



January 2018

## The ATE Bulletin N°2

The team of Saint-Barthélemy's Territorial Environment Agency is pleased to present you the second scientific Bulletin of the ATE.

The ATE Bulletin is an exclusively digital publication that will appear irregularly over time and will be disseminated via the website, the Facebook page and through the ATE mailing list.

The goal of this bulletin is to summarize, in a succinct and accessible way, the new naturalistic data and the inventories of the fauna and flora of the island.

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# Short notes on the biodiversity of Saint Barthélemy

Jim Boos

## First observation of cannibalism of *Alsophis rijgersmaei*.



On April 3rd, 2017, on the road leading to Gouverneur Beach, an adult *Alsophis rijgersmaei* is observed and photographed devouring a smaller individual of the same species. This observation seems to be the first evidence of cannibalism in the genus *Alsophis*.

Karl Questel

## Size of preys of the lizard *Pholidoscelis plei* (Duméril & Bibron, 1839)

According to Censky (1996 in Breuil, 2002) the maximum size of the prey of *Pholidoscelis plei* is 3.4 cm. Breuil (2002) mentions an observation of predation on a larger prey, a 5 cm cricket. However, more recent observations show that *Pholidoscelis*

*plei* are not limited to small prey, but can potentially attack anything they are able to kill, including large centipedes.



November 2009, large male filmed attacking and devouring a *Scolopendra subspinipes* of about 13 cm.



May 16, 2014 large male filmed attacking and devouring an adult *Hemidactylus mabouia* (7 cm, snout-cloaca).



On June 12, 2014 a female photographed attacking and devouring a caterpillar *Manduca sexta* about 8 cm on the Îlet Frégate.

### Reference :

- Breuil, M. 2002. Histoire naturelle des amphibiens et reptiles terrestres de

l'archipel guadeloupéen. Guadeloupe Saint Martin, Saint Barthélemy. *Patrimoines Naturels*, Paris 54 :1-339p.

Karl Questel, Clémence Jarry & Grégory Moulard

## New observation of the Northern Parula *Setophaga americana* (Linnaeus, 1758) on Saint-Barthélemy



November 8, 2017, a Northern Parula *Setophaga americana* was observed on Île Fourchue feeding on aphids in low vegetation.

The last mention of this species on the island is made in Raffaele *et al.* 1998 (without precise dates of observations) where it is considered common. Since this publication, no other observation of this migratory species has been recorded ( $\pm$  20 years).

### Référence :

- Raffaele H., Wiley J., Garrido O., Keith A. & Raffaele J. 1998. A guide to the birds of the West-Indies. Helm, London, 511 p.



Karl Questel

## Proposal of a methodology to classify native species and exotic species in order to prioritize conservation actions or their management.



*Ctenonotus gingivinus* on îlet Coco

This proposal of a methodology is intended to become a decision support tool for the management of natural areas and preservation actions in Saint-Barthélemy. The objective is to define a protocol to classify species, in light of the threats they incur or represent. This classification would make it possible to formalize and legitimize the prioritization of intervention areas and actions of the ATE. To illustrate this method, it is tested here on the herpetofauna of the island. This method is still under discussion and improvements may be made in the future when other taxa are submitted.

### 1 - Proposal of criteria to classify the animal and plant species in danger or exotic of the island.

#### 1a - Native species.

##### 1aa - Icons # 1 Badges.

##### 1aaa - Icons #2 Additional threat factors.

#### 1b - Exotic species.

##### 1bb - Icons #1 Badges.

##### 1bb - Icons #2 Aggravating factors.

### 2 - Evolution of the herpetofauna of Saint-Barthélemy.

#### 2a - The new entries on the list.

#### 2b - The herpetofauna of Saint-Barthélemy subjected to the criteria.

## Proposal of criteria to classify the animal and plant species in danger or exotic of the island.

### 1a Native species.

#### 1aa Icons # 1 Badges.



The number in the badges indicates the number of islands in the Lesser Antilles where the endemic species is still present during the update of the sheet, not necessarily its original distribution.

For example, *Alsophis rijgersmaei* is originally endemic to 3 islands (St. Barthélemy, St. Martin and Anguilla), nowadays this species has disappeared from St. Martin, so it is not the number 3 but the 2 which appears in the badge. The conservation responsibility for this species in St. Barthélemy is therefore a priority.

1 - 2	3 - 4	5 - 6	7 +
(+4 points)	(+3 points)	(+2 points)	(+1 point)

The lower the number, the brighter the color and the more the species earns points in the ranking of priority species in the conservation measures.

**1 - 2** **A** - A red species is present at most in 2 islands of the Lesser Antilles and nowhere else in the world. If it disappears from these islands, it will definitely be scratched off the surface of the earth.

**3 - 4** **B** - An orange species is not necessarily rare, it can even be very common (like Anolis). But because of its globally restricted distribution, constant arrivals of exotic species through plant containers and continued fragmentation of habitats; it stays vulnerable if it is associated with **additional threat factors**.

**5 - 6** **7 +** **C** - For a yellow or green species, same as for orange species.



**D** - Some species are not endemic to the Antilles, but come to the island to nest (migratory birds, sea turtles). They are stamped here as **Native +**.



**E** - A violet species has no note, it is an endemic species of St. Barthélemy or the Anguilla Bank. Its data is insufficient and it can not be subject to the criteria in the current state of knowledge. Because of its status as an endemic species, this species must be studied more extensively to assess its vulnerability.

## 1aaa Icons #2 Additional threat factors.



### 1 - Loss of suitable habitat. (+3 points)

This is the major threat factor on endemic species.

Habitat loss includes; destruction of native vegetation cover, urbanization, fragmentation of ecological corridors, human omnipresence and domestic animals, destruction or disruption of breeding and foraging sites.

The following factors are often its logical continuation.



### 2 - Predation or competition with an exotic species. (+2 points)

This factor is related to the loss or degradation of the habitat (spread of goats, *Antigonon leptopus*...).

This factor also indicates exotic species that threaten native species (Cats, *Cactoblastis*, *Iguana iguana*, Lionfish ...).



### 3 - Persecution. (+1 point)



Often a threat associated with habitat loss, species are found in the property of some people who are not willing to accept wild animals in their property.

Poaching, harvesting, collection and use of pesticides are included in this factor.

These criteria are not intended to replace those on the IUCN Red List, but rather to make a local assessment, especially for small islands that can not be subjected to IUCN methodology due to their small area size. They take into account the global distribution of the species (badges) and the threats identified locally (additional threat factors).

A species may be classified as Least Concern (LC) globally, but it can be highly threatened locally and vice versa.

For example, the Least Tern (*Sternula antillarum*) is classified as Least Concern (LC) (IUCN Red List 19 December 2017) globally. On the other hand, once submitted to the criterion proposed here, it becomes **PRIORITY** in the measures to be taken locally in favor of this species.

 <p>© 2008 Karl Questel</p>	<p><b><i>Sternula antillarum</i> (Lesson, 1847)</b></p> <p>Famille : Sternidae</p> <p>Petite Sterne Least Tern</p>
	
<p><b>Priorité : 7/10</b></p>	
<p>Menaces identifiées</p>	<ul style="list-style-type: none"> <li>- Piétinements des oeufs et des poussins.</li> <li>- Prédation par les chats et les chiens.</li> <li>- Inondation de l'aire de ponte.</li> <li>- Coupe de la mangrove.</li> <li>- Collecte des oeufs.</li> </ul>

## 1b Exotic species.

These criteria make it possible to evaluate both the exotic species already present on Saint-Barthélemy, as well as those that are likely to arrive.

### 1bb Icons #1 Badges.



#### Category A (+4 points)

Species whose negative impacts on native biodiversity are identified in Saint-Barthélemy or in other islands of the Lesser Antilles.

For example :

- **Flora** - The Mexican creeper, or Coralita (*Antigonon leptopus* Hook. & Arn), already present on the island, with its rapid growth, grows over the slower native species and ends up smothering them.
- **Fauna** - The Puerto Rican Crested Anole (*Ctenonotus cristatellus* (Duméril & Bibron, 1837)) has not been reported on St. Barthélemy, but is present in St. Martin (Questel, 2011) and Dominica. On the latter island it enters into competition and takes the place of the endemic species *Ctenonotus oculatus* (Cope, 1879) (Doggett, 2017).



#### Category B (+3 points)

Species whose negative impacts on native biodiversity are identified in islands in the Greater Antilles, Bahamas or elsewhere in the Caribbean Basin.

For example :

- **Fauna** - The *Boa constrictor* is invasive in Aruba, it threatens the endemic rattlesnake and many birds (Reinert et al, 2008?). As the hygrometry of Aruba is not so different from that of St. Barth, the Boa could potentially settle and prosper here too.



#### Category C (+2 points)

Species whose negative impacts on native biodiversity has been identified outside the Caribbean basin (Hawaii, Polynesia, ect ...)

For example :

- **Flora** - Glory bush (*Tibouchina urvilleana* (DC.) Cogn.) Is invasive in Hawaii, New Zealand and French Polynesia, replacing native species where it is established.
- **Fauna** - The Brown Snake (*Boiga irregularis* (Bechstein, 1802)), invasive in some Pacific islands, is responsible for the disappearance of many endemic birds (ISSG).



#### Category D (+1 point)

Species whose negative impacts on native biodiversity have not been observed, but whose biology and environmental tolerances are compatible with a possible invasion.

For example :

- **Flora** - Many species of Fabaceae, Asparagaceae and Poaceae are introduced regularly on the island, some can acclimate and become invasive, further study is underway on this subject.
- **Fauna** - The Green Anole (*Anolis carolinensis* (Voigt, 1832)) is already naturalized in several islands, its impact has not yet been demonstrated at the moment, but it remains a species to be closely monitored.



#### Category E (-1 point)

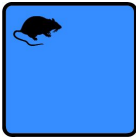
Species whose biology and environmental tolerances are unlikely to be compatible with an invasion in the near future on St. Barthélemy.

For example :

- **Flora** - *Epipremnum* spp., (Pothos) are invasive in Saba in the moist forest. In St. Barthelemy, the Pothos are limited to gardens, the climate of the island is too dry for these species to become naturalized.

- **Fauna** - the Grivet Monkey (*Chlorocebus aethiops*) is invasive in St. Kitts and begins to be invasive in St. Martin. St. Barthelemy, unlike the islands mentioned above, has no dense forest, let alone fruit tree fields, some monkeys have already found themselves in the wild, but have never managed to survive without getting close to dwellings.

## 1bb Icons #2 Aggravating factors.



1 : species known of less than 10 specimens on St. Barthelemy (+1 point)



2 : species close to naturalization (isolated populations) (+2 points)



3 : species largely naturalized (+3 points)



4 : species that threatens a native species ranked at least 5/10 (+4 points)

### N.B.

Many criteria are not taken into account in the classification proposed here, such as the differentiation between native species widely distributed on the island and those with limited distribution, nor the dynamics of these populations. The criteria proposed here make it possible to make a first sorting in these species.

Once this first sorting is done, more specific studies can be put in place, in order to take into account other data that may be useful for the management of these species.

## 2

## Evolution of the herpetofauna of Saint-Barthélemy.

## 2a

## The new entries on the list.

At the end of 2017, the list of the Saint-Barthélemy herpetofauna is updated to 31 species.

Four exotics added:

1 lizard, *Ctenonotus distichus* (Cope, 1861).

1 snake, *Storeria cf. dekayi* (Holbrook, 1839).

2 frogs *Eleutherodactylus planirostris* (Cope, 1862) and *Dryophytes squirellus* (Daudin, 1800).

Of the native species, two are too rare and will not be subject to the criteria here, namely sea turtles :

*Caretta caretta* (Linnaeus, 1758) and *Lepidochelys olivacea* (Eschscholtz, 1829).

All exotic reptiles with one or more recurrent entrance means (Plant Containers in particular) will be subject to this, including the known species of a single specimen.

Accidental species, that is to say those that do not have recurrent entrance means, and that ended up on the island by chance or escape from someone's home, will not be subject to the criteria.

These species are among others:

**Snakes**

*Python regius* (Shaw, 1802) - 2 specimens escaped from someone's house.

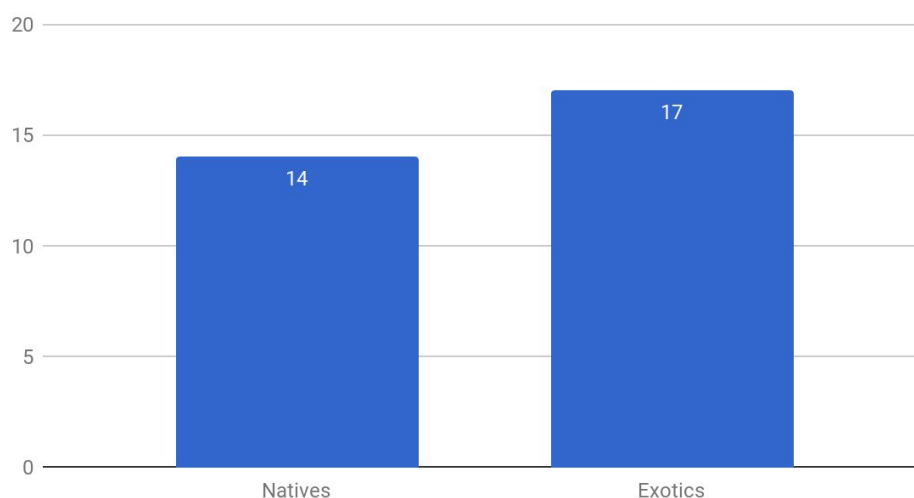
*Python bivittatus* Kuhl, 1820 - 1 specimen escaped from someone's house.

*Thamnophis sirtalis* (Linnaeus, 1758) - 1 specimen escaped from someone's house.

**Salamander**

*Salamandra salamandra terrestris* Lacépède, 1788 - 1 specimen found in a salad in a supermarket (Breuil *et al.* 2012).

## Herpetofauna of Saint-Barthélemy 2017



For most exotic species, there is no indication that they will settle permanently on the island. But if no control nor treatment of plant containers are made thoroughly and sustainably, the arrival drip of breeding individuals of these species will significantly increase the chances of colonization of the latter.



## 2b

## The herpetofauna of Saint-Barthélemy subjected to the criteria.

## Native species




Family	Species	Typos	Code	Note
Dactyloidae	<i>Ctenonotus gingivinus</i> (Cope, 1864)	● 2	B2	5/10
Iguanidae	<i>Iguana delicatissima</i> Laurenti, 1768	● 3 2 1	C123	7/10
Teliidae	<i>Pholidoscelis plei plei</i> (Duméril & Bibron, 1839)	● 2 1	B23	6/10
Scincidae	<i>Mabuya powelli</i> (Hedges & Conn, 2012)	● 3 2	A12	9/10
Sphaerodactylidae	<i>Sphaerodactylus parvus</i> King, 1962	● 2	B2	5/10
Sphaerodactylidae	<i>Sphaerodactylus sputator</i> (Sparman, 1784)	● 2	C2	4/10
Phyllodactylidae	<i>Thecadactylus rapicauda</i> (Houttuyn, 1782)	● 1	D3	2/10
Dipsadidae	<i>Alsophis rijgersmaei</i> Cope, 1869	● 3 2 1	A123	10/10
Typhlopidae	<i>Antillotyphlops annae</i> (Breuil, 1999)	● ●	AE	?/10
Cheloniidae	<i>Chelonia mydas</i> (Linnaeus, 1758)	● 3 2	D13	5/10
Cheloniidae	<i>Eretmochelys imbricata</i> (Linnaeus, 1766)	● 3 2	D13	5/10
Dermochelyidae	<i>Dermochelys coriacea</i> (Vandelli, 1761)	● 3	D1	4/10




1	2	3	4	5	6	7	8	9	10
LEAST CONCERN			WATCH			PRIORITY			




## Exotic species

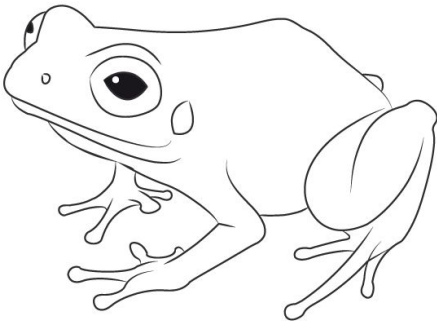

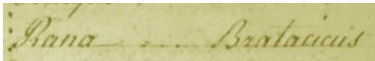
Family	Species	Typos	Code	Note
Dactyloidae	<i>Ctenonotus distichus</i> (Cope, 1861)	● ●	D1	2/10
Dactyloidae	<i>Deiroptyx equestris</i> (Merrem, 1820)	● ●	D1	2/10
Dactyloidae	<i>Norops sagrei</i> (Duméril & Bibron, 1837)	● ●	B2	5/10
Dactyloidae	<i>Anolis carolinensis</i> (Voigt, 1832)	● ●	D2	3/10
Iguanidae	<i>Iguana iguana</i> (Linnaeus, 1758)	● ● ●	A34	11/10
Gymnophthalmidae	<i>Gymnophthalmus underwoodi</i> Bocourt, 1881	● ●	D3	4/10
Gekkonidae	<i>Hemidactylus mabouia</i> (Moreau de Jonnes, 1818)	● ●	D3	4/10
Colubridae	<i>Pantherophis guttatus</i> (Linnaeus, 1766)	● ●	D3	4/10
Colubridae	<i>Storeria cf. dekayi</i> (Holbrook, 1839)	● ●	D1	2/10
Typhlopidae	<i>Indotyphlops braminus</i> (Daudin, 1803)	● ●	D3	4/10
Testudinidae	<i>Chelonoidis carbonarius</i> (Spix, 1824)	● ●	A3	7/10
Emydidae	<i>Trachemys scripta elegans</i> (Wied, 1839)	● ●	B2	5/10
Eleutherodactylidae	<i>Eleutherodactylus johnstonei</i> Barbour, 1914	● ●	D3	4/10
Eleutherodactylidae	<i>Eleutherodactylus martinicensis</i> (Tschudi, 1838)	● ●	D3	4/10
Eleutherodactylidae	<i>Eleutherodactylus planirostris</i> (Cope, 1862)	● ●	D1	2/10
Hylidae	<i>Dryophytes squirellus</i> (Daudin, 1800)	● ●	D1	2/10
Hylidae	<i>Osteopilus septentrionalis</i> (Duméril & Bibron, 1841)	● ●	B3	6/10

1	2	3	4	5	6	7	8	9	10	11
EXOTIC				POTENTIALLY INVASIVE			INVASIVE			


FAUNA - AMPHIBIANS	EXOTIC
 <p>© 2011 Karl Questel</p>	<p><i>Eleutherodactylus johnstonei</i> Barbour, 1914</p>
	<p>Family : Eleutherodactylidae</p> <p>Lesser Antillean Frog Hylode de Johnstone</p>
	 
<p>Priority in control measures : 4/10 (D3)</p>	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p>The first confirmation of the presence of this species in St. Barthélemy was made by Michel Breuil in 1996 (Breuil, 2002). 21 years later, this species remains limited to urban areas or around houses where watering is abundant.</p>	


FAUNE - AMPHIBIENS	EXOTIC
 <p>© 2010 Karl Questel</p>	<p><i>Eleutherodactylus martinicensis</i> (Tschudi, 1838)</p>
	<p>Family : Eleutherodactylidae</p> <p>Martinique Frog Hylode de la Martinique</p>
	 
<p>Priority in control measures : 4/10 (D3)</p>	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p>The first confirmation of the presence of this species in St. Barthélemy was made by Hinrich Kaiser in 1989 (Kaiser, 1992). 28 years later, this species is widely distributed on the island, mainly around dwellings, but also in non-urban areas. Although widely distributed, density seems low (based on listening to songs at night).</p>	

FAUNA - AMPHIBIANS	EXOTIC
	<i>Eleutherodactylus planirostris</i> (Cope, 1862)
	Family : Eleutherodactylidae Greenhouse frog
	 
	Priority in control measures : 2/10 (D1)
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p><b>NEW</b></p> <p>Species from Cuba, Bahamas and Cayman Islands. It is exotic in Jamaica, mainland USA, Hawaii, Guam and Mexico (Hedges <i>et al.</i>, 2004). But also in Bequia (Caribherp, 2017) and St. Martin (Yokoyama, 2013). In November 2017, 8 specimens of this species were intercepted in plant containers from Florida. For now, there is no indication that this species has settled permanently on the island.</p>	




FAUNE - AMPHIBIENS	NATIVE
	<i>Eleutherodactylus sp.</i>
	Family : Eleutherodactylidae St. Barthélemy Frog
	  <p>Mention of the <i>Rana</i> in L'Herminier, 1815</p>
	Priority in protective measures : 0/10 (Extinct species)
<p>The first mention of a frog on St. Barthélemy was made by Felix Louis L'Herminier in 1815 (L'Herminier, 1815) under the name <i>Rana</i>.</p> <p>In 1821, Auguste Plée collected a frog on St. Barthélemy which he describes as similar to those of Puerto Rico and Martinique, without webbed feet (Plée <i>in</i> Breuil, 2002).</p> <p>This frog appears to be present in MNHN collections under number MNHN 4881 (Breuil, 2002).</p> <p>This species, if it belongs to an endemic species, is probably extinct today.</p>	









FAUNA - AMPHIBIANS	EXOTIC
 <p>© 2017 Karl Questel</p>	<p><i>Dryophytes* squirellus</i> (Daudin, 1800)</p> <p>Family : Hylidae</p> <p>Squirrel Tree Frog Rainette de la Caroline</p> <div data-bbox="826 488 970 629"> </div> <div data-bbox="975 488 1114 629"> </div>
Priority in control measures : 2/10 (D1)	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p><b>NEW</b></p> <p>Species from the USA. Exotic at Grand Bahama Island and Little Bahama Bank (Hammerson &amp; Hedges, 2017). In November 2017, a specimen of this species was intercepted in a plant container from Florida. For now, there is no indication that this species is permanently established on the island.</p> <p>*<i>Hyla</i> is replaced by <i>Dryophytes</i> according to the new classification proposed by Duellman <i>et al.</i> 2016.</p>	

FAUNA - AMPHIBIANS	POTENTIALLY INVASIVE
<p>© 2006 Karl Questel</p> 	<p><i>Osteopilus septentrionalis</i> (Duméril &amp; Bibron, 1841)</p> <p>Family : Hylidae</p> <p>Cuban Treefrog Rainette de Cuba</p> <div data-bbox="826 1563 970 1704"> </div> <div data-bbox="975 1563 1114 1704"> </div>
Priority in control measures : 6/10 (B3)	
Impacts identified	- Competition or / and predation on native species.
Actions taken in the past against this species	<ul style="list-style-type: none"> <li>- Publication of control recommendations in the local press.</li> <li>- Elimination of adults and tadpoles when seen.</li> </ul>

<b><i>Osteopilus septentrionalis</i></b>	
Actions in progress against this species	- None
Actions to come against this species	- None
<p>Species from Cuba, Bahamas and Cayman Islands. It is exotic in the USA, Hawaii, Costa Rica, Puerto Rico, the British and American Virgin Islands, Turks and Caicos, Anguilla, St. Martin, Nevis and Antigua (Somma, 2017). Arrived on St. Barthélemy in 1995, it is between 1998 and 2000 that this species invaded the whole island (Breuil, 2002). In 1999, Hurricanes Jose and Lenny brought heavy rains, the gullies of the island flowed for months (for the anecdote, freshwater shrimps and eels were found at more than 500 meters of a pond in a gullies of St. Jean). Taking advantage of this exceptional abundance of freshwater on the island, the treefrogs massively reproduced, they leaped everywhere on the roads at night, the croaking of this species had become classic in the nocturnal ambiances. Nowadays, following several years of droughts, the population of this species has greatly decreased and is limited to a few neighborhoods and often associated with old cisterns. In November 2017, 6 specimens of this species were intercepted in plant containers from Florida, indicating that arrivals of this species have not stopped since 1996. Although the situation seems to have improved, this species remains to be monitored.</p>	

FAUNA - REPTILE	NATIVE
	<b><i>Ctenonotus* gingivinus</i> (Cope, 1864)</b>
	<b>Family : Dactyloidae</b> <b>Anguilla Bank Tree Anole</b> <b>Anolis du Banc d'Anguilla</b>
	 
<b>Priority in protective measures : 5/10 (B2)</b>	
Threats identified	<ul style="list-style-type: none"> <li>- Predation by cats.</li> <li>- Potential competition with exotic Anolis.</li> </ul>
Actions taken in the past for this species	- None
Actions in progress for this species	- Presentation and familiarization with school children by the Territorial Environment Agency.
Actions to come for this species	- None
<p>Species endemic of Anguilla Bank (St. Barthélemy, St. Martin, Anguilla and some satellite islands). It is the most common reptile, present on the entire island. Because of its geographical limitation, continuous predation by cats and the arrival of several other exotic species of anole on the island, this species needs to be monitored.</p>	
<p>*<i>Anolis</i> is replaced by <i>Ctenonotus</i> according to the new classification proposed by Nicholson <i>et al.</i> 2012.</p>	

FAUNA - REPTILE	EXOTIC
	<b><i>Ctenonotus* distichus</i> (Cope, 1861)</b>
	Family : Dactyloidae  Bark Anole, Hispaniolan Gracile Anole Anolis écorce d'Hispaniola
	 
<b>Priority in control measures : 2/10 (D1)</b>	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p><b>NEW</b>            Species from Hispaniola and Bahamas. Exotic in Florida.            This species had never been mentioned in the Lesser Antilles before.            In November 2017, a specimen of this species was intercepted in a plant container from Florida. For now, there is no indication that this species is permanently established on the island.</p> <p>*<i>Anolis</i> is replaced by <i>Ctenonotus</i> according to the new classification proposed by Nicholson <i>et al.</i> 2012.</p>	

FAUNA - REPTILE	EXOTIC
	<b><i>Anolis carolinensis</i> (Voigt, 1832)</b>
	Family : Dactyloidae  Green Anole Anolis de Caroline
	 
<b>Priority in control measures : 3/10 (D2)</b>	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None

***Anolis carolinensis***

Species from the USA. Exotic in Anguilla, Bahamas, Cayman Islands, Guam, Mariana Islands (Mexico), Nansei-shoto and Ogasawara-shoto (Japan), Palau and Spain.

Already known on St. Barthelemy by a specimen found in Lurin in 2016 (Questel, 2017).

In November 2017, 22 specimens of this species were intercepted in plant containers from Florida. For now, there is no indication that this species is permanently established on the island.



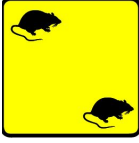


*Anolis carolinensis* and *Norops sagrei* collected in two plant containers from Florida.





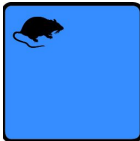
*Ctenonotus gingivinus* male seeking to fight with freshly caught exotic anoles.



FAUNA - REPTILE	POTENTIALLY INVASIVE
	<b><i>Norops* sagrei</i> (Duméril &amp; Bibron, 1837)</b>
	Family : Dactyloidae  <b>Cuban Brown Anole</b> <b>Anolis brun de Cuba</b>
	 
<b>Priority in control measures : 5/10 (B2)</b>	
Impacts identified	<ul style="list-style-type: none"> <li>- Predation and competition with native Anoles (Florida, Cayman Islands).  <a href="http://issg.org/database/species/impact_info.asp?si=603&amp;fr=1&amp;sts=sss&amp;lang=EN">http://issg.org/database/species/impact_info.asp?si=603&amp;fr=1&amp;sts=sss&amp;lang=EN</a> </li> </ul>
Actions taken in the past against this species	<ul style="list-style-type: none"> <li>- None</li> </ul>
Actions in progress against this species	<ul style="list-style-type: none"> <li>- None</li> </ul>
Actions to come against this species	<ul style="list-style-type: none"> <li>- None</li> </ul>
<p>Species from Cuba and Bahamas. Exotic to Jamaica, Grand Cayman, Swan Island, Grenada, St. Vincent, Canouan (Grenadines), Barbados, St. Martin, St. Lucia, Mexico, Belize, Bahia Islands, Aruba, Hawaii, Taiwan, USA, Turks and Caicos Islands (Burgess, 2012).</p> <p>Two isolated populations with breeding specimens were identified, one in Colombier (Moulard G) in 2014 and the other in Lurin (Questel, 2017) in 2016.</p> <p>In November 2017, 31 specimens of this species were intercepted in plant containers from Florida.</p> <p>Given the recurrence of their presence in containers, and the frequency of importation of exotic plants (<math>\pm 4</math> containers per week) concealing breeding specimens (<math>\pm 4</math> per container), the establishment of this species in the long term on St. Barthélemy is highly conceivable.</p> <p><i>*Anolis</i> is replaced by <i>Norops</i> according to the new classification proposed by Nicholson <i>et al.</i> 2012.</p>	



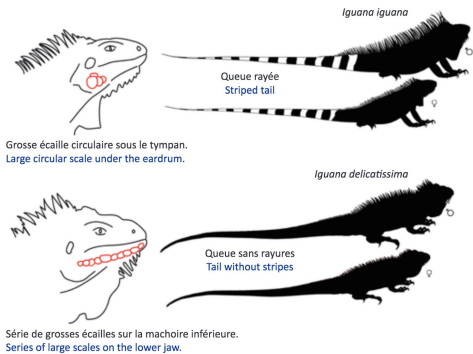


Female *Norops sagrei* with a particular dorsal pattern, collected in a plant container incoming from Florida.






FAUNA - REPTILE	EXOTIC
	<b><i>Deiropyx* equestris</i> (Merrem, 1820)</b>
	<p>Family : Dactyloidae</p> <p><b>Knight Anole, Cuban Giant Anole</b>  <b>Anolis chevalier, Anolis géant de Cuba</b></p> <div data-bbox="810 483 1098 622">   </div>
<b>Priority in control measures : 2/10 (D1)</b>	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p>Species from Cuba. Exotic Florida, Hawaii, Cayman Islands and Canary Islands.          Already known on St. Barthélemy by 5 individuals found between 2013 and March 2017 (Questel, 2017).          A specimen was photographed after hurricane Irma and 3 others captured in plant containers from Florida in November 2017.          The 9 individuals were all adult males.          For now, there is no indication that this species is permanently established on the island.          With 19 cm of body length, these are the largest anole, much larger than all the other species present in the Lesser Antilles.</p> <p><i>*Anolis</i> is replaced by <i>Deiropyx</i> according to the new classification proposed by Nicholson <i>et al.</i> 2012.</p>	



Photographs showing the difference in size between an exotic *Deiropyx equestris* male (bottom) and a native *Ctenonotus gingivinus* male (top). It is easy to guess which of the two species would win a territorial war, or who would eat the other.

FAUNA - REPTILE	INVASIVE																														
 <p>© 2013 Karl Questel</p>	<p><i>Iguana iguana</i> (Linnaeus, 1758)</p> <p>Family : Iguanidae</p> <p>South America Iguana Iguane invasif</p> <div data-bbox="810 488 1246 629">  </div>																														
	<p>Priority in control measures : 11/10 (A34)</p>																														
Impacts identified	<ul style="list-style-type: none"> <li>- Hybridization with <i>Iguana delicatissima</i>.</li> </ul>																														
Actions taken in the past against this species	<ul style="list-style-type: none"> <li>- Search for this species and hybrids on the field, capture and neutralization.</li> <li>- Calls in the local press to encourage people to report the presence of this species in their home.</li> <li>- Publication of a flyer explaining the impact and how to differentiate the two species.</li> <li>- Awareness with school children.</li> </ul>																														
Actions in progress against this species	<ul style="list-style-type: none"> <li>- Search for this species and hybrids on the field, capture and neutralization.</li> <li>- Awareness-raising with school children.</li> </ul>																														
Actions to come against this species	<ul style="list-style-type: none"> <li>- Search for this species and hybrids on the field, capture and neutralization.</li> <li>- Awareness-raising with school children.</li> </ul>																														
<p>Species native to South America and Central America. Some islands in the Lesser Antilles have historically native populations, potentially endemic subspecies (St. Lucia, Grenada, Grenadines, St. Vincent, Montserrat, Saba). Exotic in Anguilla, St. Martin, St. Kitts, Nevis, Antigua, Barbuda, Guadeloupe, Les Saintes, Marie-Galante, Martinique, Puerto Rico, Grand Cayman, Turk and Caicos, Florida, Fiji and Israel (ISSG and Breuil , 2002). The first hybridization observed on St. Barthélemy was made by Grégory Moulard in 2007 (Questel &amp; Moulard, 2008).</p>																															
<table border="1"> <thead> <tr> <th>Hybrides</th><th>20</th></tr> </thead> <tbody> <tr><td>2011</td><td>4</td></tr> <tr><td>2012</td><td>4</td></tr> <tr><td>2013</td><td>2</td></tr> <tr><td>2014</td><td>3</td></tr> <tr><td>2015</td><td>4</td></tr> <tr><td>2017</td><td>3</td></tr> <tr> <th><i>Iguana iguana</i></th><th>13</th></tr> <tr><td>2011</td><td>2</td></tr> <tr><td>2012</td><td>1</td></tr> <tr><td>2013</td><td>2</td></tr> <tr><td>2014</td><td>1</td></tr> <tr><td>2015</td><td>3</td></tr> <tr><td>2017</td><td>4</td></tr> <tr> <td><b>Total</b></td><td><b>33</b></td></tr> </tbody> </table>	Hybrides	20	2011	4	2012	4	2013	2	2014	3	2015	4	2017	3	<i>Iguana iguana</i>	13	2011	2	2012	1	2013	2	2014	1	2015	3	2017	4	<b>Total</b>	<b>33</b>	<div data-bbox="820 1503 1294 1854">  <p><i>Iguana iguana</i></p> <p>Queue rayée Striped tail</p> <p>Grosse écaille circulaire sous le tympan. Large circular scale under the eardrum.</p> <p><i>Iguana delicatissima</i></p> <p>Queue sans rayures Tail without stripes</p> <p>Série de grosses écailles sur la mâchoire inférieure. Series of large scales on the lower jaw.</p> </div>
Hybrides	20																														
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Invasives iguanas neutralized	Illustration differentiating the two species																														





FAUNA - REPTILE	NATIVE
 <p>© 2010 Karl Questel</p>	<b><i>Iguana delicatissima</i> Laurenti, 1768</b>
	<p><b>Family : Iguanidae</b></p> <p><b>Lesser Antillean Iguana</b> <b>Iguane des Petites Antilles</b></p>
	   
<b>Priority in protective measures : 7/10 (C123)</b>	
<b>Threats identified</b>	<ul style="list-style-type: none"> <li>- Habitat loss.</li> <li>- Hybridization with <i>Iguana iguana</i>.</li> <li>- Predation by cats and dogs.</li> <li>- Persecution by individuals and hoteliers who do not like to see them in their property.</li> <li>- Drowning in pools.</li> <li>- Road mortality.</li> <li>- The bacteria <i>Devriesea agamarum</i>, in adult male individuals.</li> </ul>
<b>Actions taken in the past for this species</b>	<ul style="list-style-type: none"> <li>- Awareness-raising with school children.</li> <li>- Publication of a flyer explaining the characteristics and how to differentiate the two species.</li> <li>- Search for <i>Iguana iguana</i> and hybrids, capture and neutralization.</li> <li>- Strengthening the endangered population of Fourchue Island in 2011.</li> <li>- Reintroduction of the species on Frégate Island in 2011, population extinct because of goats.</li> <li>- Development of a nesting site in Saint-Jean.</li> <li>- CMR protocol on Saint-Barthélemy from 2011 to 2015.</li> <li>- CMR on Frégate Island and Fourchue Island.</li> <li>- Care of injured individuals with the participation of veterinarians of the island.</li> <li>- Publications in various local media.</li> <li>- Discovery and studies of the bacteria <i>Devriesea agamarum</i>, suspected to be the cause of fatal dermatitis in adult males.</li> </ul>
<b>Actions in progress for this species</b>	<ul style="list-style-type: none"> <li>- Collaboration with Anguilla as part of a BEST project to create a conservation population of this species on Prickly Pear.</li> <li>- CMR on Frégate Island and Fourchue Island.</li> <li>- Care of injured individuals with the participation of veterinarians of the island.</li> <li>- Awareness-raising with school children.</li> <li>- Search for <i>Iguana iguana</i> and hybrids, capture and neutralization.</li> </ul>
<b>Actions to come for this species</b>	<ul style="list-style-type: none"> <li>- Public event as part of the BEST project for this species.</li> <li>- CMR on Frégate Island and Fourchue Island.</li> <li>- Care of injured individuals with the participation of veterinarians of the island.</li> <li>- Awareness-raising with school children.</li> <li>- Search for <i>Iguana iguana</i> and hybrids, capture and neutralization.</li> </ul>







<b><i>Iguana delicatissima</i></b>	- Research of the bacteria <i>Devriesea agamarum</i> on the islets.
Endemic to the Lesser Antilles, this species only survives today on eight islands: Anguilla, St. Barthélemy, St. Eustatius, Guadeloupe, La Désirade, Petite-Terre, Dominica and Martinique. Includes Chancel Island (Martinique), Fourchue Island, Frégate Island (St. Barthélemy). An adult male was observed on Gros Îlet in 2012 (Questel, Jarry & Blanjot, 2012) as well as an adult female and a burrow trace in 2016 on Petit Jean islet.	






Hybrid Iguanas captured by ATE.




FAUNA - REPTILE	NATIVE
	<b><i>Pholidoscelis* plei plei</i></b> (Duméril & Bibron, 1839)
	<b>Family : Teiidae</b> <b>Anguilla Bank Whiptail</b> <b>Anolis de terre, Ameive du Banc d'Anguilla</b>
	
Priority in protective measures : 6/10 (B23)	
Threats identified	<ul style="list-style-type: none"> <li>- Predation by cats and dogs.</li> <li>- Pesticides.</li> <li>- Persecution by individuals and hoteliers who do not like to see them dig burrows in their gardens.</li> <li>- Drowning in pools.</li> <li>- Road mortality.</li> </ul>
Actions taken in the past for this species	- None
Actions in progress for this species	- Presentation and familiarization with school children by the Territorial Environment Agency.
Actions to come for this species	- None
<p>Endemic species of the Anguilla Bank (St. Barthélemy, St. Martin, Anguilla and some satellite islands. An individual was observed in Martinique in 2012 (Maël Dewynter, comm. pers.) This is the second most common reptile, present on the entire island.</p> <p>Because of its geographical limitation, continuous predation of cats and dogs, human persecution, and especially antecedents of this genus to disappear mysteriously (Guadeloupe, Les Saintes, La Désirade, Petite Terre (Breuil 2002)), this species needs to be monitored.</p> <p><i>*Ameiva</i> is replaced by <i>Pholidoscelis</i> according to the new classification proposed by Goicoechea <i>et al.</i> 2016.</p>	

FAUNA - REPTILE	NATIVE
 <p>© 2008 Karl Questel</p>	<p><i>Mabuya* powelli</i> (Hedges &amp; Conn, 2012)</p>
	<p>Family : Scincidae</p> <p>Anguilla Bank Skink Scinque du Banc d'Anguilla, Couleuvre bâtarde</p>
	  
<p>Priority in protective measures : 9/10 (A12)</p>	
Threats identified	<ul style="list-style-type: none"> <li>- Habitat loss.</li> <li>- Predation by cats.</li> <li>- Road mortality.</li> <li>- Drowning in pools.</li> </ul>
Actions taken in the past for this species	<ul style="list-style-type: none"> <li>- None</li> </ul>
Actions in progress for this species	<ul style="list-style-type: none"> <li>- Presentation and familiarization with school children by the Territorial Environment Agency.</li> </ul>
Actions to come for this species	<ul style="list-style-type: none"> <li>- Project to introduce wild or captive-born individuals to one or more satellite islands to create an breeding population isolated from human activities and domestic animals.</li> </ul>
<p>Endemic species of Anguilla Bank (St. Barthélemy, Anguilla and Tintamarre (Lorvelec <i>et al.</i>, 2017)). Of all the reptiles of St. Barthélemy, the skink is by far the rarest to observe, although it is distributed throughout the island. It is the only viviparous lizard on the island (Questel &amp; Boggio, 2012a).</p> <p>Because of its limited geographical distribution to two islands, the urbanization of its habitat and associated traps (swimming pools), the predation of cats and its rarity, it is the <b>second most endangered reptile of St. Barthélemy</b> and whose protective measures must be given <b>priority</b>.</p> <p>The skink is often confused with <i>Gymnophthalmus underwoodi</i> which is very common.</p> <p>*<i>Spondylurus</i> is replaced by <i>Mabuya</i> according to the new classification proposed by Miralles <i>et al.</i> 2017.</p>	



A juvenile. Similar to adults, with the difference that the tail is blue.

FAUNA - REPTILE	EXOTIC
	<p><i>Gymnophthalmus underwoodi</i> Bocourt, 1881</p>
	<p>Family : Gymnophthalmidae</p> <p>Smooth-scaled Worm Lizard Gymnophthalme d'Underwood, Chauffé soleil</p>
	 
Priority in control measures : 4/10 (D3)	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p>Species native to South America. Exotic in Les Saintes (Breuil &amp; Serre-Collet, 2012), Guadeloupe, La Désirade, Marie-Galante, Antigua, Barbuda, Dominica, Martinique, Barbados, St. Vincent (Breuil, 2002), St. Kitts (Orchard, 2010), St. Martin (Yokoyama, 2013), Hispaniola, Virgin Islands, Cuba (Caribherp). Identified the first time on St. Barthélemy in 2012 (Questel &amp; Boggio, 2012b), this species quickly spread throughout the island.</p> <p>This lizard seems to occupy a vacant ecological niche (no native <i>Gymnophthalmus</i>) and is not considered invasive.</p>	

FAUNA - REPTILE	EXOTIC
	<p><i>Hemidactylus mabouia</i> (Moreau de Jonnes, 1818)</p>
	<p>Family : Gekkonidae</p> <p>Tropical House Gecko Mabouia des maisons, Mourant</p>
	 
Priority in control measures : 4/10 (D3)	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None



***Hemidactylus mabouia***




Species from Africa




This species seems to have been introduced into the New World from the beginning of the triangular trade (Du Tertre, 1667 in Breuil, 2002).

This is the most common gecko in St. Barthélemy.

More than 300 years after its establishment, no impact on native fauna has been demonstrated.




This species is not considered invasive.



FAUNA - REPTILE	NATIVE
 <p>©2003 Karl Questel</p>	<b><i>Sphaerodactylus parvus</i> King, 1962</b>
	<b>Family : Sphaerodactylidae</b> <b>Anguilla Bank Sphaero</b> <b>Sphéro du Banc d'Anguilla</b>
	 
	<b>Priority in protective measures : 5/10 (B2)</b>
Threats identified	- Predation by chickens.
Actions taken in the past for this species	- Aucune
Actions in progress for this species	- Aucune
Actions to come for this species	- Aucune
<p>Endemic species of Anguilla Bank (St. Barthélemy, St. Martin and Anguilla).          Small diurnal gecko spread all over the island, lives discreetly in the litter.          Totally absent from areas where chickens are present.          Because of its geographical limitation and the continuous predation by chickens, this species remains to be watched.</p>	

FAUNA - REPTILE	NATIVE
 <p>© 2015 Karl Questel</p>	<b><i>Sphaerodactylus sputator</i> (Sparrman, 1784)</b>
	<b>Family : Sphaerodactylidae</b> <b>Leeward Banded Sphaero</b> <b>Sphéro œil-de-chat des Petites Antilles</b>
	 








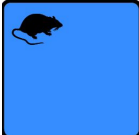
<i>Sphaerodactylus sputator</i>	
<b>Priority in protective measures : 4/10 (C2)</b>	
Threats identified	- Predation by chickens.
Actions taken in the past for this species	- Aucune
Actions in progress for this species	- Aucune
Actions to come for this species	- Aucune
<p>Endemic species of Saint-Eustachius Bank (Saint Kitts, Nevis and Saint-Eustachius) and Anguilla Bank (St. Barthélemy, St. Martin, Anguilla and some satellite islands).</p> <p>Small nocturnal gecko spread all over the island and several satellite islands.</p> <p>Its nocturnal and arboreal manners and its greater geographical distribution make it less sensitive than <i>Sphaerodactylus parvus</i>.</p> <p>This species remains to be watched.</p>	

<b>FAUNA - REPTILE</b>	<b>NATIVE</b>
 <p>© 2011 Karl Questel</p>	<p><i>Thecadactylus cf. rapicauda</i> (Houttuyn, 1782)</p>
	<p><b>Family : Phyllodactylidae</b></p> <p><b>Turnip-tailed gecko</b> <b>Théca commun, Gros Mabouya</b></p>
	 
<b>Priority in protective measures : 2/10 (D3)</b>	
Threats identified	- Persecution by individual and hoteliers who do not like to see them in their property.
Actions taken in the past for this species	- Aucune
Actions in progress for this species	- Aucune
Actions to come for this species	- Aucune
<p><i>Thecadactylus rapicauda</i> was considered a monospecific species, but with the description of <i>Thecadactylus solimoensis</i> Bergmann &amp; Russell, 2007 in South America (Bergmann &amp; Russell, 2007) and <i>Thecadactylus oskrobapreinorum</i> Köhler &amp; Vesely, 2011 in St. Martin (Köhler &amp; Vesely, 2011), the exact identity of <i>Thecadactylus</i> of the Lesser Antilles is no longer so clear. We will use, until clarification of the taxon, the name of <i>Thecadactylus cf. rapicauda</i> to designate the species of St. Barthélemy.</p>	

FAUNA - REPTILE	NATIVE
 <p>© 2016 Karl Questel</p>	<b><i>Alsophis rijgersmaei</i> Cope, 1869</b>
	<p>Family : Dipsadidae</p> <p><b>Anguilla Bank Racer snake</b>  <b>Couresse du Banc d'Anguilla</b></p>
	
<b>Priority in protective measures : 10/10 (A123)</b>	
Threats identified	<ul style="list-style-type: none"> <li>- Habitat loss.</li> <li>- Predation by cats, dogs, rats and chickens.</li> <li>- Persecution by individuals and hoteliers who do not like to see them in their property.</li> <li>- Road mortality.</li> </ul>
Actions taken in the past for this species	<ul style="list-style-type: none"> <li>- Calls in the press to collect <i>Alsophis</i> on people's land to avoid them killing the snakes (2007).</li> <li>- Publications in local press and social networks.</li> </ul>
Actions in progress for this species	<ul style="list-style-type: none"> <li>- Presentation and familiarization with school children by the Territorial Environment Agency.</li> <li>- Publications in the press and social networks.</li> </ul>
Actions to come for this species	<ul style="list-style-type: none"> <li>- Project to introduce wild or captive-born individuals to one or more satellite islands to create a breeding population isolated from human activities and domestic animals.</li> </ul>
<p>Endemic species of Anguilla Bank (St. Barthélemy and Anguilla, extinct on St. Martin).  The genus <i>Alsophis</i> is endemic to the Lesser Antilles (Hedges, Couloux &amp; Vidal, 2009).  It is the most persecuted reptile of the island, by exotic animals and humans in a direct way (killed when sighted) or indirect (road mortality, pesticides, destruction of habitats).  Although scattered all over the island, in situ observations are becoming increasingly rare every year, and calls from individuals and specimens found dead on the road are also falling sharply (ATE database).</p> <p><b>With a score of 10/10, it is the most endangered reptile of St. Barthélemy, all conservation measures in favor of this species should be given priority.</b></p>	



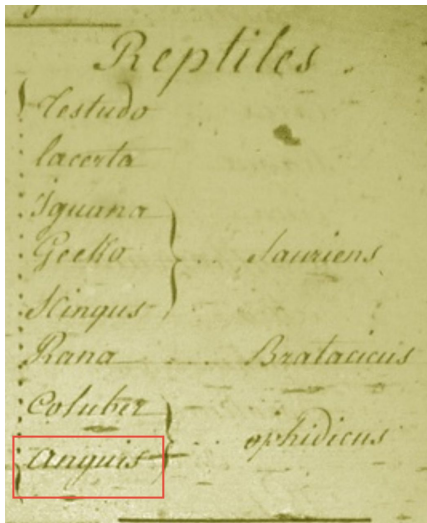


FAUNA - REPTILE	EXOTIC
 <p>© 2013 Karl Questel</p>	<p><i>Pantherophis guttatus</i> (Linnaeus, 1766)</p>
	<p>Family : Colubridae</p> <p>Corn Snake Serpent des blés</p>
	 
<p>Priority in control measures : 4/10 (D3)</p>	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p>Species from the USA. Exotic at Anguilla, Antigua, Bahamas, São Paulo, Grand Cayman, Germany, Bonaire, Curacao, St. Martin, Durban, Canary Islands, Spain, Hawaii and the Virgin Islands (ISSG). The first mention of this species in Saint-Barthélemy dates from 1997 (Breuil 2002), the first reproduction confirmation in 2012 (Questel &amp; Vitri, 2012). To date, 16 Corn snakes have been observed on the island. The Corn snake on St. Barthélemy seems to have nocturnal habits, the majority of the specimens observed were dead on the roads. It is located in Saline, Grand Cul-de-sac, Pointe Milou, Vitet and Marigot. Although there is no evidence of invasiveness of this species, it is a generalist predator and should remain under surveillance.</p>	




FAUNA - REPTILE	EXOTIC
 <p>© 2016 Karl Questel</p>	<p><i>Storeria cf. dekayi</i> (Holbrook, 1839)</p>
	<p>Family : Colubridae</p> <p>Brown snake Couleuvre brune</p>
	 
<p>Priority in control measures : 2/10 (D1)</p>	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None






<b><i>Storeria cf. dekayi</i></b>	
Actions to come against this species	- None
<p><b>NEW</b></p> <p>Species from the USA, this species has never been mentioned outside its range of origin. In December 2016, a specimen of this species was intercepted in a plant container from Florida. For now, there is no indication that this species is permanently established on the island.</p>	




FAUNA - REPTILE	NATIVE
 <p>© 2014 Karl Questel</p>	<p><b><i>Antillotyphlops* annae</i> (Breuil, 1999)</b></p>
	<p><b>Family : Typhlopidae</b></p>
	<p><b>Saint Barts Blindsnake</b> <b>Typhlops de Saint-Barthélemy</b></p>
	
<p><b>Priority in protective measures : ?/10 (AE) - Lack of data</b></p>	
Threats identified	- None
Actions taken in the past for this species	- None
Actions in progress for this species	- None
Actions to come for this species	- None
<p>Endemic species of St. Barthélemy. Discovered in 1996 (Breuil, 1999), then found in 2014 (the specimen of the photo), this small blind snake is known only from 2 specimens. In his list of Saint-Barthélemy reptiles made in 1815, Félix Louis L'Herminier mentions two ophidians, <i>Coluber (Alsophis)</i> and <i>Anguis</i>. The <i>Anguis</i> (Slow-worm, saurians in fact) are not present in the Antilles, it is possible that L'Herminier found a <i>Typhlops</i>, but did not collect the individual. The lack of data does not allow to define what are the threats to this species.</p> <p style="text-align: center;">Mention of "<i>Anguis</i>" in L'Herminier, 1815</p>	
	
<p><small>*<i>Typhlops</i> is replaced by <i>Antillotyphlops</i> according to the new classification proposed by Hedges <i>et al.</i> 2014.</small></p>	



FAUNA - REPTILE	EXOTIC
 <p>© 2015 Karl Questel</p>	<p><b><i>Indotyphlops* braminus</i> (Daudin, 1803)</b></p> <p>Family : Typhlopidae</p> <p>Flowerpot Blindsnake Typhlops brame</p>
	 
Priority in control measures : 4/10 (D3)	
Impacts identified	- None
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p>Species native from India. Exotic all over the world. First observed on Saint-Barthélemy in 1997 (Breuil, 2002), this species is nowadays widespread throughout the island.</p> <p>This species may compete with the endemic Typhlops species <i>Antillotyphlops annae</i>.</p> <p><i>*Ramphotyphlops</i> is replaced by <i>Indotyphlops</i> according to the new classification proposed by Hedges <i>et al.</i> 2014.</p>	

FAUNA - REPTILE	POTENTIALLY INVASIVE
 <p>© 2017 Karl Questel</p>	<p><b><i>Trachemys scripta elegans</i> (Wied, 1839)</b></p> <p>Family : Emydidae</p> <p>Red-eared Slider Tortue de Floride, Trachémyde à tempes rouges</p>
	 
Priority in control measures : 5/10 (B2)	
Impacts identified	<ul style="list-style-type: none"> <li>- Predation on vulnerable or endangered native species.</li> <li>- <a href="http://issg.org/database/species/impact_info.asp?si=71&amp;fr=1&amp;sts=sss&amp;lang=EN">http://issg.org/database/species/impact_info.asp?si=71&amp;fr=1&amp;sts=sss&amp;lang=EN</a></li> </ul>
Actions taken in the past against this species	- Floating traps in the pond of Saint-Jean.

<b><i>Trachemys scripta elegans</i></b>	
Actions in progress against this species	- None
Actions to come against this species	- None
<p>Species native to the Mississippi Basin from Illinois to the Gulf of Mexico. Exotic all over the world, it is one of the most tracked and invasive species in the world.</p> <p>Although this species has been kept in captivity by some peoples on St. Barthélemy since the early 80's, it was not until 2008 (Breuil, Ibéné, Questel, 2011) that it began to be seen in the pond of Saint-jean.</p> <p>Nowadays it is always present in this pond and continues to reproduce there.</p>	

FAUNA - REPTILE	POTENTIALLY INVASIVE
 <p>© 2013 Karl Questel</p>	<b><i>Chelonoidis carbonarius</i> (Spix, 1824)</b>
	<p>Family : Testudinidae</p> <p><b>Red-footed Tortoise</b>  <b>Tortue charbonnière, Molokoï</b></p>
 	
<b>Priority in control measures : 7/10 (A3)</b>	
Impacts identified	- Consumes young shoots of endangered plant species.
Actions taken in the past against this species	- None
Actions in progress against this species	- None
Actions to come against this species	- None
<p>The first mention of this species on St. Barthélemy dates from 1975 (Thomas, 1975 in Breuil, 2002) where apparently it was already very common. Its introduction is probably much older.</p>	







Blind specimen, carapace smooth and cracked, visibly very old.

## Sea turtles

5 species of sea turtles are reported on St. Barthélemy, here we will only deal with species that come to lay on the beaches of the island, are therefore excluded the Loggerhead *Caretta caretta* (Linnaeus, 1758) and Olive Ridley *Lepidochelys olivacea* (Eschscholtz, 1829).



With 124 spawning activities (tracks, confirmed egg-laying and emergence) Saint-Barthélemy is far from being a "hot spot" for the reproduction of these species.

FAUNA - REPTILE	NATIVE
 <p>© 2016 Karl Questel</p>	<p><b><i>Chelonia mydas</i> (Linnaeus, 1758)</b></p>
	<p><b>Family : Cheloniidae</b></p> <p><b>Green Sea Turtle</b> <b>Tortue verte</b></p>
	
<p><b>Priority in protective measures : 5/10 (D13)</b></p>	
<p>Threats identified</p>	<ul style="list-style-type: none"> <li>- Loss of nesting sites (urbanization of beaches, light pollution).</li> <li>- Poaching (anecdotal).</li> <li>- Degradation of feeding grounds (seagrass beds).</li> <li>- Collisions with boats.</li> </ul>
<p>Actions taken in the past for this species</p>	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> </ul>
<p>Actions in progress for this species</p>	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> <li>- Tagging laying females.</li> <li>- Reflexion on public and private lighting near nesting sites to minimize impacts.</li> </ul>
<p>Actions to come for this species</p>	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> <li>- Tagging laying females.</li> <li>- Setting information boards at the beach entrances.</li> </ul>
<p>It is the most observed sea turtle on feeding sites around Saint-Barthélemy and satellite islets. Laying on the beaches is, however, infrequent (14 between 2001 and 2016).</p>	

FAUNA - REPTILE	NATIVE
 <p>© 2016 Karl Questel</p>	<p><i>Eretmochelys imbricata</i> (Linnaeus, 1766)</p>
	<p>Family : Cheloniidae</p> <p>Hawksbill Sea Turtle Tortue imbriquée, Karet</p>
	
<p>Priority in protective measures : 5/10 (D13)</p>	
<p>Threats identified</p>	<ul style="list-style-type: none"> <li>- Loss of nesting sites (urbanization of beaches, light pollution).</li> <li>- Poaching (anecdotal).</li> <li>- Impacts with the boats.</li> </ul>
<p>Actions taken in the past for this species</p>	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> </ul>
<p>Actions in progress for this species</p>	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> <li>- Tagging laying females.</li> <li>- Reflexion on public and private lighting near the nesting sites to minimize impacts.</li> </ul>
<p>Actions to come for this species</p>	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> <li>- Tagging laying females.</li> <li>- Laying information boards at the beach entrance.</li> </ul>
<p>It is the species that nest the most on Saint-Barthélemy (29 between 2001 and 2016). It is also visible on feeding sites all around the island and satellite islets all year round.</p>	





FAUNA - REPTILE	NATIVE
	<b><i>Dermochelys coriacea</i> (Vandelli, 1761)</b>
	<b>Family : Dermochelyidae</b>  <b>Leatherback Sea Turtle</b> <b>Tortue luth</b>
	
<b>Priority in protective measures : 4/10 (D1)</b>	
Threats identified	<ul style="list-style-type: none"> <li>- Loss of nesting sites (urbanization of beaches, light pollution).</li> </ul>
Actions taken in the past for this species	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> </ul>
Actions in progress for this species	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> <li>- Tagging laying females.</li> <li>- Reflexion on public and private lighting near the nesting sites to minimize impacts.</li> </ul>
Actions to come for this species	<ul style="list-style-type: none"> <li>- Raising awareness among the general public and schoolchildren.</li> <li>- Nesting survey.</li> <li>- Tagging laying females.</li> <li>- Laying information boards at the beach entrance.</li> </ul>
This is the rarest turtle to come lay on Saint-Barthélemy. 5 nestings confirmed on 2 beaches (Flamands, 1982 and 2014 ; Saline, 2009, 2011 and 2012).	

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