OCAL NATURA sustainable SADIE GRACE **FARMS** RAW HONE Crissy Ward, Owner and Beekeeper



# Sadie Grace Farms

Pure Raw Local Honey
Pollination Services
Bee Rescues and Removals
Apiary Set-Up
Beekeeping Consultation
Beekeeping Education, Tours, Classes

Chickens, Farm fresh eggs



**Education. Community. Services. Resources.** 





Why We Need Bees

Bee Emergencies

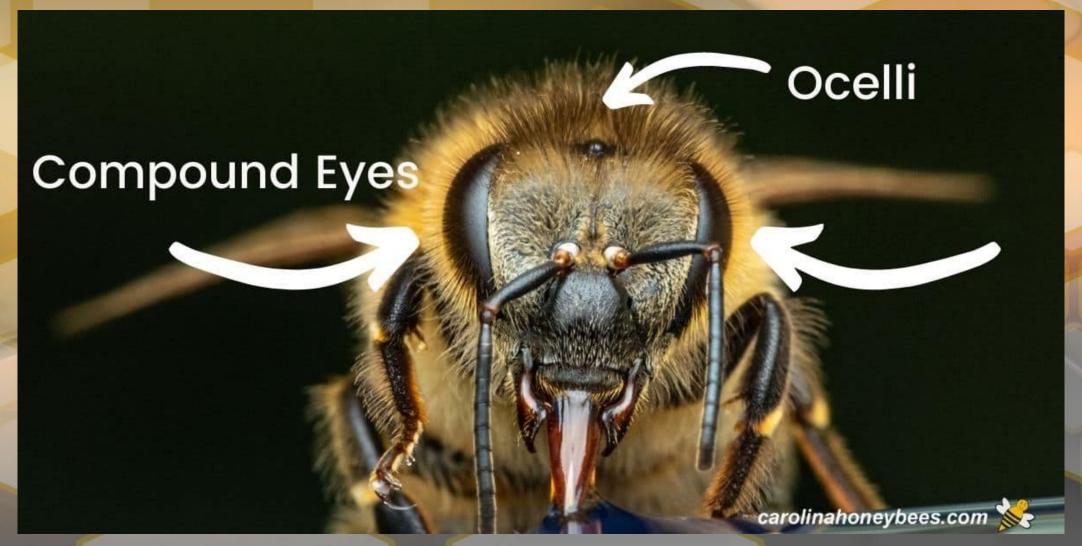
How you can be involved

Becoming a Beekeeper

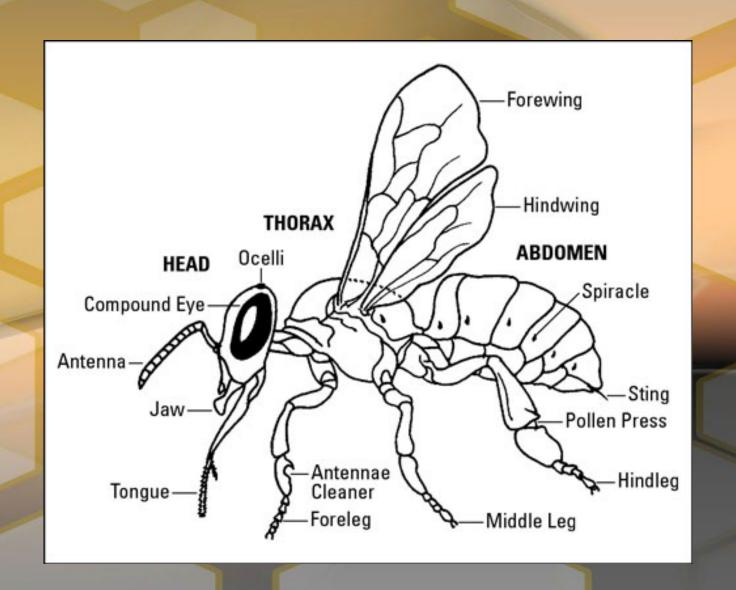


Bees have 5 total eyes.

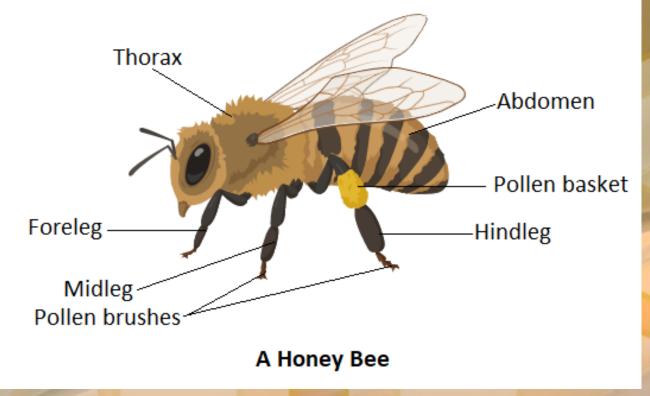
3 simple eyes on top and then 2 compound eyes on each side.



# Honeybee Anatomy



**Bee Anatomy** 





# Honeybee Hives





Bees live in together in a colony of bee's – the colony lives in a structure called a beehive. All of the beehives together is called an apiary or a bee farm.

# **Bee Colony and Hive**







# Bee Hives







# Who's Who in a honeybee colony....

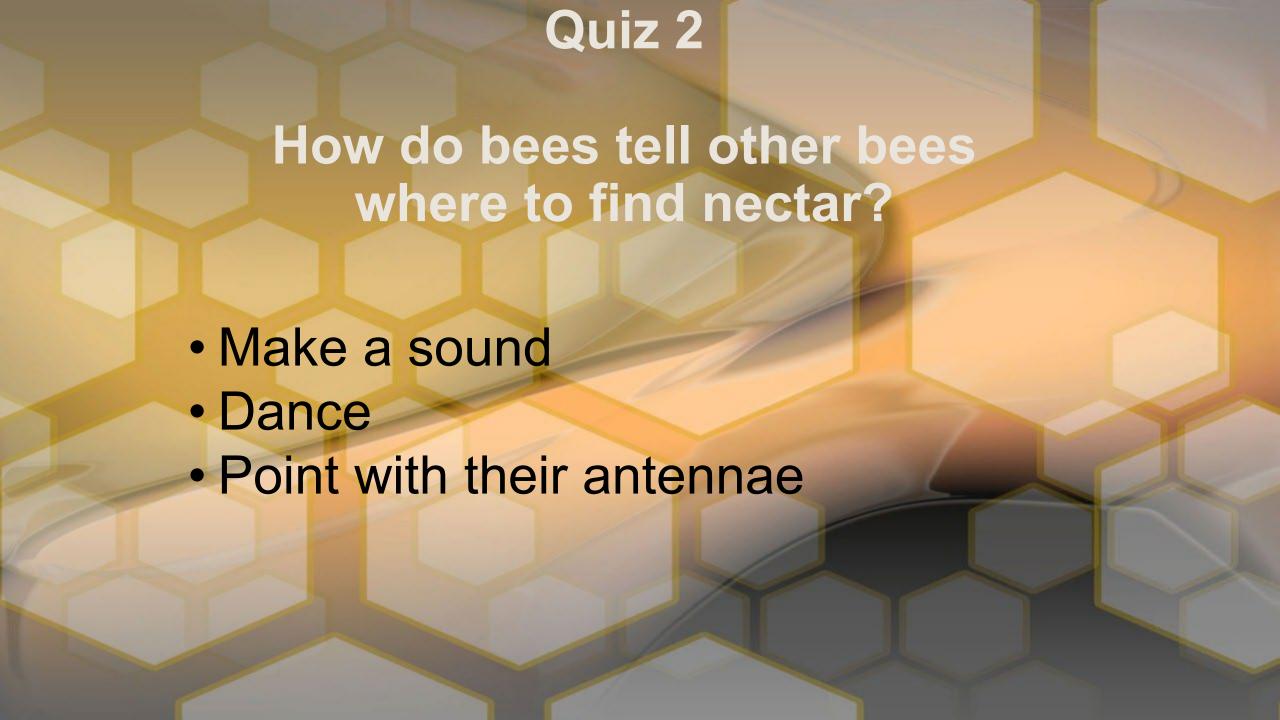
• Three types of bees in a honeybee colony or bee hive...



# Honeybee Colony







# Why do we need Honey Bees?



What do the bees provide nature?

Roll do they play?

- Pollination
- Honey
- Beeswax
- Bee Venom

Bees do more than make honey...

Bees are responsible for pollinating over 90 types of flowering crops in the US.

Over 1/3 of our food supply







# Why Do We Need Bees

Put simply, bees pollinate our plants - they carry pollen between plants of different sexes to fertilize them or even between different parts of the same plant.

1/3 of our food crops are pollinated by bees.

Bees also pollinate crops that animals, birds and other species eat as well. Deer, quail, turkey, dove, chickens, etc.

Gardens, landscaping, trees, all walks of life need bees...

# Why Do We Need Bees

### Trees need bees!

It is not only flowers and food crops that are

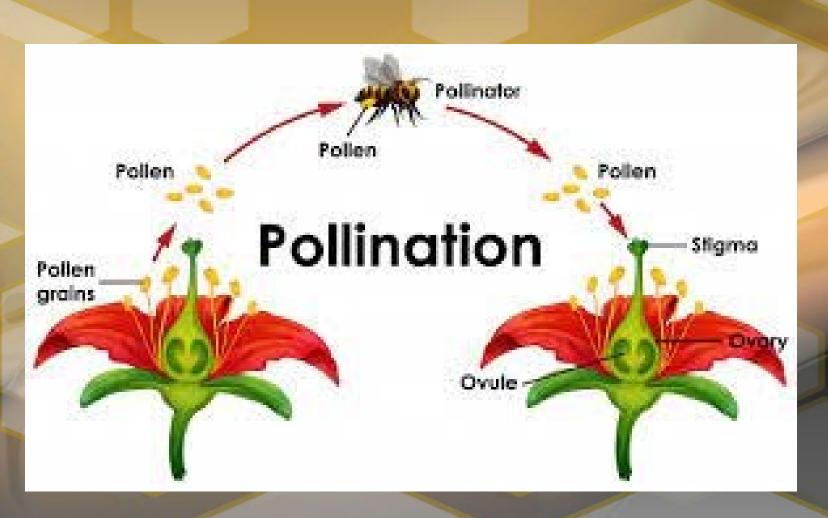
pollinated by bees.

This point is often neglected, but many trees are

pollinated by bees.

Fruit bearing trees, Oak, Mesquite

# **Bees Pollinating**





# **Bees Pollinating**

















#### **Bumble Bees**

Bombus spp.

- One of the few social native bees.
- Generalist pollinators, visit many different species of plants.



- Perform "buzz pollination" by vibrating their wings to extract pollen.
- Colonies are much smaller than honeybee hives.
- Different species build nests either in the ground or in grass or trees.



### —— SOCIAL BEES — SUPPORT BEES —

There are at least 1100 native bee species in Texas, possibly up to 1500.

They are the primary pollinators of native plants.

Most are solitary and do not defend their nests, therefore pose little risk of stings.

Support native bee populations in your garden by:

- · Planting a variety of native wildflowers.
- Leave some areas free of mulch for ground nesting bees.
- Purchase or make a bee house for dead wood nesting bees.



Texas Parks and Wildlife Native Prairies Association of Texas

**Xerces Society** 





#### — DEAD WOOD NESTERS —

#### Leaf-Cutter Bees

Megachile spp. Cuts circular portions of leaves to use to build nest cells, Some use plant resin instead of leaves.

Genus contains the world's largest bee, Megachile pluto.

### Large Carpenter Bees Xylocopa spp. Burrow into wood to create nest cells. Commonly mistaken for bumblebees.

#### **Mason Bees**

Osmia spp.

Nest in existing small cavities; do not excavate their own. Nesting material

may be mud, grit, chewed plant tissue, et

#### **GROUND NESTERS**

#### **Digger Bees**

Anthophora spp.

Nearly all species nest in soil.

Wings appear disproportionately short compared to other bees.



#### Long-Horned Bees

Melissodes spp.

Nearly all species nest in soil, most in flat ground but some in exposed banks.

Male antennae are characteristically long.



#### **Sunflower Bees**



Offspring require pollen from the sunflower family (Astericide).

#### **Sweat Bees**

Agapostemon spp., Lasioglossum spp., Halictus spp.

So-named due to their attraction to human sweat; they Some genera are metallic, some use the salt for are fuzzy nutrition with stripes. Some species aggregate, but work only for their own brood.

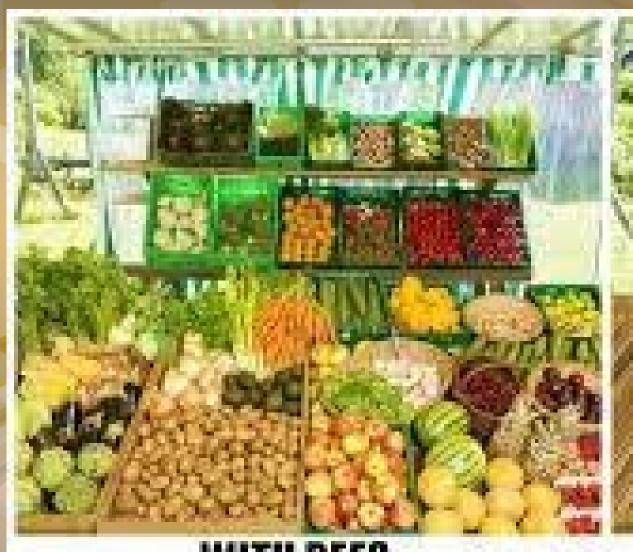
Females are usually entirely metallic blue/green, but sometimes have stripes on the abdomen.

#### **Polyester Bees**

Colletes spp.

Secrete a waterproof, cellophane-like substance to line their brood cells. Nest in the ground, a few species live in large aggregations

SOLITARY BEES-





WITH BEES

WITHOUT BEES



Successful Treatment-Free Beekeeping starts with local, non-treated bees

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Beekeeping Apprenticeships www.Bee-Mindful.com/apprenticeships

Free Top-Bar Hive Plans www.Bee-Mindful.com/plans

2	Cour. Mg	Lat Har	MA	14	/sand	45g/	May b	8/4	10 10	Mr In	PILI	6/5e8	/0°	40	/ Dec	They & m.
3	FLOWERING PLANTS	In blue: preferred planting - Yellow area =	bloom	ng time	e - Fir	st num	ber = e	expect	ed firs	st mon	th to b	oloom	- Sec	ond N	Numbe	er = expected last month to bloom
4	Spiderwort	Tradescantia sp.				2		5					T		h	https://tinyurl.com/2p8bemvs
	Baby Blue Eyes	Nemophila merziesil				2			6							https://tinyurl.com/yckeu7sm
	Golden Groundsel	Packera obovata				2			6				_	_	_	https://tinyurl.com/kr5systj
	Pink Evening Primrose	Oenethera speciosa				2	1		1	7				_		https://tinyurl.com/4dyjbk7v
	Prickly Pear	Opuntia austrina, Opuntia sp.				2				-			10			https://tinyurl.com/bdz8rfps
	Global Mallow	Sphaeralcea angustifolia				2						-		11		https://tinyurl.com/2p8vuw4b
	Large Buttercup	Ranunculus macranthus				3	4								_	https://tinyurl.com/bdh9ybve
	Dandelion	Taraxacum officinale	no			3			+			-	_	_		https://www.wildflower.org/plants/result.php?id_plant=TAOFC
	Blue Curls	Phacelia congesta	110		-	3	-	5						- 23		https://www.wildflower.org/plants/result.php?id_plant=phco2
	Bluebonnet	Lupinus texensis			_	3	_	5	_	$\vdash$		_	-	$\rightarrow$		https://www.wildflower.org/plants/result.php?id_plant=lute
	Winecup, Pooy Mallow	Callirhoe sp.			-	3		1	6			-	-+	-		ttps://tinyurl.com/2p8fby5t
	Huisache Daisy, Butterfly Daisy, Honey Daisy	Amblyolepis setigera			-	3		+	6			-	-	-	_	ttps://www.wildflower.org/plants/result.php?id_plant=amse
100000	Lyre Leaf Sage	Salvia lyrata			-	3		+	6			-	-+	-	-	https://www.wildflower.org/plants/result.php?id_plant=saly2
	Gulf Coast Penstemon	Penstemon tenuis			-	3	-	+	6			-	-	-+		https://www.wildflower.org/plants/result.php?id_plant=pete3
	Cutleaf Daisy, Engelmann's Daisy	Engelmannia peristenia			_	3		+	0	7		-		-		https://www.wildflower.org/plants/result.php?id_plant=ENPE4
	Cedar Sage	Salvia roemeriana			_	3				/	8		-	+		https://www.wildflower.org/plants/result.php?id_plant=ENPE4
					-	3	_				8		10	-		https://www.wildflower.org/plants/result.php?id_plant=SAKO3
	Texas Betony Milkweed, Antelope Horn, Butterfly Weed	Stachys coccinea			-	3							10	-		
		Asclepias sp.			-			+	-					-		https://www.wildflower.org/plants/result.php?id_plant=ASAS
	Verbena	Glandularia bipinnatifida			-	3		+	-				10	-4		https://www.wildflower.org/plants/result.php?id_plant=glbi2
	Indian Mallow, Pelotazo	Abutilon incanum				3		-	-				10			https://www.wildflower.org/plants/result.php?id_plant=ABIN
4.50	Blackfoot Daisy	Melampodium leucanthum			_	3		-	-				_	11		https://www.wildflower.org/plants/result.php?id_plant=mele2
	Greg's Mistflower	Conocilinum greggi			_	3	_	-	_					11	_	ttps://www.wildflower.org/plants/result.php?id_plant=cogr10
	Prairie Verbena	Glandularia bipinnaifida				3	_	_						_		https://tinyurl.com/mpjd45np
	Engleman's Sage	Salvia englemanii				_	4	-	_	$\vdash$			_	_		ttps://www.wildflower.org/plants/result.php?id_plant=saen2
	Wild Foxglove, Prairie Penstemon	Penstemon cobaea				_	4	5								https://www.wildflower.org/plants/result.php?id_plant=PECO4
	Barbara's Buttons	Marshallia caespitosa					4	_	6		1		_	_		ttps://www.wildflower.org/plants/result.php?id_plant=MACA7
	Larkspur	Delphenium sp.					4	_	_	7			_	_		ttps://www.wildflower.org/plants/result.php?id_plant=deca3
	False Indigo	Baptista australis					4			7			- 1			ttps://www.wildflower.org/plants/result.php?id_plant=BAAU
	Fluttermills (Evening Primrose)	Oenothera macrocarpa					4				8					ttps://www.wildflower.org/plants/result.php?id_plant=OEMA
	Winecup	Callirnoe digitata					4				8					ttps://www.wildflower.org/plants/result.php?id_plant=cadi2
1.755	Bulbine	Bulbine frutenscens	no				4	1			8					ttps://tinyurl.com/bdz6ev6f
	Texas Sage, Purple Sage	Leucophyllum frutescens					4					9			h	ttps://www.wildflower.org/plants/result.php?id_plant=LEFR3
	Purple Coneflower	Echinacea purpurea					4					9				ttps://www.wildflower.org/plants/result.php?id_plant=ECPU
37	Yarrow, Common	Achillea millefolium					4					9			<u>h</u>	ttps://www.wildflower.org/plants/result.php?id_plant=acmi2
	Columbine (yellow and golden)	Aquilegia chrysantha					4					9				ttps://www.wildflower.org/plants/result.php?id_plant=AQCH
39	Damianita	Chrysactinia mexicana					4					9			h	ttps://www.wildflower.org/plants/result.php?id_plant=CHME3
40	Mint	Lamiaceae sp.					4						10		<u>h</u>	https://tinyurl.com/2p89ta33
41	Purple Hearts (Purple Queen)	Tradescantia pallida	no				4						10		<u>h</u>	https://tinyurl.com/5n7j83ze
42	Mealy Blue Sage	Salvia farinacea					4						10			ttps://www.wildflower.org/plants/result.php?id_plant=safa2
	Butter Daisy, Cowpen Daisy	Verbesina encelioides					4						10		<u>h</u>	ttps://www.wildflower.org/plants/result.php?id_plant=VEEN
	Shrimp Plant	Justice brandegeeana					4							11		https://tinyurl.com/2p8t897p
45	Wild Onion	Allium canadense						5		7					h	ttps://www.wildflower.org/plants/result.php?id_plant=alca3
46	Indian Blanket	Gaillardia pulchella						5			8				<u>h</u>	ttps://www.wildflower.org/plants/result.php?id_plant=GAPU
47	Catnip	Nepeta cateria	no					5				9			<u>h</u>	https://tinyurl.com/mue3ymrd
48	Bitterweed, sneezeweed	Helenium amarum						5				9	- 3		<u>h</u>	ttps://www.wildflower.org/plants/result.php?id_plant=HEAM
49	Gregg's Dalea	Dalea greggli						5				9			h	https://www.wildflower.org/plants/result.php?id_plant=dagr2
50	Twoleaf Senna, Twinleaf Senna	Senna roemeriana						5					10		h	ttps://www.wildflower.org/plants/result.php?id_plant=SERO8
	Clover, All	Trifolium sp.						5					10			https://tinyurl.com/yckjfayd
	Zinnia, prairie zinnia, yellow zinnia	Zinnia sp.						5					10			ttps://www.wildflower.org/plants/result.php?id_plant=ZIGR
	Tahoka Daisy (Prairie Aster)	Machaeranthera tanacetifolia						5					10			https://www.wildflower.org/plants/result.php?id_plant=MATA2
	Mexican Hat	Ratibida columnifera						5					10	1		https://www.wildflower.org/plants/result.php?id_plant=RACO3
	Erect Dayflower	Commelina erecta			$\neg$	_		5					10			https://www.wildflower.org/plants/result.php?id_plant=coer
	Henbit	Lamium amplexicaule	no	YES	$\neg$	_	+	5					10	_		ttps://hort.extension.wisc.edu/articles/henbit-lamium-amplexicaule/
	Partridge Pea	Chamaecrista fasiculata	110		_	_		5					10	$\rightarrow$		https://www.wildflower.org/plants/result.php?id_plant=CHFAF
5/	rai uluge rea	Chamaecrista fasiculata			_			5					10	_	<u>n</u>	ttps://www.wiidilower.org/plants/result.pnp?id_plant=CHFAF



Successful Treatment-Free Beekeeping starts with local, non-treated bees

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Beekeeping Apprenticeships www.Bee-Mindful.com/apprenticeships

Free Top-Bar Hive Plans young Ree-Mindful.com/apprenticeships

Beekeeping starts with local, non-treated bees	Free Top-Bar Hive Plans www.Bee-Mindful.com/plans														
2 Confinence	, diff there	MA	WE WAY	ASWE Janus	t ept	Jary March	Agril	May	jure	July 6	Jugust .	september Or	tober W.	overno	
113 Abelia	Abelia x grandiflora	no			$\Box$			5			9				neeps, y tinyanicomy z ponaomo
114 Flax, Berlandier's Yellow	Linum berlandieri							5			9				https://www.wildflower.org/plants/result.php?id_plant=libeb2
115 Kidneywood, bee brush, rock brush	Eysenhardtia texana							5				10			https://www.wildflower.org/plants/result.php?id_plant=EYTE
116 Buttonbush, Button Willow, Honey Balls	Cephalanthus occidentalis								6		9				https://www.wildflower.org/plants/result.php?id_plant=CEOC2
117 Butterfly Bush	Budddelia davidii	no	YES						6		9				https://tinyurl.com/2t8swffv
118 Prairie Acacia, Fern Acacia, Whiteball Acacia, Prairie Wattle, White-ball Acacia	Acaciella angustissima								6		9				https://www.wildflower.org/plants/result.php?id_plant=ACAN11
119 Skeleton-leaf Goldeneye, Resinbush	Viguiera stenoloba							_	6			10			https://www.wildflower.org/plants/result.php?id_plant=VIST
	Anisacanthus quadrifidus						_		6				11		https://www.wildflower.org/plants/result.php?id_plant=ANQU2
121 Sumac, Evergreen	Rhus virens				_	_	_	_	7	_				_	https://www.wildflower.org/plants/result.php?id_plant=RHVI3
Lindheimer's Senna, Velvet Leaf Senna, Puppy-dog Ears	Senna lindheimeriana				_		_	_		8			10		https://www.wildflower.org/plants/result.php?id_plant=SELI4
	Ligustrum sp.	no	YES	_	_		$\rightarrow$	$\perp$	_	_	4		<u> </u>	_	https://nativebackyards.com/ligustrum/
Lavender Lavender	Lavendula	no			$\rightarrow$	_	$\rightarrow$			_	-		_	_	
125 Rosemary	Rosmarinus officinalis	no			-	_	$\rightarrow$	_	-	-	-	-		_	
Tomatillo	Lyclum torreyl	no			_	_	$\rightarrow$	$\rightarrow$	_	+	+	+-		_	
Hibiscus, hardy & non-hardy	Hibiscus sp.												<u> </u>		https://tinyurl.com/6s7xw7cc
	In blue: preferred planting - Yellow area =	= bloom	ing tim	ne - Fir	rst nu	ımber	= exp	pected	first me	onth to	bloo	m - <b>S</b> e	cond	_	
129 Mexican Olive Tree, Texas Olive, or Anacahuita	Cordia boissieri			1										12	https://www.wildflower.org/plants/result.php?id_plant=cobo2
130 American Elm	Ulmus americana				2	_	4								https://www.wildflower.org/plants/result.php?id_plant=ULAM
131 Mexican Plums	Prunus mexicana				2		4								https://www.wildflower.org/plants/result.php?id_plant=PRME
	Prunus caroliniana				2		4								https://www.wildflower.org/plants/result.php?id_plant=PRCA
133 Honey Mesquite	Prosopis glandulosa				2						9				https://www.wildflower.org/plants/result.php?id_plant=prgl2
134 Mesquite - see Honey Mesquite	Prosopis sp.				2						9				https://tinyurl.com/4sx4x7hh
135 Mountain Laurel	Sophia secundiflora				2		_	_						_	https://www.wildflower.org/plants/result.php?id_plant=SOSE3
136 Maple Trees	Acer sp.					-	4	_		_	1			_	https://tinyurl.com/4c7hx65r
137 Redbud Tree, Texas Redbud	Cercis canadensis						4	_	_	1	1			_	https://www.wildflower.org/plants/result.php?id_plant=CECAT
Persimmons	Dyospiros texana				_	_	4				-		_	_	https://www.wildflower.org/plants/result.php?id_plant=DITE3
	Styphnolobium affine			_		3	$\rightarrow$	5	-	+	-	-		-	https://www.wildflower.org/plants/result.php?id_plant=STAF4
	Bauhinia lunarioides					3	_	5		_	_	-		-	https://www.wildflower.org/plants/result.php?id_plant=BALU
141 Mexican Buckeye	Ungnadia speciosa				_	3	-	_	6	+	+	-	-	1	https://www.wildflower.org/plants/result.php?id_plant=UNSP
	Prunus serotina					3	-	_	6			+	-	-	https://www.wildflower.org/plants/result.php?id_plant=PRSE2
	Morus rubra rubra			-	8	3		-	-	8	-			-	https://www.wildflower.org/plants/result.php?id_plant=MORUR
	Salix nigra				-		4	5		+	-	+	-	-	https://www.wildflower.org/plants/result.php?id_plant=SANI
	Prunus americana			-	-		4	5	-	+	+	+	-	+	https://www.wildflower.org/plants/result.php?id_plant=pram
146 Yaupon Holly 147 Black Locust	Ilex vomitoria Robinia pseudoacacia			-	$\rightarrow$		4	-	6	+	1			+	https://www.wildflower.org/plants/result.php?id_plant=ilvo https://www.wildflower.org/plants/result.php?id_plant=ROPS
148 Roughleaf Dogwood	Cornus drummondii			-	-	_	4	-	6	+	1	+		+	https://www.wildflower.org/plants/result.php?id_plant=KOPS https://www.wildflower.org/plants/result.php?id_plant=CODR
	Diospyros virginiana			-	$\rightarrow$	_	4		6	+	+	+		+	https://www.wildflower.org/plants/result.php?id_plant=DIVI5
American Linden, American Basswood, Bee Tree	Tilia americana				$\dashv$	_	4		7		1	1		1	https://www.wildflower.org/plants/result.php?id_plant=TIAM
	Parkinsonia Aculeata				$\dashv$		4		- '	8		-		T	https://www.wildflower.org/plants/result.php?id_plant=PAAC3
152 Desert Willow	Chilopsis linearis			-	$\dashv$	_	4				9			T	https://www.wildflower.org/plants/result.php?id_plant=chli2
	Ehretia anacua					_	4				1				https://www.wildflower.org/plants/result.php?id_plant=EHAN
154 Prickly Ash, Toothache Tree	Zanthoxylum americanum				$\neg$		4					Т			https://www.wildflower.org/plants/result.php?id_plant=ZAAM
155 Catalpa, Cigar Tree, Indian Bean	Catalpa bignonioides							5	6						https://www.wildflower.org/plants/result.php?id_plant=CABI8
	Pistacia texana							5		8					https://www.wildflower.org/plants/result.php?id_plant=PIME4
Sumac, Winged/Shining/Flameleaf/Mountain/Black	Rhus copallinum								7	8					https://www.wildflower.org/plants/result.php?id_plant=RHCO
Pomegranate, bushes/trees	Punica granatum	no							7	8					https://tinyurl.com/3728fuyz
159 Crape Myrtle	Lagerstroemia	no							7		9				https://tinyurl.com/yckurhzh
Loquats, Fruit Bearing	Eribotrya japonica	no											11	12	https://tinyurl.com/2p98kdre
61 Mimosa Tree	Albizia julibrissin	no	YES												https://texasinvasives.org/plant_database/detail.php?symbol=ALJU
62 Bradford Pear Tree	Pyrus calleryana	no	YES												https://tinyurl.com/5x3hpwzw
63 Bee Bee Tree	Tedredium danielli	no	YES												https://tinyurl.com/2p8kzj4a
Chinese Parasol	Firmiana simplex	no	YES												https://www.texasinvasives.org/plant_database/detail.php?symbol=FISI2
65 Chinese Tallow	Triadica sebifera	no	YES												https://www.invasivespeciesinfo.gov/terrestrial/plants/chinese-tallow
	Citrus x meyeri	no													https://tinyurl.com/bdfy6tww
Fruit Trees that bear fruit	Assorted	no													



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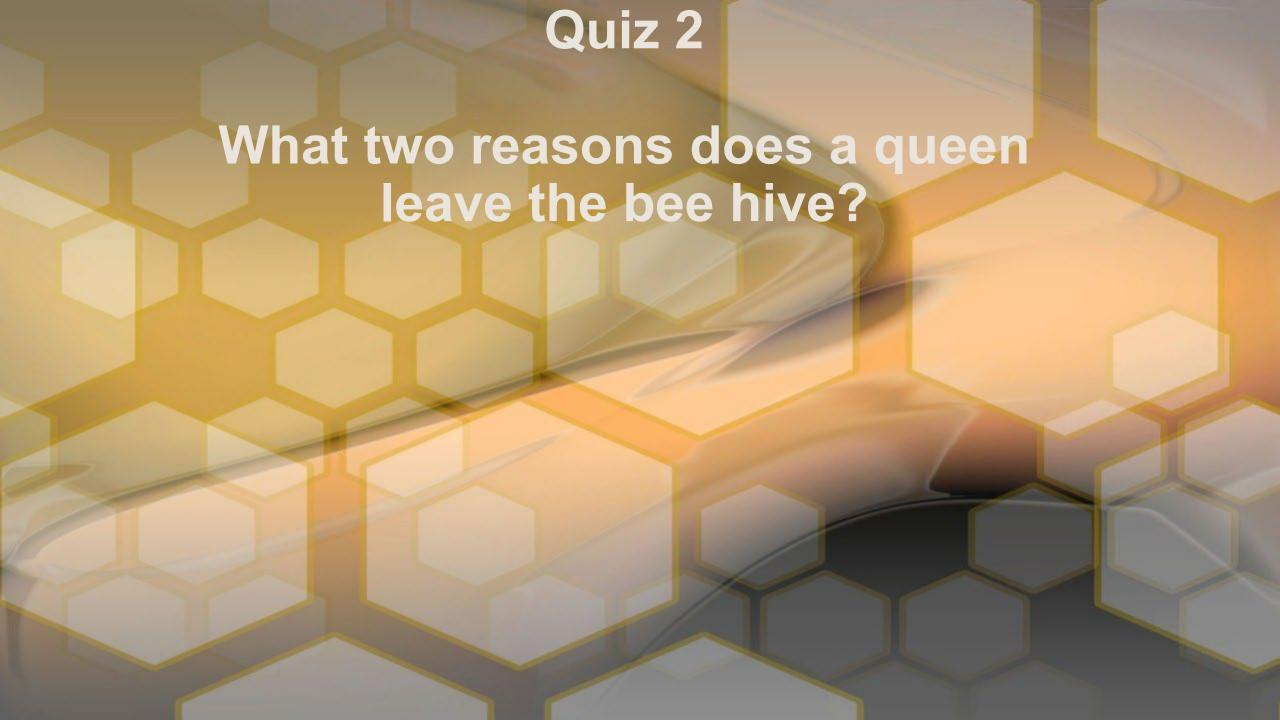
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Beekeeping Apprenticeships www.Bee-Mindful.com/apprenticeships

Even Top-Ber Hive Plans wayer Bee-Mindful.com/apprenticeships

Free Top-Bar Hive Plans www.Bee-Mindful.com/plans local, non-treated bees interest for hings hour bound hing hing hear seed seed 58 Clammyweed Polanisia dodecandra https://www.wildflower.org/plants/result.php?id\_plant=PODO3 Thistle "Arizona" 5 Cirsium arizonicum https://www.wildflower.org/plants/result.php?id\_plant=CIAR3 Autumn Sage Salvia greggii https://www.wildflower.org/plants/result.php?id\_plant=sagr4 5 Turk's Cap, Wax Mallow, Bleeding Hearts, Manzanita Malvaviscus arboreus var. drummondii https://www.wildflower.org/plants/result.php?id\_plant=MAARD https://www.minnesotawildflowers.info/flower/hairy-vetch 62 Hairy Vetch Vicia villosa no YES 6 6 63 Woolly Ironweed Vernonia lindheimeri https://www.wildflower.org/plants/result.php?id\_plant=VELI3 Narrowleaf Mountain Mint, Slender Mountain Mint, Common Horsemint Pycnanthemum tenuifolium 6 https://www.wildflower.org/plants/result.php?id\_plant=PYTE 65 False Foxglove Agalinis heterophylla 6 10 https://www.wildflower.org/plants/result.php?id\_plant=aghe4 66 Pepper Grass Lepidium virginicum 6 10 https://www.wildflower.org/plants/result.php?id\_plant=LEVI3 67 Big Red Sage Salvia pentstemonoides 10 https://www.wildflower.org/plants/result.php?id\_plant=SAPE15 6 68 Indigo Spires 6 Salvia "Indigo Spires" hybrid https://www.wildflower.org/expert/show.php?id=6091&frontpage=true 12 https://www.wildflower.org/plants/result.php?id\_plant=cola5 69 Coreopsis (Tickseed 6 Coreopsis lanceolata Symphyotrichum sp. https://en.wikipedia.org/wiki/Symphyotrichum ascendens Joe-pye Weed, Trumpetweed, Queen Of The Meadow, Hollow Joe-pye Weed Eutrochium fistulosum 9 https://www.wildflower.org/plants/result.php?id\_plant=EUFI14 72 Eryngo, False Purple Thistle Eryngium leavenworthi 7 https://www.wildflower.org/plants/result.php?id\_plant=ERLE11 https://tinyurl.com/2p8hz44r 73 Hydranga, Mexican Clerodendrum bungei no 7 10 74 Black-eyed Susan Rudbeckia hirta 7 10 https://www.wildflower.org/plants/result.php?id\_plant=ruhi2 https://tinyurl.com/5aknj73m Sunflower Helianthus sp. 7 10 76 Thistles Asteraceae sp. 7 10 https://tinyurl.com/pyeyvhda Goldenrod Solidago arguta 10 https://tinyurl.com/32upj977 7 78 Blue Beard Spirea Carvopteris "Bluebeard" 7 10 https://www.bluestoneperennials.com/CABM.html no 79 Cosmos Cosmos bipinnatus 7 10 https://tinyurl.com/48ase8tf no VES 80 Bluemist Flower Conoclinum coelestinum/gregii 7 https://www.wildflower.org/plants/result.php?id\_plant=coco13 Baldwin's Ironweed, Western Ironweed Vernonia Baldwinii https://www.wildflower.org/plants/result.php?id\_plant=VEBA goldenrod solidago (arenicola, asperula, arguta) https://tinyurl.com/rayk2yje 83 Frostweed, Iceweed, Indian Tobacco Verbesina virginica 8 https://www.wildflower.org/plants/result.php?id\_plant=VEVI3 12 https://www.wildflower.org/plants/result.php?id\_plant=soal6 84 Goldenrod Solidago altissima 8 Sky-Blue Aster Symphyotrichum oolentangiense https://www.wildflower.org/plants/result.php?id\_plant=SYOO Gayfeather Liatris sp. 9 11 https://tinyurl.com/ycxfdd8y SHRUBS/BUSHES In blue: preferred planting - Yellow area = blooming time - First number = expected first month to bloom - Second Number = expected last month to bloom Forestiera pubescens https://www.wildflower.org/plants/result.php?id\_plant=FOPU2 89 Texas sage, purple sage, barometer bush, cenizo 12 https://www.wildflower.org/plants/result.php?id\_plant=LEFR3 eucophyllum frutescens 90 Mexican Honevsuckle, forecracker bush Justicia spicigera no 12 https://www.centraltexasgardener.org/resource/mexican-honeysuckle/ 91 Vitex, Chastetree Vitex rotundifolia 12 https://www.wildflower.org/plants/result.php?id\_plant=VIRO80 no YES 92 Agarita Mahonia trifoliolata https://www.wildflower.org/plants/result.php?id\_plant=matr3 93 Texas Barberry https://www.wildflower.org/plants/result.php?id\_plant=MASW Mahonia swaysesli 2 Δ 94 Mexican Heather, false heather Cuphea hyssopifolia no 2 https://tinyurl.com/8v6un92t 95 Pyracantha Pyracantha coccinea no https://www.wildflower.org/plants/result.php?id\_plant=PYCO2 96 Wright's Skullcap, Bushy Skullcap, Shrubby Skullcap Scutellaria wrightii 3 https://www.wildflower.org/plants/result.php?id\_plant=SCWR2 97 Mimosa Bush (fragrant, pink) (NOT albizia ulibrissin) Mimosa borealis 3 https://www.wildflower.org/plants/result.php?id\_plant=MIBO2 98 Creosote Bush, Greasewood, Hediondilla, Governadora, Guamis Larrea tridentata 3 https://www.wildflower.org/plants/result.php?id\_plant=LATR2 Aloysia gratissima https://www.wildflower.org/plants/result.php?id\_plant=algr2 https://tinyurl.com/j6r89fde 100 Hawthorn, Little Pinkie, India Hawthorn Raphiolepis indica 4 5 no 101 Indigo Bush, False Indigo Amorpha Fruticosa 4 https://www.wildflower.org/plants/result.php?id\_plant=AMFR 102 Powder Puff Calliandra haematocephala 4 https://tinyurl.com/23pmj3kz no 103 Coralberry, Indian Currant, Buckbrush Symphoricarpos orbiculatus 4 7 https://www.wildflower.org/plants/result.php?id\_plant=SYOR https://tinyurl.com/ycknsrz8 104 Bottlebrush Tree Callistemon rigidus no 4 105 Featherplume Dalea formosa 4 8 https://www.wildflower.org/plants/result.php?id\_plant=DAFO 106 Bee Balm (Horsemint, Bergamot) Monarda sp. 4 107 Lantana, Texas Lantana urticoides 4 10 https://www.wildflower.org/plants/result.php?id\_plant=laur2 108 Pussyfoot Dalea obovata 4 10 https://www.wildflower.org/plants/result.php?id\_plant=DAOB 09 Yellow Bells (Esperanza) Tecoma stans 4 https://www.wildflower.org/plants/result.php?id\_plant=test https://www.wildflower.org/plants/result.php?id\_plant=PALA13 10 Rock Rose Pavonia lasiopelata 4 4 111 White Mistflower, Shrubby Boneset, Havana Snakeroot Ageratina havanensis 11 https://www.wildflower.org/plants/result.php?id\_plant=AGHA4 112 American Beautyberry Callicarpa americana https://www.wildflower.org/plants/result.php?id\_plant=CAAM2



# Why Do We Need Bee's

**Honey** is known for its antioxidant, antimicrobial, anti-inflammatory, and anticancer properties.

In traditional medicine, people use honey when treating a wide variety of conditions such as...

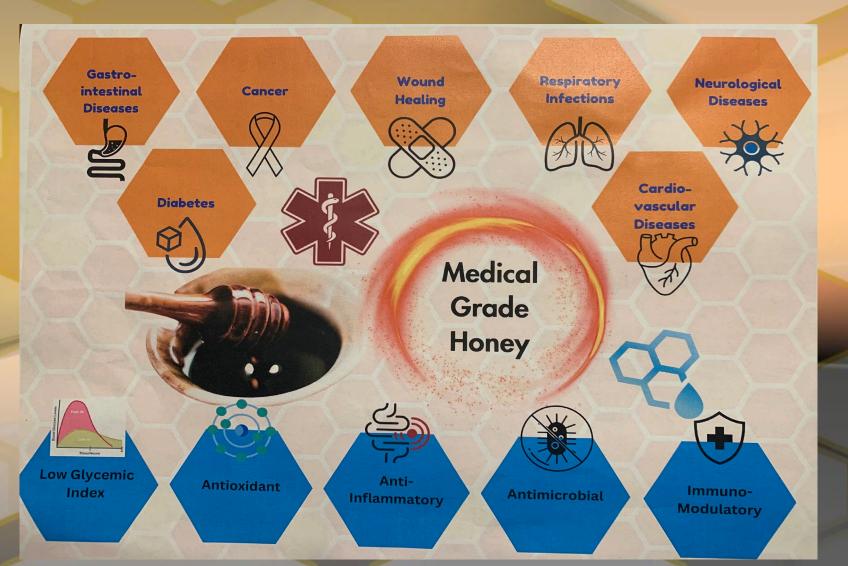
- Eye diseases
- •Bronchial asthma Allergies
- Cough and Sore Throats
- Hiccups
- Fatigue
- Dizziness
- Constipation
- Eczema
- Ulcers
- Wounds, burns, cuts







# Medicinal Honey The Honey Pathways Lab at UTSA

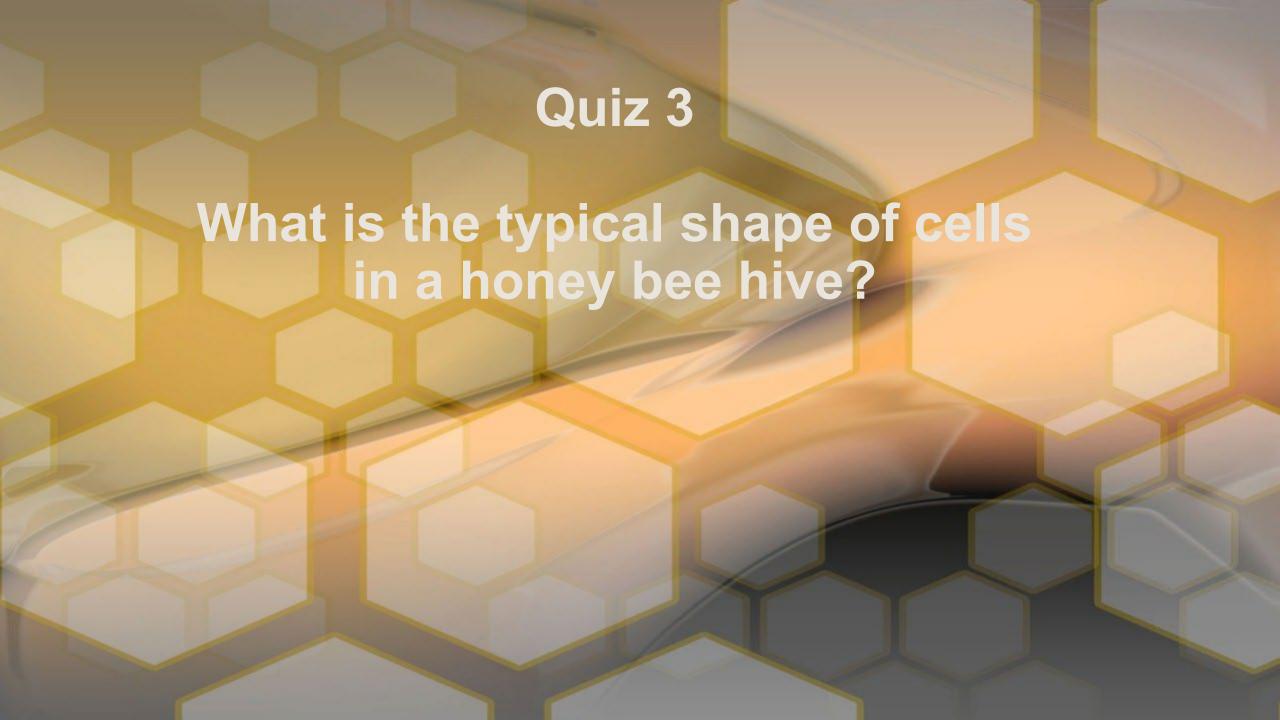


# Why Do We Need Bees

**Beeswax** is another important product from bees, used widely in a number of skincare products. Pharmaceutical industries use beeswax in ointments, hand salves, balms, etc

- •Beeswax Candles purify the air
- Beeswax Lotions, ointments
- Beeswax Lip balm, lip butter
- Beeswax Beard Balm



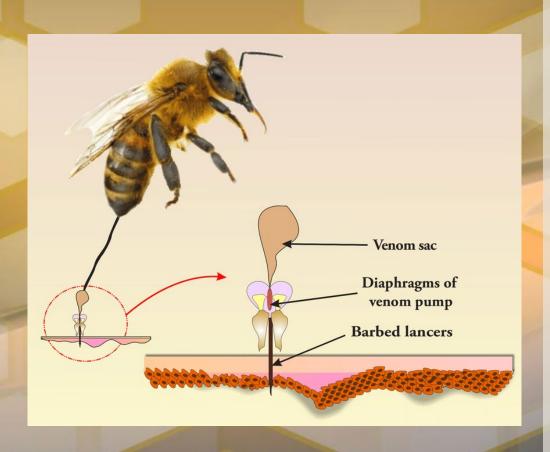


# Services we provide...



Bee Stings
Bee Emergencies
Bee Relocation
Role of the Beekeeper

# Why Do Bees Sting?



- Bees will defend their colonies. Defensive not aggressive.
  - -Offspring called brood
  - Food called honey and pollen
- Bee stings release special pheromones
- Colony sizes can range from 10,000 to 60,000 bees



# Not A Swarm





# Scene Size Up

Important questions to ask

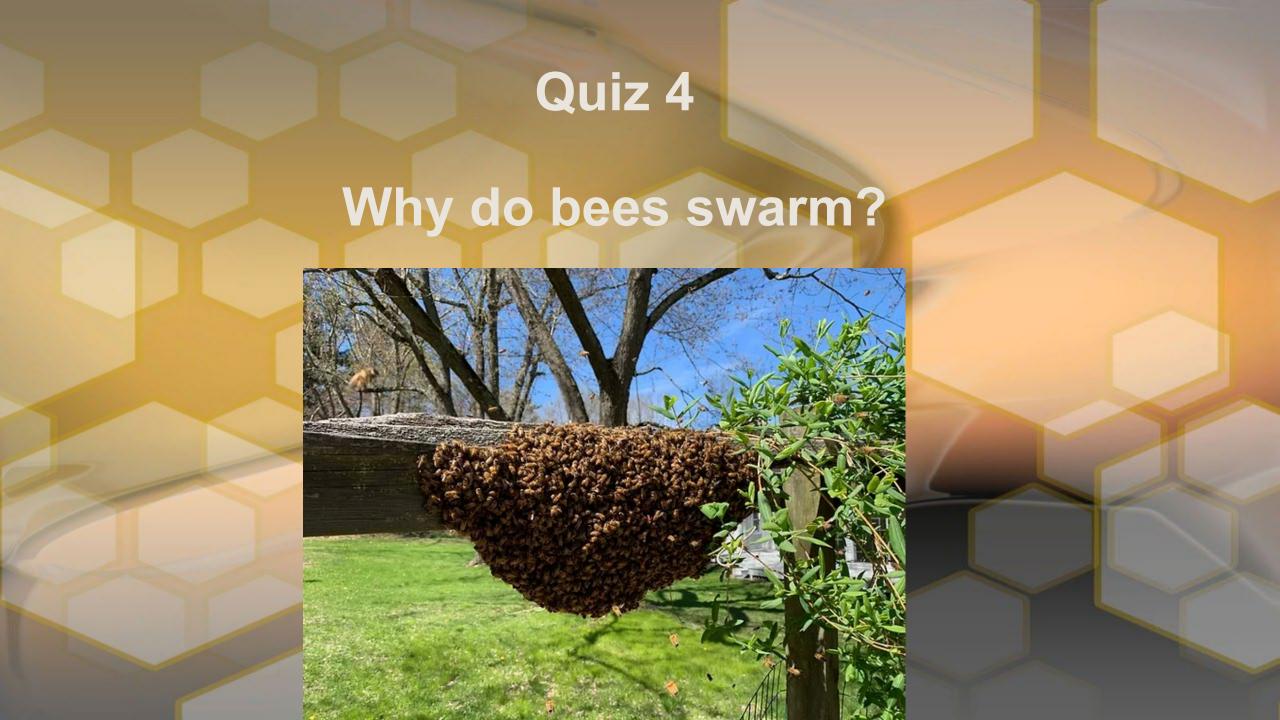
- Is it a swarm or established hive?
- Were the insects disturbed?
- Is anyone allergic?
  - Do they have their EpiPen?
  - Have they already been dosed due to exposure?
- Has anyone already been stung?
  - How long ago were they stung?
- Call a local beekeeper for help!



### What to Do...What to Do...

- An Undisturbed Bee Swarm
  - Call a beekeeper to collect
  - Leave it alone
- A Disturbed Swarm/Hive
  - Remove bystanders and potential victims
  - Spray sugar water or water and Pray!
  - Use the water as a wall to knock bees from the air
  - Call a local beekeeper or Fire Dept.

- Stinging Insect Victim
  - Remove stingers ASAP!
  - Apply Cold Compress, Benadryl Cream
  - Call EMS if needed
  - Remove the stung person from the scene...pheromones attract more bees.



# Bee Relocation







- Trained Beekeepers will come to the location, size it up.
- We will bring a team of other beekeepers to safety remove the bees from the structure
- Clean everything out...this is important...
- Give the bees time to clean the space then fill the void.
- Relocate to a local apiary, supporting new beekeepers.



## How to become a beekeeper...







Contact a local beekeeper or beekeepers association and ask for classes, mentors, shadowing, etc

### **WAYS TO HELP NATIVE BEES**



Plant native tree's. Tree's provide a large nectar source from their blossoms and habitat for some bees.



Plant native plants that bloom during spring, winter, summer and fall to provide a continuous food source. Wildflowers, a garden, shrubs.



Avoid using herbicides, pesticides and insecticides. Find organic ways to garden and remove pests.



Provide a water source and habitat such as bare soil in your garden for ground nesting bees, bird baths, ponds, tanks, etc.



Join a local beekeepers association to learn more, become an apprentice, beekeeper or help on a local apiary.



325-665-1638 sadiegracefarms@gmail.com

### **BEGINNERS BEEKEEPING CLASS**



Are you ready for a local Beekeeping 101 Class - with a hands on leaning in healthy hives? This is a perfect opportunity for you!

Limited capacity available. Sign up to reserve your spot!

### SATURDAY SETP. 7TH

9 am - 1 pm Food and Drinks provided

Cost: \$100 RSVP by Sept. 2

#### **TOPICS:**

- · Basics of the bee/bee biology
- · Learn to identify different stages of honey bee development
- · Roles and responsibilities of the bees in their colony
- · Necessary equipment
- Beehive components

- Hive maintenance
- · Full inspection of a functioning bee hive
- · Question and answer session at the end of class
- HANDS-ON EXPERIENCE IN THE APIARY

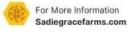


#### **Expert Guidance**





#### **Education & Training**







(325) 665-1638 Sadiegracefarms@gmail.com

### Contact Sadie Grace Farms



# CRISSY WARD

325.665.1638

sadiegracefarms@gmail.com

Pure Raw Local Honey | Beeswax Propolis | Pollination Services Bee Rescues | Apiary Set-up Honeybee Consulting and Education

### Sadie Grace Farms

**Crissy Ward** 

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www.SadieGraceFarms.com

Facebook / Instagram

### Contact Us

### Big Country Beekeepers Association



### **Monthly Meetings**

3<sup>rd</sup> Tuesday of each month Ridgemont Baptist Church 4857 Buffalo Gap Road, Abilene

Crissy Ward - 325.665.1638 www.BigCountryBeekeepersAssociation.com