Paper Wasp Nest of Columnar Shape and Very Tall and Nest of Golden Wasps

El Aserradero, Panal 5a and Panal 5b, March 20, 2025

Photos by Javier Archila
Text by Nicholas Hellmuth
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In addition to finding more of the many species of wasps that make edible honey, an additional interest is to find all the different sizes and shapes of nests so that in the future a student for MA thesis or PhD can prepare an inventory of all sizes, shapes, and colors of the nests of all the wasps of Guatemala and adjacent areas of Mesoamerica. So even if not all these wasps make honey, they still deserve to be studied, since lots of wasps are pollinators.

The easiest wasp to immediately recognize by the size and shape of its nests are the wasps that make their nests from mud, such as *Polybia emaciata*. The other wasp whose nest is very easy to recognize are the nests made in vertical stacks, one new nest on top of the previous nest—instead of "continuous" like the columnar nest in the photo at the left. We found these nests in PNYNN, Izabal and Alta Verapaz. We have separate FLAAR Reports on each of these different architectural designs.

So now we show a beautiful example of a "columnar" shaped nest. We need to find more since not all will be so regular (nearly identical diameter all the way down). Once a helpful wasp entomologist can suggest that species builds this size and shape of nest, we can try to find more examples that are close enough so we can photograph the individual wasps to document their coloration.

Sony A1 (Alpha 1), Sony 200-600 telephoto zoom lens

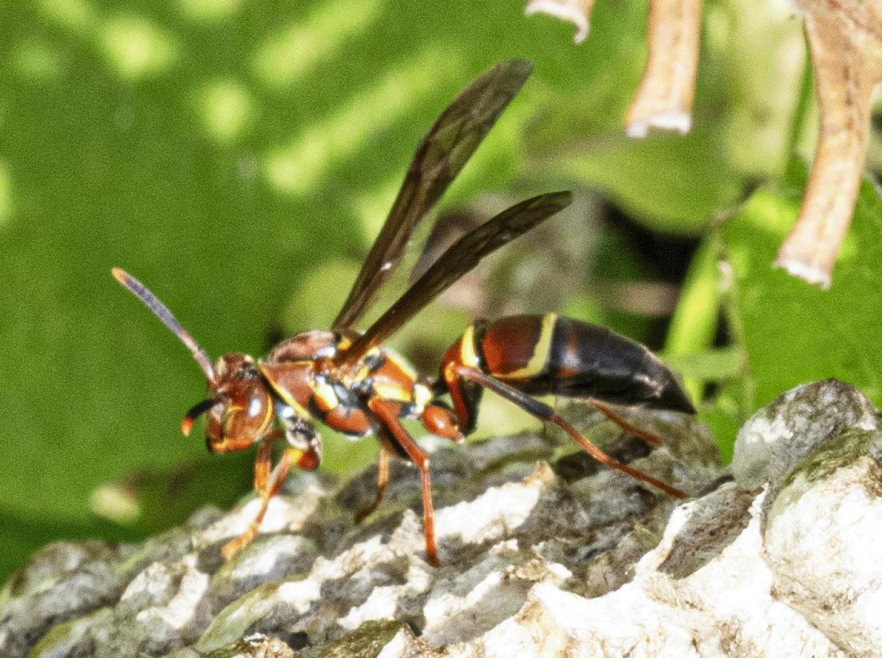
As you can see, this nest is far away, up a hill. You don’t want to slip and fall down the hill with all your camera equipment. So it would obviously help if a kind person could donate so we can have access to the 400-800mm Sony lens so we can better document all these magnificent wasp nests.

Panal 5b, El Aserradero, 10:02am

Since Panal 5a was so high, to get macro closeup photos of individual wasps—to identify the genus and species—so the local Q'eqchi' Maya guide, Manolo, found another panal. It was very small but by putting it in front of us it was possible to get good views so that wasp specialists could identify the wasps in the future.

Small nest with wasps that attacked and stung—not honey wasps

These closeup views should allow a wasp entomologist to be able to identify this wasp genus and species.



Photos by Javier Archila, cropped and processed in RAW mode by Nicholas Hellmuth.

The outside of this nest has a horizontal pattern that is very different than the rough or smooth patterns of nests of other wasp species.

These cells are much higher than cells of other nests.

It helps wasp entomologists and students when the FLAAR Mesoamerica team photographs from the front, from above, and from the sides. What is missing are photos parallel with the top of the cells so that you can see down inside to see what's down there.

Very helpful photo so you can see the different areas with brown-gold and with black coloration.

Here you can also see the side of the head.

You need to be able to see the coloration of the thorax, “waist” (petiole) and abdomen—and head, to help recognize which genus and species this is.

Carpenter, Garcete and Freire 2012 list nine species of Genus *Polistes* in Guatemala (Appendix 1, page 279):

Polistes apicalis de Saussure 1858, has black color on parts of legs. Listed by Portal de Biodiversidad de Guatemala for Departamento de Guatemala and Alta Verapaz.

Polistes canadensis canadensis (Linnaeus 1758), listed for Huehuetenango and Solola. Different pattern on abdomen.

Polistes carnifex carnifex (Fabricius 1775), more golden, especially wings, more yellow areas. Listed for Guatemala, Izabal, Peten, Jutiapa, Chimaltenango and Solola.

Polistes dorsalis neotropicus Bequaert 1940, 5 yellow bands on abdomen. Departamento de Guatemala.

Polistes franciscanus Richards 1978, more golden, not much yellow areas, abdomen not same as wasp we photographed. Listed for Peten and Alta Verapaz.

Polistes instabilis de Saussure 1853, very different color patterns. Listed for Guatemala, Chimaltenango, Peten, Quiche, Sacatepéquez, Baja Verapaz, Alta Verapaz, Jutiapa, Zacapa, Izabal.

Polistes oculatus Smith 1857, similar in many aspects. Not listed anywhere for Guatemala in the Biodiversidad de Guatemala.

Polistes pacificus Fabricius 1804, top of head and thorax and beginning of abdomen are solid black (with a few yellow patterns). Not yet in the map for Guatemala

Best if a wasp entomologist can kindly help us document the correct name, but I estimate the genus is *Polistes*.

CARPENTER, James Michael, GARCETE Battett, Bolivar Rafael and Joseph Aledander FREIRE

2012 Las Vespidae (Hymenoptera: Vespoidea) de Guatemala. Chapter, pages 269-279 in Biodiversidad de Guatemala, Volumen 2, Universidad del Valle de Guatemala.

Available as helpful download from ResearchGate and elsewhere.

Map by Byron Pacay, Google Earth Pro.

Team:

Nicholas Hellmuth, field trip concept organizer and photographer
Byron Pacay, helps packing the equipment then co-pilot (while Nicholas drives, then pilot).
Norma Cho Cu, organizes all the equipment and packing, and photographer
Senaida Ba Mucu, field trip assistant for over a decade.
Franklin, the husband of Senaida who works in the office and also field trips
Javier Archila, lead photographer, video photographer, and drone pilot (from Coban Alta Verapaz.
The two children of Senaida and Franklin came in the vehicle from Guatemala City to Senahu; then Fernanda stayed with her paternal grandmother. 10-month old Nicolas came along with her mother Senaida every day of both the pre-trip and the mid-March field trip.

Each day a local Q'eqchi' Maya individual comes along as a helpful guide, Manolo Mucu Chub worked with us the first morning (it began to rain after lunch). He also worked with the team all the following days.

The grandfather of Senaida Ba, Tomas Mucu Choc, assisted us on Wednesday. Domingo Ba Chub also assisted us on Wednesday. We brought a large selection of food for each family that welcomed us to their homes and surrounding property.

Vivian Hurtado is research project manager for FLAAR Mesoamerica. She works from her home office and from the office of FLAAR Mesoamerica.

If you are a wasp entomologist, we would greatly appreciate it if you can help us identify the wasp genus and species. Please contact Vivian Hurtado via email: flaar-mesoamerica@flaar.org You can write in English o en español. Please also include Sergio Jerez, botany-zoology@flaar.org