

WEST AFRICAN
RESEARCH
ASSOCIATION

2016-2017 Newsletter

In this Issue:
Religion in West Africa



Articles in this edition of the WARA newsletter provide glimpses into the increasingly dynamic and diverse religious landscape of West Africa.

The lead article, by Nimi Wariboko, points to the central place of compassion in the ethical code of the Kalabari people of Southeastern Nigeria. He notes the critical relevance of empathy and compassion to the contemporary situation in the U.S. How to address the immeasurable suffering of black mothers who have lost their children to police violence? Wariboko directs us to the Kalibari ethos to remind Americans that it is through empathy and compassion that we can best support our grieving black mothers.

The pieces by William F.S. Miles and Dima Hurlbut explore some of the complex changes and transformations that are rapidly reshaping the religious landscape across West Africa. Miles's article, shows Judaism, a hitherto marginal religion in the region, now rapidly spreading in Cameroon, Côte d'Ivoire, Gabon, Ghana, and Nigeria. Although Christianity, unlike Judaism, has been present in the region for centuries, Dima Hurlbut's report highlights new trends resulting from the rise of American Churches in Southeastern Nigeria, while Deese's exploration of pre-colonial Christianity in southeastern Nigeria adds historical depth.

As Robert Baum reminds us in his piece, despite several centuries of Christian and Islamic proselytization and the recent growth of Judaism, indigenous African religious traditions remain strong in many communities like the Dioula.

In the summer of 2016, this diversified and increasingly changing religious landscape in West Africa fittingly served as the context for an immersion course for Aliou Niang's students from Union Theological Seminary to learn about Africa's interfaith coexistence and spirituality in Dakar.

And Jesus Wept: Let Us Weep with Black Mothers
Text: John 11:35

Professor Nimi Wariboko

This article is the transcript of the sermon delivered by Professor Wariboko on the occasion of his installation as the Walter G. Muelder Professor of Social Ethics at the Boston University School of Theology.

The woman you have just seen and heard, wailing in a gut-wrenching voice, was trying to re-present the mournfulness Jesus encountered as he walked into the family home of Lazarus, who had just been declared dead. More importantly and poignantly for our gathering today, her performance symbolizes the agonizing pain, the sadness, and trauma black mothers experience on hearing the news of the death of their sons and daughters at the hands of police and gang members. Her haunting voice that pierced our hearts—at least, my heart—is only a pale echo of the voices of lamentation that are heard too often in black homes.

Voices, lamentation and bitter weeping, are heard in Sanford, Ferguson, Baltimore, Chicago, New York, Tulsa, and Charlotte. Like Rachel in the book of Jeremiah, Sybrina Fulton, Lezley McSpadden, Gwen Carr, and Joey Crutcher are weeping for their children and refusing to be comforted because they are no more. Jesus weeps with them. He is moved by the pain of black families in grief. The Shekinah, blue and barefooted, is wandering in black neighborhoods, bitterly crying for God's lost children. Indeed, the pain of black mothers ripples through heaven and earth. Are you moved by the deep anguish of black mothers?

Inside this Issue:

Feature Articles

And Jesus Wept: Let Us Weep with Black Mothers	1
A Model for Our Time	14
African Religions and African Studies	15
Repainting the "White House" of Judaism	17
The Rise of American Churches in Southeastern Nigeria	19
Divinity and the State	20
Senegal's Islamic Connections to the Gulf	22

News From WARA and WARC

WARA at the ASA	3
From WARA Board President Wilson-Fall	3
From WARA Director	4
From WARC Director	4
Welcome to WARA Operations Manager Benjamin Bulluck, WARA Intern	5
African Slave Wrecks Project	6
Announcing 2017 WARA Fellows	7
ACPR 7:1 Women, Leadership and Peace in Africa	8
Welcoming WARA's new institutional members	8
Summer Study Programs at WARC	9
An Evening with H.E. Professor Hassana Alidou	9
Ideas Matter: A New Doctoral Fellowship Program	10
Tastes of West Africa Culinary Institute	11
Religion in West Africa Lecture Series	18
Yelimane Fall Exhibition is on the road!	41
Community College Faculty Seminar at WARC	47

FROM OUR FELLOWS

2016 WARA Fellows

Allison Backman, 2016 WARA Diaspora Intern	24
Katrina Spencer, 2016 WARC Library Fellow	25
Mohammed Diagayeté, 2016 WARA Resident Fellow	26
James Blackwell, 2016 WARA Pre-doc	27
Allison Grossman, 2016 WARA Pre-Doc	28
AnneSpear, 2016 WARA Pre-doc	29
Emily Stratton, 2016 WARA Pre-doc	30
Oluwakanyinsola Obayan, 2016 WARA Pre-doc	31
Oluwakemi M. Balogun, 2016 WARA Post-doc	32

2016 WARC Travel Grantees

Keita Ibrahim	34
Komivi Dossa	37
Omowumi Idowu	39
Koffi Yao Bernard	42
Ikem Chinedu,	44
Nikiema Mahamadi	45
Soro Tionhonkélé Drissa	46

2015 WARC Travel Grantees

David Olubada	48
Emmanuel Ikpefan	50
Gloria Afolayan	51

2014 Saharan Crossroads Fellows

Alioune Deme, 2014 Saharan Crossroads Fellow	52
Fathi Jarray, 2014 Saharan Crossroads Fellow	53

WARA Board & Officers	55
WARA Institutional Members	55

WARA Officers

President

Wendy Wilson-Fall
LaFayette College

Vice President

Ismail Rashid
Vassar College

U.S. Director

Jennifer Yanco
Boston University

Associate Director

Cynthia O. Ezeani

WARC Director

Ousmane Sène
Université Cheikh Anta Diop

Contact Information

WARA

African Studies Center
Boston University
232 Bay State Road
Boston, MA 02215
Tel: 617-353-8902
Email: wara@bu.edu

WARC

B.P. 5456 (Fann-Residence)
Rue E x Léon G. Damas
Dakar, Senegal
Tel: (221)865-22-77
Email: warccroa@yahoo.fr

This newsletter is published twice a year by the West African Research Association with the support of the African Studies Center and the College of Arts and Sciences at Boston University. It is distributed to all members and associates of WARA. Material for publication in upcoming newsletters should be submitted to the editor at the WARA email address above. Please send an electronic version of your submission. WARA has the right to reject items that do not comply with the goals and purposes of the organization and reserves the right to edit and/or modify any submissions for content, format or length. Opinions expressed in published articles, however, belong solely to the author(s).



**Come Join WARA at the
60th Annual Meeting of the ASA**

***Institutions:
Creativity and Resilience in Africa***

November 16-18, 2017
Chicago Marriott Downtown Magnificent Mile
Chicago, Illinois



WARA Events to Note

**WARA Annual Membership
Meeting & Reception**

Friday, November 17. Time & Venue to be announced.
All Are Welcome!



WARA & WARC Official Panels

The Changing Role(s) of ECOWAS in the West Africa Region
Thursday, November 16, 2:00—3:45

Chair: Niklas Hultin, George Mason University
Ismail Rashid, Vassar College
Boubacar N'Diaye, College of Wooster
Hassana Alidou, Independent Scholar. Ambassador of
the Republic of Niger to the United States

**Roads, Rails and Planes: Building Infrastructures for Sub-
Regional and Regional Integration in Africa**
Thursday, November 16, 8:30—10:15

Infrastructure is an absolute necessity for furthering West African and continental integration. The bridge project between Senegal and the Gambia has resumed, but transportation infrastructures from one region of the continent to another, and even from one country to another, are missing. Heavy investments will be necessary so that people can get from Cairo to the Cape and from Dakar to Nairobi. (This roundtable will be steamed live from the West African Research Center in Dakar)



As I write this, our very esteemed and appreciated Jennifer Yanco will be stepping down from her post as Director after fourteen years of impeccable service to our organization. Fortunately for us, Jennifer will continue on an as-needed advisory basis, as we welcome a new Operations Manager to the WARA office in Boston. While these changes reflect the truth that Dr. Yanco is moving to a well-deserved

change of pace, it is also true that WARA is seeking to cut costs, streamline, and weather the storm of the next three years without Department of Education funding.

We have received very helpful advice and support from the Council of Overseas Research Centers (CAORC) as we move into this significant and daunting phase of WARA's life. I'm happy to report that WARC and WARA continue to benefit from many important partnerships, including but not limited to that of the National African American Museum, the Master Card Foundation, and the Library of Congress. Our relationship with the American Embassy in Dakar continues to be a source of encouragement and collaboration, and WARC continues to offer incomparable support and programming to scholars from around West Africa, the United States, and elsewhere. I am asking all institutional and individual members to therefore consider how they can join us in supporting WARA and WARC over the coming challenging period. Contributions big and small will be critical over the next three years.

WARA also continues to be creative and responsive, and the recent collaboration with Pierre Thiam, initiated by Jennifer Yanco, demonstrates that there are many ways that we can spread the word and the benefits of the West African Research Association. I invite you to join me in fighting to assure WARA's good health and institutional growth. Moving to an operations manager means that the membership and board will be the mainstays for sustaining WARA's viability and strength.

Wendy Wilson Fall
WARA Board President

News From WARA and WARC Headquarters

From the WARA Headquarters



It's been an honor to serve as WARA's US Director for the past 14 years (!) and I thank all of you for being such wonderful partners in this endeavor. As I prepare to step down, I am pleased to report that WARC is stronger than ever. In addition to its growing program of lectures, book signings, and film screenings, WARC also continues to serve as the hub not only the YALI program for all of francophone and lusophone West

Africa, but also for various study abroad programs, including Virginia State University's Fulbright Hays Group Project Abroad and Harvard Summer School. Ousmane Sene, of course, continues to provide the wise and effective leadership that has made WARC such a critical center for inquiry and exchange. It has been one of life's great pleasures to have served together with him over these past 14 years.

While the loss of WARA's Title VI funding presents us with significant challenges, we are fortunate to have a strong board and vibrant membership. As the board has explored ways to deal with the fiscal challenges created by the absence of Title VI funds, our first priority has been to keep WARC up and running. This has meant streamlining our operations by restructuring the staffing of the US office. Both Director and Associate Director positions are being eliminated and collapsed into one administrative position. It is anticipated that the savings associated with this staff restructuring will allow us to keep our funding for WARC operations steady. Both WARA and WARC are in excellent health—just in need of a slimming diet—and we expect that this measure will allow us to continue to provide researchers and the scholarly community with the kinds of resources and support they have come to expect.

WARA has initiated a number of new programs this year—a professional development seminar for community college faculty led by Mbye Cham in January; and in February, a West African culinary institute headed up by world-renowned chef, Pierre Thiam. We hope that both of these will become annual programs at WARC. The WARA traveling exhibit, "The Paintings of Yelimane Fall: Community, Literacy, and Activism in Islamic Africa," also makes its debut to institutions this coming fall, with Lafayette University as its first stop on the list.

I am pleased to announce that WARA's collaboration with The MasterCard Foundation for the **Ideas Matter Doctoral Fellowship Program** was renewed for a second year; awardees will be announced soon!

Wishing everyone enjoyed a good summer that was both restful and productive!

Jennifer Yanco
Outgoing WARA US Director

Post script: This letter to the membership was written prior to the hiring of Caroline Johnson as WARA Operations Manager. Caroline came on board in April and is doing a superb job. WARA is indeed blessed to have such a talented and dedicated person at the helm of our US operations!



The month of March is when, in most parts of the world, women are celebrated. On March 11, young Senegalese women recipients of the Mandela-Washington Fellowship Program chose WARC as the venue of their day's activities on the theme of "Strengthening Women's Empowerment for Successful Leadership". These young women leaders held three panels chaired by celebrated ladies known in

Senegal and the rest of the world for their leadership in academia, politics, social engagement and fashion, style and design. WARC was, indeed, the designated location to hold such an event as it is already involved in the implementation of the other component of the Obama-initiated Young African Leaders' Initiative program (YALI) of which the Mandela-Washington Fellowship is a part.

Earlier, in January, WARC received several groups of faculty and students, including Lafayette College and the Community College Program launched this year by CAORC. The Center also hosted the Culinary Institute mulled for almost ten years by Dr. Jennifer Yanco, WARA Director. The Institute was a milestone success, and one hopes the organizers will have no difficulty enlisting a larger number of participants for its second and subsequent editions.

As for every year, Black History Month was celebrated at WARC for 2017 and one of the landmark events was a public lecture offered by Professor Emeritus Boubacar Barry on the subject of the Greater Senegambia: Past, Present, and Future. This came on the wake of developments in the Gambia which ultimately culminated in the ousting and forced exile of former President Jammeh and the swearing in of the new Gambia statesman, President Barrow.

Meanwhile, WARC remains busy implementing projects entrusted by several institutions, including but not limited to, the Library of Congress, the National Museum of African American History and Culture in Washington, D.C. and State Department's ECA, which revived the Foreign Language Teaching Assistantship (FLTA) for the Wolof language at WARC, which was discontinued for years. As early as May, the Center has been filled with researchers, faculty and students from study tours operated by several US universities. Over ten programs were coordinated and successfully implemented by WARC for a total of 150 participants. The Fulbright Hays Program of Virginia State University and the Harvard Summer School Program featured among those study tours.

The Center also keeps a vigilant eye on the quality of the various services it delivers and the conviviality of its environment. In this respect, a new generator has been acquired thanks to the YALI project to keep operations uninterrupted at the Center by unexpected although now rare power outages in Dakar and the walls, doors, and windows of the center's building have been embellished and rejuvenated with a new coat of paint.

Ousmane Sène
WARC Director

Welcome to Caroline Johnson, WARA's new Operations Manager

In April, I received a warm welcome from WARA and the Boston University African Studies Center as I began my new journey as Operations Manager for WARA's US headquarters. I was blessed with the opportunity to train under the tutelage of Dr. Jennifer Yanco, an utmost inspiring individual. I since feel I have gained an in-depth understanding of the ins and outs of this position.

Although saddened by the fact that Jennifer and her colleague Cynthia Ezeani have stepped down, I am very happy to play a role in carrying out the legacy these two handed over and excited to join such a great family here at WARA. I strongly value educational and cultural exchange, as its benefits are very clear to me: First, for the individual in self-growth, and second, for society, by allowing people from different cultures to gain deeper understanding for one another. This is something our world seems to need the most right now while we deal with extremism, not only in Islam abroad, but also in white nationalism in the US. It is true that if everyone could live a day in someone else's shoes, this world would be a better place. The opportunities for exchange and learning provided by WARA bring us one step closer to that ideal. It is hope and wisdom, not fear and ignorance, that drive progress.

Before being hired as Operations Manager, I spent two years with the Peace Corps in the southeasternmost department of Senegal, Saraya (in the region of Kédougou), where I deepened my understanding of the Malinké language and culture. There, I specialized in grant writing and project management for local entrepreneurial endeavors, including market gardening and general business practice. I also managed a scholarship program promoting female empowerment at the local middle school, and found great joy in seeing some of the beneficiaries become role models for their peers during my two-year term. Living there also allowed me to witness first-hand some of the barriers to higher education that exist at least in that pocket of West Africa, which touched me greatly as someone who highly values education but never had to worry about access to it while in the US. And so, I think it vital that WARA continue its efforts to break down some of those barriers in providing fellowships to West African nationals.

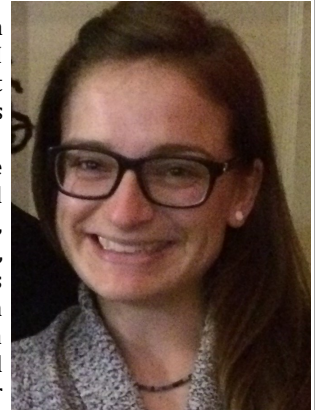
I come to WARA with an extensive background in administrative roles, one such being a personal accounting administrator at Ayco, a Goldman Sachs company. Other experiences include facilitating fellowship competitions at the Fulbright Commission of Belgium and coordinating social services for refugee, asylee, and immigrant clients at the International Institute of New England.

I earned my B.A. in Economics at Stonehill College in 2013. I am fluent in French with advanced-intermediate Malinké. I also look forward to taking up Wolof this coming fall.

As Operation Manager, I hope to build upon and expand the WARA network in order to: 1. strengthen WARA's presence in academia, 2. raise funds that will sustain WARA's operations in the short-term, and 3. increase opportunities for scholars in West Africa in the long-term.

Words truly cannot express how thrilled I am to be a part of the WARA family, one that is comprised of a board and membership of truly remarkable scholars in West African studies, and to partake in its noble mission.

Caroline Johnson
WARA US Operations Manager



WARA 2016-2017 Intern Benjamin Bulluck

WARA has been exceedingly fortunate this year to have Benjamin Bulluck here as an intern in the US office. Ben comes to us from Lafayette College where he graduated in spring 2016 with a double major in International Affairs and Africana Studies. With his sights set on becoming a librarian, Ben has also devoted several hours a week to assisting the African Studies as an assistant to their special collections. In addition, he has been a conscientious student of both Hausa and Wolof over the year.

This fall, Ben will begin graduate work as a student of Simmons College, where he will pursue a Master's in Library and Information Science. With a concentration in Cultural Heritage informatics, he is looking to master the skills needed to work behind the scenes at libraries/archives, and special collections. He is also interested in bringing the study of linguistics to his career as an information professional.

We are thrilled that Ben will continue to work with us next year, as he has accepted the invitation to serve as the social media coordinator for the ALMA project.



African Slave Wrecks Project Working with the NMAAHC

The African Slave Wrecks Project (ASWP) is a unique global partnership among museums and research institutions which locates, documents, and archaeologically excavates slave shipwrecks globally, while working to build capacity in the areas where wrecks are found.

The project combines research, training and education to build new scholarship and knowledge about the study of the global slave trade, particularly through the lens of slave shipwrecks. It assists in strengthening cultural resource management programs that preserve and protect irreplaceable heritage related to the historical slave trade and Africa's global diaspora and in capacity building for educational, heritage and scientific institutions in partnering countries.

The African Slave Wrecks Project is long-term collaboration between the National Museum of African American History and Culture (NMAAHC) and a number of partner institutions including George Washington University, Iziko Museums of South Africa, the National Parks Service, and the African Center for Heritage Activities.



Students conducting underwater documentation in Senegal.

The first phase of the project focused on the wreck of the Portuguese slave ship, Sao Jose, found off the coast of Cape Town, South Africa. Artifacts from this wreck are now on display at the NMAAHC, which opened last fall.

Since 2014 WARA has been working in partnership with the NMAAHC on a number of projects in Senegal, providing administrative and logistical support through the West African Research Center (WARC).

This has included supporting the African Slave Wrecks Project. In Senegal, the project has focused the preservation of artifacts, strengthening the IFAN archeology laboratory, and importantly, on training UCAD graduate students and faculty developing capacity in underwater, or maritime, archeology. This latter has involved intensive training in deep sea diving, methods and techniques of underwater archeology, and practical experience in underwater documentation and surveying.

The Archaeology Lab at Cheikh Anta Diop University (UCAD) in Dakar, Senegal is an important center for learning and research around the involvement of West Africa in the Atlantic Slave Trade. The head of the UCAD Archaeology department, Dr. Ibrahima Thiaw, a leading expert in Atlantic slavery in the Senegambia and cultural heritage management, has, along with six graduate students (two of whom are women), gone through the intensive dive training. As part of the Slave Wrecks Project, the NMAAHC Office of Community and Constituent Services is working with the Archeology Lab to build capacity.

Another related project was the The Goree Island Archaeological Digital Repository Project, conducted in partnership with NMAAHC and the Matrix Center of Michigan State University. This project, which created a digital repository of selected archeological artefacts, entailed training 15 students and museum professionals from Musée Théodore Monod d'art africain (IFAN), in stereophotogrammetry and 3D conceptualization.

Following the training, three students were selected to carry out the phase 3 of the program which consists of 3D digitization. In all, 36 artefacts were digitized, as well as various documents from Goree Island's Maison des Esclaves.

CONGRATULATIONS TO OUR FELLOWS!

2017 Pre-doctoral Fellows

Lisa Fouladbash (University of North Carolina) for research in Burkina Faso “Groundtruthing Sahelian Greening with Local Knowledge in Burkina Faso”

Jason McSparren (University of Massachusetts Boston) for research in Mali “Seeking a Nexus between Transparency, Accountability and Sustainable Development in the Extractive Industries: Evaluating capacity of civil society organizations in Mali”

Douglas Peach (Indiana University) for research in Sierra Leone “We Are Here to Sensitize the Connection Among our Peoples!': Music, Heritage, and Trans-Atlantic Dialogues between Sierra Leoneans and Gullah Geechees”

Matthew Steele (Harvard University) for research in Guinea “The Lives of Texts: Islam, Law, and History in Guinea”

Russell Stevenson (Michigan State University) for research in Nigeria “White Shirt Empire: Mormonism and Corporate (Post)colonialism in Nigeria, 1953-1988”

2017 Post-doctoral Fellows

Kristin Peterson (University of California) “Africa Rising?: Planetarity, Urban Politics, and Art Photography in Lagos, Nigeria”

Emily Riley (Michigan State University) “Performing Politics: Female Politicians, Griottes, and the Parité Movement Dakar, Senegal”

2017 Residency Fellow

Valerie Delali Adjoh-Davoh (University of Cape Coast) to conduct research on child labor in the colonial period of the Gold Coast at Harvard University.

2017 WARC Library Fellow

Obden Mondésir (Queen’s College) for summer fellowship at the WARC Library in Dakar.

2017 Travel Grantees

Fall competition

Tovide Semou Noel (Université d’Abomey-Calavi) for research in Burkina Faso. “Contamination du mil (*pennisetum americanum*) et du sorgho (*sorghum bicolor*) par les moisissures productrices de mycotoxines: évaluation des risques d’exposition des populations aux fumonisines, aflatoxines et ochratoxines”.

Konan Louis Nguessan (Université Nangui Abrogoua) for research in Burkina Faso. “Evaluation de l’impact de différents régimes de feu sur le stock de carbone et l’état physiologique des microorganismes du sol dans la zone de contact forêt-savane de Côte d’Ivoire”.

Yusuf Rafatu Talatu (Ahmadu Bello University, Nigeria) for research in Ghana. “Fabrication of catalytic foam filters based on perovskite catalysts for diesel soot emission control.”

Sama Hemayoro (LABIOCA, Université Ouaga I Pr Joseph KiZerbo) for research in Benin. “Etude de la résistance de *Jatropha curcas* L. aux champignons phyto-pathogènes de l’espèce.”

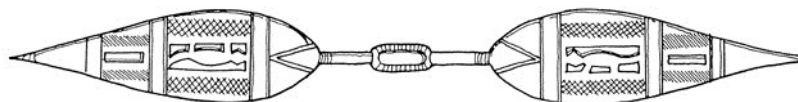
Spring competition

Evariste Bako (University of Ouagadougou) “Molecular Epidemiology of Virulence Genes and Antibiotics Resistance Genes in Diarrheal *Escherichia Coli* Pathogenic Strains Isolated from Livestock Market Effluents in Ouagadougou.”

N’Do Jotham (University of Ouagadougou) “Potentiel hépatoprotecteur et criblage phytochimique de *Acanthospermum hispidum* DC (Asteraceae).”

Kossitse Venyo Akpataku (Université de Lomé, Togo), “Identification des sources de contamination des eaux souterraines par les composés minéraux azotés : Cas de la Région des Plateaux du Togo”

Arts Council of the African Studies Association. In support of West African scholars traveling to the 5¹th Triennial Symposium on African Art, sponsored by ACASA. The Symposium took place at University of Ghana, Legon, August 9 to 13, 2017.



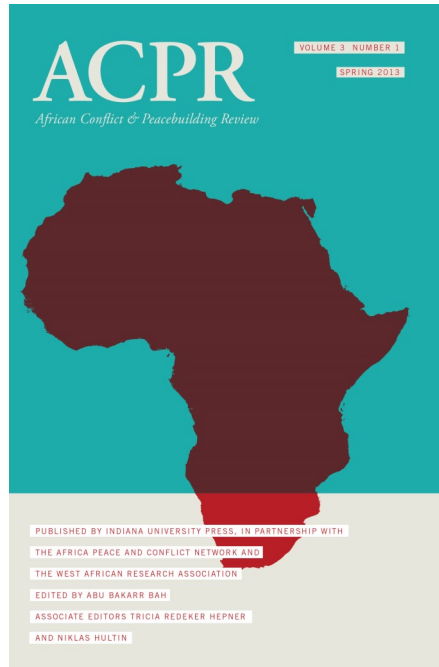
We would like to thank our fellowship committees here in the US and in Dakar for their conscientious work in reviewing applications and selecting awardees. We would also like to acknowledge the Educational and Cultural Affairs Bureau of the US State Department for the generous funding that supports WARA’s fellowship programs.

African Conflict & Peacebuilding Review (ACPR)

African Conflict & Peacebuilding Review is published by Indiana University Press in partnership with WARA. Now in its seventh year, ACPR is a forum for the exploration of issues that impact the establishment and maintenance of peaceful polities on the African continent. ACPR is committed to featuring the work of African scholars.

We are pleased to welcome David Hurlbut (Boston University) as ACPR's new Managing Editor. Volume 7, Number 1 is now available. This Special Issue, focusing on Women, Leadership, and Peace in Africa, is edited by Francis Onditi, senior lecturer and head of department, School of International Relations and Diplomacy, Riara University, Kenya.

—*Abu Bakarr Bah, Editor-in-Chief*



Contents of Volume 7, Number 1

Articles

Introduction to the Special Issue:

Women, Leadership, and Peace in Africa

Nic Cheeseman, Francis Onditi, and Cristina D'Alessandro

Women's Access and Control over Woodland and Water Resources in Rural Zimbabwe

Jeffrey Kurebwa

Zimdancehall and the Peace Crisis in Zimbabwe

Ushehweu Kufakurinani and Wesley Mwatwara

Briefings

Women's Agency and Violence against Women:

The Case of the Coalition on Violence Against Women in Kenya

Fatuma Ahmed Ali

Women-Led Non-Governmental Organizations and Peacebuilding in Rwanda

David Mwambari

South Sudan's 2015 Peace Agreement and Women's Participation

Kizito Sabala

Want to learn more about ACPR and other African content journals? Find out how to get your work published? Mark your ASA calendars for Friday, November 17 at 4pm . "Publish that Article!" features the editors of leading African journals , including ACPR.

Welcoming New Institutional Members of WARA

Garden City University College

WARA extends a warm welcome to Garden City University College! GCUC is based in Kumasi, Ghana, founded by Dr. Albert Acquah in 2002, under its original title, College of Information Technology and Management Studies. It offered 2-year certificate programs in business administration, computerized accounting, and banking technology, until it became accredited and renamed as Garden City University College in 2005, offering 4-year degree programs in addition to its 2-year certificate programs. In 2007, it became the first private institution in Ghana to offer a BSc. in Nursing. Dr. Albert Acquah is the current Chancellor. You can find out more about GCUC on their website: <http://www.gcuc.edu.gh/> . Thank you GCUC and welcome to the WARA family!

George Washington University

WARA has had the good fortune to work with member institution George Washington University's Integrated, Information Science & Technology Program. In February of this year, IIST student Daniel Alvarez Castegnaro traveled to WARC to conduct a technology assessment of the center. IIST Program, Director Dr. Olivia Blackmon, was recently awarded the Nashman Center Engaged Scholarship grant to design a course and study abroad programs in education technology in Central America, Senegal, and Kenya. We look forward to continuing to be part of this important work.

Union Theological Seminary

This past year, we were pleased to welcome Union Theological Seminary as an institutional member of WARA. Union professor Aliou Niang got to know WARC when he took a group of Union students to Senegal last summer to explore issues of religious tolerance and coexistence. Professor Niang will be delivering the Fall 2017 "Religion in West Africa" lecture in the BU/WARA series. Learn more about our new member at <https://utsnyc.edu/about/>

2017 Summer Study Programs at WARC

This year, WARA member institution, Virginia State University, was awarded a Fulbright-Hays Group Projects Abroad grant for Senegal. The program, coordinated by WARC, was a four-week cultural immersion entitled “Gender, Tradition, and Transformation in Contemporary Senegal.” The VSU GPA brought together a group of 13 Virginia K-12 teachers and two VSU faculty (photo below) to explore cultural and historical contexts for understanding the complexities of contemporary Senegal and its position in West Africa today. This follows on last summer (2016), when WARC worked with Boston University to coordinate their Fulbright Hays Seminar Abroad.



WARC is increasingly sought after for its scholarly resources and skill in administering and coordinating winter break and summer study programs for students and teachers alike. This spring and summer WARC hosted a number of study tours for US universities and educational institutions and offered its hospitality to no fewer than 150 participants in these programs.

Other institutions whose programs were organized by WARC this year included

- Lafayette College
- The International Honors Program Cities in the 21st Century
- Brigham Young University
- State University of New York-Geneseo
- Union College/Albany College of Pharmacy and Health Sciences
- Harvard University
- Georgia Institute of Technology

WARC also provided assistance to summer programs run by Ohio State University, Western Michigan University, and the Dakar Institute for African Studies (DIAS).

An evening in Boston with H.E. Professor Hassana Alidou, Ambassador of the Republic of Niger to the U.S. and Canada Promoting Leadership through Girls’ Education

On Wednesday, September 28, 2016, WARA had the distinct honor of hosting an evening with H.E. Professor Hassana Alidou, Ambassador of the Republic of Niger to the U.S. and Canada. Co-sponsored by WorldBoston, the Boston Network for International Development, and the United Nations Association of Greater Boston, the event explored the notion of transformative leadership.

For Ambassador Alidou, transformative leadership is grounded in education. In her remarks, she made a compelling case for the critical importance of education and specifically, the education of girls. Educating a girl, she noted, is not just educating one person, but a whole family, a community, a nation. Mothers who have gone to school—for even just a few years—are much more likely to insist that their children do so, and they are more likely to advocate for themselves and their communities—in short, to become leaders.



In light of the critical impact of educated women on the family, the community, and the nation, we should be deeply concerned by the fact that the majority of those not getting education are girls. Among the reasons for this is pervasive poverty, forcing parents to make decisions about sending their children to school, decisions that often disadvantage girls. While poverty limits everyone’s access to education, it hits girls the hardest and deprives society of their leadership potential.

Ambassador Alidou spoke about her own trajectory as a leader and the pivotal role of her parents’ decision to prioritize their daughters’ schooling. She also pointed to their refusal to impose gender restrictions on their daughters, instead encouraging them to pursue their interests regardless of society’s preconceptions about what was appropriate for girls. She spoke about the many people in her life who have encouraged her, and the ways in which we are each responsible for fostering leadership in one another.

Held in Dudley Square, Boston, at the new headquarters of the Boston Public Schools, the event was attended by upwards of 60 people.

Ideas Matter Doctoral Fellowship Program A WARA partnership with the Mastercard Foundation

The **Ideas Matter Doctoral Fellowship Program** is a joint initiative of the West African Research Association and the Mastercard Foundation. Ideas Matter invests in the work of young scholars based in West African institutions, by supporting doctoral students in the final phases of their work, with a focus on research that is at the intersections of women, technology and entrepreneurship. This program reflects our joint commitment to increasing opportunities for emerging West African scholars, people who are transforming ideas into active solutions to the challenges facing the region and the world at large.



We are pleased to present the awardees from the 2016 Ideas Matter Fellowship competition, all of whom are currently in the field conducting their research. In this inaugural competition, we received 63 complete applications from doctoral students representing ten West African countries and fields as diverse as biology, agronomy, political science, medicine, public health, chemistry, and pharmacy. Their research seeks to solve some of the most trenchant health and economic challenges facing Africa today. Applicants were more or less equally divided between francophones and Anglophones, and while just 17 of the 63 applicants were females, the three applications which rose to the top were all submitted by women—attesting to the growing role of women in science and technology. Please take a moment to meet them:

2016 IDEAS MATTER Doctoral Fellows



Ms. Akomoun Blandine Kapko (Benin, Université d'Abomey-Calavi) Health and Medicine
Chemical characterization of active properties in plants known for their efficacy in traditional treatment of typhoid fever in Benin

According to the W.H.O., more than 80% of people in developing nations depend almost entirely on traditional medicine. Ms. Kapko's research will include a comprehensive inventory of plants used in the traditional treatment of typhoid fever. Each will then be subjected to chemical analyses to isolate their active properties.



Ms. Osemudiamen Anao (Nigeria, University of Benin) Environmental Health
Assessment of genotoxicity and environmental health effects of brominated flame retardants (BFRs) on *Allium cepa* and male and female albino wistar rats

Currently, somewhere between 50-80% of the electronic-waste collected by recyclers in the U.S. ends up in developing countries, including Nigeria. Ms. Anao's research explores the health effects of a common component of e-waste that is capable of acting as an endocrine disruptor, carcinogen and neuro-development toxicant.



Ms. Gloria Tetteh-Kubi (Ghana, University of Cape Coast) Food Security
Improving the Field Resistance of Cowpea Genotypes to the Cowpea Aphid (*Aphis craccivora*)

Ms. Tetteh-Kubi's research focuses on strengthening the widely consumed legume, *Vigna unguiculata* also, or cowpea or black-eye pea. The study is of great practical value because it will propose ecological improvement measures aimed at reducing the widespread pesticide use in cowpea agriculture and will thus contribute to biodiversity conservation, food security and rural poverty reduction in Ghanaian cowpea growing areas.

Awardees for 2017 will be announced over the course of the summer.

Tastes of West Africa 2017: A Culinary Institute in Senegal with Chef Pierre Thiam

This February WARA realized a dream that had been in the making for at least a decade: organizing a West African Culinary Institute in Senegal.

The institute was headed up by Chef Pierre Thiam and WARA Director, Jennifer Yanco. The institute provided hands-on cooking lessons; under the guidance of Chef Thiam we prepared a number of signature dishes, starting with the marketing right up through serving and sharing the meals we prepared. Among the dishes were Yassa, Ceermbum, Ngurbaan, and Thieboudienne. And we cooked in different kitchens—a private home, our hotel restaurant kitchen, the kitchen of the lodge where we stayed in the countryside—and with many different cooks.

We did our shopping at several different markets in Dakar and elsewhere, and we traveled to meet with producers. We met with farmers, fishermen, the people who harvest salt from the waters of Lac Rose, the Benedictine monks of Keur Moussa who tend their orchards and gardens, those who protect the mangroves

I had never thought of culinary tourism as a concept or the idea of getting to know a country or culture through cooking its food. But it has now become my gold standard for really understanding any country I plan to visit, and it could not have been organised better beginning to end, in a more expert way.

—Robbie Smith, participant

that are the natural fish



hatcheries of the region, the cooperatives and processing plants that process foods like millet, fonio, fruits and vegetables.

It was a very busy ten days and we covered a lot of ground. We visited historic sites including Goree Island, and the Mamelle Lighthouse, which has been continuously operating since 1864. We visited the Dakar Culinary School and met with its director, enjoyed a lecture by a specialist in the history of food in the region, and ate at a range of West African restaurants in Dakar. We spent two nights in Djilor at the heavenly ecolodge La Source aux Lamantins, run by Anne Catherine Beye, the granddaughter of Senegal's first president, Leopold Sedar Senghor. Anne Catherine made sure that we visited key groups involved in promoting agriculture,



Tastes cooks taking a break, with Chef Pierre Thiam on the left.

Continued on page 33

Religion in West Africa

The theme of this issue of the WARA newsletter is Religion in West Africa. We have gathered seven articles prepared by WARA members who are experts in various aspects of the subject. From traditional religion, to Islam, Christianity, Judaism, and from West Africa to the United States, these articles provide a sense of the richness and diversity in religious belief and practice in the region and its interaction with and impact on the rest of the world.

When last did you weep like these mothers when they heard
Wariboko (continued from page 1)

the news of yet another son or daughter killed at the hands of the police? Did you cry when you heard that a young woman walking to school to register her children was cut down in her prime, an innocent victim of gun violence? Where was your witness to suffering when you learned that a little boy, playing with a toy guy in a public park, was gunned down by police? Have our hearts grown so hard and callous that we are no longer moved by human pain? Perhaps, we are still moved by the suffering of human beings, but just not that of black mothers. Are black mothers not human?

Why as American citizens have we not torn our clothes, put on sackcloth, and poured ashes on our heads to lament for the sufferings of blacks? As a people, have we lost the capacity for empathy? What is happening in this country to black people, what is happening in this country to the poor, and what is happening in this country to all marginalized and oppressed people should make us weep. What veil has blinded us from seeing the suffering of black mothers? What evil being has devoured our capacity for empathy?

Tell me, why have Americans rejected empathy as the point of departure for ethical action when it comes to the senseless taking of black lives? In moving away from empathy or compassion as the foundation of our ethos we are walking away from being human. I think to be human means to be humane. I believe you and I were not raised to turn our backs on our own flesh and blood. Our mothers nurtured us to be sensitive to the suffering of our neighbors and to help them come out of it, help them find a place of healing and solution.

While growing up in Nigeria, I was taught a lesson by my Kalabari community: that empathy is an ethical mode. Empathy connects, reveals, and shares the particularity of pain, and speaks the language of singular-plurality of human mutuality. Empathy is one of the ways our shared humanity weaves and tells its travails silently across the fabric of being, touching, awakening, and caressing the edges of the invisible threads that form our common garment of existence and destiny.

Another lesson I learned from my Kalabari people is that empathy may begin silently but it does not always remain incognito. It will often take command of our eyes and we shed tears. Men and women weep not because they are weak; they weep because the other's suffering and pain touch them. Weeping as a mode of empathy enables those whose hearts have not shriveled to pay close attention to particulars in the life of individuals struggling under a (social) problem and to respond to such persons with sympathetic understanding and mercy. Weeping invites immersion into the other's situation,

nudging the members of the community to put themselves in the place of the hurting soul, and thus enabling everyone to see similar possibilities between their own experiences and the grieving person. The practice of weeping nudges the community to bring the grieving person to its center and to make necessary changes that will protect and care for her or him, and hopefully better protect others from experiencing this pain in the future. This kind of moral imagination and response is highly relevant to community building in any society.

Thus in the Kalabari community of my upbringing, those who grieve are encouraged to call forth and re-energize communal empathy, to express their pain and thus share it with the supreme being, the gods, the ancestors, nature, and the whole village. When one person is hurt, the Kalabari believe that the whole of creation and the Creator is hurt. Weeping or shared weeping acknowledges that they are all together in the pain and together they will find a solution. Such weeping is not a demand for some goods of existence, but for justice, which as the Jewish philosopher Walter Benjamin once said, is a state of the world or state of God, it designates the ethical category of the existent, the living person.

In my teens, I saw at close quarters this tradition of weeping. In 1979, my mother lost her own mother in January and by early April she lost her only brother too. One way she responded to these crushing blows was to wake up every morning at about five, walk to the back of our home where she could look at the open sky directly, as if to have a clear view of God, and wail, weep aloud, lament the unbearable loss of her brother. She would call on God, her late mother, her saintly forebears, and the town, which was still sleeping or arousing itself from the night rest, to hear her pain and to bear witness to the extreme unfairness of life to her. As she wept she would tell the story of her brother: proclaiming his accomplishments, joys, and pains in life, while announcing her own pain over and over again. She would question God and the ancestors, probing them for answers to the cruel mysteries of life that seemed to envelope her too often. This was a 46-year-old woman who at that time had buried five of her own children. In the midst of all the wailing and laments, she would call on the same God to spare her another loss and sustain hope for the living, to guarantee her existence and those of her loved ones.

Her haunting voice in those early morning sessions took me to the depth of the human soul, the abyss of human suffering, and the height of human capacity for fierce hope in the midst of excruciating pain. The lessons I learned from this Kalabari tradition of weeping have stayed with me since then. I have come to realize that at the root of all ethical care for our loved ones and society is empathy, to share others' pain with them—and to rejoice with them when the occasion demands. I have learned that the starting point for ethics is empathy, compassion.

The co-joined twins of empathy and compassion start their lives in the womb of sorrow. Before we “learn the tender gravity of kindness,” we must know, experience, or share sorrow; feel the size of the wet blanket that ever so often covers humanity. The Arab-American poet Naomi Shihab Nye puts it this way in her poem, “Kindness”:

*Before you know what kindness really is
you must lose things
feel the future dissolve in a moment
like salt in a weakened broth
...
Before you know kindness as the deepest thing inside,
you must know sorrow as the other deepest thing.
You must wake up with sorrow.
You must speak to it till your voice
catches the thread of all sorrows
and you see the size of the cloth.*

If as a society, as a people, or as a scholarly community we no longer imagine ourselves being in the other’s situation, when we no longer imagine some community between ourselves and our fellow citizens, and when we no longer inhabit a sense of similar possibilities and vulnerabilities, then there is no ethics left to speak about. There is no longer compassion in our social life, only abstract arguments, mere social activism, and proliferating public policies. You might be working hard for the oppressed, the excluded, and the despised, and even giving money to them, but are you connected to them at a very deep humane level? Compassion serves as an important bridge between persons and between persons and community.

As the philosopher Martha Nussbaum puts it, compassion broadens, educates, and stabilizes elements of concern that we already have. It widens one’s own circle of concern. She explains at length that compassion expands the boundaries of the self as it is often set in motion by “painful emotion occasioned by awareness of another person’s underserved misfortune.” Compassion is a process in which the suffering of one citizen is shared by another; hence the co in com-passion. This co-sharing, which can and often does prompt us to treat others justly and humanely, is based on an evaluative judgment of the sufferer’s condition. We determine that the loss is not trivial, the sufferer does not deserve it, and the scale of suffering affects her flourishing, as well as our own.

Today, the sufferings of black mothers do not collectively move us as a nation. Alas, their fellow citizens do not share their pain. We have turned our backs to them in their moments of need and desperation. Perhaps, deep down we are thinking the possibilities and the vulnerabilities of black mothers are not similar to our loved ones and us. We have become so “developed,” so advanced, so “successful,” that we have lost our capacity to weep with those who weep. We are so emotionally evolved that we now consider the capacity to share the pain and suffering of our fellow citizens as primitive.

I am afraid that in this country we have succeeded in making ethics and morality only about logical, philosophical, and conceptual arguments. I am afraid that ethics for many have become only activism on the street. I worry that most of our citizens now think that ethics is primarily about correctly

formulating the next public policy paradigm to address blacks who are always the “problem.”

In all these worthy endeavors America has not answered the vexing question: Do we really care for the lives of black children? Where is our empathy for them? Where is our compassion for young black males, an endangered group of people in this country? Where are our sense and structures of justice fed and powered by the streams of compassion? Our ethics, activism, academic arguments, and policy frameworks are empty, no-thing, without the deep feeling of connection to other human beings, especially those who are suffering.

The ongoing evacuation of fellow feeling from the collective being of Americans makes me weep, keeps me up at night. African Americans are paying a heavy price for it. The cost is so exorbitant, the weight of blackness so crushing it is time to weep with black mothers. It is also time to mourn America for having lost its capacity for empathy in the midst of monumental suffering. It is high time to rebase and reorient our national ethos toward a practice of weeping, that is to deeply share the pains of black mothers and say to them as one community: “We hear you, your warfare is over, and your peace is won.”

As an ethicist, I believe that weeping (literally and figuratively) is an ethical disposition, a protest and resistance against the rough edges of life and society, an habitus against the unbearable pain of existence. My friends, tears are not a sign of weakness. They signal that justice is about to roll like a river, and righteousness like an ever-flowing stream. Tears mean that the primeval waters of creation stored in our souls are flowing to repair the broken edges of our relationships and mutuality. Weeping is a manifestation of our capacity for empathy, an indication of our connection to other human beings and their sufferings, and a desire to change the world. Weeping teaches us to care for our world and our neighbors. Weeping says that night will not last forever, for the new day will break forth with joy.

This joy that comes in the morning after weeping in the night of our sorrows does not abide with shriveled hearts. Too many of our hearts in this country are turning to stones and dust insofar as black lives are concerned. But all is not lost; there is great reason for hope. I believe in the great potential of the good people of this country. I know that once we wake up to weep, our tears will clear the veils, wash away the scales that blind us and prevent us from seeing the deep racism, classism, and callousness that daily beset our institutions and us. Once we are able to see again we will stand up and transform our nation. In the meantime, let us weep for America in solidarity with black mothers, so that we may see and feel again. Let us gather our strengths and gifts to work for a better tomorrow; let us work real hard for a nation where black lives and livelihoods matter. For I sense God is saying: “I have surely seen the affliction of my people in America. I have heard their cries of distress because of their dead children. Yes, I am aware of their suffering and I have come down to deliver them.” In partnership with God, let our deeds of mercy and justice say to black mothers: “Come forth out of your affliction.”

And let somebody shout alleluia!

Continued on page 16

A Model for our Time: Fulfilling the Will of God in Dakar, Sénégal, West Africa Professor Aliou Niang

A native of Sénégal, I am now an Assistant Professor of New Testament at Union Theological Seminary in New York City. As I was working on a proposal for an immersion course for Union students in Dakar, I learned about the West African Research Center (WARC) from Souleymane Bashir Diagne of Columbia University. Mariane Yade, Program & Public Relations Officer of the WARC coordinated the logistics for the main events as well as lined up lecturers from Cheikh Anta Diop University: Fatou Sow and Mamadou Fall. The logistical support the WARC provided was invaluable.

I have dreamed about sharing my Senegalese culture and Faith Traditions with Americans since 1990, when I first set foot in the United States of America to pursue biblical studies. My dream came to fruition in July 2016, when I landed at Léopold Sédar Senghor International Airport in Dakar with a group of students from Union Theological Seminary to learn about Senegalese spirituality. The course introduced students to the lived experiences of the faith traditions of the people of Sénégal, West Africa (a nation that includes 93-4% Muslims, 4-5% Christians and 1-2% African Traditionalists), especially in and about Dakar--capital of the oldest French colony in West Africa with a long history of contact with Europe since 1444. It immersed students into a country where, I argue, religion and a sort of secularism (laicity) shape each other to promote religious equality, respect, freedom, and a healthy interreligious dialogue--a goal rooted in the mission of Union Theological Seminary.

Sénégal and especially Dakar, for me, is one of the best West African contexts where one can learn about the exercise of interreligious dialogue--a mission the first president of Sénégal, Léopold Sédar Senghor, qualifies as being the quintessential spiritual act of fulfilling the will of God among humans. Compared to other West African countries such as Mali, Ghana, Nigeria, and Niger where religiously inspired conflicts along sectarian lines are frequent, Sénégal offers a unique example of a peaceful spiritual coexistence between Muslims, Christians and Traditionalists. As Ousmane O. Kane rightly notes, Senegalese political and religious leaders managed to foster the kind of mutual acceptance between faith traditions and ensured equity, justice and peace in the country.

Students were expected at the end of the immersion to be able to critically analyze the Senegalese expression(s) of African Traditional Religion, examine its relationships to Islam and Christianity and bring the content to bear on sustainable interfaith conversations at Union Theological Seminary. The leading question for the course is what is peculiar about the Senegalese construction of religious identity and pluralism and how might we translate the content of our queries into our Union interfaith conversations. Sustained conversations with religious leaders revealed that they fostered a symbiotic coexistence that pervades the daily lived experiences of the people. They expressed what they conceived to be their role and function in the making of interfaith relations and helped us understand the peculiarity of the Senegalese construction of religious identity and pluralism. In a nutshell, their desire to collaborate, foster and sustain an organic interreligious

symbiosis is not only insightful and unique but something for my students and me to take away. Conversation with some religious leaders at Camberène revealed that compassion, respect, hospitality, and being a good neighbor are the main virtues that direct, move and inform how members of the Muslim Layenne Community relate to each and their Christian neighbors. Subsequent conversations with Christian leaders highlighted similar concerns. Except for some concerns about the status of and role of women raised by students, especially in Christian circles (Catholic and Protestant), we saw the manifestation of a good and healthy organic religious symbiosis worth emulating. A visit at the IFAN Museum revealed yet another profound dimension of West African spirituality: fecundity--in human life and subsistence based agriculture.

Students commented that the opening and closing lectures were invaluable. Sow highlighted the challenges involved in maintaining both the visible and invisible in Senegalese spirituality. Fall repositioned the West African region in world history by reconstructing the origins of Senegalese peoples as peasants who relied on cereal subsistence based agriculture. This precolonial cohesive agrarian life was disturbed by 1884 with the dawn of French colonialism that turned most of the people into bandits--warmongering plunderers. He also noted how Muslim clerics such as Cheikh Amadou Bamba moved to fill the leadership vacuum by turning these bandits into faithful disciples trained to read, write, and network--a lifestyle undergirded by piety and hard work.

In sum, the immersion helped us gain new insights on how interfaith dialogue might be translated into concrete practical ways of living in community. What is intriguing about Senegalese spirituality is that it is first and foremost a lived experience. Religious leaders may engage in an interreligious dialogue and would do so as they deem necessary--a lived interreligious engagement. It is not surprising then to hear a Senegalese Christian say "my husband is a faithful Muslim," a Senegalese Moslem say "my wife is a faithful Christian" or Senegalese Catholic priest say "my siblings are Muslims." Is this how fulfilling the will of God encouraged by Senghor, a devoted Christian, looks like? That is the topic for my next immersion study in Senegal.

Aliou Niang
Assistant Professor of New Testament
Union Theological Seminary
aniang@uts.columbia.edu



References

Ousmane Oumar Kane, *The Homeland is the Arena: Religion, Transnationalism, and the Integration of Senegalese Immigrants in America* (New York: Oxford University Press, 6455); Mamadou Diouf, ed., *Tolerance, Democracy, and Su^qis in Senegal* (New York: Columbia University Press, 2013).

See also Mamadou Fall, *Les terroirs de la Sénégambie entre l'épée et le croissant: Xème-XXème Siècles* (Paris: L'Harmattan, 2016).

African Religions and African Studies: Examples from the Study of Diola Religion

Professor Robert Baum

In 1977 I began my doctoral dissertation research on the history of indigenous Diola religion in southern Senegal. I went to meet with the director of a major research institution in Dakar and told him about my research. He told me that the indigenous religion of Senegal was Islam; that there was no religion in Senegal before Islam; and then he gave me a pamphlet he wrote entitled "L'Islam: La religion indigène du Sénégal." I thanked him for the article, he agreed to allow me to affiliate with his research institution, and I began my research. I have been working in the area ever since. Sadly, nearly 40 years later, I found that there was a similar resistance to the incorporation of African religious traditions in the study of Senegal, when I was part of a consultation on religion and development in 2015. Such reluctance to take indigenous religions and indigenous knowledge seriously harkens back to an image of Africa as a place without history and without religion, an image that Valentin Mudimbe has demonstrated has endured among outside observers of Africa from the time of Herodotus to the time of Georg Friedrich Hegel. It affects the ability of development specialists to build on indigenous knowledge systems all over Africa. And the denial of this rich religious heritage plays an important role in secessionist movements in many African countries dominated by Christian or Muslim elites.

My research focuses on the religious and social history of the Diola, a minority community of 600,000 people in Senegal, Gambia, and Guinea-Bissau. They are generally considered the best wet rice farmers in West Africa and include the largest number of adherents of an indigenous African religion in the Senegambian region. There is a close connection between Diola religious traditions, their religious calendar, and the cycle of rice agriculture. Despite five hundred years of Christian and Muslim proselytization, many Diola continue to find their traditional religion, the awasena path, to be an effective means of understanding and shaping their world. Much of my work focuses on the innovative qualities of this religious tradition, which incorporates long-standing traditions of direct revelation from the Diola supreme being, Emitai, and continues up to the present-day. My first book examined the history of Diola religious traditions before the colonial occupation. It examined the ways in which Diola religion interpreted the challenges of ecological change, migration, incorporation of other ethnic groups, and the Atlantic slave trade. It also showed the ways in which the religious traditions were influenced by these problems. It highlighted the ways that this "traditional" society sustained traditions of innovation – through a prophetic tradition, an emphasis on dreams and visionary experiences, and the broad diffusion of religious authority among both men and women – to adapt successfully to the challenges of sustaining a rice-growing culture in pre-colonial Senegambia. This work demonstrated the limited utility of images of traditional societies as change-resistant or brittle, an image which dominates much of the literature on religious change and on economic development.

Let me provide two concrete examples of the types of changes that were described to me in Diola oral traditions. In one case, there was a war between two quarters of the same Diola township, Kadjinol, that grew out of a sexual assault by the larger quarter, known as Hassouka, against women drawing water from a spring in the rice paddies near the smaller quarter of Kafone. A man named Kooliny Diabune received a vision that he would fall into a deep sleep in which his soul would leave his body and travel up to the supreme being, Emitai. He told his wife that he would be falling into a deep sleep resembling death for several days. He warned her not to disturb his body while his soul was away. When he fell asleep, according to traditions I collected, he told Emitai about the rape of the women of Kafone. Emitai was said to weep. Then Emitai provided him with instruction about the creation of a war shrine, Cabai, which the people of Kafone could use to defeat their neighbors. This story challenges the assumption that African supreme beings were seen as inactive and amoral, who refrained from intervening in the affairs of two quarters of the same township. The Diola supreme being intervened in a strictly local conflict on behalf of a community that had been victims of sexual assault.

During the era of the Atlantic slave trade, people we now know as Diola were raided by neighboring groups and they eventually participated in slave raiding against other communities. In the absence of a centralized state, Diola religious authorities regulated the slave trade by setting the acceptable boundaries of what people could be seized, how long they had to be held for ransoms or fines before they could be sold as slaves, and how they had to be treated while being held. Any violations of these rules were said to be punished by spirits associated with particular spirit shrines (ukine) who inflicted various types of wrongdoers or members of their families with diseases that could even result in death. In the process of regulating the slave trade, however, these shrines became more involved than they had initially expected, transforming some of the shrines by emphasizing wealth and successful participation in the slave trade as a means of acquiring priestly offices rather than long-standing ideas of charismatic experience. This illustrates the way that traditional religions interpreted such disruptive challenges at the Atlantic slave trade and were, in the process, transformed by them.

My second book, *West Africa's Women of God: Alinesitoué and the Diola Prophetic Tradition*, examines the history of Diola prophetism and its transformation from an exclusively male tradition of direct revelation to a tradition in which two thirds of the prophets are women. In connection with this research I have collected oral traditions concerning fifteen male prophets before European colonization and over fifty such prophets since the last decade of the nineteenth century. Those prophets who were arrested by the French or interviewed by Portuguese or French authorities have files about them either at the Archives Nationales du Sénégal or Arquivo historico ultramarinho in Lisbon. Those who managed to escape the colonizer's gaze are described by Diola, Bainounk, and Manjaco elders. The term I translate as "prophet" is a Diola epithet "whom Emitai sent" or "Emitai sent him/her" (Emitai

Religion in West Africa

dabognol). This tradition of direct revelation from the supreme being is largely unknown outside of Senegal, Gambia, and Guinea-Bissau, but the frequency of such prophetic figures rivals the numbers found in other prophetic religions.

The most famous of these prophets was Alinesitoué Diatta, born in 1920 or 1921, in the southern Diola township of Kabrousse. Her prophetic ministry lasted less than two years before she was arrested by the French and exiled to Timbuctou where she died of scurvy brought on by the poor quality of food in French internment camps. She died in 1944, but the French kept it secret until it was revealed to the public in the early 1980s, a result of a fact-minding mission sent by President Abdou Diouf and led by Saliou Mbaye, the former head of the Archives Nationales. During the short time that Alinesitoué taught, she introduced a series of new spirit shrines and rituals designed to beseech Emitai for rain and to end the devastating drought that threatened the region during the first years of the Second World War. She taught that Diola, regardless of religious affiliation, had an obligation to perform the community-wide rain ritual known as Kasila, a six day ritual involving the sacrifice of a black bull to Emitai in order that there be adequate rainfall. She also diagnosed the cause of the drought in Diola neglect of their ritual obligations and their obligation to respect a Diola Sabbath, known as Huyaye. However, she also attributed the drought to changes in agricultural practices. French officials had encouraged new forms of Asian rice (*oryza sativa*) which offered higher yields than African rice (*oryza glaberimma*). Although these new forms of rice offered potentially higher yields, they were more susceptible to drought, plant disease, and animal pests. Alinesitoué taught that they were not part of Emitai's gift of rice agriculture to the Diola. You could grow the new rice, but only the traditional forms of rice could be used in ritual, thus arguing on religious grounds for the preservation of seed diversity and offering a critique of agricultural development schemes well before the critics of the Green Revolution began to emerge. What got her into the most trouble, however, was her rejection of French efforts to spread peanut or groundnut cultivation to the Diola. She saw the ways in which Diola men abandoned rice farming to their wives and daughters in the hope of earning funds from this new cash crop. Women's work dramatically increased in areas where peanut cultivation had taken hold. She saw the way that forest areas were cut down to grow peanuts, thus depriving the community of important sources of palm products, wild fruits, herbal medicines, bush meat, and thatch. She argued for a rejection of this French initiative in favor of a continued reliance on a family mode of production focused primarily on rice agriculture.

In January, 1943, she was arrested by Vichy French officials, who were all too aware of their fragile control over the peoples of Senegal. Like the Romans who were afraid that Jesus would lead a revolt of the ancient Hebrews against the Romans, Vichy French officials, including Governor General Boisson, were afraid that Alinesitoué would lead a revolt their authority. Such a revolt did occur, and has been documented by Ousmane Sembène's film "Emitai" though no firm links between the revolt and Alinesitoué have been established. She was tried under the Indigénat, the legal system that was applied only to "subjects" of the French Empire. Her defense was simply that

she only did what Emitai had commanded her to do.

In this article I have briefly outlined some of the issues with which I am engaged in studying the history of the traditional religion of the Diola. It clearly demonstrates that African traditional religion have strong capacities for innovation and keen insights into issues of ethnic identity, social order, and economic development. Knowledge of African religious systems should be included in any discussions where religious insights can shed light on the rich history and diverse contemporary experience of African societies.



Robert Baum
Department of Religion
Dartmouth College
religion@dartmouth.edu

References

- Valentin Mudimbe, *The Invention of Africa: Gnosis, Philosophy and the Order of Knowledge*, Bloomington: Indiana University Press, 5³²².
- Paul Pélissier, *Les Paysans du Sénégal* St Yrieix: Imprimerie Fabrègue, 1968.
- Olga Linares, *Prayer, Power, and Production The Jola of Casamance, Senegal* Cambridge: Cambridge University Press, 5³³⁶.
- Robert M. Baum, *Shrines of the Slave Trade: Diola Religion and Society in Pre-Colonial Senegambia*, New York: Oxford University Press, 5³³³.
- _____, *West Africa's Women of God: Alinesitoué and the Diola Prophetic Tradition*, Bloomington: Indiana University Press, 6459 (645⁰).
- Robin Horton, "African Conversion," *Africa*, V. 41, 1971, passim.

Wariboko (continued from page 13)

References

- Walter Benjamin, "Notes Toward a Work on the Category of Justice," trans. Peter Fenves in his *The Messianic Reduction: Walter Benjamin and the Shape of Time* (Stanford, CA: Stanford University Press, 2011), 257.
- Naomi Shihab Nye, "Kindness," in *Words Under the Words: Selected Poems* (Portland, OR: Eighth Mountain Press, 1994), 42.
- Martha Nussbaum, "Compassion: Tragic Predicaments," in *Upheavals in Thought: The Intelligence of Emotion* (Cambridge: Cambridge University Press, 2001), 301.

Repainting the “White House” of Judaism: New Jewish Movements in West Africa

William F.S Miles

Adapted from *In The Shadow of Moses: New Jewish Movements in Africa and the Diaspora*, edited by Daniel Lis, William F.S. Miles, Tudor Parfitt (Los Angeles: Tsehah Publishers, 2016).

We are living in an era in which the color of Christianity has been turning steadily darker. In Europe and the United States, for example, Roman Catholic priests are increasingly being recruited from Africa, Asia and Latin America. Sub-Saharan Africa alone has nearly twice as many Catholics (171 million) as does North America (89 million); in 1910, in contrast, there were fifteen times as many Catholics in North America than in Africa.

Evangelical Protestantism is also expanding mightily in the Global South. Germany, where Protestantism emerged in the first place, has half as many Protestants as Nigeria. One-quarter of world Christianity resides in sub-Saharan Africa alone.

Over a much longer period of time, the Arab Semitic demographic fulcrum of Islam has been even more eclipsed by the faithful from other ethnicities. Thanks to its penetration throughout Sub-Saharan Africa beginning in the eleventh century, Islam has also had an important core of Black followers. In terms of population, the Kingdom of Saudi Arabia, custodian of the holy sites of Mecca and Medina, constitutes a very small percentage of Muslims worldwide. There are more Muslims in Nigeria alone than in the entire Arabian Peninsula (Saudi Arabia, Yemen, Oman, Qatar, United Arab Emirates) combined. Just as the custodians of the Vatican no longer physically resemble the majority of Catholics in terms of physique, the direct descendents of the Prophet Muhammad do not look like “typical Muslims” today.

Of the “Big Three” monotheistic religions, only the Jewish one is still at the cusp of having to reckon with a similar “re-colorization” of its sense of peoplehood. But, as *In the Shadow of Moses. New Jewish Movements in Africa and the Diaspora* shows, Judaism too is undergoing an epidermal shift among its adherents. Nowhere is this clearer than in West Africa where, as individual chapters of the book demonstrate, new Jewish communities are emerging in Cameroon (Nathan Devir), Côte d’Ivoire (Marla Brettschneider), Gabon (Marla Brettschneider), Ghana (Janice Levi) and Nigeria (William Miles). Indeed, with the wholesale resettlement of Ethiopian Jews to Israel, the fulcrum of African Jewry has decidedly

moved from East to West Africa. The book explores this new Jewish African landscape from five major conceptual frameworks:

1. The growing phenomenon of West African Jewry and sub-Saharan Judaism needs to be viewed through the comparative religious studies lens of New Religious Movements (NRMs), on a par with other religions and spiritual practices emerging and evolving in sub-Saharan Africa. The trend should be neither excluded from the wider field of African religion nor ghettoized as marginal to either African or Jewish studies.

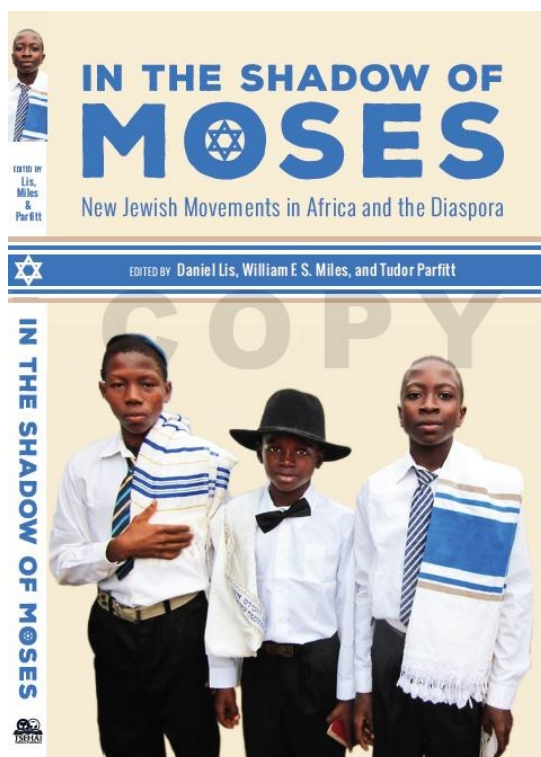
2. Albeit at an early stage, globalization of Judaism is beginning to parallel the demographic shift of Christianity to the Global South, including the concomitant influence of Africa. As Arabian Peninsular Islam did long ago, Euro-American Christianity is coming to terms with its numerical supersession by non-Euro-American congregations. Global Judaism must contemplate a similar future scenario by, for example, partnering with West African synagogues.

3. Salience of faith is at least as important as reproductive rates: Strict observance of Judaism by West Africans will increasingly balance out the secularization of Jews in the West. As these two tendencies continue, the unconscious and common eliding of Judaism with Jewry (or the more amorphous “Jewishness”) will become increasingly untenable.

4. Israel, the only sovereign nation of the Jewish people and state-promoter of Judaism, is increasingly becoming a crossroads of the Western world and the Global South. While relatively few of the non-Jewish job seekers from Africa embrace Judaism, their assimilation into the broader culture of the Jewish state inevitably will have repercussions in the religious sphere -- particularly for their offspring who are born and raised in Israel.

5. Both the Jewish State and Jewry of the Diaspora must come to grips with the economic implications of religious globalization. All humankind is created in the image of G-d, Judaism teaches, and therefore equal at some fundamental, spiritual level. But it is disingenuous to disregard material differences that intermediate the encounter between high-income Israelis and Diaspora Jews on the one hand and comparatively poor West African Jews on the other.

Other overarching points include the “Messianic portal”



Religion in West Africa

through which many African Christians have passed before eventually embracing Judaism without Jesus; the startling replication of denominational schism (the “two Jews, three synagogues” phenomenon); the problematic blending of normative Judaism with indigenous manipulation of the spirit world (“magical syncretism”); and the complicating coincidence of New Jewish Movements emerging in Africa at the same time that anti-



Jewish and anti-Zionist strands of Islamism are roiling parts of the continent. Each of the book's three parts is introduced with illustrations by the French graphic novelist Jérémie Dres, who offers his own artistic interpretation of the histories and realities of Black Judaism and Black Jews.

In the Shadow of Moses is dedicated to the late Professor Ali Mazrui. “Mwalimu,” proponent of the “The Semitic Impact on Black Africa” thesis and author of *Euro-Jews and Afro-Arabs*, was an early proponent of scholarly synergies between the study of Africa and the study of the Jews. The book happens to emerge into print just as the more familiar White House – the one in Washington, D.C. – is preparing the departure of its first Black resident family. While the tenure of a single African-American president has hardly “recolored” the entire U.S. presidency, the Obama experience has certainly reshaped ethno-political imagination. So it is with the color associations of Jewry and Judaism: broader recognition of even modest-sized communities of West African Jews can go a long way towards re-coloring the imagination. It is a perspective that “Mwalimu” Mazrui would surely have shared.



William Miles
Professor of Political Science
Department of Political Science
Northeastern University
B.miles@neu.edu

Religion in West Africa: Cosmopolitanism, Faith Communities and the Social Fabric

The Fall 206 Religion in West Africa lecture was presented by Nimi Wariboko, WARA Board Member and the Walter G. Muelder Professor of Social Ethics at the Boston University School of Theology.

Professor Wariboko’s lecture, entitled “The Demons as Guests: Aesthetics fo African Traditional Religion & Pentecostal Hot Prayers in Nigeria,” provided a historical context for the present day aesthetics of Pentecostalism in Nigeria. Professor Wariboko described the continuity and discontinuity between Christianity and African tradition. This, he argues ,explains how tradition plays into the practice of African traditional religion, creating the blueprint for the exercises that occur in Pentecostal prayer and deliverance sessions. Aesthetics, he says, is a tool for persuasion. He further made an interesting foray into African Pentecostalism in Europe, shedding light on how politics can play into the control of the ‘manifestation’ of Christianity. This, he **says**, determines who can manifest and the value of the manifestations.

Dr. Wariboko also referenced the works C.S. Lewis (*The Screwtape Letters*) and Robin Horton (*The Gods as Guests: An Aspect of Kalabari Religious Life and Patterns of Thought in Africa and the West: Essays on Magic, Religion and Science*) while speaking on the themes of sacretism, beauty and ethics.

The full lecture is available on the WARA YouTube channel:
<https://www.youtube.com/watch?v=ggNXEILVwzY>



The spring 2017 lecture, *West Africa’s Women of God*, delivered by Professor Robert Baum (see page 15), is also available online at <https://www.youtube.com/watch?v=w1fKAS2t4rg>

The Religion in West Africa lecture series is a joint initiative of WARA and the Boston University African Studies Center.

The Rise of American Churches in Southeastern Nigeria

Dima Hurlbut

The area around the oil-palm belt in Southeastern Nigeria, encompassing the Igbo and Ibibio towns of Aba, Owerri, Uyo, Ikot Ekpene, Abak, and Eket, has become the region with the densest concentration of Christian churches, and highest levels of religious competition in the country—if not on the entire continent. Over the course of the past fifty years, this region has experienced the dramatic growth of many different kinds of American churches, including Mormonism, Jehovah's Witnesses, the Mennonite Church, and Seventh-Day Adventism. Today, Nigeria is the country with the largest number of Mormons and Jehovah's Witnesses in Africa. While the presence of these institutions can be felt by anyone who takes a drive down the federal highways in Imo, Abia, and Akwa Ibom States, the growing importance of these churches in the region remains relatively unknown outside of local circles.

My dissertation project investigates the growth of Mormonism in postcolonial Southeastern Nigeria. By exploring why the Igbo and Ibibio embraced this American faith, and how Mormonism has manifested itself in Southeastern Nigeria over the past five decades, I examine the ways in which this religious reorientation has provided those living in southeastern Nigeria with the resources, community, and language to combat and overcome their postcolonial discontents. This is a story about the cultural transformations that many have undergone in a country where acquiring material and spiritual prosperity is not possible without having faith in a higher power.

My preliminary archival research has revealed some of the ways in which the emergence of a Nigerian Mormon church has affected the Church of Jesus Christ of Latter-day Saints (LDS Church) on a global level. More specifically, this preliminary research demonstrates how interactions between Mormon missionaries and Nigerian converts during the 1960s and 1970s helped bring about a reversal in the priesthood ban, a racist institutional policy that prevented Black men from holding the priesthood, the power and authority to act on behalf of God. Without the priesthood, Black converts could not perform ordinances and act as leaders within the LDS Church, but through sustained contact with these Nigerian converts, Mormon missionaries appeared to have rejected their church's racist



policy. They brought their forward thinking back to Salt Lake City, where they influenced church leaders and laid the groundwork for the priesthood revelation. Mormonism, it seems, is not immune from the effects of the southward shift in the membership of global Christianity.

At the moment, I am using the conversion narratives of Nigerian converts to Mormonism to complicate existing theories of conversion in Africa. The dominant theories of conversion ignore the complexity of the process by reducing religious change to a measurement for political, social, and environmental upheaval. This research examines the ways in which different types of documents influence how historians and anthropologists write about the process of conversion. By comparing the ways in which Mormon converts understood their own conversions in oral histories against the manner in which missionaries interpreted their conversions, I hope to add nuance to our theories of religious change.

I plan to conduct fieldwork and collect oral data for my dissertation project in the coming academic year, and I look forward to reporting my findings to the members of the West African Research Association in the future!



Dima Hurlbut
Department of History
Boston University
hurlbut.david@gmail.com

References

David Barrett, *Schism and Renewal in Africa: An Analysis of Six-Thousand Contemporary Religious Movements* (Oxford: Oxford University Press, 1968), 291; Caroline Ifeka-Moller, "White Power: Social-Structural Factors in Conversion to Christianity, Eastern Nigeria, 1921-1966," *Canadian Journal of African Studies* ², no. 5 (5³18): ⁰9.

See, for instance, Russell Stevenson, *For the Cause of Righteousness: A Global History of Blacks and Mormonism*, 5² 74 -2013 (Salt Lake City: Greg Kofford Books, 2014), Chapter 4; R. Bruce Yoder, "Mennonite Mission Theorists and Nigeria Practitioners in Southeastern Nigeria: Changing Context and Strategy in the Dawn of the Postcolonial Era," *International Bulletin of Missionary Research* ⁷¹, no. 7 (6457): 57²-144.

D. Dmitri Hurlbut, "Nigerian Converts, Mormon Missionaries, and the Priesthood Revelation: Mormonism in Nigeria, 1946-1978," *Working Papers in African Studies*, no. 268 (2015): 1-22.

Doctrine and Covenants 50:26-27.

Divinity & the State: Polity, Sovereignty & Kingship in the Anglican Egbá-Yorùbá Tracts 1854-1912

Adrian Deese

I study the history of pre-colonial Yorùbá Christian literature in the field of World Christianity. The dissertation that I'm writing examines the historical context of the doctrinal Christian texts of Egbá-Yorùbá Anglican writers from the town of Abeokuta. Through examining the writings of early Egbá catechists, I explore the intersection of Christian thought in shaping the reformation of Egbá kingship and the evangelist project of the major catechists, William Odusina Moore and Emmanuel Moses Lijadu, in Yorùbáland broadly.

By looking at the discourse of the town's Anglican intelligentsia, I posit a new interpretation of the early history of the Egbá state in Abeokuta (c. 1830). This new interpretation reconsiders the role of the Anglican Church Missionary Society (c.1843) in the reformation of the town's political structure. Henry Venn led the CMS during this period and had a vision of developing self-sustaining churches in West Africa under 'native agency.' The Anglican movement to propagate Christianity in Africa was the moral economy corollary to the abolitionist movement in England. They thought that by propagating Christianity as an instrument of proper moral economy they would facilitate a profound socio-economic change in Africa, through the abolition of the African Slave Trade, in favor of modern free market economics. Abeokuta, the "Sunrise Within the Tropics," was envisioned to be the seat of this transformation of the West African political economy. Henry Townsend was the first major European Anglican missionary to settle in Abeokuta, and he promoted the concept of establishing Christianity as the official Yorùbá state religion, which would then undergird Abeokuta's newly minted monarchy; the first monarch (*Alake*), the Sagbua Okukẹno, was elected & installed in 1854. As the first Yorùbá Christian state Abeokuta, the Anglicans initially hoped, would be the seat of a new federation of the Yorùbá city-states under a monarchial Christian theocratic system of government.

The dissertation revisits the function of Yorùbá cosmology in the political structure of this state in the middle 19th century. Many of the prominent institutions of Egbá civic society, such as the *Ogboni* (the senate) society, or the *Oro* (jurisprudence) society, had various religious or ritual functions. In addition to the complex *Ifa* oral corpus (the town's governing cosmology), which narrated the origins & sanctioning of the Yorùbá dynasty, Abeokuta hosted the powerful Yorùbá state deities (*orisa*), like *Ogun* or *Şango*, that played a key role in mediating state-society relations in the polity. The Yorùbá civic guilds were sacred institutions and can be considered, not simply religious in terms of personal devotion, but they constituted the governing apparatus of the social order; they were, as Professor Jacob Olupona argues, the basis of a "Yorùbá civil religion."

The Egbá kings, like most Yorùbá dynasts, claimed descent from Ile-Ife. The connection to Ife, the seat of the Yorùbá creation narrative, established the divinely sanctioned basis of the state on the earth— and it provided the rhetoric for the enthronement of a quasi-divine kingship. This pattern of divine kingship was not unique to the Egbá state; it was clearly

articulated in many Yorùbá kingdoms. Yet, this concept of a divine kingship was being fashioned in the Egbá state, concurrently with the rise of a Christian élite who wanted a Christian monarchy. How was the dilemma in Yorùbá cosmology, of the ideal of a divine kingship, reconciled with the Christian ideal of constitutional kingly rule by the new Anglican élite? What do these writings, which negotiated this quandary, tell us about the relationship of religion and political modernity in nineteenth century West Africa?

I work with two timeframes in interpreting the history of the Christian intelligentsia: the first period 1830-1867, is the early period in which the Anglicans first settle in Abeokuta and help to revive monarchial rule, and the second phase 1867-1914, when the Egbá Anglicans became the state's dominant aristocratic group and aligned with the powerful warlords in the aftermath of the *Ifole* (the persecution and expulsion of European Christians from Abeokuta). The Revd. William Moore, an Egbá catechist, served as the Vicar of Saint Peter's Cathedral, Aké (1869-1876) and the Superintendent of the CMS Mission to Egbáland (1868-1880). Moore was a pioneering Christian thinker, and counts among his progeny two major Yorùbá literary figures: his son S.J. Moore, co-founder (with Lijadu) of the first Yorùbá literary society (1883), the *Egbe Olufe Ile-Ibi Wọn* (The Patriots), and grandson A.K. Ajíyaf. Moore was the leading Egbá Christian in the town during this time of turmoil and uncertainty. His writings and catechisms during this period were, not simply a summary of Christian principles, but a theological commentary on the existential condition of citizens in the town.

The maturation of Lijadu during this period initiates, what I term, the apogee of the Egbá Christian intelligentsia. Lijadu studied under Rev. Townsend at the CMS School in Abeokuta. His earliest writings appear during the *Ifole* (1867-1882), and as Africans, the only Christians allowed in the town, the early tracts spoke to the crises of religious repression and the deteriorating relationship of church & state. After the persecution of Christians, the state proceeded to solidify control of its new domain and to expand. The state, beginning in 1874, invaded most of southern Egbado and occupied Oke-Odan, in a campaign to bring the coastal city of Porto Novo into a tributary relationship with Abeokuta. As the state's expansionary ambitions stymied internal social security, Lijadu's writings functioned as a veiled critique of the moral economy of the military junta to whom the Egbá aristocrats were subordinate. Lijadu's Christian tracts (poetic & prose) during this phase were transcendent because they addressed fundamental Christian doctrines in a way that dramatized some existential dilemmas in Yorùbá cosmology. In 1879, he authored, on *Peace*, on *Simplicity*, or *Want of Understanding*, *On the Persecuted Christian*, *On Faith vs. Works*, on *Temptation*, and *Prudence & Foresight*; his tracts on the nature of fidelity, the *Promise*, and on *Honesty*; and his Christological cosmogony, in on *Time & Eternity*, *God is Love*, and *Life is Short*. These texts formed the basis of his career as a CMS schoolteacher (1883), and later as a priest (1896) and Anglican evangelist to the Ondo Kingdom.

Lijadu's most important contribution to the historical development of world Christian thought was as a Christian apologist, and this development was tied to the Egbá state's modernization politics at the turn of the century. He made several major contributions to Yorùbá literature in this era: his commentary on Yorùbá cosmogony and theogony (*orisa*), *Ifa* (1897), *Yorùbá Grammar* (5²³²), his translation of the Holy Bible, the *Bibeli Mimo* (1900), a historiographical serial the 'Fragments of Egbá National History' in the *Egbá Government Gazette* (5³⁴⁸-1905), and a major Christological treatise on the Yorùbá deity of foreknowledge & fate, *Orùnmla!* (1908). Collectively, Lijadu's corpus of Christian tracts constitutes the most significant individual intellectual achievement of the original Anglican Egbá intelligentsia.

In 1892 the Anglican Mission appointed Lijadu the catechist to Ondo, and he conducted research in eastern Yorùbáland on *Ifa*. By this time, the independence of Abeokuta and the other Yorùbá kingdoms had been progressively waning. In 1893 most Yorùbá states signed British treaties that ceded external sovereignty. Only the Anglo-Egbá Treaty of 1893 provided provisions for the recognition of sovereignty. In 1898, Abeokuta came under the Egbá United Government, where Lijadu used the Government Press to publish some of his works, and his publications began to be adopted by the state's education committee as school curriculum. In 1901, Lijadu felt, despite the precarious political circumstances, that it was an opportune time to accelerate the plans to establish, what he termed, the Yorùbá National Religion, and formed his Evangelist Mission Band in Ondo to initiate such a process.

The second half of my study, therefore, develops a hermeneutical analysis of the *Ifa* (1897) and its fundamental conceptual role in Lijadu's attempted nationalization of Yorùbá Christianity. I am working on an original translation of the *Ifa*, which would form the basis of my analysis. I argue that Lijadu's *Ifa* is, as an apologetic or systematic defense of Christian doctrine, a Christian reinterpretation of Yorùbá cosmology. Lijadu sought to impose the Biblical doctrine of the creation of the universe, onto *Ifa's* definition of creation, in order to provide the theoretical basis of a Christian definition of divine & political sovereignty. By establishing the Christian basis of legitimate divine & political sovereignty, Lijadu succeeds in making the case for a Christian understanding of human responsibility within Yorùbá civic society. His doctrines retain kingship as the institutional basis of legitimate representative government. Yet, paradoxically, Lijadu holds the ruling theogony an impediment to good governance, and argues that a Christian anthropology must be propagated in order to buttress the Christian political order.

In his concern with Christian anthropology Lijadu was not alone. The preoccupation with a Christian anthropology, or concept of human nature, became the defining concern of the Egbá-Yorùbá Anglican literary élite of this period. This Christian anthropology consisted of many dimensions but the unifying themes were: a systematic evaluation of *Ifa's* account of the creation of the universe and humanity; the articulation of the Christian understanding of the appropriate relationship of body and soul; an exposition on the problem of sin; a preoccupation with articulating the nature of evil (as posing a profoundly distinct problem to legitimate social order than simply sin); and an assessment of *Ifa's* teaching on the nature

of life after death (reincarnation). The Christian writers had a Christian understanding of polity and sovereignty; they believed that at the core of any social order had to be responsible human agents. Their doctrines, therefore, delineate their worldview on responsible human conduct, and claim that only an established State Church, governed by a Trinitarian doctrine of God, would sustain a viable functioning order.

Finally, I'm developing a chapter on Lijadu's translation of Paul the Apostle's *Letter to the Romans*. I work with the translation that Lijadu completed for the British & Foreign Bible Society (1900), and I utilize some of his disparate commentaries on *Romans*. I'm concerned with the ways in which Lijadu reads the *Romans*, wherein he identifies the Roman political & juridical context, to which Saint Paul addresses in his epistle, with the superstructure of the Yorùbá dynasty, which functions as the key subtext. In Lijadu's exegesis on *Romans*, he is most concerned with the relationship of the Old Testament Law, the limits of human custom by prerogative, and the doctrine of justification by Grace. How do these institutions interact? What do they tell us about the intersection of legitimate social order, with human conduct and human desire? Did Lijadu believe that *Romans* had an answer to the characteristic predestinarianism of divination? Why did Lijadu become so fascinated with the relationship of kingship to Pauline doctrine in the 20th century? An investigation of Lijadu's engagement with Pauline doctrine, through the text of the *Romans*, will serve as a bridge to my future examination of his Christological recasting of divination in the *Orùnmla!* (1908).

It is ironic that the mission of the Anglican intelligentsia, of Christianizing the Yorùbá states, just started to theoretically materialize at the moment they faced instability due to the internecine warfare of the late 19th century. By 1912, Abeokuta was faced with the perennial issue in Africa of complete state failure. After Abeokuta's internal political violence & social unrest commenced, Lord Lugard recommended that Egbáland be annexed into the new federation of colonial Nigeria (1914). The collapse of the Egbá polity signaled the end of an era, and the transformation of an intellectual community. While the Egbá Anglicans did not succeed in establishing the Church as the Yorùbá state religion, they left behind an interesting body of literature for future scholars to study & debate.

I am most grateful for the sponsorship this study has received: the WARA Pre-Doctoral Fellowship, the Fulbright-Hays Yorùbá GPA Fellowship, the Fulbright U.S. Student Fellowship, and grants at Cornell University. The study, I hope, will make a meaningful contribution to the history of Christian thought in West Africa.



Adrian M. Deese
Ph.D. Candidate--Theology
Faculty of Divinity
Sidney Sussex College
University of Cambridge
amd335@cornell.edu

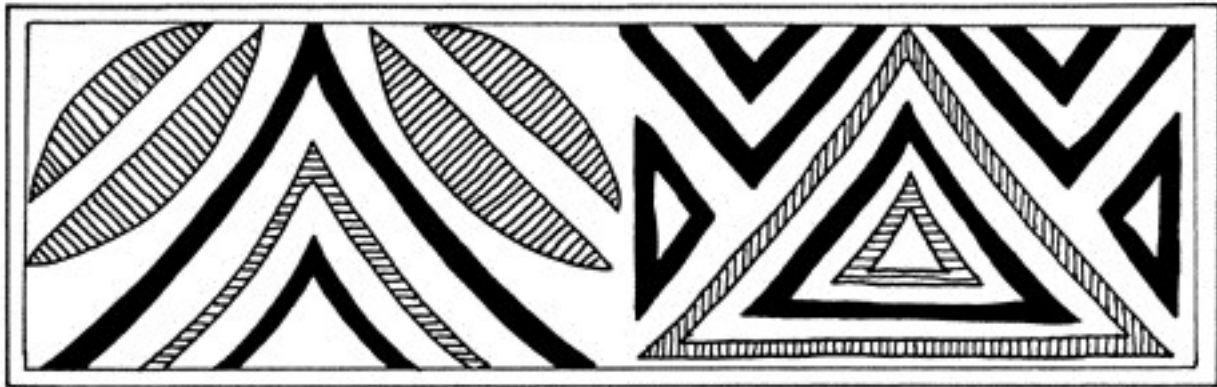
Senegal's Islamic Connections to the Gulf

Mara A. Leichtman

I am grateful to WARA for enabling me to spend two months, from May 25 – July 29, 2016, in Senegal as a post-doctoral fellow. My book *Shi'i Cosmopolitanisms in Africa: Lebanese Migration and Religious Conversion in Senegal* was published last year by Indiana University Press. Coming out of that fieldwork was the observation that certain Senegalese Islamic NGOs received Kuwaiti funding and I saw Kuwaiti delegations attend religious events in Dakar. This led me to my next research project, to explore Kuwaiti Islamic charitable and humanitarian organizations and their impact on development in Africa, where Senegal will be one case study. I am spending this academic year as a Fulbright Scholar at American University of Kuwait, where I will continue to examine Kuwaiti connections to Africa.

poetry books in Arabic. Talibes (disciples) have come to Senegal from other countries to study under Senegalese marabouts (Islamic teachers). Prominent Senegalese religious leaders always had strong relations with the Arab world – for example Tijani Shaykh Ibrahim Niass (1900-1975) had connections with political leaders throughout North Africa, the Middle East, and Asia.

Senegal has had a diplomatic tradition since independence and has not faced major crises like other African countries. It is thus easy to organize events in Senegal, with its custom of *teranga* (Wolof for hospitality), its charm, and the established Dakar offices of other international organizations. Senegal has long been a West African financial center with *Compagnie*



While I knew this would be an interesting topic, and would follow my larger interests in exploring transnational and cosmopolitan connections between the Middle East and Africa, I learned through my summer research just how important Senegal is for the Arab world. I met with officials at Senegalese government ministries, the Islamic Development Bank, current and former ambassadors, university professors, economists, journalists, NGO leaders, directors of an NGO umbrella organization, and heads of Islamic schools and mosques. I also collected NGO annual reports, a new government decree, and conducted research in the archives of Senegal's national newspaper *Le Soleil*.

I asked those I interviewed why Senegal has such a special relationship with the Gulf countries. I was told that geographically Senegal is a port of entry into Africa. French colonialism established Senegal's importance in relation to the West African sub-regions, making the university of Dakar the best in the region. Senegal today is a 95% majority Muslim country (whose first president was Christian) and is a stable secular democracy with strong ties to Europe and the United States. It has an open investment climate as well as transportation, connectivity, and communications infrastructure. Senegal is also Arabophone – intellectually as well as linguistically. Senegal has a long history of renowned Islamic intellectuals who published important literary and

bancaire de l'Afrique occidentale (CBAO) tracing its early history to French colonial banking institutions. Senegal joined the United Nations shortly after gaining independence from France in 1960, and has long served in leadership roles on the UN Security Council, the Economic and Social Council, and most dominantly on the Commission for Human Rights. Senegal also joined the Organization of African Unity (now the African Union) in 1963 and the Non-Aligned Movement in 1964.

Important for the Arab world, Senegal was among the first African countries to recognize Palestine. Senegal developed a position during the 1967 Arab-Israeli war in support of Palestinian rights and broke ties with Israel after the 1973 war, encouraging other African countries to follow suit. Senegal gave Palestine an embassy with all fees paid and Palestine Liberation Organization Chairman Yasser Arafat's first visit to Africa was to Senegal in the late 1970s

Senegal's global importance was thus already established when the Organization of the Islamic Conference (renamed the Organization of Islamic Cooperation) was created in 1970. Senegalese Amadou Karim Gueye served as the third OIC Secretary General (1975-1979). In 1981 Senegal was nominated to host COMIAC, the OIC Standing Committee for Information and Cultural Affairs. COMIAC's charge is to

“acquaint international public opinion with the noble causes of the Islamic Ummah, in particular with the question of Palestine.” Another goal is to confront unfair campaigns against Islam and Muslims. Senegal likewise became the only African country to host the OIC Islamic Summit – not once, but twice (1991 and 2008). In addition, Senegal was active in the Islamic Development Bank (IDB), created in 1975 to serve the economic interests of OIC member countries. Senegalese Ousmane Seck served as vice president of the bank in Jeddah, Saudi Arabia, and an Africa regional branch of the bank opened in Dakar in 2008 (in connection with Senegal’s hosting of the OIC summit).

Senegal smartly lobbied for and used the opportunity of hosting these summits to receive significant Arab funding for infrastructural development. Although much of this investment was a result of bilateral funds (in particular from Saudi Arabia, Kuwait, and Qatar), Senegal maximized its position as a location for the international summits to encourage Gulf countries to generously assist with preparations (similar to developing countries that host Olympic games). The IDB also funded Senegalese transportation projects, road construction, and a new airport, built power stations, and financed agricultural, health, and educational projects. Today, Gulf aid has displaced Western development funds in Senegal.

Furthermore, Senegal was the first sub-Saharan African country to embrace Islamic Finance. Senegal launched a successful four-year US\$168 million sukuk (the Islamic equivalent of a bond) in 2014, beating South Africa and Nigeria to the race. This helped address Senegal’s long-term funding needs, particularly for infrastructure, where a major benefit of the sukuk program was the issuance in local currency as opposed to hard international currency. Significantly, this was another demonstration of Senegal’s desire to be the Islamic finance hub in Africa.

All Senegalese presidents have worked on strengthening relations with the Gulf countries. To give the example of Kuwait, Senegal and Kuwait first established diplomatic relations in 1971, the year Kuwaiti Emir Sabah al-Salim al-Sabah took his first official state visit to Senegal. This was followed by the visit of then-Senegalese Prime Minister Abdou Diouf to Kuwait in 1972. The first Senegalese student to study in Kuwait arrived in 1973. Senegal opened an embassy in Kuwait in 1975. Likewise, Kuwait’s first embassy in Africa opened in 1981 in Senegal, which serves as its primary embassy for the West African sub-regions. Kuwait opened a Zakat House office in Dakar (1988-2003), which recuperated the Islamic tax on 2.5% of wealth in Kuwait to redistribute in Senegal for charitable activities. This NGO built mosques, French-Arabic schools, clinics, and wells, distributed sheep during Tabaski (Eid al-Adha), and aided orphans.

Relations between Senegal and Kuwait further developed as a result of the 1990-1991 Gulf War. Senegal sent 500 troops to Saudi Arabia to join a multinational mission to liberate Kuwait from Iraqi occupation. Following the war some of these soldiers were taken on Hajj, pilgrimage to Mecca, but

their transport plane crashed when returning to their military base and 93 Senegalese soldiers tragically died. Kuwait financed a program to help the families of these victims. Senegalese businessmen and firefighters also helped Kuwait rebuild after the war. In 2008 Kuwait built a “Kuwait room” in Senegal’s Museum of Armed Forces honoring these Senegalese soldiers. The room was decorated with Kuwait’s national symbols and images from the destruction and rebuilding of Kuwait from the Gulf War.

Kuwait’s involvement in Senegal increased with the OIC meetings. The largest part of Senegalese-Kuwaiti bilateral relations comes out of the Kuwait Fund for Arab Economic Development, from where Senegal receives the largest amount of funds after Middle Eastern countries and ahead of other African countries. From a 2 Billion FCFA loan in the 1970s, Kuwait Fund investment in Senegal has reached 200 Billion FCFA. Projects funded agricultural, livestock, infrastructure, hydraulic, industry, transport, health, education, and civil protection sectors, with considerable funding for road construction before and after the 2008 OIC summit. The Republic of Senegal honored Kuwaiti politician (later Prime Minister, 2006-2011) Nasser al-Sabah twice, with the Highest Decoration of Knight from President Abdou Diouf in 1994, followed by the Grande Croix de l’Ordre National du Mérite by President Abdoulaye Wade in 2007.

On a smaller scale, Kuwaiti NGOs, such as Direct Aid (Africa Muslims Agency), are active in Senegal, and Kuwait finances the work of local Senegalese NGOs. I conducted extensive fieldwork at one of these Islamic NGOs, which received containers of donated Kuwaiti and Saudi dates for distribution during Ramadan. Ramadan is also a time when Senegalese NGO directors travel to Kuwait seeking charitable funds for their activities. Kuwaiti businessmen financed the construction of mosques (some with declared “Kuwaiti-style” architecture) and Islamic schools in the south of Senegal. The NGO held an annual Qur’an recitation competition, funded by a Kuwaiti in memory of his father. Events are well documented with videos and photography posted on YouTube and Facebook, which facilitates research in the age of social media. The WARA grant enabled me to make excellent progress exploring Senegalese-Gulf relations and to make valuable contacts with Senegalese who have ties to Kuwait.



Mara Leichtman
2016 WARA Post-Doctoral Fellow
Associate Professor of Anthropology
Michigan State University
Mara.leichtman@ssc.msu.edu

Psychosocial support for survivors of Ebola Viral Disease in the Western Area of Sierra Leone: A Pilot Needs Assessment

Allison Backman

I am a second-year dual MSW/MPH student at Boston University, and my research interests revolve around resilience and community healing after trauma. I think that the ability to thrive amidst adversity is innate in everybody, but that some people have an easier time of accessing those skills and resources than others. My goal as a future public health social worker is to work with communities that have been hit by trauma by helping to identify endogenous community strengths and resources that can help promote healing.

Because of this interest, I have spent a lot of time following Sierra Leone within the context of a resilience framework, as it has withstood two enormous community traumas in the past twenty years: the civil war, and more recently, the Ebola epidemic. In fact, my interest in Sierra Leone, and particularly Ebola survivors, grew exponentially when I began reading about member-led support groups of Ebola survivors that had formed organically, simply out of a need for survivors to connect and support one another within their communities. This type of community-driven support program was what interested me in travelling to Sierra Leone to learn more about community resilience in a cultural context.

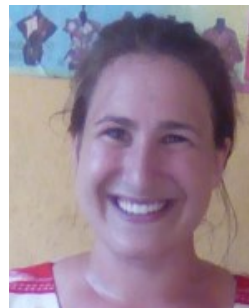
Thanks to the Diaspora Fellowship award from the West African Research Association, I was lucky enough to do just that. With the funding from this award, I spent ten weeks in Freetown, conducting qualitative field research on the psychosocial needs of survivors of Ebola Viral Disease (EVD) in the Western Area. Originally, I was paired to work with an international non-profit organization on community outreach and education in order to help re-integrate EVD survivors back into their original communities. This partnership fell through, so I improvised and ended up partnering with a few different organizations during my time there.

Primarily, I worked with a group called Sierra Leone Association for Ebola Survivors (SLAES), which is a union that represents all 4,052 registered EVD survivors in the country. To best assist them, I created a needs assessment survey which would help to get an understanding of what resources were available to EVD survivors, and what ones they would like more of. With the help of SLAES in recruiting participants, I interviewed eleven EVD survivors and eleven community leaders and stakeholders about their perception of community needs, specific to survivors.

What we found was that the majority of interview participants requested empowerment programs that would allow them to rebuild businesses, re-enter school, or learn a trade that would help them to earn money. Survivors specifically requested literacy classes, business training, agricultural loans, and life skills classes that would help them re-enter the world as productive citizens. These individuals wanted access to resources that would help them become independent, resourceful, and capable once again. In short, these individuals sought help developing their resilience.

These findings will be particularly helpful as SLAES begins to apply for grants to develop programming that is specific to their members, as they can use these results as the basis for evidence-based planning and advocacy. I also hope that I will be able to continue advocating on behalf of SLAES, especially now that I feel so connected with the needs of its members. My hope is that some time soon, I will be able to return to Sierra Leone to expand the needs assessment past the initial pilot, and that my findings end up in the hands of officials who want to create policies that benefit vulnerable populations within the country.

This experience has been a meaningful one, and I feel so grateful to WARA for giving me the opportunity to explore this professional and academic interest of mine, and I truly hope that the research findings will help, even in some small way, to better the lives of vulnerable individuals and to promote resilience within Sierra Leonean communities.



2016 WARA Diaspora Intern
Allison Backman
School of Public Health
School of Social Work
Boston University
abackman@bu.edu

Need to renew your WARA membership?

Not to worry: now you can renew online!
It's simple and takes only a few minutes.

www.bu.edu/wara



WARC Library Fellow 2016 Report

Katrina Spencer

Primary Activities

Process new library material acquisitions; deselect undesirable acquisitions housed in the storage room; develop a draft of a collection development policy that sets quality conditions for new acquisitions and allows library staff to weed the collection

this criteria specified the collection’s focus on Africa and the African diaspora. Other specifications stated that the donations should be free of dust and water damage. The document will be under review and the WARC library’s decision makers will determine how to implement this collection development policy.

Secondary Activities

Created digital records for patrons’ formerly handwritten contact information into database; wrote an English-language script that introduces and describes the West African Research Center’s grounds; translated library policies and rules from French to English



Overall, the fellowship taught me a lot about my work style (introverted and apart), resilience in the face of power cuts, and further about being a minority (a native English speaker) in a country where the mother tongue is not my own.

To find out more about my time abroad, please feel free to read “20 Things to Know About Dakar” on my personal website, Katleespe.com. Also, to see how I have broadcast this opportunity to the rest of the library and information science world, read “Africana Librarianship Anyone?” on the Hack Library School blog.

Summary

My time spent in the West African Research Center’s (WARC) Library this summer was a unique and valuable experience that taught me about broad library operations. Under Adama Diouf’s direction and with Aliou Badara Sarr’s assistance, I helped to process up to 400 new titles that the library acquired. WARC library’s new acquisitions stem from donations and the local database is stored in an Excel file. This means that titles for new monographs and journals are typed by hand along with additional identifying information like author, international standard book number (ISBN), and keywords that refer to books’ and journals’ themes. While the majority of my time was spent on documenting and processing new acquisitions, some time was also spent performing reference work, helping patrons to locate materials, and envisioning ways to assess the collection.

Thank you to WARA and all who supported me on the journey!

My proudest achievement while at WARC did not refer to growing the collection but rather, in some ways, reducing its scope and scale. While weeding (discarding library materials that are no longer of use and/or are in poor condition for use) is a sensitive and highly controversial topic in library and information science, it was one that was extremely relevant in terms of WARC’s holdings. Some materials did not address local research needs or had been damaged by wear, tear, and the elements. The deselection of these materials allows for patrons to access a collection that is more focused and in better condition for use. Seeking input from the library staff, I drafted a document that would allow one to identify high priority acquisitions that corresponded to patrons’ needs and delineated a minimal criteria for what an acceptable donation should look like in terms of both theme and condition. Some of



2016 WARC Library Fellow
Katrina Spencer
Library and Information
Science
University of Illinois –Urbana
Champaign
katleespe@gmail.com

WARA Residency at the University of Illinois at Urbana-Champaign Mohammed Diagayete



During the month of September, 2016, I conducted a one-month research stay at the University of Illinois at Urbana-Champaign (UIUC), Department of History and Center for African Studies, hosted by Prof. Mauro Nobili.

After a long trip that took me to the Champaign-Urbana airport from Timbuktu, I was glad to arrive on the day when the local African Students Organizations had their welcome back barbecue for AA 2016/17. This was the first, warm, welcome I had in Champaign, before the beginning of a very intense period of work.

During my time at UIUC, I worked with Prof. Nobili on his book project, provisionally titled *Sultan, Caliph, Renewer of the Faith*. Prof. Nobili's research, which focuses on the Caliphate of Hamdallahi (central Mali, 1818-1862), is closely related to mine, but my stay was also extremely beneficial to my work on Fulani scholars from Mali. I was able to spend several days working on microfilms of manuscripts of the Charles Stewart papers, a collection of Arabic manuscripts from Boutilimit, Mauritania, bearing witness of the relationship between Arab-Berber scholars of the Southern Sahara, and especially the Kunta scholarly family of Timbuktu, and the Fulani 'ulamā' of the Middle Niger, my area of expertise. For the same reasons, I travelled to the Herskovits Library, Northwestern University, to work on the large collection of manuscripts they host, under the invitation of the Program of African Studies and the Institute for the Study of Islamic thought in Africa. At UIUC, for a happy coincidence, I also collaborated with Dr. Ali Diakite (University of Lyon, France), currently visiting scholar in the Department of History, who also works on Arabic manuscripts from the Middle Niger.

Prof. Nobili and I were also able to complete and submit to *History in Africa* our article "A Report on Some Collections of Islamic Manuscripts in Ivory Coast and Ghana (August 2015)." The article, accepted by the journal, makes public the result of our field-work in Ghana and Ivory Coast during the summer 2015, sponsored by the UIUC Research Board. We also wrote a project for a conference to be held in Illinois in 2018 on the Caliphate of Hamdallahi and run it by Dr. Maimouna Barro (UIUC, Center for African Studies), Dr. Rebecca Shereikis and Prof. Charles Stewart (both at Northwestern University, Program of African Studies).

I also gave three presentations. The first one was titled "The Contribution of Fulani Scholars to the Development of Islamic Scholarship in Mali, 18th-19th c." and took place at UIUC Center for African Studies on Monday the 19th. I gave another talk of Fulani scholars at Northwestern University, Program of African Studies, on the 28th. At the end of my presentation, Prof. Robert Launay kindly donated to IHERI-AB a copy of the two volumes of Charles Stewart's masterpiece, *The Arabic Literature of Africa Volume V: Mauritania and the Western Sahara* (Brill 6459). In Evanston, on the 27th I also gave a talk at the Public Library, under the title "The 2012 Crisis in Northern Mali and its Repercussions on the 'Timbuktu Manuscripts'."



Prof. Mauro Nobili with Dr. Mohammed Diagayete

I want to thank you several institutions and people who made my visit possible and facilitated my stay in Illinois. First, WARA and Jennifer Yanco who supported me financially and made all the arrangements for my trip. Then Prof. Mauro Nobili who invited me, Prof. Clare Crowston and Dr. Maimouna Barro who hosted me, respectively as chair of the Department of History at UIUC and as Interim Director of the Center for African Studies. Finally, Dr. Rebecca Shereikis, Prof. Charles Stewart, Prof. Robert Launay, Tiffany Williams-Cobleigh (Northwestern University, Program for African Studies), and Amy Settergren (Northwestern University, Program for African Studies) who made all the arrangements for the visit at Evanston.



2016 WARA Resident Fellow
Mohammed Diagayete
Institut des Hautes Etudes et de
Recherches Islamiques Ahmed Baba
Timbuktu, MALI
diagayete@gmail.com

Igbo Migration, Entrepreneurship and the Creation of the ‘Igbo Scare’ in British Southern Cameroons, 1920-1970

James Blackwell

Objectives of Research

In 1919 the British officially incorporated half of what had been German Kamerun into British Nigeria, and ruled it from Lagos, as the British Cameroons. Britain separated its new territory into two spheres Northern Cameroon and Southern Cameroon. The following year after the partition of German Kamerun, large numbers of Igbo began migrating to Southern Cameroon answering the call for laborers to work on Cameroonian plantations. These plantations suffered from a continuous shortage of labor. By 1955, Igbo made up the majority of the almost 10,000 migrants living and working in the British Southern Cameroon. The 1950s, witnessed strong anti-Igbo propaganda sweep through Southern Cameroon.

My dissertation will explore the experience and impact of Igbo migration and entrepreneurship from Igboland to British Southern Cameroon. I am interested in learning how migrant Igbo communities functioned in Southern Cameroon. Did the experience of Igbo migrant differ in rural areas as compared to the cities? If so, I am interested in learning the roots of the difference. My dissertation is as much about exploring and understanding the conditions present in Igboland that engendered a need for Igbos to migrate in such great numbers into the Cameroons to work as laborers. While Igbos migrated into British Southern Cameroon, they still maintained strong community connections to Igboland. These ties were instrumental in the continued success of Igbo in British Southern Cameroon; as well as motivating more Igbo to migrate.

Research Activities Carried Out

I arrived in Enugu, Nigeria on May, 8, 2016. In Enugu, I conducted archival research at the Nigeria National Archives, Enugu. In NAE, I combed through numerous finding aids such as Owerri District, Calabar Province, Okigwe District, CSE and Aba District. The finding aids assisted me in finding a slew of information that matured my dissertation by leaps and bounds. I was able to more effectively contextualize the factors that pushed Igbo men and women to seek labor in British Southern Cameroon.

On May 30, 2016, I traveled to Owerri, to conduct oral interviews. I was able to conduct oral interviews in Owerri and Mbaise. I would like to thank Prof. Chima Korie, for assisting me in conducting interviews Umuchiezie Ihetteaforukwu in Ahiazu Mbaise. In both locations I collected life stories from my oral history collaborators, that shed light on the Igbo migrant experience from Nigeria to British Southern Cameroon.

I would also like to thank Prof. Korie for inviting me to present a research paper at the University of Nigeria, Nsukka Brown Bag series. At UNN I presented a research paper entitled “The Fruit is Brought by the People:” Igbo Women, the Pioneer Oil Mill Scheme and Transformations in the Palm Oil Trade, 1929-1960. I would like to thank you UNN faculty, graduate and undergraduate students for wonderfully engaging discussion.

Preliminary Findings

In the NAE, I found a tremendous amount of material. I was able to pin point the earliest presences of Igbo arrival at 1918. Colonial officials, sent urgent messages throughout Nigeria seeking labor the depleted plantations. This call for labor was met by Igbo, Ibibio, Hausa, and Yoruba. Igbo and Ibibio, arrived in the largest number, and from this point a stream of migration was born. My oral history collaborators in Umuchiezie informed me about their experience in British Southern Cameroon and the

factors that pushed them to find labor. In addition, my oral history collaborators provided me with information about trading during this time. My oral history collaborators in Owerri shed light on the continuous migration of Igbo to Cameroon which has taken place until the present. I spoke to traders at Relief Market, Owerri, who have conducted such trade. In the NAE, I found preliminary information that shed light on a Cameroonian presence in Owerri. In addition, I found information that spoke to Igbo trade from Owerri, to Calabar, Victoria and beyond. These preliminary findings not only assisted me in better comprehending the factors which compelled Igbo to embrace out migration; but also shed light on the social and economic impact Igbo migration began to have.



2016 WARA Pre-Doctoral Fellow
James K. Blackwell, Jr.
Michigan State University
West African History
Blackw41@msu.edu

Dynamics of Ebola Treatment: Guinean citizen responses to Government Intervention

Allison Grossman

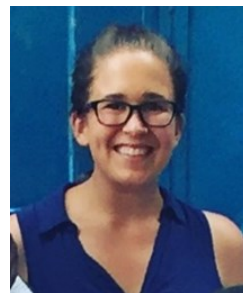
I am a second year PhD student in the Travers Department of Political Science at the University of California at Berkeley. I was awarded a WARA Pre-Doctoral Research Fellowship in the spring of 2016, and conducted a pilot study from June through August 2016. My research investigates citizens' perceptions of and relationships with both formal and informal authority figures after the West African Ebola Crisis. During the crisis, many citizens feared and resisted government interventions for containment and control of the disease. This resistance often took the form of hiding sick patients, lying about exposure, and attempting to prevent the circulation of health workers.

To explain this pattern of resistance and reticence, many analysts have invoked citizens' longstanding lack of trust in the state. As analysts and policy-makers aggregate lessons learned to prepare for future crisis, several questions remain: Which actors would be trusted by citizens to intervene in similar crises? What factors affect differences in levels of citizen trust across types of authority? Which authorities are more likely to receive compliance with public health advisories? To answer this question, I piloted a survey-based experiment in Kindia and Labé prefectures. Working with youth empowerment organizations, I recruited and trained 20 enumerators who surveyed over 1,200 Guineans. In addition, I interviewed representatives of international organizations, local service providers, traditional leaders, and citizen volunteers who participated in the response in order to understand their perceptions of response efficacy and citizens' reactions. These interviews took place in Kindia and Labé as well as Conakry, Guinea's capital, and Forecariah, one of the prefectures hardest hit by Ebola.

The study resulted in several preliminary findings. First, actors individuals involved in coordinating and implementing the response attributed resistance to containment and control procedures to poor initial messaging that stated that the disease was fatal and incurable. Second, they generally attributed the eventual success of containment to a change in strategy that centered the involvement of individuals known to local communities. According to my interviewees, these individuals vouched for the expertise of international interveners, providing legitimacy and credibility to the sanitation and burial practices they prescribed. Third, interviewees involved in the response reported frustration that while citizens have improved their sanitary practices since the crisis

(e.g. adopting regular hand washing), little else has changed. They report that they have not received money and resources promised to strengthen health systems. While they feel more knowledgeable and able to confront an epidemic, the health infrastructure has not substantially improved. Fourth, citizens' willingness to comply with public health advisories advanced by different authorities correlates with their degree of trust in central state institutions. Specifically, the survey experiment found that individuals who are members of politically excluded ethnic groups express lower levels of trust in central government institutions and report a greater willingness to comply with demands of local leaders. These individuals also express greater levels of dissatisfaction with the response to the Ebola crisis and skepticism of international organizations. By contrast, individuals who are not members of excluded groups report greater levels of trust, greater willingness to comply overall, and greater levels of satisfaction with the response to the Ebola crisis. These findings not only demonstrate important heterogeneity in citizen compliance with government demands for action, but also suggest important lessons for using different authorities to mobilize specific target populations.

These preliminary findings make clear the importance of future work on these and related topics. I plan to continue to explore questions about local compliance with international interventions in my future work. I would like to thank WARA along with Professor Leo Arriola for support and guidance during this project. It supports WARA's mission by providing more nuanced understanding of the dynamic ways that many Guinean citizens interact with representatives of the state, informal institutions, and international actors. I welcome questions, comments, and feedback from members of the WARA community.



Allison Grossman
2016 WARA Pre-Doctoral Fellow
Travers Department of Political Science
University of California at Berkeley
Allisongrossman@gmail.com

Assessing Teachers' Perceptions and Responses to School Related Gender Based Violence in Burkina Faso"

Anne Spear

I conducted research in Burkina Faso for two months in the summer of 2016. Funded through the WARA's Pre-Doctoral Fellowship, I conducted a mixed method research to assess teachers' knowledge and practices in response to School Related Gender-Based Violence (SRGBV). I administrated a survey to 120 secondary teachers in two regions of the country and conducted over 22 interviews with professionals who are currently working to combat SRGBV throughout Burkina Faso. In addition, I met with several associations to focus in capacity building and developing sustainable partnerships. The resulting scholarly articles (in progress) and future conference presentations produced from this research advances WARA mission to disseminate original research from West Africa. This research allows for practical application of the findings through informed programs led by local organizations in Burkina Faso.

Research Objective

This study explored the extent to which teachers' needs and abilities to report incidences align with guidelines regarding SRGBV offered by the government and the national teachers' union. The study asks, "What are teachers' knowledge of SRGBV and the official reporting mechanisms?" "What are their perceptions of SRGBV and practices for reporting SRGBV?" "What factors and experiences inform teachers' perceptions and responses of SRGBV?" "Are there differences between male and female teachers?" and "How, if at all, do governmental and nongovernmental programs currently support teachers?"

Theoretical framework

In order to understand teachers' familiarity and attitudes toward reporting SRGBV, this study draws on previous research that demonstrates particular factors and experiences as influential on teachers' knowledge and behaviors surrounding responding to SRGBV. Cultural norms, particularly surrounding gender, violence, and sexual relations contribute to teachers' unwillingness and inability to respond against SRGBV. Factors such as community stigma and fear of retaliation encourages a culture of silence around SRGBV (Leach, Donne, and Salvi, 2014; Porter, 2015; United Nations, 2006). Female teachers, often the ones pressured to respond and protect students from SRGBV, are even more at risk, due to their vulnerability (Bhana, 2015, Porter, 2015; Stromquist et al, 2013). This paper argues that social and cultural reproduction of the unequal gender relationship helps explain the weak teachers' response in addressing SRGBV (Bourdieu, 1973).

Methodology

An opportunistic sample of 30 male teachers and 30 female teachers from the Yatenga Province of the North Region and the same number from the Eastern Region's Gourma Province were selected to participate in the survey. The North and East region were chosen as survey sites due to statistics demon-

strating a high rate of SRGBV and gender inequalities in the two regions. Selected were teachers who taught at the level of lower or upper secondary education, which comprises of grades that have adolescent students and thus more likely to experience sexual violence. Using survey data, qualitative interviews, and field observation, this mixed method study explored how governmental and nongovernmental regulations and programs are currently addressing teachers' needs. Twenty-two in depth interviews with governmental and nongovernmental personnel whom does work to combat SRGBV were conducted throughout Burkina Faso.

Preliminary Findings

This study found that teachers lack the knowledge of how to report incidences of SRGBV that is laid out by the government as well as the national teachers' union. Teachers report a lack of motivation on the part of the state, school, and local community to address occurrences SRGBV due to the normalization of the violence and the culture of solidarity built among teachers to "protect" their colleagues. Teachers express fears of negative, often dangerous, repercussions and concern over the lack of protection for teachers who do speak out against SRGBV within the formal reporting mechanisms.

Scholarly significance

Recent studies (Bhana, 2015; Leach, Donne, and Salvi, 2014; UNICEF et al., 2010; United Nations, 2006a) show that teachers and school communities can provide preventive and protective support for schoolchildren against SRGBV though there is very limited research in the area. This study provides a contribution to the literature by examining teachers' roles in responding against SRGBV and the limitations they face to effectively protect students from violence. This research provides recommendations to governments and nongovernment organizations to address teachers' needs in combating SRGBV.



Anne Spear
WARA Pre-Doctoral Fellow
2016
International Education Policy
University of Maryland
aspear@umd.edu

Exploring “One-Mans” Churches in Ghana

Emily Stratton

I am a PhD student in the Department of Religious Studies at Indiana University. Thanks to a WARA Pre-Doctoral Fellowship, I spent June through mid-August 2016 in Accra, Ghana initiating groundwork for longer dissertation research in 2017. My dissertation, at large, is an ethnographic project that examines the city’s recent proliferation of small churches known colloquially as “one mans.” A significant part of Accra’s thriving Pentecostal-Charismatic scene, these churches acquired their name by having been generally founded, pastored, and governed administratively by one person (usually male).

My interest in “one mans” initiated from seeing how they have incited local concerns over religious and financial ethics. Many Ghanaians—regardless of religious identity—tend to position the men who oversee these churches as charlatans (or “fake pastors”) who are looking to make easy money in difficult economic times. Further, those contributing money to such men are usually viewed as incompetent dupes, desperate for miraculous relief from their own economically-induced circumstances. Indeed, there is no shortage of popular criticism. Ghanaian media—whether in film, hip-hop, talk radio, or internet memes—continually circulates a vast array of acerbic and humorous insults toward “one man” ministers. Likewise, sensational stories about such “Men of God” frequently make media headlines.

In my own work, I am neither interested in making claims about “one man” ministers being charlatans or not, nor in making any other kinds of prescriptive evaluations. I am, however, highly interested in how “fake pastor” accusations and “one man” criticisms are constructed: What kinds of actions or theologies provoke outrage and which do not? And why? I am also interested in exploring potential effects of these criticisms: do they change the ways that people think or act? I contend that examining these processes can help scholars better theorize ways in which urban publics can define and regulate normative conceptions of “authentic” and “fake” religious expressions. Thus, I spent a significant portion of my time in Accra talking with city residents about “one man” churches, their attitudes about them, and their own participation in religious giving. I also spent time documenting instances of public criticism, and collecting memes, cartoons, and other image-based insults.

The vast majority of my time in Accra, however, was spent collecting data on “one man” churches themselves, not just attitudes about them. As there is a lack of useful quantitative data available to help scholars measure the pervasiveness of Pentecostal-Charismatic Christianity in Accra, I conducted a mapping pilot study. Using a mobile application, I selected a

geographic zone in Accra and walked systematically through its streets and footpaths, plotting the coordinates for religious meeting spaces of any kind and collecting as much descriptive data as possible (size and condition, accessibility, contact information, services offered, etc). I also took photos of the spaces and their signage. I have not processed all of the raw data yet, but I am particularly looking forward to creating animated maps that demonstrate the proliferation of “one man” churches over time. While out on foot, I also photographed billboards, banners, posters, stickers, and any other kind of Pentecostal-Charismatic signage in order to take a closer look at ways that church leaders present themselves, and how their signs’ aesthetics play into the broader discourse of criticizing “one man” ministers.

Lastly, I attended services at as many “one mans” as possible. I sought to preliminarily gauge the varieties of these churches in Accra, and in so doing, contribute toward WARA’s mission of advancing scholarship and accurate information about West Africa. Partially because of the kinds of standard aesthetics in their signage and consistent patterns in public criticisms towards them, “one man” churches are often depicted—by local residents and scholars alike—as a rather “flashy” and “flamboyant,” yet monolithic subset of the city’s religious scene. However, given that Pentecostal-Charismatic Christianity is quite theologically and organizationally flexible in and of itself, and that “one man” churches are small and independent of denominational oversight, we should not be surprised to find that “one mans” are rather diverse, materially, stylistically, and theologically.

Midway through my stay, I also attended the triennial Ghana Studies Association Conference at the University of Cape Coast, where I enjoyed the opportunity to meet other scholars from many parts of the world and talk about our work. I look forward to further developing these professional connections and continuing my research in Accra.



Emily Stratton
2016 WARA Pre-Doctoral Fellow
PhD Student and Associate
Instructor
Department of Religious Studies
Indiana University
strattoe@indiana.edu

In Search of the Nigerian Dream: Transnational Migrants and the Politics of Home

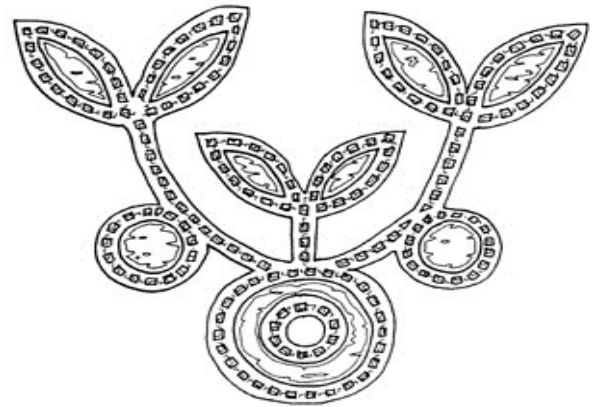
Oluwakanyinsola Obayan

The primary objective of my research was to examine contemporary Nigerian reverse migrants and how they negotiate their intersectional identities of ethnicity, class, gender, and transnationality within the city of Lagos in order to understand how processes of diaspora and transnationalism conceptually recast questions of autochthony and belonging within the era of neo-liberal globalization. In light of this, I initially posed the following questions: How do Nigerian diasporic bodies negotiate and navigate the politics of exclusion and inclusion in contemporary Lagos? Furthermore, how do these returnees fashion their identities and in the process fashion the identity of the city itself? In order to test out their feasibility and usefulness for my project, I employed the ethnographic methods of participant observation and informal and semi-structured interviews over a period of two months. In doing so, I sought to investigate how Nigerian diasporic returnees can help to enhance our contemporary understanding of transnationalism, Diaspora, globalization and the urbanization of African cities.

Upon arriving in Lagos, I immediately began my ethnographic research. Through my personal and professional networks, I was able to establish initial contact with several Nigerian return migrants spanning different industries prior to my arrival. Consequently, I conducted 16 semi-structured interviews and engaged in participant observation and informal discussions at different gatherings. Perhaps due to my own Nigerian background, I found it relatively easy to build relationships with my collaborators, who were extremely receptive and eager to introduce me to other return migrants. Moreover, individuals often invited me along to social events, where I met other potential interviewees.

My preliminary work was extremely insightful because it helped me draw connections between the narrative of Africa rising and return migrant phenomena. A vast of individuals I interviewed possessed MBAs from Western prestigious institutions and now worked for multinational corporations such as Total, Shell, Atlas Mara, and McKinsey while others were entrepreneurs. Preliminary fieldwork in Lagos, Nigeria showed me that individual narratives of career goals and success could inform us about the relationship between narratives of Africa rising and return migration. Moreover, this fieldwork also suggests that the ability to successfully move back to Lagos and belong to (and in) Lagos is primarily measured through economic success and achievement. In consideration of these findings, I decided to refine my initial research questions and theoretical frameworks for my dissertation research. Based on my preliminary research, I found the general category of Nigerian return migrants to be extremely broad and result in wide, disparate representation of experiences. Therefore, in order to select participants for this contemporary study, I define a highly skilled return migrant as an highly educated individual with at least a masters degree, who has lived outside of Nigeria for at least

five years, and has been living in Lagos for at least one year to ten years. Within this general category, I will select individuals who are entrepreneurs and/or mid-senior level professionals in their respective industries. The preliminary research was also instructive in helping me prepare for return in 2017. Due



to my decision to stay with family members, I encountered several challenges in the areas of transportation and housing, which slowed down my general productivity. As a result, I have made housing arrangements closer to the residential areas of most of my collaborators.

Overall, the receipt of the West African Research Association Pre-Doctoral Fellowship has greatly enhanced my research and enriched its theoretical and methodological foundations, which aligns with WARA's mission to foster the production and dissemination of current research on West Africa and the diaspora. Although I am yet to publicly disseminate my research findings, I plan on doing so in the spring semester at a conference on Lagos at the University of Lagos in Lagos, Nigeria. Disseminating my work at this conference will also provide an avenue to advance WARA's mission to promote scholar exchange among West African scholars and institutions and their counterparts in the US and beyond. Ultimately, I am extremely grateful for WARA's support because without them, I would not have gained such tremendous insight into my dissertation project.



Oluwakanyinsola Obayan
2016 WARA Pre-Doctoral
Fellow
Africana Studies
Cornell University
oo67@cornell.edu

Beauty Diplomacy: Culture, Markets, and Politics in the Nigerian Beauty Pageant Industry

Oluwakemi M. Balogun

Research Summary

My WARA Postdoctoral Fellowship project is my in progress book tentatively titled *Beauty Diplomacy: Culture, Markets, and Politics in the Nigerian Beauty Pageant Industry*, which examines the Nigerian beauty pageant industry as a lens to analyze varied articulations of embodied Nigerian nationhood. The research remains situated within a larger body of scholarship that examines how women and their bodies are used to symbolically represent the trajectory of the nation. This book explores Nigeria's fledging position in the global economy alongside its shifting and contentious cultural politics. I look at beauty in the context of major transitions within the Nigerian nation-state, using pageants to understand how Nigeria simultaneously makes sense of itself internally as a national community and internationally to the world. Nigerian beauty competitions, while they seem superficial, are an important vehicle in linking nationalism from above through intricate interactions with the state to nationalism from below through public involvement. *Beauty Diplomacy* compares the production, symbolism, and political controversies surrounding four pageants to show the way they differently represent the Nigerian nation. I focus on how Nigerian beauty pageants: (1) project a cohesive national identity in a multiethnic and multi-religious society; (2) craft a narrative of unique nationhood while aiming to be part of the global arena; and (3) manage local adaptation and resistance to globalization. This book will rethink interdisciplinary debates about the place of Africa in globalization and national identity in a postcolonial context. Taken together, my book project will force us to rethink the nationalist and global politics of gendered nationalism.

Research Activities

I spent 8 weeks during the summer of 2016 collecting and analyzing archival materials at the National Archives at the University of Ibadan for the historical chapter of my book that

provides a brief overview of the Nigerian beauty pageant industry. The bulk of the chapter focuses on Miss Nigeria, the country's oldest beauty contest that began in 1957. I focus on the rise, fall, and subsequent return of the Miss Nigeria pageant in order to document the development of the Nigerian beauty pageant industry over the last five decades from a country reveling in its post-colonial independence to an emerging nation self-consciously placed within the international political economy. I used the trip to help bulk up the historical evidence I needed to substantiate my argument. I focused on collecting materials from the 1950s to 2000s and I was able to collect over 200 documents. Most of the data was from the Daily Times Nigeria newspaper, which sponsored the pageant during that time period.



I was interested in documenting the main shifts that have occurred in the pageant in terms of understandings of gender and beauty culture and its connection to the trajectory of

Nigeria as a nation. Preliminary analysis reveals four dominant frames that circulated during various historical periods as it relates to the Miss Nigeria pageant. The first theme aligns the pageant with domesticity and well being for example through ads in which Nigerian beauty queens pose next to “modern” home appliances, health tonics, and drinks to entertain guests. The second theme focuses on professionalizing beauty culture through cosmetics like skin creams and hair products. The third theme examines luxury goods like cars and designer clothing. The fourth theme focuses on the dominance of displaying



the body through swimwear and focusing on contestants' body measurements. In the next stage of my analysis, I plan to link these varied themes that connect these Nigerian beauty queens to various idealized versions of femininity to the broader political and economic contexts of what was happening during that particular moment in Nigeria.

The West Africa Research Association's Postdoctoral Fellowship has been instrumental in helping me make progress on my book. Being able to conduct this fieldwork provided me with access to first-hand accounts and archival sources that will make my work more accessible to a broader readership to offer a glimpse into an aspect of contemporary Nigerian popular culture. During my trip I was also able to start to build connections with some scholars at the University of Ibadan and the University of Lagos. I hope to continue to foster these collaborative relationships.



2016 WARA Post-Doctoral Fellow
Oluwakemi M. Balogun
Assistant Professor
Departments of Women and Gender Studies and Sociology
University of Oregon
kbalogun@uoregon.edu

Continued from page 11

and that we understood the complex and fragile ecosystem of the delta region. She sent us off to visit Kaydara, a farm school where young people enroll in a two-year course of learning by doing, after which they go on to create similar schools. The farm takes its name from Amadou Hampate Ba's recounting of the tale of Kaydara.

While in Djilor, we were invited by a women's cooperative that specializes in processing fruits, nuts, and grains, to cook with them. We worked under their tutelage, chopping, pounding, slicing, and stirring to prepare the famous Serer dish, Ngurbaan. When it was done, we sat down to a real feast, complete with dancing afterwards.

On another day, we enjoyed an early morning pirogue ride out into the mangroves where we learned about reforestation efforts, visited the port of Joal and the fish smoking works nearby (Senegal supplies most of West Africa with smoked fish).

Encouraged by the success of this year's pilot, we are planning a repeat of the **Tastes of West Africa Culinary Institute** in 2018. Come learn from the experts. Leave your heavy winter clothes behind and come join WARA and Chef Pierre Thiam for ten days of sunshine, good food, and good company.

To learn more, visit the Tastes website at www.tastesofwestafrica.org.



Isolation and molecular identification of yeast strains from “Rabilé,” a starter of local fermented drink

Keita Ibrahim

Abstract

“Rabilé” is dried yeast harvested from Sorghum beer, used as a traditional starter culture, but more especially as ingredient in cooking in Burkina Faso. The present study aimed to isolate and identify indigenous yeast flora of “Rabilé”. Standard microbiological process was carried out to isolate yeast in different samples of “Rabilé” coming from the thirteen areas of Burkina Faso. Molecular method (PCR-RFLP) was used for yeast strains characterization and identification. A total of 345 yeast strains were isolated. Molecular identification revealed three specific species among yeasts isolated as *Saccharomyces cerevisiae* with a frequency of $2^{1.2}7\pm$, *Candida Krusei* $55.9^3\pm$ and *Rhodotorula mucilaginosa* with a frequency of 0.58%. This data highlights the diversity of indigenous yeast flora of “Rabilé”.

Key words: *Rabilé*, yeast, polymerase chain reaction (PCR), restriction fragment length polymorphism (RFLP), traditional starter culture.

Introduction

Sorghum beer is a popular alcoholic beverage in African countries where sorghum is produced (N'Guessan et al., 2016). The beers are consumed at various festivals and ceremonies and constitute a source of income for beer producers (Lyumugabe et al., 2012; Djègui et al., 2015). Sorghum beer is commonly called “Dolo” in Burkina Faso (Abdoul-latif et al., 2013) where 60% of population are consumers (Bationo et al., 2015). It is mainly produced by women (Maoura et al., 2005) using various processes depending on the geographic location. The fermentation step is the most important step of the manufacturing process (Djegui et al., 2014). However, this fermentation is uncontrolled and its success depends on the accurate knowledge of the processor in terms of handling the starter (Kayodé et al., 2012).

In Burkina Faso, “Rabilé” is used as traditional starter culture for the production of Dolo. It was reported that “Rabilé” is also largely used as ingredient in cooking sauces and foods (Konlani et al., 1996b). “Rabilé” brings to those people a wide range of nutritional benefits and contributes to their dietary needs, as it is mainly constituted of yeast, lactic acid bacteria and various metabolites resulting from fermentation process. Indeed, brewer's yeast is an important source of group B vitamins and minerals such as Ca, P, K, Mg, Cu, Fe, Zn, Mn and Cr, in addition to its profile balanced in amino acids (Bekatorou et al., 2006; Feldmann, 2012). Despite its common use in diet, very limited information exists on microbiological and nutritional characteristics of “Rabilé” in particular its yeast diversity. The present study focused on isolation and identification of yeast strains from “Rabilé” using molecular methods.

Materials and Methods

Sampling

Samples of dried yeast harvested “Rabilé” from sorghum beer were collected from commercial sites in 13 areas of Burkina Faso. In each sites, 25 g of “Rabilé” were purchased from three local beer producers. Once at laboratory, samples collected were stored at 4°C before yeasts isolation.

Yeast strains isolation

An amount of 10 g from each sample was crushed in blender suspended and mixed in 90 ml of sterile diluents (physiological water). Serial 10-fold dilution was carried out and yeast was isolated on Sabouraud Agar (Biomérieux) with addition of chloramphenicol at 30°C. The representative colony forming units were recorded and purified twice on MYGP Agar (Malt extract, yeast extract, glucose and peptone). Microorganism preparation and genomic DNA extraction

The 20 representative isolated yeast strains were grown on Sabouraud agar at 30°C for 72 h. For each strain culture a loop full was collected for DNA extraction. Genomic DNA was extracted and purified according to CTAB extraction method used by Kumar et al. (2014).

ITS amplification

Primers (MWG Operon Eurofins, USA) ITS1 (5'-TCCGTAGGTGA ACCTGCGG-3') and ITS4 (5'-TCCTCCGCTTATTGATATGC-3') were used to amplify ITS-5.8S-DNAr region. DNA amplification was performed in a reaction volume of 25 µl, containing 0.4 µM of each primer (MWG Operon Eurofins, USA), 2 ng/µl of genomic DNA, 0.8 mM deoxynucleotides (dATP, dCTP, dGTP, dTTP), 4 mM of MgCl₂, 0.04 U/µl Taq polymerase and buffer 1 X. The amplification was performed according (Esteve Zarzoso et al., 1999).

RFLP analysis

An aliquot (10 µl) of PCR product was digested separately with restriction endonucleases to generate restriction fragments. Reaction mixture consisted of 1 µl enzyme, 2 µl buffer, 10 µl amplicon and 7 µl pure water. Digestion was carried out at 37°C for 1 h according to the manufacturer's instructions (Invitrogen, China). Restriction fragments were visualized by ethidium bromide staining and UV transillumination. Identification was carried out using specific standards.

Results

Distribution of isolated yeast

A total of 345 were selected from traditional starters “Rabilé” from 13 areas of Burkina Faso. Table 1 shows distribution of selected yeast according their area origin.

Table1 (on facing page)

Distribution of selected yeast strains according their area origin

Area	Number of selected yeast strains
Bobo dioulasso	30
Kaya	30
Koudougou	30
Ouaga	29
Fada	29
Banfora	29
Ziniaré	29
Kombissiri	29
Gaoua	28
Tenkodogo	26
Dédougou	23
Ouiyigouya	20
Dori	13

Yeast molecular identification

In order to determine the diversity of yeasts isolated from traditional starter "Rabilé" PCR-RFLP was used. PCR products and restriction fragments analyzed by electrophoresis gel showed three profiles relating three specific species: *Saccharomyces cerevisiae*, *Candida krusei* and *Rhodotorula mucilaginosa*. The biodiversity of traditional starter "Rabilé" in term yeast flora is highlighted in table 2.

Table2. Biodiversity of indigenous yeast flora of traditional starter "Rabilé"

Area	Number of strains isolated		
	<i>S. cerevisiae</i>	<i>C. krusei</i>	<i>R. mucilaginosa</i>
Bobo dioulasso	29	0	1
Kaya	30	0	0
Koudougou	23	7	0
Ouaga	28	1	0
Fada	24	5	0
Banfora	29	0	0
Ziniaré	21	7	1
Kombissiri	26	3	0
Gaoua	26	2	0
Tenkodogo	25	1	0
Dédougou	19	4	0
Ouiyigouya	11	9	0
Dori	12	1	0
Total	303 (87.83%)	40(11.59%)	2(0.58%)

From Our Fellows

Discussion

Molecular characterization revealed three species among isolated strains from "Rabilé". As indicated in Table 2, 87.83% of isolates belong to *S. cerevisiae*, 11.59% to *C. krusei* and 0.58% to *R. mucilaginosa*. The prevalence of *S. cerevisiae*, *C. Krusei* and *R. mucilaginosa* shows that indigenous yeast flora of "Rabilé" responsible in traditional fermentation is variable according place of origin (Table 2). This is in agreement with the idea according to which the composition of the yeast population responsible for the spontaneous fermentation of sorghum beer could be related to the regional location (van der Aa Kühle et al., 2001). In many studies, *S. cerevisiae* has been reported as responsible for the spontaneous fermentation of sorghum beer (Konlani et al., 1996a; Naumova et al., 2003; Lyumugabe et al., 2014). *S. cerevisiae* is fully accepted for human consumption and is the most common food grade yeast (Bekatorou et al., 2006). The high prevalence of *S. cerevisiae* would indicate a predictive characteristic of good brewer's starter and important source of proteins. On the contrary, the presence of *R. mucilaginosa* in sorghum beer could be dangerous because it has been reported to cause Onychomycosis (Da Cunha et al., 2009; Jimoh et al., 2011). It was also reported that certain yeasts involved in sorghum beer production were phenotypically different from reference strains (van der Aa Kühle et al., 2001). For this reason, the sequencing of isolated strains is underway in the host laboratory to determine the variability of strains of the same species within the same locality on the one hand, and the variability in different localities, on the other hand.



Keita Ibrahim
Fall 2016 Travel Grantee
Biotechnology
Université de Ouagadougou
keita.ibrahim@yahoo.fr

References

- Abdoul-latif FM, Bassolé IH, Dicko MH (2013). Proximate composition of traditional local sorghum beer "dolo" manufactured in Ouagadougou. *Afr. J. Biotechnol.* 12(13):1517-1522.
- Bationo JF, Nikiema PA, Koudougou K, Ouedraogo M, Bazie SR, Sanou E, Barro N (2015). Assessment of aflatoxin B1 and ochratoxin A levels in sorghum malts and beer in Ouagadougou. *Afr. J. Food Sci.* 9(7):417-420.
- Bekatorou A, Psarianos C, Koutinas AA (2006). Production of food grade yeasts. *Food Technol. Biotechnol.* 44(3):407-415.
- Da Cunha MM, Dos Santos LP, Dornelas-Ribeiro M, Vermelho AB, Rozental S (2009). Identification, antifungal susceptibility and scanning electron microscopy of a keratinolytic strain of *Rhodotorula mucilaginosa*: a primary causative agent of onychomycosis. *FEMS Immunol. Med. Microbiol.* 55(3):396-403.
- Djegui YK, Atchade RA, Gachomo EW, Kotchoni SO, Hounhouigan JD (2014). Diversity of yeasts in otch, a traditional starter used in fermentation of an opaque sorghum beer chakpalo. *Afr. J. Microbiol. Res.* 8(37):3398-3404.
- Djêgui KY, Kayodé APP, Tokpohozin ES, Gachomo EW, Kotchoni SO, Hounhouigan JD (2015). Phenotypic characters of yeasts isolated from kpete-kpete, a traditional starter of a Benin opaque sorghum beer. *Afr. J. Biotechnol.* 14(27):2227-2233.
- Esteve-Zarzoso B, Belloch C, Uruburu F, Querol A (1999). Identification of yeasts by RFLP analysis of the 5.8 S rRNA gene and the two ribosomal internal transcribed spacers. *Int. J. Syst. Bacteriol.* 49(1):329-337.
- Feldmann H (2012). *Yeast: Molecular and Cell Biology*. 2nd edn. WileyBlackwell, Weinheim, Germany. 464p.
- Jimoh, SO, Ado SA, Ameh JB, Whong CMZ (2011). Characteristics and diversity of yeast in locally fermented beverages sold in Nigeria. *Res. J. Biol. Sci.* 6(8): 389-392.
- Konlani S, Delgenes JP, Moletta R, Traore A, Doh A (1996a). Isolation and physiological characterization of yeasts involved in sorghum beer production. *Food Biotechnol.* 10(1):29-40.
- Konlani S, Delgenes JP, Moletta R, Traore A, Doh A (1996b). Optimization of cell yield of *Candida krusei* SO1 and *Saccharomyces* sp. LK3G cultured in sorghum hydrolysate. *Biores. Technol.* 57(3):275-281.
- Kayodé, APP, Deh DC, Baba-Moussa L (2012). Stabilization and preservation of probiotic properties of the traditional starter of African opaque sorghum beers. *Afr. J. Biotechnol.* 11(30):7725-7730.
- Kumar MS, Kaur G, Sandhu AK (2014). Genomic DNA Isolation from Fungi, Algae, Plant, Bacteria and Human Blood using CTAB. *Int. J. Sci. Res.* 3(9):617-618.
- Lyumugabe F, Uyisenga JP, Songa EB, Thonart P (2014). Production of Traditional Sorghum Beer "Ikigage" Using *Saccharomyces cerevisiae*, *Lactobacillus fermentum* and *Issatckenkia orientalis* as Starter Cultures. *Food Nutr. Sci.* 05 (06):507-515.
- Lyumugabe F, Gros J, Nzungize J, Bajyana E, Thonart P (2012). Characteristics of African traditional beers brewed with sorghum malt: a review. *Biotechnol. Agron. Soc. Environ.* 16(4):509-530.
- Maoura N, Mbaiguinam M, Nguyen HV, Gaillardin C, Pourquie J (2005). Identification and typing of the yeast strains isolated from bili bili, a traditional sorghum beer of Chad. *Afr. J. Biotechnol.* 4 (7):646-656
- N'Guessan FK, Coulibaly HW, Alloue-Boraud MW, Cot M, Djè KM (2016). Production of freeze-dried yeast culture for the brewing of traditional sorghum beer, tchapalo. *Food Sci. Nutr.* 4(1):34-41.

Identification of drought-tolerant sesame accessions for West and Central African farmer

Komivi Dossa

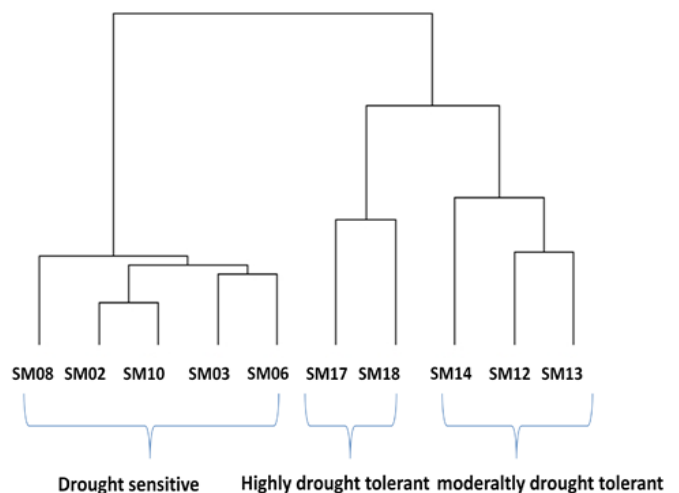
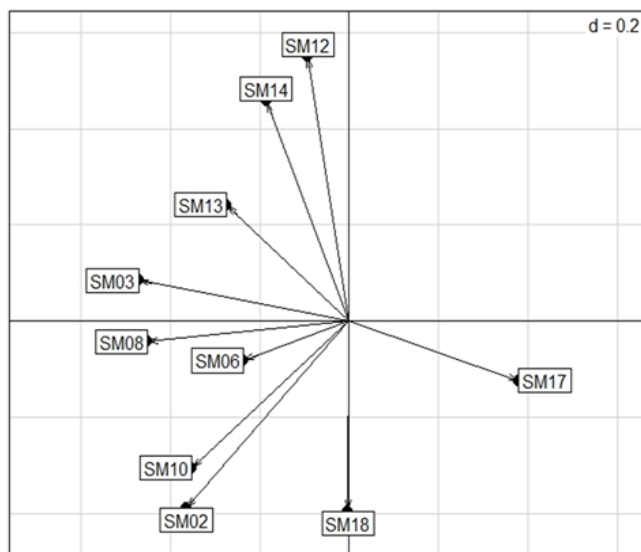
Background and objective

Sesame (*Sesamum indicum* L.) is a very ancient crop and often termed as “the queen of oil seeds” because its high oil quantity and quality (Uzun et al., 2008). It is grown in nearly all West and some Central African countries but Nigeria and Burkina Faso are the leading producer countries (Faostat, 2015). Sesame production is rapidly increasing over the years and is becoming an alternative important cash crop for smallholders because its cultivation is relatively simple as it can grow in different kind of soils, does not need irrigation, is tolerant to high temperatures, a hardy plant, not labour intensive, and fits in well with crop rotation schemes (Witcombe et al., 2007). In addition, sesame production demands fewer investments, which makes it suitable for the small-scale farmers in West and Central Africa.

Sesame is mostly grown under rain fed conditions in arid and semi-arid areas where it is subjected to terminal and intermittent droughts (Dossa et al., 2016a; Boureima et al., 2016). Drought is therefore one of the most important environmental factors that limit its production and, identifying drought tolerant genotypes is for a paramount importance for breeding programs (Pathak et al., 2014). Sesame germplasm from West and Central Africa are poorly characterized. However, the available genetic diversity in these materials could serve for improvements towards drought (Dossa et al., 2016b). In this study, we collected sesame germplasm from 7 main producer countries in West and Central Africa and screen them for drought tolerance based on different traits with the aim of well understanding drought response mechanisms and identify some excellent genotypes for future breeding and genetic studies.

Materials and Method

A total of 20 accessions comprised of landraces and modern cultivars representing geographically and phenotypically wide variation was collected from Benin, Togo, Cameroon, Burkina Faso, Senegal, Mali, Ivory Coast and used in this study. Since the phenology of the accessions was highly different, only 10 accessions with similar anthesis period were finally retained for drought stress treatment.



Experiments were carried out at the experimental farm of University of Yaounde I, (Cameroon). At anthesis stage, plants were subjected to severe drought stress for a period of 21 days by withholding the irrigation. After drought treatment all the stressed-plants as well as the control-plants were kept under normal irrigation until maturation. In total 13 traits including plant growth parameters and yield related traits were recorded in both treatments.

Preliminary Results

Statistical analysis revealed that accessions used in this study varied significantly in term of their responses to drought stress ($p=0.05$). Principal component analysis and clustering pattern of the data displayed three main groups of accessions (Figure 1): the group 1 gathered together the highly drought tolerant accessions (SM18 and SM17); the group 2 included the moderately drought tolerant accessions (SM12, SM13 and SM14) and the group 3 encompassed the drought sensitive accessions (SM02, SM03, SM08, SM10 and SM06). The drought tolerant accessions displayed higher root volume and weight which help in exploring higher soil volume. They showed a weak percentage of leaf wilting, thus had a good photosynthesis rate and better produced biomass and grain yield (Figure 2).

The drought tolerant accessions uncovered in this study will serve in future breeding programs to release highly drought-tolerant varieties for the benefit of local farmers in West and Central Africa.



Komivi Dossa
Fall 2016 Travel Grantee
Dept of Plant Biology
University Cheikh Anta Diop
dossakomivi@gmail.com

References:

Uzun B, Arslan C, Furat S (2008). Variation in fatty acid compositions, oil content and oil yield in a germplasm collection of sesame (*Sesamum indicum* L.). *J. Am. Oil. Chem. Soc.* 29:5579–1142.

Faostat, Food and Agriculture Organization statistical databases (2015). Disponible en ligne: <http://faostat.fao.org/> (accessed August 19th 2016).

Witcombe JR, Hollington PA, Howarth CJ, Reader S, Steele KA (2007). Breeding for abiotic stresses for sustainable agriculture. *Philos. Trans. R. Soc. B.* 363:703-716.

Dossa K, Niang M, Assogbadjo AE, Cissé N, Diouf D (2016a). Whole genome homology-based identification of candidate genes for drought resistance in (*Sesamum indicum* L.). *Afr. J. biotechnol.* 59 : 1464–1475.

Dossa K, Wei X, Li D, Zhang Y, Wang L, Fonceka D, et al. (2016b). Insight into the AP2/ERF transcription factor superfamily in sesame (*Sesamum indicum*) and expression profiling of the DREB subfamily under drought stress. *BMC Plant Biol.* 16: 171.

Boureima S, Diouf M, Amoukou AI, Damme VP (2016). Screening for sources of tolerance to drought in sesame induced mutants: Assessment of indirect selection criteria for seed yield, *Int. J. Pure App. Biosci.* 4(1): 45-60.

Pathak N, Rai AK, Kumari R, Thapa A, Bhat KV (2014). Sesame crop: an underexploited oilseed holds tremendous potential for enhanced food value. *Agric Sci.* 5: 519–529.



Women, Environmental Degradation, and Food Security: The Case of Oloibiri Community of Bayelsa State, Nigeria

Omowumi Omodunni Idowu

Introduction

Nigeria is regarded as the fifth largest producer of crude oil and as a leading producer of crude oil in Africa. Nigeria economy was ranked as one of the biggest in Africa and is also considered as one of the fastest growing economies in the world. Oil was discovered in the Niger-Delta region of Nigeria, which comprises of Ondo State, River state, Bayelsa state, Delta state and Akwa-Ibom State. Among these states, crude oil was first discovered in Bayelsa state, particularly in Oloibiri community of Ogbia local government area in Bayelsa state in 1956 and in large quantities by Shell Multinational oil companies. The first oil drill of 12,008 feet (3639m) was made by shell multinational company in Oloibiri (as shown in figure 1 below). This site of first oil drill was proposed to be a research institute/oil museum to be sponsored by the federal government. It was commissioned by the then former president Olusegun Obasanjo in 2001 but since then it is still at the foundation level.

The Oloibiri community in Bayelsa state is one of the poorest and most threatened areas in the Niger-Delta region as a result of environmental degradation; ironically, it is also one of the richest communities in terms of natural resources. It is a highland surrounded by water. However, the neglect of other resources which following the discovery of crude oil in commercial quantity in the Oloibiri community led to the emergence of a mono-cultural economy anchored on the aggressive exploration of oil in Nigeria. While the country as a whole has benefited immensely from petro-dollars as it continues to be the major source of government revenue. It has also created negative externalities to the environment. Consequently, as the Oloibiri community inhabitants find themselves at the mercy of these multinational oil companies and their activities which have eroded their means of livelihood. While their lands, rivers and air continue to be under attack, it has generated ill feelings and anomie attitude among the people of Oloibiri. Predictably, various violent means of expressing the anger felt has being employed. This in turn has led to instability which has further hampered economic growth and development. Particularly, women have had to face the major brunt of these ordeals in performing their roles at home.

For a typical Oloibiri woman, the major economic activity is agriculture, predominantly farming and fishing. Thus, there is

a need to investigate the effects of environment degradation on women's attainment of food security.

Research procedures

The first two weeks of this research were spent in the first phase of the project, conducting preliminary fieldwork in Ogbia local government of Bayelsa state. Collecting information and making contacts. Interviews with non-governmental organizations, academic and people of Ogbia were conducted. Collecting background information and identifying political and social constraints within the communities helped to further define the issues at hand.

The particular community that was chosen for in depth research was Oloibiri situated in Ogbia local government area of Bayelsa state.

Methodology

A greater proportion of the time was spent in Oloibiri. The research procedure and data collection method were segregated into personal interviews module, structured research questions and focus group discussion. These were distributed to mostly women and subsequently to men, NGOs and security

personnel in the area. 80 questionnaires were administered in the proportion of 60% women, 20% men and the other 20% shared among opinion leaders, security personnel and community stakeholders. Out of the 80% of the questionnaire administered 10% was administered outside Oloibiri community. The initial set up of the interviews and subsequent contacts were facilitated with the help of the CDC chairman of Oloibiri community in person of Prince Akabai Ekine. As part of field research procedures, the chief priest, and other stakeholders in the community filled the consent form to indicate that they and their people were not taken under duress or compulsion before being involved in the research process.

Hypotheses

Women are the centre piece of food production and human survival. Their importance to man's existence and home economics cannot be over-emphasized. As a result, this project has two propositions to validate;

Ho -

There is no significant relationship between environmental degradation caused by crude oil exploration and Oloibiri's women attainment of food security



From Our Fellows

This particular proposition relates the effect of environmental degradation on food security in terms of food availability, accessibility and utilization. A deep understanding of these tiers of food security will help to know the area by which women are most hindered in their effort to ensure food security at home.

Ho - There is no significant relationship between economic status of women in Oloibiri community and food security.

This was achieved by looking at women's employment, income, education and access to land as they influence the state of food security at home. Literally, economic status are those things that enable/empower or otherwise the capability of women to ensure food security.

Findings

Food security is a situation that exists when "all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". There are four basic aspects of food security, namely; food availability (production), food accessibility (affordability/ distribution), food utilization (the use of the nutritional value content of food) and stability (the consistency of all the other three aspects of food security over time). On the supply side, food availability is most or intensely affected. Contrary to the information gathered at the capital of the state (Yenogoa), the Oloibiri people are friendly, hospitable and accommodating. Though, communities in Ogbia including Oloibiri are featured with all sorts of crimes and atrocities such as kidnapping, murder and robbery.

The Oloibiri environment can be seen or regarded as the shadow of itself because of environmental deterioration due to irresponsibility of actions/activities of the multinationals oil companies traced to primitive agreement, un-detailed or lack of memorandum of understanding between the community stakeholders/landowners and the multinationals oil companies which led to crisis in the Oloibiri community.

The implication of oil exploration and exploitation activities on Oloibiri affects virtually all areas of their living since the time oil was found and greatly immediately after the war (evidenced from focus group discussion). The soil got light and crops have no stamina. There were some categories of crops and species of fishes that went to extinction as a result of environmental degradation, for example, a species of cocoyam called in their language "Amazi", which was mostly seen during raining season in large quantities before the coming of the Whitemen. As it was told, immediately the rain touched the Amazi plant, it dies which was not so before because rain facilitates the growth of this crop. Also, some species of fishes

have also gone to extinction, fishes such as Eren, Agbara, Orobh-Obhi (popularly known as mud fish) as a result of oil spillage. There were airborne diseases due to gas burning and skin rashes which can be linked to unsuitable drinking water from polluted creeks.

Presently, food attainment and sustainability has become an uphill task for the Oloibiri inhabitants compared to when Oloibiri used to be a food producing community before the discovery of oil. Oil pipelines and spillage have caused an irreparable damage to land once used for agricultural purpose reducing the quantities and thereby increases the prices of available crops. Environment degradation and oloibiri women attainment of food security has been greatly affected by the aftermath of oil exploration and exploitation, in term of the quantities of food (availability), proximity to the source of food and ability of obtaining the food (accessibility) and utilization as they were curtailed in exercising and performing their responsibilities as food producers and care giver.

The activities of the multinationals (shell, total) had actually depleted the ozone layers, bringing about acidic rain, killing crops as soon as it is raining period. Evident is the loss of amazi crop and untimely destruction of roofing sheets. The acidic rain also has effect on water and water reservoirs, sign posts/bill board and plants.

Oloibiri women are less educated while few of these women were secondary school holders. A larger proportion of these women are farmers. Due to low education status of these women, it was impossible for them to fit into a global environment or obtain a formal employment, thus they are rather

cleaners and clerical officers in surrounding organizations which ipso facto impacted on their family food intake. In addition, reference to those interviewed, the former queen (wife of King J.C Egba), when the White-men were talking about oil, the oloibiri people thought it was palm oil they were actually talking about. And at the time they knew it was crude oil, they had no idea of its value and the duration of the white people stay. This could be traced to lack of enlightenment and education of the Oloibiri people. Thus, they felt cheated and deprived, thereby resorted to violence.

Conclusion

Women are the heart beat of food security in every society. They are involved in all forms and levels in agricultural production such as crop planting, weeding, harvesting, food processing, food storage and marketing.

Food insecurity is becoming more of a permanent issue in Oloibiri, as things are becoming chronic and more pathetic. Women and children are suffering from water and air borne diseases as a result of gas flaring and oil spillage. The Ogbia local government creation eventually over shadow the glory of Oloibiri as government incentives and benefits are limited to Ogbia instead of Oloibiri community.



Little or no improvement has been seen in this area, peradventure due to continued prevalence of kidnapping, destruction of pipelines and other criminal activities. As part of deprivation, recently the location of local government area in its suburb during former Governor Okilo regime (Ogbia community), despite the fact that Oloibiri community is the largest and the first community in Ogbia area. It had a king named Honouable king J.C Egba (OLOI X), the Obanema of Oloibiri (1918-2011). As a result, all forms of economic activities are taking place in Ogbia and not the popularly known Oloibiri. This drives people away from Oloibiri to Ogbia.

It was revealed that women have not been adequately catered for in all the programmes of the government (e.g., amnesty programmes) and those at the grass root level only hear capacity development without partaking of it. In furtherance to this, agencies established to see to the welfare of the Niger-Delta (NDES, NDDC, NESREA etc.), focus less on women in all their programmes.

As a form of recommendation to the government, it was suggested that the government should ensure equitable capacity development in the area with an improved focus on women. Bribery and the politicization of opportunities such as scholarships should be checked, so that people or children at the grassroots level can benefit. Government should encourage self-help projects among women. More cooperative associations, educational and skill acquisition centres should be formed among women to economically empower them. In all, the effectiveness and efficiency of these measures should be ensured.



Idowu, Omowumi Omodunni
Fall 2016 Travel Grantee
Department of Economics
Ekiti State University
Nigeria
talk2wummie@yahoo.com

References

Oyadongha & Idio (2016). 60 years after Nigeria's first crude : oloibiri oil dries up, native wallow in abject poverty.
NDES – Niger Delta Environmental Survey; NDDC- Niger Delta Development Commission; NESREA- National Environmental Standards and Regulations Enforcement Agency

Community, Literacy, and Activism in Islamic Africa: The Paintings of Yelimane Fall



Minaret . by Yelimane Fall, 2008

This fall semester, the traveling exhibition of Yelimane Fall's works put together by WARA will be on display at Lafayette College in Easton, Pennsylvania. The exhibit, which consists of twelve framed acrylics, four carved and painted works on wood, and seven 8 x 10 (12.5 x 14.5 framed) photographs.

As its title suggests, the exhibition is divided into three sections: Community, Literacy, and Activism. While Fall uses the Arabic language in most of his work, fluency in Arabic is not necessary to experience the impact of his work, as the literal interpretation of the script represents only one layer of meaning. Fall invests an immense amount of research and contemplation into each of his works, and encourages viewers to take their time so that the layers of meaning can slowly reveal themselves. Fall also uses Ajami—the Arabic alphabet adapted for writing West African languages—to reach an even broader population. Six photographs taken by Cynthia Becker of contemporary life in Muslim West Africa form part of the exhibition, providing a broader context for the understanding of Fall's artistic practice. This allows the viewer to see the ways in which Fall's art shares the graphic styles and vibrant colors of Senegalese street art, and further demonstrates the universality of his message.

For information on how your institution can host the Yelimane Fall exhibition, contact the WARA office.

Etude de la Communauté microbienne (Biomasse et Activité Microbienne) dans les Sols Amendés avec Les Déjections Animales pour une Production Rizicole et Maraîchère Durable en Côte d'Ivoire

Koffi Bernard Yao

Contexte

Un défi scientifique majeur de l'agriculture moderne est de concevoir des systèmes de culture à la fois productifs, durables et respectueux de l'environnement. Cet enjeu est également prégnant en Afrique subsaharienne qui doit composer avec des sols souvent dégradés et un besoin de production vivrière qui s'accroît face à la pression démographique (Winterbottom et al., 2013). En Côte d'Ivoire, les sols sont soumis à une exploitation agricole de plus en plus intensive du fait de la forte pression sur les terres due aux besoins croissants engendrés par l'accroissement démographique et au manque de terres cultivables (N'Goran et al., 1997). La conséquence de cette pression est la diminution des jachères conduisant à la dégradation du sol, aux faibles rendements des cultures (Yemefack et al., 2000) et surtout une augmentation de la demande alimentaire qui ne peut être satisfaite que par une intensification de l'activité agricole (Milleville et Serpantié, 1994). Dans cette approche basée sur l'intensification écologique, il devient nécessaire de redonner une place centrale aux processus écologiques fondés sur les fonctions réalisées par les organismes du sol. La conception de pratiques agronomiques capables de promouvoir les processus écologiques nécessite une amélioration des connaissances actuelles du fonctionnement biologique du sol, en particulier du rôle des organismes, des interactions trophiques ou non trophiques et de la biodiversité du sol (Masse et al., 2013). Le fonctionnement biologique des sols englobe l'ensemble des fonctions assurées par les organismes vivants du sol en interaction avec les composantes physiques, chimiques et biologiques du milieu. Ainsi, la compréhension des mécanismes régissant cette intensification de façon générale et particulièrement le bio fonctionnement du sol aideraient à opérer le meilleur choix de gestion. Le riz et les produits maraîchers occupent une place importante dans l'alimentation en Côte d'Ivoire. Cependant la production locale de riz ne couvre pas les besoins de consommation de cette denrée. Les faibles superficies de bas-fonds aménagés et leur surexploitation figurent parmi les causes de ce déficit. L'utilisation des engrais chimiques, de par leur action bénéfique immédiate sur la productivité des cultures vivrières est une des solutions, mais leur coût élevé et leur indisponibilité les rendent presque inaccessibles aux petits paysans (N'Goran, 1995). Outre les problèmes écologiques et environnementaux qu'elle cause, la fertilisation minérale seule ne permet pas de maintenir la fertilité des sols (Bado, 2002). Dans un tel contexte, la fertilisation organique devrait constituer une solution appropriée pour la restauration de la fertilité des sols. De nombreux travaux ont montré que les amendements organiques jouent un rôle important sur diverses propriétés du sol, ce qui permet de justifier leur utilisation (Lompo et al., 1995). La fertilisation organique par l'utilisation des déjections animales notamment, la bouse de vache et la fiente de volaille (Akanza et Yoro, 2003) se présente comme une alternative incontournable pour une production durable et écologique du riz et des maraîchers. L'utilisation de ces bio- ressources permet le transfert de nutriments et surtout une utilisation durable des terres,

combinée à une adaptation locale de gestion de la fertilité des sols. Aussi, contrairement aux engrais chimiques, il n'y a pas de surcoût lié à l'utilisation des déjections animales. Cependant, les études concernant l'impact des déjections animales sur la dynamique des paramètres microbiologiques du sol sont un peu rares en Afrique de l'Ouest, surtout en riziculture de bas-fonds.

Introduction

Une mobilité entièrement financée par WARA (West African Research Association) nous a permis d'effectuer un stage au Laboratoire LMI IESOL (Laboratoire Mixte International-Intensification Ecologique des Sols cultivés en Afrique de l'Ouest), Centre IRD-ISRA bel air, Dakar sous la supervision scientifique de Docteur Koné Armand, encadreur de la thèse.

Le stage s'est déroulé du 05 Avril au 05 Mai 2016 sous la direction de Docteur Dominique Masse, Co-directeur de la thèse et de Docteur Laurent Cournac Co-directeur du LMI IESOL. Il avait pour objectif d'évaluer l'impact des différents types de déjections animales utilisées comme fumiers ou compost sur l'abondance et l'activité des microorganismes du sol.

Il s'agissait de façon spécifique de (i) quantifier la présence des microorganismes du sol due à l'application de ces déjections animales comme fumiers ou compost en agriculture irriguée (riziculture) et pluviale (maraîchage) à travers la mesure de la biomasse microbienne, (ii) mesurer de l'activité des microorganismes sur ces mêmes dispositifs à travers la respiration basale et les activités enzymatiques du sol, (iii) connaître les procédures d'analyse de ces paramètres microbiologiques du sol ; (iv) accéder aux appareils de mesure de ces différents paramètres notamment, le μ -CPG, le Technicon AutoAnalyzer III, le spectrophotomètre et apprendre leurs fonctionnements.

Dispositif expérimental

L'étude est centrée sur des expérimentations au champ menées sur 2 sites : l'un à Songon (culture maraîchère) et l'autre à Yamoussoukro (culture de riz irrigué).

Site de Songon

Cinq parcelles ont été identifiées sur lesquelles sont expérimentés trois traitements. Chaque parcelle constitue une répétition. Chacune mesure 30 m de long et 26 m de large et a été divisée en trois pour recevoir chaque traitement. Les opérations culturales sont : le traitement avec application de compost de fientes en surface sur les planches (planche), le traitement avec enfouissement localisé de compost de fientes dans des trous (trou) et le témoin sans aucune application d'intrants (témoin).

Site de Yamoussoukro

Le dispositif expérimental comprend trois traitements disposés en bloc avec cinq répétitions. Les parcelles élémentaires (ou casier) ont une surface de 400 m² (20 m x 20 m) relevées de 0,5 m pour empêcher l'eau de circuler d'un casier à un autre évitant ainsi des contaminations

entre différents traitements. Les traitements sont les suivants : le traitement avec application de bouse de bovins (bouse de vache), le traitement avec application d'engrais chimique NPK (fertilisation chimique) et le témoin sans amendement (témoin).

I. Présentation de la structure d'accueil

Créé au Sénégal en 2012, le laboratoire mixte international (LMI) «Intensification écologique des sols cultivés en Afrique de l'Ouest» (IESOL) associe l'Institut sénégalais de recherches agricoles (ISRA) et l'IRD. C'est une plateforme scientifique et technique, et de formation, en science du sol pour une augmentation de la production agricole et la préservation de l'environnement en Afrique de l'Ouest. Les recherches menées ont pour objectif finalisé de contribuer au développement d'une ingénierie écologique dans la gestion des sols cultivés. Ce développement passe par des programmes de recherches mettant en avant les sciences de l'écologie et de la complexité dans la compréhension du fonctionnement des sols et des agrosystèmes. Le LMI IESOL avec ces deux plates formes de recherche que sont : le Laboratoire d'Ecologie Microbienne des Sols et Agrosystèmes Tropicaux (LEMSAT) et le Laboratoire des Moyens Analytiques (LAMA), offre des capacités techniques et analytiques performantes pour la réalisation des travaux de recherches (laboratoires certifiés ISO 9001 version 2008). Le LMI IESOL s'engage par ailleurs dans la formation des doctorants ainsi que celle des étudiants au niveau master, ingénieur et licence professionnelle. Il est co-dirigé par Dr Laurent Cournac, ECO&SOLS-IRD, Sénégal et Dr Yacine Ndour Badiane, LNRPV-ISRA, Sénégal.



II. Activités menées

II. 1. Visites des plates formes du Laboratoire

Le 05 Avril 2016, nous nous sommes vus présenter tous les membres du laboratoire LMI IESOL par Dr Docteur Dominique Masse. Le lendemain, nous avons effectué une visite de toutes les plates-formes du Lemsat que sont : les plates formes biochimie, biologie moléculaire et enzymologie. Cette visite s'est achevée par une prise de connaissance du règlement intérieur et de la conduite à tenir au sein du laboratoire, conformément à la démarche de qualité de l'institution. La visite a été supervisée par M. Lamine Dieng, responsable qualité du Lemsat.

II.2. Enregistrement des échantillons

Le 06 Avril 2016 (le lendemain de notre arrivée), nous avons procédé à l'enregistrement de nos échantillons prélevés sur nos dispositifs expérimentaux en Côte d'Ivoire sous la supervision de M. Moustapha Sané.

II.3. Analyse des échantillons

Nos analyses se sont déroulées au Lemsat (sur les plates formes biochimie et enzymologie) et au LAMA.

- Biochimie : extraction pour la mesure de biomasse microbienne et l'azote minéral (NH_4^+ et NO_3^-) sous la supervision de M. Moustapha Sané, responsable de la plate forme et M. Amadou Diop, technicien. Nous avons également procédé à la mesure de la respiration basale de nos échantillons de sols au μCPG sous la supervision de M. Lamine Sagna, technicien (Annexes).
- Enzymologie : dosage de l'activité de la bêta-glucosidase et d'hydrolyse de la fluorescéine di-acétate (FDA) sous la supervision de M. Mahécor Diouf, responsable de cette plate forme (Annexes).
 - LAMA : lecture colorimétrique en flux continu au technicon AutoAnalyzerIII de l'azote α -aminé pour la biomasse microbienne et du NO_3^- et NH_4^+ pour l'Azote mineral



II. 4. Réunion de Laboratoire et exposé

Au cours de notre stage (1 mois) nous pris part à 3 réunions de laboratoire. Ce sont des réunions hebdomadaires qui se tiennent tous les lundis. La première réunion a été l'occasion pour nous de présenter l'objet de notre présence au labo

ainsi que les activités que nous comptons mener durant notre séjour. Lors des autres réunions nous sommes intervenus pour présenter l'état d'avancement de nos travaux.

Nous avons également fait un exposé qui a consisté à présenter notre projet de thèse ainsi les activités effectuées à mis parcours. Cet exposé s'est fait en présence de Dr Dominique Masse co-directeur de la thèse, des Docteurs Komi Assigbetse et Laurent Cournac ainsi que certains doctorants et stagiaires du LMI IESOL.



Koffi Bernard Yao
2016 WARC Travel Grantee
Agro-écologie
Université Nangui Abrogoua
Abidjan, Côte d'Ivoire
bernardkoffi1@gmail.com

Ce rapport a du être raccourci; veuillez contacter le WARA pour le rapport integrale.

Antimalarial properties of selected commercially available herbal preparations in Nigeria

Ikem Chinedu

Malaria continues to be a devastating disease, affecting millions of people living in the endemic areas in the developing world. Numerous attempts have been made to control the disease by using vector control measures and/or chemoprophylaxis, but they have had limited success. The disease primarily affects poor populations in tropical and subtropical areas, where the temperature and rainfall are suitable for the development of vectors and parasites. More than 40% of the world population is at risk of the disease. An estimated 1.2 billion are at high risk of transmission (≥ 1 case per 1000 population), half of which live in the African regions; 80% of such cases are concentrated in 13 countries, and over half in Nigeria, Congo, Ethiopia, Tanzania and Kenya. Nigeria accounts for a quarter of all malaria cases in Africa. In the southern part of the country, transmission occurs all year round while in the north it is more seasonal. Almost all malaria cases in the country are caused by *Plasmodium falciparum*, considered to be the leading cause of death worldwide in 2004, from a single infectious agent. Antimalarial drug resistance, particularly *Plasmodium falciparum* resistance, has been a major setback in the fight against malaria and its attendant complications. WHO has recognized the place of herbal medicines as a viable alternative in the treatment of malaria. In Nigeria, many plants are used for the management of malaria and these vary from one locality to another. The screening of herbal medicines provides a foundation for further exploration of their use as antimalarial medicines. There is a need to record and validate the medicinal uses of these plants to expand their use to include integration into modern medical healthcare systems. Thus this study was designed to validate the ethno-medicinal uses of some selected commercially available antimalarial-herbal preparations in Nigeria.

In-vitro culture of *Plasmodium falciparum* and antimalarial activity

The anti-plasmodial activity of the six herbal extracts was assessed against *P. falciparum*: 3D7 (chloroquine-sensitive) strain *in vitro* using SYBR® Green assay. The activity of the extract was measured over a wide range of six concentrations: 100 $\mu\text{g/ml}$, 33.33 $\mu\text{g/ml}$, 11.11 $\mu\text{g/ml}$, 3.70 $\mu\text{g/ml}$, 1.23 $\mu\text{g/ml}$, 0.41 $\mu\text{g/ml}$, obtained by three-fold serial dilution with Complete Parasite Medium (CPM). Chloroquine and artesunate were used as positive controls. All experiments were performed in triplicates. At least two independent experiments were performed.

The SYBR green I-based fluorescence anti-plasmodial assay as described by Trager and Jensen was used for the activity screening of the drugs. Sorbitol synchronized parasites were incubated with the drugs (100 μl final volume) under normal culture condition at 2% haematocrit and 1% parasitaemia. Parasites without drug treatment were used as negative controls while the wells containing chloroquine and artesunate were the positive controls. The plates were covered and shaken slightly to ensure a thorough mixing. The plates were arranged in a clean modular incubation

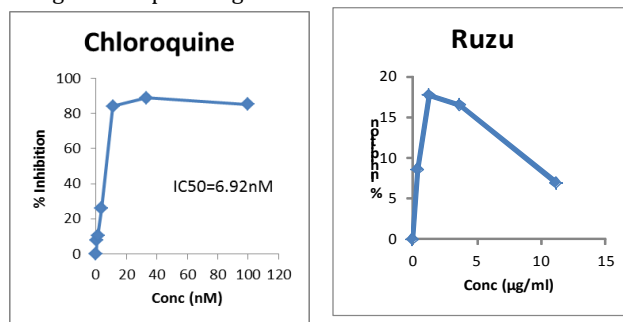
chamber and flushed with mixed gas for 1 minute. The cultures were incubated for 72 hours. After 72 hours, a 100 μl of lysis buffer containing 20 mM Tris-Cl (pH 7.5), 5mM EDTA, 0.008 % saponin, 0.08 % triton-X 100 and 1X SYBR green I (10 000X in DMSO) was added. They were mixed gently and incubated in the dark for 1 hour. The fluorescence in each well was read using a Tecan fluorescence multi-well plate reader at excitation and emission wavelengths of 497 and 530 nm respectively. The intensity of the fluorescence signals were plotted against the drug concentrations to obtain a dose response curve. The curve were analysed to determine 50 % inhibitory concentrations (IC_{50}) of the drugs.

Results and Discussion

These herbal formulations (Ruzu, Deep root, Chuka trin, Blood purifier, M&T and African iba) had an IC_{50} greater than 100 $\mu\text{g/ml}$ which is considered inactive ($>100 \mu\text{g/ml}$) when compared with the reference drugs Chloroquine and Artesunate with IC_{50} of 6.92 and 0.75 nM, which indicates a very potent activity.

Several researchers have reported *in vitro* activities on some individual medicinal plants in Nigeria with some of these constituting the plants used for the Herbal formulations used for this study, but because it is made up of more than one extracts it indicates that there could be some compounds

acting as pro-drugs wh



ich explains the reason why there was no activity with the *in vitro* assay.

Conclusion

The results of this study confirmed that the six herbal extracts possess poor antimalarial properties. This suggests that these herbal extracts may contain pro-drugs non-active by themselves. In this case, these precursors of the active compounds have to be metabolized *in vivo* into active antimalarials.

Continued on page 54

Screening des souches microbiennes impliquées dans la biodégradation des déchets organiques municipaux: Production d'un complexe microbien pour le prétraitement

Nikiema Mahamadi

Mr. Nikiema, a doctoral student at the University of Ousagadougou, in Burkina Faso, traveled to the University of Abomey-Calavi in Benin. There he conducted research under the direction of Professor Fatiou Toukourou, Directeur du Laboratoire de Microbiologie et des Technologies Alimentaires (LAMITA).

La gestion des déchets est une problématique majeure de notre temps. Le choix des pratiques en la matière ont des conséquences pour l'environnement, avec des répercussions dans la sphère économique et sociétale.

Le traitement par méthanisation des déchets organiques municipaux connaît de nos jours un net regain d'intérêt. Elle est très délicate, notamment à cause de la complexité des déchets. Ce travail vise à rechercher des souches microbiennes présentant un spectre très large de dégradation des déchets organiques municipaux pour la phase de prétraitement biologique en amont de la digestion anaérobie.

Pour ce faire les déchets municipaux ont été échantillonnés dans des centres de précollectes de la ville de Ouagadougou au Burkina Faso. Les déchets précollectés ont été triés, séchés, puis pilés et tamisés (Taille \leq 1mm) pour les différents tests de fermentation. Les paramètres physico-chimiques de la poudre de déchets à savoir le pH, la matière sèche (MS), la matière organique (MO), les cendres et la teneur en lignine ont été déterminés.

Sur un total de 05 échantillons, 16 microorganismes ont été isolés dont 03 bactéries cellulolytiques isolées du sol (CA1, CA2 et CA3), 03 Streptomyces isolés du sol (SS1, SS2 et SS3), 04 Bacillus dont 02 isolés du sol (BS1 et BS2), 01 isolé des déchets en putréfaction (BDP) et 01 d'un aliment fermenté (soubalala) (BAF), 03 Levures dont 01 isolé de la bouse de vache (YBB), 01 isolé des déchets en putréfaction (YDP) et 01 isolé des eaux usées d'abattoir, et enfin 03 moisissures dont 01 isolé du sol (MS), 01 isolé de la bouse de vache (MBB) et 01 isolé des déchets en putréfaction (MDP). Les caractéristiques biochimiques des différentes souches ont été réalisées. Des tests de biodégradation de déchets ont été réalisés dans des flacons de 300 mL avec 120 mL de volume utile composé du tampon (K_2HPO_4 (2g) et NH_4Cl (2g)/1000mL) et 2% de poudre de déchets. Des tests d'optimisation de la fermentation des déchets ont été conduits en combinant les souches performantes à différentes températures (30 et 37°C) et à différentes proportions d'inoculum (10% et 25%). L'évolution du pH et la perte en matière sèche ont été suivies au cours de la fermentation. Les résultats des paramètres physicochimiques de la fraction organique des déchets municipaux ont montré 92,79% de MS, 80,10 % de MO, 17,11 % de Cendres Totales et 29,21 % de Lignine.

Le suivi du pH pendant 20 jours a permis d'observer la chute du pH de 7 à 5,4 et reste stable jusqu'au 6ème jour. Le pH augmente progressivement à partir du 6ème jour pour atteindre les valeurs 7-7,5 au 15ème jour. Les meilleures pertes par rapport aux MS initiales au 25ème jour étaient de 8,2g/L pour CA3, 8.7g/L pour SS1, 8,4g/L pour BS1, 4,5g/L pour YBB, 7,2 pour MBB g/L. Le témoin non stérilisé (TNS) présente une perte de 9g/L. L'évolution du pH dans les essais indique une activité fermentative des microorganismes.

La production d'acides dans le TNS était plus accrue, cela pourrait s'expliquer par la présence de diversité de microorganismes dans la masse de déchets. En tenant compte de l'évolution du pH et la perte de matière sèche CA3, SS3, BDP, YBB et MBB ont été retenues comme les souches les plus performantes. L'évolution du pH avec 10% et 25% d'inoculum ne présente pas de différence significative à 30°C ($p > 0.5$).

La chute du pH de 7 à environ 5.75 jusqu'au 6ème jour est suivi de son augmentation progressive au tour de 9. Une élévation de la température à 37°C permet une forte acidification brusque (pH 5,63 à 30°C et pH 4,725 à 37°C) à partir du 3ème jour et augmente jusqu'à pH 10. A cette température une différence significative de la production d'acide ($p < 0.0001$) est remarquable à 10% et 25% d'inoculum.

La perte en matière sèche au cours de la fermentation était respectivement de 16,4 et 14,7 g/L pour 10% et 25% à 30°C. Cette perte a connu une augmentation significative à 37°C (21,2 g/L pour 10% et 30,6 g/L pour 25%). A l'issue de cette étude, le complexe microbien CA3-SS3-BDP-YBB après 7 jours de culture enrichie et supplémentée en cellulose 5% permet une bonne pré-fermentation des déchets solides municipaux à 37°C avec un temps optimal de fermentation de 3 jours.



Mahamadi Nikiema
Spring 2016 Travel Grantee
Universite de Ouagadougou
Burkina Faso
mahamadinikiema87@gmail.com

Étude des Caractéristiques Spatio-Temporelles des Feux de Brousse et de leur Relation avec la Végétation dans un Contexte de Boisement des Savanes: Comparaison des Savanes de Côte d'Ivoire et du Togo

Soro Tionhonkélé Drissa

Introduction

Le développement des pays africains est généralement basé sur l'exploitation des ressources naturelles. Les aires protégées constituent ainsi les seuls refuges de la Biodiversité, en dehors desquelles celle-ci est menacée. Cependant, à l'instar des savanes du monde, les savanes humides d'Afrique de l'Ouest ont tendance à se boiser malgré l'application du feu qui les caractérise; un phénomène qui n'épargne pas les aires protégées.

Objectif

Cette mission au Togo visait à confronter les méthodes d'étude et de gestion des feux dans les aires protégées (refuges de la Biodiversité) afin de trouver des stratégies de gestion et de maintien des savanes à une échelle sous-régionale.

Methodologie

À cet effet, il s'est agi au cours de la mission de (i) caractériser les paramètres de propagation des feux de végétation, (ii) se former aux méthodes de cartographie des feux actifs et des superficies brûlées à l'aide des données de Télédétection, (iii) confronter les méthodes d'étude des feux à Lamto (Centre Côte d'Ivoire) et à la Comoé (Nord Côte d'Ivoire) avec ceux de l'aire protégée de Togodo (Sud-Est Togo).



Figure 1 : Échanges avec le gestionnaire (A) et des gardes forestiers (B) du parc national de Togodo-Sud (Sud-Est, Togo)

Des échanges fructueux avec le gestionnaire et d'autres gardes forestiers du Parc de Togodo (Figure 1) ont permis de s'imprégner de la pratique des feux (précoces) pour la gestion des aires protégées au Togo. En ce qui concerne les paramètres de propagation du feu, la hauteur de l'herbe a été évaluée à 2 m en moyenne et une faible vitesse de propagation des flammes (0,015 m/s) a été observée, probablement due aux quelques pluies qui étaient encore constatées dans ce mois de décembre (Figure 2). Cette mission permis d'initier la collecte de données satellitaires

sur les feux actifs et les superficies brûlées en vue de l'étude prochaine de leur distribution spatio-temporelle en Côte d'Ivoire.

Des résultats préliminaires sur le Parc National de la Comoé (Nord-Est, Côte d'Ivoire) ont été obtenus pour la période 2003 à 2016. Sur cette période, on dénombre 64999 feux actifs été détectés par les satellites avec en moyenne 4643 feux détectés /an et 672083 ha/an (soit 58 %) de ce parc qui brûlent par an.



Figure 2: Feu précoce dans le parc national de Togodo-Sud et mesure de la vitesse de propagation des flammes, 15 déc. 2016

La confrontation des méthodes d'étude des feux de végétation a permis de relever que certaines sont actuellement appliquées en Côte d'Ivoire et non au Togo. Il s'agit notamment des mesures des paramètres climatiques (sur site) pendant les feux, de la hauteur des flammes (utilisée comme indice post-feu), de la température et du temps de résidence du feu (permettant de mieux interpréter son impact). Au terme de notre mission, ces méthodologies ont été présentées aux collaborateurs de l'Université de Lomé qui les ont perçues comme de nouvelles pistes de recherche dans la compréhension du comportement et de la sévérité des feux. Par contre, l'étude de la distribution spatio-temporelle des feux actifs et des superficies brûlées est actuellement appliquée au Togo et non en Côte d'Ivoire. Cette mission a été l'occasion de se former à la collecte de données et à la cartographie des feux actifs et des superficies brûlées pour une application en Côte d'Ivoire.

Continued on facing page

WARA & Howard University team up for Community College Faculty Development Seminar in Senegal



In January, WARC hosted a ten-day seminar for thirteen, mostly community college, faculty members. The group included faculty from Montgomery College, MD; Merritt College, CA; Arkansas State University; Hawkeye Community College, IA; Prince George Community College; Sacramento City Community College; Roxbury Community College and Bunker Hill Community College, MA; Northeast Wisconsin Technical College; Fresno City College; St. Louis Community College; and College of the Canyons in CA.

Organized by WARA and Howard University in collaboration with the Council of American Overseas Research Centers (CAORC), the seminar was led by Professor Mbye Cham, former WARA Board Chair and Chair of the African Studies Department at Howard University.

La mission a par ailleurs été l'occasion de l'ouverture d'une piste de collaboration entre la Faculté des Sciences de l'Université de Lomé (FDS-UL, Togo) et l'Unité de Formation et Recherche des Sciences de la Nature de l'Université Nangui Abrogoua (UFR SN-UNA, Côte d'Ivoire). En effet, la recherche collaborative s'impose aujourd'hui dans la mesure où le phénomène de boisement des savanes est observé partout. Ainsi, la compréhension du comportement des feux à grande échelle devient d'une utilité indéniable afin de proposer des solutions à une échelle sous-régionale. Dans la quête de stratégies de gestion durable à grande échelle, la mise en place d'un réseau de recherche international sur les feux en Afrique a été envisagée. Un tel réseau permettrait d'harmoniser les terminologies en matière d'étude des feux, d'améliorer la compréhension du comportement des feux et de proposer des stratégies de gestion des savanes à des échelles régionales ou sous-régionales pour une meilleure conservation de la Biodiversité en Afrique.

Remerciements

Je tiens a remercier mon universite, l'Universite Nangui Abrogoua, l'Universite de Lome qui m'a bien recu, et le West African Research Association pour son soutien.



Soro Tionhonkélé Drissa
Spring 2016 Travel Grantee
Biodiversity and Sustainable Management of Ecosystems
Lamto Ecology Research Center
Université Nangui Abrogoua
Côte d'Ivoire
drissasoro87@yahoo.fr

Development of Porous Ceramic Honeycomb from Kaolinite Clay for Automobile Exhaust System

David Olubiyi Obada

Introduction.

The presence of porosity in a material is often viewed as problematic. However, there are many applications in which the use of porous materials can be advantageous or even necessary, for example in filters, membranes, catalytic substrates e.t.c. Generally, porous ceramics are usually understood as materials having porosity over 30% (Guzman, 2003).

Objectives of research

A lot of pore-forming agents have been investigated, however, to the best of my knowledge; no report regarding the use of powdery high density polyethylene (PHDPE) has been reported so far for its potential in creating voids in a ceramic body after solid state sintering. Hence, this experimental investigation therefore aims to develop ceramic bodies from kaolin deposits located at the *Kankara* regions in Katsina-Nigeria using Kibi kaolin (Ghana) as plasticizer.

Results and Discussion

Figure 1 shows the SEM and EDS scan of beneficiated and raw kaolin. The suitability of porous ceramic bodies for potential use in industrial applications is explained by high volume of porosity and surface area as well as the physical, chemical and thermal properties of the ceramic bodies. These properties in turn are intrinsically related to the nature of raw materials (kaolin) and the pore formers used (Efavi *et al*, 2012).

Each of the images showed a booklet morphology consisting of platelet sheets of kaolinite mineral as reported in the literature,. The average particle size was estimated as 10.0 μm for both the raw and beneficiated kaolin. It can be observed from the images that the EDS for raw kaolinite clay showed some impurities (Fe) while the EDS for the beneficiated kaolinite clay was devoid of the impurity hence suitable for casting of ceramic green bodies.

Batch formulation history of ceramic samples will be reported in subsequent articles.



Plate 1: Green bodies after firing with PHDPE as pore former



Plate 2: Green bodies after formation of honeycomb structure

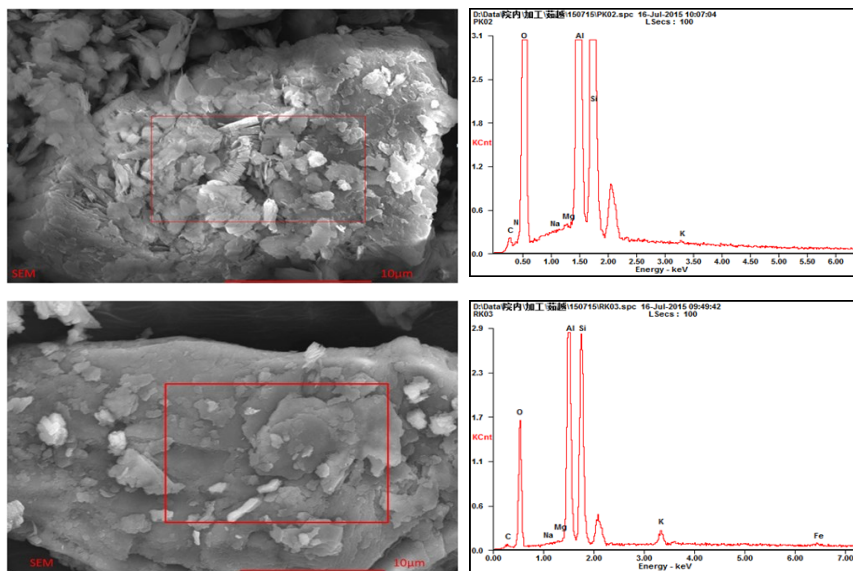


Figure 1: SEM and EDS of beneficiated (top) and raw kaolin (bottom).

The summary of results obtained for the different physical experiments carried out in this investigation are presented in tables 1 and 2 on the facing page. The property trends are discussed below:

The samples gave the following limits of results: apparent porosity: 28.63% - 67.13%; water absorption: 17.07%-58.42%; bulk density: 0.79g/cm³-2.75g/cm³;apparent density: 1.49g/cm³-2.34g/cm³;and shrinkage: 12.5% - 17.0%.

Samples with high density polyethylene (HDPE) pore formers showed minor surface cracks after firing, but exhibited high porosity levels while samples with styrofoam and saw dust exhibited uniform surface characteristics with pores, high strength, thermal stability and no visible surface cracks. Apparent porosity as high as 67% has been calculated.

Table 1: Summary of results for physical tests

Sample	Shrinkage (%)	Apparent porosity (%)	Water absorption (%)	Bulk density (g/cm ³)	Apparent density (g/cm ³)
A	17.0	47.13	47.76	1.05	1.99
B	12.5	50.21	51.08	0.98	1.97
C	12.5	41.30	46.34	0.89	1.51
D	12.5	46.53	58.46	0.79	1.49
E	13.8	52.87	57.42	0.92	1.95
F	14.5	67.13	64.00	0.88	2.03
G	12.5	28.63	17.07	2.75	2.34

(values are average values for each composition of test specimens)

Table 2: Summary of the porosity results fired at 1150^oC for all samples

Sample ID	Pore former	Kankara Kaolin	Plasticizer(Kibi Kaolin)	Cracks	Trap pore former	Cleavage	Porosity
A	Saw dust	Yes	Yes	Minor	Not seen	Uneven	High
B	Saw dust	Yes	Yes	Minor	Not seen	Uneven	High
C	Styrofoam	Yes	Yes	Not seen	Visible	Uneven	High
D	Styrofoam	Yes	Yes	Not seen	Visible	Uneven	High
E	HDPE	Yes	Yes	Large	Visible	Uneven	Very high
F	HDPE	Yes	Yes	Large	Visible	Uneven	Very high
G	-	Yes	Yes	None	None	Uneven	Low

Conclusion.

Based on the porosity and physical properties of the sintered samples investigated in this study, it can be concluded that:

- The feasibility of producing porous ceramic bodies for catalytic substrates from kaolin deposits has been successfully explored in this investigation.
- Samples with high density polyethylene as pore former resulted in porous bodies, confirming that the choice of pore formers is critical in achieving porous ceramic bodies. Formulations containing 60% kaolin can be used for the production of ceramics with porosities as high as 67% if the right pore formers are used.
- The physical properties (water absorption, bulk density, apparent density and linear shrinkage) were all within tolerable limits for kaolin based ceramics.

Acknowledgements

The author is grateful for the profound support of the West African Research Association (WARA), my host advisor, all my Ph.D research advisors and also Gloria and Grace of the Department of Materials Science and Engineering, University of Ghana, Legon for their technical assistance during the course of this experimentation.



David Olubiyi Obada
Spring 2015 Travel Grantee
Department of Mechanical Engineering
Ahmadu Bello University
Kano, Nigeria
obadavid4@gmail.com

References:

- Guzman I.Y, Glass and Ceramics, 2003,60, 280-283.
Efavi, J.K., Damoah, L., Bensah, D.Y., Dodoo-Arhin, D., Tetteh, D (2012).Development of porous ceramic bodies from kaolin deposits for industrial applications. *Applied Clay Science* 21-66 (2012) 31-36.

Growth Inhibitory/Cytotoxic Evaluations of Four Nigerian Medicinal Plants against Cancer Cell Lines

Emmanuel Ikpefan

My research work involved the screening of medicinal plants reputed for anticancer activities and isolating their active constituents. To conduct this research, I traveled to the Atsu Osei Centre for Cancer and Biomedical Research at the University of Ghana.

Cancer is a major cause of death and the number of individuals suffering from cancer is increasing continuously. To combat this serious disease search for new anti-cancer drugs has been one of the largest research areas worldwide. During last few years a number of publications appeared describing bioactive plant-derived compounds (Hamburger and Hostettman, 1991). These studies have yielded several highly effective plant



derived drugs for the treatment of various types of cancer. In many cases, the actual compound isolated from the plant may not serve as a drug, but may lead to the development of novel therapeutic agents. With the development of new technologies, some of the agents which failed earlier in clinical studies are now stimulating renewed interest. Hence plants, especially those possessing ethno-medicinal reputation in the treatment of cancer appear to be a potential source of new anti-cancer agents.

The approach in the present study is to focus on the selected plants on the basis of their use against cancer in folk medicine particularly in Nigeria. The plant extracts were scientifically evaluated for their reputed activity, and two most potent plants were subjected to bioactivity directed isolation. The objective was to obtain potential active compounds or lead molecules.

Nationwide data for cancer patients in Nigeria is not accessible; however, the data from the Nigerian Cancer Registry indicate that in general, cancer has been on the rise (Curado et al 2009). Among males, lung cancer is the most frequently recorded malignancy, followed by cancer of the oral cavity and larynx. In females, breast cancer appears to be the common cancer site, followed by cancers of the oral cavity and ovaries. In spite, of a large number of medicines currently in use, scientists are continuously exploring for most promising curative agents with minimum toxicity and other undesirable side effects.

Based on ethnomedicinal applications in treating tumour related ailments, four medicinal plants (*Euphorbia graminea*, *Securinega virosa*, *Cnidioscolus aconitifolia* and *Conyza sumatrensis*) were selected from a pool of plants reputed traditionally for anticancer activity. The plants were selected based on the preliminary screening using the tadpole mortality assay for cytotoxicity and guinea corn radicle assay for antiproliferation respectively. However, two of these extracts (*Euphorbia graminea* and *Cnidioscolus aconitifolius*) were chosen for further purification process based on the activity they exhibited.

The anti-cancer activity was performed using sulforhodamine-B assay on human breast cancer (MCF-7) and human large cell lung cancer (NCI-H460) cell lines in the presence of various concentrations of plant extracts, fractions and isolated compounds. The crude methanol extracts of these plants were partitioned into hexane, dichloromethane and aqueous fractions and the active fractions fractionated up to the VLC level (Vacuum Liquid Chromatography) in our laboratory in Nigeria. On resuming work at the Atsu Osei Centre for Cancer and Biomedical Research, the extracts and their respective organic solvent fractions were tested for anticancer activities against human cancer cell-lines (MCF-7 and NCI-H460) and NIH-3T3 normal cell line. While the crude extracts were tested at 1-250 µg/mL the respective fractions were tested at 1-100 µg/mL. Base on the result obtained, the biologically active fractions were further fractionated on chromatographic columns on silica gel using appropriate solvent systems (gradient hexane: ethyl acetate system).

Results

Fractionation of the methanol extracts produced an enhanced activity over the crude. The isolated compounds coded as EGC (13,15 19), S1, S2, C219 and C110 were tested at 1-100 µM and were analyzed by state-of-the-art-equipment like nuclear magnetic resonance (NMR), infrared spectroscopy (IR) and mass spectroscopy (MS) to determine their chemical structure and the activities of these isolated compounds were compared with existing anticancer standard drug available at the center.

Conclusion

The overall results justify the ethnomedicinal uses of the plants in treating tumour related ailments in Nigeria.



Emmanuel Ikpefan
Spring 2015 Travel Grantee
Department of Pharmacognosy &
Traditional Medicine
Faculty of Pharmacy
Delta State University
ikpefanemmanuel@delsu.edu.ng

Introgression of Quantitative Trait Loci into Sorghum Varieties Adapted in Nigeria through Marker Assisted Backcrossing @ ICRISAT

Gloria Afolayan

Abstract

Sorghum is cultivated in the drier areas of Africa, Asia, the Americas and Australia; where development challenges are the greatest and market failure is most acute, and few if any of these are more urgent than the 'Sahel' region of Africa. Globally, it is the fifth most important cereal crop in area, and is the dietary staple of more than 500 million people in more than 30 countries. Nigeria is the largest producer of sorghum in Africa with an increase in production from 7.7 million metric tons (MT) in the year 2000 to 9.1 million MT that was recorded in the year 2007.

Among the biotic stresses affecting sorghum production, *Striga hermonthica* is the most damaging obligate parasite, and is an important bottleneck to yield increases by small-holder farmers. Integrated *Striga* management packages have been designed, but these will continue to require new cultural and chemical treatments, resistant varieties, and an integrated approach to manage both *Striga* and soil fertility. Application and utilization of advance techniques in genomics and molecular breeding appropriately can further enhance the efficiency of integrated *striga* management practices, and thus crop productivity.

In the course of this training at ICRISAT, BC1F1 lines having the *Striga* resistant QTLs were identified and will be used in the generation of advanced lines with the *Striga* resistant traits.

The objective of this laboratory work was to identify and confirm *Striga* resistant QTLs in BC1F1 generations obtained from a cross between N13 which is a *striga* resistant line using the polymorphic SSR markers

Methodology

Genomic DNA was extracted from BC1F1 plants using the CTAB protocol and the samples were shipped to ICRISAT, India for genotyping. The sent samples were screened for quality at ICRISAT, CEG laboratory on 1% agarose gel.

Twenty six SSR markers for N13 QTLs and 4 SSR markers for SRN39 were used in the polymerase chain reaction process however, only those which reveals polymorphism between the donor parents (N13, SRN39) and the recurrent parents were used in selecting carrier progenies.

Results

A successful foreground selection was carried out on the first backcross generation (BC1F1). From the analysis, about 9 BC1F1 progenies were found to be having one to two QTLs introgressed from the N13 *Striga* resistant lines. There is a single recessive locus that influences the low germination

stimulant production in SRN39 *Striga* resistant line. The presence of this recessive locus was confirmed in 6 BC1F1 introgressed lines using SSR markers in this region.

Using the marker assisted backcrossing foreground selection method, we were able to introgress genomic regions from the popular *Striga* resistant donor parent N13 into the genetic backgrounds of elite farmers' varieties SAMSORG39 and DANYANA and also from the low germination stimulant producing parent SRN39 into farmers' variety SAMSORG14 at the first backcross generation. Marker

assisted selection has the possibility of tremendously reducing the time needed for selecting desirable genotypes possessing traits of interest.

Outlook

The selected lines, will be advanced to the next backcross generations to enable the fixation of the donor parents (N13 and SRN39) genomic regions of interest and also the recovery of the recurrent parents (SAMSORG39, DANYANA and SAMSORG14) genetic background.

Acknowledgements

I would like to appreciate the support given to me by the West African Research Center (WARC) in the provision of the West African Research Association (WARA) travel grant. This grant made it possible for me to purchase an economy flight ticket which enabled my traveling to ICRISAT, India between February and April, 2016, to partake in this laboratory training in the pursuit of my PhD degree.

Gloria Afolayan
Spring 2015 Travel Grantee
West African Center for Crop Improvement (WACCI)
University of Ghana
&
National Center for Genetic Resources and Biotechnology (NACGRAB)
Ibadan, Nigeria
ogo246@yahoo.com



Ms. Afolayan at ICRISAT collecting leaf samples for DNA extraction

Archaeological investigations of the relationship between the Sahara and the Middle Senegal valley during West Africa's Late Prehistory: promising data from Walaldé (Senegal)

Alioune Deme

In 2014, I returned to the Middle Senegal valley to gather more data at Walaldé thanks to the Saharan Crossroads Fellowship awarded by the West African Research Association and the American Institute for Maghreb Studies. Data we gathered during our doctoral field research pushed back the earliest known date of occupation in the MSV by at least 600 years at the site of Walaldé where there were two occupation phases: Phase I (800–550 cal BCE), and Phase II (550–200 cal BCE). However, more data were needed to better understand the first millennium BC occupation of the Middle Senegal Valley.

This is why one main objective of our project was to collect more data (metallurgy, small finds, and subsistence economy) to better assess the relationship between the Middle Senegal Valley and the Sahara during the last millennium BC. We planned to open one 2x2 unit. However, being going to the field, a lot of students shown interest in joining us. This is why we decided to open a larger unit: 3x3m. This allowed us to spend more time in the field and to gather more data.

In terms of excavation method, we did controlled stratigraphic excavations through the technique of excavation primarily by naturally occurring archaeological strata. By using the excavation by natural strata strategy, we were able to recognize one level (among others) and remove it entirely before moving to another one. This technique is very efficient in a floodplain environment, where tell sites such as Walaldé tend to build up stratum upon stratum in a highly complex fashion. The methodology is predicated upon a systematic recording of excavated data on one of the three different field forms: the LRF form, the Feature form and the 14C form.

The LRF (Level Record Form) was used to record information such as site name, unit number, date, associated 14C and feature numbers, the number of the flotation samples collected, level number, as well as soil texture and color. It was used to record all observations related to the nature of the deposits and how those deposits are associated. The soil texture was determined using the Ahn test whereas the soil color was recorded by use of the Munsell Soil Color Chart.

The Feature form was used to collect all information related to a feature. A feature is defined as a structure with a multitude of associated elements that cannot be removed without that original association being destroyed. At Walaldé, features are mostly composed of inhumations and associated residues of presumed funerary activities. The feature form contains the following information: the site name, the unit number, the date, the level or levels associated with the feature, the depth of the feature, its position relative to the east and north unit

walls, the nature of the feature (e.g., habitation, burials), 14C sample number associated with the feature and sources of disturbance or intrusions. Also, since a photo of the feature is always taken, we will record on the feature form the exposure number of the picture taken. Each Feature form was accompanied by a scale drawing of the feature.

The 14C form was used to record information related to the collection of radiocarbon samples. It contains information such as the site name, the unit number, the LRF, the level and the feature associated with the 14C sample collected, the depth of the 14C sample, its position relative to the north and east unit walls, a description of the context, the degree of confidence in the sample, and any source of intrusions.

Data gathered confirmed the first millennium BC occupation of the site.

Moreover, data helped us understand

the inhumation and the funerary practices at Walaldé. The ceramic confirmed also contact with the Sahara. However, we did not have enough funding to open a unit with the furnace zone. This would have helped better understand the origin and evolution of metallurgy at Walaldé.

Data collected during this research were used in a conference paper -Pêche et interactions entre la Moyenne Vallée du fleuve Sénégal et le littoral atlantique sénégal-mauritanien durant le dernier millénaire BC. The paper was presented at the Oceanides Conference on L'influence de la mer sur l'histoire : Antiquité et Moyen Age in Paris on December 11-12 2014. My paper was chosen to be part of the book that will be edited by Michel Balard & Philip de Souza at the edition Picard. The expected publication date 2016.

Also, the data collected and the excavation were included in a documentary film titled: *Le premier occupant du Film: Hamady Walaldé*. That documentary film was very successful. It was shown in several internet sites (including the WARA website. Thanks WARA!) and was viewed by more than 300,000 people in one week.

WARA's help is a good example of the importance and power of this association. It is a good networking and promotion tool. At the same time, it helps African scholars who, because of their lack of means of research and fieldwork opportunity, cannot fully participate to the global debates.

Alioune Dème, Ph.D.
2014 Saharan Crossroads Fellow
Enseignant/Chercheur
Chef du Laboratoire d'Archéologie
Département d'Histoire, FLSH
Université Cheikh Anta Diop
alioune.deme@ucad.edu.sn



La notion du temps et les procédés de sa mesure au Maroc d'après les cadrans solaire

Fathi Jarray

Rapport de mission de recherche: Maroc (Août-Septembre 2014)

Cette recherche s'inscrit dans un cadre plus large à propos de la gnomonique et des cadrans solaires dans tout le monde musulman.

Au cours de cette mission, j'ai pu visiter des monuments dotés des cadrans solaires dans les principales villes marocaines (Rabat, Salé, Marrakech, Fès, Meknès, Chefchaouen, Tanger, Tétouan) et certains musées archéologiques, et j'ai pu réaliser des recherches bibliographiques dans certaines institutions universitaires y compris La Bibliothèque nationale de Rabat, Faculté des Lettres et des Sciences humaines de Rabat, Musée archéologique de Rabat, Musée des arts et des traditions populaires de Fès, Musée des Arts islamiques de Tétouan, Musée de la Qasaba de Chefchaouen, Musée privé «Dâr Bel-Ghâzi».

Les travaux d'exploration ont concerné huit villes

historiques alors que le lot des cadrans solaires collecté a été recueilli dans 23 lieux. Cette collection est composée de 32 cadrans solaires soit in situ, soit conservés ou exposés dans des dépôts et des musées archéologiques. Chaque cadran a été doté d'une fiche signalétique contenant toutes les données relatives à son emplacement, à son historique, à son assemblage en courbes et tracés et à son inscription commémorative.

La ville de Fès

- Mosquée al-Qarawiyyîn
- Mosquée al-R'sîf,
- Mosquée al-Andalus,
- Mosquée al-Hamrâ,
- Mosquée Mawlây 'Abdellah.

La ville de Meknès

- Mausolée de Sîdî Ismâ'îl al-'Alawî,
- La Grande mosquée de Meknès.

La région de Rabat-Salé

- Conseil des droits de l'homme, l'ancien tribunal de première instance

- La Grande mosquée de Salé,
- Musée archéologique de Rabat,

La ville de Marrakech

- Mosquée Ben Youssef,
- Mausolée de Sîdî Bel-'Abbâs,
- Mosquée de Mawlây Yazîd à la Qasaba,
- Mosquée d'al-Mawâsîn,
- La Zâwiya d'al-Tijâniyya
- Hôtel des Andalous.

La ville de Tétouan

- La Grande mosquée
- Mosquée al-Umma,
- Musée des arts islamiques

La ville de Tanger

- La Grande mosquée.
- La ville de Chefchaouen
- La Grande mosquée

La ville de Casablanca

- Cadran solaire de la place de Mohamed V
- Cadran français de Casablanca

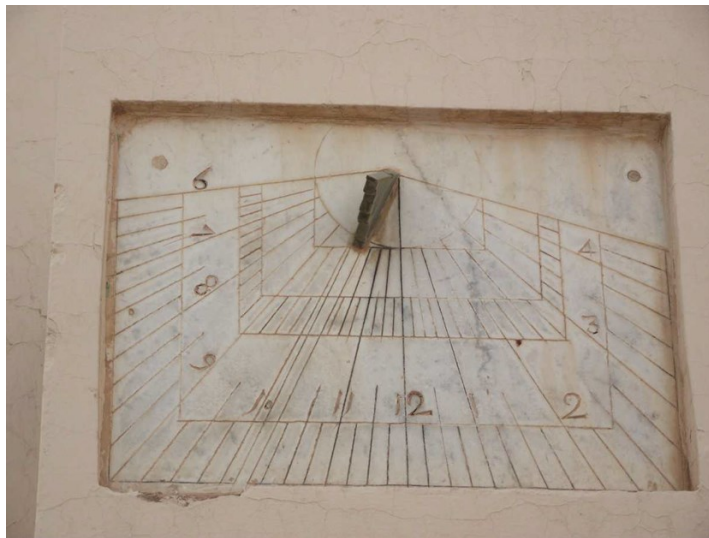
Comme il a été annoncé dans le projet de recherche présenté dans le dossier de candidature, cette collection d'instruments de mesure du temps fera l'objet d'une étude sur la notion du temps et les

procédés de sa mesure au Maroc et permettra l'établissement des comparaisons avec les cadrans du reste du monde musulman et surtout ceux de Tunisie.

Outre les travaux de prospection effectués dans les grandes villes historiques du Maroc, d'autres tâches furent réalisées et surtout le dépouillement du fond de la Bibliothèque nationale de Rabat et la consultation de certains manuscrits en gnomonique et en astronomie et d'autres ouvrages en histoire des sciences en général.

Quant aux rencontres des collègues de différentes institutions universitaires et de recherche au Maroc, ils nous ont permis de faire des échanges des idées et de mettre en place des éventuels projets de coopération.

Après l'accomplissement du travail du terrain et la collection du matériel de gnomonique et pour mieux traiter la problématique annoncée, la méthode à suivre dans la recherche prévue va s'articuler autour de certains thèmes principaux :



Cadran solaire du mausolée BelAbbès à Marrakech

La présentation de tous les cadrans collectés (martialité, emplacement dans le monument, assemblage, inscription commémorative, datation)

L'étude des unités du temps employées sur ces instruments afin de comprendre l'évolution des procédés de sa mesure à travers l'histoire.

Essai de présenter une typologie chronologique des cadrans étudiés afin de comprendre l'évolution de ces instruments depuis l'époque médiévale et durant les deux époques moderne et contemporaine.

L'étude de l'histoire de la gnomonique marocaine à partir des apports des cadrans solaires et par le recours à d'autres



La tour des muwaqqitîn-s à Fès

sources tels les épîtres et les traités astronomiques. Une discussion autour de la notion du temps à la lumière des résultats obtenus.

Outre les cadrans solaires se rapportant d'une façon directe à notre sujet de recherche, d'autres pistes d'investigation étaient utiles à notre problématique :

L'enquête orale menée auprès des responsables des mosquées et de certains vieux nous a fourni plusieurs informations fiables sur l'emploi des cadrans solaires dans la détermination du temps et les procédés de sa mesure.

A Fès nous avons découvert un monument très important connu sous le nom de burdj (la tour) des muwaqqitîn-s. C'est-à-dire le lieu de la réunion des spécialistes dans la mesure du temps pour observer le mouvement de la lune et du soleil.

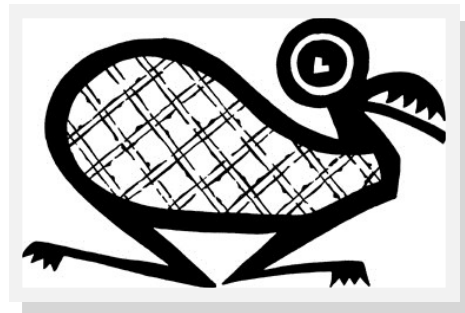
Plusieurs mosquées abritent encore une pièce qui s'appelle la chambre du muwaqqit c'est-à-dire le lieu où il exerce ses fonctions à l'aide de certains outils et documents.

NB : le Muwaqqit est le fonctionnaire chargé de la détermination des heures de la prière dans la mosquée.

Cette étude une fois achevée et publiée, sera d'une grande importance pour notre projet de recherche sur la mesure du temps dans tout le monde musulman depuis le Moyen-âge et durant les deux époques moderne et contemporaine. Elle aura le mérite également d'être la première à avoir collecté et documenté ce type de patrimoine délaissé malgré son importance historique et scientifique.



Fathi Jarray
Centre national de la
calligraphie
Tunis, Tunisie
fathijarray2003@yahoo.fr



Continued from page 44

Limitations of the Study

Detailed safety profile of the herbal formulation was not carried out.

Stability study of the herbal formulations during the period was not evaluated.

In vivo assay using mice model needed to verify this pro-drug claim

Ikem Chinedu Joseph

Spring 2016 WARC Travel Grantee

Department of Pharmaceutical Microbiology and Biotechnology

Faculty of Pharmaceutical Sciences

Nnamdi Azikiwe University, Nigeria

jaycjay2017@yahoo.com

WARA Officers and Board of Directors

Officers

President: Wendy Wilson-Fall, *Lafayette College*
Vice President: Ismail Rashid, *Vassar College*
Secretary: Abel Djassi Amado, *Simmons College*
Treasurer: Cynthia Becker, *Boston University*

Directors

Louise Badiane, *Bridgewater State University* (2018)
 Henry Drewal, *University of Wisconsin at Madison* (2019)
 Hilary Jones, *Florida International University* (2018)
 Mary Ellen Lane, *CAORC Executive Director, Emerita* (2017)
 Ismail Montana, *Northern Illinois University* (2018)
 Sylvia Macauley, *California State University, Northridge* (2019)
 Mbare Ngom, *Morgan State University* (2018)
 Pearl Robinson, *Tufts University* (2017)
 Nimi Wariboko, *Boston University* (2018)

Scott Youngstedt, Past President *Saginaw Valley State University* (ex-officio)
 Jennifer Yanco, Director, *West African Research Association* (ex-officio)
 Ousmane Sène, Director, *West African Research Center* (ex-officio)

Institutional Members of WARA

- The Africa Network
- American University
- Boston University
- Bridgewater State University
- College of Wooster
- Colorado College
- Columbia University
- Dakar Institute of African Studies
- Florida International University
- Garden City University College
- Georgia State University
- George Washington University
- Harvard University
- Hobart and William Smith Colleges
- Howard University
- Indiana University
- Iowa State University
- Kalamazoo College
- Kent State University
- Lafayette College
- Lesley University
- Michigan State University
- New Jersey City University
- Northern Illinois University
- Northwestern University Library
- Ohio State University
- Ohio University
- Rutgers University
- Saginaw Valley State University
- Santa Clara University
- Smithsonian Institution
- South Dakota State University
- Tufts University
- Union Theological Seminary
- University of California at Berkeley
- University of California at Los Angeles
- University of California at Riverside
- University of Chicago
- University of Cincinnati
- University of Florida
- University of Georgia
- University of Illinois at Urbana-Champaign
- University of Minnesota
- University of North Carolina at Chapel Hill
- University of Wisconsin-Madison
- Virginia State University
- Wells College
- Western Michigan University
- Willamette University
- Yale University

The West African Research Association is a member of the Council of American Overseas Research Centers (CAORC). WARA is the only Sub-Saharan African member of CAORC. More information on CAORC is available at: www.caorc.org.

West African Research Association
Boston University African Studies Center
232 Bay State Road, Room 408
Boston, MA 02215

