UTAH PESTS fact sheet

UtahState University COOPERATIVE EXTENSION

Published by Utah State University Extension and Utah Plant Pest Diagnostic Laboratory ENT-133-09 January 2013

Gardening for Native Bees in Utah and Beyond

James H. Cane
Research Entomologist, USDA ARS
Pollinating Insect-Biology, Management, Systematics Research

Linda Kervin
Logan, UT

Do You Know?

- 900 species of native bees reside in Utah.
- Some wild bees are superb pollinators of Utah's tree fruits, raspberries, squashes, melons and cucumbers.
- Few of our native bees have much venom or any inclination to sting.
- Our native bees use hundreds of varieties of garden flowers, many of them water-wise.
- A garden plant need not be native to attract and feed native bees.

Fig. 1. Carder bee *(Anthidium)* foraging at lavender *(Lavendula:* Lamiaceae).[1]

Fig. 2. A pollinator garden can also be water-wise. Purple *Penstemon strictus,* front, firecracker penstemon (*P. eatonii*), center, and blue flax (*Linum perenne*), background, combine to make a pleasing design. [1]

Utah is home to more than 20 percent of the 4,000+ named species of wild bees that are native to North America. Except for bumblebees and some sweat bees, our native bees are solitary, not social, many with just one annual generation that coincides with bloom by their favorite floral hosts. In contrast, the familiar honeybee is highly social, has perennial colonies, and was brought to North America by settlers from Europe. Regardless of these differences, however, all of our bees need pollen and nectar from flowers. The sugars in sweet nectar power their flight; mother bees also imbibe some nectar to mix with pollen that they gather. Pollen is fortified with proteins, oils and minerals that are essential for the diets of their grub-like larvae back at the nest.

Our flower gardens can become valuable cafeterias for local populations of diverse native bees. In our cities and towns, native plant communities have been displaced by pavement, buildings and lawns. In the countryside, grain and hay crops likewise

offer our native bees little food. Because bees find their favorite flowers by their color or scent, a bee garden can also be appealing to the homeowner. Many of these flowering species are surprisingly easy to grow.

Some people are fearful of being stung if they attract native bees to their yard. In our 25 years of watching bees at flowers, we have yet to be stung by any species of non-social bees native to North America. We have been stung handling honey bees or bumble bees at their colonies. These social bees are the ones that deliver the most painful stings. But even then, we've never been stung when just watching them at flowers.

The table of garden plants for native bees (page 4) can help guide home gardeners in Utah and across North America to genera of flowering plants whose species will please gardener and bee alike. In turn, pollination services by bees set bumper crops of all of our tree fruits and some vegetables too. Native bees also give hours of pleasant entertainment and distraction as you follow their foraging rounds or their amorous pursuits at your flowers.

The list consists of plant genera, many of whose species both attract native bees and are available from standard or native seed companies or plant nurseries. In a few cases, particularly valuable plants for native bees are listed though not yet available commercially. If just beginning your Utah bee garden, consider species from the genera that are bolded in ***blue italics***. These represent broadly available, adaptable, and dependable plant genera whose blooms reliably attract native bees. Many of the genera in the list will not be universally adaptable to all climates, soils, and irrigation regimes; you will need to make informed decisions from among the genera in the list for your local use. If you are trying water-wise (or xeriscape) plants from seed, autumn seeding is beneficial, as many need a cool wet period to elicit germination. Note that the vast majority of choices are perennials, in contrast with the many traditional annual bedding plants. You will need to be patient during their first year of establishment, weed regularly, and provide occasional water as they develop their extensive root systems.

Be aware of the invasive tendencies of some plant species in your locale. The bachelor's button or cornflower (*Centauria cyanus*), for instance, is a well-behaved garden plant across much of the U.S., but in parts of the Pacific Northwest, it has become a naturalized, undesirable weed. If in doubt, please check with your county Extension agent or the Utah Department of Agriculture, or visit one of the Web sites listed below for introductory weed information.

- invader.dbs.umt.edu/Noxious_Weeds, is a searchable listing of all U.S. weeds, by state
- www.invasive.org/weedus, "Invasive Plant Atlas of the US," contains images
- wiki.bugwood.org/Invasipedia, lists close to 200 species with detailed information on each

Fig. 3. Nevada bee-plant (*Cleome lutea*) is a water-wise annual native to western U.S., providing pollen in summer to bees such as this *Anthophora* digger bee. [1]

Fig. 4. Mason bees (*Osmia*) are very important pollinators, and are superior to honey bees in tree fruit orchards. They forage at hundreds of different flowers, including sweetvetch (*Hedysarum* Fabaceae). [1]

Fig. 5. Male *Melissodes* bees (with distinctive long antennae) sleeping on a sunflower head (*Helianthus*: Asteraceae). [1]

Some popular garden flowers are missing from the list, such as tulips, petunias and marigolds. These and some other garden flowers have, through years of artificial breeding and selection, lost whatever attraction they may have had for bees. That's no reason not to plant and enjoy them; they just won't feed bees.

The list is a work in progress. If you find errors, oversights or useful refinements, I will be happy to consider your suggestions for modification so long as it retains its current form. You may disseminate the list or modify your copy of it for local needs or your personal preferences as you see fit. Happy bee-ing!!

Fig. 6. The legume, western prairie clover (*Dalea ornata*), is an Intermountain West native, producing pollen for months for bees like this bumblebee (*Bombus*).[2]

Fig. 7. The native squash bee (*Peponapis pruinosa*) pollinates most of Utah's squashes and pumpkins (cucurbits), and is active primarliy in the early morning hours.[1]

Fig. 8. Fernbush (*Chamaebatiaria millefolium*) is a native shrub with aromatic foliage.[1]

Fig. 9. Russian sage (*Perovskia atriplicifolia*) blooms for months, and is the authors' favorite pollinator plant.[1]

Fig. 10. Blue hyssop (*Hyssopus*: Lamiaceae) blooms in mid to late summer and is very hardy.[1]

Fig. 11. Design the pollinator garden with a succession of blooms for season-long foraging.[1]

Garden Plant Recommendations for Wild Bees of North America

This table contains nearly 200 garden plant genera with species whose flowers are sought by wild bees of North America.

The **Code** column is useful for Utah gardeners. Some additional species not coded as G or U are suitable for Utah but only in the hot, southernmost climates (e.g. *Larrea* or creosote bush).

- **G** - grows in Utah
- **U** - Utah native
- **W** - water-wise
- **F** - food product

Form tells whether the usable species in the genus are

- **A** - annual
- **P** - perennial
- **S** - shrub
- **T** - tree

Plants in ***bold italic*** are great choices for Utah gardeners.

Genus	Family	Common Name	Code	Forms	Notes
Abelia	CAPRIFOLIACEAE	abelia		S	
Acacia	FABACEAE	acacia	W	ST	
Acer	ACERACEAE	maple	GU	T	
Achillea	ASTERACEAE	yarrow	GUW	P	*A. millefolium* weedy
Aconitum	RANUNCULACEAE	monkshood	GU	P	
Agastache	LAMIACEAE	hyssop	G	P	
Ajuga	LAMIACEAE	carpet bugle	G	P	
Allium	LILIACEAE	ornamental onions	GUW	P	
Althea	MALVACEAE	hollyhock	G	P	not double-flowered
Amelanchier	ROSACEAE	serviceberry	GU	S	
Amorpha	FABACEAE	false indigo	G	S	
Anchusa	BORAGINACEAE	wild forget-me-not		AP	
Anethum	APIACEAE	dill	G	A	
Aquilegia	RANUNCULACEAE	columbine	GU	P	not double-flowered
Arctostaphylos	ERICACEAE	manzanita	GUW	S	
Argemone	PAPAVERACEAE	prickly poppy	GUW	P	
Armeria	PLUMBAGINACEAE	sea thrift	G	P	
Aster	ASTERACEAE	aster	GUW	P	not double-flowered
Astragalus	FABACEAE	locoweed	GUW	P	
Baileya	ASTERACEAE	desert marigold	GW	P	
Baptisia	FABACEAE	wild-indigo	G	P	
Berberis	BERBERIDACEAE	barberry	G	S	
Borago	BORAGINACEAE	borage	G	A	
Brassica	BRASSICACEAE	mustard	G	A	*B. kaber* and *B. nigra* weedy
Calamintha	LAMIACEAE	calamint	G	P	
Calliopsis	ASTERACEAE	annual coreopsis	G	A	C. tinctoria
Callirhoe	MALVACEAE	wine cups	GW	P	
Calluna	ERICACEAE	heather		S	needs acidic soils
Camissonia	ONAGRACEAE	camissonia	G	P	

Genus	Family	Common Name	Code	Forms	Notes
Campanula	CAMPANULACEAE	bell flower	G	P	
Caragena	FABACEAE	Siberian peashrub	G	S	
Carthamnus	ASTERACEAE	safflower	GWF	A	
Caryopteris	LAMIACEAE	blue mist spirea	GW	S	esp. ***C. x clandonensis***
Cassia	FABACEAE	many now Senna		T	
Ceanothus	RHAMNACEAE	buckbrush	GW	S	California species only
Cercidium	FABACEAE	palo verde	W	T	
Cercis	FABACEAE	redbud	G	ST	
Cercocarpus	ROSACEAE	mountain mahogany	GUW	S	
Chaenomeles	ROSACEAE	flowering quince	G	S	
Chamaebatiaria	ROSACEAE	fernbush	GUW	S	**see Fig. 8**
Chilopsis	BIGNONIACEAE	desert willow		S	
Chrysothamnus	ASTERACEAE	rabbit brush, chamisa	GUW	S	= ***Ericameria***
Citrullus	CUCURBITACEAE	watermelon	GF	A	
Citrus	RUTACEAE	grapefruit, orange, lemon		T	
Clarkia	ONAGRACEAE	clarkia	G	A	not double-flowered
Cleome	CLEOMACEAE	bee-plant	GUW	A	**see Fig. 3**
Coreopsis	ASTERACEAE	coreopsis	GW	AP	
Coriandrum	APIACEAE	coriander	GF	A	
Coronilla	FABACEAE	crownvetch	G	P	
Cosmos	ASTERACEAE	cosmos	G	AP	
Crataegus	ROSACEAE	hawthorn	GU	ST	
Cucurbita	CUCURBITACEAE	squash, gourd, pumpkin	GF	A	**see Fig. 7**
Cuphea	LYTHRACEAE	false heather	G	S	*C. hyssopifolia*
Cydonia	ROSACEAE	fruiting quince	F	S	
Cynara	ASTERACEAE	artichoke, cardoon	F	P	
Cynoglossum	BORAGINACEAE	hound's tongue	G	P	*C. grande*; shade
Dalea	FABACEAE	prairie clover	GUW	P	**see Fig. 6**
Daucus	APIACEAE	carrot, Queen Anne's lace	GF	P	some weedy
Delphinium	RANUNCULACEAE	larkspur	GU	AP	not double-flowered
Delosperma	AIZOACEAE	ice plant	GW	P	
Digitalis	SCROPHULARIACEAE	foxglove	G	P	
Echinacea	ASTERACEAE	cone flower	G	P	
Echium	BORAGINACEAE	Pride of Madera		P	
Ericameria	ASTERACEAE	rabbit brush, chamisa	GUW	S	***E. nauseosa***
Erigeron	ASTERACEAE	fleabane	GUW	P	
Eriodictyon	HYDROPHYLLACEAE	yerba santa	W	P	

Genus	Family	Common Name	Code	Forms	Notes
Eriogonum	POLYGONACEAE	wild buckwheat	GUW	SP	
Eryngium	APIACEAE	sea holly	G	AP	
Erysimum	BRASSICACEAE	wallflower	GU	P	
Escholzia	PAPAVERACEAE	California poppy	GW	P	
Eupatorium	ASTERACEAE	joe pye weed	G	P	not *E. capillifolium*
Ferocactus	CACTACEAE	barrel cactus	W	P	
Foeniculum	APIACEAE	fennel	GF	P	*F. vulgare*
Fragaria	ROSACEAE	strawberry	GF	P	
Fremontodendron	STERCULIACEAE	flannelbush	W	S	
Gaillardia	ASTERACEAE	blanket flower	GW	AP	
Gaura	ONAGRACEAE	gaura	GW	P	
Gentiana	GENTIANACEAE	blue gentian	GU	P	
Geraea	ASTERACEAE	desert sunflower	W	A	
Geum	ROSACEAE	avens, prairie smoke	G	P	
Gilia	POLEMONIACEAE	gilia	GUW	P	blue or violet
Glycyrrhiza	FABACEAE	licorice		P	
Hedeoma	LAMIACEAE	sweetscent, mock pennyroyal		P	
Hedysarum	FABACEAE	sweet vetch	GUW	P	***H. boreale*; see Fig. 4**
Helenium	ASTERACEAE	sneezeweed	GW	P	
Helianthella	ASTERACEAE	sunflower	GU	P	
Helianthus	ASTERACEAE	sunflower	GUW	AP	not double-flowered or pollen-free; **see Fig. 5**
Heliotropium	BORAGINACEAE	heliotrope	G	P	often grown as annual
Hibiscus	MALVACEAE	rose-of-sharon, hollyhock	G	S	not double-flowered
Holodiscus	ROSACEAE	cliff spirea, mountainspray	GU	S	
Hymenoxys	ASTERACEAE	alpine sunflower	GUW	P	
Hyptis	LAMIACEAE	desert lavendar	GW	S	
Hyssopus	LAMIACEAE	hyssop	GW	P	**see Fig. 10**
Ilex	AQUIFOLIACEAE	holly		ST	needs acidic soils
Iliamna	MALVACEAE	mountain hollyhock	GU	P	
Kallstroemia	ZYGOPHYLLACEAE	Arizona poppy	W	P	
Keckiella	SCROPHULARIACEAE	bush penstemon		S	
Lamium	LAMIACEAE	deadnettle	G	P	incl. *Lamiastrum*
Larrea	ZYGOPHYLLACEAE	creosote bush	W	S	
Lathyrus	FABACEAE	sweet pea	G	AP	a marginal bee plant
Lavendula	LAMIACEAE	lavendar	GW	S	**see Fig. 1**
Layia	ASTERACEAE	tidytips		A	

Genus	Family	Common Name	Code	Forms	Notes
Lespedeza	FABACEAE	bush clover	W	PS	esp. *L. cuneata*
Lesquerella	BRASSICACEAE	bladderpod	W	A	
Liatris	ASTERACEAE	gayfeather	G	P	
Limnanthes	LIMNANTHACEAE	meadowfoam, fried egg flower	G	A	
Linanthus	POLEMONIACEAE	mountain phlox	W	A	
Linum	LINACEAE	flax	GUW	AP	**see Fig. 2**
Lotus	FABACEAE	birdsfoot trefoil, lotus	G	P	good in pastures
Lycium	SOLANACEAE	wolfberry	W	S	
Mahonia	BERBERIDACEAE	Oregon grape	GUW	S	
Malus	ROSACEAE	apple, crabapple	GF	T	
Malva	MALVACEAE	mallow		P	
Medicago	FABACEAE	alfalfa, medic	G	P	good in pastures
Melilotus	FABACEAE	sweet clover	G	AP	can be weedy
Mentha	LAMIACEAE	mint	GF	P	
Mentzelia	LOASACEAE	blazing star	GUW	P	
Mertensia	BORAGINACEAE	bluebells	GU	P	
Mimulus	SCROPHULARIACEAE	monkey flower	GU	P	
Monarda	LAMIACEAE	bee balm	G	P	not red
Myoporum	MYOPORACEAE	myoporum	W	ST	*M. laetum*
Nemophila	HYDROPHYLLACEAE	blue eyes	G	A	
Nepeta	LAMIACEAE	catmint	GW	P	esp. ***N. x faassenii***
Ocimum	LAMIACEAE	basil	GF	A	
Oenothera	ONAGRACEAE	evening primrose	GUW	P	
Opuntia	CACTACEAE	pear cactus	GUW	P	
Origanum	LAMIACEAE	oregano	GF	P	
Oxydendrum	ERICACEAE	sourwood		T	
Oxytropis	FABACEAE	locoweed	GUW	P	
Parkinsonia	FABACEAE	Mexican palo verde	W	S	
Pedicularis	SCROPHULARIACEAE	lousewort	GU	P	
Penstemon	SCROPHULARIACEAE	penstemon	GUW	P	***P. palmeri, P. strictus, P. eatoni*** etc.; **see Fig. 2**
Perovskia	LAMIACEAE	Russian sage	GW	S	***P. atriplicifolia*; see Fig. 9**
Petalostemon	FABACEAE	prairie clover	GUW	P	= ***Dalea***
Phacelia	HYDROPHYLLACEAE	bluebells, scorpionweed	GW	A	
Phyllodoce	ERICACEAE	mountain-heath		S	needs acidic soil
Physocarpus	ROSACEAE	ninebark	GUW	S	
Physostegia	LAMIACEAE	obedient plant	G	P	

Genus	Family	Common Name	Code	Forms	Notes
Pieris	ERICACEAE	fetterbush		S	needs acidic soil
Platystemon	PAPAVERACEAE	creamcups		A	
Polemonium	POLEMONEACEAE	Jacob's ladder	GU	P	
Pontederia	PONTEDERIACEAE	pickerelweed		P	an aquatic plant
Prosopis	FABACEAE	mesquite	W	ST	
Prunella	LAMIACEAE	henbit	G	P	some weedy
Prunus	ROSACEAE	cherry, plum, apricot	GUF	ST	not double-flowered
Psorothamnus	FABACEAE	indigobush	W	S	
Purshia	ROSACEAE	cliff rose	GUW	S	
Pycnanthemum	LAMIACEAE	mountain mint	G	P	
Raphanus	BRASSICACEAE	mustard		A	
Ratibida	ASTERACEAE	Mexican hat	GW	P	
Rhamnus	RHAMNACEAE	buckthorn	G	S	
Rhus	ANACARDIACEAE	sumac	GUW	S	
Ribes	GROSSULARIACEAE	currant	GUF	S	esp. *R. aureum*
Robinia	FABACEAE	black locust	G	T	
Romneya	PAPAVERACEAE	Matilija poppy		P	
Rosa	ROSACEAE	rugosa-type and wild roses	GU	P	not double-flowered, some weedy
Rosmarinus	LAMIACEAE	rosemary	GF	S	
Rubus	ROSACEAE	raspberry, blackberry, brambles	GUF	P	some weedy
Rudbeckia	ASTERACEAE	black-eyed susan	GU	P	
Salix	SALICACEAE	willow	GU	ST	pussywillow, not weeping willow
Salvia	LAMIACEAE	sage	G	PS	blue or violet, esp. ***S. nemorosa* and 'Blue Spires'**
Sambucus	CAPRIFOLIACEAE	elderberry	GU	S	
Scabiosa	DIPSACEAE	pincushion flower	G	P	not double-flowered
Sedum	CRASSULACEAE	sedum, stonecrop	GUW	P	
Senecio	ASTERACEAE	butterweed,	W	P	
Senna	FABACEAE	senna		S	
Sidalcea	MALVACEAE	checkermallow	GUW	P	
Solanum	SOLANACEAE	nightshade	G	PS	some weedy
Solidago	ASTERACEAE	goldenrod	GUW	P	
Sphaeralcea	MALVACEAE	globemallow	GUW	P	
Spiraea	ROSACEAE	spirea	G	S	
Stachys	LAMIACEAE	lamb's ear	GX	P	
Stanleya	BRASSICACEAE	prince's plume	GUW	P	

Genus	Family	Common Name	Code	Forms	Notes
Sympytum	BORAGINACEAE	comfrey	G	P	can be weedy
Talinum	PORTULACACEAE	fameflower		P	
Tanacetum	ASTERACEAE	tansy	G	P	
Tecoma	BIGNONIACEAE	yellow trumpet bush		S	
Teucrium	LAMIACEAE	germander	G	P	
Thermopsis	FABACEAE	false lupine, golden pea	GU	P	
Thymus	LAMIACEAE	thyme	GWF	P	
Tilia	TILIACEAE	basswood, linden	G	T	
Tithonia	ASTERACEAE	Mexican sunflower	G	A	
Trichostema	LAMIACEAE	bluecurls	W	S	
Trifolium	FABACEAE	clover	G	P	good in pastures
Vaccinium	ERICACEAE	blueberry, cranberry, huckleberry	G	S	needs acidic soil; widely attractive
Valeriana	VALERIANACEAE	valerian	GU	P	
Verbena	VERBENACEAE	verbena	GW	P	not red
Verbesina	ASTERACEAE	golden crownbeard	GUW	P	
Veronica	SCROPHULARIACEAE	speedwell, veronica	GW	P	
Viburnum	CAPRIFOLIACEAE	arrowood, snowball bush		S	
Vicia	FABACEAE	vetch	GU	P	good in pastures
Viguiera	ASTERACEAE	showy golden-eye	GUW	P	
Viola	VIOLACEAE	violets	GU	AP	not pansies
Wyethia	ASTERACEAE	mules ear	GUW	P	
Zinnia	ASTERACEAE	zinnia	GW	AP	not double-flowered

RESOURCES FOR UTAH AND INTERMOUNTAIN WEST

WEB SITES

Intermountain Native Plant Growers Association, with information on the program, "Utah's Choice": click here

UC-Berkeley's "Guide to Bee-Friendly Gardens": click here

PLACES TO VISIT

Pollinator Garden at USU Campus, Logan

Conservation Garden Park at Jordan Valley, West Jordan, UT, click here for Web site

Red Butte Botanical Garden, SLC, click here for Web site

Washington County Water Conservancy District demonstration garden, 1851 Dixie Drive, St. George, UT

BOOKS

Sunset Guide to Western Gardening, by Sunset Editors

Weeds of the West, by Tom Whitson

Landscaping on the New Frontier: Waterwise Design for the Intermountain West, by Susan Meyer, Roger Kjelgren, Darrel Morrison, William Varga, and Bettina Schultz

Waterwise: Native Plants for Intermountain Landscapes, by Richard Sutton, Craig Johnson, Wendy Mee, Jared Barnes, Roger Kjelgren, Teresa Cerny

Flowering Calendar for Cultivated Bee Plants - Logan, Utah in 2012

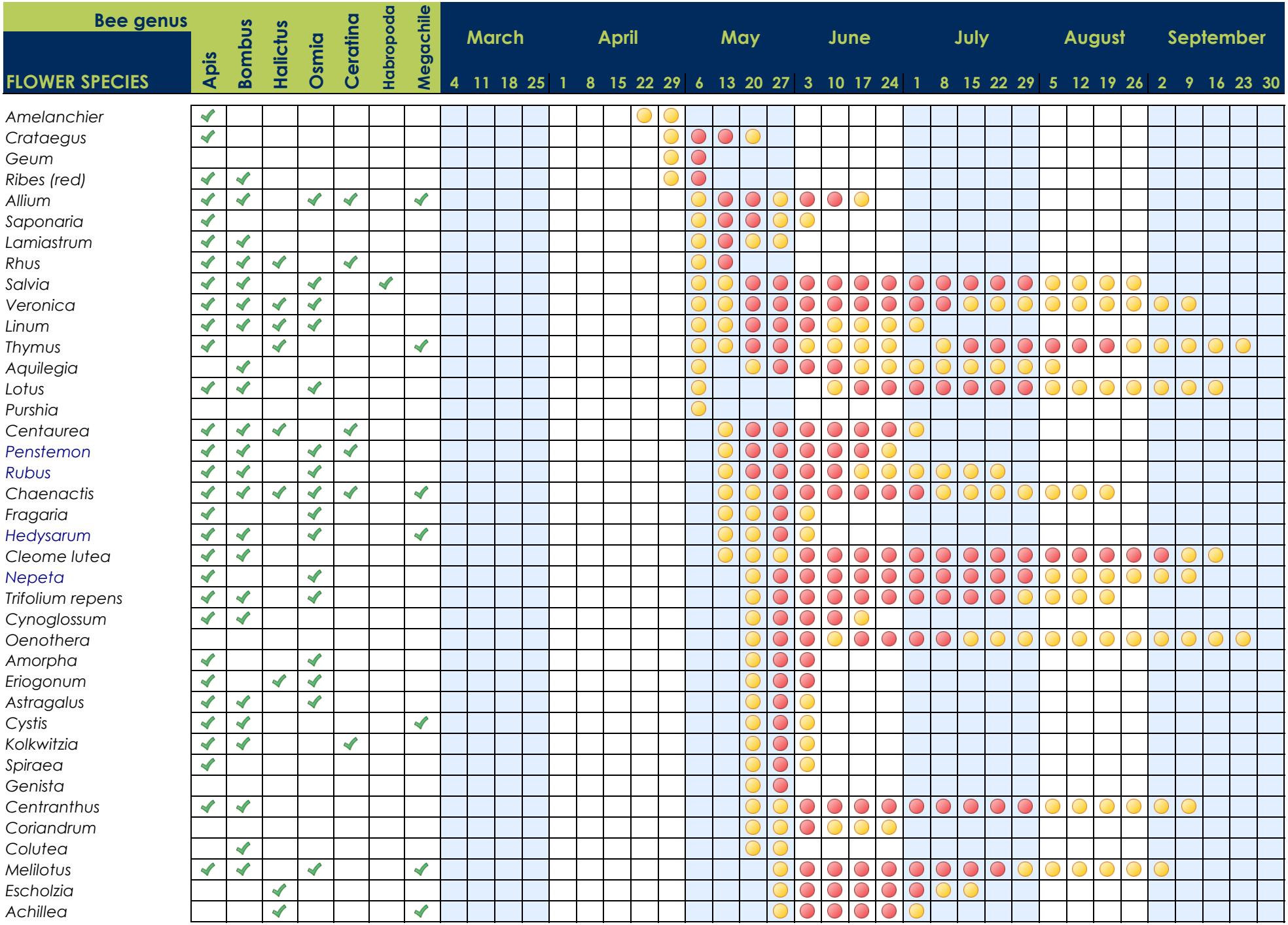
Preparing a garden, yard, orchard or park to feed a community of native bees requires not only a knowledge of suitable flowering species, but also their schedule and duration of bloom, so that pollen and nectar are available throughout the growing season.

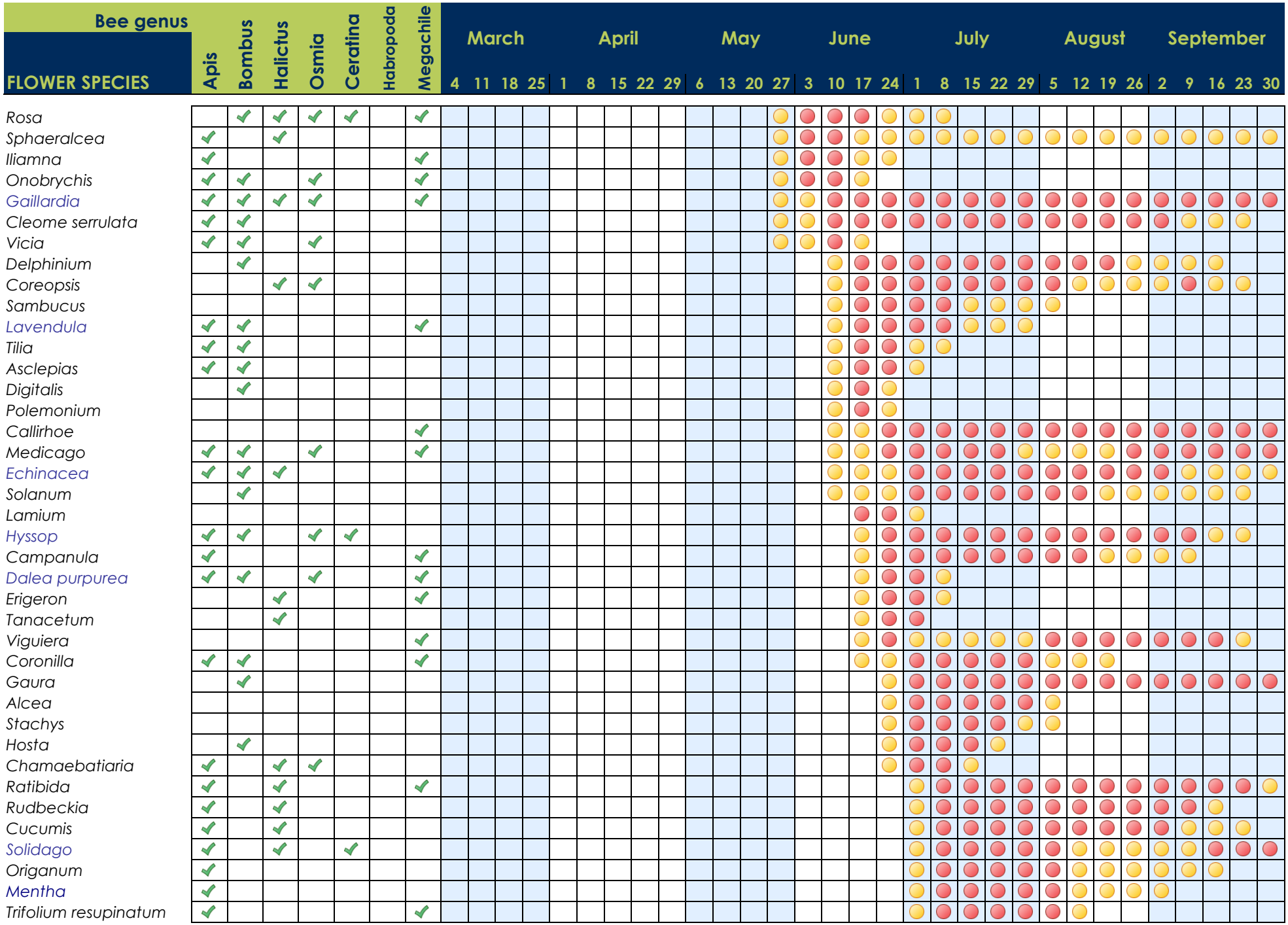
The following table is sorted in order of bloom, from earliest to latest.

- yellow circles indicate week(s) of bloom
- red circles indicate peak bloom, a subjective judgement
- blue plant names are great choices for Utah gardeners
- red plant names are widely used for phenological (seasonal) markers (see National Phenological Network)

Sometimes multiple species of a genus are represented (e.g. several ornamental and edible onions, genus *Allium*).
Utilization by species of several common, recognizable bee genera is indicated by a green check mark in the columns at the left.

Bee genus / FLOWER SPECIES	Apis	Bombus	Halictus	Osmia	Ceratina	Habropoda	Megachile	March 4	11	18	25	April 1	8	15	22	29	May 6	13	20	27	June 3	10	17	24	July 1	8	15	22	29	August 5	12	19	26	September 2	9	16	23	30
Galanthus	✓							●	●	●																												
Crocus	✓		✓						●	●	●	●																										
Iris reticulata	✓		✓						●	●																												
Forsythia										●	■	●	●	●																								
Salix (pussywillow)	✓	✓		✓						●	■																											
Arctostaphylos		✓								●	●																											
Prunus (apricot)	✓	✓	✓	✓							●	■	●																									
Scilla				✓	✓						●	■	●																									
Viola											●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●												
Muscari	✓	✓			✓	✓							●	■	●	●	●																				
Chaenomeles	✓	✓		✓									●	■	●																						
Prunus (plum)	✓	✓	✓	✓		✓							●	■	●																						
Mahonia	✓	✓		✓		✓								●	■	■	●																				
Cercis	✓	✓		✓		✓								●	■	●	●																				
Malus (apple)	✓	✓		✓		✓								●	■	●																					
Malus (crab)	✓	✓		✓		✓								●	■	●																					
Prunus (cherry)	✓	✓		✓	✓	✓								●	■	●																					
Ribes aureum	✓	✓		✓										●	■	●																					
Pyrus (pear)	✓			✓										●	■																						
Wisteria	✓	✓												●	●	■	■	●																			
Viburnum														●	●	■	●																				
Vinca	✓													●	●	●	●	●	●	●																	
Acer	✓			✓										●	●																						
Syringa (lilac)															●	■	●	●																			
Berberis	✓	✓		✓		✓									●	■	●																				
Caragena		✓		✓											●	■	●																				


Bee genus
FLOWER SPECIES
Apis
Bombus
Halictus
Osmia
Ceratina
Habropoda
Megachile
March
April
May
June
July
August
September
4 11 18 25 1 8 15 22 29 6 13 20 27 3 10 17 24 1 8 15 22 29 5 12 19 26 2 9 16 23 30
Amelanchier
Crataegus
Geum
Ribes (red)
Allium
Saponaria
Lamiastrum
Rhus
Salvia
Veronica
Linum
Thymus
Aquilegia
Lotus
Purshia
Centaurea
Penstemon
Rubus
Chaenactis
Fragaria
Hedysarum
Cleome lutea
Nepeta
Trifolium repens
Cynoglossum
Oenothera
Amorpha
Eriogonum
Astragalus
Cystis
Kolkwitzia
Spiraea
Genista
Centranthus
Coriandrum
Colutea
Melilotus
Escholzia
Achillea


Bee genus
FLOWER SPECIES
Apis
Bombus
Halictus
Osmia
Ceratina
Habropoda
Megachile
March
April
May
June
July
August
September
4 11 18 25 1 8 15 22 29 6 13 20 27 3 10 17 24 1 8 15 22 29 5 12 19 26 2 9 16 23 30
Rosa
Sphaeralcea
Iliamna
Onobrychis
Gaillardia
Cleome serrulata
Vicia
Delphinium
Coreopsis
Sambucus
Lavendula
Tilia
Asclepias
Digitalis
Polemonium
Callirhoe
Medicago
Echinacea
Solanum
Lamium
Hyssop
Campanula
Dalea purpurea
Erigeron
Tanacetum
Viguiera
Coronilla
Gaura
Alcea
Stachys
Hosta
Chamaebatiaria
Ratibida
Rudbeckia
Cucumis
Solidago
Origanum
Mentha
Trifolium resupinatum

FLOWER SPECIES	Apis	Bombus	Halictus	Osmia	Ceratina	Habropoda	Megachile	March 4	March 11	March 18	March 25	April 1	April 8	April 15	April 22	April 29	May 6	May 13	May 20	May 27	June 3	June 10	June 17	June 24	July 1	July 8	July 15	July 22	July 29	August 5	August 12	August 19	August 26	September 2	September 9	September 16	September 23	September 30
Liatris	✓						✓																		●	●	●	●	●	●									
Foeniculum																									●	●	●	●	●	●									
Sedum	✓				✓		✓																		●	●	●	●							●	●	●	●
Helianthella	✓		✓																						●	●	●											
Physalis																									●	●	●	●										
Helianthus	✓	✓	✓	✓			✓																			●	●	●	●	●	●	●	●	●	●	●	●	●
Perovskia	✓				✓																					●	●	●	●	●	●	●	●	●	●	●	●	
Carthamnus	✓																									●	●	●	●									
Cucurbita	✓	✓																									●	●	●	●	●	●	●	●	●	●	●	
Cosmos	✓						✓																				●	●	●	●	●	●	●	●	●	●	●	●
Trifolium praetense	✓	✓																									●	●	●	●	●							
Heliopsis							✓																					●	●	●	●	●	●	●				
Aster	✓																											●	●	●	●	●	●	●	●	●	●	●
Caryopteris	✓	✓																										●	●	●	●	●	●	●	●	●	●	●
Hibiscus rose of sharon	✓																											●	●	●	●	●	●	●	●	●		
Borago		✓																										●	●	●	●	●	●	●	●			
Teucrium	✓	✓																										●	●	●	●	●	●	●	●			
Monarda		✓																										●	●	●	●	●	●	●				
Ocimum	✓																											●	●	●	●	●	●	●	●	●	●	
Sophora	✓																												●	●	●							
Aconitum		✓																											●	●	●	●	●	●				
Ericameria	✓		✓																														●	●	●	●	●	
Tithonia																																	●	●	●	●	●	

James H. Cane
Adjunct Professor, Dept. of Biology, USU
USDA-ARS Bee Biology and Systematics Lab
Utah State University, Logan, UT 84322 USA
www.ars.usda.gov/npa/beelab

[1]Images courtesy of Jim Cane
[2]Image courtesy of Kevin Connors