

## Garden students reap intellectual harvest

SABA—A special harvest was in store recently for the young men working at the Youth Garden, under a special programme administered by the Foundation Social Workplace Saba (FSWS).

Four of the boys were taken in tow by visiting scientists Barbara and Mike Richardson to have a closer look at some examples from the insect world that meets them in the soil and on the plants of the huge agricultural plot on The Level. The programme has been running since the first of the year, and the students already have earned a Level One certificate.



Entomologist Barbara Richardson (far right) gives students in the Youth Garden Programme a quick introduction into the insect world.

The Richardsons are British insect experts who were on Saba for their fourth visit, this time to participate in the October Sea&Learn nature programme. They graciously gave of their time one afternoon to share with the young men in this special programme.

Barbara Richardson organized the afternoon into four parts: a quick lecture about how insects evolve through the stages of egg, larva, pupa, and adult; a tour to gather specimen insects from bromeliads on the Harry L. Johnson Museum grounds; a review of the specimens under the scientific microscope back at the Cottage Club; and a PowerPoint presentation to pull everything together.

## **Why adults are important!**

Four garden interns– Alex Leocadio-Wilson, Elijah Peterson, Jevon Weeks, and Lennie Hassell-Suero – were joined by FSWS course mentor Sjoerd Aardema at a picnic table outside the Eugenius Centre where Barbara gave a mini-tutorial on the short lives of insects. She had prepared handouts on the cycles of the mosquito, butterfly, and housefly, which will go into course notebooks kept by the students.

Many insect species live in different places when they are at the larva stage and at the adult stage, and will also have vastly different diets in these different habitats. Many can only be precisely identified at their final adult. Yet, at that point, bromeliad dwellers, for example, have left the bromeliad's nursery environment to fly away at this last stage of development. Since the insect uses the bromeliad for its development only up to the adult phase, Barbara's previous Saba studies included taking larvae from bromeliads found on Saba's trails back to Great Britain for their final metamorphosis to the adult stage and exact scientific species description. This was the specific insect world she shared with the students.

At the non-native bromeliads on the Museum grounds, Barbara showed the water reservoir at the centre that provides the environment for the insects. This is where they eat the forest debris that falls into the bromeliad rosette from the canopy. Mike Richardson demonstrated the scientific way that the water and its insects is extracted from the plant's small "tank." Jevon Weeks had an opportunity for some hands-on participation as he siphoned the small animals into the container held by Mike.



Mike Richardson (left) is assisted by Jevon Weeks to extract insects from the water held in this bromeliad's centre.

Not to be outdone, other students were also interested in trying to capture some of the flying insects around them. A bee and a butterfly were confined into specimen jars and taken to the impromptu lab that Barbara had set up in the foyer of the Cottage Club Hotel in order to continue the discussion.

## **Up close and personal**

The students quickly got the notion of how to adjust the microscope. The Richardsons had travelled with the instrument to look at the specimens the couple collected during their three weeks on Saba. Barbara had prepared a few samples for the students as well as what had brought over from the Museum. These new catches—the bee and the butterfly--were not prepared since they were a live catch and resisted being stuck with a pin, as the students clearly enjoyed trying to get them to settle down.



Elijah Peterson has a look through the microscope, as Barbara explains how to adjust the instrument for best viewing.

Meanwhile, Mike was showing what had been taken from the Museum bromeliads as he dumped the tank water onto trays so that the insects could be inspected as the boys leaned over the examination table. Barbara concluded the tutorial with a slide show of the Richardson's work in Puerto Rico, how different elevations affect environment, and how to determine biodiversity.



Students look at the insects from the Museum grounds bromeliads.

The students were also treated to snacks provided by the Richardsons, and boys extended an invitation to the Richardsons to visit the project garden on The Level. The next day, the Richardsons went on a grand tour of the garden beds with Melvin Simmons who has worked there for almost three years.



Melvin Simmons checks out a garden bug captured on Barbara's palm.

Everyone was on the lookout for insects and discussed how they can affect a garden and what can be done about it. Most important is to know enough to determine whether the insect is helping or harming the garden. Encouraging the garden crew to see the science behind their project should help with a better harvest for them in all sorts of ways!



From left, Jevon Weeks, Alex Leocadio-Wilson, Lennie Hassell Suero, and Elijah Peterson listen while Barbara explains what they are seeing on her computer in foreground.