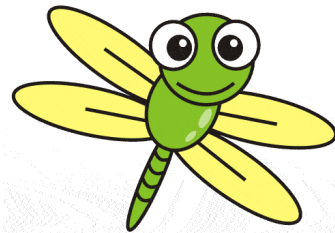


Insect Photography – Field techniques (For Biologists)



TENNESSEE
STATE UNIVERSITY



ALFRED DANIEL J.



931 743 0442



danieljalfred@gmail.com

Three important persons and their views...



You are more of a “want” type person than a “need” type person



You are a kid – you don’t know how to think properly !!



XXXXXXXXXXXXXXXXXXXXXXXXXXXX (censored)





Dr. Karla Adesso secured over \$2.4 million in USDA-Specialty Crop Research Initiative Grant funding in 2022-2023, money that is funding her “Flatheaded borer management in specialty crops” research project.



DISCLAIMER

The presenter is neither a professional photographer nor does he own a full frame camera- All the contents provided in the slides are just the outcome of trials and errors and the lessons learnt from real professional photographers. The presenter is willing to learn for the listeners as well.

My first ever insect photograph

Sepsidae, Photographed on April 24, 2014, Nagercoil, India





Asilidae- Photographed on August 29th 2019, Nagercoil, India

Peucetia viridans, NRC, McMinnville Sept 2023



So, what happened between

2014 and 2024 ?

Come!!

Lets learn



Together



WHAT WILL BRING A GOOD INSECT PHOTO ????

A DEDICATED MACRO LENS?



A WELL TRAINED/ EXPERIENCED PHOTOGRAPHER?



A HIGH END CAMERA ?



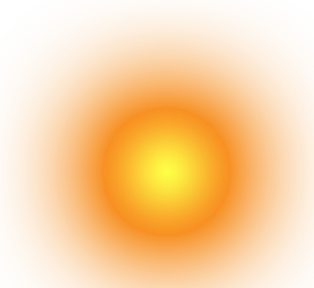
AN EXCELLENT DIFFUSER ?



PROPER GEARS ?



GOOD NATURAL LIGHT ?



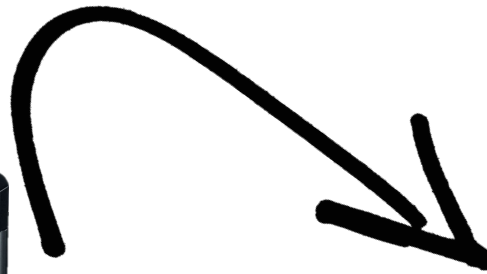
OR
WHAT ELSE ???
JUST PATIENCE ?





Canon Powershot SX 40
320 USD

Used it for 3 years
Took 3,083 photos of Insects



Panasonic FZ 300
500 USD

Used it for 5 Years
Took 13,923 photos of Insects



OM Sytem OM-1
Using it since Sept.
4000 USD



Sony RX 10 - IV
Used it for 3 years
5700 Photos
1800 USD





112



34



19



5



320 USD



500 USD



1800 USD

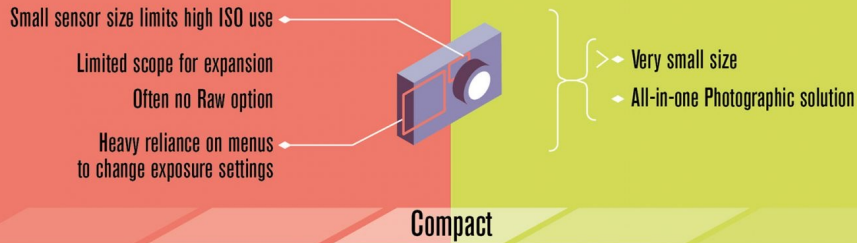
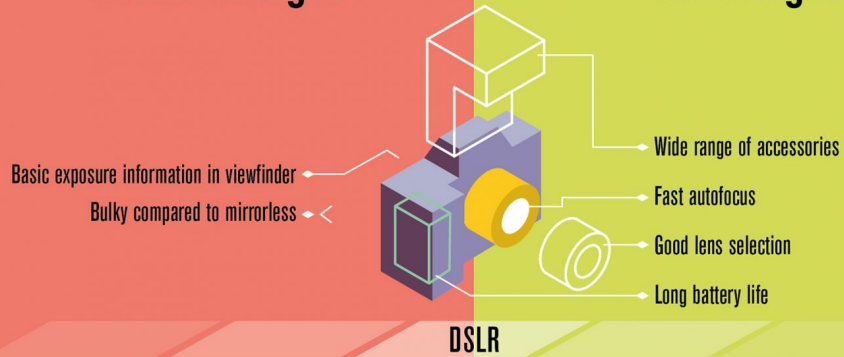


4000 USD



Disadvantages

Advantages



There are exceptions for all the Points given here

Finally it comes to two points

1- What do you want

&

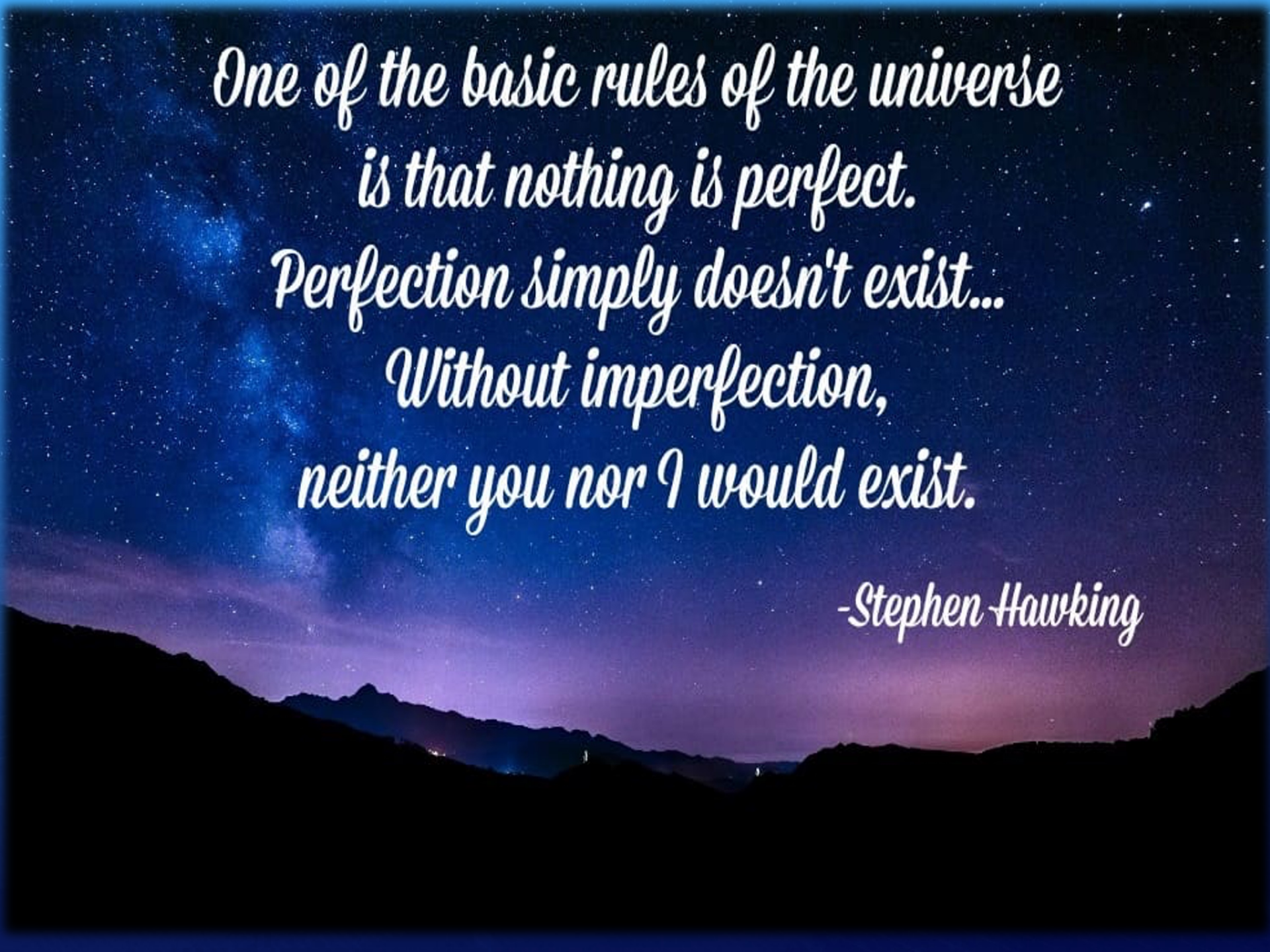
2- How much you are willing to spend



What makes a perfect Camera
“A photographer’s dream”

- 1) Panasonic’s lens & Video quality
- 2) Olympus’s Colour depth & focus stacking
- 3) Sony’s Sensor & fast response
- 4) Canon’s longevity & Cost
- 5) Nikon’s Software & user interface

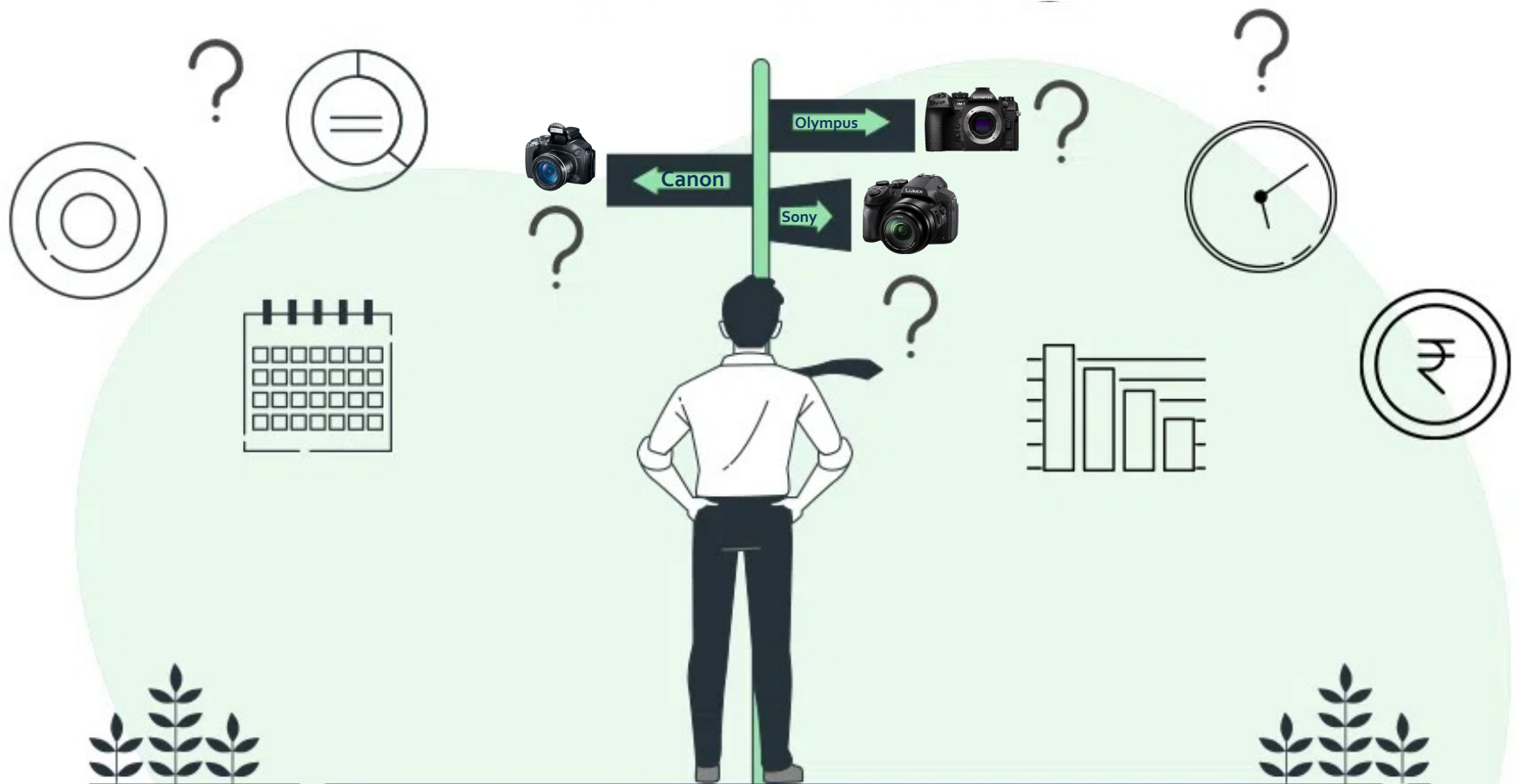


A night sky with the Milky Way galaxy visible, set against a dark background with silhouettes of mountains in the foreground.

*One of the basic rules of the universe
is that nothing is perfect.
Perfection simply doesn't exist...
Without imperfection,
neither you nor I would exist.*

-Stephen Hawking

Now you have decided what camera to buy So whats next ?



3:3:10

What do we need ? (Apart from the camera body)

1) Lens



2) Diffuser



3) Flash



A POOR MAN'S MACRO LENS
Raynox DCR 250
40 USD



Expensive Macro lens
20,000 USD



A POOR MAN'S DIFFUSER
HAND MADE
2 USD



3000 USD (approx.)



**For Insects,
FLASH IS MUST.**



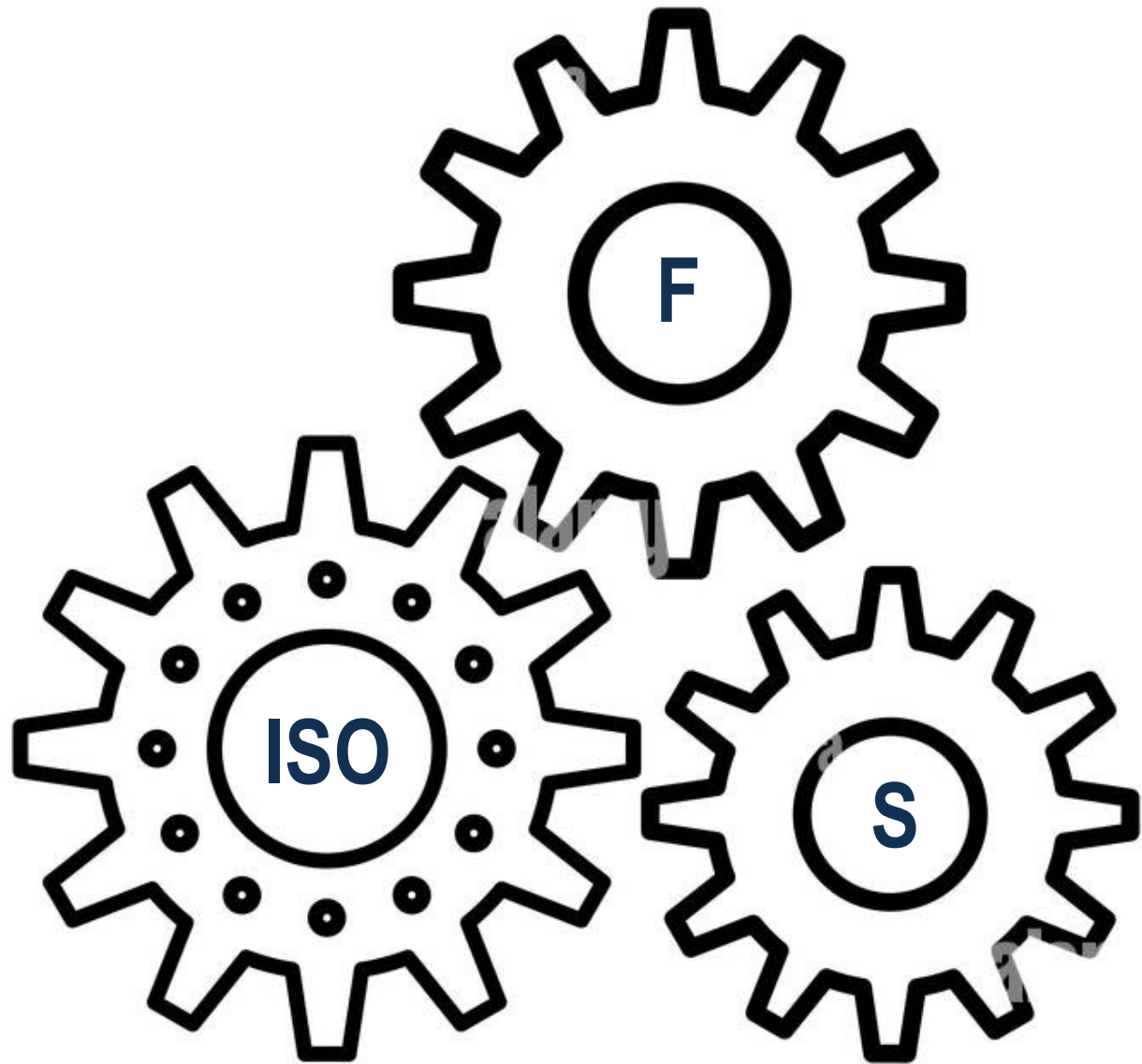
1. Need not to buy a DSLR /Mirrorless camera – a bridge camera is fine enough!
2. Need not to buy a dedicated macro lens- a magnifying glass is fine enough !
3. Need not to buy a dedicated flash- a built in flash is fine enough !



**Now you have decided what flash, macro lens & diffuser to buy
So whats next ?**



3:3:10





Light makes photography. Embrace light. Admire it. Love it. But above all, know light. Know it for all you are worth, and you will know the key to photography.

George Eastman

ISO

- **It brighten or darken a photo.**
- **As you increase your ISO number, your photos will grow progressively brighter.**
- **For that reason, ISO can help you capture images in darker environments.**
- **However, raising your ISO has consequences.**
- **A photo taken at too high of an ISO will show a lot of grain/noise**
- **So, brightening a photo via ISO is always a trade-off.**

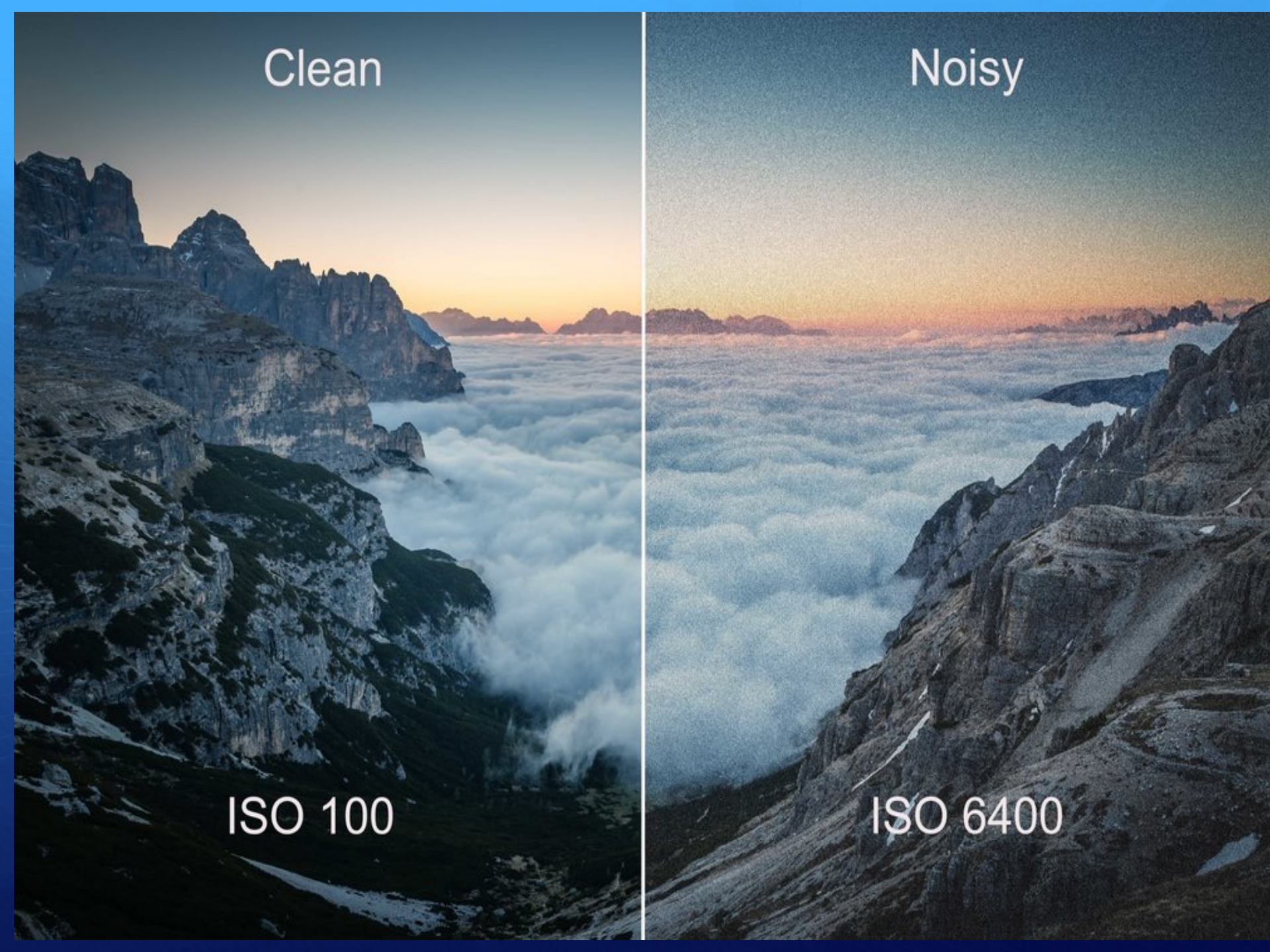


Clean

ISO 100

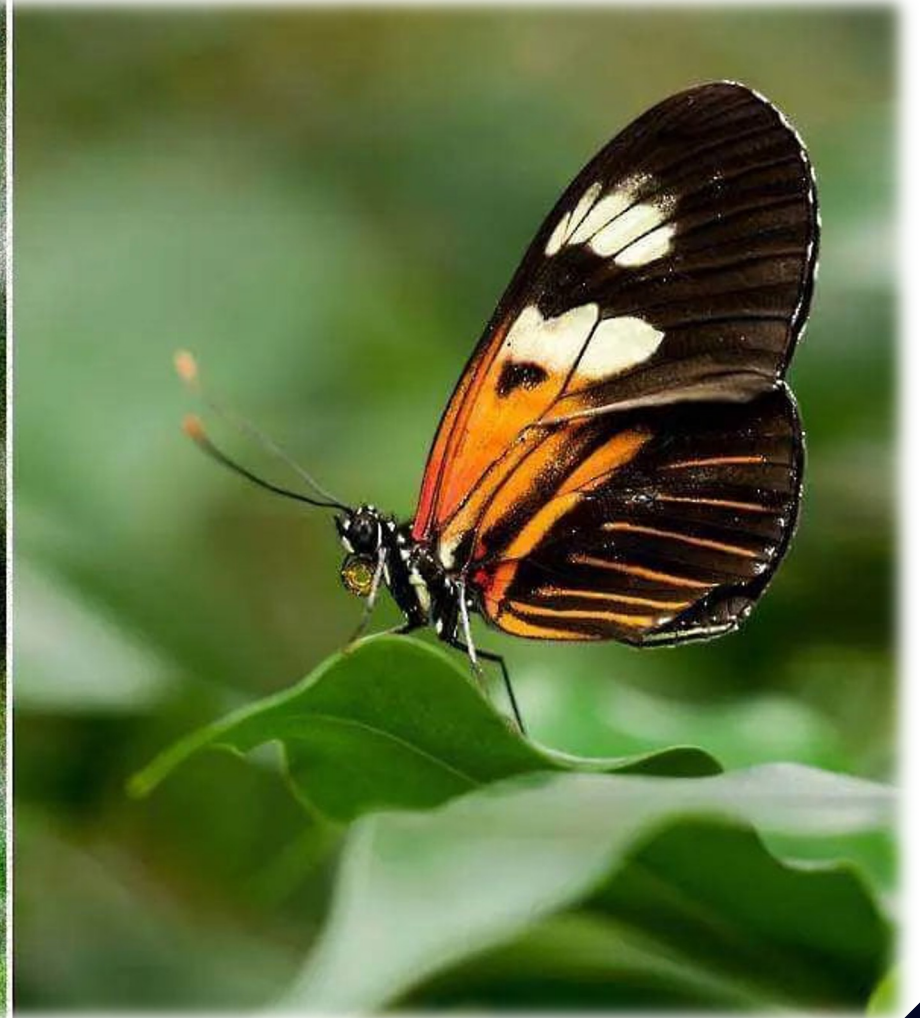
Noisy

ISO 6400



So, settings rule number 1 – never set ISO above 200

The lower ISO the better photo



F-Value

- The “ f ” stands for the focal length of the lens.
- F - is about how much light you allow to hit the sensor via the aperture opening.
- The lesser the f value - you are letting more light to enter in.
- The lesser the f value – the lesser the Depth of Field
- Increasing the F-value gives you more depth of field but this cuts out light.
- Again, it is a trade-off

APERTURE

F/1.4



F/2.0



F/2.8



F/4.0



F/5.6



F/8.0



F/11



F/16



DEPTH OF FIELD

Shallower
Depth
of field



f/2.8

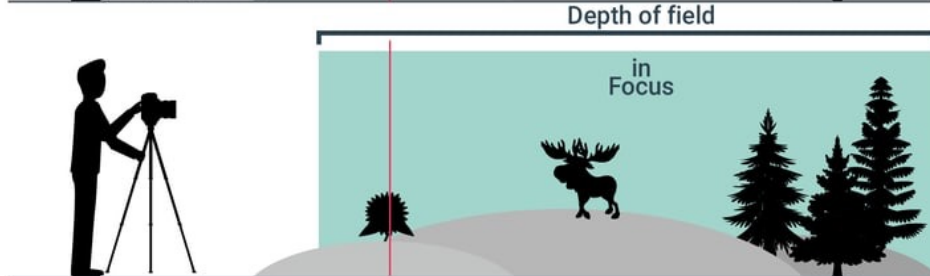
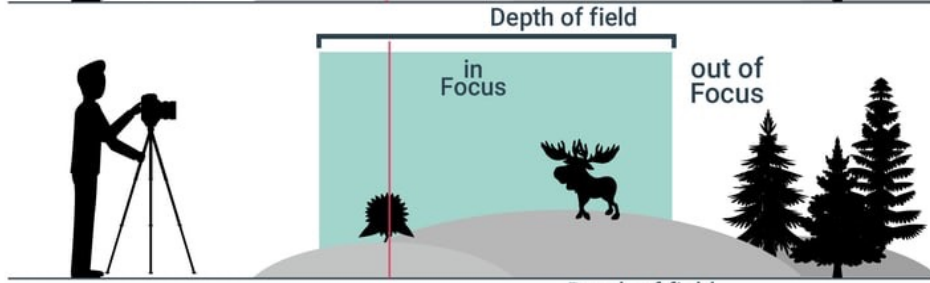
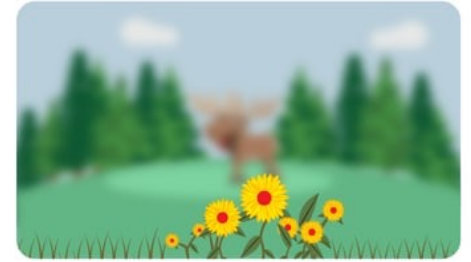
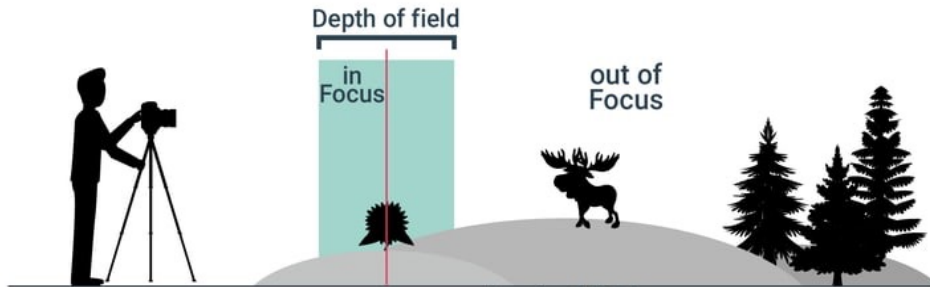


f/5.6



f/11

More Depth
of field



- One of the greatest challenges for macro photographers is achieving sharp focus for all of the parts of the insects.
- In this image the wings of only one of this pair of butterflies are in focus.



For me this image is a failure. Why? Almost all the interesting parts and features of the nymph are out of focus - its abdomen, wing buds, legs & even its head.



So, settings rule number 2 – Set the f- value between 9-11

SHUTTER SPEED

FAST
Shutter Speed

MEDIUM
Shutter Speed

SLOW
Shutter Speed

1/4000s 1/1000s 1/250s 1/60s 1/15s 1/4s 1s

Short exposure
Darker photos
Freezes the motion

Long exposure
Brighter photos
Movement is seen blurry

So, settings rule number 3 – Set the shutter speed of 1/200



T

Don't expect magic to happen on the first day





N E X T ?

3:3:10

THE 10 COMMANDMENTS FOR INSECT PHOTOGRAPHY



1) Thou shall first take a record shot

2) Thou shall go as close to the subject as possible

3) Thou shall consider the color combination

4) Remember to focus on the eyes of the insect

5) Honor the surroundings and record it

6) Thou shall focus on the interaction

7) Thou shall have patience

8) Thou shall give importance to the angle

9) Thou shall carry a vial with you always

10) Thou shall identify the insect as soon as possible

1) Take a record shot









2) Go as close to the subject as possible







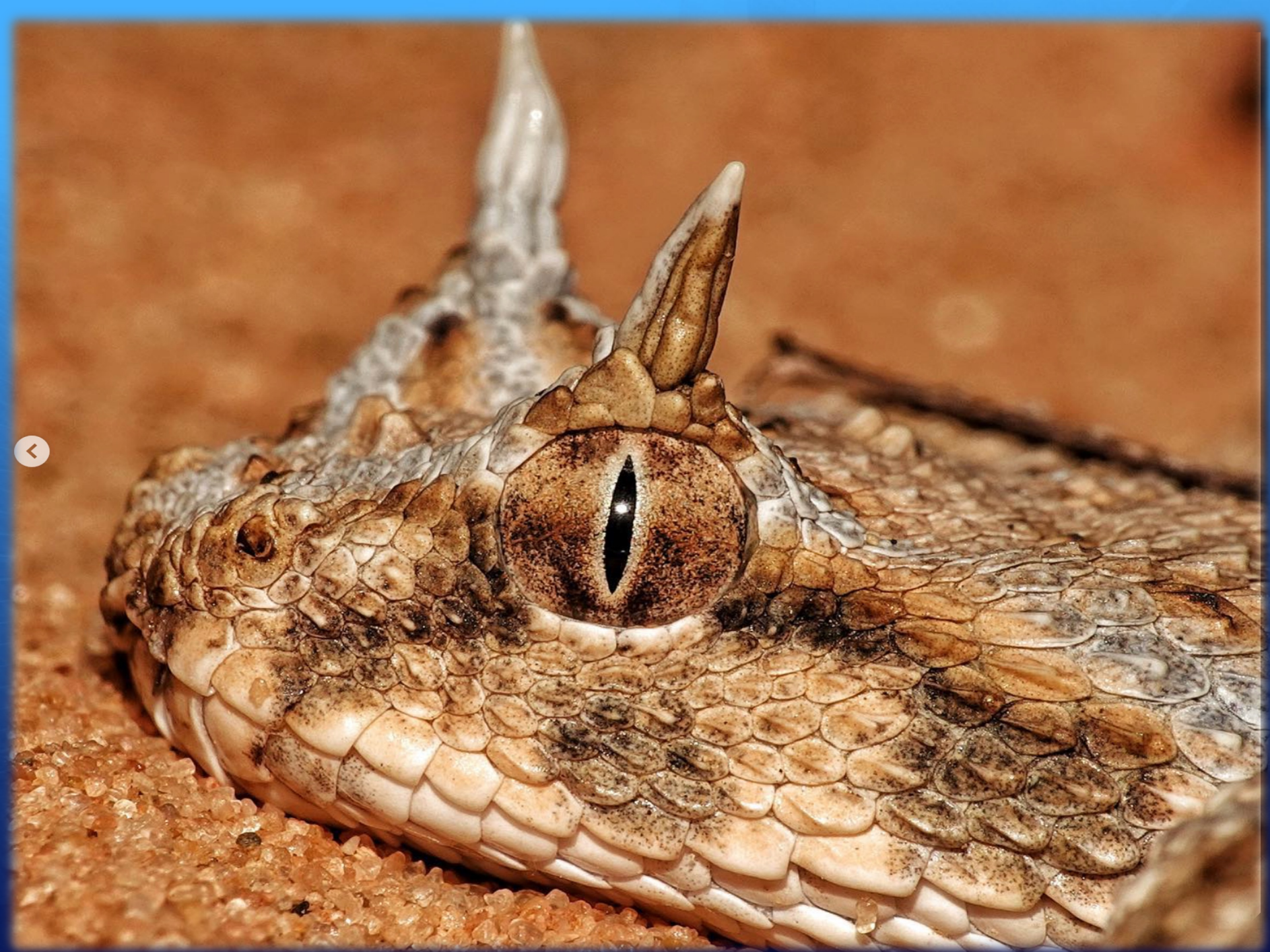












3) Consider the color combination





Ptyas mucosa @ Pechiparai, Kanyakumari District





Boxer Mantis @ Coimbatore



Boxer Mantis @ Coimbatore



I AM ONE OF THOSE
MELODRAMATIC FOOLS



Ahaetulla nasuta @ Sirisi, Karnataka





4) Remember to focus on the eyes of the insect





Alfred Daniel J





When we honour the Earth
We honour ourselves

-L. M. Wilde-

**5) Honor the surroundings
and record it.**

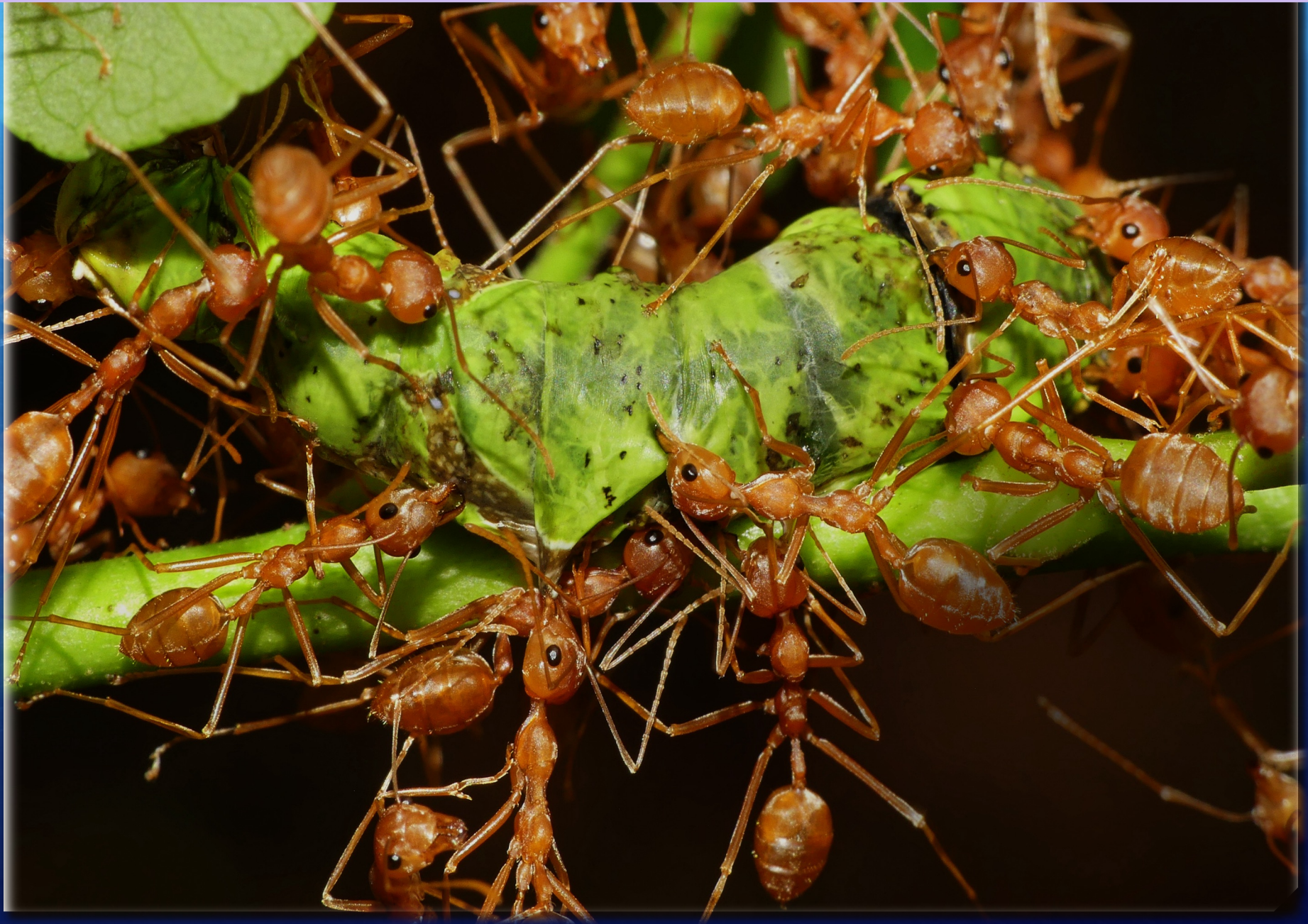








6) Focus on the interaction











We can learn so many things through photos like this..



7) HAVE PATIENCE



1. Death is just 5 cm away



2. Cockroach kissing the death



3. Wasp dragging the cockroach



3,4&5. Wasp dragging the cockroach to its nest for laying the eggs on it

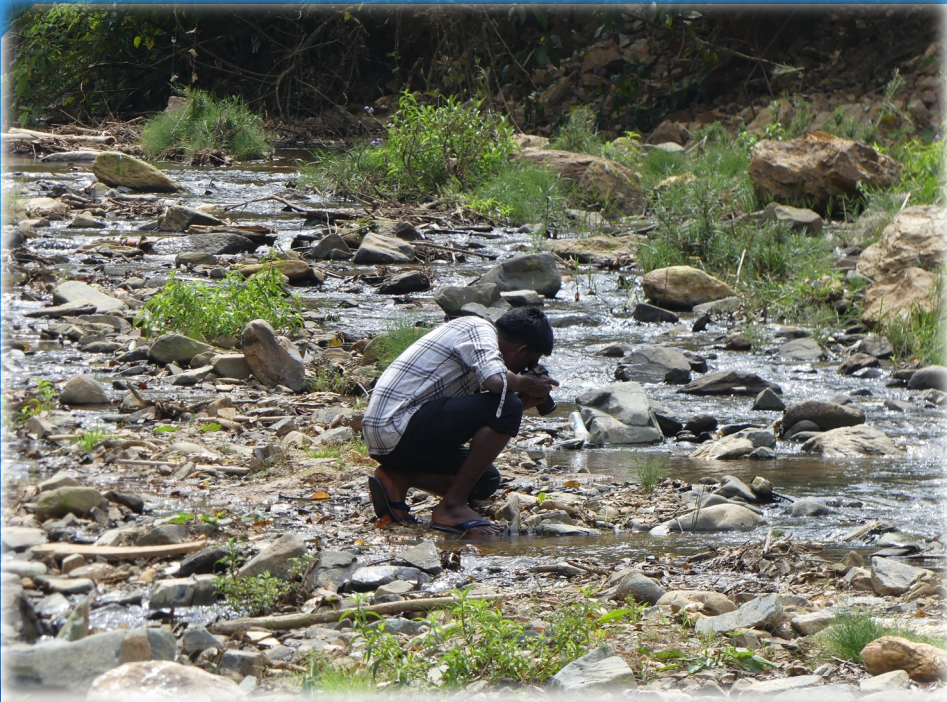


6. After egg laying, wasp seals its nest

8) Give importance to the angle



ANGLE IS OF PRIME IMPORTANCE





Angle Matters Much



Grapsus grapsus, Muttom, Kanyakumari





Minervarya keralensis @ Pechiparai, Kanyakumari, India







9) Carry a collecting vial with you always



**REMEMBER – WE ARE BIOLOGISTS NOT PROFESSIONAL PHOTOGRAPHERS
&**

WE NEED NOT TO BE A PROFESSIONAL PHOTOGRAPHER

Cyclosa spider parasitized with *Polysphincta* @ Coimbatore, India

11:35



4G+ R 72%



Donald
Active Now



Keep the remains. It will be an interesting host record. Suggest you contact Keizo



Yes, Polysphincta group

Thank you very much

Will follow it up

keizaf@gmail.com



Keizo Takasuka

Will contact him



if you can rear it you might get a note about it published. Little known about hosts in India

Oh...sure..i will rear it



Hi Alf,

Thank you for getting in touch. Very interesting sample.

Cyclosa is parasitized by only genera Reclinervellus or Polysphincta so far (both are Polysphincta group wasps). Especially Reclinervellus has been recorded from east Asia and Europe only. Both genera have never been collected from India. It should be a new species or must be newly recorded one probably belonging to two genera.

It is very nice if you could rear that by yourself. Make a square or rounded frame (dia. 30-40cm) from woods and put the spider there. Hopefully, it would build a web on the frame until next morning without escaping. After web construction, it can be fed with small flies or other small flying insects thrown into the spiral area.

However, the larva seems to grow enough to reach final instar without spider's fullness. If so, the spider to be confined in a bottle or tube with papers for leg grip is appropriate way to rear the larva. I'm not sure whether it is (60% confidence in no need feeding).

All the best,


2019年12月13日(金) 16:11 Alfred Daniel <danieljalfred@gmail.com>:

...

--

高須賀圭三 Keizo TAKASUKA

E-mail: keizaf@gmail.com



Always remember..
Documentation is our
top most priority than
just photography !!!

10) Identify the insect as soon as possible



Aug 17 2014

Mopla guttata

Mopla guttata (Acrididae: Catantopinae) rediscovered in the Western Ghats, Kerala, India

▼ Dhaneesh Bhaskar, P.S. Easa, C.H.F. Rowell

Abstract ▲

The endemic *Catantopinae* genus *Mopla* was described by Henry in 1940 from the Malabar region of South India. Henry described two species under this genus, *M. guttata* and *M. rubra*. The female type specimens of *Mopla* are deposited in the Natural History Museum, London, UK. There have been no further records of these two species since their description. Seventy-six years later, the first male specimen of the genus *Mopla* was discovered in the Western Ghats, Kerala, India, in 2016. This paper describes the specimen, thought to be of *Mopla guttata*, and reconsiders its systematic placement.

Keywords ▲

endemism, first male of genus, grasshopper, systematics, tropical forest



alfred_daniel_j

Home

Profile

Observations

Edit Observations

Calendar

IDs

Lists

Journal

Favorites

Projects



Edit account settings & profile

Observations	6048
Species	1915
Identifications	12
Journal Posts	0
Lists	2
Followers	8

Alfred Daniel J

Joined: Aug 3, 2018 Last Active: Feb 15, 2024 iNaturalist Israel

I enjoy observing insects, spiders and birds

Following 25 People

endness
16

kagiso1
0

lsea123
53

nitzan4
4567

noahm7
1417

christian1441
18

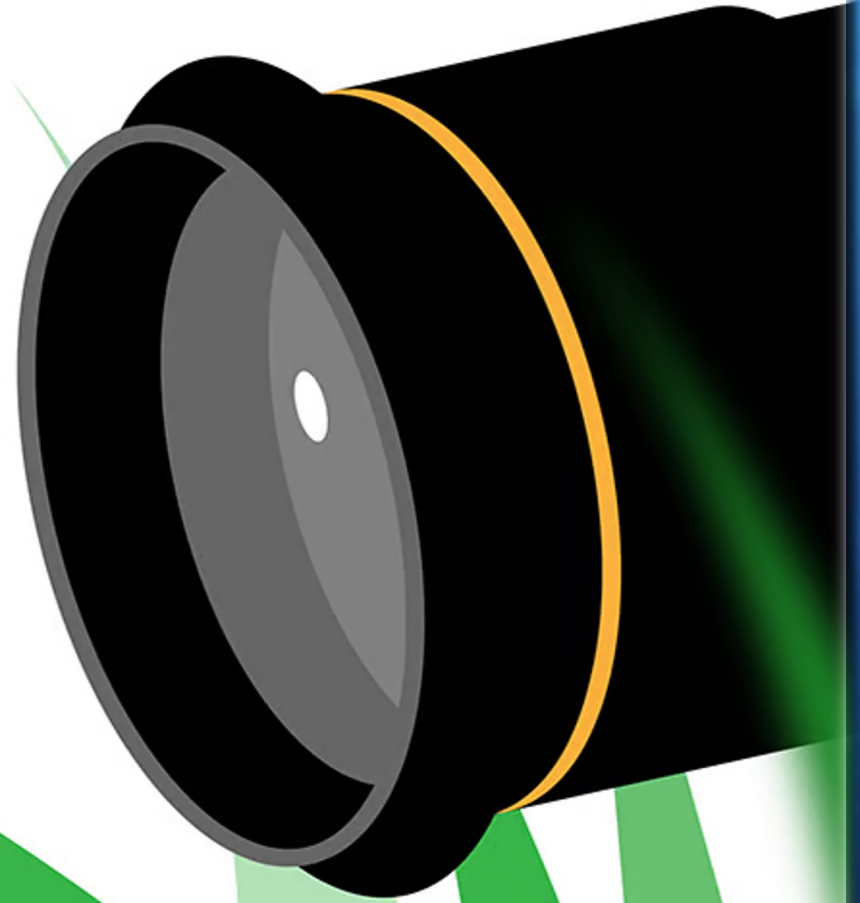
joshuabasharr
267

tramage
476

View All



QUESTIONS ?
Happy Photographing
Thank you..



Lets plan for a NRC nature walk in the coming spring to nearby parks