Monarchs & 4-H

Mallory Maher



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



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?

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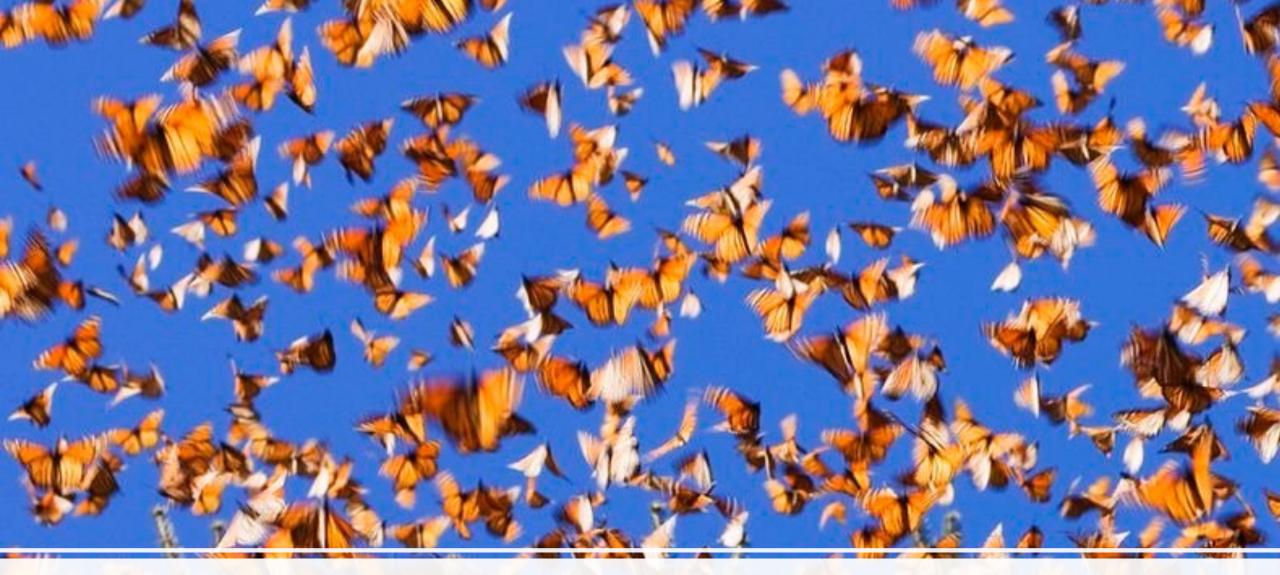
Milkweed!

- No Milkweed, no Monarchs
 - Eggs on laid <u>only</u> on milkweed, monarch caterpillars eat <u>only</u> milkweed



Common Milkweed Species in SC

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

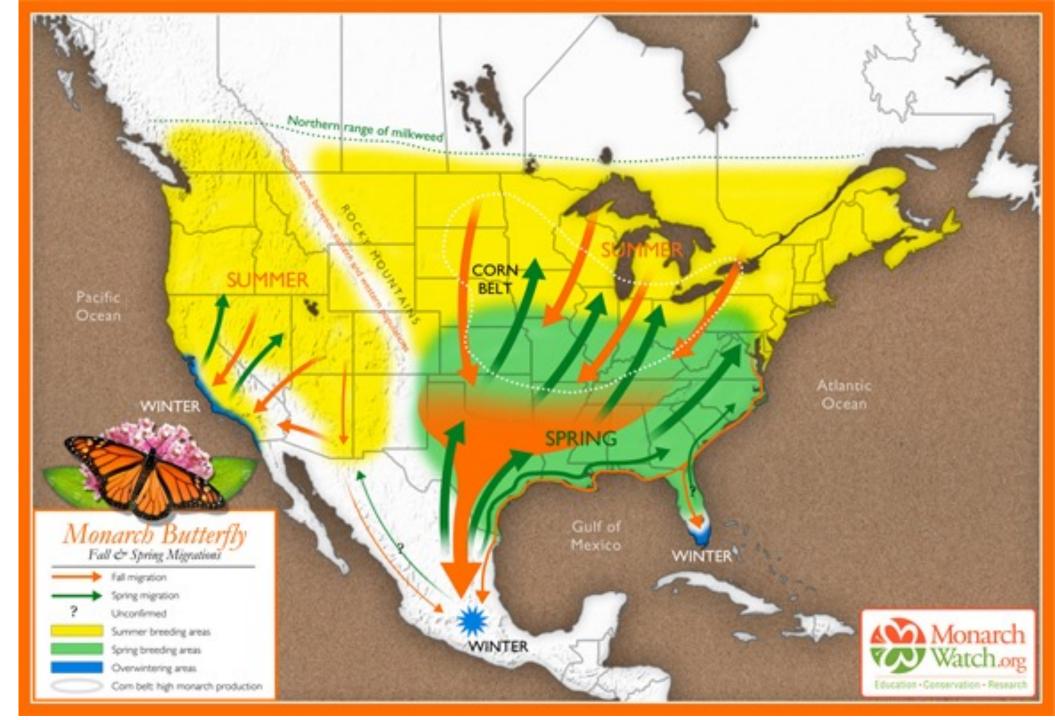


Monarch Migration



- 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



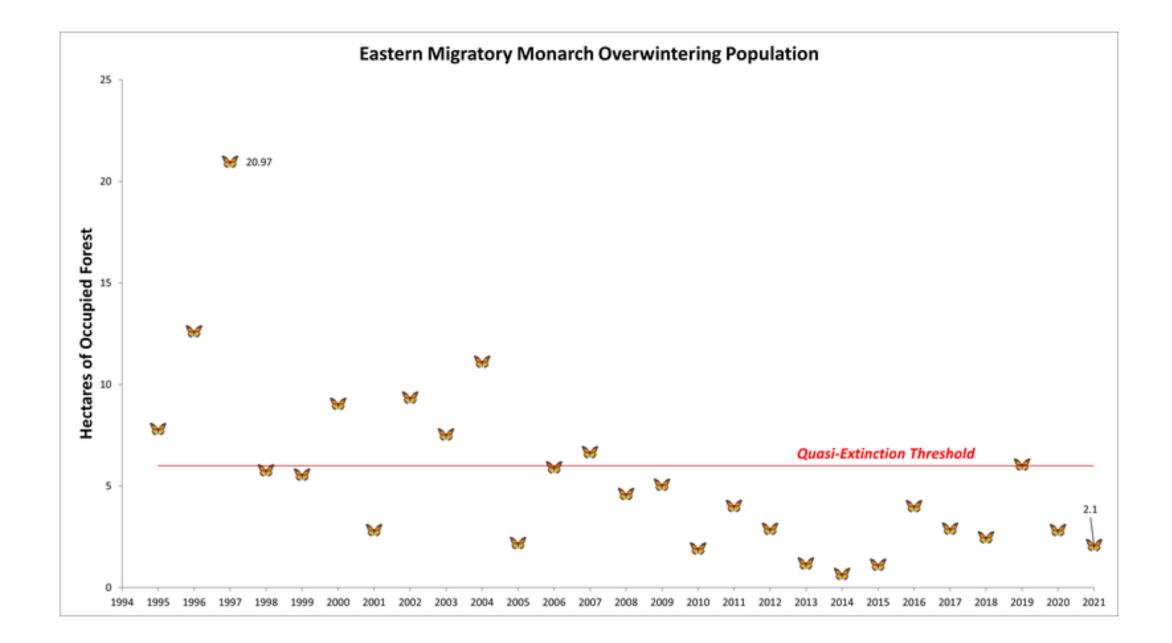
Wintering Grounds

- 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.



Reasons for Population Declines

Wintering Grounds

- Winter Storms
- Illegal Deforestation



Spring & Summer Habitats

• Habitat Loss & Fragmentation



Monarch Tagging



Minimum **Supplies** Needed

Tags & Datasheet **Monarch Figurines Butterfly Pavilion** Insect/Butterfly Nets

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Greetings, taggers		00 0								
Welcome to the 2019 monarc season. This year marks Watch's 28th season! Over	Monarch	NARCH W		TAGGIN					PAGE	OF
thousands of taggers have	contrib-	se submit yo	our data o	nline! Data	sheets	and instruction	ons are availab	le at monarch	watch.org/t	agging
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mine of information about migration functions. The re	how the							but if m	ailing please a	send to:
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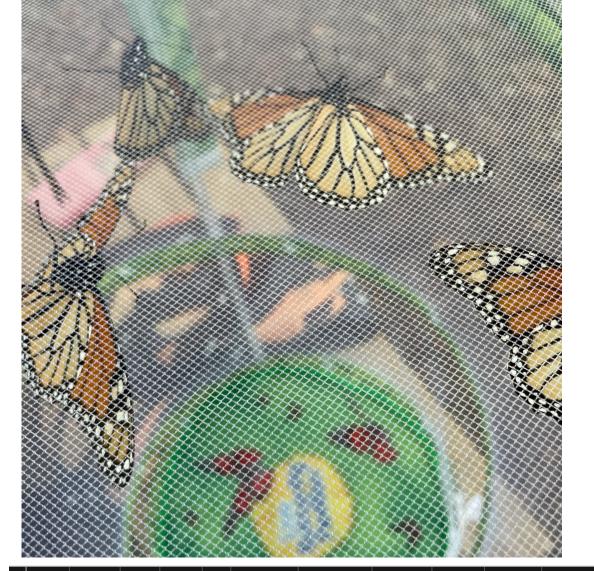
Tagging Steps

- 1. Catch Monarch
- 2. Fill out Data Sheet
- 3. Place Sticker on the Discal (mittenshaped 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	В	С	D	E	F	G	н	I	J	к	L	М	N	0	Р	Q	R	S	т
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 Br	oad Street	Walhalla	SC	29691	864-638-5889	mallord@clemsor	n.edu
3	XMT 460	10	13	2017	F	w	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Br	road Street	Walhalla	SC	29691	864-638-5889	mallord@clemsor	n.edu
4	XMT 472	10	13	2017	М	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Br	oad Street	Walhalla	SC	29691	864-638-5889	mallord@clemsor	n.edu
5	XMT 450	10	13	2017	М	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Br	road Street	Walhalla	SC	29691	864-638-5889	mallord@clemsor	n.edu
6	XMT 451	10	13	2017	М	w	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Br	road Street	Walhalla	SC	29691	864-638-5889	mallord@clemsor	n.edu
7	XMT 455	10	20	2017	F	W	West Union	SC	29696	Mallory	Dailey	Clemson Extension	301C W South Br	road Street	Walhalla	SC	29691	864-638-5889	mallord@clemsor	n.edu







4-H & Monarchs



COOPERATIVE EXTENSION College of Agriculture, Forestry and Life Sciences



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



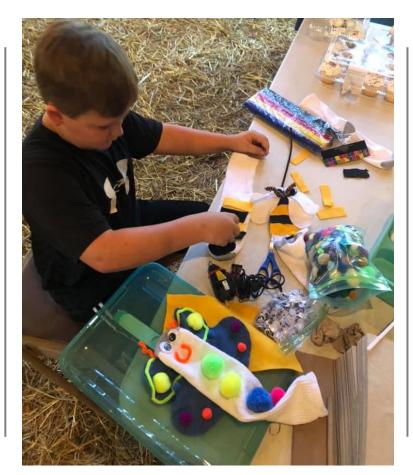
4-H Program Ideas

- 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



Butterfly Puddler Dishes

JMG Pollinator Sock Puppets – Life stages

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!

