

# *South Dakota Citizen Science Project*

## *- YES, We Need YOU!!!!*

Note – thanks to Doug Backlund, WildPhotosPhotography.com for the use of his photos.

### Monarch, Regal Fritillary and Bumble Bee Observations

You don't have to be an expert to help us. We just need you to get outside (perfect activity during the virus quarantine) and let us know if you see these species. You can do this in your backyard. Please don't catch them with nets – just observe them. Regals and Monarchs are large enough they don't need to be caught. Bumble bees are usually slow moving and have no desire to sting you unless you harass them. Take a digital photo if you can, especially of the bumble bees. We will try to identify them.



We are not expecting you to do a formal survey (line transects) but if you want to, we are developing a form that will be available here for you to use. If you have questions, email one of the staffers at the end of this page. Please do not go on private land without permission.

### **Regal Fritillary (Regals)**

The South Dakota Field Office is working on a Species Status Assessment (SSA) to determine if the Regals should be added to the Endangered Species List. A final decision will be made by May 2022. Historically, Regals were seen throughout the state, but recent data is needed, especially for the western counties of South Dakota. So as you are out traveling South Dakota, out walking in our beautiful public lands, or watching your backyard, let us know if you see these critters fluttering about.

A fun way to remember Regals – they look like Monarchs dipped in chocolate. Just don't eat them! Males have a row of orange spots on the hind wing; females would have white spots.



## Monarchs

Monarchs may be the best known butterfly. It's large, it's orange and black and many people have raised them from caterpillars. The status of this species is also being looked at and a decision is scheduled for the end of 2020 whether to add them to the Endangered Species List. The main threat to monarchs is habitat loss (both prairies with flowering forbs and winter habitat). Many people are now planting milkweed native to their area to help. We also need to protect flowering plants in the fall when Monarchs are migrating and protect the forests they use to roost in at night as they travel north and south. Males have a "pouch" on the hind wing.



## Viceroy

No, this butterfly is not being considered for listing, but you might confuse it with a monarch. They are smaller in size than monarchs, but if you only have one butterfly in front of you, you need to look for one other clear identifying mark – the black vein that runs parallel to the wing edge on the hind wing:



## **Bumble Bees – Charlie’s Favorite**

These guys are big and move slowly, they really just want to collect pollen and nectar and not come near you. The best way to identify them is by the stripes on their thorax and abdomen (back and butt), so try to get a good photo from that angle. Sometimes hair on the face is important, so a side view can be helpful. If you see enough bumble bees you will notice the stripes may be different colors– yellow, orange, brown, or black. In South Dakota we can get a mix of western and eastern species. Example: here is a Hunt’s bumble bee found in Oahe Downstream Recreation Area two different years. Notice the orange stripes on the abdomen and hair on the face.

Bumble bees are declining. The Rusty-patched Bumble Bee used to exist in northeastern South Dakota, but hasn’t been seen recently. The status of Western Bumble Bee and Yellow-banded Bumble Bee are being evaluated now.



Hunt's Bumble Bee, photo by Charlene "Charlie" Bessken, USFWS

## **Where To Look**

These critters occur on prairies with flowering plants, in butterfly gardens, in fields, near wetlands, in your backyard. If you can find a patch of flowers, they might be there.

## **When To Look**

Regal fritillaries have a flight period from mid-June to the end of July.

Monarchs can be found throughout the summer if milkweed is available. In central South Dakota they migrate south from late August to October – the peak migration time is mid-September for the Pierre area.

Bumble bees are active spring to fall. Be sure to leave some leaf litter or rock piles for the queens to make a nest for the winter.

### **What You Need To Do**

Get outside and make observations. Mid-day (10 am to 3 pm) is best because butterflies and bumble bees like it sunny and warm. Pick a day with low wind. Notes about weather or seeing small/large groups of a species would be helpful. Please do not go on private land without permission.

Go to our website (address at the end) then Click on the links **for a simple data sheet** (also attached) you can take with you outside.

*Or record what you see with a photo on our group page in iNaturalist:*

<https://www.inaturalist.org/projects/south-dakota-regal-fritillary>

<https://www.inaturalist.org/projects/south-dakota-monarch-butterfly>

<https://www.inaturalist.org/projects/south-dakota-bumble-bees>

Don't worry about identification, the great minds on iNaturalist will help with that!

If you'd rather email your observations or have questions, you can send them to:

charlene\_bessken@fws.gov      or      daniel\_kim@fws.gov

*Thank you for helping us and the critters we work with!!*

[https://www.fws.gov/mountain-prairie/es/southDakota/Citizen\\_Science.php](https://www.fws.gov/mountain-prairie/es/southDakota/Citizen_Science.php)

# Single Observation/Spot Record

Use this form if you are doing informal observations (i.e. while hiking or in your backyard).

Site Name: \_\_\_\_\_ County: \_\_\_\_\_

Observer Name: \_\_\_\_\_

Contact Information: Email: \_\_\_\_\_ and/or Phone #: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temperature: \_\_\_\_\_ Wind: \_\_\_\_\_

*Beaufort Scale of Wind (0: Calm, smoke rises vertically, 1 Light Air, Smoke drift indicates wind direction, still wind vanes, 2 Light Breeze, Wind felt on face, leaves rustle, wind vanes begin to move, 3 Gentle Breeze leaves and small twigs constantly moving, light flags extended, 4 Moderate Breeze dust, leaves, and loose paper lifted, small tree branches move, 5 Fresh Breeze Small trees in leaf begin to sway, 6 Strong Breeze larger tree branches moving, whistling in wires, 7 Near Gale Whole trees moving, resistance felt walking against wind)*

## Location:

Give a GPS location if you know one or your best description of where you were (i.e. Directions from Town/Landmark)

## Number of Butterflies:

Was there a group of the same type? YES / NO

Other butterflies around the area: Lots \_\_\_\_\_ A few \_\_\_\_\_ None \_\_\_\_\_

If Monarchs were present, did any of them have a tag? (A small white circle/sticker on the wing) (It may be possible to read the tag number with binoculars). YES / NO Tag Number: \_\_\_\_\_

## Number of Regal Fritillaries:

Number of *Male* Fritillaries: \_\_\_\_\_

Number of *Female* Fritillaries: \_\_\_\_\_

Number of *Unknown Sex* Fritillaries: \_\_\_\_\_

## Number of Monarch Butterflies:

Number of *Male* Monarchs: \_\_\_\_\_

Number of *Female* Monarchs: \_\_\_\_\_

Number of *Unknown Sex* Monarchs: \_\_\_\_\_

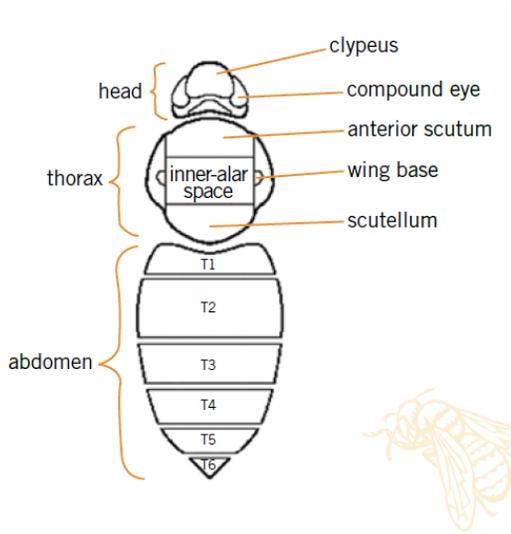
## General Notes about the butterflies:

**Number of Bumble Bees:** \_\_\_\_\_

Were they all the same: YES / NO

General description:

Stripe colors. Here is a diagram to color in.



**Notes:**

What flowers did the pollinators like best?

Send photos if you can.

Send to:

**Dr. Daniel Kim**

*Pollinator Biologist*

**daniel\_kim@fws.gov**

**OR**

**Charlene "Charlie" Bessken**

*Fish and Wildlife Biologist*

**charlene\_bessken@fws.gov**

**USFWS, South Dakota Ecological Services Field Office**

**420 S Garfield Avenue, Suite 400**

**Pierre, SD 57501**

**(605) 224-8693**

**Thank you for helping us help pollinators!**

To save paper, please print the identification page once, but make multiple copies of the data form as needed.