TOPIC: 2) Mosquito-borne diseases (dengue, malaria, fiebre amarilla, zika, chikungunya)
APPROACH: 2. Vector biology and eco-epidemiology

Diversity, abundance, and presence of mosquito vectors of yellow fever in Northeast of Corrientes province

Keywords: mosquito-borne diseases; vector biology; eco-epidemiology; diversity; abundance; yellow fever.

LIZUAIN, Arturo A.[1]; CANO, María E[2].; BRIVIDORO, Melina V[2].; MUTTIS, Evangelina[2].; LEPORACE, Marina[3].; AYALA, Mahia M[2].; MICIELI, María V[2].; MARTI, Gerardo[2] & MANTECA ACOSTA, Mariana[1]

1. Centro Nacional de Diagnóstico e Investigación en Endemoepidemias (CeNDIE). ANLIS "Malbrán". CABA. Argentina.
2. Centro de Estudios Parasitológicos y de Vectores (CEPAVE-CONICET). La Plata, Buenos Aires. Argentina.
3. Fundación H.A Barceló, Laboratorio de Control de Vectores Entomológicos de Importancia Sanitaria. Santo Tomé, Corrientes. Argentina.

E-mail address: arlizuain@gmail.com

Yellow fever is currently increasing in importance in Argentina due to outbreaks in neighboring countries such as Brazil and Paraguay that cover a great part of the Misiones and Corrientes border. Due to several epizootic events in the south of Brazil between 2020 and 2021, in March and April 2021, we perform a mosquito survey to evaluate abundance and distributions of species vectors of *Yellow fever virus* (YFV) in several selvatic locations with presence of monkey *Alouatta caraya* in Northeast of Corrientes province: Las Marias, Tají Poty, Garabi, Garruchos, San Carlos, Colonia Liebig and near the Chimiray stream. Adult mosquitoes were collected using nets and manual aspirators and were grouped per hour between 10:00 h and 15:00 h. Female adults were identified using general dichotomous keys. Relative abundance of each species and Shannon index of diversity (H) per site were calculated. For the most abundant species, the number of individuals captured per person (ind/per) was evaluated based on the time of capture through GLMM. We collected 676 mosquitoes belonging to 8 genera and 18 species. The most abundant species were *Aedes scapularis* (33.58%), *Sabethes albiprivus* (20.27%), *Ae. albopictus* (17.75%), *Haemagogus leucocelaenus* (15.86%), y *Psorophora ferox* (5.32%). *Aedes scapularis* was dominant in Garabi, Las Marías and Chirimay; *Hg. leucocelaenus* in San Carlos and Colonia Liebig; *Sa. albiprivus* in Taji Poti; and *Ae. albopictus* in Garruchos. The highest diversity was found in Garabi (H = 1.74) while the lowest is represented by Las Marias (H = 0.56). Only *Sa. albiprivus* and *Ae. albopictus* showed significant differences in the number of individuals captured between hours. The first presented a high value of 0.78±0.30 ind/per between 13-14hs; and the second a maximum value of 0.10±0.10 ind/per between 10-11 hs. On the other hand, *Ae. scapularis* presented a capture rate per hour of 0.69±0.39 ind/per, *Hg. leucoceleanus* 0.21±0.15 ind/per, and *Ps. ferox* 0.11±0.11 ind/per. The present work shows that the most abundant species in sylvatic environments of the northeast of Corrientes are vectors of YFV. *Sabethes albiprivus* presents a maximum of activity at midday, *Ae. albopictus* in the morning, and the rest of the species with constant values of activity between 10 and 15h. Enhanced studies about presence, diversity and abundance of mosquito vectors are necessary to identify epidemiological risk areas in order to implement vaccinations campaigns.