



Monarchs & 4-H

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COOPERATIVE EXTENSION
College of Agriculture, Forestry and Life Sciences



Why Monarchs?

- They are the most iconic and most recognizable butterfly species in the world
- They make one of the most unique and complex migrations of any animal
- The monarch population has declined by approximately 90 percent since the 1990s



Identifying Monarch Butterflies

Monarch



Viceroy



Gulf Fritillary



Male vs Female

- Males: black spots (scent glands), thinner veins
- Females, no spots, thicker veins







What plant do you think of when
you think of monarch butterflies?





Milkweed!

- No Milkweed, no Monarchs
 - Eggs on laid only on milkweed, monarch caterpillars eat only milkweed



Common Milkweed Species in SC

1. Butterfly Weed - *Asclepias tuberosa*
2. Swamp Milkweed - *A. incarnata*
3. Common Milkweed – *A. syriaca*





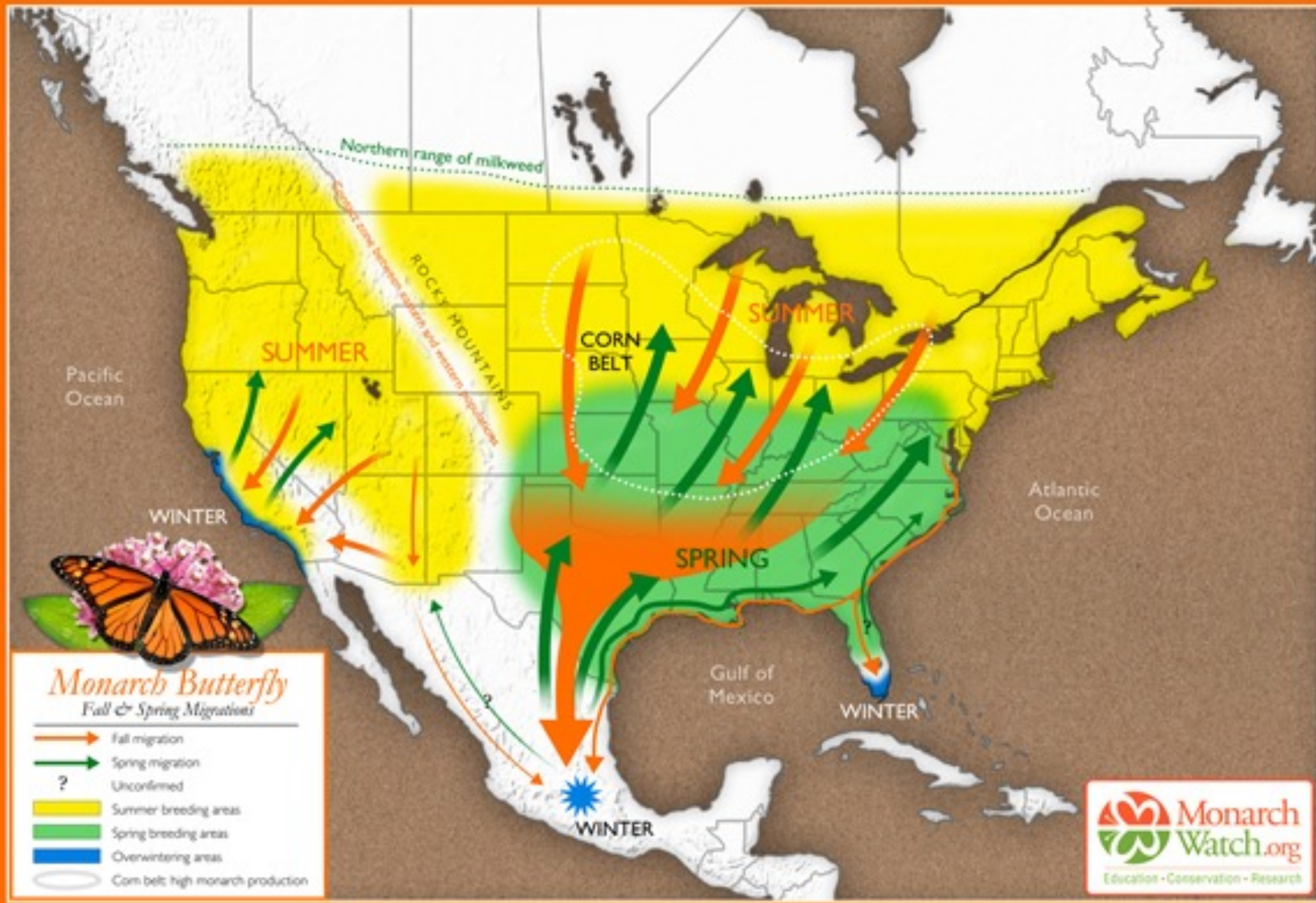
Monarch Migration





- Most migrations involve previous generations leading the way to a certain destination
- Large animals such as whale or elephants are often associated with long migrations

- Some travel up to 3,000 miles to their wintering grounds
 - Records of 50 – 100 miles a day
 - 20 miles on average
- A lot of mystery surrounding how monarchs find their way
 - magnetic pull of the earth and the position of the sun



A photograph showing a vast number of monarch butterflies (Danaus plexippus) covering the ground and trees in a forest. The butterflies are orange with black veins and white spots on their hindwings. They are densely packed, filling the scene and creating a vibrant orange carpet. The background shows some green foliage and a clear blue sky visible through the canopy.

Wintering Grounds

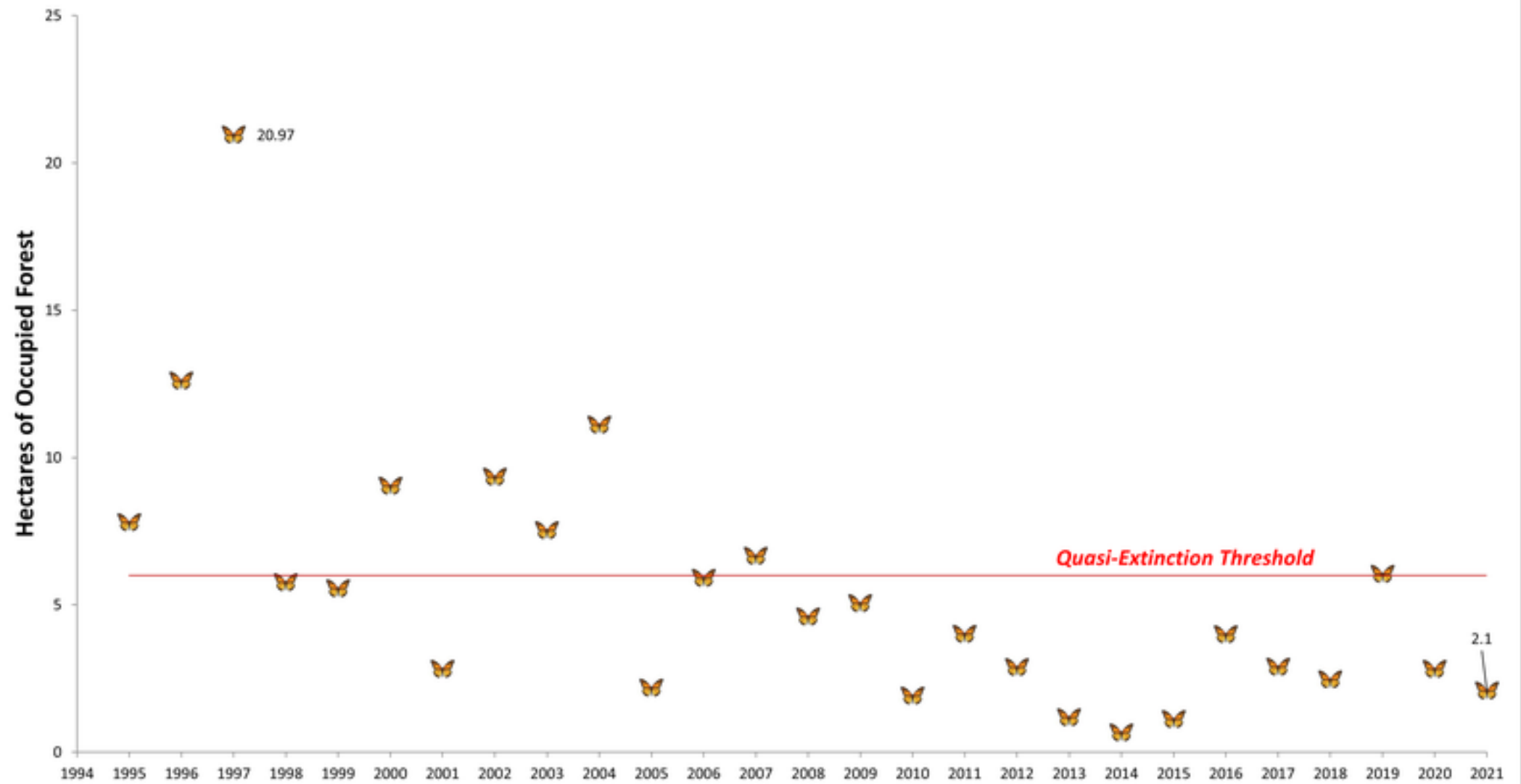
- Sierra Madre Mountains of Mexico
- Michoacán, Mexico (62 miles NW of Mexico City)
 - Migrate to an area that is less than 10 acres
 - Roost in the oyamel fir trees



Cultural Significance

- Their arrival coincides with *Día de Muertos* (Day of the Dead), which is observed in Mexican culture between November 1st and 2nd
- *Día de Muertos* is a celebration of the deceased
- Monarchs represent the souls of their ancestors returning to visit them for *Día de Muertos*.

Eastern Migratory Monarch Overwintering Population



Reasons for Population Declines

Wintering Grounds

- Winter Storms
- Illegal Deforestation



Spring & Summer Habitats

- Habitat Loss & Fragmentation



Monarch Tagging



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Tagging Steps

1. Catch Monarch
2. Fill out Data Sheet
3. Place Sticker on the Discal (mitten-shaped cell)
4. Release!

Tips & Tricks



MIDPOINTS AND PEAKS OF THE MONARCH MIGRATION BY LATITUDE



Latitude	Midpoint	Peak in monarch abundance
49	26 August	18-30 August
47	1 September	24 August - 5 September
45	6 September	29 August - 10 September
43	11 September	3 - 15 September
41	16 September	8 - 20 September
39	22 September	14-26 September
37	27 September	19 September - 1 October
35	2 October	24 September - 6 October
33	7 October	29 September - 11 October
31	12 October	4-16 October
29	18 October	10-22 October
27	23 October	15-27 October
25	28 October	20 October - 1 November
23	4 November	27 October - 8 November
21	11 November	3-15 November
19.4*	18 November	10-22 November

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	TagCode	TagMonth	TagDay	TagYear	M / F	R / W	TagCity	TagState	TagZip	Firstname	Lastname	Organization	Address1	Address2	City	State	Zip	Phone	Email	
2	XMT 465	10	6	2017	F	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Broad Street		Walhalla	SC	29691	864-638-5889	mallord@clemson.edu	
3	XMT 460	10	13	2017	F	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Broad Street		Walhalla	SC	29691	864-638-5889	mallord@clemson.edu	
4	XMT 472	10	13	2017	M	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Broad Street		Walhalla	SC	29691	864-638-5889	mallord@clemson.edu	
5	XMT 450	10	13	2017	M	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Broad Street		Walhalla	SC	29691	864-638-5889	mallord@clemson.edu	
6	XMT 451	10	13	2017	M	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Broad Street		Walhalla	SC	29691	864-638-5889	mallord@clemson.edu	
7	XMT 455	10	20	2017	F	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Broad Street		Walhalla	SC	29691	864-638-5889	mallord@clemson.edu	



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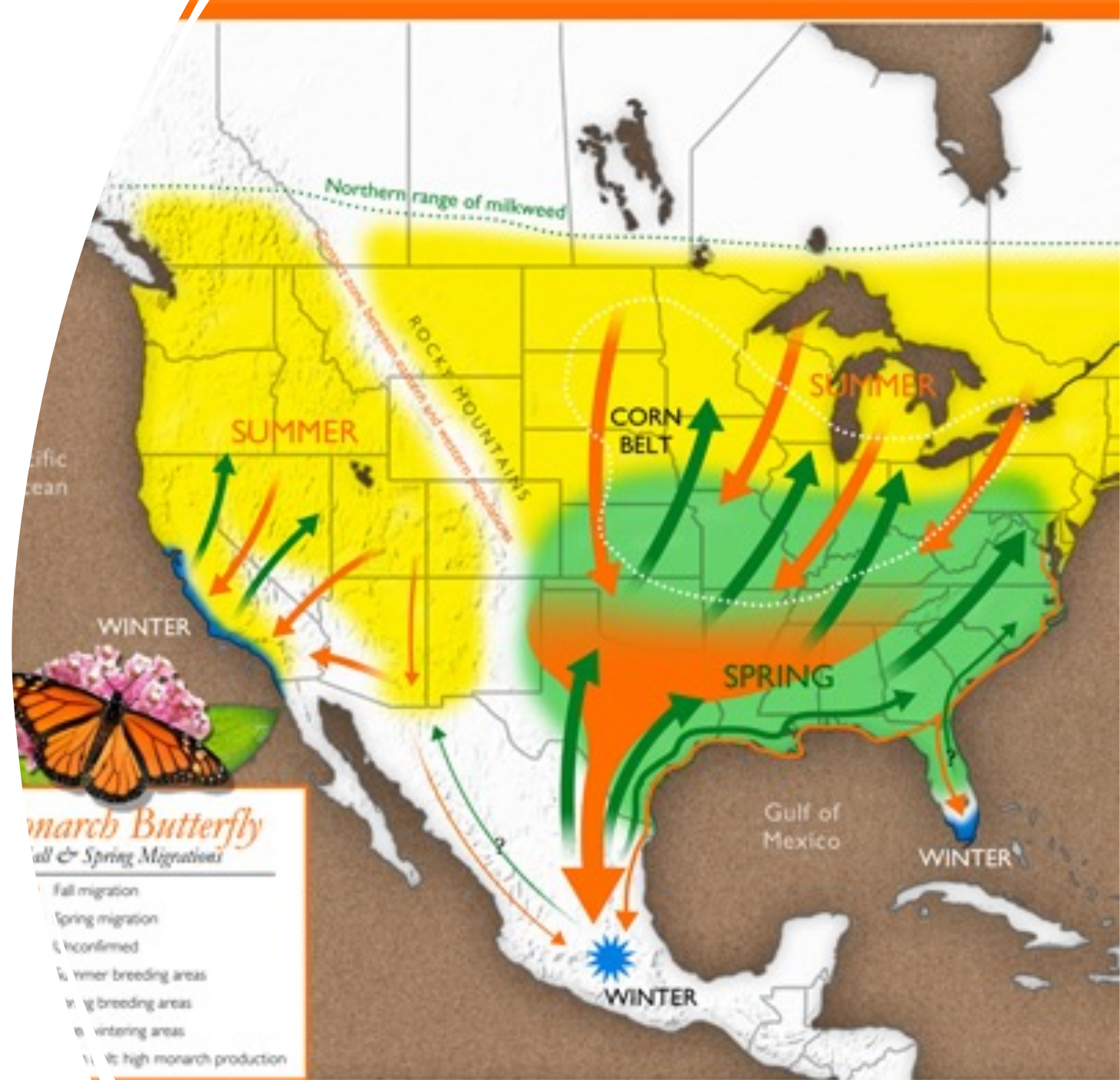


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Key Migrations!

- Year-Round Programming by targeting the migration patterns!



4-H Tagging Program

- Introduce insects
- Monarch Butterfly life history
- Migration
- Tagging Lesson with fake butterflies
- Tag living butterflies if available



4-H Program Ideas

- Jr. Naturalist — entomology
 - Parts of insect, types of insects, and then hands-on activity
- 4-H Clubs
 - Great monthly club activity, community service
- Summer Camps
 - Pollinator summer camps
- Schools — lifecycles, pollinators
- Citizen Science & Conservation
 - Monarch Watch, Journey North
- Pollinator Gardens!!
 - Monarch Waystations





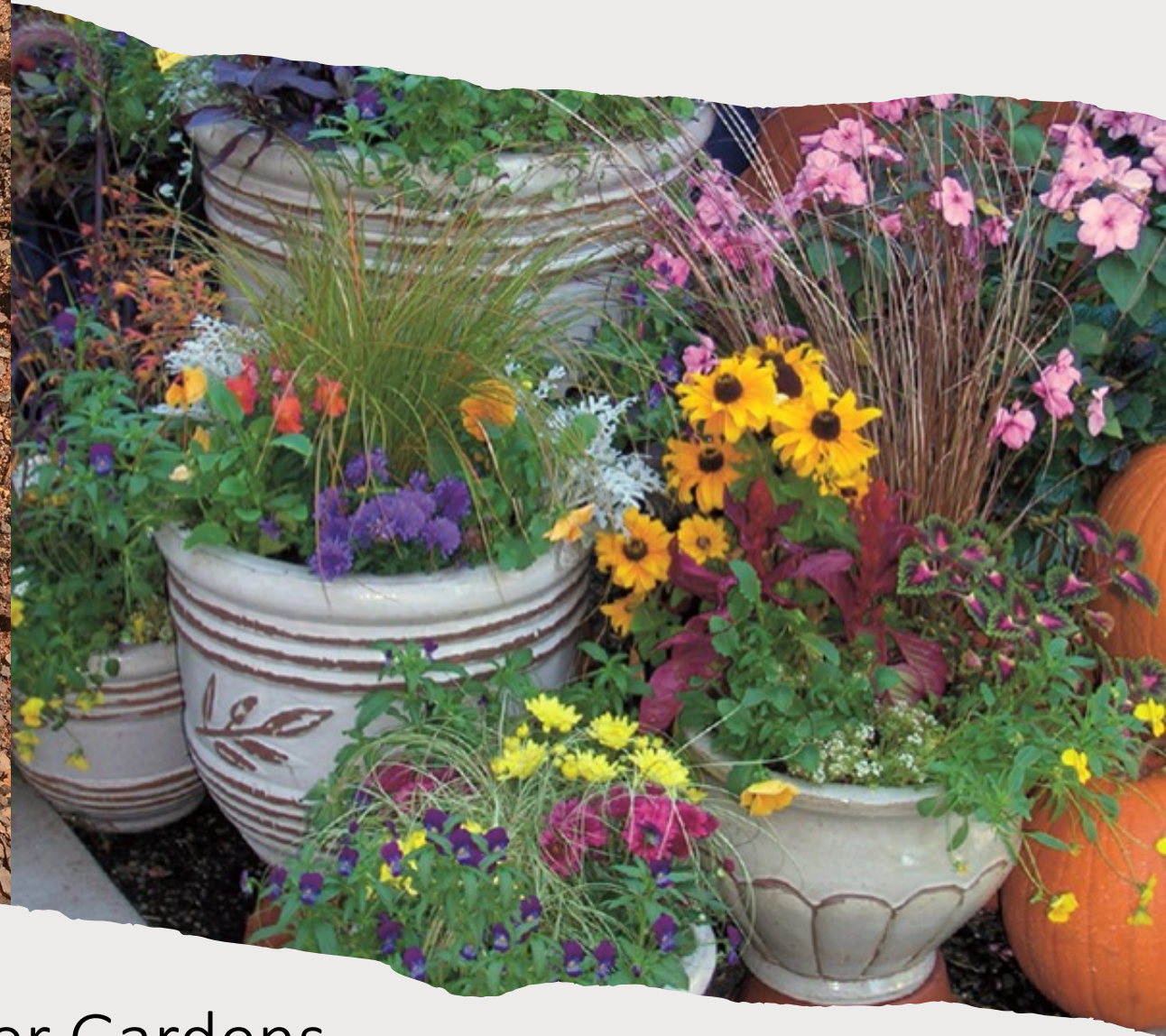
DYI Mason Bee Houses –
Pollinator Habitat



JMG Pollinator Sock
Puppets – Life stages



Butterfly Puddler Dishes



Pollinator Gardens & Container Gardens



Supplies

- Monarch Tagging Kit – Monarch Watch
- Monarch Migration Map – Monarch Watch (optional)
- Monarch Replicas – Nature-Watch
- Monarch Lifecycle Figurines – Nature Watch (optional)
- Butterfly Pavilion – Nature Watch
- Insect/Butterfly Nets – Nature Watch, Monarch Watch, really anywhere!
- Monarch WayStation Signage & Site Registration – Monarch Watch



Questions?

Please take this
short survey!

