Launching the Global Locust Initiative (GLI) at Arizona State University

Identifying the Institutional Framework and Opportunities to Influence Policy Change in Locust Research and Management *April 12-14, 2018*

Program Guide and Schedule









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Contacts and more information

Global Locust Initiative website: locust.asu.edu

Dr. Arianne Cease GLI Founding Director Assistant Professor, School of Sustainability PO Box 875502, Tempe, AZ 85287-5502 480-965-7145 acease@asu.edu Dr. Ariel Rivers GLI Program Manager PO Box 875502, Tempe, AZ 85287-5502

480-965-2549 ariel.rivers@asu.edu

Point-of-Contact During Event

During the event, if you have any immediate needs or questions, please email locust.asu@gmail.com

The Event

Participants will have the opportunity to meet and network with a diverse set of global stakeholders, share their research through talks and posters, engage early with an up and coming initiative, and help shape the future direction of this new initiative through workshop and synthesis discussions.

Attending Remotely

Participants may attend the presentations and the synthesis discussions virtually through Vidyo. Recordings of the presentations and the synthesis discussions will also be available after the event

To connect online, use any of the following options:

- If you are an ASU Vidyo user, find "Global Locust Initiative" in the Vidyo Directory, and Connect to the Room.
- If you are a guest, we recommend downloading and installing the VidyoDesktop application from https://asu.idsflame.com/download.html. Run that application and leave it at the login screen with all fields blank.
- To join from your desktop or mobile device: Click http://asu.idsflame.com/flex.html?roomdirect.html&key=NBaVZoMXml
- If you do not have the VidyoDesktop application running, the link will prompt you to install the VidyoWeb Browser Plug-in. Once installed, please return to this email, and click on the link above again to join the meeting.

To join from your phone:

 Dial 480-884-1557, listen for the prompt, PRESS 1 TO JOIN A CONFERENCE, then enter 10557145 and #.

NOTE: If joining from the phone and watching on your computer, please be sure your computer speakers and microphone are muted!

To join from a non-Vidyo conferencing endpoint:

• Connect to 149.169.149.135, use H.323 or SIP, and enter meeting ID 10557145

Participants

Attendees will include individuals with expertise or interest in grasshoppers and locusts, transboundary pest issues, integrated pest management (IPM), landscape-level processes, working at the community level, food security, sustainable food systems, and/or cross-sectoral initiatives.

Outcomes

Participants of the event will have the opportunity to engage early with the GLI and help shape the future direction of this new initiative through break-out and synthesis discussions. These discussions will also contribute to two products, and everyone is welcome to help finalize and serve as a co-author as time and interest allows after the event. See "Break-Out Discussions" for more details.

- A draft of a scholarly review comparing the structure and function of organizations and institutions working in the locust/grasshopper space, highlighting potential opportunities for the GLI to be complementary to existing organizations
- A draft a policy brief directed towards influencers in the U.S.-based policy realm

Registration

The event is free to attend for all interested parties. We will accept donations to offset travel costs for stakeholders traveling from the global south and for students. Please contact us for more information.

Please see the schedule for locations and times of onsite registration; you must register at one of the allotted times to receive your registration materials and discussion assignments.

Navigating ASU's Campus

Most activities will take place in Wrigley Hall on the ASU campus. Please see the official schedule for all activity locations and ask the GLI Volunteers if you have any questions. ASU also has an interactive virtual map that is user friendly on any mobile device: https://www.asu.edu/map/interactive/

Presentation Guide

Oral Presentations

All oral presentations will be 15 minutes, inclusive of time for questions. Please plan accordingly, as speakers are asked not to go over time. Screens may accommodate standard size or widescreen PowerPoint presentations (or other slide presentation software).

Please submit your presentations to Dr. Ariel Rivers via <u>WeTransfer</u> (free file transfer service) by **12:00 PM**, **Wednesday**, **April 11**, **2018**.

Poster Presentations

Please format your posters as 48 inches (122 cm) by 36 inches (92 cm). We will use magnets to display them on the room wall. Presenters may choose the content and structure of their posters as appropriate for their presentation. Posters will be displayed all day, with a focused networking session on Friday afternoon, 4:00-5:00 PM, for which we ask presenters to stand by their posters for any questions.

Local Information

Weather

It will be warm in Tempe in April. Please check <u>AccuWeather.com</u> or a similar site, and note that temperatures are expected above 90°F (>30°C) during the week of the event.

Transportation

Most Tempe hotels are approximately 15-20 minutes by car from the airport. Uber, lyft, and taxis are available at the airport. The Valley Metro Light Rail also operates between the airport and downtown Tempe.

Free Orbit bus system - Operates within Tempe

The Valley Metro Light Rail

From the airport:

Take the FREE PHX Sky Train® from Terminal 3 or 4 to the 44th Street PHX Sky Train® Station. From there, follow the walkway with moving sidewalks on level 2 to the elevator and escalator down to the Valley Metro Rail platform at 44th Street and Washington. If you are traveling from Terminal 2, take the walkway between Terminals 2 and 3 to the Terminal 3 PHX Sky Train® station.

From the platform at 44th Street and Washington take the East bound train into Tempe. The closest stop to Wrigley Hall is Veterans Way & College Ave. Walk straight down College Avenue and Wrigley Hall will be the first building on your right just South of University Dr.

Valley Metro Rail operates from early morning to late at night:

- Monday Thursday: 4 a.m. midnight
- Friday: 4 a.m. 2 a.m.
- Saturday: 5 a.m. 2 a.m.
- Sunday: 5 a.m. 11 p.m.

Trains arrive every 12-20 minutes depending on day and time.

Favorite Eats

There are many great restaurants within walking distance from ASU campus between Mill Avenue and Collage Avenue. Here are some recommendations and a full list of options here: https://www.tempetourism.com/food-and-drinks

Original ChopShop

New American Restaurant

Cafe with outdoor seating, serving health-conscious juices, salads & sandwiches, plus beer & wine; 2 min walk from Wrigley Hall · 222 E University Dr

Postino

Italian · Happy hour food; 5 min walk from Wrigley Hall · 615 S College Ave

Phoenicia Cafe

Mediterranean; 4 min walk from Wrigley Hall · 616 S Forest Ave

House of Tricks

1920s bungalow & New American fare · Happy hour food · Outdoor seating; 5 min walk from Wrigley Hall · 114 E 7th St

Pitchforks & Corks

Sandwiches/Salads \cdot Small plates \cdot Quick bite \cdot Drinks; 3 min walk from Wrigley Hall \cdot 660 S College Ave

Staying the whole weekend?

Desert Botanical Garden

1201 N Galvin Pkwy, Phoenix, AZ 85008 8am-8pm

Camelback Mountain Hike

6131 E Cholla Ln, Paradise Valley, AZ 85253 6:30am-6:30pm

South Mountain Preserve

Main Entrance 10211 S. Central Ave 5am-7pm

Quartz Ridge Trail #8A

Lincoln Drive to 32nd St. Turn left (North) on 32nd Street and immediately turn right into the Trailhead parking lot.
Sunrise to Sunset

Abstracts

A complete list of abstracts will be available after the event.

Schedule

The schedule is tentative and may be subject to change.

Optional Activities on Wednesday, April 11, 2018

Location	Time	Activity	
Meet in	9:00 AM-	Optional tour of local United States Department of Agriculture, Animal Plant	
Wrigley Hall	11:00 AM	Health and Inspection Service, Center for Plant Health and Science and	
Breezeway		<u>Technology Laboratory</u> .	
		Please sign-up here: Sign-Up for Tour of CPHST Phoenix Lab	
Wrigley Hall	11:00 AM-	Event registration	
Breezeway	3:00 PM		
Wrigley Hall	12:00-	Sustainability Series Presentation by Dr. Cathy Waters, Climate Research	
481	1:15 PM	Leader, New South Wales Department of Primary Industries, Australia	
		Lunch will be provided, but you must RSVP on the event page, here:	
		Livestock: A Cause of or Cure for Land Degradation?	
Postino	At will	Suggested restaurant for no host dinner. Postino is close to campus, with	
		Italian food and happy hour specials	
		Located at: 615 S. College Ave., Tempe, AZ	

Thursday, April 12, 2018

Location	Time	Activity	
Wrigley Hall Patio	10:00 AM- 12:30 PM	Public outreach event, to include live grasshoppers, opportunities to engage with scientists, locust displays and more. All attendees are	
		welcome to attend.	
Wrigley Hall 481	12:30- 2:30 PM	Registration, and meeting location for locust facility tours	
College Commons	3:00- 4:00 PM	Panel Q&A: Impact of Locusts - Global to Local Speakers from six regions, plus the United Nations, will give an overview of the Acridid challenge in specific regions, then discuss ways forward and the potential roles for GLI. Panel Speakers: Arianne Cease (Moderator), Founding Director, Global Locust Initiative Aliou Diongue, World Food Programme, Cameroon, Africa Chris Adriaansen, Australian Plague Locust Commission, Australia	
		Chris Adriaansen, Australian Plague Locust Commission, Australia Long Zhang, Chinese Agricultural University, China Cecilia Catenaccio, Argentine National Service of Agri-Food Health and Quality (SENASA), Latin America Derek Woller, USDA, Animal & Plant Health Inspection Service (APHIS), North America	
		Alex Latchininsky, University of Wyoming, Russia, Central Asia & Caucasus Annie Monard, Food and Agriculture Organization (FAO) of the United Nations	
College Commons	4:00- 5:00 PM	Official Welcome Ceremony	
Rúla Búla	At Will	Suggested restaurant for no host dinner (Irish food). Located at (15-minute walk from campus): 401 S. Mill Ave., Tempe, AZ	

Friday, April 13, 2018

Location	Time	Activity		
		Only presenting authors are indicated in bold. See list of abstracts for		
		complete author list (published after the conference).		
Wrigley Hall	7:30 AM	Networking coffee and registration – <i>light snacks provided by GLI</i>		
L1-04	8:00 AM	Introduction to Global Locust Initiative and the event		
		Arianne Cease; Ariel Rivers		
	8:30 AM	Global Locust Initiative (GLI), USA What can history contribute to the GLI?		
	0.30 AIVI	Ted Deveson		
		Australia Plague Locust Commission, Australian National University		
	8:45 AM	Linking locust activity to land degradation in the Australian rangelands		
		Cathy Waters		
		New South Wales Department of Primary Industries, Australia		
	9:00 AM	A coupled natural human systems approach to addressing locust plagues		
		Arianne Cease		
		Global Locust Initiative, USA		
	9:15 AM	Locust control in Central Asia - an overview		
		Alex Latchininsky University of Wyoming, USA		
	9:30 AM	Locusts and grasshopper management in China		
	9.30 AW	Long Zhang		
		China Agricultural University, China		
	9:45 AM	South American locusts: a crisis that creates opportunities		
		Cecilia Catenaccio		
		National Service of Agri-Food Health and Quality (SENASA), Argentina		
	10:00 AM	Current situation, perspectives and challenges of <i>Schistocerca piceifrons</i>		
		piceifrons in Central America		
		Mario Poot Pech		
	10:15 AM	Yucatán State Plant Protection Committee, Mexico BREAK		
	10:30 AM	Locust research for preventive management: CIRAD's perspective		
	10.30 AW	Cyril Piou		
		CIRAD, Centre for Biology and Management of Populations, France		
	10:45 AM			
		Annie Monard		
		UN Food and Agriculture Organization, Italy		
	11:00 PM	WFP-Comprehensive Food Security and Vulnerability Analysis (CFSVA):		
		a useful tool to identify and confirm food insecurity issues including post-		
		harvest losses due to agricultural pests in the Far North region of		
		Cameroun		
		Aliou Diongue World Food Program, Cameroon		
	11:15 AM	Rangeland grasshopper management in the U.S.A.: past, present, and		
	111107111	future		
		Derek Woller		
		USDA, Animal and Plant Health Inspection Service (APHIS), USA		
	11:30 AM	Unmanned aircraft systems in agriculture: applications and limitations in		
		area-wide integrated pest management		
		Nathan Moses-Gonzales		
	44.45.45	M3 Consulting, Phoenix, AZ, USA		
	11:45 AM	Trends in a new site-based grasshopper survey database in Alberta,		
		Canada 1070 to 2016		
		Canada, 1970 to 2016		
		Canada, 1970 to 2016 Dan Johnson Lethbridge University, Canada		

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Friday, April 13, 2018 - Continued

Location	Time	Activity	
Wrigley Hall	1:00 PM	Break-out Sessions: Regional Discussions	
Wrigley Hall481	3:00 PM	Whole Group Discussion: Synthesis	
Wrigley Hall 481	4:00 PM-	Poster Session	
	5:00 PM	Only presenting authors are indicated in bold. See list of abstracts for	
		complete author list (published after the conference).	
		Field tests of a microbial control agent based on locally isolated	
		Metarhizium, for protection of airports and crops	
		Dan Johnson	
		Lethbridge University, Canada	
		Biogeography and mapping of late-season population density of	
		grasshoppers in the agricultural zone of Alberta, Canada: 47 years,	
		73,000 survey sites Dan Johnson	
		Lethbridge University, Canada	
		Markov chain analysis of 32 years of grasshopper infestations in 25	
		counties and districts in Alberta, Canada	
		Dan Johnson	
		Lethbridge University, Canada	
		Locust and tree interactions in Australian rangelands	
		Douglas Lawton	
		Arizona State University, USA	
		Oxygen's role in setting the thermal niche of the South American locust (Schistocerca cancellata)	
		Jacob Youngblood	
		Arizona State University, USA	
		The effects of flight on macronutrient balance of the Australian plague locust, Chortoicetes terminifera	
		Deanna Zembrzuski	
		Arizona State University, USA	
		Two Molecular Olfaction Pathways Independently Detecting to One	
		Aldehyde in Locust Mouthpart	
		Long Zhang	
		China Agricultural University, China	
Pitchforks and Corks	5:30 PM- 6:30 PM	Sustainability Scholars and Scientists Happy Hour. Appetizers and drinks provided.	
		Located a 5-minute walk from campus: 660 S. College Ave., Tempe, AZ	

Saturday, April 14, 2018

Location	Time	Activity	
		Only presenting authors are indicated in bold. See list of abstracts for complete author list (published after the conference).	
Wrigley Hall 101	7:45 AM	Light snacks provided by GLI	
	8:00 AM	Panel: lessons learned from locust research in coupled natural and human systems Arianne Cease (moderator); Jim Elser; Joleen Hadrich; Brian Robinson; Eli Fenichel; Kevin Berry Various Institutions, USA and Canada	
	9:00 AM	Mechanisms of phase change in the Australian plague locust, Chortoicetes terminifera Stephen Rogers University of Cambridge, UK	

Saturday, April 14, 2018 - Continued

Location	Time	Activity
	9:15 AM	Novel insights into understanding the evolution of locust phase
		polyphenism based on phylogenomic data
		Hojun Song
		Texas A&M University, USA
	9:30 AM	Density-dependent yellowing prevents mistaken sexual identity in
		swarming locusts.
		Darron Cullen
		KU Leuven, Belgium
	9:45 AM	Importance of solitarious desert locust population dynamics: lessons from
		historical survey data in Algeria
		Mohammed Lazar
		National Institute of Plant Protection, Algeria
	10:00 AM	Synthesis of research activities on <i>Oedaleus senegalensis</i> (Krauss, 1877)
		and Schistocerca gregaria (Forskäl, 1775), two important pests in the
		Sahel
		Amadou Bocar Bal
	10.15.44	Gaston Berger University, Senegal
	10:15 AM	BREAK
	10:30 AM	Ecology and egg survival strategies of the Senegalese grasshopper
		Oedaleus senegalensis (Krauss, 1877), during the dry season in the
		Sahel in West Africa
		Idrissa Maiga
	40.45.44	Aghrymet Regional Center, Niger
	10:45 AM	Linking land use and the nutritional ecology of locusts: the case of the
		Senegalese locust (Oedaleus senegalensis)
		Marion Le Gall
	44.00.414	Arizona State University, USA
	11:00 AM	Weather and food as drivers of grasshopper population dynamics, with
		implications for cultural management practices in the Western U.S.
		Dave Branson
	11:15 AM	USDA, Agricultural Research Service (ARS), USA The use of biopesticides as part of IPM of locusts and grasshoppers
	11.15 AW	David Hunter
		Locust and Grasshopper Control, Australia
	11:30 AM	Naturalized biocontrol agent may help in the management of pest
	11.50 AW	grasshoppers and locusts in Argentina
		Carlos Lange
		CEPAVE, National University of La Plata, Argentina
	11:45 AM	Studies on <i>Schistocerca cancellata</i> (Orthoptera: Acrididae) in Argentina
		Maria Marta Cigliano
		CEPAVE, National University of La Plata, Argentina
	12:00 PM	Fast locust-tour across the resurgence of Schistocerca cancellata
		(Serville) in Argentina. Actions, questions, hypotheses and research
	1	needs
		Eduardo Trumper
		National Institute of Agricultural Technology (INTA), Argentina
	12:15 PM	Introduction to afternoon discussion
		Arianne Cease; Ariel Rivers
Wrigley Hall	12:30 PM	LUNCH – Provided by GLI
Wrigley Hall	1:30 PM	Break-Out Sessions: Disciplinary and Interdisciplinary Discussions
Wrigley Hall 481	4:00 PM-	Whole Group Discussion: Synthesis and Conclusions of Event
1.3.27	5:00 PM	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
Boulder's on	6:00 PM	Conference celebration and wrap-up. Appetizers will be provided by GLI.
Broadway		Located at: 530 W. Broadway Ave., Tempe, AZ
2.oudilay	1	Located at oo H. Diodattay / Hot, Tollipo, //L

Break-Out Discussions

On Friday and Saturday, the GLI leadership team has organized a series of discussions to provide subject matter to include within the two written products we will generate as a result of the event (a draft scholarly review and a draft policy brief; see **Outcomes** for more information). We welcome anyone who is willing to stay involved to serve as a co-author in the development of the two products; please notify Dr. Ariel Rivers or Dr. Arianne Cease if you would like to participate after the event.

Event participants are assigned to specific discussion groups; please see the registration list at the end of this document for your assignment. Contact Dr. Ariel Rivers or Dr. Arianne Cease if you did not receive an assignment or if you feel you should be assigned to a different group.

An assigned group facilitator will receive a schedule and discussion prompts. Please review the guiding questions for each day to appropriately prepare for the discussions

Friday, April 13, 2018

Discussion Theme:	Regional Institutions Involved in the Locust and Grasshopper Space		
Time:	1:00 – 3:00 PM		
Guiding Questions:	Broadly, what institutions currently operate in the areas of locust and grasshopper management, research, etc. in your region?		
	Within your region, what are the strengths and weaknesses of the existing institutional structure?		
	In an ideal world, what is your 5 year vision for locust and grasshopper institutions in your region?		
Regional Groups and	Africa	Wrigley Hall 401	
Meeting Locations	Asia Wrigley Hall 102		
	Australia Wrigley Hall 418		
	Latin America Wrigley Hall 323		
	North America	Wrigley Hall 481	

Saturday, April 14, 2018

Discussion Theme:	Disciplinary and Interdisciplinary Discussions			
Time:	1:30 – 4:00 PM			
Guiding Questions:	What advances have been most important in your discipline?			
	What are the most important future quadress in your discipline?	What are the most important future questions and/or challenges to address in your discipline?		
	What new opportunities would working in interdisciplinary and cross- sectoral teams provide? What workshops would you recommend GLI hosting to support these advancements?			
	What are major policy-related barriers in your field?			
Expert Groups and	Biocontrol	Wrigley Hall 102		
Meeting Locations	Ecology Wrigley Hall 323			
	New and Alternative Technologies Wrigley Hall 401			
	Physiology, Evolutionary Biology, and Systematics Wrigley Hall 308			
	Population Dynamics and Modeling Wrigley Hall 408			
	World Institutions	Wrigley Hall 481		

Conference ParticipantsThis list reflects registered participants as of April 6, 2018 and is subject to change. Participants are listed alphabetically by first name.

First Name	Country	Institution/Organization	Friday Discussion Group	Saturday Discussion Group
Alex Latchininsky	USA	University of Wyoming	Asia	New and Alternative Technologies
Aliou Dioungue	Cameroon	World Food Programme, Cameroon	Africa	World Institutions
Amadou Bocar Bal	Senegal	University of Gaston Berger	Africa	Ecology
Annie Monard	Italy	Food and Agriculture Organization (FAO) of the United Nations	Asia	World Institutions
Annie Swank	USA	University of Houston - Clear Lake	Latin America	New and Alternative Technologies
Arianne Cease	USA	Arizona State University		
Ariel Rivers	USA	Arizona State University		
Balanding Manneh	USA	Arizona State University	Africa	World Institutions
Bert Foquet	USA	Texas A&M University	Phase Change	
Brian Robinson	Canada	McGill University		World Institutions
Britt Peterson	USA	Center for Insect Science, University of Arizona		Physiology, Evolutionary Biology, and Systematics
Carlos Lange	Argentina	Center for Parasitological and Vector Studies (CEPAVE), La Plata University	Latin America	Ecology
Cathy Waters	Australia	New South Wales Department of Primary Industries	Australia	New and Alternative Technologies
Cecilia Catenaccio	Argentina	National Service of Agri-Food Health and Quality (SENASA)	Latin America	World Institutions
Chris Adriaansen	Australia	Australian Plague Locust Commission (APLC)	Australia	World Institutions
Chris Reuter	USA	USDA, Animal & Plant Health Inspection Service (APHIS)	North America	Physiology, Evolutionary Biology, and Systematics
Cyril Piou	France	Agricultural Research Centre for International Development (CIRAD)	Africa	Population Dynamics and Modeling

First Name	Country	Institution/Organization	Friday Discussion Group	Saturday Discussion Group
Dan Johnson	Canada	University of Lethbridge	North America	
Darron Cullen	Belgium	KU Leuven	Phase Change	Physiology, Evolutionary Biology, and Systematics
Dave Branson	USA	USDA, Agricultural Research Service (ARS)	North America	Population Dynamics and Modeling
David Hunter	Australia	Orthopterists' Society	Asia	Biocontrol
Deanna Zembrzuski	USA	Arizona State University	North America	Physiology, Evolutionary Biology, and Systematics
Derek Woller	USA	USDA, Animal & Plant Health Inspection Service (APHIS)	North America	Biocontrol
Douglas Lawton	USA	Arizona State University	Australia	Ecology
Eduardo Trumper	Argentina	National Institute of Agricultural Technology (INTA)	Latin America	Population Dynamics and Modeling
Eli Fenichel	USA	Yale University	North America	
Esteve Giraud	USA	Arizona State University	Africa	Population Dynamics and Modeling
Hojun Song	USA	Texas A&M University	Phase Change	
Idrissa Maiga	Niger	Agrhymet Regional Center	Africa	Ecology
Jacob Youngblood	USA	Arizona State University	Asia	Physiology, Evolutionary Biology, and Systematics
Jim Elser	USA	Arizona State University	Asia	
John Connett	USA	University of Wyoming	North America	Biocontrol
Joleen Hadrich	USA	Colorado State University	North America	New and Alternative Technologies
Julia Ramos	USA	Arizona State University	Latin America	Bicontrol
Kelly O'Meara	USA	Arizona State University	Asia	World Institutions
Kevin Berry	USA	University of Alaska, Anchorage	North America	

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First Name	Country	Institution/Organization	Friday Discussion Group	Saturday Discussion Group
Larry Jech	USA	USDA, Animal & Plant Health Inspection Service (APHIS)	North America	Population Dynamics and Modeling
Long Zhang	China	Chinese Agricultural University	Asia	Biocontrol
Lonnie Black	USA	USDA, Animal & Plant Health Inspection Service (APHIS)	North America	New and Alternative Technologies
María Marta Cigliano	Argentina	Center for Parasitological and Vector Studies (CEPAVE), La Plata University	Latin America	Physiology, Evolutionary Biology, and Systematics
Mario Poot-Pech	Mexico	Yucatán State Plant Protection Committee	Latin America	Biocontrol
Marion Le Gall	USA	Arizona State University	Africa	Ecology
Mohammed Lazar	Algeria	National Institute of Plant Protection	Africa	Population Dynamics and Modeling
Nathan Moses Gonzalez	USA	M3 Consulting	North America	New and Alternative Technologies
Nathan Thrash	USA	Arizona State University		New and Alternative Technologies
Pablo Karnatz	Argentina	Argentina's Rural Confederation	Latin America	New and Alternative Technologies
Rick Overson	USA	Arizona State University	Latin America	Ecology
Stephen Rogers	UK	University of Cambridge	Phase Change	Physiology, Evolutionary Biology, and Systematics
Svenja Wagner	USA	Arizona State University	North America	
Ted Deveson	Australia	Australian Plague Locust Commission Australian National University	Australia	Population Dynamics and Modeling

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