



MISSION REPORTS N°5

MERCI PROJECT
MISSION TO THE ÎLES DES SAINTES
FEBRUARY 2023

Eradication of invasive exotic turtles in the Îles des Saintes, Terre de Haut, Guadeloupe

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CONTEXT

Invasive alien species (IAS) are organisms that have the ability to adapt to foreign environments and threaten local species (competition, predation, etc.). As such, they are considered a strong threat to biodiversity. The "Managing Exotic Reptiles on Caribbean Islands" (MERC I) project, led by the association Caribaea Initiative, aims to establish management plans for invasive exotic reptile species on the islands of the Lesser Antilles based on results from robust scientific studies. In Guadeloupe, the project focuses on the Antillean slider, *Trachemys stejnegeri*, and the Yellow-bellied slider turtle, *T. scripta* (Fig. 1), both considered invasive alien species in the Lesser Antilles.



Figure 1. Antillean slider *Trachemys stejnegeri* (foreground) and Yellow-bellied slider turtle *T. scripta* (background), in Guadeloupe. Photo © C. Cambrone.

Following the communication of the progress of the MERC I project, in particular on the study and control of the Yellow-bellied slider turtle in Martinique, the Conservatoire du Littoral, in agreement with the Town Hall of Terre de Haut - one of the islands of Les Saintes, south of Guadeloupe – contacted scientists from Caribaea Initiative to carry out a campaign to eradicate a pond infested by trachemids (15.870037°N, 61.579003°W; WGS84 datum; Fig. 2). According to the estimate of the Coast Guard, Philippe De Proft (Environment Police), the pond of about 5 m² is currently invaded by nearly 80 turtles. Following the infestation and according to the testimony of Mr. De Proft, the appearance of the pond has changed completely in three years. For example, it used to host many species of aquatic plants that have now completely disappeared. In addition, the water is now saturated with organic matter due to the droppings of overpopulated turtles in the pond. An attempt

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to eradicate the population of invasive turtles seems therefore necessary to ecologically restore the pond and to avoid the infestation of other water environments on the island.



Figure 2. Location of the pond that needs to be treated for the infestation of Antillean slider turtles (yellow dot) in Terre de Haut, Îles des Saintes, Guadeloupe. © Google Earth

ACTIONS CARRIED OUT

Setting traps

During this first mission to Les Saintes, the team set up three “sunbathing” traps to capture the turtles (Fig. 3). Every 3-4 days, the team will carry out a mission to Les Saintes to recover trapped individuals and collect biometric data and biological samples that will help to better understand the ecology of these invasive populations (see Project continuation below). Mr. De Proft will make daily inspections of the traps to detect if turtles have been captured, and will then communicate to the Caribaea Initiative team whether or not they need to make the trip.

In the case of invasive alien species, the destruction of captured specimens is mandatory according to the environmental code, unless waived. Therefore, captured individuals will be euthanized in accordance with the European directive governing the use of animals for scientific purposes and in accordance with the euthanasia procedures to minimise stress and pain. This procedure will be carried out by Mr. Cambrone, who has been trained in the use of non-resident wildlife animals for scientific purposes (see Appendix).

Public awareness

During the installation of the traps, passers-by (locals and tourists) asked the team questions about the project. Locals explained that they used to feed the turtles in the pond. An explanatory panel is necessary to make the local population and visitors aware of the impact of invasive trachemids on local biodiversity, and to explain the study and the aim of the eradication project on the pond.

An awareness-raising activity was carried out on site for around fifteen 9th grade students from the Collège Archipel des Saintes in Terre de Haut, guided by the Physical Education and Sports teacher, Mr. Floc'hlay. Students asked questions about the IAS and the project to the team members.



Figure 3. Set up of “sunbathing” traps on a pond infested with trachemydes in Terre de Haut, Les Saintes, Guadeloupe. Left: Installation of traps on site. Right: Traps placed and attached.



Figure 4. Meeting with students from the Collège Archipel des Saintes in Terre de Haut about the impact of invasive alien species on local biodiversity and about the project to study and eradicate trachemydes in Les Saintes.

PROJECT CONTINUATION

- The team estimates that around 5-6 missions will be needed to capture all the turtles.
- Morphological data (weight, dimensions of the carapace and the plastron, photos of the temples, plastrons and carapaces) and blood samples will be collected during the missions. These data will make it possible to detect variations in the invasive populations of Guadeloupe compared to the original populations.

- Following the euthanasia of captured individuals, the digestive tract will be recovered for genetic analysis of stomach contents in order to determine the food preferences of this species in the invaded territories and to better understand its impact on local biodiversity.
- An explanatory panel will be prepared and then placed at the edge of the pond.



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ATTESTATION
DE SUIVI DE
FORMATION A L'UTILISATION D'ANIMAUX
DE LA FAUNE SAUVAGE NON-HEBERGEE A FINS SCIENTIFIQUES
DESTINEE AUX PERSONNES CONCEVANT OU REALISANT
LES PROCEDURES EXPERIMENTALES
(ExpeFS-F1 Concepteur)

Vu le décret n°2013-118 du 01 Février 2013, et les arrêtés afférents, relatif à la protection des animaux utilisés à des fins scientifiques
Vue l'approbation de la formation par le Ministère chargé de l'Agriculture sous le n° F-75-MNH-N-F1-15 en date du 05/04/2022

Je soussigné, Dr. Pierre-Yves HENRY, responsable pédagogique de la formation, certifie que :

M. Christopher CAMBRONE

a suivi la totalité de cette formation à l'utilisation d'animaux à fins scientifiques destinée aux personnels assurant les fonctions de conception et/ou réalisation de procédures expérimentales, correspondant à la fonction 1 - Concepteur (équivalent à fonction C de FELASA, fonction b dans la Directive 2010/63/EU du Parlement Européen et du Conseil du 22/09/2010 sur la protection des animaux utilisés à fins scientifiques, permettant également d'assurer les fonctions c – soigneur, et d – mise à mort des animaux). Cette formation était composée d'un module de base obligatoire (25 heures), ayant eu lieu du 14/03/2021 au 25/03/2021 en distanciel synchrone, d'un module complémentaire spécialisé obligatoire (32 heures, incluant 15h de démonstrations pratiques/TD), ayant eu lieu du 05/09/2022 au 09/09/2022 au Centre d'Etudes Biologiques de Chizé, Villiers-en-Bois (79), avec **spécialisation lors des démonstrations pratiques sur le groupe d'espèces: petits oiseaux**, et les démonstrations pratiques (15h) du module complémentaire spécialisé, ayant eu lieu du 13/09/2022 au 15/09/2022 à la Station d'Ecologie Théorique et Expérimentale, Moulis (09), avec **spécialisation lors des démonstrations pratiques sur le groupe d'espèces: reptiles (lézards)**.

L'intéressé(e) a satisfait au contrôle des connaissances sanctionnant cette formation.

fait à Paris, le 06/12/2022

Pour en jouir avec les droits et prérogatives qui y sont attachés.

Le responsable pédagogique :

Dr. Pierre-Yves HENRY

Service de la Formation Continue

Direction de l'Enseignement et de la Formation

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