

Meadow plants for honey bees and wild pollinators



The value of regularly occurring plant species in Austria, southern Germany and South Tyrol

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Note

Despite great endeavours to correctly reflect the value of the listed plant species for the four insect groups, it cannot be ruled out that individual classifications may require correction. For hoverflies and adult butterflies the information situation is comparatively sparse. The authors welcome any suggestions and information in this regard. Please send them to the e-mail address hochland.pf@gmail.com

Editor

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Gender note

The personal designations used in this brochure always refer equally to male and female persons. We have refrained from using double references and gendered terms in favour of better readability

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Foreword

Colourful flowering meadows were still taken for granted by the older generation in their youth. Today, it is almost impossible to pick a bouquet of meadow flowers for Mother's Day. When we humans are in danger of losing something, it becomes valuable. That is why flower meadows are once again becoming the centre of attention. After all, they are a source of food for many insects, such as wild bees, butterflies, hoverflies and beetles, to name but a few.

The value of meadow flowers lies primarily in the pollen and nectar they provide in their blossoms. Nectar is important for adult butterflies, pollen is important for wild bees and honey bees collect nectar and pollen. For all insects, it is all about rearing and providing for their offspring. If there are sufficiently strong, i.e. healthy, insect populations, the food supply for many bird species is also ensured. The insects themselves, in turn, ensure seed formation through pollination and thus the preservation of plant species.

Everything is connected to everything else. A cycle that turns in silence. So quietly that hardly anyone notices when individual elements fail and the cycle begins to stutter. If many parts are missing, the seemingly eternal cycle comes to a standstill. Plant and animal species disappear. Modern man usually only sees himself as an observer, without realising that he is part of the cycle and its beneficiary. We humans must therefore have a fundamental interest in doing everything in our power to promote biodiversity and support its existence.

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Peter Fröhwrth

*Engaging with the earth and plants
can give the soul a similar relief and peace as meditation.*

Hermann Hesse (from: Freude am Garten)



Regional wild plant seeds

Grasses and herbs from extensively farmed native grasslands are known as wild plants. The use of wild plant seed is intended to preserve and promote genetic diversity while taking regionality and origin into account. The aim is to re-establish regional - especially species-rich - grassland in the cultivated landscape. Regional grasses and herbs come directly from wild collection or from seeds propagated from them on specially created propagation areas. Seeds of regional grasses and herbs can therefore be traced back exclusively and verifiably to plants of regional origin, which come from suitable donor areas in strictly defined regions of origin and have been propagated over a maximum of five generations.

The „Gumpenstein Certificate of Origin „G-Zert“ ensures that the origin and regionality, production, quantity flow and generation sequence of the seeds are transparent and traceable right through to the end consumer. GZert wild plant seeds help with this in landscaping, but also in agriculture, for example, in preserving the livelihood of flower-visiting insects.

With the Austrian standard L1113 and the supplementary ONR 121113, a set of rules has been created which, in the absence of further contractual agreements, provides a basis for contractual partners as to how and within what framework revegetation with wild plant seeds should take place.

Native wild plant seed is very complex to obtain and produce and is therefore correspondingly expensive. However, some of the species contained in such mixtures, such as oxeye daisy or yarrow, are also available as much cheaper commercial seed from New Zealand or France. However, these materials are not genetically suitable for our natural habitats and their use is therefore not permitted. In order to give seed producers and -consumers that they are using the right material, wild plant seeds must be certified, i.e. their regional Austrian origin must be proven.

G-Zert certified seed is available in various mixtures from Kärntner Saatbau.

Legends

Value for wild bees:

empty field	No information available
0	not addressed in Westrich (2018)
1	maximum 2 polylectic wild bee species in Westrich (2018)
2	maximum 3 species, of which at least one wild bee species in Westrich (2018) is oligolectic (°)
3	At least only 1 strictly oligolectic (+) wild bee species OR more than 3 wild bee species in Westrich (2018)

Value for honey bees (nectar, pollen, total), hoverflies and adult butterflies:

empty field	No information available
0	No significance
1	Low importance, low value, occasionally visited
2	medium importance
3	high importance, high value, frequently visited

Footnote to the column „Honey bees total“:

Weighted average of „honey bee nectar“ and „honey bee pollen“, with pollen rated twice as important as nectar due to its protein supply.

Availability of regionally certified seed:

1	Certified seed available in large quantities
2	certified available in small quantities, can be produced on demand at any time on a large scale
3	No certified seed available

Sources (see literature):

1	Frühwirth, P. und Rohrer, G. (2015)
2	Scharsching, V. and Tschöll, A. (2023)
3	Westrich (2018)
4	Bee pasture catalogue (2014)
5	Kirk W. D. J. and Howes F. N. (2012)
6	Frühwirth, P. (2025)
7	Gusenleitner, F. (2025)
8	Düll, R. und Kutzelnigg, H. (2011)
9	Heim, H. (2025)
10	Rauschert, S. (1961)

Source for „Seeds of regionally certified origin“: Krautzer, B. (2025).

Source for „Flowering time“: Landolt, E. et al. (2010): Flora indicativa.

The meadow plant species are categorised according to

HERBS
LEGUMINOSES
GRASSES (SWEET GRASSES AND SOUR GRASSES)

Nr.	Scientific name	English name	Honeybees			Wild bees			Hoverflies			adult butterflies			Flowering time (from to)			Seeds from reg. Crt. origin			Honey bee nectar			Source pollen			Source honeybee			Wild bees			Source hoverflies			Source adult butterflies		
			Nectar	Pollen	total																																	

	HERBS														
1	Achillea millefolium aggr.	common yarrow	1	2	1.67	3	2	0	6-9	1	1	6	3	1	1
2	Achillea ptarmica	marsh yarrow	1	2	1.67	0	2	0	7-8	2	1	1	3	1	1
3	Aconitum napellus	monkshood	1	1	1.00	0	1	2	6-8	3	2	2	3	2	2
4	Adonis aestivalis	summer adonis	0	0	0.00	0	1	0	5-7	3	1	1	3	1	1
5	Aegopodium podagraria	ground elder	0	0	0.00	3			5-7	3	6	6	3		
6	Agrimonia eupatoria	common agrimony	0	2	1.33	0	0	0	6-9	2	1	1	3	1	1
7	Agrostemma githago	common corn-cockle	0	0	0.00	0	0	3	6-8	1	1	1	3	1	1
9	Ajuga reptans	blue bugle	3	1	1.67	3	3	2	4-7	2	1	1	3	9	1
10	Alchemilla sp.	lady's mantle species	0	0	0.00	0			5-9	2	6	6	3		
11	Allium carinatum	keeled garlic				0			6-7	2			3		
12	Allium schoenoprasum	chives	2	2	2.00	1	0	1	5-8	2	1	1	3	1	1
14	Anemone nemorosa	wood anemone	0	2	1.33	1	1	0	3-5	3	1	1	3	1	1
15	Angelica sylvestris	wild angelica	3	1	1.67	3	2	1	7-9	2	1	1	3	1	1
16	Anthemis tinctoria	dyer's chamomile, golden marguerite	1	2	1.67	3	3	1	6-9	1	1	1	3	1	1
18	Anthriscus sylvestris	wild chervil	2	2	2.00	3	1	0	4-9	2	1	1	3	1	1
20	Aquilegia vulgaris	commune columbine	1	2	1.67	0	0	1	5-7	3	2	2	3	2	2
21	Arabis ciliata	ciliated goose cress	2	2	2.00	0			4-7	3	5	5	3		
22	Arenaria serpyllifolia	thyme-leaf sandwort				0			5-7	3			3		
23	Arnica montana	mountain arnica	0	2	1.33	0	2	2	6-8	2	1	1	3	1	1
25	Artemisia vulgaris	mugwort	0	0	0.00	0	0	0	7-9	3	1	1	3	1	1
26	Aruncus dioicus	goat's beard, forest honeysuckle	1	2	1.67	0	2	1	5-7	3	2	2	3	2	2
27	Astrantia major	great masterwort	1	1	1.00	0	1	1	6-8	2	2	2	3	2	2
29	Barbarea vulgaris	winter cress	2	1	1.33	3			5-7	1	5	5	3		
30	Bellis perennis	daisy	1	1	1.00	3	0	0	2-11	2	1	1	3	1	1
35	Bupthalmum salicifolium	willow-leaved ox-eye daisy	0	2	1.33	3	2	3	6-9	1	1	1	3	1	1
36	Calendula officinalis	marigold	2	2	2.00	2	3	2	6-8	1	1	1	3	1	1
37	Campanula glomerata	clustered bellflower	3	2	2.33	3	1	1	6-8	3	2	2	3	2	2
38	Campanula patula	spreading bellflower	2	2	2.00	3	0	0	6-8	1	1	1	3	1	1
39	Campanula persicifolia	Peach-leaved bellflower	2	2	2.00	3	2	0	6-7	2	1	1	3	1	1
40	Campanula rapunculoides	creeping bellflower				3			6-9	3			3		
41	Campanula rotundifolia	common harebell	2	2	2.00	3			5-9	2	5	5	3		
42	Campanula scheuchzeri	common bellflower	1	1	1.00	0	1	0	6-8	3	1	1	3	1	1
43	Capsella bursa-pastoris	shepherd's purse				3			3-11	3			3		

44	Cardamine pratensis	cuckoo flower	1	1	1.00	3	2	2	4-6	3	6	6	3	1	1
50	Carlina acaulis	silver thistle	3	3	3.00	0			7-9	3	4	4	3		
51	Carum carvi	caraway	3	2	2.33	1	2	0	5-8	1	1	1	3	1	1
52	Centaurea cyanus	cornflower	3	3	3.00	3	3	2	6-10	1	1	1	3	1	1
53	Centaurea jacea	brown knapweed	3	2	2.33	3	2	3	6-9	1	1	1	3	1	1
54	Centaurea nigrescens	Tyrol knapweed				0			6-8	2			3		
55	Centaurea pseudophrygia	wig knapweed	3	3	3.00	2	2	2	7-8	1	1	1	3	1	1
56	Centaurea scabiosa	greater knapweed	3	3	3.00	3	2	3	6-8	1	1	1	3	1	1
57	Cerastium holosteoides	common mouse-ear chickweed				1			4-8	3			3		
58	Chenopodium album	white goosefoot	0	0	0.00	0			7-9	3	6	6	3		
59	Chenopodium bonus-henricus	good King Henry	0	0	0.00	0			5-8	3	6	6	3		
60	Chenopodium glaucum	oak-leaved goosefoot	0	0	0.00	0			7-9	3	6	6	3		
61	Cichorium intybus	common chicory	3	2	2.33	3	2	1	7-9	1	1	1	3	1	1
62	Cirsium acaule	stemless thistle	2	2	2.00	0			7-9	3	6	6	3		
63	Cirsium heterophyllum	melancholy thistle	2	2	2.00	0			7-8	3	5	5	3		
64	Cirsium oleraceum	cabbage thistle	3	2	2.33	1	1	2	6-9	2	1	1	3	1	1
65	Cirsium palustre	marsh thistle	3	2	2.33	2	2	3	7-10	3	1	1	3	1	1
66	Colchicum autumnale	autumn crocus	1	1	1.00	0			8-10	3	5	5	3		
67	Consolida regalis	common field larkspur	0	0	0.00	2	0	0	6-9	2	1	1	3	1	1
68	Crepis aurea	golden hawksbeard	0	0	0.00	0	2	2	6-8	2	1	1	3	1	1
69	Crepis biennis	rough hawksbeard	2	2	2.00	3	2	1	5-9	1	1	1	3	1	1
70	Crocus albflorus	spring crocus	0	2	1.33	0			3-7	3	6	6	3		
72	Daucus carota	wild carrot	2	1	1.33	3	2	0	6-8	1	1	1	3	1	1
74	Dianthus carthusianorum	carthusian pink	0	1	0.67	2	0	3	6-10	1	1	1	3	1	1
75	Dianthus deltoides	maiden pink	0	0	0.00	0	0	3	6-8	1	1	1	3	1	1
76	Dianthus superbus	fringed pink	0	0	0.00	0	0	3	7-8	1	1	1	3	1	1
77	Dipsacus fullonum	wild teasel	2	2	2.00	0	1	2	7-8	1	2	2	3	2	2
78	Echium vulgare	common viper's bugloss	3	1	1.67	3	2	3	5-10	1	2	2	3	2	2
80	Erigeron glabratus	glabrous ragwort	0	0	0.00	0	1	1	7-8	2	1	1	3	1	1
81	Eupatorium cannabinum	hemp-agrimony, holy rope	2	2	2.00	0	1	3	7-9	2	1	1	3	1	1
82	Euphorbia cyparissias	cypress spurge	0	0	0.00	0	1	0	4-7	1	1	1	3	1	1
83	Euphrasia officinalis aggr.	eyebright	1	0	0.33	0			5-10	3	5	5	3		
89	Filipendula ulmaria	meadowsweet	0	3	2.00	0	1	0	7-8	2	1	1	3	1	1
90	Fragaria vesca	wild strawberry	1	1	1.00	3	1	0	4-7	3	1	1	3	1	1
91	Galium album	white bedstraw	2	2	2.00	0	1	0	6-10	1	1	1	3	1	1
92	Galium mollugo	hedge bedstraw				1			5-9	1			3		
93	Galium odoratum	sweed woodruff	2	2	2.00	0	1	2	4-6	3	2	2	3	2	2

Nr.	Scientific name	English name	Honeybees			Wild bees			Hoverflies			adult butterflies			Flowering time (from to)			Seeds from reg. Cert. origin	Source honeybee pollen	Source wild bees	Source hoverflies	Source adult butterflies
			Nectar	Pollen	total																	
94	Galium verum	lady´s bedstraw	2	2	2,00	1	1	0	6-9	1	1	1	3	1	1	1	1	1	3	1	1	1
95	Geranium pratense	meadow crane´s-bill	2	2	2,00	1	2	1	6-7	2	1	1	3	1	1	1	1	1	3	1	1	1
96	Geranium sanguineum	bloody crane´s-bill	3	3	3,00	0	2	2	5-7	3	2	2	3	2	2	2	2	2	3	2	2	2
97	Geum rivale	water evans	2	3	2,67	1	1	0	4-7	1	1	1	3	1	1	1	1	1	3	1	1	1
98	Glechoma hederacea	ground ivy	3	2	2,33	3	0		4-5	3	1	1	3	1	1	1	1	3	1	1	1	1
99	Helianthemum nummularium	common rock-rose	0	2	1,33	3	3	1	5-8	2	1	1	3	1	1	1	1	3	1	1	1	1
100	Heracleum sphondylium	common hogweed	3	1	1,67	3	2	1	6-9	1	1	1	3	1	1	1	1	3	1	1	1	1
101	Hieracium lactucella	European hawkweed				0			5-10	3			3					3				
102	Hieracium murorum	wall hawkweed	1	2	1,67	0	2	2	5-9	3	1	1	3	1	1	1	1	3	1	1	1	1
103	Hieracium pilosella	tall hawkweed	2	2	2,00	3	2	2	5-10	1	1	1	3	1	1	1	1	3	1	1	1	1
105	Hypericum maculatum	spotted St John's Wort	1	1	1,00	0	2	0	6-8	1	1	1	3	1	1	1	1	3	1	1	1	1
106	Hypericum perforatum	St John's Wort	1	1	1,00	3	2	0	6-9	1	1	1	3	1	1	1	1	3	1	1	1	1
107	Hypochaeris radicata	cat´s ear, flatweed	2	3	2,67	3	2	2	5-10	2	1	1	3	1	1	1	1	3	1	1	1	1
108	Inula salicina	Irish fleabane, willowleaved yellow-head	1	2	1,67	3	2	2	7-8	2	1	1	3	1	1	1	1	3	1	1	1	1
109	Iris pseudacorus	yellow iris, yellow flag	1	1	1,00	0	0	0	5-6	2	1	1	3	1	1	1	1	3	1	1	1	1
110	Iris sibirica	Siberian iris	1	2	1,67	0	0	0	5-6	2	1	1	3	1	1	1	1	3	1	1	1	1
111	Knautia arvensis	field scabious	3	2	2,33	3	2	3	5-9	1	1	1	6	3	1	1	1	3	1	1	1	1
113	Lamium album	white dead-nettle	1	1	1,00	3			5-8	3	5	5	3					3				
114	Lamium purpureum	purple deadnettle	3	2	2,33	3			2-11	3	4	4	3					3				
116	Legousia speculum-veneris	large venus´s-looking-glass	0	0	0,00	0	1		6-7	2	1	1	3	1	1	1	1	3	1	1	1	1
117	Leontodon autumnalis	autumn hawkbit	2	2	2,00	3	2	2	7-9	1	1	1	3	1	1	1	1	3	1	1	1	1
118	Leontodon hispidus	bristly hawkbit, rough hawkbit	2	2	2,00	3	2	2	6-8	1	1	1	3	1	1	1	1	3	1	1	1	1
119	Leucanthemum vulgare aggr.	ox-eye daisy	2	2	2,00	3	2	2	5-10	1	1	1	3	1	1	1	1	3	1	1	1	6
120	Linaria vulgaris	common toadflax	1	1	1,00	1	0	0	6-10	1	1	1	3	1	1	1	1	3	1	1	1	1
121	Linum austriacum	Asian flax	1	1	1,00	0	2	1	6-7	2	1	1	3	1	1	1	1	3	1	1	1	1
126	Lycopus europaeus	gypsywort, European bugleweed	0	0	0,00	0	2	1	7-9	3	1	1	3	1	1	1	1	3	1	1	1	1
127	Lysimachia nummularia	moneywort, creeping jenny	1	1	1,00	3	0	0	6-7	3	1	1	3	1	1	1	1	3	1	1	1	1
128	Lysimachia vulgaris	yellow loosestrife	0	1	0,67	3	0	0	6-8	2	1	1	3	1	1	1	1	3	1	1	1	1
129	Lythrum salicaria	purple loosestrife	3	3	3,00	3	0	3	6-9	2	1	1	3	1	1	1	1	3	1	1	1	1
130	Malva moschata	musk Mallow	3	1	1,67	2	2	0	6-9	1	1	1	3	1	1	1	1	3	1	1	1	1
131	Matricaria chamomilla	chamomile	1	2	1,67	0	1	0	5-9	1	1	1	3	1	1	1	1	3	1	1	1	1
132	Matricaria discoidea	pineappleweed, rayless mayweed				1			5-10	3			3					3				
138	Mentha longifolia	horse mint	2	0	0,67	0	2	1	7-9	2	1	1	3	1	1	1	1	3	1	1	1	1
139	Myosotis alpestris	alpine forget-me-not	2	2	2,00	0			6-8	2	8	8	3					3				

140	Myosotis arvensis	field forget-me-not	3	3	3,00	0	0	1	4-10	1	1	1	3	1	1
141	Myosotis decumbens	prostrate forget-me-not				0			6-8	3			3		
142	Myosotis sylvatica	wood forget-me-not	2	2	2,00	0	2	1	5-7	2	1	1	3	1	1
144	Oenothera biennis	common evening primrose	2	2	2,00	0	0	2	6-9	1	1	1	3	1	1
147	Ononis spinosa	spiny restharrow	0	3	2,00	3	0	0	6-9	2	1	1	3	1	1
148	Origanum vulgare	wild marjoram	3	2	2,33	3	3	3	7-9	1	1	1	3	1	1
149	Orobanche gracilis	blood-red summer orchid, broomrape				0			5-8	3			3		
150	Papaver rhoeas	cornmon poppy	0	3	2,00	3	2	0	5-9	1	1	1	3	1	1
151	Pastinaca sativa	parsnip	1	1	1,00	3	2	0	5-7	1	1	1	3	1	1
152	Persicaria bistorta	western bistort, smokeweed	3	2	2,33	0	1	2	5-8	3	1	1	3	1	1
153	Petrorhagia saxifraga	tunic flower, coat flower	3	1	1,67	0	0	2	6-9	1	1	1	3	1	1
154	Peucedanum palustre	milk parsley, marsh hog's fennel	0	0	0,00	0	2	0	7-8	2	1	1	3	1	1
156	Phyteuma betonicifolium	betony-leaved rampion				0			5-8	3			3		
157	Phyteuma orbiculare	round-headed rampion				3			5-7	3			3		
158	Phyteuma ovatum	Haller's devil's claw				0			6-8	3			3		
159	Pimpinella major	greater burnet saxifrage	2	1	1,33	0	2	0	6-9	1	1	1	3	1	1
160	Pimpinella saxifraga	burnet saxifrage, lesser burnet	3	1	1,67	0	1	0	6-9	2	1	1	3	1	1
161	Plantago lanceolata	ribwort plantain, narrowleaf plantain	0	3	2,00	3	1	0	4-9	1	1	1	3	1	1
162	Plantago major	broadleaf plantain, greater plantain	0	2	1,33	3			6-10	3	4	4	3		
163	Plantago media	hoary plantain	0	3	2,00	3	1	0	5-8	1	1	1	3	1	1
168	Polygonum aviculare	common knotweed	0	0	0,00	0			5-7	3	6	6	3		
169	Potentilla argentea	silver cinquefoil, hoary cinquefoil	2	2	2,00	3	2	0	6-8	2	1	1	3	1	1
170	Potentilla aurea	golden cinquefoil				0			6-8	3			3		
171	Potentilla erecta	common tormentil, septfoil	0	2	1,33	3	1	1	6-9	2	1	1	3	1	1
172	Potentilla neumanniana	spring cinquefoil				3			4-5	3			3		
173	Primula elatior	true oxlip	1	0	0,33	2	0	1	3-7	3	1	1	3	1	1
174	Primula veris	cowslip	0	0	0,00	1			4-6	3			3		
175	Prunella grandiflora	large-flowered self-heals	2	1	1,33	0	0	1	6-10	1	1	1	3	1	1
176	Prunella vulgaris	common self-heals	3	2	2,33	1	0	1	6-9	1	1	1	3	1	1
177	Pulmonaria officinalis	lungwort, Mary's tears	3	3	3,00	3	2	3	3-5	3	2	2	3	2	2
178	Ranunculus acris	meadow buttercup, tall buttercup	1	0	0,33	3			4-9	3	4	4	3		
179	Ranunculus bulbosus	bulbous buttercup	0	1	0,67	3	1	1	5-7	1	1	1	3	1	1
180	Ranunculus repens	creeping buttercup	1	0	0,33	3			5-9	3	4	4	3		
181	Reseda lutea	yellow mignonette	2	2	2,00	3	2	0	6-9	2	1	1	3	1	1
182	Rhinanthus alectorolophus aggr.	european yellow-rattle aggr.				0			5-9	3			3		
183	Rhinanthus minor	yellow rattle	2	0	0,67	0	0	1	5-9	2	1	1	3	1	1
184	Rumex acetosa	common sorrel	0	0	0,00	0	0	0	5-8	1	1	1	3	1	1

Nr.	Scientific name	English name	Honeybees			Wild bees		Hoverflies		adult butterflies		Flowering time (from to)	Seeds from reg. Celt. origin	Source honeybee pollen	Source wild bees	Source hoverflies	Source adult butterflies
			Nectar	Pollen	total												
185	Rumex crispus	curly dock	0	0	0,00	0				7-8	3	6	6	3			
186	Rumex obtusifolius	bluntleaf dock, broad-leaved dock	0	0	0,00	0				6-8	2	6	6	3			
187	Salvia pratensis	meadow sage	3	1	1,67	3	0	1	3	5-8	1	1	1	3	1	1	1
188	Salvia sylvestris	grove sage	3	2	2,33	0	1	3	0	6-7	1	2	2	3	2	2	2
189	Sanguisorba minor	salad burnet, small burnet	2	2	2,00	0	0	0	0	5-8	1	1	1	3	1	1	1
190	Sanguisorba officinalis	great burnet	0	2	1,33	0	1	2	0	7-9	2	1	1	3	1	1	1
191	Saponaria officinalis	common soapwort	1	1	1,00	0	1	1	0	7-9	2	2	2	3	2	2	2
192	Scabiosa columbaria	small scabious, dwarf pincushion flower	2	1	1,33	3	3	3	3	6-9	1	1	1	3	1	1	1
193	Scabiosa lucida	shining scabious	1	1	1,00	0	3	3	0	7-9	2	1	1	3	1	1	1
194	Scabiosa ochroleuca	cream scabious, cream pincushions	1	1	1,00	2	3	3	3	6-9	1	1	1	3	1	1	1
195	Sedum acre	goldmoss stonecrop	2	2	2,00	3	2	1	0	6-7	3	1	1	3	1	1	1
196	Sedum album	white stonecrop	2	3	2,67	1	2	2	0	6-9	3	1	1	3	1	1	1
197	Selinum carvifolia	Cambridge milk-parsley	0	0	0,00	0	2	1	0	7-9	3	1	1	3	1	1	1
198	Serratula tinctoria	dyer's plumeless saw-wort	1	2	1,67	0	2	3	0	7-9	2	1	1	3	1	1	1
199	Silene dioica	red campion	2	2	2,00	0	0	3	0	4-9	1	1	1	3	1	1	1
200	Silene flos-cuculi	ragged robin	3	3	3,00	0	0	2	0	5-8	1	1	1	3	1	1	1
201	Silene nutans	Nottingham catchfly	1	1	1,00	0	0	3	0	6-8	1	1	1	3	1	1	1
202	Silene vulgaris	bladder campion, maidenstears	1	1	1,00	0	0	3	0	6-9	1	1	1	3	1	1	1
203	Solidago virgaurea	European goldenrod	2	2	2,00	2	2	2	2	7-9	2	1	1	3	1	1	1
204	Sonchus oleraceus	common sow thistle	2	3	2,67	0			0	6-10	3	4	4	3			
205	Spergula arvensis	corn spurry, stickwort	1	1	1,00	0	0	0	0	6-8	1	1	1	3	1	1	1
206	Stachys officinalis	betony	3	3	3,00	0	2	3	0	6-8	1	1	1	3	1	1	1
207	Stachys sylvatica	hedge woundwort, whitespot	3	2	2,33	3	2	3	0	6-9	3	2	2	3	2	2	2
208	Stellaria graminea	common starwort, grass-leaved stitchwort	1	1	1,00	0	1	0	0	5-7	1	1	1	3	1	1	1
209	Succisa pratensis	devil's-bit scabious	2	3	2,67	3	2	3	0	7-9	2	1	1	3	1	1	1
210	Tanacetum corymbosum	corymbflower tansy, scentless feverfew	0	0	0,00	1	2	0	0	6-8	2	1	1	3	1	1	1
211	Tanacetum vulgare	common tansy	2	2	2,00	3	2	0	0	6-9	2	1	1	3	1	1	1
212	Taraxacum officinale aggr.	common dandelion species group	3	3	3,00	3			0	4-9	3	6	6	3			
213	Thalictrum lucidum	glossy meadow rue	0	3	2,00	0	0	0	0	5-7	2	1	1	3	1	1	1
214	Thymus pulegioides	broad-leaved thyme	3	1	1,67	1	2	3	0	4-9	2	1	1	3	1	1	1
215	Tragopogon orientalis	Oriental goat ´s beard	3	2	2,33	2	2	2	0	5-7	3	1	1	3	1	1	1
226	Trollius europaeus	globeflower	0	1	0,67	0	0	0	0	5-7	3	1	1	3	1	1	1
227	Valeriana officinalis	garden valerian, cat ´s love	3	2	2,33	3	2	2	0	6-8	2	1	1	3	1	1	1
228	Verbascum densiflorum	denns-flowered mullein	1	3	2,33	0	2	0	0	6-9	1	1	1	3	1	1	1

229	Verbascum nigrum	black mullein	1	3	2,33	0	2	0	5-9	1	1	3	1	1
230	Veronica arvensis	field speedwell	2	2	2,00	0			4-6	3	5	3		
231	Veronica chamaedrys	germander speedwell	2	2	2,00	3	1	0	4-6	2	1	3	1	1
232	Veronica serpyllifolia	thyme-leaved speedwell	1	0	0,33	0			5-9	3	6	3		
233	Veronica teucrium	large speedwell	2	2	2,00	3	1	0	5-7	1	1	3	1	1
237	Vinca minor	lesser periwinkle	1	1	1,00	0	1	1	3-5	3	2	3	2	2
238	Viola arvensis	field pansy	2	1	1,33	0	0	1	3-10	3	1	3	1	1
239	Viola tricolor	wild pansy	2	1	1,33	0	1	1	5-8	2	1	3	1	1
LEGUMES														
19	Anthyllis vulneraria	kidney vetch	1	2	1,67	3	0	1	5-6	1	1	3	1	1
115	Lathyrus pratensis	meadow pea	3	2	2,33	3	0	1	6-7	2	1	3	1	1
124	Lotus corniculatus	common bird´s-foot trefoil	2	2	2,00	3	0	3	5-7	1	2	3	2	2
133	Medicago falcata	sickle medick, sickle alfalfa	3	1	1,67	3	0		5-8	1	1	3	1	1
134	Medicago lupulina	hop clover, black medick	3	2	2,33	1	0	1	5-9	1	1	3	1	1
135	Medicago sativa	lucerne, alfalfa	2	1	1,33	3		3	6-8	3	4	3		6
136	Mellilotus albus	white mellilot, honey clover	3	2	2,33	3	0	1	6-8	1	1	3	1	1
137	Mellilotus officinalis	yellow mellilot, sweet yellow clover	3	3	3,00	3	0	1	6-10	1	1	3	1	1
145	Onobrychis montana	mountain sainfoin				3			7-8	3		3		
146	Onobrychis viciifolia	common sainfoin	3	3	3,00	3	0	1	5-8	1	1	3	1	1
217	Trifolium arvense	hare´s-foot clover, rabbitfoot clover	2	2	2,00	3	0	0	5-8	1	1	3	1	1
218	Trifolium campestre	field clover, low hop clover	3	2	2,33	0	0	1	5-9	1	2	3	2	2
219	Trifolium dubium	lesser trefoil, suckling clover	1	1	1,00	1	0	0	5-9	1	1	3	1	1
220	Trifolium hybridum	alsike clover	3	3	3,00	0	0	1	5-9	3	1	3	1	1
221	Trifolium medium	zigzag clover	3	3	3,00	2	0	0	5-8	2	1	3	1	1
222	Trifolium montanum	mountain clover	3	2	2,33	1	0	2	5-8	2	1	3	1	1
223	Trifolium pratense	red clover	3	3	3,00	3	0	3	5-10	1	2	3	1	1
224	Trifolium repens	white clover	3	3	3,00	3	1	1	5-10	1	1	3	1	1
234	Vicia cracca	bird vetch, tufted vetch	3	2	2,33	3	0	1	6-8	2	1	3	1	1
235	Vicia sepium	bush vetch	1	1	1,00	3			4-8	3	5	3		
236	Vicia villosa	hairy vetch, fodder vetch	2	2	2,00	2	0	1	6-8	2	1	3	1	1
GRÄSER														
8	Agrostis capillaris	common bentgrass	0	1	0,67	0	0	0	6-8	1	6	7	6	6
13	Alopecurus pratensis	meadow foxtail	0	0	0,00	0	1	0	5-7	1	1	3	1	1
17	Anthoxanthum odoratum	sweet vernal grass	0	1	0,67	0	0	0	4-6	1	1	1	1	1
24	Arrhenatherum elatius	fals oat-grass, tall oat-grass	0	1	0,67	0	0	0	6-7	1	1	1	1	1
28	Avenula pubescens	downy oat-grass	0	1	0,67	0	0	0	5-7	1	6	7	6	6

Nr.	Scientific name	English name	Honeybees			Wild bees		adult butterflies		Flowering time (from to)	Seeds from reg. Cult. origin	Source honeybee pollen	Source wild bees	Source butterflies	
			Nectar	Pollen	total										
31	Brachypodium rupestre	rock-twig	0	1	0.67	0	0	0	6-8	3	6	6	7	6	6
32	Briza media	quaking grass, dodder-grass	0	1	0.67	0	0	0	5-8	1	1	1	1	1	1
33	Bromus erectus aggr.	erect brome species group	0	1	0.67	0	0	0	5-7	1	1	1	1	1	1
34	Bromus hordeaceus	soft chess, bull grass	0	1	0.67	0	0	0	5-7	3	6	6	7	6	6
45	Carex caryophyllaea	spring sedge	0			0			3-5	3	6		3		
46	Carex leporina	oval sedge, eggbract sedge	0			0			5-7	3	6		3		
47	Carex montana	mountain sedge, soft-leaved sedge	0	1	0.67	0			3-5	3	6	10	3		
48	Carex ornithopoda	bird's-foot sedge	0			0			4-6	3	6		3		
49	Carex pallescens	pale sedge	0			0			4-7	3	6		3		
71	Dactylis glomerata	cocksfoot	0	1	0.67	0	0	0	5-9	1	6	6	7	6	6
73	Deschampsia cespitosa	tufted hair grass, tussock grass	0	1	0.67	0	0	0	6-8	1	6	6	7	6	6
79	Elymus repens	common couch grass, twitch, quitch grass	0	1	0.67	0	0	0	6-8	3	6	6	7	6	6
84	Festuca arundinacea	tall fescue	0	1	0.67	0	0	0	5-8	1	6	6	7	6	6
85	Festuca nigrescens	Chewing ´s fescue	0	1	0.67	0	0	0	6-8	1	1	1	1	1	1
86	Festuca pratensis aggr.	meadow fescue species group	0	1	0.67	0	0	0	5-8	1	1	1	1	1	1
87	Festuca rubra	common red fescue, creeping red fescue	0	1	0.67	0	0	0	5-9	1	1	1	1	1	1
88	Festuca rupicola	furrowed fescue	0	1	0.67	0	0	0	5-7	1	1	1	1	1	1
104	Holcus lanatus	Yorkshire fog, meadow soft grass	0	1	0.67	0	0	0	5-8	1	6	6	7	6	6
112	Koeleria pyramidata aggr.	pyramidal crested meadow-grass species group	0	1	0.67	0	0	0	6-8	1	1	1	1	1	1
122	Lolium multiflorum	Italian ryegrass	0	1	0.67	0	0	0	6-8	2	6	6	7	6	6
123	Lolium perenne	English ryegrass, perennial ryegrass	0	1	0.67	0	0	0	5-9	1	6	6	7	6	6
125	Luzula campestris aggr.	field wood-rush species group	0			0			3-8	2	6		3		
143	Nardus stricta	matgrass	0	1	0.67	0	0	0	5-7	2	6	6	7	6	6
155	Phleum pratense	timothy grass	0	1	0.67	0	0	0	6-8	1	1	1	1	1	1
164	Poa alpina	alpine meadow grass, alpine bluegrass	0	1	0.67	0	0	0	6-9	1	6	6	7	6	6
165	Poa annua	annual meadow grass, annual blue grass	0	1	0.67	0	0	0	1-2	1	6	6	7	6	6
166	Poa pratensis	Kentucky bluegrass	0	1	0.67	0	0	0	5-7	1	1	1	1	1	1
167	Poa trivialis	rough-stalked meadow-grass	0	1	0.67	0	0	0	6-7	2	6	6	7	6	6
225	Trisetum flavescens	Golden oat grass	0	1	0.67	0	0	0	5-9	1	1	1	1	1	1

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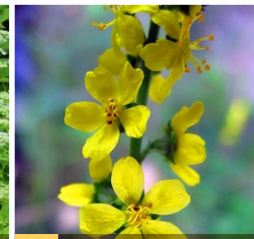
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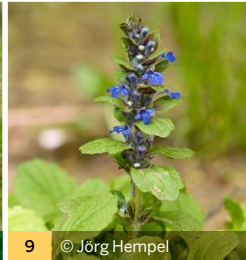
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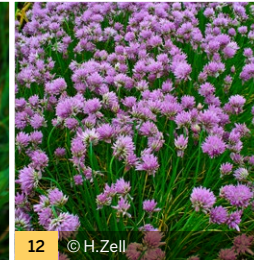
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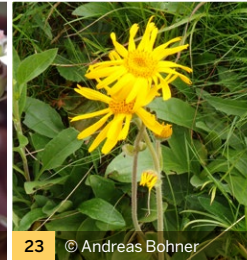
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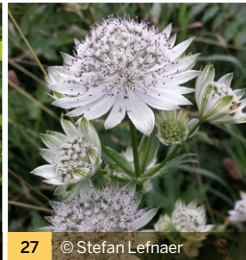
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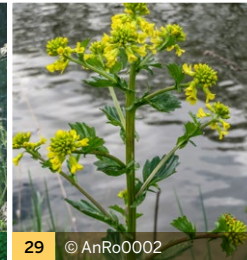
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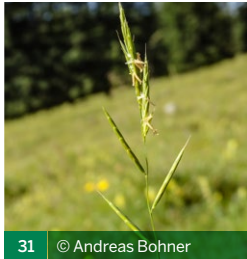
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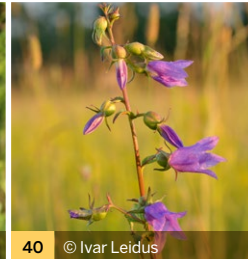
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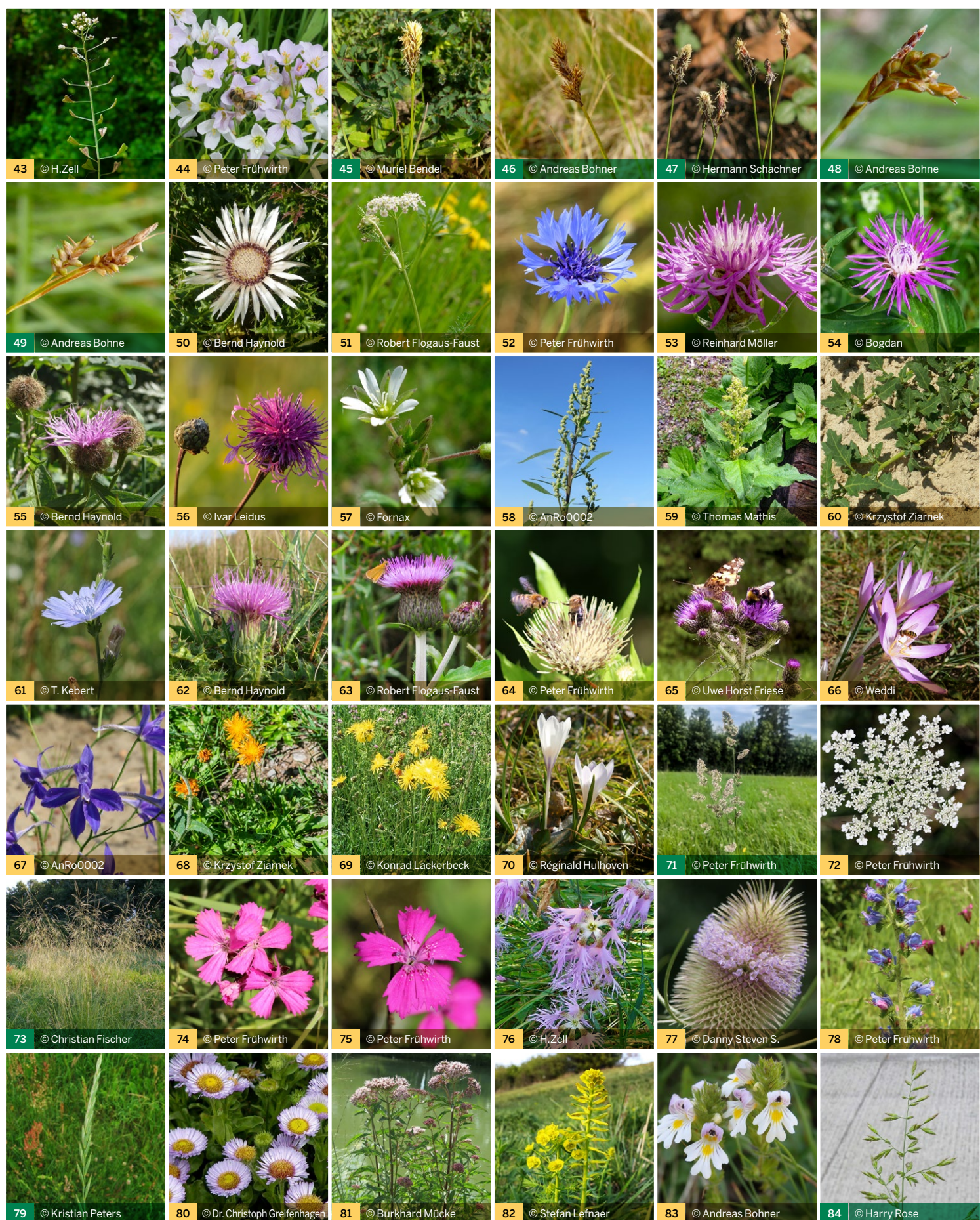
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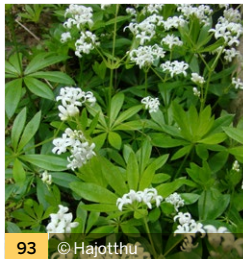
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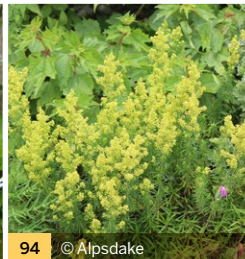
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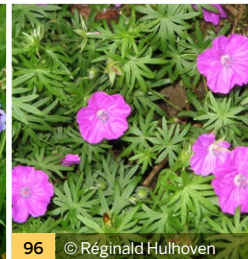
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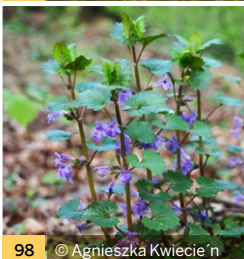
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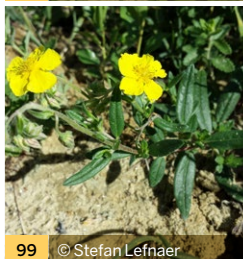
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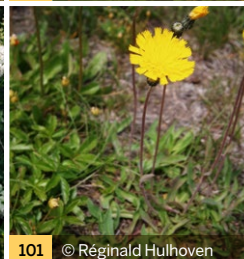
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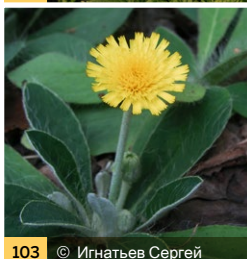
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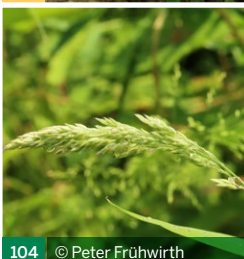
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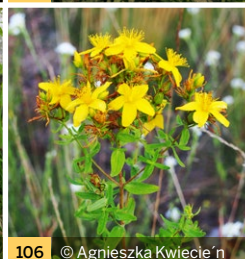
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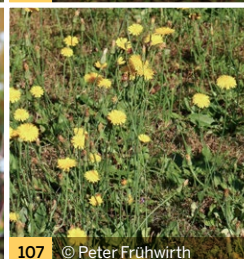
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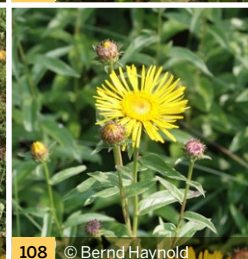
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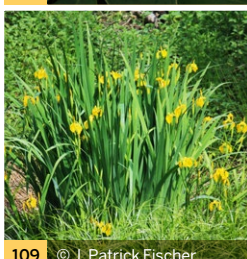
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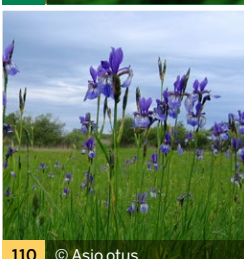
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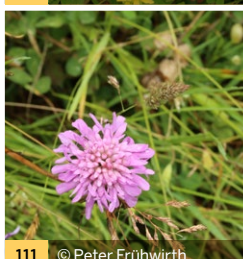
108 © Bernd Haynold



109 © J. Patrick Fischer



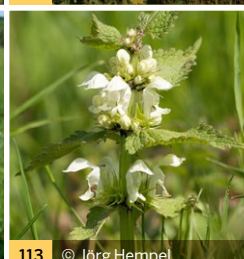
110 © Asio otus



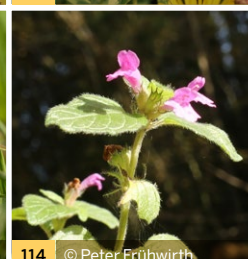
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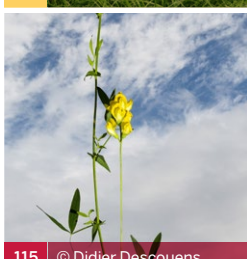
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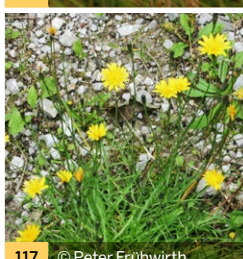
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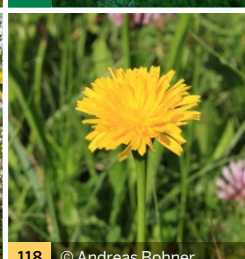
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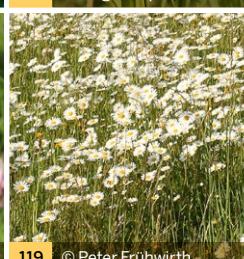
116 © Stefan Lefnaer



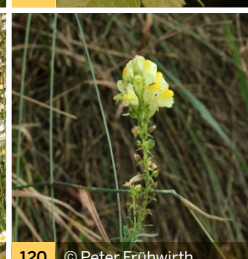
117 © Peter Fröhwrth



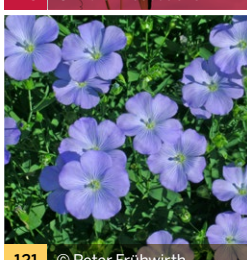
118 © Andreas Bohner



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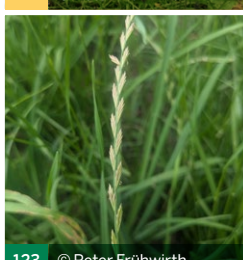
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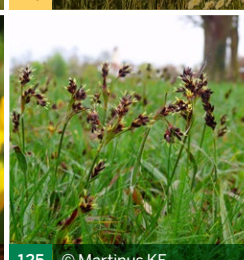
122 © Harry Rose



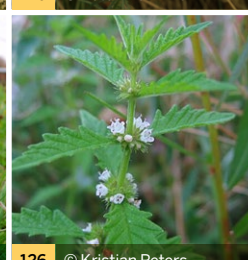
123 © Peter Fröhwrth



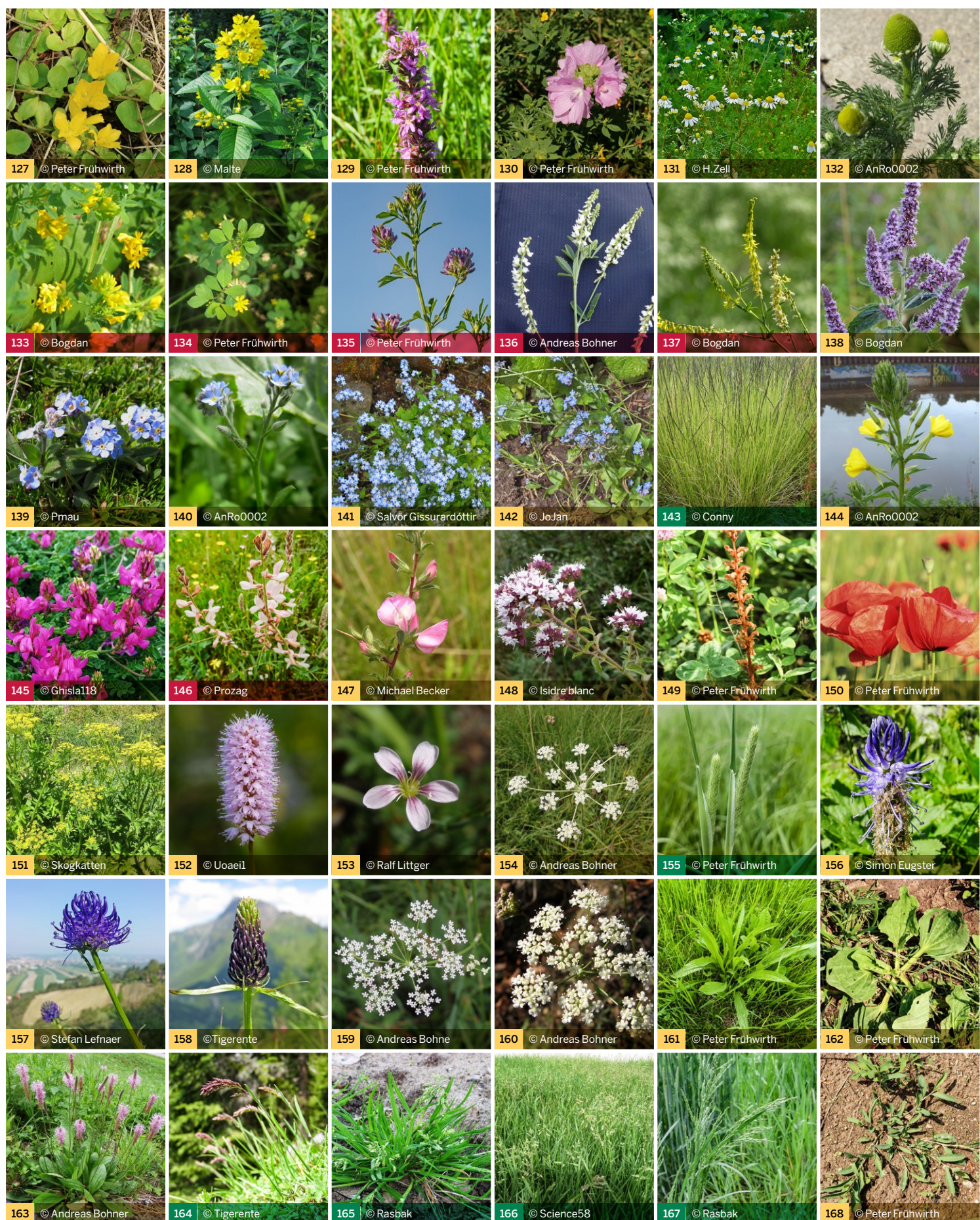
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170 © Tigerente



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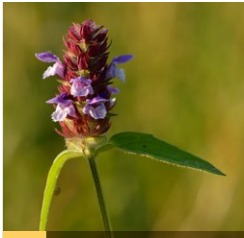
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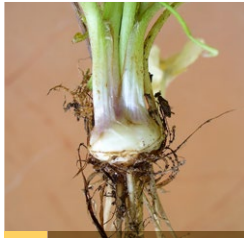
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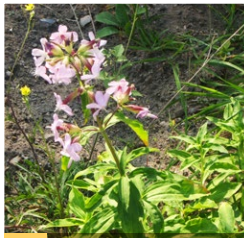
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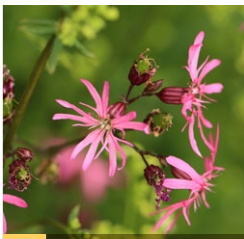
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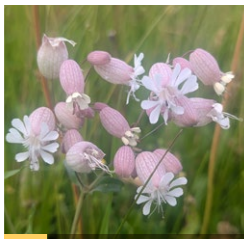
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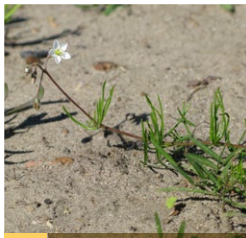
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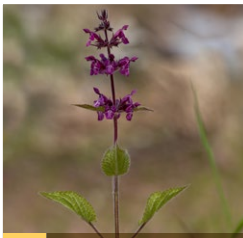
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