

AN
INTRODUCTION
TO
MACRO
PHOTOGRAPHY



photographer unknown

QUESTION: ISN'T
MACRO
PHOTOGRAPHY THE
SAME THING AS
CLOSE UP
PHOTOGRAPHY?

ACTUALLY,
THERE IS A
DIFFERENCE.

- Close up photography is making pictures of objects in close range, but you can achieve this with ANY LENS.

CLOSE UP OF DRAGONFLY



image by Tanya Puntti

MACRO OF SAME DRAGONFLY

- With MACRO, you are capturing the finest detail; in fact, that is the biggest difference between close up and macro photography.

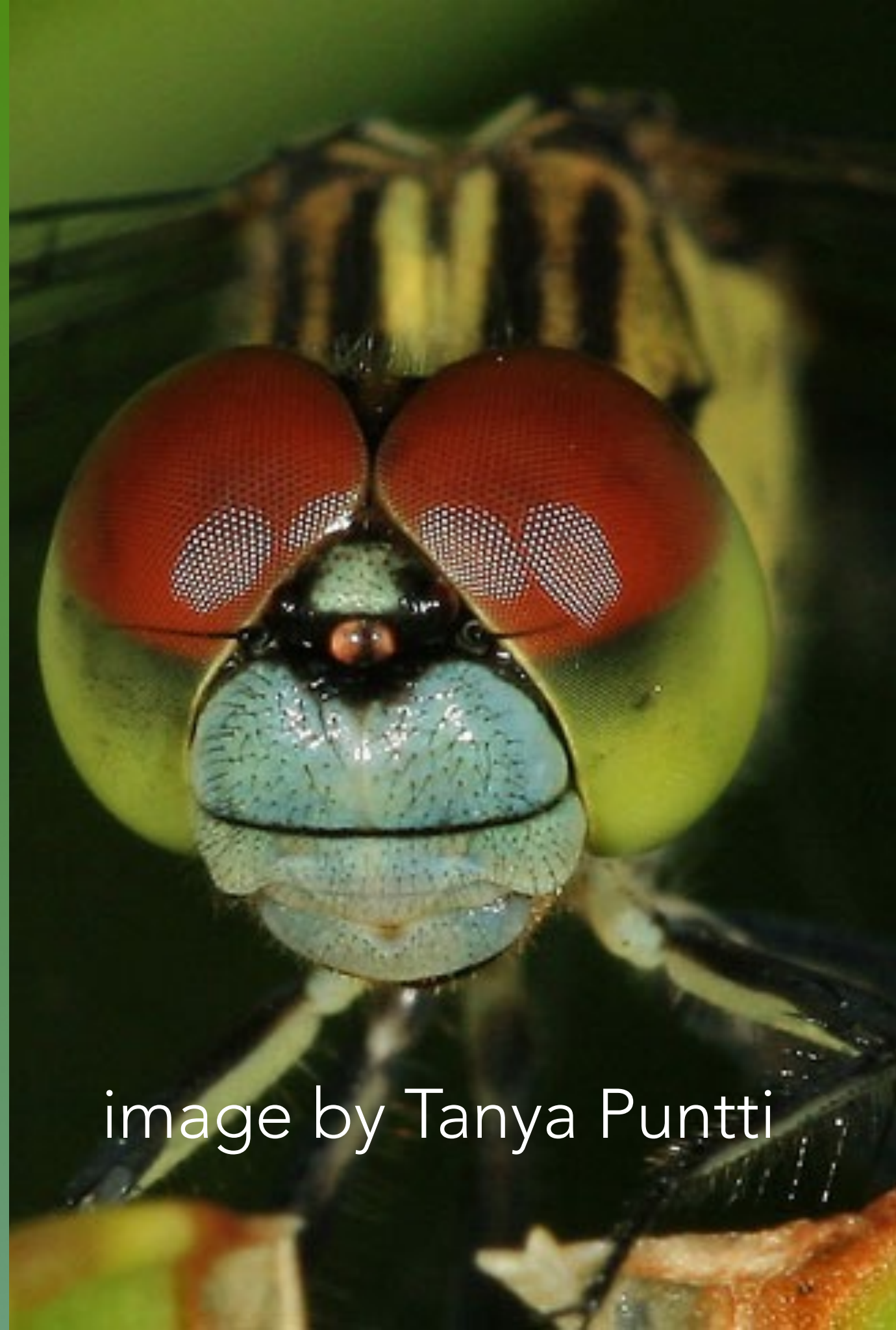


image by Tanya Puntti

“The benefit of Macro Photography is that you can share with others things that they are not capable of seeing themselves with the naked eye.”

—THOMAS SHAHAN





MY OUTDOOR SETUP TO GET THE FOLLOWING IMAGES
OF A
SUNFLOWER

A close-up photograph of a sunflower. The left side shows the dark brown, textured seed head. The right side features large, bright yellow petals with prominent red-orange veins. Several clear water droplets are visible on the petals. The background is a soft-focus green.

IMAGE BY SUE WILLIAMS

CLOSE UP OF SUNFLOWER

IMAGE BY SUE WILLIAMS

MACRO OF SUNFLOWER



THE AMOUNT OF
DETAIL AND THE
SHALLOW DEPTH OF
FIELD ARE WHAT
DISTINGUISHES MACRO
FROM CLOSE UP
PHOTOGRAPHY.

THE WELL-
EQUIPPED MACRO
PHOTOGRAPHER
WILL HAVE AT
LEAST ONE MACRO
LENS.



Macro Lenses

MACRO LENSES ARE
EXPENSIVE FOR A
REASON. A TRUE
MACRO LENS ALLOWS
THE CAPTURE OF THE
HAIRS ON AN INSECT'S
FACE.

IMAGE BY ONDREJ PAKAN



SO HOW EXPENSIVE ARE
MACRO LENSES?

THE CANON 180MM
MACRO LENS LISTS AT
B&H FOR \$1,300.

A MACRO LENS IS
DESIGNED TO ALLOW
YOU TO FOCUS CLOSE
TO YOUR SUBJECT
WITHOUT PHYSICALLY
MOVING IN TOO CLOSE.

THIS IS ESPECIALLY
HELPFUL IF YOUR
SUBJECTS ARE ALIVE,
LIKE BUTTERFLIES OR
EVEN SNAKES, FOR
EXAMPLE.



IMAGE BY SUE WILLIAMS

THE 180 MM IS A HEAVIER
LENS, BUT THE
ADVANTAGE IS THAT YOU
CAN BE FARTHER AWAY
FROM YOUR SUBJECT
THAN YOU CAN WITH A
100MM.



TAKEN WITH THE CANON 180 MM

IMAGE BY SUE WILLIAMS

YOU MAY ALREADY HAVE A LENS IN
YOUR

BAG THAT SAYS "MACRO" BUT IT
MIGHT BE A GOOD IDEA TO LOOK
CLOSELY AT IT.

A TRUE MACRO LENS PROVIDES
A MAGNIFICATION OF AT LEAST
1/5 LIFE SIZE.

MOST MACRO LENSES WILL PROVIDE
FULL LIFE SIZE OR 1:1
MAGNIFICATION.

MACRO LENSES COME IN
A VARIETY OF FIXED
FOCAL LENGTHS,
RANGING FROM 50MM
TO 200MM.

CLOSE UP FILTERS

- A less expensive way to get into MACRO photography is to use close up filters, but you will probably lose a bit of image quality





A CLOSE UP FILTER IS
A SECONDARY LENS
THAT WORKS LIKE
READING GLASSES
DO, ALLOWING THE
PRIMARY LENS TO
FOCUS MORE
CLOSELY.

EXTENSION TUBES ARE ANOTHER LESS EXPENSIVE
WAY TO GET INTO MACRO PHOTOGRAPHY



THEY ARE HOLLOW
CYLINDERS PLACED
BETWEEN THE CAMERA
BODY AND A LENS...

THEY CREATE MORE
DISTANCE BETWEEN THE
CAMERA SENSOR AND
THE LENS.

YOU CAN GET CLOSER TO
YOUR SUBJECT WITH AN
EXTENSION TUBE; YOU
CAN FILL THE FRAME
WITH MORE OF IT, AND
STILL ACHIEVE FOCUS.

TRIPOD



BECAUSE THE
DEPTH OF FIELD
IS SO SHALLOW,
SHARPNESS OF
YOUR SUBJECT IS
CRUCIAL.

image by Sue Williams

THE 180MM HAS A VERY
SHALLOW DEPTH OF FIELD



image by k. howell

A QUOTE BY BILL
FORTNEY SAYS IT BEST:

HOW DO YOU SPELL
SHARPNESS?

"T-R-I-P-O-D"



MIKE MOATS IN THE SWAMP...HE USES A TRIPOD
100% OF THE TIME.

IF YOU DON'T HAVE A TRIPOD,
USE YOUR BODY AS A TRIPOD.

IF YOU KNOW HOW TO
HAND-HOLD YOUR
CAMERA AND LENS,
YOU CAN USE YOUR
BODY AS A TRIPOD.
(MOLLY ISAACS)

To Turn Your Body Into a Tripod:

- REST YOUR CAMERA BODY IN YOUR LEFT PALM.
- USE YOUR RIGHT HAND TO GRIP THE RIGHT SIDE OF THE CAMERA
- TUCK YOUR ELBOWS FIRMLY AGAINST BODY
- PLACE FEET SHOULDER WIDTH APART

TECH:

- SHOOT IN RAW
- USE AUTO WHITE BALANCE
- SET CAMERA ON APERTURE PRIORITY
- DO NOT USE AUTO ISO
- USE A LENS HOOD
- USE ISO 400 AS A STARTING POINT
- USE A SHUTTER SPEED OF 1/125 SEC.
OR HIGHER IF NOT USING A TRIPOD

(Mollie Isaacs, Webinar “The Mighty Macro”)

“The real voyage of discovery consists not in seeking new landscapes, but in having new eyes.”

MARCEL PROUST



WITH MACRO, YOU JUST OPEN YOUR EYES TO
NEW POSSIBILITIES, TO TINY LANDSCAPES...



A Chambered Nautilus Shell

A PEACOCK FEATHER & KEY

image by Sue Williams

BUTTONS





OLD WATCH PARTS

BOTTLE CAPS



FOREIGN CURRENCY & A FEATHER



image by Sue Williams

COLORFUL CLOTHES PINS





SHELLS, SHELLS, SHELLS

EVEN A SLINKY



LIGHTING

INDOOR: WINDOW LIGHT IS GORGEOUS,
ESPECIALLY A NORTH FACING WINDOW.
THE LARGER THE WINDOW THE BETTER.

MY SETUP USING NORTH AND WEST FACING WINDOWS

My subject was a Cala
Lily from Lowes



THE LCD SCREEN ON BACK OF MY CAMERA



1/100

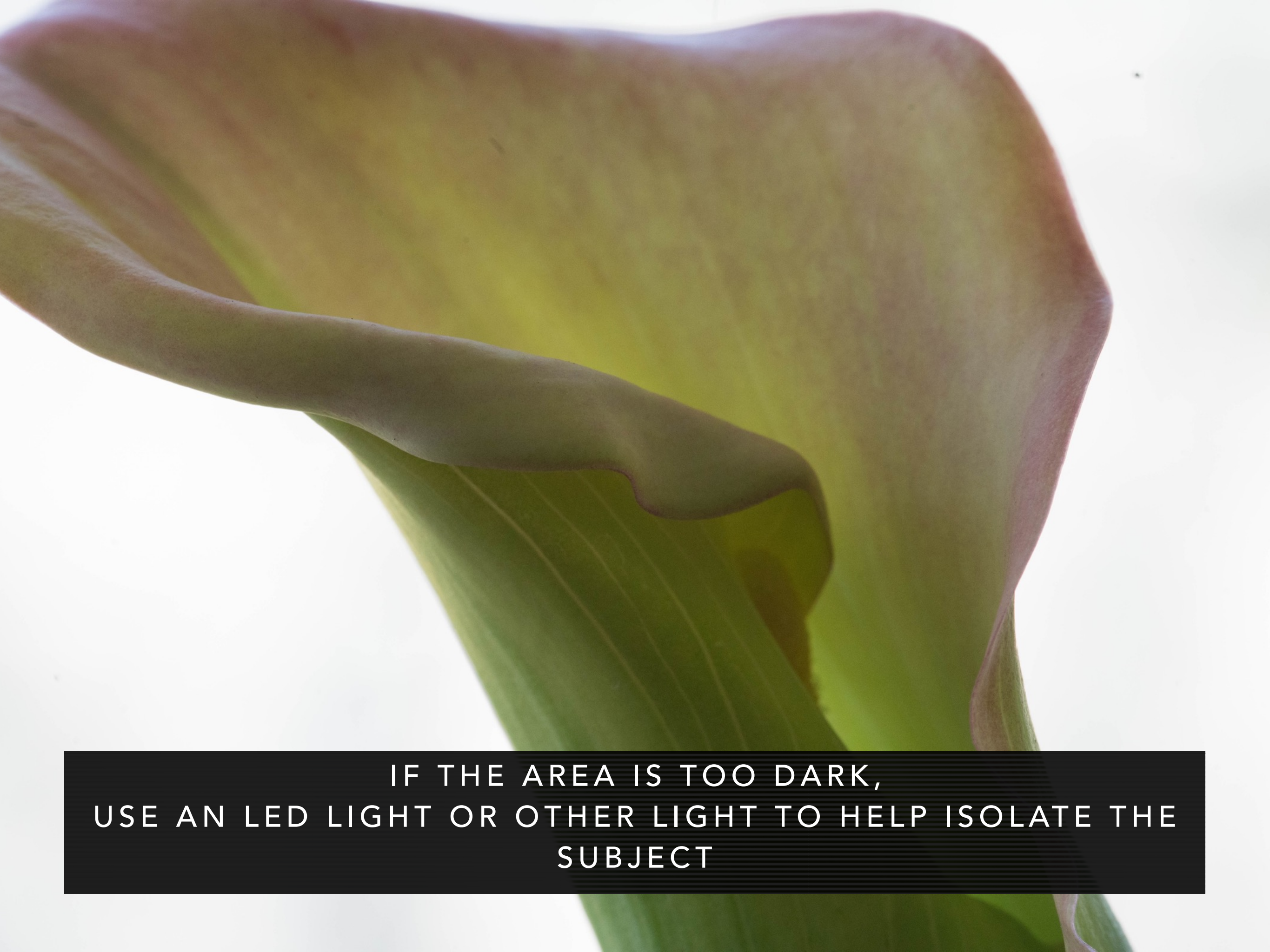
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MM +0.3

ISO 3200

SONY

USE THE LCD SCREEN TO TELL YOU WHEN
EVERYTHING IS SHARP AS YOU MANUALLY FOCUS
ON YOUR SUBJECT. IF YOU ONLY HAVE A VIEW
FINDER, USE LIVE VIEW TO MANUALLY FOCUS.



IF THE AREA IS TOO DARK,
USE AN LED LIGHT OR OTHER LIGHT TO HELP ISOLATE THE
SUBJECT





straight out of the
camera

With fill light



without fill light

AFTER PROCESSING



ANOTHER INDOOR SET UP USING
STAIRS, A PLAMP AND A PRINTED BACKGROUND



OUTDOOR LIGHTING



NATURAL LIGHT SHOULD BE
SOFT.

GO OUTSIDE ON AN OVERCAST
DAY OR IN THE EARLY
MORNING/LATE AFTERNOON
WHEN SHADOWS WILL NOT BE
AN ISSUE.

USE A DIFFUSER. LOOK FOR
LINES AND CURVES

LIGHT DIRECTION

THE DIRECTION OF THE
LIGHT AND THE
QUALITY OF THE LIGHT
ARE VERY IMPORTANT.

LEARN TO RECOGNIZE GREAT
LIGHTING FROM GOOD
LIGHTING.

STUDY LIGHT DIRECTION AND
LIGHT QUALITY.

PRACTICE BY WORKING WITH THE
LIGHT THAT IS THERE. IF YOU
LIKE TO SLEEP LATE, GO OUTSIDE
IN LATE AFTERNOON TO
PRACTICE.

BACK LIGHTING:

FLOWERS WITH
TRANSLUCENT PETALS
ARE GREAT FOR THIS
KIND OF LIGHTING

SIDE LIGHTING:

BE SURE THE LIGHT IS
GENTLE

FRONT LIGHTING:

BE SURE THE SUBJECT
IS EVENLY LIT



PROMASTER LED 120 SUPERSLIM RECHARGEABLE
LIGHT
ALLOWS YOU TO CONTROL THE LIGHT SOURCE

SHOULD I USE A
FLASH OR A RING
LIGHT WHEN
SHOOTING
MACRO?

THE TWO PROBLEMS WITH
USING CAMERA FLASH OR A
STROBE OR A RING LIGHT,
ARE THAT THE LIGHT IS
VERY BRIGHT AND YOU
CANNOT TELL WHAT IT IS
GOING TO DO. TOO MUCH
TRIAL AND ERROR
INVOLVED!



WITH THE LED, YOU HAVE AN EVENLY
DISTRIBUTED LIGHT SOURCE ON YOUR SUBJECT.



ANOTHER INDOOR SETUP:
SUBJECTS: COFFEE CUP AND COFFEE STIRRERS ON BLUE PAPER
BACKGROUND
(NOTICE THE LED LIGHT AS THE ONLY LIGHT SOURCE)

THE RESULT: COFFEE STIRRERS ABSTRACT



Image by Mollie Isaacs

THE ART

**TOP
OF
TIER**

**CNPA
Members
Choice
Contest**



CAROLINAS' NATURE
PHOTOGRAPHERS ASSOCIATION
Members Choice Contest 2017

Top of Tier 2

Pam McClure

Fairyland

WITH ANY SHOT YOU TAKE,
MOVE BEYOND JUST 'DOCUMENTING'
YOUR SUBJECT; INSTEAD, CREATE ART WITH YOUR
SUBJECT.



photo by Mike Moats

TIPS:

- USE 'LEADING LINES.'
- CONSIDER 'BALANCE'
- USE REPETITION (OF
COLOR, OF SHAPE, OF A
STRONG ELEMENT

image by Mike Moats



HERE, THE HEART-SHAPED LEAF COATED
IN ICE IS THE STRONG ELEMENT

CONSIDER COLOR:
HARMONY, CONTRAST

COMPLEMENTARY COLORS ARE A WINNING COMBINATION IN
NATURE



PHOTOGRAPHER UNKNOWN

ISOLATE YOUR SUBJECT



IMAGE BY VYACHOSLAV MISHCHENKO

POST PROCESSING/
ADDING MAKE-UP/
OPTIMIZING/
EDITING...

WHATEVER YOU
CALL 'FINALIZING'
YOUR IMAGES, IT IS
AN IMPORTANT
PROCESS IN MAKING
THEM STAND OUT.

straight out of camera

image with minor
adjustments

added textures,
layer masks, and
borders

Scott Williams

AN EGRET: BEFORE OPTIMIZATION



(MOLLIE ISAACS, WEBINAR "THE MIGHTY MACRO")



AFTER:
image has been cropped and rotated

Mollie Isaacs, Webinar "The Mighty Macro"

Another thing to remember...

DON'T LET YOUR LACK
OF EQUIPMENT HOLD YOU BACK.

THOMAS SHAHAN



SHAHAN USES A PENTAX
K200D AND K-X VINTAGE
28MM OR 50MM LENS
REVERSED ON A SET OF
THREE EXTENSION
TUBES WITH A DUCT-
TAPED FLASH DIFFUSER.

IMAGE BY
THOMAS SHAHAN

- With his 'crude' equipment, Shahan makes some incredible photos.



AGAIN, DON'T LET
YOUR EQUIPMENT OR
LACK OF EQUIPMENT
HOLD YOU BACK...



THIS WAS TAKEN WITH MY CELL PHONE CAMERA

"THE CLICHE COMES IN NOT
WHAT YOU SHOOT, BUT IN
HOW YOU SHOOT IT."

DAVID DUCHEMIN



photo by Dennis Wojtkiewicz



photo by Mike Moats

A PHOTO IS NOT A
PICTURE OF AN OBJECT;
IT'S A PICTURE OF LIGHT
FALLING ON, REFLECTED
OFF, OR PASSING
THROUGH AN OBJECT.

(RICK SAMMON)



A CLEMATIS BLOOM IN DIFFUSED LIGHT

image by Sue Williams

ACCESSORIES

- SMALL FLASHLIGHT
- PAIR OF SCISSORS
- PAIR OF TWEEZERS
- SMALL BRUSH
- KNEE PADS (VERY IMPORTANT)
- SPRAY BOTTLE OF WATER
- DIFFUSER, REFLECTOR
- WIMBERLY PLAMP
- LED LIGHT

THE WIMBERLEY PLAMP



is an extra 'hand' to hold your light diffuser/reflector, the plant, the remote shutter release, etc.

The cost is \$43.

FOCUS STACKING

IF YOU ARE DISAPPOINTED
IN HOW NARROW OR
SHALLOW YOUR MACRO
IMAGES ARE, REGARDING
DEPTH OF FIELD, CONSIDER
MAKING THREE IMAGES (OR
MORE) AND MERGING THEM
IN PHOTOSHOP.

THERE ARE FREE TUTORIALS ON HOW TO DO
FOCUS STACKING...A VERY HELPFUL ONE IS
BY AARON NACE WITH PHLEARN.COM

WITH FOCUS
STACKING,
IT IS ALL ABOUT
THE FOCAL
PLANES...

THE **FOCAL PLANE**
IS THE DISTANCE FROM
THE CAMERA
AT WHICH THE SHARPEST
FOCUS IS ATTAINED.

SO WITH THAT IN
MIND...

..YOU TAKE THREE (OR MORE)
IN A SERIES OF IMAGES
USING MANUAL FOCUS,
PAYING CLOSE ATTENTION
TO THE FOCAL PLANE. YOU
ONLY ADJUST THE LENS WITH
YOUR HANDS. DO NOT USE
AUTO-FOCUS AT ALL. DO
NOT MOVE THE CAMERA!!
ONLY THE LENS!!

TAKE A PICTURE OF THE FRONT PART OF
THE SUBJECT IN RAZOR-SHARP FOCUS...



THEN,

ADJUST THE LENS
MANUALLY SO THAT THE
MIDDLE PART OF THE
SUBJECT IS SHARPLY IN
FOCUS...

TAKE THE SECOND PICTURE.



THEN,
ADJUST THE LENS MANUALLY AGAIN UNTIL THE
BACK PART OF YOUR SUBJECT IS RAZOR-SHARP.
TAKE THE PICTURE.



OPEN THE SERIES OF
IMAGES IN PHOTOSHOP...

GO TO "FILE" THEN "SCRIPTS" THEN "LOAD
STACKS"

A 'BROWSE' WINDOW WILL LET YOU CHOOSE THE
IMAGES YOU WANT TO USE FOR FOCUS STACKING.

ONCE THE FILES ARE OPEN IN PHOTOSHOP,
CLICK ON ALL OF THE LAYERS IN THE LAYERS
PALETTE.

GO TO "EDIT" THEN "AUTO BLEND LAYERS"
CLICK OK

THE LAYERS WILL BE BLENDED AND THE THREE
(OR MORE) IMAGES WILL BE SHARP.



THE FINAL IMAGE IS SHARP FROM FRONT TO BACK

image by Kate Silvia



ANOTHER EXAMPLE
OF AN IMAGE WITH FOCUS STACKING OF THREE
PHOTOS...

THIS IMAGE WON HONORS THIS YEAR AT THE NORTH AMERICAN NATURE PHOTOGRAPHERS COMPETITION. RON SANTINI, THE PHOTOGRAPHER, STACKED 72 IMAGES TO GET THE MILLIPEDE AND ITS SURROUNDINGS IN SHARP FOCUS.



Millipede 72 Stacked Images, Roan Mountain, TN
© Ron Santini

[click to close](#)



WHAT IS THE KEY TO SUCCESSFUL FLOWER AND CRITTER
IMAGES?

IMAGE BY MIKE MOATS

THE KEY IS FINDING
THE RIGHT
SUBJECT AND
FINDING THE RIGHT
CAMERA ANGLE.

GIVE YOURSELF
OPTIONS ONCE YOU
FIND YOUR SUBJECT.
SHOOT MULTIPLE
F-STOPS



WITH MACRO, YOU OFTEN GET SURPRISES. CRITTERS SHOW UP UNEXPECTEDLY.

FILL THE FRAME FOR
MORE IMPACT...

CNPA'S TOP WINNERS (2017) HAD CLOSE UP OR MACRO STYLE IMAGES



CAROLINAS' NATURE
PHOTOGRAPHERS ASSOCIATION
Members Choice Contest 2017

Tier 1 Plant Life



First Place

Alan Clark



CAROLINAS' NATURE
PHOTOGRAPHERS ASSOCIATION
Members Choice Contest 2017

Tier 1 Plant Life



Honorable
Mention

Mary Presson
Roberts



Members Choice Contest 2017

Plant Life



Second Place

Donna Eaton



CAROLINAS' NATURE
PHOTOGRAPHERS ASSOCIATION
Members Choice Contest 2017

Tier 1 Plant Life



Third Place

Susan Bailey

READY TO LEARN MORE?

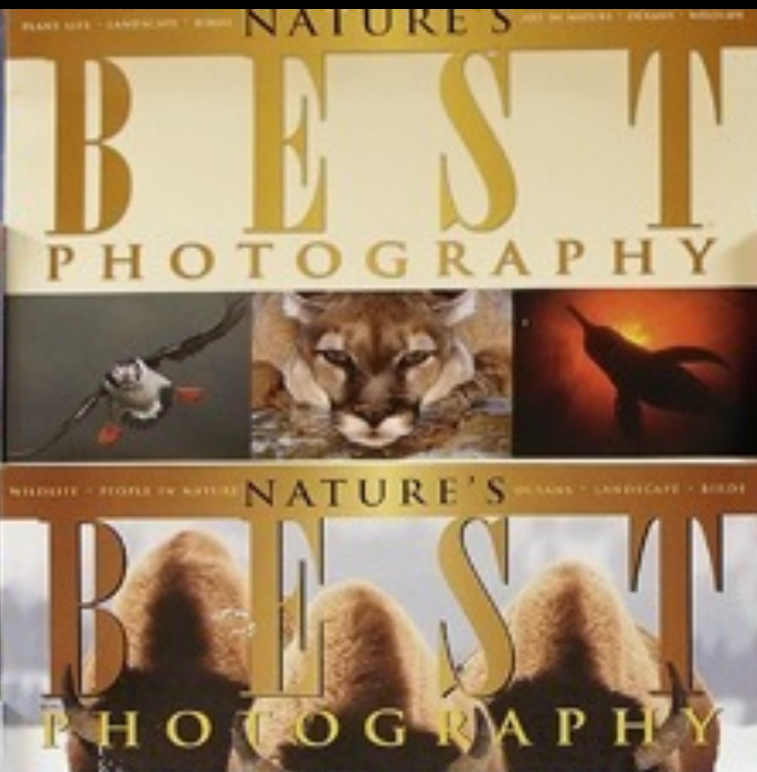
ATTEND CONFERENCES
AND WORKSHOPS...

CAROLINAS' NATURE PHOTOGRAPHY CONFERENCE FEB. 2017



MIKE MOATS AT ONE OF HIS "BOOT CAMPS"





READ AND LEARN FROM THE PROS, THE BEST...

CONNECT WITH
OTHERS, THROUGH
SOCIAL MEDIA,
THROUGH PHOTO CLUB
MEMBERSHIPS AND ALL
THAT THEY OFFER.



JOIN MACRO MADNESS GEEKS ON FACEBOOK...
MIKE MOATS, HIMSELF, IS THE ADMINISTRATOR OF THE PAGE
AND POSTS IMAGES REGULARLY



photo by Mike Moats

I WOULD LIKE TO CLOSE BY THANKING ALL OF
YOU IN THIS ROOM, MY COASTAL PHOTO CLUB
BUDDIES. YOU INSPIRE ME TO LEARN MORE AND
PRACTICE MORE.

MY MACRO MENTORS, MIKE
MOATS AND MOLLIE ISAACS
ARE NOT ONLY MASTERS AT
THEIR CRAFT, BUT MASTER
TEACHERS, TOO. THIS
PROGRAM WOULD NOT HAVE
BEEN POSSIBLE WITHOUT
THEIR INSTRUCTION.

FINAL THOUGHTS BY THOMAS SHAHAN...

"LIFE ON EARTH IS REALLY, REALLY BEAUTIFUL
AND IT DESERVES A CLOSER LOOK."

HAVE FUN EXPLORING THE TINY WORLD
OF MACRO PHOTOGRAPHY!



photographer unknown