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ENGLISH

# Parks and Reserves in the Caribbean

Session 4/8

*Documentation Project of  
the Biodiversity from Municipio de  
Livingston, Izabal*



FLAAR  
MESOAMÉRICA



FLAAR

1. Herbs, vines and epiphytes
2. Tropical trees and shrubs
3. Insects, amphibians and other creatures
4. Parks and Reserves in the Caribbean
5. Tropical Animals
6. Palms
7. Aquatic plants and ferns
8. Mushrooms and lichens

## CONTENT

- General introduction
- Specific data for this areas
- Location of species on the FLAAR Mesoamerica catalogs



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the Biodiversity from Municipio de  
Livingston, Izabal*



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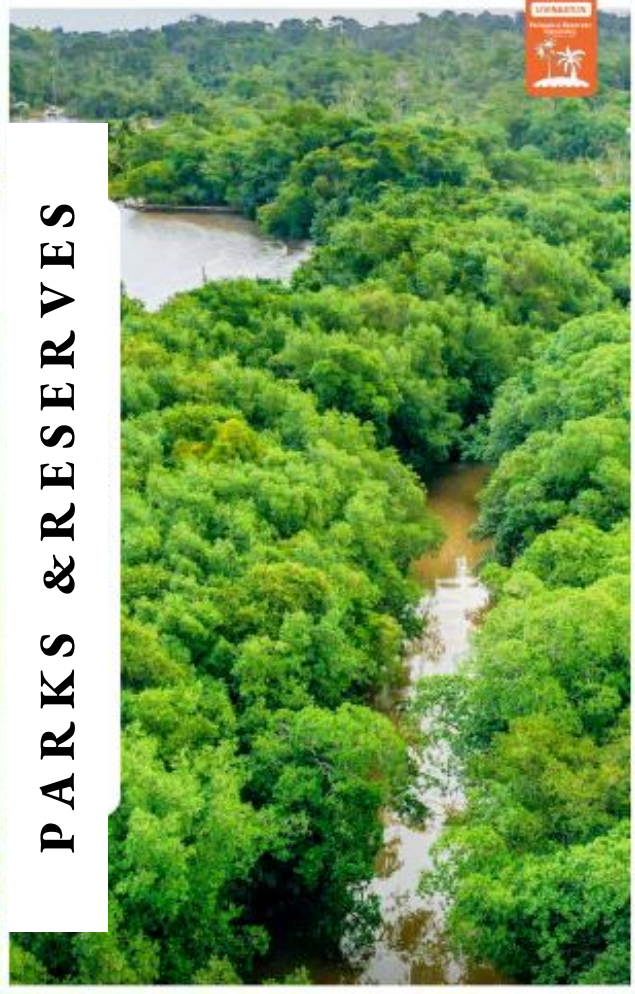


## El Rosario

Lugar: El Rosario



# PARKS & RESERVES







**FLAAR**  
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# PARKS AND NATURAL RESERVES

Researcher Victor Mendoza

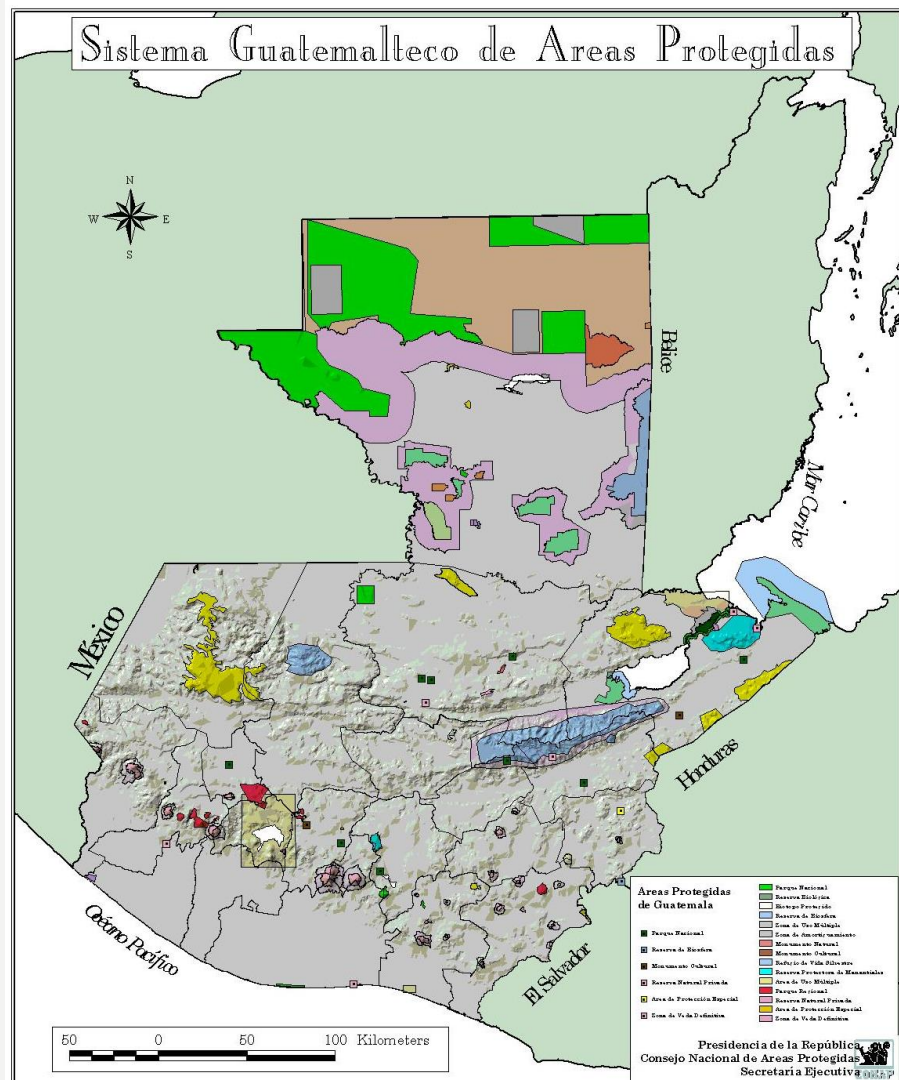


# WHAT IS A PROTECTED AREA?

They are terrestrial or aquatic spaces legally declared with the aim of conserving biological diversity and natural resources of interest.



Río Chocón Machacas

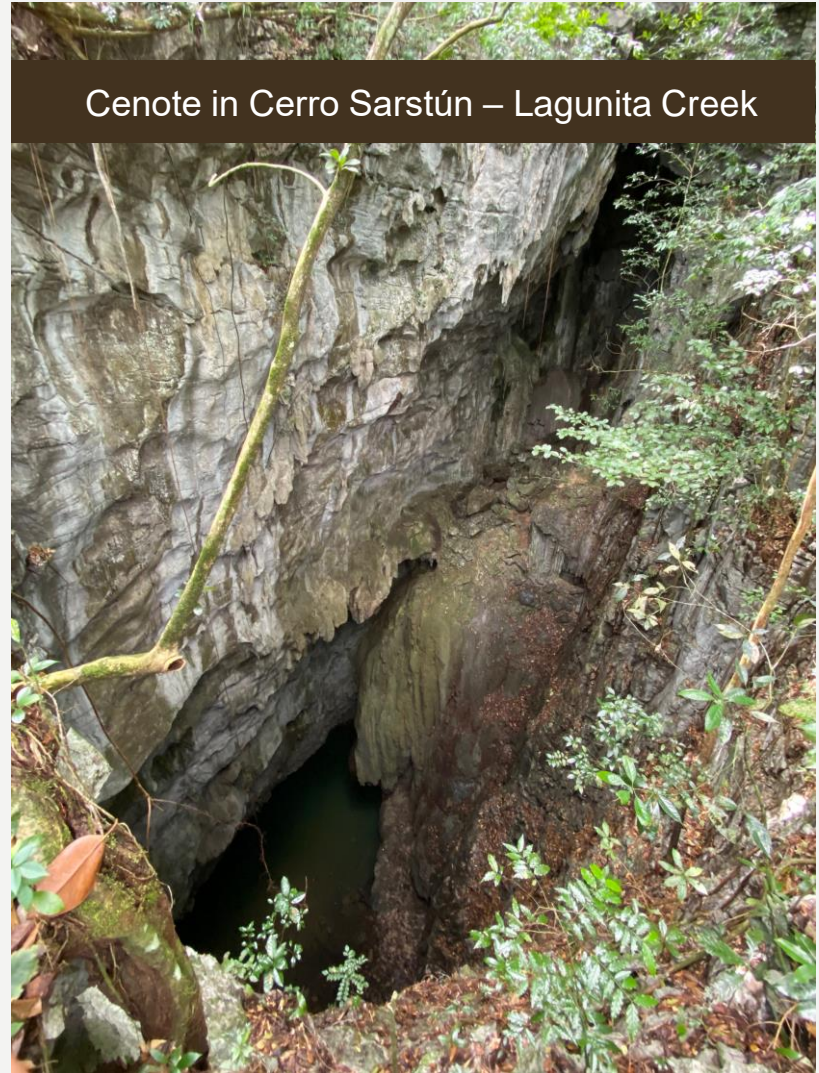




# MANAGEMENT CATEGORIES OF PROTECTED AREAS

- According to the regulations of the Protected Areas Law, there are 6 management categories.
- FLAAR Mesoamerica worked on 5 of these categories in the Project: Livingston Biodiversity Documentation.

Cenote in Cerro Sarstún – Lagunita Creek





# TYPE I

What includes?	<input type="checkbox"/> National Park <input type="checkbox"/> Biological Reserve
<b>Description</b>	<ul style="list-style-type: none"><li>● They are relatively large areas that have had little contact with anthropogenic activities.</li><li>● They contain ecosystems, species of Flora and Fauna as well as other resources of national interest in International</li></ul>
<b>Prohibitions</b>	<input type="checkbox"/> Cut, extract or destroy flora, hunt or capture fauna <input type="checkbox"/> Introduce exotic species <input type="checkbox"/> exploration and mining <input type="checkbox"/> Human settlements, except those necessary for research and administration



Category Type I - Río Dulce National Park, Castillo de San Felipe – Drone photo by Haniel López – Nov. 2021



Categoría Tipo I - **Parque Nacional Río Dulce, Cañón de Río Dulce** — Foto de Dron por Haniel López — Marzo 2021



# TYPE II

<b>What includes?</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> protected biotope,</li><li><input type="checkbox"/> natural monument,</li><li><input type="checkbox"/> Cultural Monument.</li></ul>
<b>Description</b>	<ul style="list-style-type: none"><li>● Its extent depends on the size of natural features, ruins, or structures.</li><li>● They contain one or a few outstanding natural traces, archaeological and historical traces, etc.</li><li>● They do not necessarily contain a complete ecosystem</li></ul>
<b>Management objectives</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Protection and conservation of natural and cultural values</li><li><input type="checkbox"/> Environmental education</li><li><input type="checkbox"/> controlled tourism</li><li><input type="checkbox"/> Scientific investigation</li></ul>



Category Type II – Chocón Machacas Biotope (El Golfete) – Drone photo by Haniel López – January 2021

# TYPE III

<b>What includes?</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Multiple Use Area.</li><li><input type="checkbox"/> Springs Protective Reserve.</li><li><input type="checkbox"/> Forest reserve.</li><li><input type="checkbox"/> Wildlife Refuge</li></ul>
<b>Description</b>	<ul style="list-style-type: none"><li>● relatively large</li><li>● Generally with a forest cover</li><li>● Appropriate areas for the sustainable production of forest products, water, fodder, flora and fauna</li><li>● They may present alteration by humans, but still preserve a good portion of the natural landscape</li><li>● Public land and some private property</li></ul>
<b>Management objectives</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Sustained production of water, flora fauna</li><li><input type="checkbox"/> The conservation of these resources serves as economic support.</li><li><input type="checkbox"/> Environmental and forestry education</li><li><input type="checkbox"/> Nature-oriented recreation.</li></ul>





Category Type III – Río Sarstún Multiple Use Area – Drone photo by Haniel López – February 2021





Category Type III – Río Sarstún Multiple Use Area, Buena Vista – Drone photo by Haniel López – October 2020





Category Type III – Cerro San Gil Springs Protective Reserve – Drone photo by Haniel López – May 2021



# TYPE IV

<b>What includes?</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Natural Recreational Area</li><li><input type="checkbox"/> Municipal Regional Park</li><li><input type="checkbox"/> Routes and Scenic Byways</li><li><input type="checkbox"/> Nature and Ecotourism Reserves</li></ul>
<b>Description</b>	<ul style="list-style-type: none"><li>● These spaces preserve natural features and species of Flora and Wild Fauna of interest.</li><li>● They are used for educational and recreational activities.</li></ul>



Category Type IV – Tapón Creek Nature Reserve – Drone photo by Haniel López – October 2020

# TYPE V

<b>What includes?</b>	Ownership of individual or legal persons
<b>Description</b>	These areas are intended by their owners voluntarily and for as long as they consider, for the conservation and protection of the habitat for flora and fauna as well as biotic communities or environmental features. The conservation, stability or survival of certain species is guaranteed.
<b>Management objectives</b>	Ensure the natural conditions required to protect significant species, groups of species, biotic communities or physical features of the environment and cultural features on privately owned land.



\*Proposed farm to be a Private Reserve in Livingston.



Category Type V – Where The Pirates Hide, La Buga Livingston – Photo by Victor Mendoza – December 2020

# TYPE VI

<b>What includes?</b>	Biosphere Reserve
<b>Description</b>	They are reserves of global importance in terms of natural and cultural resources that are significantly extensive since when they are categorized for this type a recognition is granted by UNESCO.
<b>Management objectives</b>	Give the correct use to the land and natural resources as well as give it a sustainable use. Next This category promotes ecological research in basic studies and in natural environments as well as for environmental monitoring. As well as promoting ecotourism.
<b>Criterion</b>	<p>Each reserve will have different types of ecosystems and human uses for management through zoning.</p> <p>Natural area or core. Modifiable zones. buffer zones.</p>



\*Example clearly from Petén. In Livingston there is no Biosphere Reserve.



Category Type VI – Maya Biosphere Reserve – Drone photo by Haniel López – December 2021



# STUDY AREAS IN LIVINGSTON

- Parque Nacional Río Dulce  • Río Dulce (from Castillo de San Felipe, El Golfete to the mouth of the river at Bahía de Amatique)
- Área de Usos Múltiples, Río Sarstún  • Río Sarstún (from Laguna Grande, Lagunita Creek, Cerro Sarstún, Río Sarstún to Sarstún Creek)
-  • Tapón Creek (from Aldea San Juan, Playa Blanca, Aldea El Rosario, Aldea Buena Vista to Punta de Cocolí)
-  • La Buga (from Playa 7 Altares, Playa Quehueche, Gangadiwali, Vuelve Mujer River to Plan Grande Tatín, Cueva del Tigre)
- Reserva Protectora de Manantiales, Cerro San Gil  • Cerro San Gil (from Río Carboneras, Biostation Carboneras to Quebrada del Ávila)



Río Dulce – Río Ciénega





Río Dulce Sur – Río Higerito





Río Dulce Norte – Río Cáliz





Río Dulce – Mirador del Cañón





La Buga – Playa Quehueche





La Buga – Cueva del Tigres, Plan Grande Tatín





Río Sarstún – Reserva Natural Lagunita Creek





Tapón Creek - Playa Aldea Buena Vista



Tapón Creek – Punta de Cocolí – dolphin watching





Cerro San Gil – Bioestación Carboneras - Quebrada del Ávila



# FINAL REPORT



## INFORME FINAL PROYECTO DE DOCUMENTACIÓN DE LA BIODIVERSIDAD DEL MUNICIPIO DE LIVINGSTON, IZABAL



<https://flaar-mesoamerica.org/rain-forests-rivers-lakes-bays-ocean-caves-canyons-livingston-the-caribbean-biodiversity-wonderland-of-guatemala/>

GUATEMALA, OCTUBRE 2020 - ENERO 2022

Victor Mendoza y Vivian Hurtado

## AREAS DE ESTUDIO

Durante el desarrollo del proyecto, se visitaron 3 áreas protegidas de suma importancia para Guatemala: Parque Nacional Río Dulce, Área de Usos Múltiples Río Sarstún y la Reserva Protectora de Manantiales Cerro San Gil. A la vez, estas 3 principales áreas se subdividieron en 5 para facilitar la documentación y recopilación de datos: La Buga, Tapón Creek, Río Dulce, Río Sarstún y Cerro San Gil.



## Reservas naturales visitadas

Tabla No. 1. Tabulación cronológica de los lugares documentados durante el proyecto.

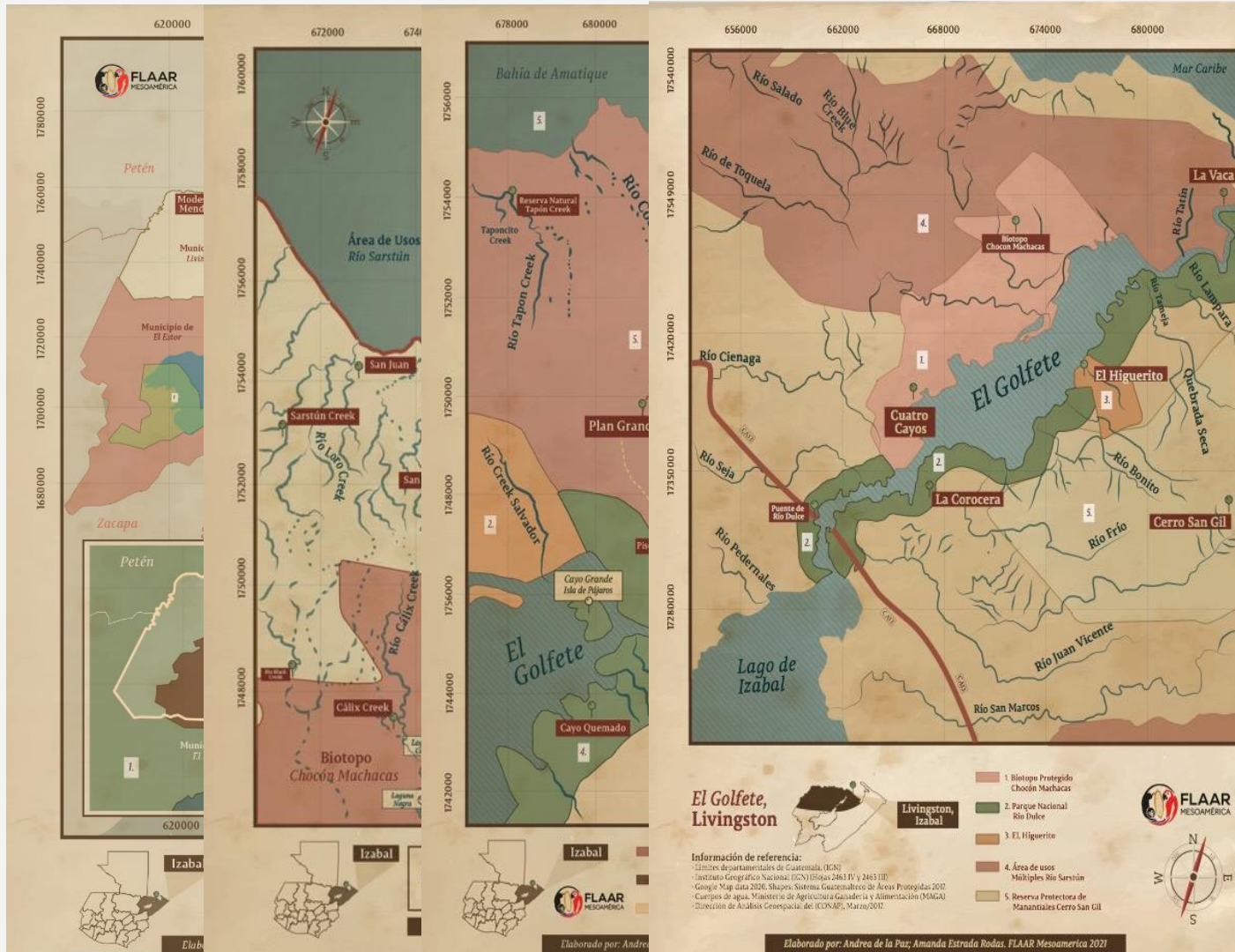
AÑO	MES	FECHAS	LUGARES DOCUMENTADOS	ÁREA PROTEGIDA
2020	Octubre	del 6 al 13	Reserva Tapón Creek, Aldea Buena Vista, Finca Santa Ana, Taponcito Creek.	Área de Usos Múltiples Río Sarstún
	Noviembre	del 4 al 11	Cañón de Río Dulce, Mirador del Cañón, Río Lámpara, El Golfete, Río Chocón Machacas, Río Cáliz, Isla de Pájaros, Río Negro, Lagunita El Salvador, Río Tatin.	Parque Nacional Río Dulce
	Diciembre	del 15 al 20	Plan Grande Tatin, Cueva del Tigre, Río Tatin, Vuelve Mujer, Finca Where the Pirates Hide, Río Quehueche, Playa Quehueche, Finca Gangadiwali, Río Sarstún, Tapón Creek Reserva.	Área de Usos Múltiples Río Sarstún y Parque Nacional Río Dulce

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AÑO	MES	FECHAS	LUGARES DOCUMENTADOS	ÁREA PROTEGIDA
2021	Enero	del 23 al 31	Cañón de Río Dulce, Río Chocón Machacas, Biotopo Chocón Machacas, Río Lámpara, Río Tatin, Río Manzanita, Isla de Pájaros, El Golfete, Sendero Las Escobas, Cerro San Gil, Bioestación Carboneras, Quebrada del Ávila	Parque Nacional Río Dulce y Reserva Protectora de Manantiales Cerro San Gil
	Febrero	del 24 al 27	Río Sarstún, Lagunita Creek, Cerro Sarstún, Laguna Grande, Finca Blue Creek.	Área de Usos Múltiples Río Sarstún
	Marzo	del 21 al 26	Cañón de Río Dulce, Mirador del Cañón, Río Lámpara, El Golfete, Río Chocón Machacas, Río Cáliz, Isla de Pájaros, Río Negro, Lagunita El Salvador, Río Tatin, Río Higuero, Río Bonito, Río Sirenas, Laguna Sirenas, Río Tamejá	Parque Nacional Río Dulce
	Abril	del 25 al 30	Reserva Tapón Creek, Aldea Buena Vista, Finca Santa Ana, Taponcito Creek, Río	Área de Usos Múltiples Río Sarstún



# MAPS



# CONTACT SHEET CATALOG



Cinco catálogos de fotografías generados en el proyecto.





# PARKS AND RESERVES SECTION

## PARQUES Y RESERVAS

Rio Tiquis Creek, Municipio de Livingston

## PARQUES Y RESERVAS

Rio Sirenas, Municipio de Livingston

## PARQUES Y RESERVAS

Rio Caba, Municipio de Livingston

## PARQUES Y RESERVAS

Puerto de Casafé, Rio Casafé, Municipio de Livingston

## PARQUES Y RESERVAS

Black Creek, Municipio de Livingston

No. Pág. 255



### Biotopo Chocón Mechacas

Lugar: Biotopo Chocón Mechacas



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DUR\_0158.DWG



DUR\_0140.DWG



DUR\_0161.DWG



DUR\_0163.DWG



DUR\_0166.DWG



DUR\_0149.DWG



DUR\_0171.DWG



Biodiversidad del Municipio de Livingston

LIVINGSTON

Parques y Reservas Naturales



# EXERCISE WITH CONTACT SHEET CATALOGS

- For the search of each photograph, it must be based on the index, on the title of each Contact Sheet and/or on the code or name of each photograph

## CONTACTS

- If you want more information on how to use this catalog or acquire original photographs of the catalog, contact the email

[botany-zoology@flaar.org](mailto:botany-zoology@flaar.org)

[viic.im8@gmail.com](mailto:viic.im8@gmail.com)



# Location of species on the FLAAR Mesoamerica catalogs

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# FLAAR Mesoamerica 2022

Project: Documentation of the Biodiversity from  
Municipio de Livingston, Izabal  
Photographic record from FLAAR Mesoamerica

Project Manager: Dr Nicholas Hellmuth  
Coordination of editorial and publications: Ing Vivian Díaz de la Roca  
Field Coordinator: María Alejandra Gutiérrez

Presenters:  
Vivian Díaz de la Roca, Victor Mendoza

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