Time: 2:00 - 8:05 pm
Weather: PC 9 mm; PH 53%; BP 102.2; calm; sun/cld; T 32º C
Activity: Pat and Kee go hunting for arthropods

The Red-tailed Hawk swooped low over the van on our way in and a fresh breeze stirred the vegetation as we set up camp. Pat suggested that I check out the Hop Tree (near the trailer) for Giant Swallowtail larvae while she finished preparing for our trip to the river. Unlike most caterpillars, these larvae resemble bird droppings! Indeed, I found a single such larva on one of the leaves, as below. But unlike most caterpillars this one carried what some experts call a "mite load". A

dozen or so tiny red mites can be seen on the larva. Normally one sees them on carrion beetles, basically hitching a ride to the next corpse. But the larva wasn't going anywhere. So what were they doing there? Parasites?

Before setting off for the river Pat and I were both visited by a Silver-spotted Skipper that perched on our respective hands. An entomologist might say that the skipper was simply looking for some salty perspiration to drink. But we saw it as two tiny blessings on the day's mission to find as many arthropods as we could.

We had what might be called two near misses on our way to the river. First, I saw a Tortricid Moth that looked unfamiliar, but fumbled with my camera, giving the moth time to fly off. At the River Landing Pat thought she saw a Kinglet flitting about in a nearby bush, but couldn't make it out. (We're always looking for birds.) I had gone to the river mainly to see if any Softshell Turtles were basking. While I returned to camp, Pat walked Mussel Beach, checking on plants along the base of the bluffs and stopping to collect a few. She thought she might have a new *Poly-gonum* species. (Smartweed) Back in camp, we sat in the Nook. Pat, whose vigilance never seems to relax, pointed at the leg of the cedar table in front of us.

"Look, there's a wasp with a caterpillar." It took us a while to realize it was not one wasp, but two. The caterpillar was presumably dead or paralysed. (See below) We took multiple closeups from a variety of angles. The male flew off for a while, then returned. Eventually the pair left the table leg altogether, carrying their awkward burden off into the surrounding vegetation. It wasn't until we got home that we could identify first the very distinctive caterpillar, then the wasps that had attacked it. Pat had found two new species without moving a muscle.

I swept with the butterfly net along the edge of the track, finding an interesting specimen every few minutes, including a new meadow katydid, small Calligraph beetle, and a stink bug that would give me an awful time to ID later. There were a few specimens that I completely failed to identify (later) including a Snout Beetle (Curculionid) that wasn't. It had a snout, but no visible antenna and, just as bad, spines on the tibia of leg III.

Pat came out of the trailer carrying a plastic container with a spider she had caught there. This turned out to be a jumper called the Parson Spider (not new) that likes to hang out in infrastructure like its relative named *Phiddipus*. It was getting late in the day and I decided to go for one more sweep, this time in the Regen Zone along the edge of Blind Creek Forest, even as Pat worked her way through leaf litter on her hands and knees in the Gallery Forest. Neither of us got anything of interest, except I found a beautiful, boldly marked Black-and-Yellow Argiope in a web full of Ws, then later a stick insect (See below.)

After a meal of enchiladas in the Nook it was time to go. "Where's Peter?" asked

Pat. (an Eastern Cottontail that frequently shows up in camp around that time). "Where are the Raccoons?" I asked. The only mammal we had seen all day were the Eastern Chipmunks that visited the bird feeder. There was just enough time left to build a new stand for the rain gauge.

Birds: (18)

American Crow (FCF); American Goldfinch (UM); Black-capped Chickadee (GF); Blue Jay (GF); Common Grackle (GF); Downy Woodpecker (GF); Eastern Towhee (BCF); Field Sparrow (HBF); Gray Catbird (RB); Northern Cardinal (GF); Northern Flicker (GF); Red-bellied Woodpecker (GF); Red-tailed Hawk (PLM); Rose-breasted Grosbeak (LM); Song Sparrow (LM); Spotted Sandpiper (TR); Turkey Vulture (LM); White-breasted Nuthatch (Tr)

Leps: (16)

Black Swallowtail (LM/Nk); Cabbage White (UM); Common Buckeye (LM); Eastern Comma (ET); Eastern Tailed Blue (PLM); Grayish Zanclognatha (ET); Giant Swallowtail (GF); Hackberry Emperor (Tr); Monarch (UM/Rd); Northern Crescent (PLM); Red Admiral (Tr); Red-spotted Purple (Nk); Silver-spotted Skipper (Tr/LM); Summer Azure (ET); Viceroy (MB); Unicorn Caterpillar Moth (Nk)

New species: (ID materials available)

Short-winged Meadow Katydid	*Conocephalis brevipennis*	LM KD Au06/12
'Round-shouldered Stink Bug'	*Coenus delius*	LM KD Auy06/12
'Two-striped Calligraph'	*Calligrapha lunata*	LM KD Au06/12
Grayish Zanclognatha	*Zanclognatha pedipilalis*	LM KD Au06/12
Unicorn Caterpillar Moth	*Schizura unicornis*	Nk pd/KD Au06/12
'Gold-marked Eremnophila'	*Eremnophila aureonotata*	Nk pd/KD Au06/12

Note: The first three insects were caught during a sweep of the vegetation in the Lower Meadow. The Zanclognatha moth was caught on our way to the river. The caterpillar and wasp combo were photographed *in situ* on the leg of a cedar-log table in the Nook. The three names in single quotes are made up ones.

IMAGES:

It's all about reproduction: A male *Eremnophila* wasp clasps a female who, in turn hold onto a captive prize: the Unicorn Caterpillar. In fact the female had to carry the caterpillar, even as she received sperm from the male. (Note how the tips of their abdomens touch.) This complicated threesome eventually stumbled off into the weeds in search of the home burrow, where they would lay an egg on the caterpillar to start the next generation.

Giant stick insect clings to net after being swept out of the veg. The two forelegs are held straight ahead, used mainly to probe for the next toe-hold, while the insect walks on the remaining four. The head is located about one-third of the way from the second pair of legs to the tip of the first pair. Mesh of net is approximately one mm, so one can make a crude measurement of the insect on that basis.

We see stick insects like this *Diapheromera femorata* in the Lower Meadow about once a year. Stick Insects, or "walking sticks" if one prefers, feed on leaves and are mainly nocturnal. Although there are only a few species of this order in the temperate zone, thousands of species live in the tropics.