

SPIDER WRAPPING PREY

GUATEMALA CITY

1500 meters elevation

 FLAAR Reports



Dr Nicholas Hellmuth
August 2017

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Spiny Orb-Weaver

Gasteracantha species

Names for this spider

In Spanish the word provided on the Internet is araña panadera.

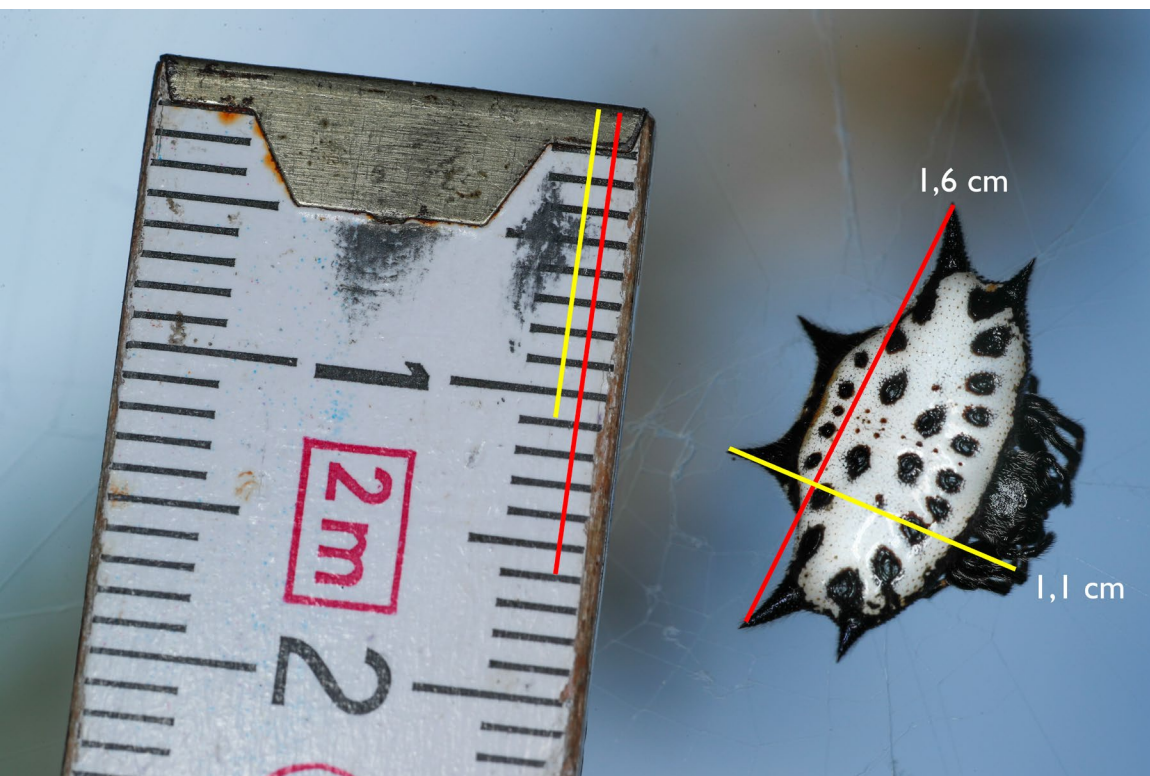
In English the word is either Spiny Orb-Weaver or Spinybacked Orbweaver (sic, with no hyphens).

The Genus is Gasteracantha. The species may be cancriformis but if you can correct us, please let us know: frontdesk "at" FLAAR.org.

The color of this spider's underside

is dark. It's top is white with black spots and black spines. The color of all the Gasteracantha cancriformis on the Internet images are bright; even sometimes the spiders are cute pink.

Due to the size of this spider we estimate it may be a female, but we have not analyzed the spider under a microscope (since we don't want to take it from its web and its nicely wrapped food sources).



*We estimate the size to be 1.6 cm wide and 1.1 cm long (front to back).

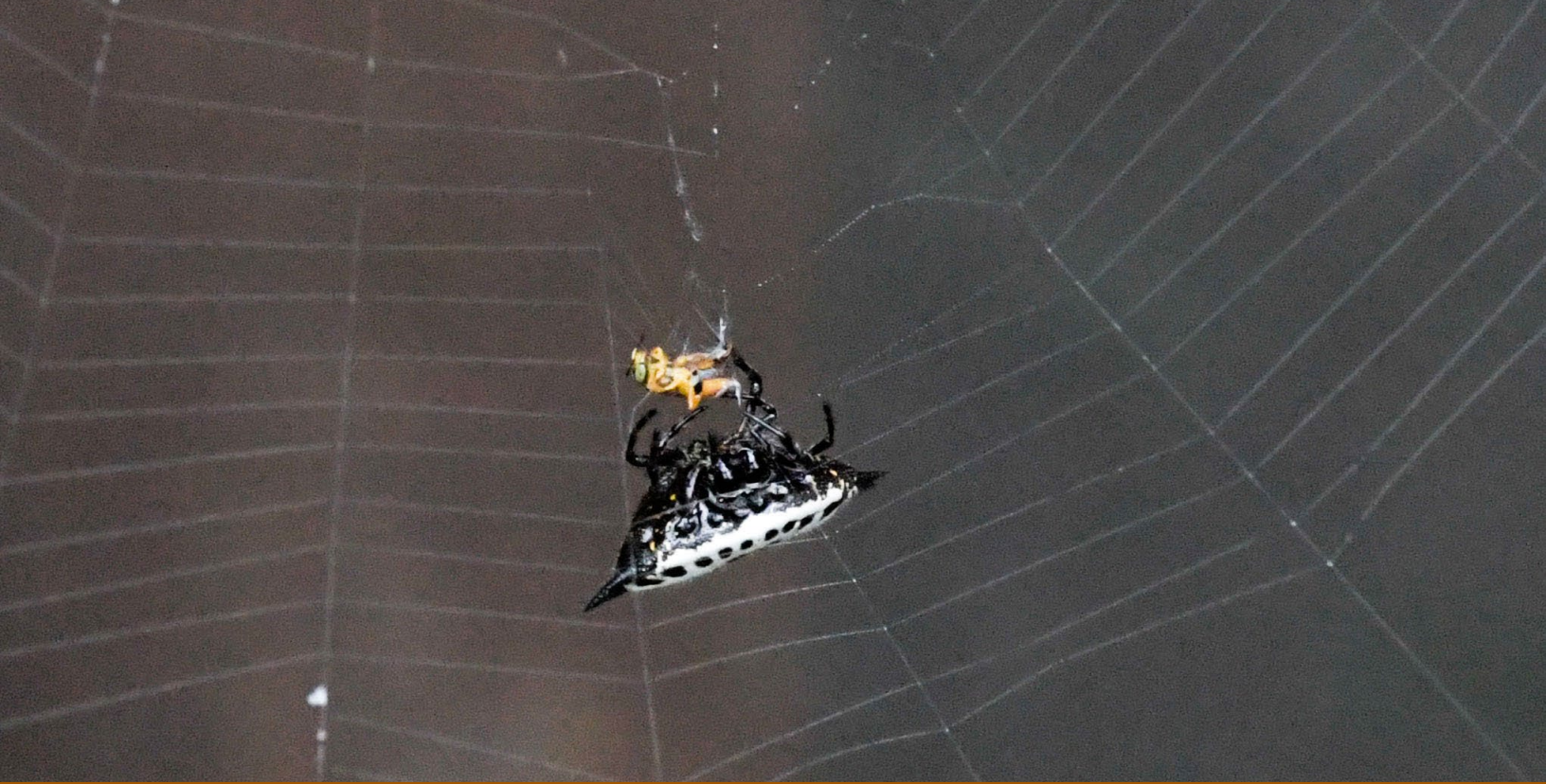


Photo by Dr. Nicholas Hellmuth, Nikon D5, Lens 100 mm f/2.0 Carl Zeiss Makro-Planar 2/100 ZF.2, F 11, Speed 1/320, ISO 12800, Tripod: Gitzo G1548 GT, Tripod Head: Arca-Swiss original big ball (over 30 years old)



Here is the spider probably several minutes after it has started to wrap its freshly caught prey.

It was pure coincidence that we happened to be looking at this spider web at this moment (since there are dozens of webs all over the place around our office).

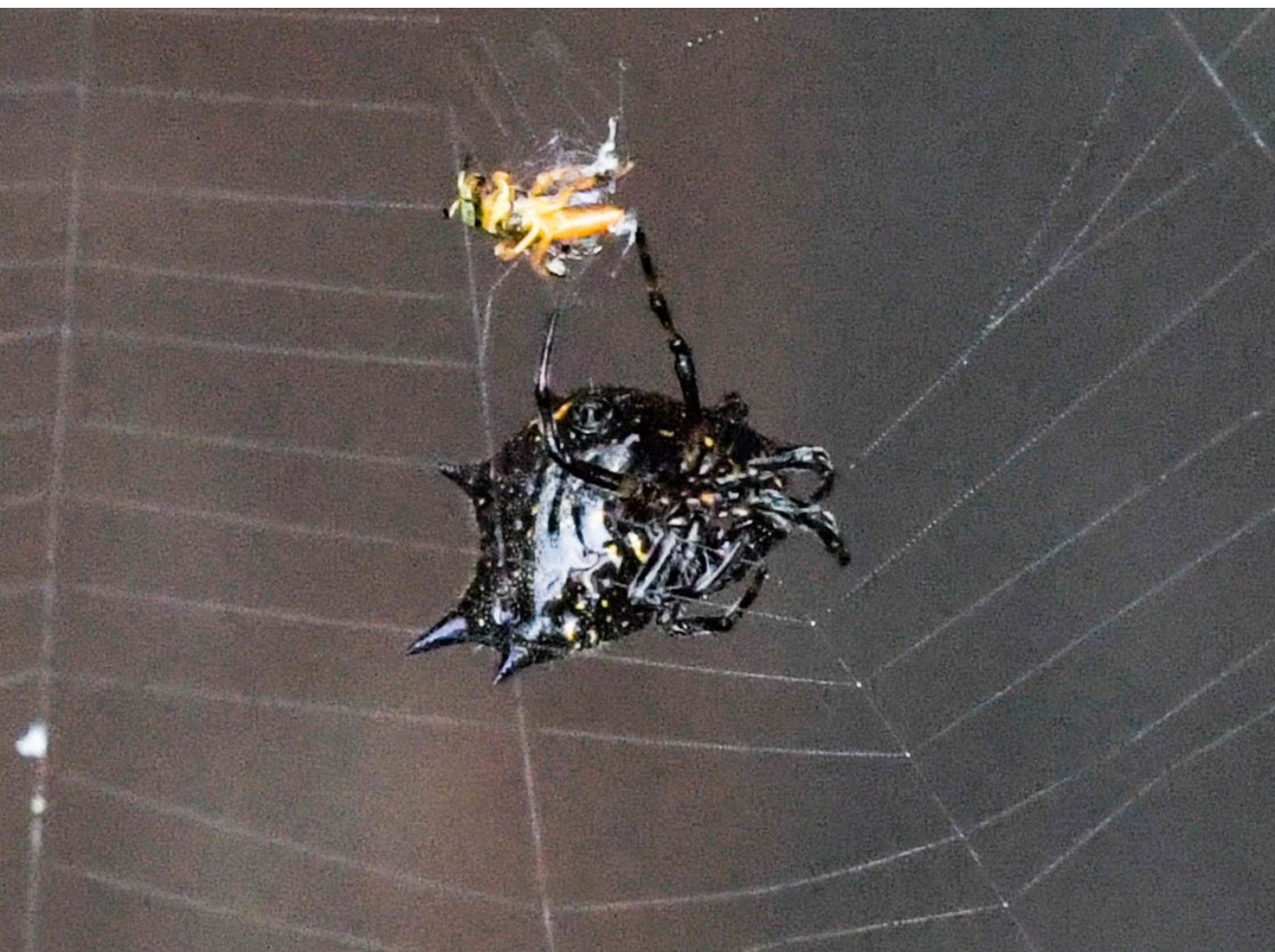
Photo: Nicholas Hellmuth, Gitzotripod, Arca-Swiss tripod head (the original one, over 30 years old), Nikon D5, lens Zeiss 100mm macro f 2.0, speed 1/320 ISO 12800

This is a tripod which can hold your camera at 2 meters or 3 meters high.

Since the web was two meters up, and at an angle, I needed a tripod to raise the camera even higher, to aim down parallel to the orb web below. We have a team of trained and experienced camera assistants to do all this. We used a large folding ladder so I could see through the lens.

Could surely have used an iPhone, but we don't usually have time to do this; especially not when the spider is moving rapidly.

Focus is not perfect because the spider is not large and was moving, plus the web was bouncing up and down due to the spider's movement.

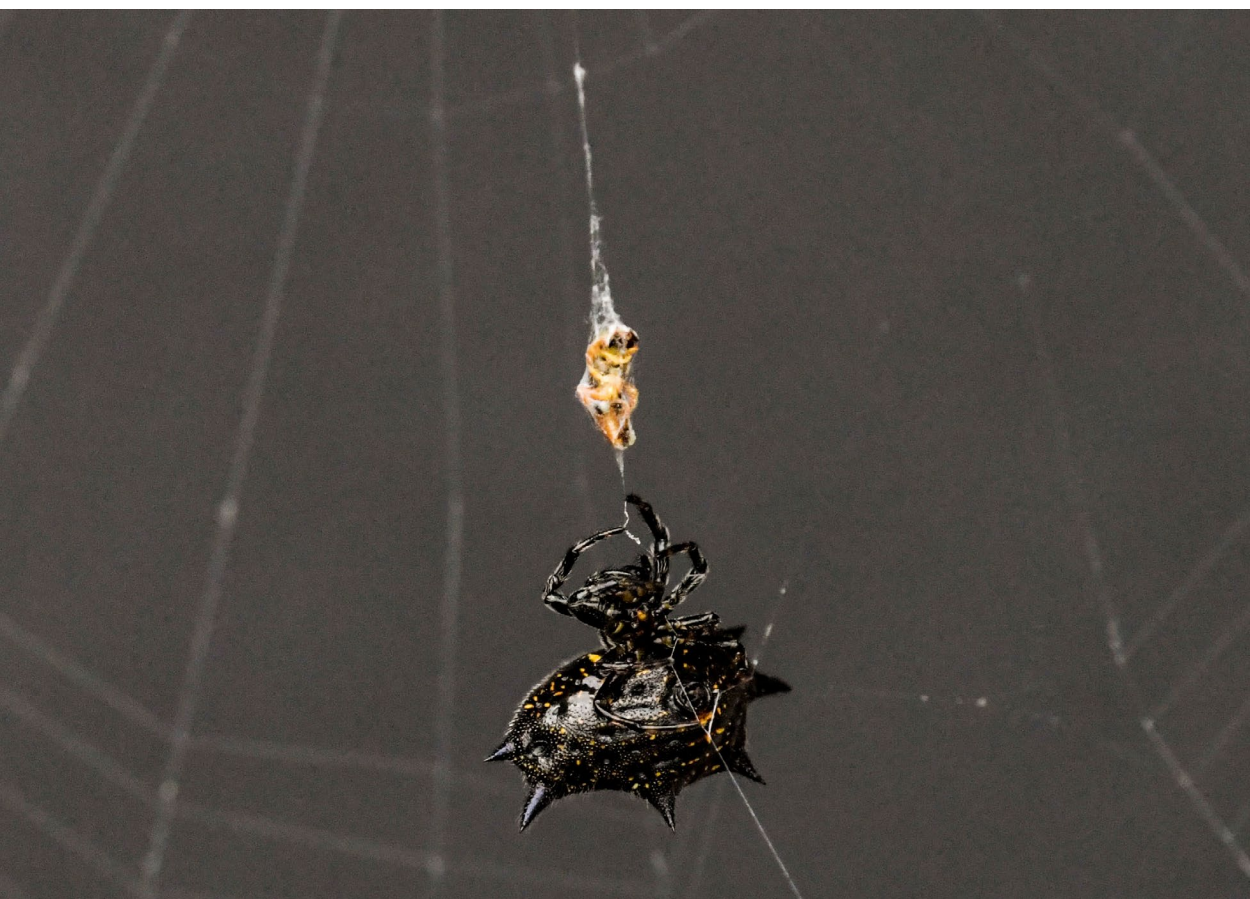




The spider rolls the insect with its feet as he uses fresh web material to wrap the insect.



This is a closeup of the earlier prey. Seems to be bee. Since we raise over 80 species of native flowers we attract lots of bees.

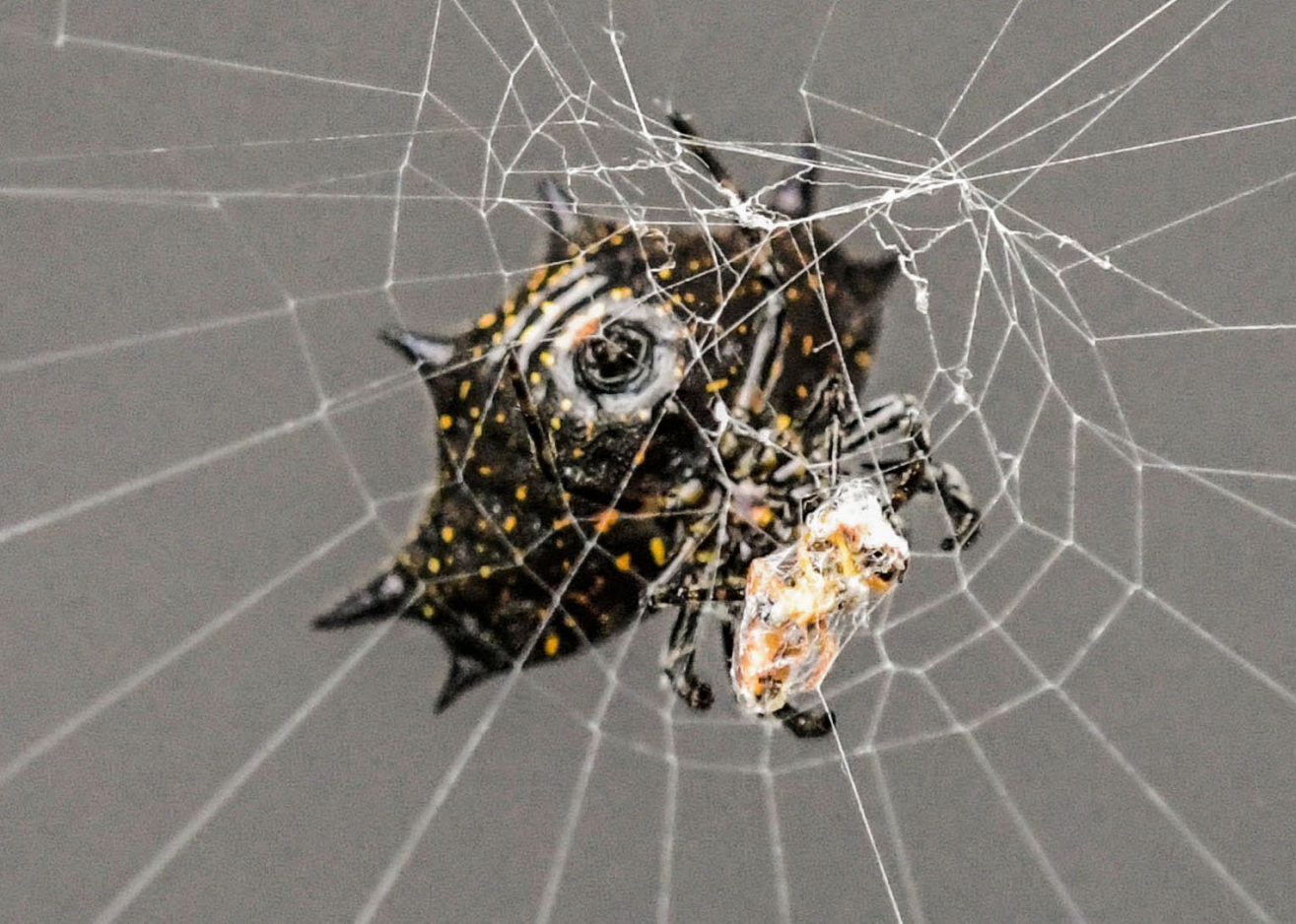


Spider is still
busy handling
its prey.



Spider is still
wrapping its
prey.





Spider is still wrapping its prey.

Photographs from underneath the orb web, looking up



Photo by Erick Flores, Canon EOS 1DX Mark II, Lens: MP-E 65mm f/ 2,8 1-5x Macro Lens, F 2,8, Speed: 1/80, ISO 160, Handheld (No Tripod), Green Flash Macro Ring LITE MR-14EX

This was photographed at 9:20 am in the morning. So this is probably the other bee that by the afternoon was stored in the upper left part of the web. Photograph by Erick Flores, Canon EOS 1DX Mark II. Note that we have

good quality cameras; this top of the line Canon, plus the Nikon D5, the best Nikon. We also have a Nikon D810, plus plenty of macro equipment.



Now that I look at this more closely, I estimate the spider may actually be eating the bee, eating the inside of its head.

We used a white background; this is cardboard that the assistants hold over the web so that your attention can focus on what the spider is doing. We do not remove these spiders from their web.

Appendix A The Orb Web



Here are photographs of the top of the spider by Erick Flores, one of the several photographers at FLAAR Mesoamerica in Guatemala. He has experience photographing here, and has also assisted Dr Nicholas in Germany and other countries.



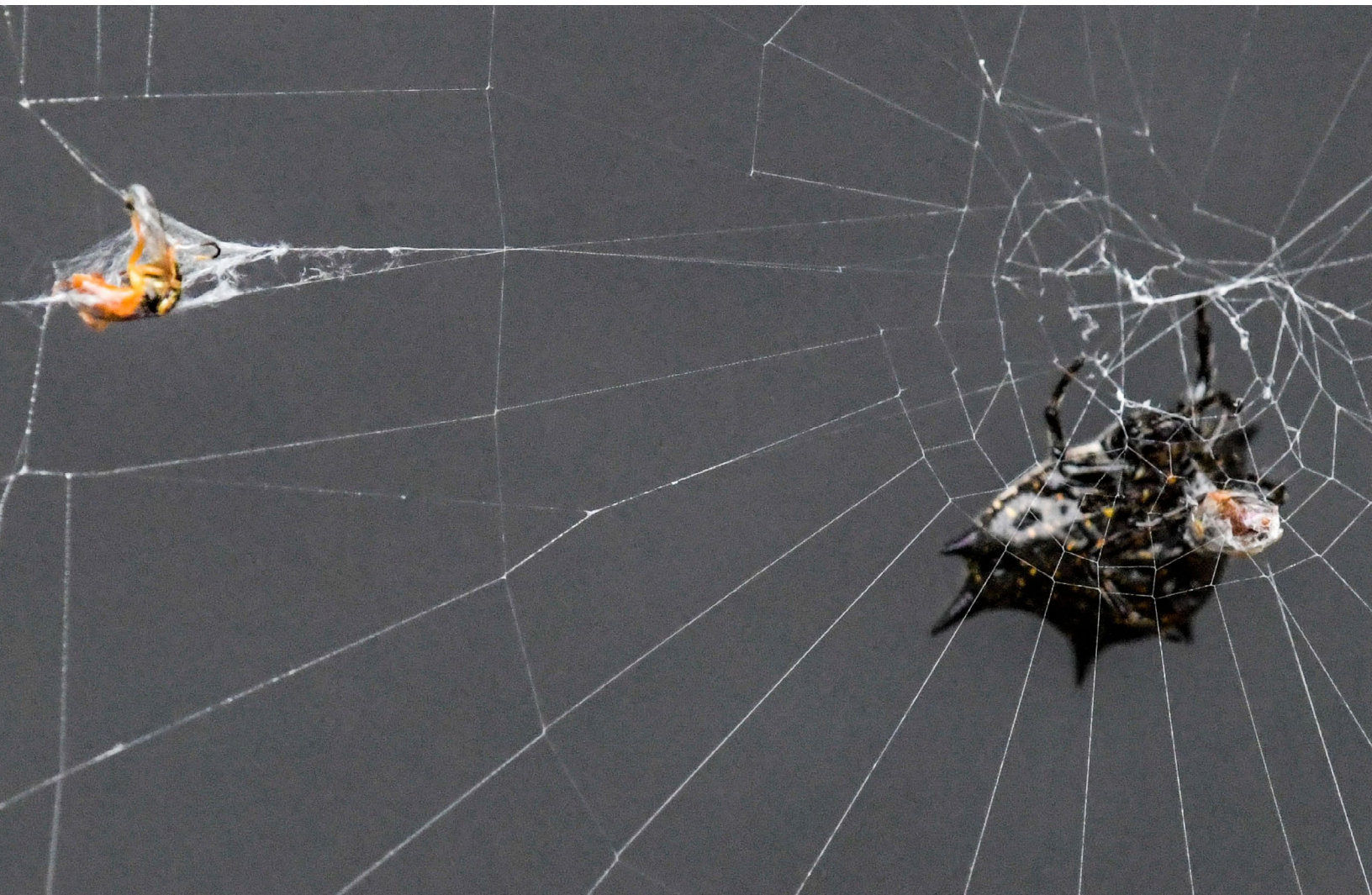
To photograph the top of the spider you need to get yourself and the camera totally under the web without breaking the spider web's support system.

Underneath the spider is white. From the other side of the web the spider is black.

Spider web silk is one of the most important natural materials in the world in terms of its chemical and physical properties. There are projects all over the world on spiders and their silk.

Since Dr Nicholas has been in Guatemala since age 17 he has seen a lot of spider webs of diverse structures (far more than just orb shaped). Plus

he has been doing field work in remote areas of Guatemala for the last eight years. So any project which seeks a partner in a spider project, FLAAR Mesoamerica (Guatemala) and FLAAR (USA) are a potential asset.



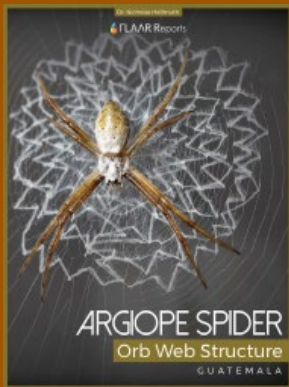
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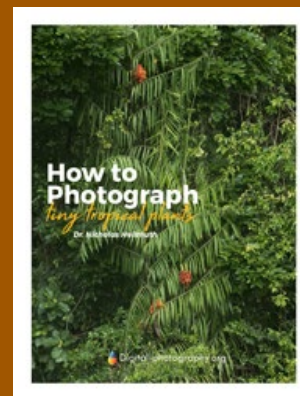
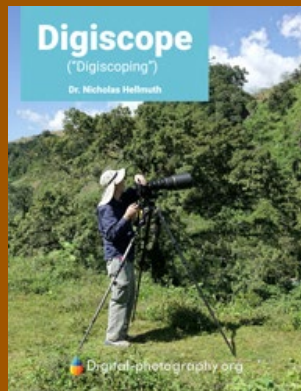
Photography: Dr Nicholas Hellmuth and Erick Flores

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