

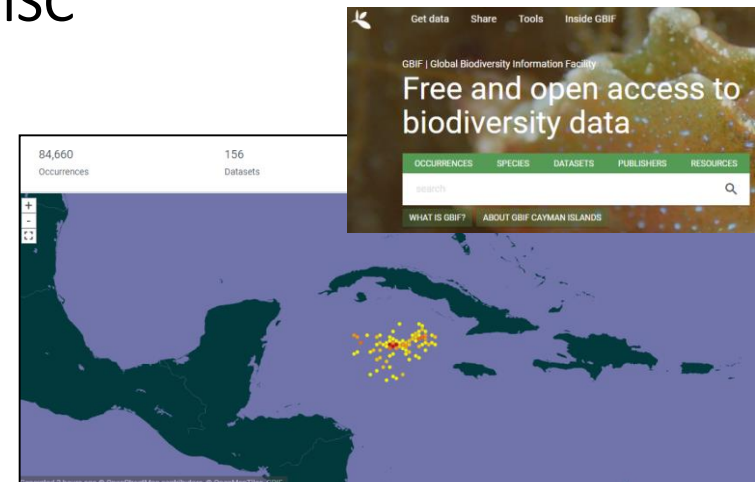
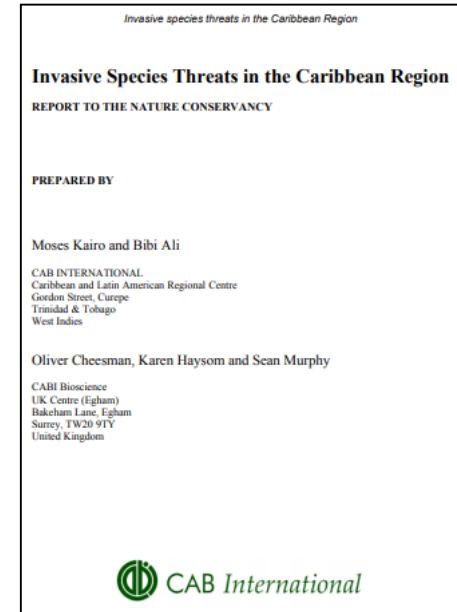
Team vertebrates

Name	Surname	Email	OT	Attending	Thematic Grc
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Rose-Smyth	Christine	mcrscay@gmail.com	Grand Cayman	y	Zoology (Tim)
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Workflow species selection

- Longlist of potential invasive vertebrates in Caribbean OTs
 - Select vertebrates from Caribbean IAS database (Kairo et al. 2003)
 - 150 species (Fish, Birds, Reptiles, Amphibians, Mammals)
 - Add vertebrates from Global Register of Introduced & Invasive Species GRIIS (Anguilla, Bermuda)
 - Confront with vertebrates from CABI ISC horizon scanning tool (Cuba, Mexico, Florida)
- Occurrence on the Caribbean OTs
 - < GBIF
- Expert knowledge & review



Pathways

- *Escape*
 - Escaped household pets (cats, chicken)
 - Pet shops
 - People moving them around
 - Fish farming (Montserrat)
 - *Birds & mammals*
- *Contaminants*
 - Living plant material
 - *Reptiles & amphibians*
- *Stowaway*
 - Containers
 - Construction material (post hurricane)
 - *Snakes, geckos*

Medium-sized mammals

- Predation

- domestic cat (*Felis catus*)
- rats (*Rattus rattus/norvegicus*)
- small Indian mongoose (*Herpestes javanicus*)
- wild boar (*Sus scrofa*)



- Herbivory

- rabbit (*Oryctolagus cuniculus*)
- goat (*Capra hircus*)



Invasive birds

- Brood parasitism
 - Shiny cowbird (*Molothrus bonariensis*)
- Competition
 - Parrots & finches (*Myopsitta monachus*)
- Disease transmission
 - Collared dove (*Streptopelia decaocto*)
- Nuisance & agricultural damage
 - red-vented bulbul (*Pycnonotus cafer*)



Invasive herptiles

- Predation
 - Common iguana (*Iguana iguana*)
- Hybridisation
 - Cuban iguana (*Cyclura nubila*)
- Competition
 - Anolis spp. (*A. equestris*, *A. sagrei*)
 - cane toad (*Bufo marinus*)
 - Caribbean tree frog (*Eleutherodactylus coqui*)
- Disease transmission
 - red-eared slider (*Trachemys scripta*)



Invasive fish

- Predation on invertebrates & eggs of native fish
 - Mosquitofish (*Gambusia spp.*)



Results

- 7 assessors
- In total 72 vertebrates identified potential risk for at least one of the OT's

ias_UKOT_vertebrates_Jane_Haakonsson_Sophie_O'Hehir.tsv

Bestand Bewerken Weergeven Invoegen Opmaak Gegevens Extra Add-ons Help [Laatste bewerking was 37 minut.](#)

100% € % .0_ .00 123 Arial 10 B I S A

fx species

	A	B	C
1	species	UKOTs	remarks (optional)
2	Acridotheres cristatellus	AI, BM, KY, MS, TC, VG	
3	Acridotheres tristis	AI, BM, KY, MS, TC, VG	interisland transfer e.g. Maynardi
4	Amazona auropalliata	AI, BM, KY, MS, TC, VG	
5	Amazona ochrocephala	AI, BM, MS, TC, VG	
6	Anolis equestris	AI, BM, MS, TC, VG	knight anole
7	Bufo marinus	TC, VG	
8	Capra hircus	AI, BM, KY, MS, TC	feral goat
9	Felis catus	AI, BM, MS	
10	Gallus gallus	MS, TC	feral chicken
11	Iguana iguana	AI, BM, TC	
12	Mustela erminea	AI, BM, KY, MS, TC, VG	
13	Mustela nivalis	AI, BM, KY, MS, TC, VG	

+ ☰ LONGLIST SHORTLIST

Results

species	n_experts
Myiopsitta monachus	5
Capra hircus	4
Herpestes auropunctatus	4
Iguana iguana	4
Molothrus bonariensis	4
Procyon lotor	4
Anolis carolinensis	3
Anolis equestris	3
Aratinga erythrogenys	3
Canis familiaris	3
Python molurus bivittatus	3
Ramphotyphlops braminus	3
Rattus norvegicus	3
Rattus rattus	3
Sus scrofa	3
Trachemys scripta	3

Acridotheres cristatellus	2
Acridotheres tristis	2
Amazona ochrocephala	2
Anolis grahami	2
Anolis sagrei	2
Aratinga pertinax	2
Cyclura nubila	2
Elaphe guttata	2
Eleutherodactylus cocqui	2
Felis catus	2
Gallus gallus	2
Gastrophryne carolinensis	2
Hemidactylus frenatus	2
Mustela erminea	2
Mustela nivalis	2
Passer domesticus	2
Pitangus sulphuratus	2
Psittacula krameri	2
Sturnus vulgaris	2

Next steps

- Discuss species identified by only few people
- Score shortlist
- Review status in OT's (identify real HS species)

Issues

- Underrepresentation of some Ots
 - Lack of Montserrat expertise
 - Lack of TCI expertise

Lebistes reticulatus to remove: it has a synonym

109 en 110: Sarotheodon mossambicus

Sarotheodon niloticus to be removed, to be held 81 en 82: Oreochromis mossambicus

Oreochromis niloticus

row 111 Sciaenops ocellatus is marine marine and brackish

row 126 Xanthium strumarium is a plant

row 66 Lebistes reticulatus to remove: it has a synonym, poecilia reticulata

line 12 remove misspelling (A. grahami)

line 77 synonym of anolis grahami line 13

Pathways Caribbean OTs

Type	Specific	Anguilla	Bermuda	Cayman	Montserrat	Turks & Caicos	British Virgin	TOT
RELEASE	Biological Control – BC						1	1
RELEASE	Hunting – H			1				1
ESCAPE	Agriculture – Ag				1			1
ESCAPE	Botanical garden/zoo/aquaria – BZA		1					1
ESCAPE	Pet/aquarium/terrarium – Pet	1	1	1	1	1	1	6
CONT	Contaminant nursery material – CNM	1					1	2
CONT	Contaminant on plants (except parasites) – Con Plant		1	1		1		3
CONT	Transportation of habitat material – THM	1						1
STOW	Container/bulk – Container	1	1	1	1		1	5
STOW	Hitchhikers on ship/boat – Ship					1		1
STOW	People and luggage / equipment – Lug		1					1

Key 2018 Tackling Invasive Non-Native Species in the UK OTs Pathway Analyses

Pathways Grand Cayman

Summary of pathways for horizon scanning, with number of asterisks increasing with importance of the pathway (yellow = *, orange = ** and red = ***).

Category	Sub-category	Invertebrates	Vertebrates	Plants
RELEASE IN NATURE (1)	Biological control	*		
	Hunting in the wild		*	
	Landscape/flora/fauna "improvement"			*
ESCAPE FROM CONFINEMENT (2)	Agriculture (including Biofuel feedstocks)			***
	Pet/aquarium/terrarium species		*	
	Horticulture			***
TRANSPORT – CONTAMINANT (3)	Ornamental purpose			*
	Contaminant nursery material	**		**
	Food contaminant (including of live food)	**		
	Parasites on animals	*		
	Contaminant on plants	***	*	
	Seed contaminant	*		*
	Timber trade	*		
Transportation of habitat material	**		*	
TRANSPORT – STOWAWAY (4)	Container/bulk	**	*	
	Hitchhikers on boat	*		
	Machinery/equipment	*		*
	Organic packing material	*		
	People and their luggage/equipment	*		*
	Vehicles (car, train, ...)	*		

