

DRAFT PROPOSAL

A Consortium of Entomological Societies of the Americas (CESA): An International Effort to Suppress Mosquito-Vectored Human Disease in the Americas

Introduction

Paradoxically, insects are arguably the most dangerous yet beneficial creatures on the planet. As the largest insect-science society in the world, the Entomological Society of America (ESA) is launching a global initiative to engage and empower other entities worldwide to take on Grand Challenges to improve the human condition. The effort is bringing together top scientists, policymakers, industry groups, NGOs, funders, and other organizations to create alliance-based coalitions to implement sustainable solutions to some of the world's insect-based challenges.

The Entomological Society of America and the Entomological Society of Brazil (Sociedade Entomológica do Brasil) have formally agreed to work together as founding partners in this effort. A Summit of the Americas will be held in March 2016 with entomological leadership to discuss this crisis and how to effectively address it through the applied power of entomologists from across the hemisphere and the rest of the world. This summit will be held during the Brazilian and Latin American Congresses of Entomology, which are co-located in Maceió, Brazil, in 2016.

The Current Mosquito-Suppression Situation

Mosquitoes, particularly *Aedes aegypti*, transmit numerous human pathogens throughout the Americas, including dengue, yellow fever, and chikungunya.

Current control efforts are fragmented and non-sustainable for the decades of effort necessary for such a program. Each country/municipality has developed its own protocols, research efforts have been isolated, and management guidelines unevenly applied. Where adequate programs do exist, they often rely on relatively short term external funding and once that has been exhausted, their sustainability degrades rapidly. As long as this situation persists, epidemics of mosquito-vectored human diseases will continue to occur in the Americas. Working together is critical to finding a sustainable solution that crosses country borders, and we are focused on bringing together entomological societies of the Americas to create renewed focus and progress on this growing public health crisis.

The Consortium of Entomological Societies of the Americas (CESA)

The first proposed effort of the Grand Challenges Initiative is to form a single collaborative called the Consortium of Entomological Societies of the Americas

(CESA), bringing together entomological societies from across the Americas to improve mosquito management throughout the Western Hemisphere. CESA will provide expertise in research and development of modern mosquito-management systems, relationships with local authorities to implement these systems, and organizational persistence to continue these programs for decades into the future.

CESA will actively coordinate with government agencies, NGOs, industry, and university entomologists to better implement effective management guidelines such as the World Health Organization's Integrated Vector Management guidelines. Studies have consistently shown that meeting implementation needs, particularly in training on mosquito surveillance, identification, and control technique, is the biggest impediment to successfully managing mosquito borne disease. It is this critical role that CESA will fill.

The advantages of CESA include:

- Regional expertise as most participants are already members of one or more of the national or regional societies.
- Independence – since CESA is a collaborative effort, it would not be a directed effort of any specific government, corporate entity, educational institution or organization.
- A communications infrastructure of national societies for unified procedures, standards, and pooled expertise.
- Local control, as each member society or participating entity completely controls its own actions independently within its national borders.
- Long-term sustainability provided by the member societies and partners, most of which have been in constant operation for many decades to over a century in some cases.
- A new paradigm in international collaborative science that unites national societies from numerous countries, along with their collaborative partners, and allows them to take an active role in an important area of applied science.

The functions of CESA include:

- Developing and implementing local training materials and programs for mosquito management that follow WHO guidelines and that are delivered by entomologists and participating partners from within each country.
- Serving as an umbrella collaborative to assist in developing and coordinating research and demonstration efforts throughout the region.
- Developing partnerships with scientific groups, private industry, and funders to support development and sustained implementation.
- Using the public-relations arms of the constituent societies to collaborate with municipalities and government agencies to improve the public's awareness of its responsibility in mosquito-vectored disease suppression.

- Extending professional certification programs in public-health entomology to management personnel in order to promote best practices.
- Storing and archiving mosquito surveillance data from throughout the region and documenting program activities and successes.
- Promoting the continuing need for local funding of mosquito management efforts.
- Managing and making necessary adjustments within the implementation process.

Partnership Opportunities

CESA organizers are actively seeking partners in developing and implementing this concept. Any organization interested in doing so should contact:

Mr. C. David Gammel
Executive Director
Entomological Society of America
DGammel@entsoc.org
(+1) 301-731-4535