*Securigera* spec.  
*Hedysarum coronaria*  
*Onobrychis* spec.

Vetch, sainfoin &  
honey-suckle



© Franz Xaver

*Astragalus monspessulanus* / Montpellier Milk-Vetch



© Jean Tosti



© Bogdan

*Coronilla varia* / Crownvetch



© Ltshears



© Thuir

*Onobrychis viciifolia* / Common sainfoin



© Michele Adorni

*Hedysarum coronaria* / French honeysuckle



© Michele Adorni

*Trifolium spec.*  
(red flowering species)

Clover



© Rob Hille

*Trifolium pratense* / Red clover



© H. Zell

*Trifolium medium* / Zigzag clover



© Christian Fischer



© Stefan.lefnaer

*Trifolium striatum* / Knotted clover



© Marco Iocchi

*Trifolium alpestre* / Alpine clover



© J. Denbert

*Trifolium arvense* / Hare's-foot clover



© Michael Becker



© Michele Adorni

*Trifolium resupinatum* / Reversed clover



© Christian Fischer

*Trifolium fragiferum* / Strawberry clover



© Franz Xaver

*Trifolium rubens* / Red feather



© Hans Hillewaert

*Trifolium stellatum* / Starry clover

*Trifolium spec.*,  
*Medicago spec.*,  
*Lotus spec.*

Medick, lucerne,  
clover, trefoil & vetch



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*Medicago lupulina* / Black medick

*Medicago falcata* / Yellow lucerne



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© Bogdan

*Medicago minima* / Little bur-clover

*Melilotus officinalis* / Yellow sweet clover



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*Trifolium campestre* / Hop trefoil



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*Trifolium dubium* / Lesser trefoil



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*Lathyrus pratensis* / Meadow vetchling



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*Lotus angustissimus* / Slender Bird's-foot-trefoil



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*Lotus pedunculatus* / Big trefoil



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*Lotus tenuis* / Narrowleaf trefoil



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*Hippocrepis comosa* / Horseshoe vetch



© Isidre blanc

*Anthyllis vulneraria* / Common kidneyvetch



© Stefan.lefnaer

*Tetragonolobus maritimus* / Dragon's teeth

*Vicia spec.*,  
*Lathyrus spec.*,  
*Astragalus spec.*  
 (only blue+purple flowering  
 species)

**Vetch**  
 (only blue+purple flowering  
 species)



*Vicia sativa* / Common vetch

© Fornax



*Vicia tenuifolia* / Bramble vetch

© Franz Xaver



*Astragalus danicus* / Purple milk-vetch

© Petr Filippov



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*Vicia cracca* / Tufted vetch

© Walter Siegmund



*Vicia sepium* / Bush vetch

© Isidre blanc



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*Trifolium spec.*  
(white flowering species)

Clover  
(white flowering species)



© Hans Hillewaert



© Jengod



© Hugo.arg



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*Trifolium repens* / White clover

*Trifolium montanum* / Mountain clover



© Peter Griffin

Grass-clover mixture

*Lupinus spec.*  
(white flowering species)

Lupin



© Carsten Niehaus

*Lupinus luteus* / Yellow lupin



© Giancarlo Dessì

*Lupinus pilosus* / Mountain lupin

**10 Source of the photos / photo authors / photo credits**

Thanks a lot to all photo authors who made their photos available and thus making it possible to develop this illustrated guidance.

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Anthriscus_sylvestris_2	Qwert1234	13.07.2016	By Qwert1234 - Qwert1234's file, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=17847120">https://commons.wikimedia.org/w/index.php?curid=17847120</a>
Anthyllis_montana_1	Jeanosti	23.08.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=161631">https://commons.wikimedia.org/w/index.php?curid=161631</a>
Anthyllis_montana_2	Jeanosti	23.08.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=161632">https://commons.wikimedia.org/w/index.php?curid=161632</a>
Anthyllis_vulneraria_1	Isidre blanc	23.08.2016	By Isidre blanc - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=49674848">https://commons.wikimedia.org/w/index.php?curid=49674848</a>
Astragalus_danicus_1	Ivar Leidus	23.08.2016	By Ivar Leidus - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=26700479">https://commons.wikimedia.org/w/index.php?curid=26700479</a>
Astragalus_monspessulanus_1	Franz Xaver	15.07.2016	By Franz Xaver - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=7653850">https://commons.wikimedia.org/w/index.php?curid=7653850</a>
Astragalus_monspessulanus_2	Jean Tosti	15.07.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=95930">https://commons.wikimedia.org/w/index.php?curid=95930</a>
Campanula_glomerata_1	Bernd Haynold	13.07.2016	By Bernd Haynold - selbst fotografiert - own picture, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4541386">https://commons.wikimedia.org/w/index.php?curid=4541386</a>
Campanula_glomerata_2	Anneli Salo	13.07.2016	By Anneli Salo - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=15789414">https://commons.wikimedia.org/w/index.php?curid=15789414</a>
Campanula_patula_1	Prazak	13.07.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=831963">https://commons.wikimedia.org/w/index.php?curid=831963</a>
Campanula_patula_2	Franz Xaver	13.07.2016	By Franz Xaver - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=8043742">https://commons.wikimedia.org/w/index.php?curid=8043742</a>
Campanula_rotundifolia_1	Hans Hillewaert	13.07.2016	By © Hans Hillewaert /, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4750293">https://commons.wikimedia.org/w/index.php?curid=4750293</a>
Campanula_sibirica_1	Le.Loup.Gris	05.09.2016	By Le.Loup.Gris - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=15732328">https://commons.wikimedia.org/w/index.php?curid=15732328</a>
Carduus_crispus_1	Monedula	13.07.2016	Public Domain, <a href="https://commons.wikimedia.org/w/index.php?curid=220349">https://commons.wikimedia.org/w/index.php?curid=220349</a>
Carduus_crispus_2	Dalgial	13.07.2016	By Dalgial - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=9757093">https://commons.wikimedia.org/w/index.php?curid=9757093</a>
Carlina_acaulis_1	Isidre blanc	23.08.2016	By Isidre blanc - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=27483154">https://commons.wikimedia.org/w/index.php?curid=27483154</a>
Carlina_vulgaris_1	Bernd Haynold	23.08.2016	By Bernd Haynold - Own work, CC BY-SA 2.5, <a href="https://commons.wikimedia.org/w/index.php?curid=285091">https://commons.wikimedia.org/w/index.php?curid=285091</a>
Carlina_vulgaris_2	Hajotthu	23.08.2016	By Hajotthu at the German language Wikipedia, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=8788815">https://commons.wikimedia.org/w/index.php?curid=8788815</a>
Centaurea_jacea_1	Franz Xaver	13.07.2016	By Franz Xaver - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=7678874">https://commons.wikimedia.org/w/index.php?curid=7678874</a>
Centaurea_jacea_2	Kristian Peters	13.07.2016	By Kristian Peters -- Fabelfroh 09:44, 5 March 2007 (UTC) - photographed by Kristian Peters, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1746557">https://commons.wikimedia.org/w/index.php?curid=1746557</a>
Centaurea_scabiosa_1	MarkusHagenlocher	13.07.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=515515">https://commons.wikimedia.org/w/index.php?curid=515515</a>
Centaurea_scabiosa_2	Kristian Peters	13.07.2016	By Kristian Peters -- Fabelfroh 08:03, 3 November 2006 (UTC) - photographed by myself, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1334881">https://commons.wikimedia.org/w/index.php?curid=1334881</a>
Cirsium_oleraceum_1	Christian Fischer	05.09.2016	By Christian Fischer, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=17322367">https://commons.wikimedia.org/w/index.php?curid=17322367</a>
Cirsium_oleraceum_2	Franz Xaver	05.09.2016	By Franz Xaver - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=7998046">https://commons.wikimedia.org/w/index.php?curid=7998046</a>
Cirsium_palustre_1	Pethan Utrecht	13.07.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=206644">https://commons.wikimedia.org/w/index.php?curid=206644</a>
Cirsium_rivulare_1	Stefan.Iefnaer	13.07.2016	By Stefan.Iefnaer - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=30476283">https://commons.wikimedia.org/w/index.php?curid=30476283</a>
Coronilla_varia_1	Bogdan	15.07.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=210517">https://commons.wikimedia.org/w/index.php?curid=210517</a>
Coronilla_varia_2	Ltshears	15.07.2016	By Ltshears - Trisha M Shears - Own work, CC BY-SA 2.5, <a href="https://commons.wikimedia.org/w/index.php?curid=1660828">https://commons.wikimedia.org/w/index.php?curid=1660828</a>
Cypripedium_calceolus_1	JostGudelius	05.09.2016	By JostGudelius - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=19822093">https://commons.wikimedia.org/w/index.php?curid=19822093</a>
Cypripedium_calceolus_2	Sepulnation1986	05.09.2016	By Sepulnation1986 - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=9514088">https://commons.wikimedia.org/w/index.php?curid=9514088</a>
Dactylorhiza_maculata_1	Jörg Hempel	13.07.2016	By Jörg Hempel, CC BY-SA 3.0 de, <a href="https://commons.wikimedia.org/w/index.php?curid=27374336">https://commons.wikimedia.org/w/index.php?curid=27374336</a>

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Daucus_carota_2	Jcart1534	13.07.2016	By Jcart1534 - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=7639096">https://commons.wikimedia.org/w/index.php?curid=7639096</a>
Dianthus_carthusianorum_1	Bernd Haynold	13.07.2016	By Bernd Haynold - Own work, CC BY 2.5, <a href="https://commons.wikimedia.org/w/index.php?curid=160915">https://commons.wikimedia.org/w/index.php?curid=160915</a>
Dianthus_carthusianorum_2	BerndH	13.07.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=160916">https://commons.wikimedia.org/w/index.php?curid=160916</a>
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Echinops_bannaticus_1	Pethan	26.09.2016	By Pethan, CC BY-SA 3.0, <a href="https://de.wikipedia.org/wiki/Banater_Kugeldistel#/media/File:Echinops_bannaticus01.jpg">https://de.wikipedia.org/wiki/Banater_Kugeldistel#/media/File:Echinops_bannaticus01.jpg</a>
Echinops_exaltatus_1	McIntosh Natura	26.09.2016	CC BY-SA 3.0, <a href="https://en.wikipedia.org/wiki/Echinops_exaltatus#/media/File:Echinops_exaltatus.jpg">https://en.wikipedia.org/wiki/Echinops_exaltatus#/media/File:Echinops_exaltatus.jpg</a>
Echinops_ritro_1	Bjoertvedt	26.09.2016	By Bjoertvedt, CC BY-SA 3.0, <a href="https://de.wikipedia.org/wiki/Kugeldistel#/media/File:Echinops_ritro_01.jpg">https://de.wikipedia.org/wiki/Kugeldistel#/media/File:Echinops_ritro_01.jpg</a>
Eryngium_planum_1	Bogdan	26.09.2016	By Bogdan, CC BY-SA 3.0, <a href="https://de.wikipedia.org/wiki/Flachblatt-Mannstreu#/media/File:Eryngium_planum_bgiu.jpg">https://de.wikipedia.org/wiki/Flachblatt-Mannstreu#/media/File:Eryngium_planum_bgiu.jpg</a>
Eryngium_planum_2	Bernard Dupont	26.09.2016	CC BY-SA 2.0, <a href="https://de.wikipedia.org/wiki/Flachblatt-Mannstreu#/media/File:Flat_Sea_Holly_(Eryngium_planum)__(14240745500).jpg">https://de.wikipedia.org/wiki/Flachblatt-Mannstreu#/media/File:Flat_Sea_Holly_(Eryngium_planum)__(14240745500).jpg</a>
Ferula_communis_1	Patrice78500	05.09.2016	By Patrice78500 - Own work, Public Domain, <a href="https://commons.wikimedia.org/w/index.php?curid=5729474">https://commons.wikimedia.org/w/index.php?curid=5729474</a>
Ferula_communis_2	Jean-Pol GRANDMONT	05.09.2016	By Jean-Pol GRANDMONT - Own work, CC BY 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4495317">https://commons.wikimedia.org/w/index.php?curid=4495317</a>
Heracleum_sphondylium_1	Christian Fischer	13.07.2016	By Christian Fischer, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4467978">https://commons.wikimedia.org/w/index.php?curid=4467978</a>
Heracleum_sphondylium_2	I, Noebse	13.07.2016	By I, Noebse, CC BY-SA 2.5, <a href="https://commons.wikimedia.org/w/index.php?curid=2445382">https://commons.wikimedia.org/w/index.php?curid=2445382</a>
Juncus_articulatus_1	Christian Fischer	05.09.2016	By Christian Fischer, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=364616">https://commons.wikimedia.org/w/index.php?curid=364616</a>
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Juncus_conglomeratus_1	James Lindsey	05.09.2016	By James Lindsey at Ecology of Commanster, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1721600">https://commons.wikimedia.org/w/index.php?curid=1721600</a>
Juncus_conglomeratus_2	Kristian Peters	05.09.2016	By Kristian Peters -- Fabelfroh 12:19, 9 July 2006 (UTC) - photographed by myself, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=934123">https://commons.wikimedia.org/w/index.php?curid=934123</a>
Juncus_effusus_1	Christian Fischer	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/e/e2/JuncusEffusus.jpg/260px-JuncusEffusus.jpg">https://upload.wikimedia.org/wikipedia/commons/thumb/e/e2/JuncusEffusus.jpg/260px-JuncusEffusus.jpg</a>
Juncus_effusus_2	Peigimccann	29.01.2018	<a href="https://en.wikipedia.org/wiki/Juncus#/media/File:Juncus_effuses_Loch_Kruse_7-8-08.jpg">https://en.wikipedia.org/wiki/Juncus#/media/File:Juncus_effuses_Loch_Kruse_7-8-08.jpg</a>
Juncus_squarrosus_1	James Lindsey	05.09.2016	By James Lindsey at Ecology of Commanster, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1721607">https://commons.wikimedia.org/w/index.php?curid=1721607</a>
Juncus_squarrosus_2	James Lindsey	05.09.2016	By James Lindsey at Ecology of Commanster, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1721609">https://commons.wikimedia.org/w/index.php?curid=1721609</a>
Knautia_arvensis_1	Kriss de Niort	13.07.2016	<a href="http://faaxaal.forumactif.com/t3073-photo-de-dipsacacee-scabieuse-des-champs-knautie-des-champs-knautia-arvensis-scabiosa-arvensis-field-scabious?highlight=knautia">http://faaxaal.forumactif.com/t3073-photo-de-dipsacacee-scabieuse-des-champs-knautie-des-champs-knautia-arvensis-scabiosa-arvensis-field-scabious?highlight=knautia</a>
Knautia_arvensis_2	Svdmolen	13.07.2016	By Photo by Svdmolen - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=309255">https://commons.wikimedia.org/w/index.php?curid=309255</a>
Lathyrus_hirsutus_1	Jerzy Opiola	05.09.2016	By Jerzy Opiola - Own work, GFDL, <a href="https://commons.wikimedia.org/w/index.php?curid=4416712">https://commons.wikimedia.org/w/index.php?curid=4416712</a>
Lathyrus_pratensis_1	Andreas Eichler	14.07.2016	By Andreas Eichler, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=39109377">https://commons.wikimedia.org/w/index.php?curid=39109377</a>
Listera_ovata_1	Orchi	05.09.2016	By Orchi - Self-photographed, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=523245">https://commons.wikimedia.org/w/index.php?curid=523245</a>
Listera_ovata_2	Hans Hillewaert	05.09.2016	By © Hans Hillewaert /, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4117934">https://commons.wikimedia.org/w/index.php?curid=4117934</a>
Lotus_angustissimus_1	Javier martin	23.08.2016	By Javier martin - Own work, Public Domain, <a href="https://commons.wikimedia.org/w/index.php?curid=11298498">https://commons.wikimedia.org/w/index.php?curid=11298498</a>
Lotus_angustissimus_2	Tigerente	23.08.2016	By User:Tigerente - Own work, CC BY 2.5, <a href="https://commons.wikimedia.org/w/index.php?curid=1392961">https://commons.wikimedia.org/w/index.php?curid=1392961</a>
Lotus_corniculatus_1	Martin Olsson	14.07.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=184621">https://commons.wikimedia.org/w/index.php?curid=184621</a>
Lotus_corniculatus_2	Walter Siegmund	14.07.2016	By Walter Siegmund (talk) - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=7726296">https://commons.wikimedia.org/w/index.php?curid=7726296</a>
Lotus_pedunculatus_1	André Karwath aka Aka	23.08.2016	By André Karwath aka Aka - Own work, CC BY-SA 2.5, <a href="https://commons.wikimedia.org/w/index.php?curid=231445">https://commons.wikimedia.org/w/index.php?curid=231445</a>
Lotus_pedunculatus_2	Kristian Peters	23.08.2016	By Kristian Peters -- Fabelfroh 15:33, 3 January 2007 (UTC) - photographed by myself, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1521790">https://commons.wikimedia.org/w/index.php?curid=1521790</a>

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Lychnis_flos-cuculi_1	Prazak	12.07.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=826205">https://commons.wikimedia.org/w/index.php?curid=826205</a>
Lychnis_flos-cuculi_2	Donald Macauley	12.07.2016	By Donald Macauley - Flickr: Lychnis flos-cuculi, CC BY-SA 2.0, <a href="https://commons.wikimedia.org/w/index.php?curid=15353039">https://commons.wikimedia.org/w/index.php?curid=15353039</a>
Medicago_falcata_1	Bogdan	23.08.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=237811">https://commons.wikimedia.org/w/index.php?curid=237811</a>
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Medicago_lupulina_2	Sten	14.07.2016	By Sten, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=6986615">https://commons.wikimedia.org/w/index.php?curid=6986615</a>
Medicago_minima_1	Fornax	23.08.2016	Public Domain, <a href="https://commons.wikimedia.org/w/index.php?curid=1122331">https://commons.wikimedia.org/w/index.php?curid=1122331</a>
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Medicago_sativa_1	H. Zell	15.07.2016	By H. Zell - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=10672432">https://commons.wikimedia.org/w/index.php?curid=10672432</a>
Melilotus_officinalis_1	Pethan Utracht	05.09.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=195679">https://commons.wikimedia.org/w/index.php?curid=195679</a>
Melilotus_officinalis_2	Bogdan	05.09.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=248342">https://commons.wikimedia.org/w/index.php?curid=248342</a>
Myosotis_arvensis_1	AnRo0002	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/d/d9/20140418Myosotis_arvensis2.jpg/1280px-20140418Myosotis_arvensis2.jpg">https://upload.wikimedia.org/wikipedia/commons/thumb/d/d9/20140418Myosotis_arvensis2.jpg/1280px-20140418Myosotis_arvensis2.jpg</a>
Myosotis_arvensis_2	Darkone	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/0/0c/Myosotis_arvensis_01.jpg">https://upload.wikimedia.org/wikipedia/commons/0/0c/Myosotis_arvensis_01.jpg</a>
Myosotis_palustris_2	Sten	13.07.2016	By Sten, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1957913">https://commons.wikimedia.org/w/index.php?curid=1957913</a>
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Scabiosa_columbaria_1	Kriss de Niort	13.07.2016	<a href="http://faaxaal.forumactif.com/t3302-photo-de-dipsacacee-scabieuse-colombaire-scabiosa-columbaria-pigeon-s-scabious?highlight=scabiosa">http://faaxaal.forumactif.com/t3302-photo-de-dipsacacee-scabieuse-colombaire-scabiosa-columbaria-pigeon-s-scabious?highlight=scabiosa</a>
Scabiosa_columbaria_2	Stan Shebs	13.07.2016	By Stan Shebs, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=132631">https://commons.wikimedia.org/w/index.php?curid=132631</a>
Serratula_tinctoria_1	Franz Xaver	12.07.2016	By Franz Xaver - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=8166825">https://commons.wikimedia.org/w/index.php?curid=8166825</a>
Serratula_tinctoria_2	Kristian Peters	14.07.2016	By Kristian Peters -- Fabelfroh 15:13, 10 August 2007 (UTC) - photographed by Kristian Peters, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=2544278">https://commons.wikimedia.org/w/index.php?curid=2544278</a>
Silene_dioica_1	Christian Fischer	13.07.2016	By Christian Fischer, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=34467612">https://commons.wikimedia.org/w/index.php?curid=34467612</a>
Silene_dioica_2	Strobilomyces	13.07.2016	By User:Strobilomyces - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=728280">https://commons.wikimedia.org/w/index.php?curid=728280</a>
Succisa_pratensis_1	Stefan.lefnaer	13.07.2016	By Stefan.lefnaer - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=37917824">https://commons.wikimedia.org/w/index.php?curid=37917824</a>
Succisa_pratensis_2	H. Zell	13.07.2016	By H. Zell - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=11135687">https://commons.wikimedia.org/w/index.php?curid=11135687</a>
Tetragonolobus_maritimus_1	Stefan.lefnaer	05.09.2016	By Stefan.lefnaer - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=29438897">https://commons.wikimedia.org/w/index.php?curid=29438897</a>
Trifolium_alpestre_1	Marco Iocchi	15.07.2016	By Marco Iocchi - Montagne della Duchessa, Rieti, Lazio, Italia, CC BY 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=9960866">https://commons.wikimedia.org/w/index.php?curid=9960866</a>
Trifolium_arvense_1	I, Denbert	23.08.2016	By I, Denbert, CC BY 2.5, <a href="https://commons.wikimedia.org/w/index.php?curid=2246884">https://commons.wikimedia.org/w/index.php?curid=2246884</a>
Trifolium_arvense_2	Michael Becker	23.08.2016	By Michael Becker - taken by Michael Becker, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=222746">https://commons.wikimedia.org/w/index.php?curid=222746</a>
Trifolium_campestre_1	Tocekas	23.08.2016	By Tocekas - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4158868">https://commons.wikimedia.org/w/index.php?curid=4158868</a>
Trifolium_dubium_1	Hopklaver	23.08.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=5247843">https://commons.wikimedia.org/w/index.php?curid=5247843</a>
Trifolium_dubium_2	I, Kenraiz	23.08.2016	By I, Kenraiz, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=2378709">https://commons.wikimedia.org/w/index.php?curid=2378709</a>
Trifolium_fragiferum_1	Christian Fischer	23.08.2016	By Christian Fischer, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1035347">https://commons.wikimedia.org/w/index.php?curid=1035347</a>
Trifolium_medium_2	Christian Fischer	14.07.2016	By Christian Fischer, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=455872">https://commons.wikimedia.org/w/index.php?curid=455872</a>
Trifolium_pratense_1	Rob Hille	14.07.2016	By Rob Hille - Own work, Public Domain, <a href="https://commons.wikimedia.org/w/index.php?curid=2583591">https://commons.wikimedia.org/w/index.php?curid=2583591</a>

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Trifolium_pratense_2	H. Zell	14.07.2016	By H. Zell - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=11228538">https://commons.wikimedia.org/w/index.php?curid=11228538</a>
Trifolium_resupinatum_1	Fornax	23.08.2016	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=1348368">https://commons.wikimedia.org/w/index.php?curid=1348368</a>
Trifolium_rubens_1	Franz Xaver	23.08.2016	By Franz Xaver - selbst fotografiert - my own photo, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=20006576">https://commons.wikimedia.org/w/index.php?curid=20006576</a>
Trifolium_stellatum_1	Hans Hillewaert	15.07.2016	By © Hans Hillewaert /, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4094956">https://commons.wikimedia.org/w/index.php?curid=4094956</a>
Trifolium_striatum_1	Stefan.lefnaer	23.08.2016	By Stefan.lefnaer - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=45018968">https://commons.wikimedia.org/w/index.php?curid=45018968</a>
Vicia_cracca_1	Walter Siegmund	15.07.2016	By Walter Siegmund (talk) - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=6991833">https://commons.wikimedia.org/w/index.php?curid=6991833</a>
Vicia_cracca_2	Isidre blanc	15.07.2016	By Isidre blanc - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=26566436">https://commons.wikimedia.org/w/index.php?curid=26566436</a>
Vicia_sativa_1	Fornax	23.08.2016	By Fornax - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4029407">https://commons.wikimedia.org/w/index.php?curid=4029407</a>
Vicia_sepium_1	Frank Vincentz	15.07.2016	By Frank Vincentz - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=2787495">https://commons.wikimedia.org/w/index.php?curid=2787495</a>
Vicia_sepium_2	Anneli Salo	15.07.2016	By Anneli Salo - Own work (Own photo), CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4233324">https://commons.wikimedia.org/w/index.php?curid=4233324</a>
Vicia_tenuifolia_1	Franz Xaver	23.08.2016	By Franz Xaver - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=33507911">https://commons.wikimedia.org/w/index.php?curid=33507911</a>
Vicia_tenuifolia_2	Petr Filippov	24.08.2016	By Petr Filippov - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=6899768">https://commons.wikimedia.org/w/index.php?curid=6899768</a>

### Species/species groups for structural characterization

Photo	Autor	Downloading date	License and Link
Calamagrostis_arundinacea_1	James Lindsey	29.01.2018	<a href="https://de.wikipedia.org/wiki/Wald-Reitgras#/media/File:Calamagrostis.arundinacea.jpg">https://de.wikipedia.org/wiki/Wald-Reitgras#/media/File:Calamagrostis.arundinacea.jpg</a>
Calamagrostis_epigejos_1	Botaurus	11.01.2018	<a href="https://commons.wikimedia.org/w/index.php?search=Calamagrostis+epigejos&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=bfqmn9zvg1qsa676x3jurdydg#/media/File:Calamagrostis-epigejos-02.jpg">https://commons.wikimedia.org/w/index.php?search=Calamagrostis+epigejos&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=bfqmn9zvg1qsa676x3jurdydg#/media/File:Calamagrostis-epigejos-02.jpg</a>
Carduus_crispus_1	Ivar Leidus	11.01.2018	<a href="https://commons.wikimedia.org/w/index.php?search=carduus&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=2cdjf8v5m5fsf9udqd4jeyci#/media/File:Carduus_crispus_-_Keila.jpg">https://commons.wikimedia.org/w/index.php?search=carduus&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=2cdjf8v5m5fsf9udqd4jeyci#/media/File:Carduus_crispus_-_Keila.jpg</a>
Carduus_crispus_2	Monedula	29.01.2018	
Carex_halleriana_1	Jean Tosti	29.01.2018	<a href="https://commons.wikimedia.org/wiki/File:Carex_halleriana.jpg">https://commons.wikimedia.org/wiki/File:Carex_halleriana.jpg</a>
Carex_arenaia_1	Christian Fischer	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/4/40/CarexArenaria.jpg/800px-CarexArenaria.jpg">https://upload.wikimedia.org/wikipedia/commons/thumb/4/40/CarexArenaria.jpg/800px-CarexArenaria.jpg</a>
Carex_acutiformis_1	Artem Topchiy	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/4/41/Carex_acutiformis.jpg/800px-Carex_acutiformis.jpg">https://upload.wikimedia.org/wikipedia/commons/thumb/4/41/Carex_acutiformis.jpg/800px-Carex_acutiformis.jpg</a>
Carex_flacca_1	Robert Flogaus-Faust	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/0/05/Carex_flacca_RF.jpg/800px-Carex_flacca_RF.jpg">https://upload.wikimedia.org/wikipedia/commons/thumb/0/05/Carex_flacca_RF.jpg/800px-Carex_flacca_RF.jpg</a>
Carex_hirta_1	Stemonitis	11.01.2018	<a href="https://commons.wikimedia.org/w/index.php?search=Carex+hirta&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=9qcj52dz8dey4bb8s5gby78vf#/media/File:Carex_hirta_utracles.jpg">https://commons.wikimedia.org/w/index.php?search=Carex+hirta&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=9qcj52dz8dey4bb8s5gby78vf#/media/File:Carex_hirta_utracles.jpg</a>
Carex_panicea_1	Kristian Peters	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/0/02/Carex_panicea_fruchtstand.jpeg">https://upload.wikimedia.org/wikipedia/commons/0/02/Carex_panicea_fruchtstand.jpeg</a>
Juncus_1	Immanuel Giel	11.01.2018	<a href="https://commons.wikimedia.org/w/index.php?search=rushes&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=mmd1rrox0sfvxftr383#/media/File:Juncus_rushes_-_panoramio.jpg">https://commons.wikimedia.org/w/index.php?search=rushes&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=mmd1rrox0sfvxftr383#/media/File:Juncus_rushes_-_panoramio.jpg</a>
Juncus_effusus_1	Peigimccann	29.01.2018	<a href="https://en.wikipedia.org/wiki/Juncus#/media/File:Juncus_effuses_Loch_Kruse_7-8-08.jpg">https://en.wikipedia.org/wiki/Juncus#/media/File:Juncus_effuses_Loch_Kruse_7-8-08.jpg</a>
Juncus_inflexus_1	Kristian Peters	11.01.2018	<a href="https://commons.wikimedia.org/w/index.php?search=Juncus+inflexus&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=euhls17qv2f1d0eukff8p5ie#/media/File:Juncus_inflexus.jpeg">https://commons.wikimedia.org/w/index.php?search=Juncus+inflexus&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=euhls17qv2f1d0eukff8p5ie#/media/File:Juncus_inflexus.jpeg</a>
Rosa_canina_1	Juandev	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/a/ac/PR_Kope%C4%8D%2C_pohled_na_v%C3%BDchod_s_%C5%A1%C3%ADpkem_%28Rosa_canina%29.JPG/1280px-PR_Kope%C4%8D%2C_pohled_na_v%C3%BDchod_s_%C5%A1%C3%ADpkem_%28Rosa_canina%29.JPG">https://upload.wikimedia.org/wikipedia/commons/thumb/a/ac/PR_Kope%C4%8D%2C_pohled_na_v%C3%BDchod_s_%C5%A1%C3%ADpkem_%28Rosa_canina%29.JPG/1280px-PR_Kope%C4%8D%2C_pohled_na_v%C3%BDchod_s_%C5%A1%C3%ADpkem_%28Rosa_canina%29.JPG</a>

<i>Rosa canina_2</i>	Michael Becker	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/3/33/Rosa_canina_blat_2005.05.26_11.50.13.jpg">https://upload.wikimedia.org/wikipedia/commons/3/33/Rosa_canina_blat_2005.05.26_11.50.13.jpg</a>
<i>Rosa canina_3</i>	Sakurai midori	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/6/62/Rosa_canina_6.JPG/1280px-Rosa_canina_6.JPG">https://upload.wikimedia.org/wikipedia/commons/thumb/6/62/Rosa_canina_6.JPG/1280px-Rosa_canina_6.JPG</a>
<i>Rubus fruticosus_1</i>	Frank Vincentz	29.01.2018	<a href="https://commons.wikimedia.org/w/index.php?title=Special:Search&amp;limit=20&amp;offset=40&amp;profile=default&amp;search=Rubus+fruticosus&amp;searchToken=6mvgraz6qrxhl71ntv51ooa08#/media/File:Rubus_fruticosus_15_ies.jpg">https://commons.wikimedia.org/w/index.php?title=Special:Search&amp;limit=20&amp;offset=40&amp;profile=default&amp;search=Rubus+fruticosus&amp;searchToken=6mvgraz6qrxhl71ntv51ooa08#/media/File:Rubus_fruticosus_15_ies.jpg</a>
<i>Rubus fruticosus_2</i>	Pleple2000	29.01.2018	<a href="https://commons.wikimedia.org/w/index.php?title=Special:Search&amp;limit=20&amp;offset=120&amp;profile=default&amp;search=Rubus+fruticosus&amp;searchToken=twqe84wdkp0twgnonflk1wry#/media/File:Rubus_fruticosus_li%C5%9Bcie_201.jpg">https://commons.wikimedia.org/w/index.php?title=Special:Search&amp;limit=20&amp;offset=120&amp;profile=default&amp;search=Rubus+fruticosus&amp;searchToken=twqe84wdkp0twgnonflk1wry#/media/File:Rubus_fruticosus_li%C5%9Bcie_201.jpg</a>
<i>Rumex obtusifolius_1</i>	Sten Porse	11.01.2018	<a href="https://commons.wikimedia.org/w/index.php?search=Rumex+obtusifolius&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=60qj84wkwcwvhyw8r0qqr2ip#/media/File:Rumex-obtusifolius-foilage.JPG">https://commons.wikimedia.org/w/index.php?search=Rumex+obtusifolius&amp;title=Special:Search&amp;profile=default&amp;fulltext=1&amp;searchToken=60qj84wkwcwvhyw8r0qqr2ip#/media/File:Rumex-obtusifolius-foilage.JPG</a>
<i>Rumex obtusifolius_2</i>	Boris Gaberšček	11.01.2018	<a href="https://commons.wikimedia.org/w/index.php?title=Special:Search&amp;limit=20&amp;offset=20&amp;profile=default&amp;search=Rumex+obtusifolius&amp;searchToken=d2hmf5wuw1p1if00vgwvm0u84#/media/File:Rumex_obtusifolius_PID1745-1.jpg">https://commons.wikimedia.org/w/index.php?title=Special:Search&amp;limit=20&amp;offset=20&amp;profile=default&amp;search=Rumex+obtusifolius&amp;searchToken=d2hmf5wuw1p1if00vgwvm0u84#/media/File:Rumex_obtusifolius_PID1745-1.jpg</a>
<i>Rumex acetosa_1</i>	Burschik	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/4/48/Rumex_acetosa_cultivar_01.jpg">https://upload.wikimedia.org/wikipedia/commons/4/48/Rumex_acetosa_cultivar_01.jpg</a>
<i>Rumex acetosa_2</i>	Hajotthu	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/SauerampferPflanze_%28Rumex_acetosa%29.jpg/800px-SauerampferPflanze_%28Rumex_acetosa%29.jpg">https://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/SauerampferPflanze_%28Rumex_acetosa%29.jpg/800px-SauerampferPflanze_%28Rumex_acetosa%29.jpg</a>
<i>Rumex crispus_1</i>	Ettore Balocchi	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/a/ab/Polygonaceae_-_Rumex_crispus-3_%288304690028%29.jpg">https://upload.wikimedia.org/wikipedia/commons/a/ab/Polygonaceae_-_Rumex_crispus-3_%288304690028%29.jpg</a>
<i>Rumex crispus_2</i>	Philmarin	08.02.2021	<a href="https://upload.wikimedia.org/wikipedia/commons/thumb/f/f5/1-R.crispus-gen-2.jpg/800px-1-R.crispus-gen-2.jpg">https://upload.wikimedia.org/wikipedia/commons/thumb/f/f5/1-R.crispus-gen-2.jpg/800px-1-R.crispus-gen-2.jpg</a>
<i>Shrub_1</i>	András Schmotzer		Personal material

### Additional legume species / species groups

Photo	Author	Downloading date	License and Link
<i>Trifolium repens_1</i>	Hans Hillewaert	19.02.2018	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/wiki/File:Trifolium_repens_(inflorescence)_Edit.jpg">https://commons.wikimedia.org/wiki/File:Trifolium_repens_(inflorescence)_Edit.jpg</a>
<i>Trifolium repens_2</i>	Jengod	19.02.2018	CC BY-SA 3.0, <a href="https://upload.wikimedia.org/wikipedia/commons/2/2d/Dutch_white_clover.jpg">https://upload.wikimedia.org/wikipedia/commons/2/2d/Dutch_white_clover.jpg</a>
<i>Trifolium montanum_1</i>	Hugo.arg	19.02.2018	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/wiki/File:KalninisDobilas.JPG">https://commons.wikimedia.org/wiki/File:KalninisDobilas.JPG</a>
<i>Trifolium montanum_2</i>	Ivar Leidus	19.02.2018	Own work, CC BY-SA 3.0, <a href="https://upload.wikimedia.org/wikipedia/commons/3/30/Trifolium_montanum_-_m%C3%A4gistik.jpg">https://upload.wikimedia.org/wikipedia/commons/3/30/Trifolium_montanum_-_m%C3%A4gistik.jpg</a>
<i>Grass_clover_mixture_1</i>	Peter Griffin	19.02.2018	CC0, Public domain; <a href="http://www.publicdomainpictures.net/pictures/10000/velka/296-1244490106cbdy.jpg">http://www.publicdomainpictures.net/pictures/10000/velka/296-1244490106cbdy.jpg</a>
<i>Lupinus luteus_1</i>	Carsten Niehaus	19.02.2018	CC BY-SA 3.0; <a href="https://commons.wikimedia.org/wiki/Lupinus#/media/File:Lupinus_spec.jpg">https://commons.wikimedia.org/wiki/Lupinus#/media/File:Lupinus_spec.jpg</a>
<i>Lupinus pilosus_1</i>	Giancarlo Dessì	19.02.2018	CC BY-SA 3.0; <a href="https://commons.wikimedia.org/wiki/Lupinus#/media/File:Lupinus_hirsutum.jpg">https://commons.wikimedia.org/wiki/Lupinus#/media/File:Lupinus_hirsutum.jpg</a>

## 11 Overview on the photos of the key species in this guidance and on further examples of the key species groups .

Selected species / species groups	English names	Colours of the flowers	Plant family (botanical name)	Plant family (English name)	Species with pictures in this guidance	Examples of Further species
<i>Apiaceae</i>	Carrot family	white, yellow	Apiaceae	Carrot family	<i>Anthriscus sylvestris</i> <i>Daucus carota</i> <i>Heracleum sphondylium</i> <i>Ferula communis</i> <i>Pimpinella saxifraga</i>	<i>Chaerophyllum hirsutum</i> <i>Carum carvi</i> <i>Conopodium majus</i> <i>Crambe tataria</i> <i>Crithmum maritimum</i> <i>Foeniculum vulgare</i> <i>Kundmannia sicula</i> <i>Oenanthe</i> spp. <i>Pimpinella</i> spp. <i>Peucedanum</i> spp. <i>Seseli</i> spp. <i>Laserpitium latifolium</i>
<i>Campanula spec.</i>	Bellflower	blue, white	Campanulaceae	Bellflower family	<i>Campanula glomerata</i> <i>C. patula</i> <i>C. rotundifolia</i> agg. <i>C. sibirica</i>	<i>Campanula abietina</i> <i>C. cervicaria</i> <i>C. erinus</i> <i>C. persicifolia</i> <i>C. rapunculuc</i> <i>C. scheuchzeri</i>
<i>Centaurea spec.</i> , <i>Serratula tinctoria</i>	Knapweed	red, pink	Asteraceae	Daisy family	<i>Centaurea jacea</i> <i>C. scabiosa</i> <i>Serratula tinctoria</i>	<i>Centaurea angustifolia</i> <i>C. aspera</i> <i>C. bracteata</i> <i>C. calcitrapa</i> <i>C. deusta</i> <i>C. melitensis</i> <i>C. napifolia</i> <i>C. nigra</i> <i>C. nigrescens</i> <i>C. paniculata</i> <i>Cyanus triumfetti</i> <i>Jurinea cyanoides</i>

Selected species / species groups	English names	Colours of the flowers	Plant family (botanical name)	Plant family (English name)	Species with pictures in this guidance	Examples of Further species
<i>Cirsium spec.</i> , <i>Carduus spec.</i> , <i>Carlina spec.</i>	Thistle	red, yellowish	Asteraceae	Daisy family	<i>Carlina vulgaris</i> agg. <i>C. acaulis</i> <i>Cirsium palustre</i> <i>C. rivulare</i> <i>C. oleraceum</i> <i>Carduus crispus</i>	<i>Carlina acanthifolia</i> <i>C. acanthoides</i> <i>Cirsium acaule</i> <i>C. appendiculatum</i> <i>C. arvense</i> <i>C. eriophorum</i> <i>C. helenoides</i> <i>C. heterophyllum</i> <i>C. monspessulanum</i> <i>C. tuberosum</i> <i>C. vulgare</i> <i>Cistus creticus</i> <i>C. salviifolius</i>
<i>Juncus spec.</i>	Rush	gree, brown	Juncaceae	Rush family	<i>Juncus conglomeratus</i> <i>J. squarrossus</i> <i>J. articulatus</i>	<i>Juncus effusus</i> <i>J. acutiflorus</i> <i>J. inflexus</i>
<i>Myosotis spec.</i>	Forget-me-not	blue	Boraginaceae	Borage family	<i>Myosotis palustris</i> agg.	<i>Myosotis ramosissima</i> <i>M. discolor</i>
<i>Orchidaceae spec.</i>	Orchid family	all colours	Orchidaceae	Orchid family	<i>Dactylorhiza sambucina</i> <i>D. maculata</i> <i>Anacamptis pyramidalis</i> <i>Orchis morio</i> <i>Ophrys apifera</i> <i>Cypripedium calceolus</i> <i>Listeraovata</i> <i>Serapias vomeracea</i>	<i>Gymnadenia conopsea</i> <i>Orchis purpurea</i> <i>O. mascula</i> <i>O. simis</i> <i>O. tridentata</i> <i>Ophrys argolica</i> <i>O. ferrum-equinum</i> <i>O. fuciflora</i> <i>O. fusca</i> <i>O. kotschyi</i> <i>O. omegaifera</i> <i>Serapias spp.</i>

Selected species / species groups	English names	Colours of the flowers	Plant family (botanical name)	Plant family (English name)	Species with pictures in this guidance	Examples of Further species
<i>Scabiosa spec.</i> , <i>Knautia spec.</i> , <i>Succisa spec.</i>	Scabious	blue, white	Dipsacaceae	Teasel family	<i>Scabiosa columbaria</i> <i>Knautia arvensis</i> <i>Succisa pratensis</i>	<i>Scabiosa atropurpurea</i> <i>S. canescens</i> <i>S. ochroleuca</i> <i>S. strillata</i> <i>S. triandra</i> <i>Knautia integrifolia</i> <i>K. purpurea</i> <i>Lomelosia spec.</i>
<i>Silene spec.</i> - red flowering, <i>Lychnis flos-cuculi</i> , <i>Dianthus spec.</i>	Campion Pink	red, pink	Caryophyllaceae	Pink family	<i>Silene dioica</i> <i>Lychnis flos-cuculi</i> <i>Dianthus carthusianorum</i> <i>D. superbus</i>	<i>S. apetala</i> <i>S. gallica</i> <i>Dianthus armeria</i> <i>D. deltoides</i> <i>D. arenaria</i> <i>D. serotinus</i>
<i>Trifolium spec.</i> - red flowering	Clover	red	Fabaceae	Legume family	<i>Trifolium arvense</i> <i>T. fragiferum</i> <i>T. medium</i> <i>T. pratense</i> <i>T. resupinatum</i> <i>T. stellatum</i> <i>T. striatum</i>	<i>Trifolium alpestre</i> <i>T. angulatum</i> <i>T. angustifolium</i> <i>T. bocconeii</i> <i>T. cherleri</i> <i>T. glomeratum</i> <i>T. hirtum</i> <i>T. incarnatum</i> <i>T. lappaceum</i> <i>T. squamosum</i> <i>T. strictum</i> <i>T. tomentosum</i>

Selected species / species groups	English names	Colours of the flowers	Plant family (botanical name)	Plant family (English name)	Species with pictures in this guidance	Examples of Further species
<i>Trifolium spec.</i> , <i>Medicago spec.</i> , <i>Lotus spec.</i> , et al. <i>Coronilla</i> - yellow flowering	Trefoil, Vetch	yellow	Fabaceae	Legume family	<i>Anthyllis vulneraria</i> <i>Trifolium campestre</i> <i>T. dubium</i> <i>Melilotus officinalis</i> <i>Hippocrepis comosa</i> <i>Lathyrus pratensis</i> <i>Medicago lupulina</i> <i>M. falcata</i> <i>M. minima</i> <i>Lotus corniculatus</i> <i>L. angustissimus</i> <i>L. pedunculatus</i> <i>L. tenuis</i> <i>Tetragonolobus maritimus</i>	<i>Trifolium micranthum</i> <i>T. patens</i> <i>Dorycnium spp.</i> <i>Medicago orbicularis</i> <i>M. rigidula</i> <i>M. doliata</i> <i>M. truncatula</i> <i>M. arabica</i> <i>M. polymorpha</i> <i>Lotus parviflorus</i>
<i>Vicia spec.</i> , <i>Lathyrus spec.</i> , <i>Astragalus spec.</i> - blue+purple flowers	Vetch	blue, purple	Fabaceae	Legume family	<i>Vicia cracca</i> <i>V. sativa</i> <i>V. sepium</i> <i>V. tenuifolia</i> <i>Lathyrus hirsutus</i> <i>Astragalus danicus</i>	<i>Vicia ervillia</i> <i>V. hybrida</i> <i>V. lathyroides</i> <i>V. lutea</i> <i>V. peregrina</i> <i>V. vilosa</i> <i>V. grandiflora</i> <i>V. pannonica</i> <i>Lathyrus angulatus</i> <i>L. latifolius</i> <i>L. linifolius</i> <i>L. setifolius</i> <i>L. sphaericus</i> <i>Astragalus austriacus</i> <i>A. hamosus</i> <i>A. sesameus</i> <i>A. onobrychis</i> <i>A. spuneri</i>