

# 10<sup>th</sup> Anniversary Issue

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# UWI TODAY

THE UNIVERSITY OF THE WEST INDIES • ST. AUGUSTINE CAMPUS

SUNDAY 8 APRIL, 2018



## *The Last Stand*

In 1988, the Caroni News Issue (No. 6) asked the public this question. “Did you know that Caroni now has 964 buffalypso animals, and plans to sell 45,000 kgs of beef in 1988? Did you know that the company has 987 hectares under beef pasture and development, and is planning to expand the herd to 2000 adult animals and to supply local fresh meat markets and that the company supplies breeding stock for the local and export markets?” It was a boast of optimism – a far cry from what exists today – and there is something wrenching at the prospects facing an industry that once held so much promise. The majority of the herd, virtually running wild now at Mora Valley, are infected with Brucellosis, and are earmarked for slaughter. But as happens in these matters of life and death, there are those who oppose it. A group comprising vets, historians and others are planning a symposium at The UWI in early June to discuss the plight of the Buffalypso. This Special Report by UWI TODAY Editor, **Vaneisa Baksh** looks at the past, the present and the future of the Buffalypso. This solitary Buffalypso was photographed by **Nandita Rastogi** on March 17, 2018 at the State-owned Mora Valley Farm in Rio Claro. (See Page 11.)

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■ TechAGRI for everyone



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■ Across the spectrum





# Walk on the Wild Side

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**@ The UWI Zoology Museum**



**Macrodonia cervicornis**  
**AKA Sabretooth Longhorn Beetle**



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What is now the St. Augustine Campus of The University of the West Indies was once home to the West Indies Agricultural College and, in 1924, the Imperial College of Tropical Agriculture.

Even then lecturers and students had begun a collection of local animal species as a teaching resource and repository for researchers investigating animal species of agricultural importance. Insects, mainly pest and beneficial species associated with the various crops under study, formed the bulk of specimens.

Now - mammals, birds, reptiles, fish, molluscs, other terrestrial and marine species are collected from all over Trinidad and Tobago, the wider Caribbean, and South America. Find also geological and archaeological objects including the famous Banwari Burial – a 5,000 year old human skeleton, one of Trinidad's earliest known residents.

**Visit us at The UWI Zoology Museum. Have a specimen identified or even learn about the annual Trinidad and Tobago Biolblitz!**

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## FROM THE PRINCIPAL

## WE CAN MAKE OUR BED ON AGRICULTURE



This year marks the 70th anniversary of The UWI and our service and leadership in the Caribbean. Along with our network of more than 120,000 alumni, we are proud of the fact that our graduates are represented at the highest levels of the public and private sectors, and among all the professions.

From one century to the next, The UWI has remained committed to advancing learning, creating knowledge, and fostering innovation for a sustainable Caribbean. It is for this reason that techAGRI 2018 is such a major 70th anniversary event.

In March last year, we recorded 8,000 visitors to techAGRI – almost 3,000 were students and teachers.

Dean of the host Faculty, Dr. Wayne Ganpat, has often declared that his intention in staging this techAGRI is to raise the profile of agriculture in Trinidad and Tobago and in the region and to re-establish the reputation of the Faculty of Food and Agriculture as the leader in agricultural education and research in our region.

Ask anyone who attended last year – it was a memorable experience and demonstrated quite comprehensively that the future of agriculture lies in the latest innovations of our young agri-entrepreneurs. This year was no different, as crowds thronged our West Field to take part in the many interactive displays on show.

As I visited techAGRI again on the second day, I was keenly reminded of the Kenyan proverb “Treat the earth well. It was not given to you by your parents. It is loaned to you by your children.” This proverb is sometimes used to explain the concept of sustainable development – development not simply for this generation but for future generations also.

I was heartened by the number of “young” persons I saw actively participating in the Expo. I am told there were approximately 4,000 students from various primary and secondary schools who visited and, from the looks on their faces, enjoyed the Expo. As Campus Principal I was even more pleased to see the young members of staff and students, bedecked in their FFA techAGRI tee-shirts. Agriculture and food security are national, regional and global priorities and not only for economic reasons. Indeed, agriculture is a development priority as evidenced by the pivotal role it plays in the United Nation’s Sustainable Development Goals (SDGs). It could be seen as the common thread holding the 17 SDGs together.

Returns from timely investments in the agriculture sector will yield benefits to our country for generations to come.

Here in Trinidad and Tobago, we have grown accustomed to a wide variety of food and drink, brought here from all parts of the globe for our enjoyment. Along with this easy access has been an unnerving increase in obesity and chronic lifestyle diseases.



PHOTO: ANEEL KARIM



PHOTO: ANEEL KARIM



PHOTO: KEYON MITCHELL

**CAPTURING INTEREST:** It was a wonderful bit of exposure for the thousands of students who swarmed the Admin Field at tech-AGRI 2018. The idea is to capture their imaginations with the possibilities that await them.

Now that access to foreign exchange is proving a daily challenge to business and individuals alike, it is time to resurrect the old refrain – ‘buy local’ and turn our much touted creativity into profitable endeavours.

Out of evil can indeed come good. For farmers, entrepreneurs, and financiers alike, there is opportunity to be had in the current scenario. We just have to ‘go brave’ as they say, seize the moment, and take that leap of faith in ourselves and our abilities.

Our Faculty of Food and Agriculture produces graduates who continuously innovate and expand the agricultural industry. These research outputs often go begging for investment to allow for commercialisation. The failing is in ourselves that those who can help are often locked into a bureaucratic treadmill that blocks visionary thinking. Some manage to overcome these stumbling blocks and return to techAgri to proudly take their place as Agro-preneurs – those who blend agriculture with innovation and entrepreneurship.

The Expo featured a tremendous variety of local agri-based products. Dean Ganpat’s team organised a mini market and mini workshops and guided visitors to our Cocoa Research Centre and the National Herbarium located on our St. Augustine Campus.

It was a fine meeting place, and now that The UWI has created the platform and provided the opportunity, I urge everyone, whether you are an investor, a Government body, an international agency, an exhibitor, someone involved in agriculture, or simply a member of the public, to see this event as a place to connect to the ideas of self-sufficiency.

TechAGRI was a complete manifestation of our capacity to look after ourselves and future generations – the ultimate measure of sustainable development. Agriculture is no longer confined to the realm of farming, and the range of connected industries can provide us with many opportunities to develop thriving spin-off industries.

Our oil legacy lured us into letting these opportunities fall by the wayside, as the special report on Buffalypso in this tenth anniversary issue demonstrates. But it is never too late to change course, and as we know, adversity breeds innovation.

Our economic circumstance can be seen as an opportunity to spread out and secure our future prudently and creatively.

*Brian Copeland*

**PROFESSOR BRIAN COPELAND**

*Campus Principal*



PHOTO: ANEEL KARIM

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# A GREEN GLIMPSE *of what could be*

BY JOEL HENRY

Imagine a food-secure Trinidad and Tobago, where farmers and manufacturers, supported by investment and innovation, produce world-class goods for domestic and international consumption. Imagine the impact it could have on T&T's \$7 billion food import bill and skyrocketing obesity rates. Imagine what a vibrant food production industry could mean for economic diversification, foreign exchange and employment.

This past March, from Thursday 22 to Sunday 25, UWI St. Augustine's Faculty of Food and Agriculture's (FFA) techAGRI Expo 2018 gave the country a glimpse of what T&T's food future could be.

"The purpose of techAGRI is to draw national attention to agriculture and food," said Dr. Wayne Ganpat, Dean of the FFA, at the opening ceremony. "Make no bones about it, Trinidad and Tobago is not a food secure nation. As a consequence we need all hands on deck to provide some level of food security for our children."

Held at the green and sprawling Admin West Field on the campus, the expo was a festival of agri-entrepreneurs, a vast array of innovative agro-products, fresh produce, the latest in farm technology, seminars, school tours, a food village and even a small zoo. The FFA said that over 200 entrepreneurs took part and more than 3,500 students from primary and secondary schools attended.

Attendees at the opening ceremony included Cuban Ambassador Guillermo Vázquez Moreno, Colombian Ambassador Alfonso Múnera Cavadia, and senior diplomats from the High Commissions of India and Jamaica. Members of The UWI executive such as Pro Vice-Chancellor of Graduate Studies and Research, Dr. Dale Webber, St. Augustine Campus Principal Professor Brian Copeland and Deputy Principal Professor Indar Ramnarine were also there.

Dr. John Alleyne, advisor on agriculture in the Office of the Prime Minister, applauded the expo for its focus on cooperation and pledged the Government's support:

"The Office of the Prime Minister and the Ministry of Agriculture are behind you. We have to work together. It is a collaborative effort – university working together with farmers, working together with (government) to get it done."

Dr. Ganpat also announced several other initiatives aimed at promoting food security. These included the offering of new certificate programmes in agriculture and human ecology, a graduate programme in value addition for food security, the hosting of a national symposium on food security in May 2018 and an international conference on climate change and food security in November 2018.

The Dean also said the Faculty would be working with PVC Webber on a "food and security research cluster across the three UWI campuses."

"Under the leadership of Dr. Webber we will coordinate research and education in agriculture," Dr. Ganpat said. "As the Dean of FFA I promise to be unrelenting in seeking every opportunity within my mandate to build a food-secure nation for our children."

Visitors to the expo took part in tours of the National Herbarium (home to samples of every plant species in T&T), the Cocoa Research Centre and the FFA's laboratories



Deputy Principal Professor Indar Ramnarine, Principal Professor Brian Copeland, FFA Dean, Dr. Wayne Ganpat and Campus Librarian, Mr. Frank Soodeen toasted the introduction of the University Station Goat's Milk. PHOTO: ATIBA CUDJOE



The Zoology Museum's booth was very popular with the students. PHOTO: ATIBA CUDJOE



The FFA said that over 200 entrepreneurs took part and more than 3,500 students from primary and secondary schools attended. PHOTO: ANEEL KARIM

and facilities. They purchased items such as exotic plants, fruit and vegetable beverages, local coffees, soaps and skin care items, handcrafted jewelry and many more. FFA staff and students played a major part in building and manning the expo, as well as conducting tours.

Dr. Ganpat made special mention of the agri-entrepreneurship on display:

"TechAGRI is intended to expose the public to the wide range of food and fruit products that have been brought to market by scores of small entrepreneurs – all based on local products. Many of these entrepreneurs just need a one-stop shop where they can go and get all the help they need to expose their products nationally, regionally and internationally. Well, who will help them?"

The FFA also used the occasion to launch a product of its own, University Station Goat's Milk. The new product, fresh milk from pasture-fed goats will join the highly successful University Field Station Cow's Milk on local shelves.

Speaking on the current national landscape for food production, Professor Copeland said, "we have grown accustomed to a wide variety of food and drink brought here from all parts of the world. Alongside this easy access has been an unnerving increase in obesity and chronic lifestyle diseases."

He added: "Now that access to foreign exchange has become challenging for business and individuals alike it is more than time to lend support to the Ministry of Agriculture in its call to 'buy local' and turn our much touted creativity into profitable endeavours."

"Out of evil can indeed come good. For farmers, entrepreneurs and financiers alike there is opportunity to be had in the current economic state. We just have to go brave," Copeland said.



# MATTA SEASON

## support from GORTT

The UWI St. Augustine hosted its 2018 Campus Council Meeting on March 20. Pro Vice-Chancellor and Campus Principal Professor Brian Copeland presented highlights of the 2016-2017 Annual Report under the theme *Matta Season* which represents critical shifts in focus as the Campus navigates a prolonged testing season.

He shared his vision for creating a culture of innovation and entrepreneurship as the Campus responds to the changing mandate for education, declining economies and a need for strategic but practical approaches to revitalizing the Caribbean.

“For developing nations to get ahead, efforts must go beyond education and training to better equip citizens to use new technologies developed elsewhere. Our national education systems must also seek to strengthen the culture of research that leads to export entrepreneurship and innovation. By its very definition, innovation, through the “newness” of what is produced, enhances competitiveness,” he wrote in the Report.

The Minister of Education, Anthony Garcia, attended the meeting and responded at the press conference that followed. He committed our Government to supporting the work of The UWI by making its contributions to the University in a timely manner.

“Our position has always been that cuts in education do not heal. We will give as much as our resources will allow and will always be here to help sustain The University of the West Indies. In the past ours has been one of the regional governments that has made its contributions on time. We have faltered a bit over the last year or two but I want to give the assurance to the University community that we have a commitment not only to support the university but to ensure that our support is given on time,” he said.

Annual report highlights covered major advancements from each Faculty in offering these practical solutions during the review period. They included:

- The introduction of summer internships with IBM, National Aeronautics and Space Administration (NASA) and Boeing in the USA for students of the **Faculty of Engineering**.
- The **Faculty of Food and Agriculture’s** inaugural techAgri Expo which exposed over 8,000 people, including 2,500 school children to the innovative work of local and regional ‘agripreneurs’.
- The offer of a new suite of income-generating services including translation services, Conversational Language Learning and Teaching of English as a Foreign Language by the **Faculty of Humanities and Education**.
- The **Faculty of Law’s** development of the International Human Rights Clinic supporting the strengthening of Trinidad and Tobago’s capacity for elevating the standard and execution of human rights protection.
- The activation of the **Faculty of Medical Sciences’** MOU with the Regional Health Authorities (RHAs) enhancing the alignment between the Faculty’s output and needs of the sector.



- A smart-grid cyber security training programme offered by the **Faculty of Science and Technology** to managers and policy makers at the Trinidad and Tobago Electricity Commission (T&TEC).
- The establishment of curriculum committees across the departments of the **Faculty of Social Sciences** to ensure curriculum alignment with national needs.

In his final address as Chair of the St. Augustine Campus Council, Mr. Ewart Williams, noted that the campus has managed the financially difficult times admirably, remaining resilient and firmly committed to doing more with less.

“Universities worldwide are engine rooms for game changing technologies and processes, and it is time that our University is seen as a key player in our national diversification strategy. To advance this process, however, there is a critical need for more research funding from Government as well as from the local private sector. I also support the lament made by Principal Copeland in a recent Conference on Diversification, “that the local private sector has not sufficiently taken advantage of the capabilities existing at the University by supporting the relationship between research, product development and entrepreneurship,” he wrote in the Report.

The Campus Council meets annually, largely to receive detailed reports on student statistics, staff matters, strategic initiatives and curriculum updates from key officers and committees.

*(Terri-Ann Thompson)*

The 2016-2017 report is available online as <http://sta.uwi.edu/news/reports/>



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# Crossing to the Dark Side

## *The bitter sweet life of chocolatiers*

BY SERAH ACHAM

**Tucked neatly in a corner** of UWI's St. Augustine Campus, the Cocoa Research Centre is a well-hidden treasure. This is the home of everything cocoa and chocolate, from the fields to the workshop. Among the Centre's various specialty areas is the Food Technology section, the engineers of Fridays at CRC – a weekly meet, greet, fill-your-belly and warm-your-soul event, where you can taste their wares, made in-house from Trinidad's fine flavour Trinitario cocoa beans, learn about their work, and about the potential that lies in our cocoa fields.

A small team, the Food Technology section's scope is far-reaching. Counting Research Assistants, Saila Ramkissoon, Kersha Guevara-Jackson and Kerry Ann Deo, all former UWI students, among its members, the section's knowledge base spans the cocoa industry, from the plant's grafting stage to the end product. This ensures that the team is well-equipped to assist Trinidad and Tobago's cocoa farmers and chocolatiers develop their skills and their businesses.

The section, called "Food Tech" by its members, looks at the cocoa industry from the bean to the production of chocolate. One of its services is to provide quality assessments of cocoa beans.

"We do quality reports for different cocoa farms around Trinidad," says Saila. "People give us a sample of their fermented and dried cocoa beans and then we do our analyses on it and give them a written report" of the beans' physical assessment, their good and bad attributes, their flavour profile, as well as recommendations for improvement. We are like a certification body for quality," she says.

Saila began working at the CRC after she graduated in 2014. A double major in Environmental and Natural Resource Management and Biology gave her the experience

she needed for her first role at the CRC: field work. "A lot of our labs weren't really in the lab doing experiments, but rather out in the field. I was in the Northern Range a lot ... and a lot of the forested areas that are really untouched ... it was fantastic." So, when she was offered her first role at CRC, in its Pathology department, doing plant pathology work at the International Cocoa Genebank, Trinidad (ICG,T) – a living gene bank, she says, with one hundred hectares of land housing fully grown cocoa trees – she was ready. She then moved to the Molecular department, where she "would have been extracting cocoa DNA from different parts [of the plant] ... verifying exactly what kind of trees we have in the gene bank so that we can be sure of the variety." Saila has now worked in each department; Food Tech completing the list. "I came into Food Tech with this broad cocoa knowledge. It was super helpful."

As a part of the section's IMPACT (Improving Marketability and Production of Artisanal Cocoa in Trinidad) project, Saila also ferments and dries beans to show farmers how they can increase their beans' flavour potential. This helps cocoa farmers "move further along the value added chain and so get more money for their beans," she advises, because rather than selling the "wet beans" straight from the cocoa pod, farmers can ferment and dry them. They can then sell their roast-ready beans to chocolatiers.

To provide farmers with a proper understanding of their bean's potential after optimal fermentation and drying, Saila then puts the dried beans through the quality assessment process. After conducting the physical tests, she grinds the beans into liquor. "Then we sit as a team and we taste," she says. This is how they determine the flavour profile of each bean sample.

Liquor-making and tasting is a part of each of the

Food Tech team's research assistants' portfolios. Saila's clear, however, "we taste liquor, not chocolate," in other words, they taste the pure cocoa.

"Liquor is just the cocoa nibs ground into a paste ... It'll be super bitter," says Kerry Ann, adding that, knowing "bitterness is your baseline, you can detect other flavours" in the bean.

It's a skill that they've all been trained in by the Head of the Food Tech section, and Trinidad's very own sensory master, Dr. Darin Sukha. While anyone can simply taste the liquor, the team needs to be able to "ignore the bitterness ... delve deeper and sift" through the different flavours, identify and record them, she says. And precision is key.

From the broader fruity, floral, vegetative and nutty characteristics, they sift down to the specific fruit, and can tell a farmer if his cocoa beans taste like mandarin, passion fruit, bananas or even coconut, which is important, since this liquor becomes chocolate. Trinidad's chocolate, they all confirm, has a distinctive raisin flavour – called a brown fruit flavour – in the cocoa and chocolate world.

Kerry Ann says that their flavour identification work helps farmers to know what their beans would taste like as a chocolate. Farmers sometimes don't understand that the flavour of their beans impacts the flavour of the chocolate they will turn into, so "whenever you're not getting through to someone, you make chocolate," she says. Once the farmers can taste and compare their beans' chocolate, to others, they understand "how beautiful their beans are or how much work they have to do," Kerry Ann explains.

The CRC's chief chocolatier, as Saila calls her, Kerry Ann's work lies primarily in making chocolate. With a nutrition and dietetics background, and a passion for product development, this role suits her. "I knew I wanted to do something, but I didn't know what it was called," she





## ■ SWEET HANDS AT COCOA RESEARCH CENTRE

says. It was only in the final semester of her undergraduate degree, when she enrolled in the Food Product Development course, that she knew, “this is what it is!”

When her relationship with the CRC began, Kerry Ann was deep in her quest for that “aha moment,” and began entering food competitions, “to measure myself, in a way, because I was not sure exactly where I belonged.” She entered CRC’s World Cocoa and Chocolate Day cuisine competition twice, in 2011 and 2013. Though she was disappointed with her performance the first time she entered, by the time the competition came back around, she was game. “I entered my stuff and I came first in [the] drinks [category], second in savoury, second in sweet,” she says. Confidence boosted, Kerry Ann entered more competitions, including one for which she used CRC’s chocolate, “and then, one thing led to the next and I was introduced to Darin. I was asked if I would like to work here [in] product development, which was exactly what I wanted.”

So, she says, “I came over to the 70 per cent dark side.”

Making chocolate is “truly a labour of love,” she says. If you don’t love it or don’t have a passion for the craft, “you taste it in your work,” she says. “When you’re passionate about it, you are more careful with each step in the process, and make sure that things are done correctly.”

Kersha adds that, though turning dried cocoa beans into a bar of chocolate may be a lengthy process, requiring a great deal of attention, it is important to be meticulous in each step, “to really do the chocolate justice.” Just a couple months into her role at Food Tech, she took up this position in February, she admits to not having the passion for food shared by the rest of her team. For her, the science behind the art is magnetising.

Kersha’s connection to the CRC was forged a little over three years ago, when as a Master’s student in Biodiversity Conservation and Sustainability Development, she completed her thesis under the supervision of CRC’s Director, Professor Pathmanathan Umaharan, and worked part-time at the CRC’s Pathology department. She then moved on to the Agronomy section, which was in line with her research interests. “I was always partial to the fields and trees,” she says, and her role in Agronomy allowed her to work directly with the cocoa plants.

When she was offered a position at Food Tech, Kersha saw an opportunity to interact with cocoa in a different way. Her experience working in the gene bank, directly with the cocoa trees, makes her vividly aware of how the field and factory go hand-in-hand. “One supports the other,” she says, explaining that, “the value of the cocoa tree, to me, is something that some chocolatiers don’t understand, [while] persons who predominantly work in the field may not always understand the value in each step of the chocolate-making process.” Having come from a field-work-intensive role, she recognises the disconnect farmers may feel. For a farmer, she explains, cocoa doesn’t taste like chocolate. They’re concerned with the fruit – “how it looks, the size, the smell ... how the pulp tastes. They can tell you about the tree.” The disparity between her different experiences with the cocoa bean helps her connect it at both ends for those who seek the CRC’s services. So when it comes to advising farmers and chocolatiers on their beans, she goes even further back in the cocoa production process than the bean. “I might actually start talking about your tree ... about what you do to get this type of fruit. You want your fruit to be bigger. You want a fruit with larger beans because that’s how you’ll get more mass to make your chocolate.”

That’s the business Kersha has become wrapped in now – chocolate. She’s joined Kerry Ann in the chocolate-making workshop and is learning the craft. The CRC wouldn’t be Trinidad and Tobago’s authority on cocoa and chocolate if they can’t make said cocoa and chocolate, after all. Although



The CRC team of chocolatiers: (from left) Naailah Ali, Saila Ramkisson, Darin Sukha and Kerry Ann Deo. PHOTOS: KEYON MITCHELL

she admits to not having much of a sweet tooth, Kersha is enjoying her experience thoroughly. She particularly enjoys the manipulation of the bean-to-bar process that is sometimes needed to bring out the best flavour in the cocoa bean.

“The chocolate-making process so dynamic for different people,” she says. The process remains the same, but “you can manipulate your beans to get the best results.” For example, if a farmer or chocolatier thinks that their batch of beans may not be particularly flavourful, they can “manipulate the process and still get a good flavour.” Kerry Ann adds that conditions change, whether they be environmental, mechanical, or any other of a number of factors, so, “you have to be ready to fix to suit and make the most out of the bean, in terms of flavour, because you want to show [it] off.”

For Kersha, that’s the exciting part about the cocoa and chocolate industry. Someone can have beans that have a naturally fruity flavour, another’s can have floral characteristics and still another’s can be nutty. “There’s one way to make chocolate, yet you can get all of these great things coming out of this one procedure and ... you stand out.”

In addition to helping local cocoa farmers and chocolatiers nurture their beans to their fullest potential, the Food Tech team teaches them to make chocolate through its Beginners Chocolate Making Training – for which Saila, Kerry Ann and Kersha are all facilitators – as well as its soon-to-come Advanced Chocolate Making Training. The entire team recently underwent the Advanced Chocolate Making Training, led by French chef and chocolatier, Régis Bouet. It was a train-the-trainers endeavour, in which they learnt the fancier side of chocolate making and can now create beautiful chocolate and cocoa products – think bonbons, ganache, truffles, mousse – with our local fine flavour cocoa beans taken straight from the trees at the Genebank.

They’re not keeping all that decadence to themselves, however. To maintain and enhance their newly-learned skills, and to show the public the wealth that lies within our soil, and how the Centre is uncovering it, the Food Tech team started Fridays at CRC.

Most Trinbagonians don’t appreciate the flavour of dark and fine chocolate, however. Saila, who also joins Kerry Ann and Kersha in the section’s product development endeavours, admits that, before working at the CRC, “I was a Cadbury’s [and] Hershey’s Pot of Gold person ... The dark I knew was the Hershey’s Special Dark.” But, when she began working at the Centre and tasted its 70 per cent dark chocolate bar with its natural tropical fruity flavour, she realised what dark chocolate is supposed to taste like. Now, Saila is an ambassador for local cocoa and chocolate and is enjoying learning about the cocoa culture and industries in other countries. She recalls a trip to St. Lucia where she noticed roadside vendors selling the island’s local cocoa tea alongside their other wares. “You would not see anybody on the Maracas lookout selling local cocoa,” she points out. “We’re still very much a Cadbury’s population [but] ... people need to get out of the mind frame that everything from the west is better because Trinidad has one thing that is the best – our cocoa,” she says.

Kerry Ann agrees, sharing her own tale of under-appreciated-chocolate woe, while attempting to share free samples of CRC’s chocolate bars to passers-by at a trade show. “Some persons turned it down ... Then every person that tasted it, and I was there interacting with hundreds of people, would say, ‘oh this is actually good,’ or, ‘this is actually not bad.’” Kerry Ann was struck by the fact that rather than simply pay a compliment, people were surprised that the chocolate was good. It’s sad, she says, but “local is associated with being inferior.”

“It’s a local ignorance,” Kersha says. People have been exposed to a certain quality of cocoa and chocolate all their lives and “that was good enough” for them. They don’t appreciate dark chocolate because they haven’t developed the palate for it. That’s what Friday’s at CRC is working to change. It’s the Centre’s way of “trying to help persons open that part of their minds and expand their palates.” Armed with a tray-full of fine flavour chocolate (or brownies!) and mugs filled with steaming cocoa tea, CRC is making a good effort.



## ■ SWEET HANDS AT COCOA RESEARCH CENTRE

**Chocolate is passion.** We give it as gifts to show love, we indulge in it to seek solace. Chocolate is one of the few foods with which we, human beings, have an emotional bond, says Dr. Darin Sukha, Head of the the CRC's Food Technology section. When you make chocolate, he says, "you are communicating the expression of passion." The CRC is on a mission to teach our local chocolatiers, cocoa farmers and anyone interested, to express that passion through Trinidad's fine flavour cocoa beans, with its Introductory Chocolate Making Course.

Begun in 2013, and with more than 200 graduates, this course is the only fully intensive bean-to-bar training that exists in Trinidad and is, in fact, "one of the few courses in the world that gives you that in depth experience where you start off with cocoa beans and end up with at least six bars of chocolate that you would have made for yourself," says Dr. Sukha. The intention, he says, is to give participants a holistic understanding of "the expression of genetic flavour potential." At the bean to bar level, he explains, it is important for a chocolate maker to understand where the cocoa bean comes from – its variety, how the plant was grown and the beans fermented and dried, because all these elements impact the flavour of that bean. "You're trying to capture the essence of the cocoa genetics you are working with and express that flavour through chocolate," he explains.

This five-day course begins with the backstory of the cocoa bean. Then, participants learn chocolate-making techniques, as well as the social and economic aspects of the industry, including team building and management, and marketing skills like developing their brand, creating their packaging and determining their prices. It's an exhaustive course that ends in a field trip to the International Cocoa Genebank, Trinidad, so that students can experience a real cocoa estate. "Every person who has done the course, always leaves totally blown away," says Dr. Sukha. "They got so much more than they bargained for and that's what I was trying to do when I put together the course. I wanted to give a full experience."

# Want to Make Chocolate?



In an endeavour to introduce another level of expertise to their chocolate-making training, and to satisfy students' desires to do more with chocolate, Dr. Sukha is developing an Advanced Chocolate Making Course. It's already in the works, with the Food Tech team having already undergone a train-the-trainers version of the course, with French chef and chocolatier, Régis Bouet. In creating this course, Dr. Sukha tried to determine "what are the most important things in our [local] context that would be useful as a next step." There are many things, it turns out, including, but certainly not limited to, learning to make different types of ganache (which leads to truffles and other tasty confectionaries), enrobing, dipping and panning techniques to coat fruit, nuts and other fillings in chocolate, as well as perfect tempering techniques and chocolate moulding to create elaborate showpieces.

With its Introductory Chocolate Making Course, and its soon-to-come Advanced Chocolate Making Course, the CRC aims to "create an awareness of the interconnectivity of all the activities along the cocoa value chain," says Dr. Sukha. He explains that, when a cocoa farmer or chocolatier adds to their skill set and product offerings, they move along the chain and add value to their business. He breaks it down – "You start off with a tree which gives you a pod. If I were to sell the cocoa pod, I'll get a certain price. If I sell the beans, I'll get a higher price." Keep moving along the chain, through the cocoa and chocolate production process, and your product's value increases.

For anyone with aspirations in our local cocoa and chocolate industry, the ability to make and sell chocolate is a vital skill, and with the high quality of cocoa that grows in Trinidad, the CRC wants to ensure that all have the opportunity to learn those skills.

Visit the Cocoa Research Centre online to learn more about the Introductory Chocolate Making Course and all the work they do. *(Serah Acham)*



*"Every person who has done the course, always leaves totally blown away," says Dr. Sukha. "They got so much more than they bargained for and that's what I was trying to do when I put together the course. I wanted to give a full experience."*





# COCOA-TEA FRIDAYS *with Lyris*

BY S H E R E E N A L I

**One of life's greatest joys**, especially if it is cold, or if you're feeling miserable and in urgent need of a pick-me-up, is a lovely large comforting mug of hot chocolate. A stress-buster like no other, there's just something about the taste that can make your eyelids lower, your toes curl, and your emotions bliss out in an unaccountable surge of wellbeing.

At the end of the working week, those in the know are popping over on Friday mornings to The UWI's Frank Stockdale building in St. Augustine to get their hit of delicious hot chocolate, or as we in the Caribbean call it, "cocoa-tea." Every Friday from mid-morning there is cocoa-tea on offer, as well as a few chocolate treats, in the relaxing ambience of the building's foyer, just in front of the Cocoa Research Centre. You can also get chilled cocoa-tea.

Get there and you'll be greeted by the smile of Mrs. Lyris Hazard-Wilson, the person mixing and selling the cocoa-tea in the traditional way her mother used to make. The cocoa-tea base itself is a special mix created by the Cocoa Research Centre, derived from its own cocoa beans and its longstanding research into making fine flavours.

When I tasted the cocoa-tea, it had an earthy, sweet taste to it, balanced and very satisfying, with just a hint of spice. It went down smoothly, with the traditional cocoa oils swirling slightly at the top. To my untutored palate, the taste was more subtle and delicious than many leading foreign brands of drinking chocolate, which can taste vapid and overly sweet by comparison: many commercial blends actually use far less of the cocoa's nutritional goodness (contained in the oils) and add a great deal of sugar, corn syrup and vegetable oils. Not so with this CRC blend.

Drinkable chocolate has been used for years to treat maladies: and it's not just old wives' tales. Antioxidants in chocolate are said to help prevent cancer, heart disease, age-related macular degeneration and aging in general because they fight free radicals in the body. According to a 2003 study conducted at Cornell University, the antioxidant concentration in hot cocoa is almost twice as strong as red wine. Cocoa's concentration was found to be two to three times stronger than that of green tea and four to five times stronger than that of black tea. Professor Chang Yong Lee, the leader of the Cornell study, added that the "hot" in "hot chocolate" is important as well. More antioxidants are released when it's heated up, reported Melissa Breyer writing in the November 2012 online issue of The Mother Nature Network (<https://www.mnn.com>).

Citing the study, she went on to note that a cup of hot cocoa contains 611 milligrams of the phenolic compound gallic acid equivalents (GAE) and 564 milligrams of the flavonoid epicatechin equivalents (ECE). The antioxidant gallic acid is used to treat internal hemorrhages, albuminuria and diabetes. Although a regular bar of chocolate has strong



PHOTOS: KEYON MITCHELL



antioxidant activity, the health benefits may be outweighed because of the saturated fats present — cocoa generally has much less fat per serving compared to the 8 grams of fat in a standard chocolate bar. And the flavonoids help your body process nitric oxide, which is why hot cocoa can improve blood flow, help lower your blood pressure and improve heart health.

Lyris, a caretaker at the CRC building, enjoys making the cocoa-tea on Fridays to help promote the Centre's activities. She has worked at The UWI for 23 years, and of that time, worked 19 years for the Faculty of Agriculture, before coming to the CRC four years ago.

She says she loves working near agricultural researchers because of what they do: "the nature of working with creation" appeals to her. She remembers being inspired by the "cocoa dream" from a speech she heard at The UWI many years ago.

"I used to make cocoa-tea for my kids from small. We got cocoa-tea from Grenada in balls, and we would grate it. We would grate about a fist-roundness of the cocoa-ball, put it to boil, and add bay leaf, spice, nutmeg, condensed milk and a bit of evaporated milk into the boiling cocoa. We would get about 10-15 cups of tea from that."

That smelled beautiful on a morning, and was a traditional Christmas drink, she remembers: "You can't have Christmas breakfast without that cocoa-tea."

"Wow! There is always that pleasure in the eyes when you feel the taste of cocoa-tea. There is a smooth taste; it's a different, stronger cocoa taste. Even before you add other things to your own cocoa-tea, you could smell the cocoa itself."

Lyris learned to make cocoa-tea as a ten-year-old from her mother: it was part of their tradition from home, living in Paget in the east. About her mother, she recalls: "She loved food, she loved cooking. I was always interested in being around her and learning."

"We make cocoa-tea for every guest who passes through the Cocoa Research Centre," says Lyris. Then members of other departments began asking for cocoa-tea for their own conferences. Then just about a month ago, the CRC decided to start "Fridays with CRC."

I was lucky last Friday to sample not only the cocoa-tea but also a scrumptious blackberry chocolate ganache treat on sale, made by cocoa researcher Naailah Ali.

I share an anecdote about a chocolatier called Rosemary from 20 years ago, who once told me: "Chocolate is full of love!" Lyris smiles.

"I love people. I love bringing pleasure to people's faces. Cocoa-tea does that! And you know they say that charity begins at home. No matter how much cocoa-tea I make here, it is never enough! People come and ask for some, students and their friends... You know, love goes a long way."



**"Every Friday from mid-morning there is cocoa-tea on offer, as well as a few chocolate treats, in the relaxing ambience of the building's foyer, just in front of the Cocoa Research Centre. You can also get chilled cocoa-tea."**





## Buffalypso's Last Stand ■ SPECIAL REPORT BY VANEISA BAKSH

If this were a Netflix documentary, we would open on a rustic village scene of Indian descent. A peasant farmer would be yoking a buffalo to a wooden cart, while chickens would be briskly pecking at the dry, patchy grass underfoot. Two half-clad children would peer shyly out from the doorway as their father climbs onto the cart and trundles off to another back-breaking day in the field.

We would be taken on a journey from India to Trinidad, replete with breathtaking vistas of hundreds of acres of land with water buffalo of varying hues and horns grazing languidly. We'd be taken through industrial plants where Buffalypso hides are being transformed into leather; to fancy restaurants where the lean, red loins are being served as a preferred beef substitute; to roadside stalls where fiercely marinated strips would be sizzling on grills and topped with imaginative Trini sauces; we would be watching celebrity chefs on TV rhapsodizing about the mozzarella cheese that has to be made from Buffalypso milk. Oh! And what are they saying about paneer and kulfi? You'd be salivating when you hear.

But this is neither a Netflix documentary, nor is it a success story. In fact, it might qualify as the worst case of Trinidad and Tobago missing out on something that was created here that has been so undernourished as an industry that it might just have made itself extinct, while several countries have developed something rich and viable from the Buffalypso they imported from local pastures.

If that sounds like the story of the steelpan, it is simply the same pattern, except that the steelpan has a whole lot of life in it, and will survive, and maybe even prosper.

In this sad tale, a once vibrant collective herd of roughly 6,000-8,000 water buffalo has been dramatically whittled, mainly by the dreadful Brucellosis infection, but exacerbated by neglect and a lack of resources.

It is a story that began with the vision of a veterinarian, Dr. Steve Bennett, who saw the potential for a meat industry to be developed by refining the breeds of water buffalo that had come from India. (See *The Journey of the Buffalypso*.) Once the strain that he joyfully named Buffalypso came into being, the possibilities opened up.

The meat was not beef, though it had a similar taste – thus making it permissible for Hindus to eat it – and it was leaner and less marbled, making it healthier. Buffalo milk had been embraced as the basis of the popular Mozzarella cheese in Italy and other European countries, and was a staple in the production of Indian products, such as paneer, kulfi, yoghurt, ghee, and sweets like barfi, rasgulla and rasmalai.

The hide was as thick as an elephant's making them particularly resistant to ticks, which are the plague of cattle, but also lending itself to particularly durable leather that was well suited for furniture.

To cream it off, the germplasm from this superior breed of the water buffalo could be the basis of an exclusive line of cattle exports. In fact, a 2007 report in the Italian Journal of Animal Science, stated that the Buffalypso had been exported to 19 countries, including the USA, Colombia, Cuba, Costa Rica, Guatemala, Honduras, Mexico (via Honduras), Nicaragua, Panama, and Venezuela. The industries in those places have moved forward profitably.

With all of this, who would not be tempted to invest in opening up a buffalypso industry?

The State was, or so it said.

The 2012-2015 Action Plan for the Ministry of Food Production, Land and Marine Affairs (still posted on the site for the Ministry of Agriculture, Land and Fisheries, so I assume it is still The Plan) has this section:

### *Buffalypso/Buffalo*

*Facilitate the development of the Buffalypso meat industry.*

*Conservation of the genetic material of the Buffalypso through the development of a gene bank and development of herd registry and herd book.*

*Facilitate the development of the Buffalo milk industry.*

# The Horns of A DILEMMA



In March, members of a committee planning a symposium on the Buffalypso, visited the Mora Valley Estate. One of the committee members, UWI PhD student, Akilah Stewart took this photo of part of the herd.

*The meat was not beef, though it had a similar taste – thus making it permissible for Hindus to eat it – and it was leaner and less marbled, making it healthier.*

*Continue to maintain the bio-security of the Aripo Livestock buffalo herd.*

*Implement a management program for Brucellosis with a view to eradication.*

So far, so good. If all goes according to plan, it sounds like a heap of positive things. Except for the timeline.

That's the twist in the plot.

In 1998, twenty years ago, Brucellosis, a dreaded cattle infection, was detected within the buffalypso community and everything changed.

In April 2017, a status report on the water buffalo industry was published in "Tropical Agriculture (Trinidad)". Its aim, said one of the authors, Riyadh Mohammed, was to try to get a grasp of the size, location and state of the water buffalo in T&T. Based on surveys done in 2012, the data tell a story, best repeated in their words.

"A test and slaughter brucellosis eradication programme, instituted by the Government, resulted in the three large WB (water buffalo) producers selling their stock and closing their WB production operations. Based on annual reports, 3255 WB were slaughtered due to a positive brucellosis status from 1998 to 2008."

Those figures were taken from the Ministry's report for 1999-2009.

The researchers noted that in 1999, the Animal Health Division tried limited vaccination with RB51 – a commercially available vaccine in the USA that had had some success with bison – but it did not protect the WB.

The infected herd was confined to the 1657-acre Mora Valley Estate in Rio Claro in 2003. A 2015 Ministry of Food Production Project Document, prepared by a Mora Valley Steering Committee, noted that the main operations were "cocoa production and water buffalo rearing but in 2003,

operations on the cocoa estate ceased and some of the animals were sold/left abandoned."

The document goes on, "The estate was to be restocked by 2006/7 but this did not materialize. The livestock farm was originally 1400 acres, but some of the land was distributed to ex-Caroni (1975) Ltd employees in 2008/9 while some was divested into MFP large farm in 2012/13."

Using figures from the status report, the State owned 1021 head of Buffalypso in 2012, and the majority were infected with Brucellosis at a rate that has not decreased over 20 years. Plans to develop a Buffalypso industry have never materialized. There are only a few of the 'pure' Buffalypso remaining at the Aripo Livestock Station – an entire germplasm can be lost.

Despite numerous representations on the potential for a Buffalypso milk industry – based on the high butterfat content of the milk – nothing has ever been done to establish even facilities for this. I was told that because it is not classified as milk, it cannot legally be sold as such.

The infected herd at Mora Valley has literally gone wild, a feral bunch that roams the vast acreage, fending for themselves and not accountable to anyone (except for Deolal, the single keeper who can walk among them). Nobody can accurately tell the size of the herd, or how many are infected with Brucellosis, or whether they have strayed off the premises.

People who once kept herds have given up, mainly because there has been little support for Buffalypso as either a meat or dairy industry.

It is truly another sorry tale of neglect.

If this were a Netflix documentary, it would have taken us on a long journey full of promise, potential, and magnificent vistas along the way, but as the shadows lengthen, the cameras would pan in on that one man on his Buffalypso cart, returning home, dusty, bedraggled and hungry, with nothing to show for his day of hard labour in the fields of misfortune. And the sun would set innocuously behind his back.





## Buffalypso's Last Stand ■ SPECIAL REPORT BY VANEISA BAKSH

# A Grim Inheritance

**The current Minister of Agriculture**, Clarence Rambharat, has inherited this unpleasant state of affairs and he knows that it has come down to making the best of a terrible situation.

“It is widely accepted that despite its initial presence in T&T since the 1980s and its rapid increase in the mid-1990s little was done towards the eradication of Brucellosis. I am at pains to differentiate between the eradication of Brucellosis and the eradication of Brucellosis-positive animals. One will lead to the other, but this is in no way a destruction of the genetic material or an abandonment of livestock development. On the contrary, tackling Brucellosis frontally is a mandatory part of developing the sector,” he said in an email exchange.

He said that a PAHO/WHO Report on Brucellosis in Trinidad and Tobago, dated April 30, 2013, had inputs from a team at the Ministry of Agriculture, which included the Permanent Secretary, the Chief Technical Officer, the lead of the Livestock Division and the Chief Veterinary Officer, and that representatives of the Ministry of Health and the Livestock Board also participated.

He said that the Mora Valley herd “is the highest contributor of Brucellosis numbers in Trinidad,”

(Estimates are that the herd numbers less than a thousand head, but it is difficult to verify because even perimeter fencing has been compromised.)

The Minister identified five items as the “key takeaways” from the Report:

1. Health and Agriculture need to work together.
2. Isolate and slaughter the positive animals at Mora Valley and Sugarcane Feed Centre.
3. Identify and preserve animals for future breeding.
4. Develop a coordinated plan and involve Nestle. This should include surveillance.
5. Review the law.

He also identified the steps he had taken since he assumed office in 2015.

- “Taken a policy decision in July 2016 to implement the PAHA/WHO recommendations.
- Engaged Dr. Marlon Knights to conduct a comprehensive livestock sector review, including a review of Brucellosis and the impact on the genetic material.
- Formally took a leadership role on Food Safety and the working relationship between [the Ministries of] Health and Agriculture. Presented the Minister of Health with Terms of Reference for our Ministries to collaborate closely. This has gone well, and a National Food Safety Policy and the supporting manuals are at an advanced stage of drafting after technical work and public consultations. This is supported by PAHO and FAO.
- Commissioned work on animal health legislation; participated in reviews of draft; participated in consultations; that draft is at an advanced stage of



Entrance to Mora Valley Estate. Minister of Agriculture, Clarence Rambharat says “the Ministry will cull the herd while at the same time preserving the Brucellosis-free genetic material we have at Aripo.”

preparation. This is supported by IICA.

- I have met with Nestle on several occasions. Nestle brought in dairy experts from Brazil. We have agreed on a project to identify and develop model dairy farms using existing farmers and farms; a working committee has been agreed on and this is close to finalization.
- Mora Valley is doing the culling – not complete or accelerated eradication.
- Dr. Knights is working on identifying the best genetic material for the purpose of preservation and long term breeding.”

When I asked him about the State’s plan, he said he has articulated the position several times.

“We cannot develop Buffalypso without addressing the high level of Brucellosis positives in the largest herd [at Mora Valley]. So, the Ministry will cull the herd while at the same time preserving the Brucellosis-free genetic material we have at Aripo. At the same time we will shift our attention to using one of the farms – no decision yet on which one – to expand the number of Brucellosis-free animals we have available. Any further policy decision will be dependent on the interest of private farmers in Buffalypso for their own herds.”

He also explained that, “From a policy perspective the genetic material is important to the country and this is being addressed. At the same time, for the long-term development of Buffalypso, we have to reduce the number of Brucellosis-positive animals in accordance with expert advice and develop Brucellosis-free herds.”

It is not a new plan, but what will make the difference is the will to implement it.

Few are hopeful. They’ve heard it too many times before.

**The Culling Fields: Some of the herd at the Mora Valley Estate.**

PHOTOS: NANDITA RASTOGI







## Buffalypso's Last Stand ■ SPECIAL REPORT BY VANEISA BAKSH

“There was a long-held assumption that water buffaloes were supposed to be resistant to diseases such as tuberculosis. When I did post-mortems on water buffaloes that had died, I found that contrary to unfounded beliefs, the water buffaloes did have tuberculosis. I decided to develop a TB eradication programme. I had done this type of work the year before I graduated from college. I worked for the State of Washington in the west coast of the United States. I was doing TB testing and also drawing blood for the control of Brucellosis. I did that job for three months so I was fully aware of what I was doing, and the benefits derived from doing it. When I tested the water buffalo herd for the first time I found that over 33% of the herd were infected with TB. This finding necessitated changes in procedures. I suggested that the pens in which these animals were kept had to have a concrete floor, and not a mud floor. Secondly, that all feed fed to the herd had to be off the ground [raised] and be fed in mangers or in “racks” and that clean water had to be available 24 hours a day, if there was going to be any hope to develop a TB-free herd. In other words, I could not slaughter 33% of the herd because the company needed these animals for pulling the carts during the harvest season. Disease control was imperative, but had to be pursued with common sense to be able to keep the operations ongoing. All animals, however, that were positive to TB, were put in one isolated pen and I started to test them every 6 months. The testing procedure was really a rodeo in itself. I had no facilities whatsoever. I needed to be innovative. I had to starve the infected buffaloes to be tested for two days. After the starving regimen, the herdsman would bring feed and put it in mangers for them to eat.

While they were eating I would have an assistant cleaning the tails off with alcohol, which I used as an antiseptic, and I would just come along and start injecting them with tuberculin for the TB test.

When I started to work at Caroni, no one knew anything about the management of large cattle herds and husbandry in general. I had to train whoever was working with me. It took me 10 years to eradicate TB from the water buffalo herd. I used the following policies – any animal that

was positive for TB in the herd went to the abattoir or the slaughterhouse and if the infected animal showed evidence of “generalized” TB, it was condemned and destroyed. For animals infected with localized lesions, the part(s) were condemned and the rest of the carcass went to market.

As a veterinarian with a passion for improving livestock agriculture in my island, I was truly convinced of the benefits of the water buffalo to the agricultural economy. The animals were hardy and could adapt to just about anything. I figured that if they could thrive under adverse conditions that they have got to be special and I was determined to improve their genetic traits. There was very little published about them at that time, because water buffaloes were predominantly raised in underdeveloped countries where little research is conducted. There were two “breeds” that I was interested in – one was the Asiatic or Swamp buffalo, and the other was the Indian or Riverine buffalo. India at that time had half the world’s water buffalo population, approximating about 60 million head. The Indians were eating the meat because they were not cattle and were not prohibited by religious decree. In India, Hindus do not eat meat from cattle because the animal is sacred and revered. I started to modify the water buffalo for tropical meat production. These animals were so hardy and able to adjust to varying environments and resistant to diseases that they became the logical choice and an important part of my life’s work.

A company started to make beer in Trinidad, later called Carib – a popular beverage for beer lovers throughout the Caribbean. The residuals from beer-making were usually discarded. I began to take that left-over residual and feed it to the water buffaloes; they thrived well on this feed supplementation. I was convinced that I was on the right track. This was the initiation into the development of a beef-type water buffalo. I was encouraged by the nutritional gains made to help transform these animals to look like traditional beef cattle. My college courses at Guelph, where I majored in animal husbandry, included a lot of judging of beef cattle that finally paid off.

I began to build an image of water buffaloes and promote them as beef-type animals. That was unheard of



# The Journey BUFFALO

Dr. Steve Bennett wrote an account  
“Singing Steven” when he  
Here are some excerpts from  
“Changing the water buffalo”



because it did not fit the traditional pattern and use of water buffaloes. The first quarters (withers) of the water buffalo was very high and there was somewhat of a hammock back and when you got to the hook bone they sloped right down severely onto the thin bones where the tail is located. I tried to straighten that up because once I accomplished that trait over the years genetically, there would be much more good meat on the rump. The feat I was able to achieve over the years by selective breeding and some of the water buffaloes that I developed were approaching an ideal beef-type animal.

In the process I made mistakes, but I was able to straighten them out in time. Interestingly, the whole herd that I was working with was completely inbred because no buffaloes were imported into Trinidad after the last lot in 1948. The choice pieces of beef are loins and are in demand by customers. I also selected other traits to improve characteristics into the buffalypso herd. When we compared the Jamaican Red, the Zebu, the Jamaican black

*Water Buffalo from India had been  
which were being deci*



# ney of the LYPSO

ount of the process in his book  
e was in his late eighties.  
a Chapter 7, which he called,  
falo into the Buffalypso.”



and Holsteins with the buffalypso using grazing criteria and weight gains, the buffalypso performed better. The beef cattle were gaining 1.4 pounds of weight per day, while the water buffaloes were gaining 1.6 pounds.

One reason for the differences is that cattle during grazing are somewhat selective, whereas the water buffaloes would eat anything.

In Venezuela, the ranchers used water buffaloes to follow cattle in pastures. When the cattle were finished grazing one pasture, they were then transferred to another pasture and the water buffaloes would be brought in to consume everything left behind. A point of interest is that water buffaloes will consume grass that cattle would not touch, making this behavior a distinct advantage over cattle, especially in regions of the tropics with limited good pastures. In addition, I started to feed the water buffaloes on the residue of sugarcane, called bagasse – it was when all the juice was squeezed out of it and the pith was all left.

en imported to replace the Zebu,  
mated by tuberculosis.

We added molasses to the bagasse and also used chicken manure because it is very high in nitrogen and a good source of protein. The animals were fattening very well on this ration. The buffalypsoes had terrific digestive systems and over time improved dramatically. We decided to start exporting them.

The first lot we shipped overseas was in 1956 to Columbia. We further expanded the exports to 19 different countries, including the USA, Cuba, Venezuela, and countries of South and Central America. The importing countries have all been very satisfied with the buffalypsoes. They can work, and their milk is also excellent with a high butterfat content. In the South American countries, for example, Venezuela, the importers made queso de mano and queso blanco. These are white cheeses and very popular with consumers. It is also well known that all the Mozzarella cheese made in Italy is from water buffalo milk. They are well diversified and useful animals in agricultural development. If water buffaloes were indigenous to developed countries, I do not think that cattle would be as popular as they are because they [buffalypso] thrive on rough pastures unlike beef cattle.

For many years water buffaloes were often referred to as “bison” or “hog cattle.” Their fat is always white and that is an advantage because in traditional beef cattle breeds, the only time you get white fat is in cattle that have been force fed and fed on special rations, otherwise the fat is usually yellow. When you buy premium cuts of meat, the fat is usually white, because the animals were fed a better type of food which results in a higher plane of nutrition. We have a huge Muslim population in Trinidad. Religious practices prevent the eating of pigs (hogs) or of touching hogs. I recommended that we do not associate the name “hog cattle” with the water buffaloes to avoid confusion. The next name was the bison, which got confused with the American bison that runs on the plains of the United States. I had to get rid of that name also.

I eventually ended up calling our beef-type water buffaloes – the buffalypso. The logic in the name was that Trinidad was the birthplace of the calypso.



## Buffalo Soldier

**Stephen Penlyn Bennett** (January 28, 1922 – December 18, 2011), received many awards for his contribution as a pioneer in veterinary medicine and as the man who developed the buffalypso, among these are the Chaconia Medal, Gold (1984) from the Government of the Republic of Trinidad and



Dr Steve Bennett was conferred with an honorary degree by The UWI in 2001.

Tobago, and an Honorary Degree from The UWI (2001). There is also a Steve Bennett building at the School of Veterinary Medicine.

He received his diploma in animal husbandry from Guelph University and returned to Trinidad, where he soon went to work at what was Tate & Lyle, a British company primarily involved in the sugar industry. A July 1971 bulletin issued by Caroni Limited and called “Birth of the Buffalypso,” carried a foreword by Gordon Maingot, the Managing Director, that said:

“Last year, a controlling interest in Caroni Limited was purchased by the Government of Trinidad & Tobago from Tate & Lyle with public funds. This in effect means that the people of Trinidad & Tobago now control the means of production in one of the nation’s most vital industries.

“The Company has since adopted a new emblem. It features the head of a ‘Buffalypso,’ a special type of beef buffalo that Caroni Limited has been developing over the past 20 years. This emblem will serve as a reminder of the new position of Caroni Limited as a full-fledged corporate citizen of Trinidad & Tobago.

“It is appropriate, therefore that this bulletin should describe the development of the unique Trinidadian Buffalypso.”

Although he had been primarily a man of the horses – and remained one until his death – he became a key figure in Caroni’s growing cattle interests and was able to change the way in which herds were housed and nourished, which was followed by livestock farmers in the country. His life’s work was centered on developing the strain of buffalypso that emerged from his breeding experiments with six of the breeds originally imported from India. Indian water buffalo had first come to Trinidad in 1905 and by 1919 they were put to work on the sugar plantations, a replacement for the Zebu who were dying in large numbers from tuberculosis. (It was the same principle on which Indian indentureship was based.)

From the various accounts of the work he did, and the obstacles he surmounted, it is clear he was an extraordinary man with an indefatigable spirit and a strong sense of confidence in his capacity to persuade even the most cynical.

His personal story and the development of the buffalypso is a rugged saga, the kind associated with pioneers, frontiers and immigrants... but it does not have a happy ending.





## Buffalypso's Last Stand ■ SPECIAL REPORT BY VANEISA BAKSH

# The Case for Culling

To get a better understanding of the nature of Brucellosis, I asked two lecturers from the School of Veterinary Medicine at The UWI, to explain its nature and impact on cattle, particularly the Buffalypso. Dr. Michael Diptee, a veterinarian in the area of veterinary medicine and surgery, lectures in Large Animal Surgery. He has a special interest in Brucellosis. Dr. Winthrop Harewood is a Senior Lecturer in Food Animal Medicine and is Head of the Clinical Veterinary Department. The Livestock Advisor to the Minister of Agriculture, Dr. Marlon Knights also shared his position on some of the questions.

### What is Brucellosis?

**DR. DIPTEE:** It is an infectious disease caused by a gram-negative bacteria that can persist in the environment invariably depending on temperature, pH, and humidity. The bacteria affect multiple species and can spread from animals to humans. Humans acquire *brucellosis* when they come in contact with contaminated animals or animal products, most commonly from the ingestion of raw milk or cheese.

### What does it mean for buffalo infected with Brucellosis?

**DR. DIPTEE:** Infected buffalo are prone to abortions, low milk production and even infertility when infected. It is caused by an intracellular bacteria and thus requires prolonged treatment with clinically effective antibiotics. As such there is no cost-effective treatment for infected livestock.

### I understand it can be managed, what does that entail?

**DR. DIPTEE:** When Brucellosis is detected, infected animals are identified and later slaughtered at a Brucellosis-approved abattoir (at the Sugarcane Feed Centre).

**DR. KNIGHTS:** What is the definition of 'managed' and to what end and under what conditions? My suggestion that the herd at Mora Valley should be culled is an actual management strategy.

1. Your management strategy will vary depending on how widespread the disease is or conversely how localized. Thankfully Brucellosis is localized and the best strategy would be to ensure it does not spread even if that means culling the herd.
2. Your management strategy depends on what you see as the potential role or function of that herd. Remember it is probably nearly 25 years since this herd has been infected. Certainly if the function of the herd is a source of genetic material then over the last 25 years we certainly have not been using it for that purpose. The management strategy of test and cull and return to the same environment has not worked, and the population has continued to dwindle while still remaining as a potential source of infection for animals outside of Mora Valley.
3. Your management strategy for Brucellosis must consider the existing level of overall management of the animals. Even after discovering the disease some 20-25 years ago many basic practices was not put in place. Two of the major deficiencies is the lack of controlled breeding and animal identification. Additionally appropriate fencing is still lacking. These are significant undertakings and still will not be sufficient.

4. Some will suggest vaccination. There are risks involved in with this, including the possibility of the vaccine causing disease in humans if accidental injection occurs. Moreover there is the issue of identifying animals that were naturally infected from those who were vaccinated. While the technology does exist to do this, who will be the ones to guarantee that a seropositive animal was actually due to vaccination and will be willing to let that animal leave the farm? Even the best vaccines are not 100% effective and there still exist questions as to if and when animals need to be revaccinated to maintain protection. We need to be careful that we do not take a localized problem and make it a national issue.
5. Then there is the question of what is the true demand for our water buffalo genetics. Yes we did supply genetics in the past but in terms of development of the animals, whether for growth or milk production, many countries have much more developed animals. It is my belief that the herd at ALS can adequately be managed to meet the need for breeding stock locally.

### Do we have the capacity to treat/manage it locally?

**DR. DIPTEE:** The simple answer to this question is no. We lack the political commitment to deal with this problem. Brucellosis was identified in water buffalo in 1998 and up to today (20 years later) the problem exists. Depopulation was not considered possible due to economic factors and the loss of genetic variability.

**DR. HAREWOOD:** I am not aware about any effective treatment options for Buffalypso with Brucellosis. There are options to manage Buffalypso herds which have been

exposed to Brucellosis. The option one uses will depend upon what one wishes, this is usually related to the purpose for which the animals are kept. One management option for an infected herd or animal(s) at risk of getting infected is a vaccination. This requires a vaccination protocol, and use of a vaccine which increases the immunity of the animal(s) to withstand the infection by the causative bacteria, with minimal signs.

**DR. KNIGHTS:** Based on what has occurred in the past and what I identified above, I would say no.

### Even if a vaccine is available and administered, would that be relevant to the herd at Mora Valley?

**DR. DIPTEE:** No! The current vaccines used on cattle are not effective in preventing Brucellosis in water buffalo. Test and slaughter is the only means available to manage the disease in T&T. It is also impossible to test the entire herd of buffalo at Mora Valley because some wild buffalo live in the forested area there.

**DR. KNIGHTS:** Based on the above no. I do not believe the Government should be in the business of beef production, which is essentially the only purpose Mora Valley serves at this time. To clean that herd up so that it can be used as a source of breeding animals will be extremely difficult. In any event the management at that site will eventually involve depopulating even if potentially positive animals are moved to another site. Moving animals from that site puts cattle and buffalo production throughout Trinidad at risk

(Dr Adesh Ramsubhag, a microbiologist at The UWI, has been exploring the efficacy of the vaccines. "We need to seriously explore alternative strategies for managing Brucellosis in local herds. It appears that imported vaccines currently used are not working. This may be due to the occurrence of unique strains of the disease-causing agent in this region. If we can confirm this by studying the disease in more detail, we may be able to help with developing more suitable and effective vaccines for protecting the animals in Trinidad and Tobago," he said.)

### How safe would it be for humans to consume the meat and milk of infected cattle, even if they are being treated?

**DR. DIPTEE:** When milk is pasteurized and meat is cooked, it is made safe by heating it just long enough to kill the Brucellosis disease-causing germs. Infected Buffalypso are slaughtered. The reproductive tract, mammary glands and lymph nodes are removed to ensure that the meat is safe for human consumption.

**DR. HAREWOOD:** It really depends upon how you define safe. Also on what is done with the meat and milk prior to human consumption. I suspect it also depends upon the state of one's immune system. If you work with the "one-size-fits-all" concept, you would most likely want to advocate avoiding Brucella-infected food, milk and milk products, especially when the alternative is readily available.

**DR. KNIGHTS:** The Same procedure must be employed; all animals must be slaughtered at the Sugarcane Feed Centre.

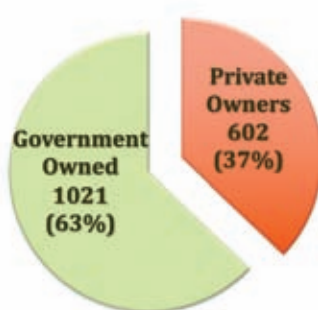


Figure 1: Total population

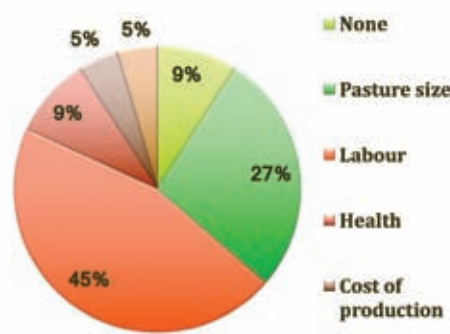


Figure 2: Constraints faced by Private farmers

Source: A status report on the water buffalo (*Bubalus bubalis* Linnaeus, 1758) industry in Trinidad. A. Mohammed, M. D. Diptee, A. Persad, R. Mohammed, N. Lambie and S. Sieuchand.





## Buffalypso's Last Stand ■ SPECIAL REPORT BY VANEISA BAKSH



# Which Tastes Better: BUFFALYPSO or BEEF?

From a Rastogi family backyard barbecue lime, Buffalypso on the grill. PHOTO: GREGORY BALLY

Many people will tell you they have never even heard of Buffalypso, far less tasted its meat. In Trinidad and Tobago, far more people may have tried it than even they realise.

In the sixties, Buffalypso designer, Dr. Steve Bennett had written that, "Ever since I can remember, buffaloes have been slaughtered in the abattoirs and sold in the market without discrimination as beef – yet many Trinidadians do not realize this fact and, if asked whether they have ever eaten buffalo meat, would reply that they have not, although they have probably consumed it unknowingly on several occasions."

Someone who once had a herd of Buffalypso in its heyday, recalled its characteristics.

"It is different from beef, less fatty and very red in colour. The taste is slightly milder than beef, if barbecued. It's been twenty years since I last ate it," he said. He said that the younger animals, and those that have been properly fed, "produce good quality meat at a lower price than bovine animals."

In the early days, as Dr. Bennett was refining the Buffalypso to get more meat out of it, taste was also an important factor in trying to persuade others of the potential for a meat industry.

In 1961, Dr. P.N. Wilson, published an article in the Journal of the Agricultural Society of Trinidad, "Palatability of water buffalo meat," describing tasting sessions he had conducted.

"In taste-panel studies in Trinidad, cooked joints from three carcasses Trinidad buffalo, a crossbred steer (Jamaica-Red/Sahiwal), and an imported carcass of a top-grade European beef steer-were served. The 28 diners all had experience in beef production, butchery, or catering and were not told the sources of the various joints. All the carcasses were held in cold storage for one week before cooking. The buffalo meat was rated highest by 14 judges; 7 chose the European beef; 5 thought the crossbred beef the best; and 2 said that the buffalo and crossbred were equal to or better than the European beef. The buffalo meat received most points for color (both meat and fat), taste, and general acceptability. There was little difference noted in texture."

Dr Bennett, had written of the purpose of these tasting sessions for the Caroni Limited Bulletin of 1964.

"To popularize this meat and unbiasedly test its acceptance, Professor Peter Wilson of the University College of the West Indies, some years ago, sponsored several palatability dinners. At the first one he invited about forty-odd people who included several caterers from leading hotels, including those from the Trinidad Hilton, Farrell House, Bel Air and others."

Describing a session held under similar conditions, Bennett wrote, "The gourmets were given a card, not knowing

what meat they were eating and asked to score points according to flavor, fat, etc. The buffalo beef won hands down on all scores."

More than fifty years later, even as the meat industry never took off, the Ministry of Food Production came up with another idea to promote the Buffalypso as an indigenous meat to be served at top restaurants.

In 2014, Mrs Leela Rastogi, on behalf of the Ministry of Food Production, sent some meat to Chef Joe Brown (Jaffa's) and to Chef Khalid Mohammed (Chaud), asking them to prepare some dishes with the Buffalypso so that the public could sample its diversity.

The "Newsday" reported that "The tasting menu on the evening of September 26 included tartar, meat balls, sliders (mini burgers), kebabs, BBQ style home-smoked Brisket and Rib-Eye Roast."

It was curious timing, because at this point, the Government's herd was already heavily infected with Brucellosis and the numbers had fallen drastically. The Minister of Food Production, Devant Maharaj, was interviewed by "Newsday", telling them that "the relatively small size of the herd; between 900 and 1,200 head, means the Ministry cannot yet supply buffalypso meat to the general population on a regular basis."

This he said was the rationale for marketing the meat to the premium restaurants. The report went on, "Hence the decision to 'market the meat to 'premium' restaurants." Another, equally important reason, for doing so is that the herd is "grass-fed, organic-fed" on acreage in the Mora Valley in the Tableland area of south Trinidad.

"This adds to the healthy component of the meat because grass-fed buffalypso is not only a leaner red meat than beef, it has fewer calories," Maharaj pointed out. "It's therefore a premium meat and we have to market it as such to restaurants with a clientele who can afford it."

Chef Brown was noncommittal in the report, saying that customers could call to find out whether or not he has Buffalypso.

I tried to reach both chefs for their assessment of buffalypso meat. Chef Mohammed said, "I found the meat to be good for stewing, braising, etc. but not for roasting or grilling as it was tough."

But he would be willing to give it another shot.

"I will definitely be interested in using it as I always prefer to use local products where I can, and I think it will be very interesting to our foreign and local customers," he said.

## The Buffalypso Committee

There are several papers, workshops and entreaties for the establishment of a milk industry coming from the Buffalypso. Most of it stretches back for decades, and at the heart of most of them is the name Rastogi – both Leela and Rajendra – who have been passionate advocates for developing both the milk and meat elements of it. Now retired, Mrs. Rastogi has visited several of the countries where the Buffalypso had been exported and during her time at the Ministry of Food Production she sought many ways to excite people about the prospects.

She is a member of the steering committee which is planning to hold a symposium on the Buffalypso in June, mainly to discuss the current state of the Buffalypso and the decision to eradicate the infected herd, but also to try to revive interest in something she calls, "potential and lost opportunity." She talks about a visit to Columbia where a big breeder is developing the Buffalypso Columbian; and a visit to the World Buffalypso Congress in Caratagena where Buffalypso queso was on display at the expo.

Her frustration is as clear as Professor Brinsley Samaroo's, a retired historian, who told me about the planned symposium and their fear that the herd will be destroyed before anyone even knows what is going on. It goes deep for him as a boy from Rio Claro who grew up among cattle, including water buffalo. When he went to India to study, he said, "for five years I drank buffalo milk."

There are powerful emotional connections for these two, and they have teamed up with others from The UWI to try to raise awareness of the plight of the buffalypso and the potential for reviving the industry. The committee is co-chaired by Dr. Karla Georges and Dr. Marc Driscoll from the School of Veterinary Science.

### The Planning Committee

**Prof Brinsley Samaroo** (*Principal advisor*)

**Dr. Karla Georges** (*Chair UWI-SVM*)

**Ms. Akilah Stewart**

**Dr. Marc Driscoll**

**Ms. Rhonda M. Thomas**

**Dr. Adesh Ramsubhag**

**Mr. Douglas Bennett**

**Mrs. Leela Rastogi**

**Dr. Winthrop Harewood**

**Prof. Bhakthavatsalam Murali Manohar**

**Dr. Ayanambakkam P. Nambi**

**Mrs. Kristal Gosine** (*Secretariat*)





# The Circle of the Web

*A man of science, community and the arts*

BY JOEL HENRY

In the closing weeks of 2017 it was announced that Dr. Adesh Ramsubhag, Head of UWI St. Augustine's Department of Life Sciences, had won an Anthony N. Sabga Caribbean Award for Excellence. He's not too comfortable with it.

"I don't really like to be in the limelight," he says from his office in the Faculty of Science and Technology. "I find refuge in the lab, in a small circle."

Dr. Ramsubhag, 50, is far from the typical introverted scientist. "I look at it as the Department's award," he says.

He may not like the limelight but he is very willing to share it. Not only is he quick to point to the contributions of his departmental colleagues and post-graduate students, he also stresses the partnerships with the Department of Chemistry. He highlights the role of past department heads. He looks back with gratitude at the lecturers and supervisors that encouraged him. He praises the small community Penal in which he grew up. He thanks his family.

If Dr. Ramsubhag's circle is small, it is small like the centre of a spider web. Its tendrils spread in an intricate pattern of human connection. He values these connections as much as his academic achievements, his awards, and the high-value research currently taking place in the Life Sciences and Chemistry departments.

And well he should, because at the heart of his accomplishments is a capacity for critical and innovative thinking. He practices it and unleashes that capacity in students. This is very valuable to Trinidad and Tobago.

## A new hope in natural products

In its June 2017 issue, UWI Today covered promising research coming out of the Life Sciences and Chemistry departments related to microorganisms with potential to become new drugs ([https://sta.uwi.edu/uwitoday/archive/june\\_2017/article19.asp](https://sta.uwi.edu/uwitoday/archive/june_2017/article19.asp)). Given the enormous biodiversity in the local soil, Dr. Ramsubhag and the research team believed the possibility existed for T&T to develop a Cuban-style pharmaceutical industry based on natural products that could generate billions in foreign exchange.

Since then the research results have only grown more promising. One PhD Chemistry student, Tresha Dobson, isolated nine "bioactive compounds" in several classes from samples taken from the Pitch Lake. Among the compounds discovered were some in the same class used to treat neurological diseases such as Parkinson's and to develop anaesthetics. This research is currently being published.

The work of post-graduate researcher Antonio Ramkissoon, highlighted in the UWI Today piece, has also made dramatic progress. Experimenting on another compound discovered in Trinidad, it has been found to enhance the effectiveness of existing antibiotics. This is incredibly valuable as new and more powerful viruses have become resistant to antibiotics. The compound has undergone in vitro screening and animal testing, and has now reached the stage of human clinical trials.

"We believe we have completed as much as we can do in UWI and T&T," says Dr. Ramsubhag. "We have engaged UWI's business development office to get it patented. As soon as that is completed we will hopefully be starting negotiations with drug companies to take them to human trials."



Dr. Adesh Ramsubhag congratulates his student, Antonio Ramkissoon after his seminar presentation on March 22.

PHOTOS: BOBBY SOOKHOO

With work such as this it is easy to see why he has been selected for the 2018 Excellence Award.

"His work on microorganisms is producing exciting results that, if supported by further research, can lead to the development of pharmaceuticals, an export-driven industry estimated at a current value of US\$1 trillion," reads a statement from the ANSA McAL Foundation.

Dr. Ramsubhag will receive his award (in the area of Science and Technology) as well as \$500,000 at a ceremony on May 5. Other laureates include Chevaughn and Noel Joseph of the Just Because Foundation (Public and Civic Contributions), Jamaican poet and novelist Professor Kei Miller (Arts and Letters), and Guyanese businessman William Boyle (Entrepreneurship).

## More teaching, more research

Speaking to Dr. Ramsubhag, the award feels very much like a marker on a much longer journey. There's an aura of great momentum about him and his close colleague, Professor Jayaraj Jayaraman, a biotechnologist and plant microbiologist. Together, with limited manpower, space and

equipment, they have managed to mould an environment where a new generation of young researchers can grow.

Dr. Ramsubhag has decided to not seek another term as Department Head for the new academic year in September. Instead he will focus all his energies on teaching and research. In part this is to meet the growing interest in microbiology. But it's also a reflection of his interest in the kind of scientists – and citizens – that Trinidad and Tobago needs.

"In a modern society the economy is fueled by innovation," he says. "Research goes with innovation."

And many students need their critical and innovative capacities unleashed: "Because the education system is not very conducive to critical thinking, there are inherent weaknesses in some (not all) students. The ability is there but because they have been conditioned in this archaic system of cramming and rote learning, sometimes you have to spend the time with the student to get them to think outside of the box. But in almost all cases they are able to do it. And that's the tragedy of our education system. The potential is there but we are wasting it."



## ■ CAMPUS MATTERS

But Dr. Ramsubhag is far from disheartened. He loves a challenge. And more importantly, he has seen the result, many times, of helping students find their creative and inquisitive voice.

“In many cases once you light that spark the student takes off in such a direction with such a speed that they overtake you in that particular project. This is the bliss that we can achieve as educators, when a student develops so much. You make the investment in time. You create that spark. And the student just takes off. And they gone,” he smiles.

Antonio, whose work has been so successful that it may eventually be looked upon as the seed for a new Caribbean pharmaceutical industry, has certainly taken off.

“Our relationship goes well beyond the normal student-supervisor,” he says of Dr. Ramsubhag. “He has been fundamental in my personal development as a young scientist, professional and man. I cannot have asked for a better mentor. His passion for microbiology has infected me as well and he taught me that spending hours in the lab is no problem when you are passionate.”

### A progressive community

When he speaks of students and learning, Dr. Ramsubhag is not speaking as a dry and distant educator. He’s telling his own story.

“I hated school,” he says of his childhood. “I always reflect on my background. I know where I came from. And I see the potential in people. I would never look at anybody as not being able to achieve.”

He grew up in the agricultural community of Rochard Road in Penal, the youngest of nine siblings from a family of farmers.

“It was tough in a sense but it was also an enjoyable experience. I would look for any reason to stay home from school and when I did I would work in the field or the farm,” Dr. Ramsubhag recalls.

He had problems with reading, as well as the rigid and rote structure of school. But outside of the classroom his dynamism was on full display.

“My existence was for cricket and music,” he says. And he delved deeply in both.

Emulating the older boys of Rochford Road, who were part of a team called “Blue Max, Ramsubhag and his young cohorts formed “Blue Boys” cricket club. The crew went from ages nine to 15 but that didn’t stop them from building their own cricket grounds and establishing iron discipline for members – no practice no play. He was team leader, captain and even welder at 15-years-old.

Likewise, he learned the mandolin and performed Indian music at community events. This led to him joining the band Dil Ki Awaaz, a popular group still in action today. In the demanding environment of professional music, he was challenged to train and conquer his fears, eventually becoming lead guitarist of the band.

Farming, cricket, music and community, that was his life and he was happy with it.

“Although the community could be seen as backward back then (the 1970s), we were very progressive. Even my family, they may not have been academic but they always appreciated knowledge, ideas and learning,” he says.

Today he looks back at his early experience as the foundation for his innovative mindset. Eventually he fell in love with science and would turn his creativity to research that could enhance farming.

“I appreciate deeper knowledge. I am passionate about understanding how things work,” Dr. Ramsubhag says, also crediting mentors such as Professor Pathmanathan Umaharan (Director of the Cocoa Research Centre) and microbiologist Dr. Alfred Donawa for their role in his development as a scientist.

### Innovation requires resource

Currently, Dr. Ramsubhag is especially excited about new methods of microorganism screening that will yield greater results from samples taken from soil. Because of Trinidad’s rich biodiversity there is opportunity to discover new compounds with pharmaceutical applications.

“The potential is enormous,” he says.

But the researchers are challenged by limited resources in technology and skilled manpower. In fact, Antonio’s very promising research required the postgraduate student to work unpaid during the vacation period, while Dr. Ramsubhag had to use his own money to buy materials. The disconnect between what the country needs, the innovative work being carried out in places such as the Life Sciences Department, and the investment being made in that work on a national level is astounding.

“It is a complex issue,” he says. “UWI has people with talent and competencies that can match any institution in the world. In terms of academic publication our rates are as high as many of the top universities. However our patent rate is woefully low. This means our academics are channeling their energy into what they deem as possible in the funding environment. We don’t have a culture of innovation because we don’t have a national infrastructure that supports innovation.”

However, Dr. Ramsubhag remains hopeful. “I believe the Government is developing a national innovation policy,” he says. Speaking specifically about the future of natural products research, he adds, “We have shown the potential. As we improve our screening capability hopefully something significant will be discovered and policymakers will take note and put the necessary funding mechanisms in place to contribute to a new industry.”

And after all, why shouldn’t he believe? Life has shown him that in farming, sports, music, research and teaching, once you do the work and do it to the best of your ability, you will see the reward.

## A Booster Shot for Antibiotics

The conference room at the Department of Life Sciences was so crammed – more than a hundred people – that students found themselves sitting at the same table with the examiners, and as they kept filing in, one of the doorways had to be opened so more could stand and listen.

For Antonio Ramkissoon, standing tall behind the conference table, few would have known that he had kicked off his shoes and was padding around in his socks the entire time. As he nears the completion of his thesis, he is delivering a seminar which he has called “Breaking Antibiotic Resistance: A novel innovation that rescues antibiotics.”

It is ground-breaking work at many levels, and it is a reminder of how many of the most magnificent discoveries come because someone looked at something in a completely different way. He makes it clear he has not found a new antibiotic – no new class has been found for nearly 40 years – but he has found something that boosts existing ones. Think of it as the impact of carbonation on water, from flat to fizz!

Its potential to medical care and pharmaceuticals makes it a discovery of global significance, and that’s about as much as can be revealed at this stage.

But look out for more on Antonio Ramkissoon because soon the world will have a lot to say about him and his work as part of the drug discovery research cluster in the Departments of Life Sciences and Chemistry. (VB)



*“His work on microorganisms is producing exciting results that, if supported by further research, can lead to the development of pharmaceuticals, an export-driven industry estimated at a current value of US\$1 trillion,” reads a statement from the ANSA McAL Foundation.*



## ENVIRONMENT

# KICK-'EM-JENNY becomes a Model

BY STACEY EDWARDS



Scientists discuss findings during Nautilus Research Vessel. Research cruises provide valuable information on activity, dimensions and marine life at submarine volcanoes.

Late last month Kick-'em-Jenny volcano grew restless. A significant increase in earthquakes beneath the volcano suggested to monitoring scientists at The UWI's Seismic Research Centre (SRC) that magma was likely on the move. Acting on their advice, authorities in Grenada raised the volcano's alert level to orange. This was an indication that an eruption could occur with less than 24 hours' notice. The barrage of public enquiries which followed was as fiery as the impending eruption.

Erupting at least 14 times since it was first discovered in 1939, the submarine (underwater) volcano located just 8km north of Grenada, is perhaps the most active volcano in the Eastern Caribbean. It is no wonder that public concern over Kick-'em-Jenny is consistently intense. Judging from interactions on the SRC's social media platforms during periods of volcanic unrest, the public appears to be both fearful of and fascinated by this underwater phenomenon, with concerns ranging from ejected material at the sea surface, sinking ships and tsunamis.

While the primary role of the SRC is to monitor and provide scientific advice on Kick-'em-Jenny, the Centre supports local disaster management agencies' efforts to satisfy the public's insatiable appetite for information on the volcano through its education and outreach programme.

It is a sound illustration of the importance of applied research and the social impact of academic and research institutions such as The UWI.

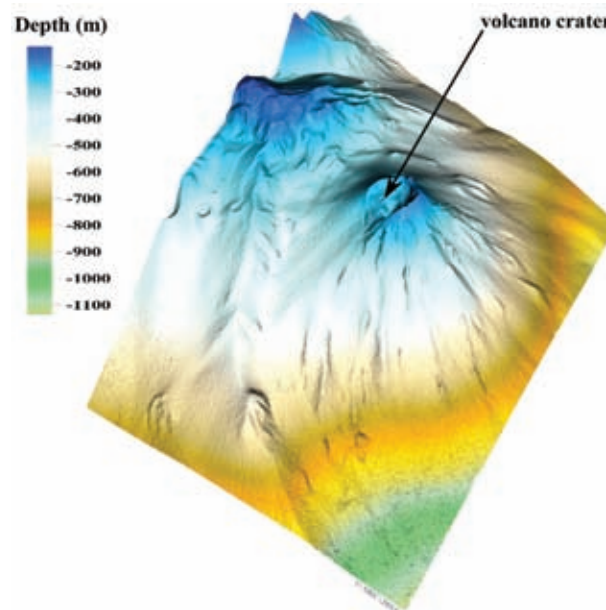
The UWI SRC currently operates the largest geophysical monitoring network in the Caribbean, generating data used in ongoing research to provide planners, disaster management practitioners, engineers and other stakeholders with tools for their short and long-term decision-making.

Scientists from the SRC regularly collaborate with other institutions to conduct impactful research on issues of seismic and geologic relevance to our region. Volcanologists at the SRC teamed up with scientists at Imperial College London, Southampton and Liverpool Universities to survey Kick-'em-Jenny immediately following an eruption in April 2017. Using ship-based imaging technology, the team was able to survey the volcano, observing gas coming from the central cone. The data was then combined with previous surveys going back more than 30 years to reveal the long-term pattern of activity. The survey was unique

in that it immediately followed an eruption and provided unprecedented data on what Kick-'em-Jenny volcano looks like soon after an eruption. The research, recently published in the journal *Geochemistry, Geophysics, Geosystems*, provides new insight into the little-studied world of underwater volcanoes.

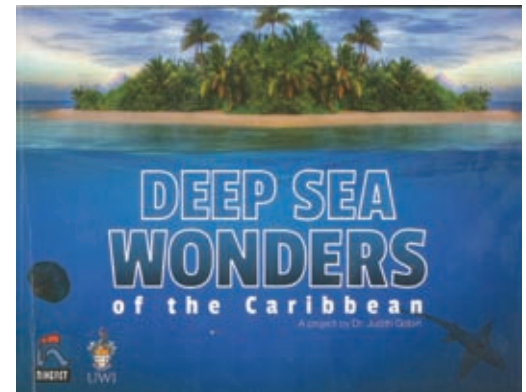
"The results of this collaborative research project enable us to better quantify our existing model of this volcano and help in developing strategies for managing future eruptions," noted Director of The UWI SRC, Prof. Richard Robertson.

In addition to conducting research, the UWI SRC currently provides a national seismological and volcanological service for contributing territories in the Eastern Caribbean, as well as support for tsunami warning and public education and awareness on geologic hazards. Although the outcome of Kick-'em-Jenny's recent episode remains to be seen – at the time of writing, activity at the volcano had slowed – The UWI SRC is well poised to provide its stakeholders with the necessary information to reduce the risk to lives and livelihoods.



DEM Image of Kick-'em-Jenny submarine volcano. COURTESY: DR. FREDERIC DONDIN, NAUTILUS 2013

## Deep Sea Wonders of the Caribbean



In 2013 and 2014, Dr. Judith Gobin, a Senior Lecturer in the Department of Life Sciences at The UWI, St. Augustine, was invited on board the Exploration Vessel (E/V) Nautilus. She was determined to share what she had learned to build a deeper understanding and appreciation of the deep sea environment in the region. This led to the introduction and distribution of an educational video series and captioned photo book detailing this previously unexplored natural feature.

In February 2018, the National Institute of Higher Education, Research, Science and Technology (NIHERST) officially launched the Deep Sea Wonders of the Caribbean video series and book at the Digicel IMAX.

NIHERST's Chairman, Professor Emeritus Winston Mellowes acknowledged the Caribbean scientists involved whose research and efforts "permanently changed our understanding of the Deep Sea." He thought it would encourage young Caribbean students to consider a future in science and related fields, since they would be proud to know "that there are many experts/icons from this region, who look like us, talk like us, and share our experiences, who can excel and make their mark in the international community".

The feature address was delivered by Minister of Education, Anthony Garcia, who highlighted the importance of Marine Sciences as a discipline, stating that it will give "students the opportunity to see where this field of study can take them".

Dr. Gobin thanked all who were involved in ensuring that the project was successful and encouraged those present to "ponder on management of this tremendous resource" since it is our heritage. She said it was her duty as a scientist to encourage stakeholders to partner with scientists, which would allow conversations and strategies focused on ensuring the sustainability and conservations of our ecosystems.

There was a first screening of the five-part video documentary series and the photo book on the Deep Sea Wonders of the Caribbean, which comprises the following segments:

1. **Exploring the Deep Wilderness**  
*An introduction to deep-sea exploration in the Caribbean*
2. **Beyond the Beaches**  
*Our Caribbean's deep-sea environment and how organisms there have adapted*
3. **Hot Sun Above, Cold Seeps Below**  
*A unique look into Trinidad and Tobago's deep ocean*
4. **Grenada and the Jenny that Kicks**  
*A unique look into Grenada's deep ocean*
5. **An Ocean of Opportunities**  
*Careers of the deep sea*



# Finally, Our War Stories

BY BRINSLEY SAMAROO

In reading this text, I sought to isolate themes which run through the volume and chose two sound-bites which encapsulate the substance of the work. One was Debbie Mc Collin's description of the period as the "inevitable paradox of war" and the other was my own view that this was a classic case of the subalterns writing back.

With regard to the paradox of war, essay after essay focus on the many benefits of the war and these are followed by the suffering and deprivation which occurred simultaneously. Another constantly repeated theme was the exposure of the deep racial divisions which the war brings to the fore. Caribbean colonial society had been carefully graded on the basis of race, which determined one's class position in the pyramid of plantation society. By the mid-20th century these divisions had become so institutionalized that even the life or death threat posed by the Axis powers could not break down the ethnic barriers among Allied nations.

And when the USA entered the war after the December 1941 attack on Pearl Harbour, the USA joined the war bringing its own brand of racist practice coming out of their slave experience. The picture on the cover of the book shows a column of black soldiers led, of course, by a white officer.

Karen Eccles tells us that lighter-skinned West Indian women were sent for training to Washington whilst black women were despatched to London. Trinidad's governor was concerned that the local Red Cross was "undesirably mixed" and it was left to black women like Audrey Jeffers to organize the Coterie of Social Workers to cater to black soldiers.

At US bases in St. Lucia, Antigua, Jamaica and Trinidad, white troops were housed and fed separately from black soldiers and no black policeman could arrest a drunken white sailor. The colonial powers were so distrustful of their loyal, dotting Caribbean subjects that they created brigades of local whites to stem any black uprising, giving these brigades euphemistic names like Home Guards and Light Infantry Volunteers.

Whilst West Indian men were dying to serve in the war the colonial governments were arresting [Tubal] Butler in Trinidad and Richard Hart and his associates in Jamaica, although these leaders were empire loyalists seeking no more than the widening of the franchise and improving the lot of Caribbean labour.

Ronald Williams, in a well-researched essay describes the displacement of West Indians from the North West peninsula and Carlsen Field and the still-festering sores of that era.

The essays of Geoff Burrows and Eric Jennings give ample testimony to the brave black West Indians who volunteered to work on the convoys escorting merchant ships under constant attack from German U-boats.

This book is a welcome addition to West Indian historiography because it makes a deliberate, refreshing effort to incorporate the total Pan-Caribbean region into one corpus, documenting the common experiences among British, French, Spanish and American colonies. So we learn about Europe's dependence on the Caribbean for vital supplies of oil and asphalt from Trinidad, bauxite from Jamaica and Guyana, timber from the South American colonies and of course sugar from the traditional sugar colonies.

Lovell Francis provides new information on the calamity caused by the flight from the plantations to the American bases and the united efforts of the plantocracy-dominated governments to urge the Americans to keep wages low so as to stem the exodus of sugar workers.

In a turnaround of Caribbean historiography, Esther Captain and Guno Jones tell of the significant ways in which the Dutch Antilles and Suriname contributed to the welfare of the Netherlands. They sent boxes of blankets, clothing, shoes, knitted vests and woollen underwear, oil and Caribbean soldiers to fight the Japanese in the Far East. In that period of real crisis, the Dutch queen promised greater autonomy to her Caribbean subjects. This resulted in internal self-government for the Dutch Antilles in 1954 whilst Suriname moved onwards to independence in 1975.

One of the major problems of Caribbean historiography has been the linguistic barriers which have divided us for centuries. This volume overcomes that problem by the inclusion of bi-lingual authors who are able to use non-English sources. The essay on the



Editors Karen Eccles (foreground) and Debbie Mc Collin shared the podium at the launch of the collection at the Alma Jordan Library. *World War II and the Caribbean* has been selected as a finalist for the 2017 Foreword Indies Book of the Year Awards. PHOTO: ATIBA CUDJOE

Dutch Caribbean, just cited is one example. So is Danelle Gutara's piece on Puerto Rico in which she tells us that Puerto Ricans had to prove their American-ness by joining the US army and to present their bodies for experimentation in chemical warfare.

Christian Cwik and Verena Muth delve into the German sources to tell of the sad and triumphant stories of European refugees to this region.

It is heartening to see in a number of essays the use of the pioneering work of our departed colleagues, Fitz Baptiste who carefully documented the warships for bases agreements, and Gaylord Kelshall, who was a participant in the war. Otherwise those valuable inputs would have remained on the bookshelves.

What is equally admirable is the wide range of sources used to complement our dependence on British sources. These essayists delve into American military archives in Alabama and Puerto Rico, German accounts, archives in France and the French Antilles and then contemporary newspapers, oral sources and calypsoes. This extensive sourcing of information, properly cited, gives authenticity to the work and lifts our gaze beyond island histories and onto the wider Caribbean panorama.

This is what Eric Williams sought to do in *Columbus to Castro* (1970). Now his intellectual descendants are taking us one step closer. The editors took great care in allowing the authors to read each other's texts before finalization so there is constant cross-referencing among the essays. This is a difficult but useful device which prevents repetition and allows more space for original analysis. There are sub-headings in each chapter which makes the reading easier although the foot-noting numbers in the text are too small for the ordinary eye; one can easily miss them.

The role of Caribbean women in the war has been generally hidden from our history. If a woman did well she could be patronizingly called one of the boys. In this collection that is not the case. Debbie Mc Collin, Karen Eccles and Suzanne Francis-Brown speak of Caribbean women. However, Delea Brown's essay on bodies in conflict, which focuses on sexual liaisons in Jamaica, marries feminist theory to the experience in the bed. In a section called colonization and sexploitation she delves into the white man's exoticisation of black and brown women from the time of slavery. This Euro-American fascination was stimulated during the

conflict by the "aphrodisiac of war" in which the military man was expected to be sexually rewarded for his bravery on the battlefield. If there is any blame to be laid, then such opprobrium has to be placed on the woman who is the culprit. She is the daughter of Eve whose seduction of Adam has given us the word "evil". In that narrative the men did not spread VD but rather it was, in the words of the Director of Medical Services, "the domestic servants, half-starved dressmakers and under-paid clerks". Delea's description of the degradation of the Caribbean women is paralleled by the other essays which speak to the position of women in this region.

Finally, we should look at the continuing legacies of the issues raised in this volume. Puerto Rico continues to function as an American colony, kept in a state of dependency by the US. In the aftermath of the recent flood and hurricane for example that colony's low rating in the US table of assistance shows that little has changed since the war. In Trinbago the preference for imported food as described by Rita Pemberton has not changed because of colonial habit and by the control of that trade, now, as in the war, by a small cartel. And Tobago struggles on, being regarded as more of a hindrance than an asset by successive governments. Cuba, whose assistance and sacrifices were most welcome during the War, has now been re-embargoed by trumped-up charges. The more things change the more they remain the same.

The one essay which the volume lacks is one that could have dealt with the socio-cultural effects of the war as seen in the outpouring of West Indian writing which dealt with that experience. Also the manner in which the entertainment sector was changed by American radio stations on the bases and the proliferation of bars and cinemas fuelled by the Yankee dollar. There was also the enrichment of West Indian entrepreneurs from post-war loot left by the Americans. But these are small omissions which hardly detract from the wealth of information and fresh analysis. *World War II and the Caribbean* is a most useful story of ourselves written by ourselves.

*Historian Professor Brinsley Samaroo delivered this review at the launch of *World War II and the Caribbean* at the Alma Jordan Library, UWI St. Augustine, on February 27, 2018.*





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# Reflective, *but not Passive*

BY ELIZABETH WALCOTT-HACKSHAW

When I was at university in Boston, one of my most demanding and brilliant professors, Roger Shattuck, a scholar of 19<sup>th</sup> century French Literature and translator of Marcel Proust, authored an intriguing book, *The Innocent Eye*. In that book, he explored the ways in which we read literature and asked a fundamental question: is it possible to read a text with an “innocent eye”?

The immediate response is, of course we cannot, we bring to books all of our fears, our prejudices, our politics, our joys, our failures; in short we bring ourselves to the books we read. How we read and what we read tell us a lot about who we are.

So consider this when you read Rajendra Ramlogan’s collection of poetry, *My Words, My Liberation*.

I met Rajendra for the first time in my office at the University two weeks ago. He had emailed me about doing this book launch and I reminded him that although I taught poetry, I was definitely not a poet and I felt he needed a poet for this review. But Rajendra has a powerful mind and his skills of persuasion are unworldly. With these powers of persuasion, I had no choice, I agreed and I am glad that I did.

I was taught to read literature in a deconstructive mode, simply put, to approach a text without knowing too much about the author’s background, to focus on the world of the text and less on the poet’s biography or the world outside of the text. My professors argued that knowing too much background influenced our reading, but knowing too little did not give us enough context in which to locate the work. Reading was then a delicate balance of the two, a dance where we knew a few steps but never all of them, taking away predictability, opening ourselves to the possibilities of the work with a measure of naiveté and perhaps even innocence.

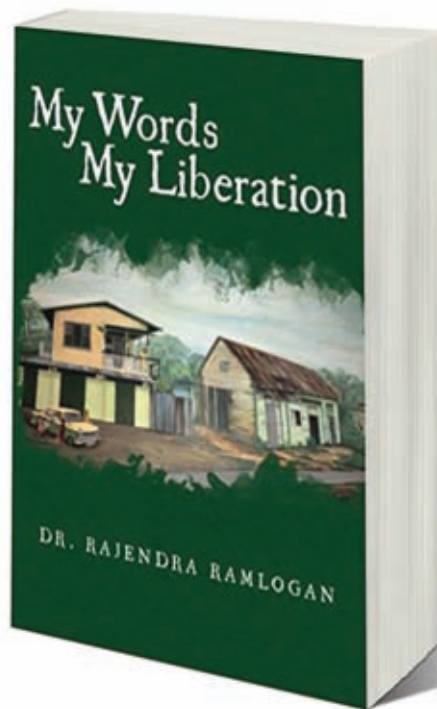
Rajendra’s poetry is a construction where traditional forms and rime schemes are used as scaffolding for ideas that want to break from tradition. That is the dance of this work. In the first poem of the collection entitled, “Bullet for a Prince”, the poet writes:

Death has claimed another black face,  
and my women have lost the father for the race...  
The pain we feel for a dead brother is real.  
In this unjust land, it will never easily heal.

The unjust land is the United States and this section, the first of five, is devoted to the unraveling of racial politics in America but also to the poet’s own awakening about his black identity. The title of this section, “These are My People”, encapsulates this awareness, or as the French say, this *prise de conscience*, and it is clearly expressed in the poem, “Sonnet to a Black Man,” where the poet affirms:

I am a man, and I am black.  
I have struggled in this land with you on my back...  
Yet I survived the pain, I survived it all,  
and I am a man standing proud, standing tall.”

*My Words My Liberation* is a journey, real and imaginary, that the poet must take in order to realize his liberation. But



## My Words, My Liberation Rajendra Ramlogan

*Create Space Independent Publishing Platform, 2017*

liberation is a vague term, and sometimes it is more useful to look to antonyms to discover and uncover meanings. Ramlogan’s declaration of liberation also announces a state of imprisonment; there is this idea of captivity within his concept of freedom. Many things have held him captive and not the least of these is the image he holds or once held of himself. *My Words My Liberation* is then a dual reflection on both captivity and freedom.

The tone of Ramlogan’s poetry is reflective, interrogative and exploratory but not passive. He challenges his own convictions and in so doing also challenges those of his reader. The title’s insistence of the personal, *My Words, My Liberation*, belies what actually takes place, for his concerns are not just for personal self-determination and agency, he is decidedly concerned about the state of our world.

Injustice is a preoccupation and a pervasive motif in the collection. For the poet sees it everywhere, in the past and present, in our history of genocide, in the treatment of the disenfranchised, the ostracized, in the way we cut down our heroes like Martin Luther King or Toussaint L’Ouverture, and in the ways we butcher our own environment.

His treatment of this theme takes the form of many guises: vagrants, abused women, children of the barrios, the mentally ill, and it spans continents. The perpetrators of these ills are also named, drawn from politics, history, even mythology, revealing once again a rich mind. In many of the poems there is a tone of disillusionment but not resignation. As the poet writes in “Black Gold—Oil”:

Raucous celebrations greet your emergence,  
as men fall to their knees and swear their allegiance.  
Pledging fidelity and service to your cause,  
loyal subjects, economic whores

The poet does not simply wish to point to all that is going on with our world, but through words and the power of the pen, through metaphor and the pun he has decided to engage and indirectly his readers are inspired to do the same. The image evoked in the poem “Sarajevo” is a poignant one, as snipers launch bullets “we shut our doors to those who flee.” The culpability and complicity that he expresses is not to be ignored.

There are also battles to be fought in the wars we wage against nature by allowing its destruction. The poet’s love of nature and the desire to find once again a telluric harmony is expressed in “A Sonnet to Remember”:

“Then heaven lowers its curtain of rain,  
bringing a mixture of pleasure and pain...  
The juice of a succulent papaya run downs a face,  
another symbol of the Creator’s grace.

But I would be wrong to leave you with the impression that this is all that there is. The poet has even more to offer, because there are also moments of brightness, music and levity. As we see in the poem, “One Summer Day in Washington” where: “the praises to summer can be set to music,” or where: “the symphonic blending of teenage chatter serenades the mall, / a day when eyes can flirt with quiet fun, / a day of summer, when musical tribute can be easily spun.” He also writes about the trajectory of love in the penultimate poem, “Ships of Dreams.” The ship’s voyage is the metaphor used to describe the journey the poet takes with his love. Their time together full of trials and glory is effectively evoked as “the weathered beams” of the ships hold their story. The sonnet also brings to light another important element in Ramlogan’s poetry and that is the role of the poet and the poem’s ability to fix and immortalize a moment even when that moment has long past. I must confess that this is one of my favorites of the collection since it is able to render so much in so few words, so allow me to indulge in a few lines:

Long ago, along the endless shore,  
buried deep and seen no more,  
were two little ships fast asleep,  
resting weary bones from sailing the deep.

From their weathered beams flows many a story  
of a past full of tribulations and pregnant with glory  
As they rest side by side, a love unfolds  
that speaks of those who dared to be bold.

I could go on but I will leave the rest to your reading of this collection and I know that you will read it and read it well, perhaps even with an innocent eye.



# Cultural Insurance

BY OONYA KEMPADOO

*The Department of Literary, Cultural and Communication Studies wound up the Campus Literature Week with its Gala ceremony on March 23, where the Writer-in-Residence, Oonya Kempadoo, gave a reading which she called: **Loyalties, Inspiration and Transition: writing between islands.** Kempadoo introduced a concept she called Cultural Insurance. Here is her synopsis of it.*



**Insurance is an ancient practice** that dates back to early human society and monetary economies. It was developed to respond to monetary risks and practised by Chinese and Babylonian traders as long ago as the 3rd and 2nd millennia BC, (as written about by

Vaughan, E. J., 1997, *Risk Management*, New York: Wiley.) Merchants would pay an extra sum for their loan to be cancelled should their shipment be lost or stolen at sea. One of the most famous examples of this is Lloyd's of London with its list of "Names" or underwriters, who determine the risk of a potential client and the cost of that risk to the client. The notion of putting away a little, each month, each year, for yourself or giving it to an insurance company in

the form of a premium for when you most need it and for emergencies, is one way of making the unknown future as secure as possible.

Storytelling is woven into the development and survival of our societies and is part of our coping mechanism as humans, given the unknown future we face. As a result, stories and other art forms can be viewed collectively as cultural artifacts. In this way they can then be seen as "cultural insurance," which means that they are able to provide comfort, relief and hope during periods of bankruptcy, upheaval, strife and loss. Regardless of whatever form, be it books, music, art, film, or television – the collection and documentation of cultural artifacts is the legacy and security of a people.

A hurricane blows away crops and housing. A flood washes away more than just buildings and streets. A fire leaves only ash traces of lived lives. Violence robs individuals of peace of mind and the ability to breathe deeply. The loss of a loved one darkens the light. So just as financial insurance helps individuals or companies get back on their feet, cultural insurance, in the form of words or images, potentially offers the same relief to a society and its members. If we are sick we need healing. If we are scared we seek comfort. In a crisis or emergency, cultural

insurance can be there for us, giving back our integrity and self-confidence.

In this way, isn't it then possible to consider stories or art as value-added insurance? This is done by individual purchase and through private collection but how is it capitalized on for members of the public *in need*? How can museums serve as insurance companies for disadvantaged or compromised populations? Is a library a bank, gathering and lending our currency back to us? Can archives become disseminators and not just curators or gatekeepers? How do all of these institutions respond to risks and emergencies? How can rich collections of cultural artifacts be used as payback, where and when most needed, and how is it redistributed? How do community members access their cultural insurance?

These questions are meant to both stimulate and challenge all of the stakeholders in this enterprise we call society, particularly those involved in the collection and distribution of our precious cultural artifacts. In other words, this is a call to stakeholders to identify specific ways in which collections of cultural artifacts can be used as cultural insurance. That these artifacts might be thought of as security and used for reassurance, in itself can be a way of insuring their social relevance.

## Christ in Trinidad

The Alma Jordan Library has just ended a small exhibition of some of Jackie Hinkson's work, featuring pieces from his Christ in Trinidad Series.

Sammarko Lightbourne, who is working on the Master of Fine Arts programme, is currently an intern at the West Indiana and Special Collections section, prepared this synopsis, which accompanied the pieces on display.

In 2004, Jackie Hinkson produced a cathartic and engaging series of paintings called, *The Christ in Trinidad Series*, a collection of 14 large paintings depicting various biblical scenes surrounding the life of Jesus Christ.

Ever conscious and concerned about the declining conditions within Trinidadian society, Hinkson uses his canvas as an instrument of moral discourse, social engagement, and to capture snapshots of the human experience both mundane and remarkable. While casually surveying the walls of a church one day, the prolific water-colourist was struck by their vacuity. The empty spaces were like a siren's song compelling him to produce work fitting for display. Embedded in local context, *The Christ in Trinidad* captures the light, warmth, and space of the region, whose prominent Christ figure allows Trinidadians to evaluate how they see themselves.

The exhibition also featured work by Hinkson scholars and collaborators, ranging from a PhD thesis to children's literature illustrated by the artist.



"Entering Town" and "Kentucky Surprise."

**Artist's Statement:** It was only after I started painting this series that I realized I had been thinking about it for a long time. I was looking at my society and becoming more concerned about the deterioration in the quality of life. I was agonizing over it. Then something happened. I was in a church one Sunday and it struck me that often in Europe there are large murals and paintings on the interior walls of churches, but here was an obvious absence. I mentioned this to the priest who happened to be a liberal thinker. He asked me if I wanted to do paintings for the church and I immediately said yes. Here was an opportunity to express what I was feeling about the society, but I realized that if the paintings were going to be placed in a church then they would have to relate to the religion practiced in the church, a Christian one. My solution was to take stories from the life of Christ and reinterpret them in a local societal context. On the surface the paintings would connect with the relevant religion but in reality, they would reflect my feelings about the state of my society. The paintings were begun around 2001 and were 'completed' in about 3 years. I still go back to them and have made a few changes and improvements, but not major compositional ones.



# Working, Thinking Art

*Exhibition brings together artists across the spectrum*

BY ALAKE PILGRIM

For those interested in a rare display of the wide range of visual art created in Trinidad and Tobago, the 'Represent' exhibition was not one to miss. Fitzroy Hoyte, respected artist and mentor, brought together 80 pieces of work from over 35 artists at the THINKARTWORKTT Studio he founded at 63 Carlos St, Woodbrook.

The exhibition featured well-known artists such as Leroy Clarke, Jackie Hinkson, Sundiata, Embah, Che Lovelace, Bunty O'Connor, Martin Superville and Tessa Alexander, alongside newcomers such as UWI students Sabrina Acham and Shanderpaul Ramsey. Featured artists like David Collymore and Lovelace have taught visual arts students in the Department of Creative and Festival Arts at The UWI St. Augustine. It also included work by several UWI alumni, including Sabrina Charran, Candice Sobers, Leona Fabien, Omowale Stewart and Keomi Serrette.

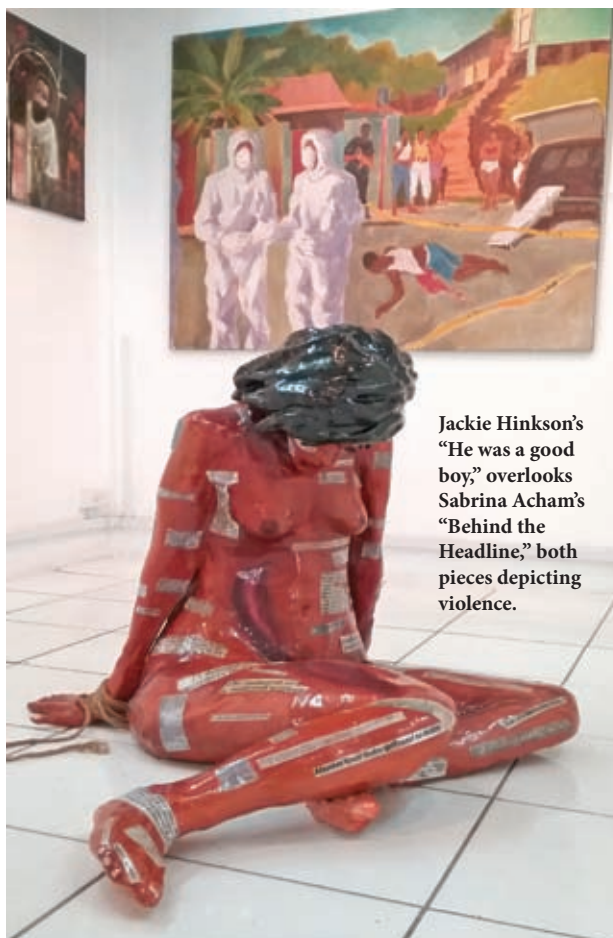
Fitzroy Hoyte, who has been drawing and creating since he was a child at Newtown Boys' RC, calls the studio "an inclusive space – a place for artists to be seen." While the life of a creative person is never easy, he learned that "instead of waiting for an opportunity to come my way, I needed to create my own opportunities."

The ThinkArtWorkTT Studio is a way of extending those opportunities to others. The studio hosts exhibitions, mentorship sessions and art classes, including a 'Little Picasso' programme for children aged two and up.

There is also a residency programme for exchanges between local and international artists. The artist exchange was inspired by two residencies Hoyte attended in South Africa. Interacting with a range of South African artists offered him a different perspective on his work. He encountered people who were "grappling with how artists can come together to make change in their society."

Having had the benefit of mentors such as Pat and Lisa Henry Choo Foon at the John Donaldson Technical Institute, Makemba Kunle of Studio 66 and Leroy Clarke, Hoyte understands the importance of younger artists being able to engage with those who are well established in their field. One example of this is Sabrina Acham, a first-year student in the Visual Arts programme at The UWI. 'Represent' is her first major exhibition. She calls the experience of being able to share her work alongside artists of this calibre, "exciting" and "surreal."

Acham credits her lecturers at The UWI for helping her to think in innovative ways. Her piece, "Behind the Headline," grew out of a project she began at Holy Name Convent, where her teachers encouraged her to "go big" with her creations. It is a life-sized sculpture of a seated woman, with her head bowed, her hands bound with rope and her body covered with newspaper articles about violent crimes against women. The work was inspired by women like Shannon Banfield, who was found murdered in a store in Port of Spain. Although the sculpture is silent, the body



Jackie Hinkson's "He was a good boy," overlooks Sabrina Acham's "Behind the Headline," both pieces depicting violence.



Fitzroy Hoyte's "Freedom." Hoyte curated the 80 pieces featured at the exhibition at his THINKARTWORKTT Studio last month. PHOTOS: ALAKE PILGRIM

speaks; calling on all who see to bear witness.

Acham's work stands in conversation with Jackie Hinkson's "He was a good boy," a painting in which a young man lies dead on the street surrounded by forensic investigators and an armed police officer. If Acham's sculpture and Hinkson's paintings are a call to mourning, response and witness, UWI alumna Sabrina Charran's painting '#Girlovett' shows women in celebration of each other. Two women with bright pink hair, backs to the viewer, hold hands and walk off into an undelineated space. It is an image that is both open and ambiguous, tender and defiant: an understated gesture of woman – love in all its forms.

Perhaps the power of this exhibition is the opportunity to observe the differences in media, subject matter and style across a wide range of artists, as well as the opportunity to put artists' work in conversation. There are images of a Caribbean landscape pushed beyond realism in the psychedelic orange of Beverly Fitzwilliam-Harries' coconut trees in "Avatar." In Christine Norton's evocative photograph, "In the season of Pouï – Women reflect," the looming contoured shadow of a tree on leaf-strewn grass conjures the relationship between nature and female power.

There is a more abstract and even surrealist interpretation of place from Shanderpaul Ramsey, a current UWI student. "The Land of the Black" is an oil painting in which the phantasm of an owl or jumbie bird stares out of the night, above three pyramids and a host of eyes and shadowy creatures that seem to offer a sense of warning. Developing the idea of mind/spirit-scapes in a very different way is Leroy Clarke's intricate work, in which we are drawn into the artist's cosmology as a space to see, feel and perhaps, heal.

An interesting theme to trace throughout the exhibition might be the body in varying expressions – from the body count of murders and violence in Trinidad, to the freedom and joy of the woman's body expressed in very different ways in Fitzroy Hoyte's "Freedom," Tessa Alexander's "Dance like no one's watching" and Martin Superville's bele and flamenco dancers.

In Che Lovelace's "The Glint," pan and panman are flanked by Jouvay masqueraders or guardians who regard the viewer with question, challenge and threat. In the next room, Rayhaan Traboulay's photographs of traditional Mas characters, such as "Moko Jumbie – The Crow," also unsettle the viewers' gaze. A man plays Moko Jumbie against a black background, dressed in black with a sheen of gold and silver, with spread wings; his face daubed with bright yellow paint. In the photograph, the Moko Jumbie is tilted as though slightly off-balance, about to walk or dance, fall or fly.

As in Lovelace's painting, Traboulay's subjects resist being simply consumed by the nostalgic or voyeuristic gaze. Instead they steadily watch the viewer, as creators shaping their own images, whose intense craftsmanship, like the artists at ThinkArtWorkTT, challenges us to see differently.



# UWI CALENDAR OF EVENTS

## APRIL – JULY 2018

### CARMINA BURANA TODAY

6.30pm  
Lord Kitchener Auditorium  
National Academy of the Performing Arts  
Port of Spain

Love music? Art? Theatre? The Department of Creative and Festival Arts (DCFA) has something for everyone with their Season of the Arts. Check out upcoming productions in April:

- Visual Arts Degree Programme Exhibition – Opening Ceremony: April 4 | Exhibition: April 5 to 20 | Artist Talk: April 13 at the National Museum and Art Gallery
- The Annual Student Production: Arthur Miller's The Crucible – April 6 to 8 and April 13 to 15, 8pm nightly (6pm on Sundays) at the Learning Resource Centre (LRC)
- The UWI Arts Chorale, UWI Steel and Percussion present Carmina Burana – April 8 at 6.30pm at the Lord Kitchener Auditorium, NAPA

For more information, please visit DCFA's Facebook Page:  
<https://www.facebook.com/UWI.DCFA/>

### Beyond the Game – Sports Law Workshop

9am  
April 12  
Century Ballroom, Queen's Park Oval  
Port of Spain

The Faculty of Law presents its inaugural Sports Law workshop under the theme Lex Sportiva: Beyond the Game. The workshop features Professor Ian Blackshaw, International Sports Lawyer. Registration cost is TT\$650. To register visit <http://sta.uwi.edu/law/events/registration.php>.

For more information, please visit the Campus Events Calendar at [www.sta.uwi.edu/news/ecalendar](http://www.sta.uwi.edu/news/ecalendar).

### Make Chinese Dumplings

April 14  
Bishop's Anstey High School  
Port of Spain

The Confucius Institute present the following Chinese Cooking Workshops:

- Workshop 1 – Chinese Dumplings | April 14 | 10am to noon | Cost: General Public/UWI Staff: TT\$200; UWI Students: TT\$100 | Registration Deadline: April 11.
- Workshop 2 – Kung Pao Chicken | April 28 | 10am to noon | Cost: public/UWI staff: TT\$200; UWI Students: TT\$100 | Registration Deadline: April 18.

For more information, please visit the Confucius Institute's Facebook Page:  
<https://www.facebook.com/Confucius.UWI/>



### Notes of a Native Daughter

6pm  
April 19  
School of Education Auditorium  
UWI St. Augustine

The Open Lectures Committee invites you to attend the Professorial Inaugural Lecture by Elizabeth Walcott-Hackshaw, Professor of French Literature and Creative Writing on the topic; Cracks in the Edifice: Notes of a Native Daughter. To indicate your attendance email [UWISTAevents@sta.uwi.edu](mailto:UWISTAevents@sta.uwi.edu) or call 662-2002 ext. 83635.

For more information, please visit the Campus Events Calendar at [www.sta.uwi.edu/news/ecalendar](http://www.sta.uwi.edu/news/ecalendar).

### Healthcare Quality in T&T Symposium

8am to 4pm  
April 21  
University Inn and Conference Centre  
UWI St. Augustine

What will it take to accomplish quality healthcare in T&T? The Faculty of Medical Sciences (FMS) invites health professionals to attend the Healthcare quality in Trinidad and Tobago: Models for Best Practice Symposium. The symposium features Dr. Joshua Tepper, Chief Executive Officer, Health Quality Ontario. Registration costs \$500 (inclusive of refreshments and lunch).

For more information, please visit the Campus Events Calendar at [www.sta.uwi.edu/news/ecalendar](http://www.sta.uwi.edu/news/ecalendar).

### Bridging Wor(l)ds

9am to 4pm  
April 26  
Centre for Language Learning Auditorium  
UWI St. Augustine

The Departments of Modern Languages and Linguistics (MLL) and Literary, Cultural and Communication Studies (LCCS) present the second edition of the Bridging Wor(l)ds Conference which features the research of MA, MPhil and PhD students within both Departments.

For more information, please visit the Campus Events Calendar at [www.sta.uwi.edu/news/ecalendar](http://www.sta.uwi.edu/news/ecalendar).

### Connecting the Dots: Work.Life.Balance.Ageing

April 26 to 27  
Teaching and Learning Complex  
UWI St. Augustine

The Research and Development Impact (RDI) Fund and other stakeholders present the Work/Life Balance and Ageing Conference under the theme, Connecting the Dots: Work.Life. Balance.Ageing where they will showcase the project's findings as well as provide recommendations for our national ageing policy. Pre-registration is open until April 20.

For more information, please visit:  
<http://conferences.sta.uwi.edu/worklifeageing/>.

### Engineering the Future

9am to 11.30am  
May 23  
UWI St. Augustine

The Department of Mechanical and Manufacturing Engineering presents their Annual Conference and Exhibition under the theme, Engineering the Future. It will showcase the Department's Capstone projects and selected MSc and MPhil/PHD research projects and presentations. The Conference takes place from 9am to 11.30am at the Max Richards Building (Engineering Block 13) and the exhibition takes place at JFK Auditorium from 9am to 5pm.

For more information, please visit the Campus Events Calendar at [www.sta.uwi.edu/news/ecalendar](http://www.sta.uwi.edu/news/ecalendar).

### Diplomatic Academy of the Caribbean Workshops

June  
UWI St. Augustine

The Diplomatic Academy of the Caribbean (DAOC) presents the following workshops:

- Summer Executive Programme for Young Professionals: Protocol, Diplomacy and Business Etiquette 101 with facilitator Gail Guy, Retired Diplomat and Protocol Consultant | Session 1: June 4 and 5 or Session 2: June 7 and 8 | 9am to 4pm | Cost: US\$300
- The Art of Corporate and Diplomatic Communication with facilitator Sharon Welsh, Communications Consultant and Adjunct Professor at Georgetown University | June 26 to 29 | 9am to 4pm | Cost: US\$800 (10% discount for each member of groups 3 or more)

For more information, please email [DiplomaticAcademy@sta.uwi.edu](mailto:DiplomaticAcademy@sta.uwi.edu) or call 662-2002 ext. 85362; 85360; 85359 or visit [www.sta.uwi.edu/daoc/](http://www.sta.uwi.edu/daoc/).



### Rainforest to Reef

8am to 6pm  
July 25 to 27  
Teaching and Learning Complex  
UWI St. Augustine

The Latin America and Caribbean Section (LACA) of the Society for Conservation Biology in collaboration with The UWI hosts the inaugural Latin America and Caribbean Congress for Conservation Biology (LACCCB 2018) under the theme, Rainforest to Reef: Strengthening Connections between the Caribbean and the Americas.

For conference rates and registration information visit <https://laccbb2018.org/registration/>.

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TO HEAR FROM YOU**

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