



Tropentag, September 9-11, 2020, virtual conference

“Food and nutrition security and its resilience  
to global crises”

## Homegarden Structure Dynamics in Communities of a Wetland Conservation Area in the Pacific Coast of Guatemala

PEDRO DANIEL PARDO VILLEGAS<sup>1</sup>, CLAUDIA BURGOS<sup>2</sup>, PABLO LEE<sup>3</sup>

<sup>1</sup>*Universidad de San Carlos de Guatemala, Biology School/ Dept. of Ecology, Guatemala*

<sup>2</sup>*Universidad de San Carlos de Guatemala, Centro de Estudios Conservacionistas,*

<sup>3</sup>*Universidad de San Carlos de Guatemala, Centro de Estudios Conservacionistas,*

### Abstract

An ethnobotanical study centred in homegardens was performed in five communities of a wetland conservation area in the Pacific coast of Guatemala. The purpose of the study was to record the ethnoflora and the traditional know-ledge associated with it. In 2011, through 101 semi-structured interviews and the collection of plant samples, a total of 181 species were registered. In terms of the use given to the reported plants, 40 are edible, 91 medicinal, and 50 species are edible and medicinal. Between 15 to 30 edible species and 3 to 25 medicinal species were registered growing or planted all together at the homegardens. Of the registered plants, 60% are native, found growing in remnants of natural vegetation or in homegardens. Considering that homegardens function as important reservoirs of useful plants of the area, in 2018 a follow-up assessment was carried out, which focused in 31 homegardens. This information allowed to identify important changes in homegarden structure between 2011 and 2018. Most of the changes are related to size reduction and species diversity loss in homegardens. In general terms, a simplification in homegarden structure in the area is evident. This can have a long-term consequence in terms of food security and family economy, since some of the fruits produced complement the family income. Taking this into account, a demonstration garden was designed at the reserve's visitor centre, which has approximately 40 useful species. This, as a means to educate the new generations on the role of the homegardens, in addition to contributing to the in-situ conservation of the ethnobotanical diversity of the area.

**Keywords:** Agrobiodiversity, agroforestry, edible plants, ethnoflora, mangrove reserve, medicinal plants