

## **IPM Innovation Lab**

Feed the Future Innovation Lab for Integrated Pest Management

### **Trip Report.**

**Project Name:**

Biocontrol of Parthenium – East Africa

**Travel Request Identifier:**

BCP-0003

**Fiscal Year:**

FY2016

**Submitted By:**

Wondi Mersie

**Status:**

Submitted

**Traveler(s):**

Name: Mersie, Wondi

Contact Number: 8045245631

Email: wmersie@vsu.edu

Institution: Virginia State University

Role: PI

**Countries Visited:**

Ethiopia

**Duration of Visit:**

10 Dec 2015 to 30 Dec 2015

**Purpose:**

To implement the parthenium project in East Africa

**Sites Visited:**

Ambo, Dire Dawa

**Comments:**

**Description:**

10 Dec 2015

Notes:

Country(s) Visited: Ethiopia Dates of Travel: December 10, 2015 to December 30, 2015 Travelers Names

and Affiliations: Wondi Mersie, Parthenium Project Director Purpose of Trip: To implement the Parthenium Project in Ethiopia Sites Visited: Addis Ababa, Ambo, Dire Dawa, Haramaya, Wollenchiti, Ethiopia Travel Day

12 Dec 2015

Notes:

Saturday December 12, 2015 Dr. Wondi Mersie met Mr. Million Abebe, VSU's Parthenium Project Coordinator in Ethiopia. The two discussed the current state of the project, current implementation issues and actions that need to be taken in the short and long term periods. Dr. Wondi Mersie, Mr. Million Abebe and Ms. Sintu Alemayehu travelled to Wollenchiti bioagent rearing site to inspect the status of the facility. The population of *Zygogramma* adult is low because of the onset of cooler weather. In the evening, Dr. Wondi Mersie went to the airport to receive Ms. Lorraine Strathie from South Africa and a Virginia Tech delegation that included Dr. Rangaswamy Muniappan, Ms. Mariam Rich and Ms. Zara Short.

13 Dec 2015

Notes:

Sunday December 13, 2015 Dr. Wondi Mersie, Ms. Lorraine Strathie, Ms. Sintu Alemayehu and Dr. Kassahun Zewdie travelled from Addis Ababa to Ambo to visit and work at the Ethiopian Institute of Agricultural Research's (EIAR) quarantine facility. They were joined by Mr. Alebel Eskazia and Mr. Yibeltal Tesfaye from Amhara Agricultural Research Institute (ARARI) as well as by Ms. Asmiret TekleMariam, Mr. Teshale Dabo, Mr. Tesfaye Haile, Mr. Shume Terfe, Mr. Takle Mituku, Mr. Teshome Mosisa and Mr. Wolde Semayat Bayissa from EIAR. Ms. Strathie and Ms. Alemayehu trained all the participants on the culturing of the new bioagent, *Smicronyx lutulentus* in the quarantine facility. Dr. Mersie delivered laboratory supplies he brought from U.S. to Ambo Research Center. Dr. Mersie also had a discussion on the progress of the Parthenium Project with the Center Director, Mr. Endale Haile.

14 Dec 2015

Notes:

Monday December 14 2015, Starting at 10:00 a.m. presentations were made to Workshop participants about IPM IL Projects and the Ambo Quarantine Facility. Dr. Muni provided an overview of the IPM IL followed by Dr. Mersie and Ms. Strathie who presented the establishment and development of the Ambo quarantine facility. The presentations lasted until 12:00 p.m. In the afternoon, Dr. Mersie went to town to purchase additional supplies for the Ambo quarantine facility.

15 Dec 2015

Notes:

Tuesday December 15, 2015 Dr. Mersie with the other workshop participants traveled from Addis Ababa to Bishofitu to visit a flower production in greenhouses. The flower production is managed by a firm named Maynieh. Maynieh staff explained pest control practices in the greenhouses and the operation of the farm in detail. Participants then traveled to the city of Adama and checked in at Kereyu Resort Hotel. In the afternoon, the participants traveled to Wollenchiti Bioagent Rearing site operated by the Parthenium Project. The participants were briefed on the operation of the facility by Mr. Million Abebe and Ms. Sintu Alemayehu.

11 Dec 2015

Notes:

Travel Day

16 Dec 2015

Notes:

Wednesday December 16, 2015 Dr. Wondi Mersie along with the other workshop participants traveled from Adama to the eastern city of Dire Dawa by road. The trip took about 10 hours with stops at small farms on the way. The participants checked into Samarat Hotel where the workshop was conducted.

17 Dec 2015

Notes:

Thursday December 17, 2015 The workshop started at 8:30 a.m. at Samara Hotel and was officially opened by Professor Chmeda Fininsa, President of Haramya University (HU). Mr. Dennis Treacy, member of Virginia Tech Board of Visitors, Dr. Yibakal Alemeyehu from HU, Dr. Muni and Dr. Brhane from Virginia Tech and Dr. Wondi from VSU also spoke at the opening session. There were twenty nine (29) workshop participants. Twenty four (24) were men and five (5) were women. The Thursday morning session included presentations on IPM IL, the Parthenium Project, gender and discussion on the distribution of parthenium in Israel. In the afternoon, presentations were made on distribution of parthenium in the Amhara Region of Ethiopia, Kenya, and Tanzania as well the current status of invasive weeds in eastern Africa. After break, presentations were made on the release and establishment of *Zygogramma* and *Listronotus* in South Africa and mass rearing of *Zygogramma* in Ethiopia.

18 Dec 2015

Notes:

Friday December 18, 2015 The Parthenium Workshop continued on Friday starting at 8:30 am. It began with a presentation on host-range evaluation of *Smicronyx lutulentus* under quarantine, scaling-up of *Zygogramma* and *Listronotus*, collecting baseline data before the release of bioagents and proper utilization of project funds and reporting. The presentations were followed by discussions on the role of women in parthenium management, assessing the impacts of bioagents, challenges of rearing and releasing bioagents in east Africa and outcomes of the project. The discussion ended at 11:00 a.m. and participants proceeded to prepare for a field trip to Haramaya University. In the afternoon, participants traveled to Haramaya University to see the newly established facility to rear *Zygogramma* and *Listronotus*. The facility that includes walk-in cages with benches was built with financial support from HU. Currently, the facility houses a small culture of *Zygogramma* and is ready to accept *Listronotus* adults for rearing. This facility is expected to supply *Zygogramma* and *Listronotus* for the eastern part of the Oromia Region.

19 Dec 2015

Notes:

Saturday December 19, 2015 Dr. Mersie returned from Dire Dawa to Addis Ababa by air.

20 Dec 2015

Notes:

Sunday December 20, 2015 Dr. Wondi Mersie, Ms. Lorraine Strathie, Ms. Sintu Alemayehu and Dr. Kassahun Zewdie travelled from Addis Ababa to Ambo to work at EIAR's quarantine facility. They were joined by Ms. Asmiret Tekle Mariam, Mr. Teshale Dabo, Mr. Tesfaye Haile, Ms. Shume Terfe, Mr. Takle Mtuku and Mr. Wolde Semayat Bayissa from Ambo Research Center. Ms. Strathie and Ms. Alemayehu gave extensive training on the care and maintenance of Smicronyx under quarantine condition. They demonstrated to staff how to identify the different life cycle stages of the bioagent and how to transfer cultures from one cage to another. Ms. Strathie also gave training on the general management of the quarantine facility. The team returned from Ambo to Addis Ababa at 6:30 p.m.

21 Dec 2015

Notes:

Monday December 21, 2015 Dr. Wondi Mersie visited several stores looking for lab supplies needed for the Ambo quarantine facility. He also worked on his trip report.

22 Dec 2015

Notes:

Tuesday December 22, 2015 In the morning, Dr. Wondi Mersie and Mr. Million Abebe went to the Ethiopian Ministry of Agriculture to meet with Mr. Fikre Markos advisor to the State Minister. They discussed the role of the Ministry in the scaling-up of Zygothrips and Lissonota rearing as well as release in the different regions of Ethiopia. Mr. Fikre promised to take-up the matter with officials in the Ministry and solicit help in securing protected rearing sites. In the afternoon, Dr. Wondi Mersie and Dr. Kassahun Zewdie went to the Head Quarters of EIAR to meet with Dr. Fentahun Mengistu, Director General of EIAR and Dr. Mekonen Director of Planning at EIAR. An extensive discussion was held on the progress of the Parthenium Project, Ambo quarantine facility and project budget. Dr. Wondi Mersie answered all questions related to the implementation of the project. The Director General at the end instructed Dr. Mekonen to sign the pending MOU between EIAR and IPM IL and he did.

23 Dec 2015

Notes:

Wednesday December 23, 2015 Wednesday was a holiday in Ethiopia and all offices were closed in Addis Ababa.

24 Dec 2015

Notes:

Thursday December 24, 2015 Dr. Wondi Mersie, Mr. Million Abebe and Dr. Kassahun Zewdie travelled to Ambo Research Center to meet with the Director, Mr. Endale Hailu and visit Ambo University. The meeting with Mr. Endale lasted over an hour and covered topics on personnel working at the quarantine facility, acquisition of supplies, maintenance of the facility, collaboration with Ambo University in training graduate students as well as budget. In the afternoon, Dr. Wondi Mersie visited the Guder campus of Ambo University. Two structures for bioagent rearing cages were erected at Guder with the help of the Parthenium Project. The purpose is three-fold; serve as source of parthenium stock for the

nearby quarantine facility, receive excess bioagents from Ambo Research Center and serve as a training place for AU graduate and undergraduate students on biological control of invasive plants. Dr. Mulugetta Negari (Dean of the College of Agriculture at AU) indicated that staff will soon start planting parthenium seeds to produce seedlings for transplanting. The plan is to receive Zygotogramma once the site has adequate supply of parthenium plants.

25 Dec 2015

Notes:

Friday December 25, 2015 Dr. Wondi Mersie, Mr. Million Abebe and Ms. Sintu Alemayehu traveled from Addis Ababa to Wollenchiti to check the status of the Zygotogramma and Listrionotus cultures. The newly introduced Listrionotus adults have started to lay eggs and some have begun to change to larvae. Discussion was held with staff on the up-keep of the facility and the planned activities. It was decided to install wooden benches in three of the cages. This arrangement will allow to place small cages for intensive rearing. It was also agreed that two additional staff will be hired to assist in the production of parthenium stock plants for the bioagents. Dr. Wondi Mersie returned to Addis Ababa at 6:00 pm.

28 Dec 2015

Notes:

Monday December 28, 2015 Dr. Wondi Mersie met Mr. Wondirad Mandefro, State Minister at the Ministry of Agriculture (MA) in his office. Mr. Wondirad Mandefro was the Ambo Plant Protection Center Director in 2005 when the Parthenium Project was launched. He was instrumental in the establishment of the quarantine facility. Dr. Wondi Mersie briefed the State Minister on the progress of the Parthenium Project in the last ten years. Dr. Wondi Mersie asked him to support the scaling-up of the rearing and the release of the Zygotogramma and Listrionotus in parthenium infested areas of Ethiopia. The State Minister was asked to write a letter to all stakeholders including regional agricultural bureaus directing them to support the Parthenium Project by providing resources to rear and release the two bioagents. He agreed in principle to issue the directive and requested such letter be sent to him through MA's Plant Protection Directorate (PPD). He also asked Dr. Wondi Mersie to confer with officials of PPD and propose course of action to institutionalize the project.

29 Dec 2015

Notes:

Tuesday December 29, 2015 Dr. Wondi Mersie went to MOD to meet officials at PPD and discuss the directives of Mr. Wondirad Mandefro regarding the management of parthenium in Ethiopia. Dr. Wondi Mersie met with Mr. Fikre Markos advisor to the State Minister and Dr. Hiwot Lemma, Director of MOD's Plant Protection Division to develop recommendations that will be submitted to the State Minister. They agreed to develop broad action items on how the regional bureaus will collaborate and carry out an integrated action against parthenium. They further agreed to ask the State Minister to provide resources to implement his directives.

26 Dec 2015

Notes:

Weekend Day

27 Dec 2015

Notes:

Weekend Day

30 Dec 2015

Notes:

Wednesday December 30, 2015 Dr. Wondi Mersie returned to U.S.A. in the evening.

### Training Activities Conducted:

Program type (workshop, seminar, field day, short course, etc.)	Date	Audience	Number of Participants		Training Provider (US university, host country institution, etc.)	Training Objective
			Men	Women		
Training	12/13/15	EIAR and ARARI Staff	6	2	Ms. Lorriane Starthie (ARC – South Africa); Ms. Sintu Alemayehu (EIAR – Ethiopia)	Familiarize EIAR staff who work at the quarantine facility on the rearing of the bioagent Smicronyx
Training	12/20/15	EIAR Staff	4	2	Ms. Lorriane Starthie (ARC – South Africa); Ms. Sintu Alemayehu (EIAR – Ethiopia)	Familiarize EIAR staff who work at the quarantine facility on the rearing of the bioagent Smicronyx
Training	12/17/15	Various presenters	23	5	Scientists from Ethiopia, Israel, Kenya, South Africa, Tanzania	Develop a biological control program to manage parthenium in east Africa

### Suggestion/Recommendations:

Travel back to Ethiopia at least twice in 2016 to follow-up on the implementation of project objective.

**List of Contacts made:**

<b>Name</b>	<b>Organization/Title</b>	<b>Contact Info (address, phone, email)</b>
Million Abebe	Parthenium Project Coordinator/VSU Ethiopia	0931526883 mabebej@yahoo.com
Maria Elisa Christie	Virginia Tech/Director of Women and Gender	5402314297 mechristie@vt.edu
Van Crowder	Virginia Tech/Director Oired	5403500136 vcrowder@vt.edu
Muo Kasina	KALRO/Entomologist	2547381993 Muo.Kasina@kalro.org
Samora Macrice	Sokoine University/Ecologist	0025568636 smacrice@yahoo.com
Miriam Rich	Virginia Tech/Communications Director	mrich@vt.edu
Baruch Rubin	Hebrew University of Jerusalem (HUJI)/Professor	9725488200
Zara Shortt	Virginia Tech/Financial Coordinator	2055324184 shorttz@vt.edu
Lorraine Strathie	ARC-PPRC/Researcher	2783339870 strathiel@arc.agric.za
Dennis Treacy	Smithfield Foods/BOV Virginia Tech	7575354485 dtreacy@smithfield.co m
Arne Witt	CABI Africa	25420227 a.witt@cabi.org
Birru Yitaferu	ARARI/Director General	0912027600 birru_Yitaferu2002@ya hoo.com
Kassahun Zewdie	EIAR/Parthenium Weed Management Coordinator	0911186486 kasshunzewdie@yahoo .com
Muni Muniappan	Virginia Tech/Director IPM Innovation Lab	5402313516 rmuni@vt.edu
Brhane Gebrekidan	IPM Innovation Lab/Africa Program Manager	7039692328 bgebrekidan@gmail.co m
Samuel Assefa	GTZ	0911471538

Toby Yaacoby	HUJI/Weed Science	9725062417 tuviaaacoby@mail.huji.ac.il
Keith Pierce	Virginia Tech/Video	
Emembe Belete	Haraymaya University (HU)/Director Gender, HIV/AIDS Specialist	0911961099 enegatu2010@gmail.com
Yebekal Alemayehu	HU/AAVP Delegates	0912065357 Yikebal_2007@yahoo.com
Bobi Bedadi	HU/Dean of Agricultural and Environmental Sciences	0913908396 bobedadi2009@gmail.com
Ayele Akuma	HU/School Head NRMES	0913581333 ayelea@gmail.com
Bulti Tesso	HU/School Head Plant Sciences	096834731 Obsa_builti@yahoo.com
Tamada Tana	HU/School of Plant Sciences	0910105100 Tamado63@yahoo.com
Lisanework Negatu	HU/Lecturer	lisanework@yahoo.com
Fikre Markos	Ethiopia Ministry of Agriculture	0913544633