



Stacked Focus Photography



with EF 180mm f/3.5L Macro USM Lens,
Novoflex Castel-XL and Helicon Software.



Cacao flower at FLAAR Mesoamerica garden taken with a 21 mega-pixel Canon EOS 1DS Mark III and a Canon 180mm f/3.5L Macro USM Lens

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Updates and improvements

If you find any errors or permission in this report, or if you know anything that we missed, please let us know to consider it. Write to FrontDesk@FLAAR.org

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Stacked Focus Photography

One of the hardest tasks in macro digital photography is to do a photograph with the subject all in focus, because of the high definition you get with a high-end macro lens like the Canon 180mm f/3.5L Macro USM Lens. You can focus on a very wide range of planes, which some times will be a problem if you wish to get all the subject in focus. One technique that has become very popular with professional photographers is stacked focus photography. Which consist on taken about 3 to 10 photos of a subject focusing on different planes starting at the front as a first plane and then photographing a further plane going as far as the back of the subject there are stacked focusing rigs like the Novoflex Castel-XL which helps to do this kind of photography. Then using digital photography software you stacked the photos on top of each other to get a single all in focus photography. The most common software you can do this type of photography are: Helicon Focus Software and Photoshop CS5.

FLAAR Reports staff worked on their ethno-botanical garden to do an evaluation of the Novoflex Castel-XL and test the Canon 180mm f/3.5L Macro USM Lens . The first step was to select the subject that we wanted to photograph in this case we used a Cacao tree planted on the FLAAR garden, witch is blooming with little cacao sprouts and flowers, we photograph the flowers and cacao sprouts and did stacked focus with the Helicon Software and later retouching of the photos with Adobe Photoshop CS5.



Juan Luis Sacayon and Dr. Nicholas Hellmuth at FLAAR Garden setting up for macro photography with the 21 mega-pixel Canon EOS 1DS Mark III and the Canon 180 Ultrasonic lens.

Equipment used:

- 21 mega-pixels Canon EOS-1DS Mark III
- Canon 180mm f/3.5L Macro USM Lens
- Helicon Focus Software
- Adobe Photoshop CS5
- Our firsts tests on macro photography started by testing the lens:
- Macro Twin Lite MT-24EX Speedlite Flash
- Macro Ring Lite MR-14EX Speedlite Flash.



Canon 180mm f/3.5L Macro USM Lens



21 mega-pixel canon EOS-1DS MARK III



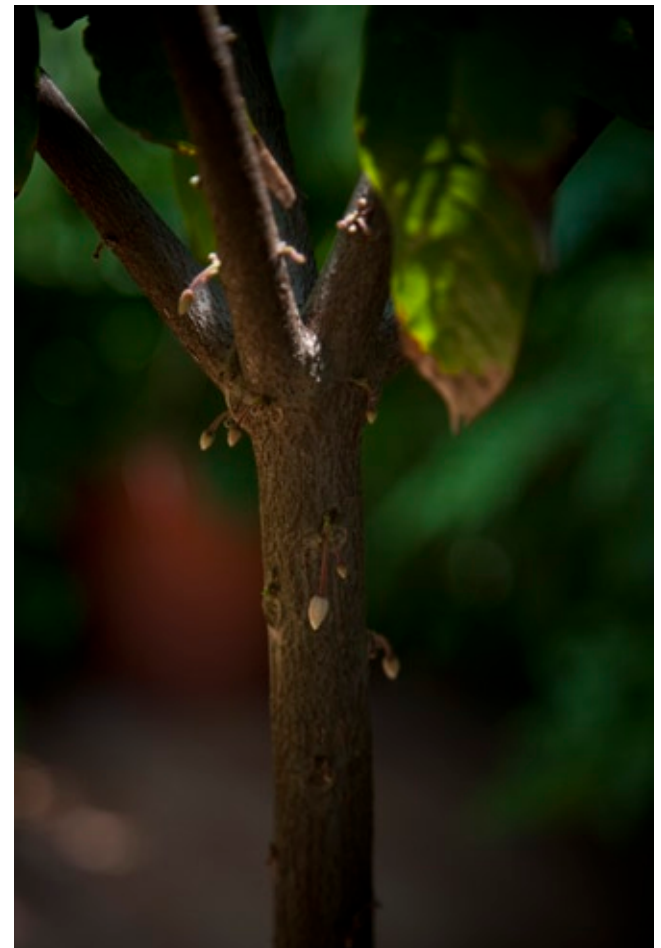
Novoflex Castel-XL stacked focus macro photography.



Picture on the left Dr.Hellmuth selecting the cacao flowers to photograph for macro photography, picture on the right Dr.Hellmuth holding the Gretagmabech colorchecker and Juan Luis Sacayon with Canon EOS -DS Mark III



Juan Luis Sacayon with Canon EOS -DS Mark III and the Canon 180mm f/3.5L Macro USM Lens for stacked focus photography of cacao flowers at FLAAR Mesoamerica garden.





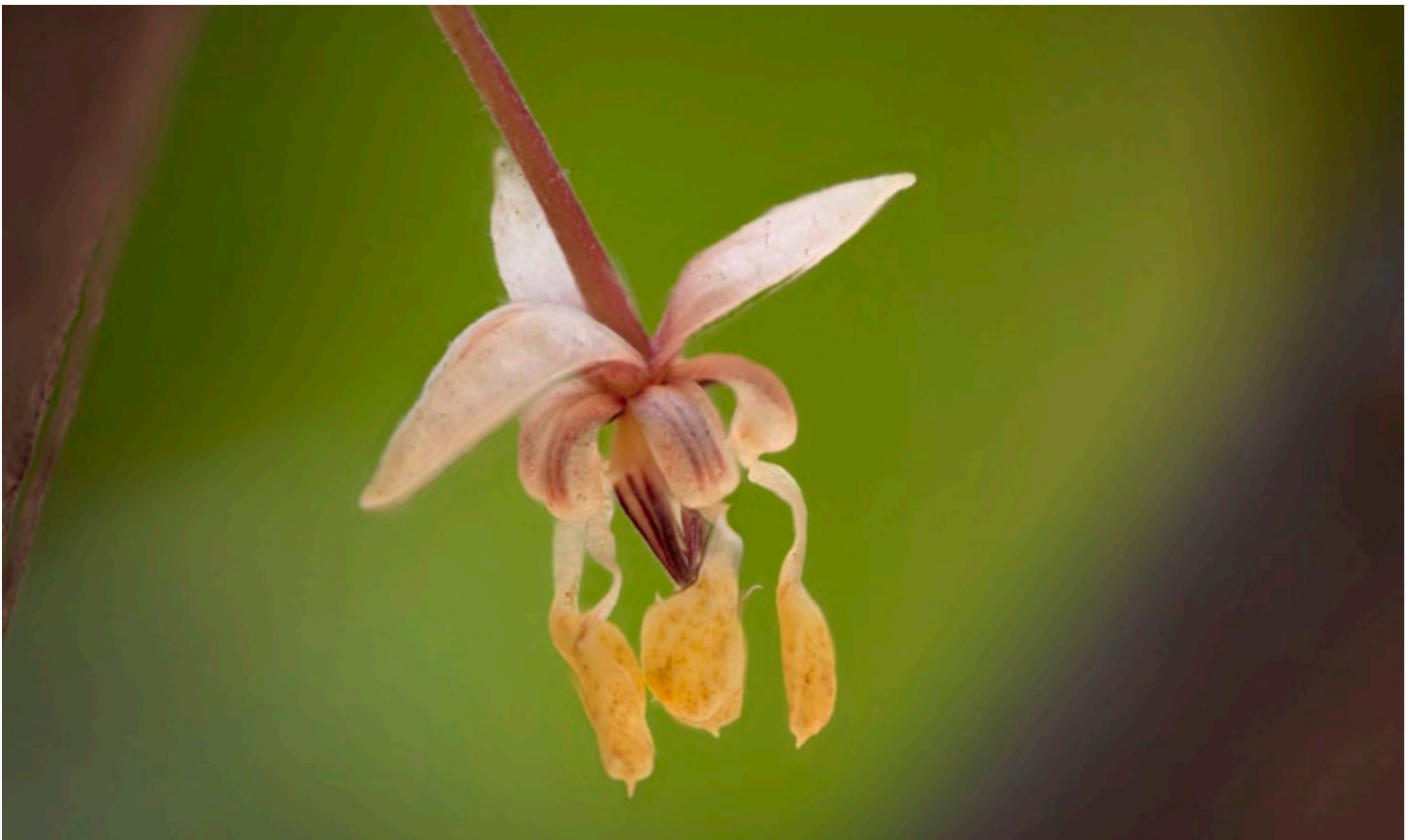
First photographs with the Canon 180mm f/3.5L Macro USM Lens



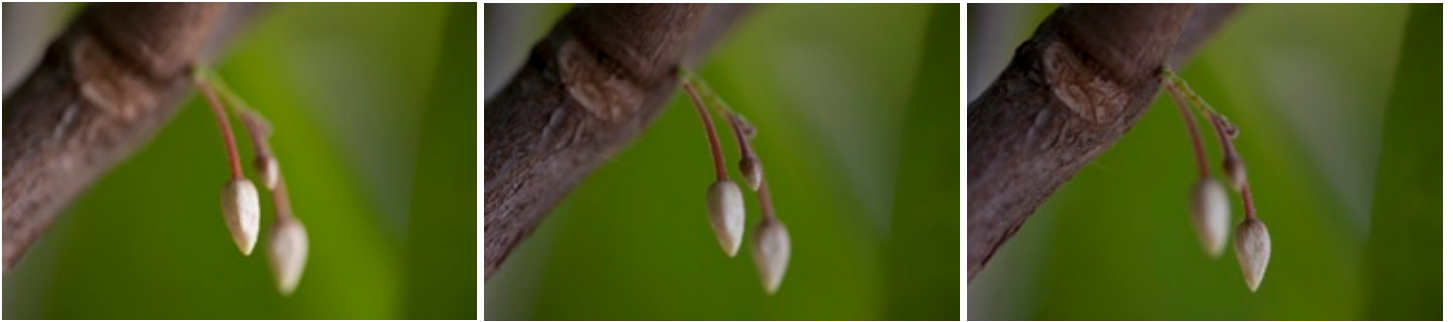
Here is where all the fun starts as we focus on a miniature cacao flower that is blooming we can see that it has very different focus planes. Here is where we use stacked focus. You can photograph the subject in 6 different planes and then use Helicon Focus Software to stack them together. Here in the samples you can see different planes in focus.



This is the first result obtained in Helicon Focus Software after stacking the photos together, you can see the photo blurred because their was movement by the air the day of the photographs where taken.



Stacked focus photography final result, here you can see all the flowers in focus. With some help of Photoshop CS5



3 photographs focus of 3 different planes for processing by Helicon Focus Software.



Final result of cacao flowers stacked focus photography.

For this specific report we used the Canon 180mm f/3.5L Macro USM Lens for future reports we will be evaluating the 100mm macro and the 65mm super macro

Acknowledgements

Since we wish to have high quality photographs to send to a top quality wide-format inkjet printer, we evaluate the cameras, lenses, tripods to hold the camera. Then we evaluate printers, inks, and the media to print on. We publish all the results of our evaluations so that other botanists can see which cameras and printers they can use for their botanical gardens.

Our Canon camera equipment and printers we tend to obtain from Parrot Digigraphic. If you get things low-bid from a box pusher (Amazon.com is one good example) you don't get to speak with a person who knows anything about cameras or printers. So if you wish to understand the difference between an Epson, an HP, and a Canon printer, Parrot Digigraphic can help you. Plus they can explain the difference between medium format and 35mm DSLR cameras, since they offer Hasselblad in addition to Canon cameras. You can contact them at info@ParrotColor.com



Canon equipment used on this report for evaluation provided by Parrot Digigraphic.

We thank Hoodman USA for the RAW CompactFlash memory cards which we use in our Phase One, Canon, and Nikon cameras. You can contact Hoodman via Toll Free (800) 818-3946 (U.S. Only), from elsewhere in the world you can reach them at +1 (310) 222-8608 (Torrance, California time zone), Fax (310) 222-8623, sales@hoodmanusa.com

Since FLAAR is dedicated to professional quality photography in archaeology, ethnography, ethno-botany, ethno-zoology, and geology, as well as macro, pano, landscape, architectural and fine art photography, we have many Canon cameras, many Nikon cameras, GigaPan, Hasselblad, and several large format Cambo cameras plus we just added a Silvestri 6x9 format camera (all digital). Thus we need a tripod for each camera.

Since each camera is different size, shape and application, it helps when each tripod is ideal for the camera and kind of location where we are photographing (studio or outside in swamps). We appreciate the tripods from both Gitzo and Manfrotto, as well as pertinent tripod heads, courtesy of Bogan Imaging.

You can see the Gitzo and Manfrotto tripods at Photokina, Photo Plus (Photo East in New York) and other professional photography equipment expos. Telephone: (201) 818-9500; Fax: (201) 818-9177;

E-mail: info@manfrottodistribution.us

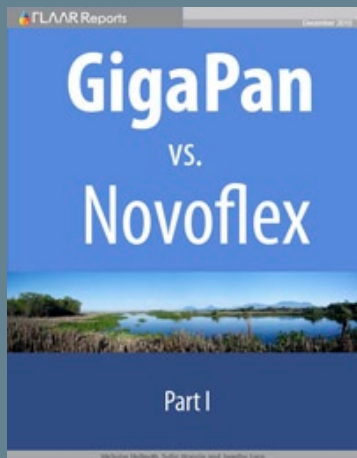


16GB Hoodman Compact Flash memory card.



Nicholas Hellmuth and FLAAR staff at FLAAR Mesoamerica garden, with Gitzo and Manfrotto tripods, holding the Hoodman compact flash memory cards.

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