

## Mosquito larval habitat ecology in the cold arid Patagonia region of Argentina.

Grech MG<sup>1</sup>, Epele LB<sup>1</sup>, Manzo LM<sup>1</sup>, Claverie AÑ<sup>1</sup>, Laurito M<sup>2</sup>, Almirón WR<sup>2</sup>, Miserendino ML<sup>1</sup>, Ludueña-Almeida FF<sup>2</sup>.

1-Laboratorio de Investigaciones en Ecología y Sistemática Animal. Centro de Investigaciones Esquel de Montaña y Estepa Patagónicas (CONICET-Universidad Nacional de la Patagonia San Juan Bosco). Roca 780 (9200). Esquel-Chubut-Argentina. Tel.: +54 02945 453985. \*E-mail: [grechmarta@gmail.com](mailto:grechmarta@gmail.com)

2-Centro de Investigaciones Entomológicas de Córdoba. Instituto de Investigaciones Biológicas y Tecnológicas (CONICET-Universidad Nacional de Córdoba). Av. Vélez Sarsfield 1611 (X5016GCA). Córdoba -Argentina. Tel.: +54 351-5353800.

Knowledge of mosquito ecology in the southern Argentine Patagonia region remains restricted mainly to geographic distributions and some habitat descriptions. There has been no comprehensive study of the ecology of larvae in this region. This study focuses on associations of environmental and physicochemical conditions in aquatic habitats with abundances of mosquito species that colonized those habitats. Twenty-six mosquito larval habitats were surveyed in Patagonia (38-54°S; 65-77°W; 14-1,163 m above sea level), during December 2013-January 2014. Habitats were mainly natural temporary pools located in mountain and steppe environments. Variables recorded at each site showed the following ranges. Water temperature: 10.2-36.5°C, pH: 4.6-9.5, conductivity: 16.2-56,500 $\mu$ S $\cdot$ cm<sup>-1</sup>, salinity: up to 21.1‰, total dissolved solid: 11.8-28,400mg $\cdot$ l<sup>-1</sup>, alkalinity: 63.4-18,180 $\mu$ Eq $\cdot$ l<sup>-1</sup>, dissolved oxygen: 1.3-19.3mg $\cdot$ l<sup>-1</sup>, aquatic plant cover: 1-80%, mean water depth: 2.5-43.3cm, area: 0.01-693.5m<sup>2</sup>. Seven mosquito species belonging to two genera were identified. *Culex apicinus* was the most abundant species (48.2%) restricted to northern Patagonia, associated with high values of water depth. It was followed by *Cx. acharistus* (22.5%) and *Ochlerotatus albifasciatus* (17.6%), which were associated with high values of alkalinity and percentage of plant cover, respectively. Less abundant species were *Cx. brethesi* (7.7%), *Cx. eduardoi* (2.6%), *Cx. dolosus* (1.4%), and *Cx. (Alm.) tramazaiguesi* (0.1%). This last species was associated with higher conductivity and salinity values, and represented a new record for Neuquén province. The present study enhances our knowledge of mosquito larval habitat ecology under extreme environmental conditions of Patagonia region.

**Key words:** mosquitoes, aquatic habitats, Patagonia, Argentina.



3 Park Place, Suite 307  
Annapolis, MD 21401 USA

Phone: 301-731-4535  
Fax: 301-731-4538

esa@entsoc.org  
www.entsoc.org

13 August 2015

Marta Grech  
CIEMEP (CONICET-UNPSJB)  
Roca 780  
Esquel 9200  
Argentina

Dear Marta:

*Congratulations! Your presentation, "Mosquito larval habitat ecology in the cold arid Patagonia region of Argentina" has been accepted to be part of Entomology 2015, the 63<sup>rd</sup> Annual Meeting of the Entomological Society of America (ESA) November 15-18, 2015, taking place in Minneapolis, Minnesota, at the Minneapolis Convention Center. We look forward to having you participate in this upcoming conference and present your work.*

Below are the details for when your presentation is scheduled:

Session Title: SysEB Section Poster Session B  
Presentation Title: Mosquito larval habitat ecology in the cold arid Patagonia region of Argentina  
Session Date: 11/18/2015  
Session Time: 8:00AM - 4:30PM  
Location: Exhibit Hall BC, Minneapolis Convention Center

All abstracts/papers for accepted submissions will be published online (insert online program link). You can obtain additional information regarding Entomology 2015 via our website at <http://entsoc.org/entomology2015>.

Additional information on requirements for obtaining visas to enter the USA can be found on <http://entsoc.org/entomology2015/international-assistance>.

We feel your participation and presentation at this meeting will provide you with an excellent opportunity to interact with other scientists, teachers, and researchers from throughout the USA and more than 40 other countries. Thank you and we look forward to welcoming you to Minneapolis in November.

Sincerely,

C. David Gammel, CAE  
Executive Director