NORTH EAST TOBAGO SPECIES OF INTERNATIONAL CONSERVATION INTEREST

A Literature Review



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INTRODUCTION

In 2015, the Environmental Research Institute Charlotteville (ERIC) undertook a literature review of species that have been reported in North East Tobago, and that are listed on, or have been reported to meet the criteria for major international lists of species of conservation concern. This report will allow rapid reference for project planning and for providing technical conservation advice.

SOURCES

1. The IUCN Red List
The International Union for the Conservation of Nature (IUCN) Red List is the most widely recognised authority on species of global conservation concern. The list is based on scientific criteria and a rigorous review process. This report lists species that have been reported in North East Tobago that are either at risk according to the IUCN Red List or that have been reported as meeting the criteria for risk on the IUCN Red List.

2. Endemic Species
Endemic species are unique to a specific geographic location. Endemic species on small islands are often of conservation concern because they have a limited geographic range. This report lists species that have been referenced as endemic and as occurring in NE Tobago.

3. EDGE Species
EDGE is a scientific framework used to identify species that are both evolutionarily distinct and globally endangered (EDGE). It is another way to assess conservation concern globally for endangered species. It complements the more commonly cited IUCN Red List. EDGE listed species that have been reported in North East Tobago are listed in this report.

4. CMS Species
The international Convention on the Conservation of Migratory Species of Wild Animals (CMS) lists species of conservation concern whose movement crosses international boundaries and that therefore require international cooperation for effective conservation. The CMS has two lists, Appendix I and Appendix II. Appendix I is 'Threatened Migratory Species'. Appendix II is 'Migratory Species Requiring International Cooperation'. Although Trinidad and Tobago is a non-party to the CMS, many internationally listed migratory species have been recorded for North East Tobago. These are listed below.

5. CITES Species
The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement that, according to the website aims "to ensure that international trade in specimens of wild animals and plants does not threaten their survival". The convention has three lists of species, two of which are relevant to NE Tobago. Appendix I lists 'Species Threatened with Extinction'. Appendix II lists "Species not immediately threatened with extinction unless trade is closely controlled". Trinidad and Tobago is signatory to the convention.

CONCLUSION
The findings of this report are that North East Tobago hosts 56 species that meet the criteria for the IUCN Red List risk, 29 endemic species, 9 EDGE species, 18 migratory species of conservation concern and 16 CITES species. These ***lists should not be taken as definitive*** but as a reference points for further research, monitoring, and project and conservation planning.

IUCN RED LIST SPECIES IN NE TOBAGO

Critically Endangered – 8

Category	Taxonomy		IUCN Status Criteria	Global Trend	Source
	Taxa/ Species	***Common Name***			
Hard Corals	*Acropora cervicornis*‡	Staghorn Coral	A2ace	Stable	IUCN Red List
	Acropora palmata‡	Elkhorn Coral	A2ace	Stable	IUCN Red List
Marine Turtles	*Eretmochelys imbricata*†‡	Hawksbill Turtle	A2bd	Extensive subpopulation declines	IUCN Red List
Sharks	*Pristis pristis*	Largetooth Sawfish	A2cd	Decreasing	IUCN Red List
	Isogomphodon oxyrhynchus	Daggernose Shark	A2ad+3d+4ad	Decreasing	IUCN Red List
Vascular Plants*	*Phyllanthus mimicus Webster*				Van den Eynden, Oatham and Johnson, 2008
	Maxillaria broadwayi (Cogn) RE Schult.				Van den Eynden, Oatham and Johnson, 2008
	Roupala tobagensis				Van den Eynden, Oatham and Johnson, 2008

* Endemic species
† Migratory species
‡ CITES species

Endangered; Total – 14

Category	Taxonomy		IUCN Status Criteria	Global Trend	Source
	Taxa/ Species	***Common Name***			
Terrestrial Birds	*Carduelis cucullata*‡	Red Siskin		Decreasing	IUCN Red List
Frogs	*Pristimantis urichi**	Lesser Antilles Robber Frog	B1ab(iii)	Decreasing	IUCN Red List
	Flectonotus fitzgeraldi¥	Tree Frog	B1ab(iii)	Decreasing	IUCN Red List
Hard Corals	*Montastraea annularis*¥‡	Boulder Star Coral	A2ace	Decreasing	IUCN Red List
	Montastraea faveolata¥	Star Coral	A2ace	Decreasing	IUCN Red List
Marine Turtles	*Dermochelys coriacea*†‡	Leatherback Turtle	A2bd	Decreasing	IUCN Red List
	Chelonia mydas†‡	Green Turtle	A2bd	Decreasing	IUCN Red List
	Caretta caretta†‡	Loggerhead Turtle	A1abd	Decreasing	IUCN Red List
Commercial Fish Species	*Epinephelus itajara*	Atlantic Goliath Grouper	A2d	Unknown	IUCN Red List
	Epinephelus striatus	Nassau Grouper	A2ad	Decreasing	IUCN Red List
	Thunnus thynnus	Atlantic Bluefin Tuna	A2bd	Decreasing	IUCN Red List
Sharks and Rays	*Sphyrna lewini*†‡	Scalloped Hammerhead	A2bd+4bd	Unknown	IUCN Red List
	Sphyrna mokarran†‡	Squat-headed Hammerhead Shark	A2bd+4bd	Decreasing	IUCN Red List
Vascular Plants*	*Xylosma sanctae-annae Sleumer*				Van den Eynden, Oatham and Johnson, 2008

*Endemic species
¥ EDGE species
† Migratory species
‡ CITES species

Vulnerable; Total – 21

Category	Taxonomy		IUCN Status Criteria	Global Trend	Source
	Taxa/ Species	***Common Name***			
Marine Turtles	*Lepidochelys olivacea*[†‡]	Olive Ridley Turtle	A2bd	Decreasing	IUCN Red List
Commercial Fish Species	*Lutjanus cyanopterus*	Canteen Snapper	A2d ver2.3	Unknown	IUCN Red List
	Lutjanus analis	Mutton Snapper	A2d, B1+2e ver2.3	Unknown	IUCN Red List
Hard Coral	*Dendrogyra cylindrus*[¥]	Pillar Coral	A4ce	Stable	IUCN Red List
	Dichocoenia stokesii[¥]	Elliptical Star Coral	A4c	Decreasing	IUCN Red List
	Montastraea franksi[¥]	Star Coral	A4ce	Decreasing	IUCN Red List
	Oculina varicosa[¥]	Large ivory Coral	A2ac	Unknown	IUCN Red List
Sharks and Rays	*Manta birostris*[†‡]	Manta Ray	A2abd+3bd+4abd	Decreasing	IUCN Red List
Frogs and Toads	*Mannophryne olmonae*[*]	Bloody Bay Poison Frog	D2	Stable	IUCN Red List
	Mannophyrne trinitatis	Yello w Throated Frog	B1ab(iii)	Decreasing	IUCN Red List
	Hyalinobatrachium orientale[*]	Eastern Glass Frog	B1ab(iii)	Decreasing	IUCN Red List
	Pristimantis turpinorum[*¥]	Bloody Bay Litter Frog	D2	Stable	IUCN Red List
Vascular Plants[*]	*Justicia tobagensis (Urb.) Wassh.*				Van den Eynden, Oatham and Johnson, 2008
	Odontonema brevipes Urban				Van den Eynden, Oatham and Johnson, 2008
	Duguetia tobagensis (Urb.) R. E. Fr.				Van den Eynden, Oatham and Johnson, 2008
	Dicranopygium insulare (Gleas.) Harl.				Van den Eynden, Oatham and Johnson, 2008

[*] Endemic species
[¥] EDGE species
[†] Migratory species
[‡] CITES species

Category	Taxonomy		IUCN Status Criteria	Global Trend	Source
	Taxa/ Species	***Common Name***			
	Rhynchospora ebracteata (Standl.) H.Pfeiff				Van den Eynden, Oatham and Johnson, 2008
	Phyllanthus acacioides Urb.				Van den Eynden, Oatham and Johnson, 2008
	Besleria seitzii Krug &Urb.				Van den Eynden, Oatham and Johnson, 2008
	Cybianthus pittieri Agostini				Van den Eynden, Oatham and Johnson, 2008
	Pilea tobagensis Urb.				Van den Eynden, Oatham and Johnson, 2008

Near Threatened; Total – 12

Category	Taxonomy		IUCN Status Criteria	Global Trend	Source
	Taxa/ Species	***Common Name***			
Reef Grazing Species	*Scarus guacamaia*	Rainbow Parrotfish		Decreasing	IUCN Red List
Sharks and Rays	*Carcharhinus limbatus*	Blacktip Shark		Unknown	IUCN Red List
	Carcharhinus perezi	Caribbean Reef Shark		Decreasing	IUCN Red List
	Aetobatus narinari	Spotted Eagle Ray		Decreasing	IUCN Red List
	Carcharhinus leucas	Bull Shark		Unknown	IUCN Red List
	Negaprion brevirostris	Lemon Shark		Unknown	IUCN Red List
Terrestrial Birds	*Campylopterus ensipennis*	White-tailed Sabrewing Hummingbird[‡]		Decreasing	IUCN Red List
	Calidris pusilla	Semipalmated Sandpiper		Decreasing	IUCN Red List
	Tryngites subruficollis[†]	Buff-Breasted Sandpiper		Decreasing	IUCN Red List
Vascular Plants[*]	*Podocarpus trinitensis Buchh. & Gray*			Unknown	IUCN Red List
	Gonolobus tobagensis Urb.				Van den Eynden, Oatham and Johnson, 2008
	Werauhia broadwayi (L.B. Smith) J.R. Grant				Van den Eynden, Oatham and Johnson, 2008
	Aegiphilia obovate Andr.				Van den Eynden, Oatham and Johnson, 2008

[*] Endemic species
[‡] CITES species

ENDEMIC SPECIES OF NE TOBAGO

Category	Taxonomy		IUCN Conservation Status	Source
	Taxa/ Species	***Common Name***		
Crustacean	*Pseudobiffarius caesari*	Ghost Shrimp	Unknown	Heard and Manning 2000
Frogs and Toads	*Hyalinobatrachium orientale*	Eastern Glass Frog	Vulnerable	Government of Trinidad and Tobago
	Mannophryne olmonae	Bloody Bay Poison Frog	Vulnerable	Government of Trinidad and Tobago
	Pristimantis charlottevillensis	Charlotteville Robber Frog	Unknown	Government of Trinidad and Tobago
	Pristimantis turpinorum	Bloody Bay Litter Frog	Vulnerable	Government of Trinidad and Tobago
	Pristimantis urichi	Lesser Antilles Robber Frog	Endangered	Government of Trinidad and Tobago
Marine Fishes	*Obilbichthys tobagoensis*	Tobago Coral Botula	Unknown	Government of Trinidad and Tobago
	Starksia rava	Tawny Blenny	Unknown	Government of Trinidad and Tobago
	Starksia sella	Darksaddle Blenny	Unknown	Government of Trinidad and Tobago
Snakes	*Erythrolamprus ocellatus*	Tobago False Coral Snake	Unknown	Government of Trinidad and Tobago
	Leptophis haileyi	Hailey's Parrot Snake	Unknown	Herpetology of Trinidad and Tobago
Terrestrial Bird	*Momotus bahamensis*	Trinidad Motmot	Unknown	del Hoyo, Collar, Christie, et al. 2014
Vascular Plants	*Aegiphilia obovate* Andr.		Near Threatened	Van den Eynden, Oatham and Johnson, 2008
	Besleria seitzii Krug &Urb.		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Cybianthus pittieri Agostini		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Dicranopygium insulare (Gleas.) Harl.		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Duguetia tobagensis (Urb.) R. E. Fr.		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Gonolobus tobagensis Urb.		Near Threatened	Van den Eynden, Oatham and Johnson, 2008

Category	Taxonomy		IUCN Conservation Status	Source
	Taxa/ Species	***Common Name***		
	Justicia tobagensis (Urb.) Wassh.		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Maxillaria broadwayi (Cogn) RE Schult.		Critically Endangered	Van den Eynden, Oatham and Johnson, 2008
	Odontonema brevipes Urban		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Phyllanthus acacioides Urb.		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Phyllanthus mimicus Webster		Critically Endangered	Van den Eynden, Oatham and Johnson, 2008
	Pilea tobagensis Urb.		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Podocarpus trinitensis Buchh. & Gray		Least Concern	Van den Eynden, Oatham and Johnson, 2008
	Rhynchospora ebracteata (Standl.) H.Pfeiff		Vulnerable	Van den Eynden, Oatham and Johnson, 2008
	Roupala tobagensis		Critically Endangered	Van den Eynden, Oatham and Johnson, 2008
	Werauhia broadwayi (L.B. Smith) J.R. Grant		Near Threatened	Van den Eynden, Oatham and Johnson, 2008
	Xylosma sanctae-annae Sleumer		Endangered	Van den Eynden, Oatham and Johnson, 2008

EDGE SPECIES OF NE TOBAGO

Category	Taxonomy		IUCN Conservation Status	EDGE Rank	Source
	Taxa/ Species	***Common Name***			
Frogs and Toads	*Flectonotus fitzgeraldi*	Tree Frog	Endangered	415	www.edgeofexistence.org/amphibians/species_info.php?id=959
	Pristimantis charlottevillensis	Bloody Bay Litter Frog	Unknown	780	www.edgeofexistence.org/amphibians/species_info.php?id=1324
	Pristimantis turpinorum	Lesser Antilles Robber Frog	Vulnerable	788	www.edgeofexistence.org/amphibians/species_info.php?id=1333
Hard Corals	*Dendrogyra cylindrus*	Pillar Coral	Vulnerable	28	www.edgeofexistence.org/coral_reef/species_info.php?id=1838
	Dichocoenia stokesii	Elliptical Star Coral	Vulnerable	37	www.edgeofexistence.org/coral_reef/species_info.php?id=1853
	Montastraea annularis	Boulder Star Coral	Endangered	8	www.edgeofexistence.org/coral_reef/species_info.php?id=1904
	Montastraea faveolata	Mountainous Star Coral	Endangered	8	www.edgeofexistence.org/coral_reef/species_info.php?id=1905
	Montastraea franksi	Star Coral	Vulnerable	43	www.edgeofexistence.org/coral_reef/species_info.php?id=1894
	Oculina varicosa	Large Ivory Coral	Vulnerable	47	www.edgeofexistence.org/coral_reef/species_info.php?id=1842

MIGRATORY SPECIES IN NE TOBAGO

Category	Taxonomy		IUCN Conservation Status	CMS Listing	Source
	Taxa/ Species	***Common Name***			
Ducks and Geese	*Anas discors*	Blue-winged Teal	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11290/legal
Hawks, Kites and Eagles	*Buteo platypterus*	Broad-Winged Hawk	Endangered	Appendix II	http://speciesplus.net/#/taxon_concepts/66158/legal
	Buteogallus urubitinga	Great Black Hawk	Endangered	Appendix II	http://speciesplus.net/#/taxon_concepts/66295/legal
Marine Turtles	*Chelonia mydas*	Green Turtle	Endangered	Appendix I and II	http://speciesplus.net/#/taxon_concepts/12155/legal
	Dermochelys coriacea	Leatherback Turtle	Endangered	Appendix I and II	http://speciesplus.net/#/taxon_concepts/11500/legal
	Eretmochelys imbricata	Hawksbill Turtle	Critically Endangered	Appendix I and II	http://speciesplus.net/#/taxon_concepts/11649/legal
	Lepidochelys olivacea	Olive Ridley Turtle	Vulnerable	Appendix I and II	http://speciesplus.net/#/taxon_concepts/11662/legal
Osprey	*Pandion haliaetus*	Osprey	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11978/legal
Sandpipers and Allies	*Arenaria interpres*	Ruddy Turnstone	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11575/legal
	Calidris alba	Sanderling	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11570/legal
	Calidris pusilla	Semipalmated Sandpiper	Near Threatened	Appendix I	http://speciesplus.net/#/taxon_concepts/11296/legal
	Limnodromus griseus	Short-Billed Dowitcher	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11812/legal
	Tringa flavipes	Lesser Yellowlegs	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11963/legal
	Tringa macularia	Spotted Sandpiper	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11730/legal
	Tringa melanoleuca	Greater Yellowlegs	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11627/legal
Seabird	*Sterna dougallii*	Roseate Tern	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/11550/legal
Sharks and Rays	*Manta birostris*	Manta Ray	Vulnerable	Appendix I and II	http://speciesplus.net/#/taxon_concepts/11353/legal
Terrestrial Birds	*Tryngites subruficollis*	Buff-Breasted Sandpiper	Near Threatened	Appendix I and II	http://speciesplus.net/#/taxon_concepts/11406/legal

CITES SPECIES IN NE TOBAGO

Category	Taxonomy		IUCN Conservation Status	CITES Listing	Source
	Taxa/ Species	***Common Name***			
Hard Corals	*Acropora cervicornis*	Staghorn Coral	Critically Endangered	Appendix II	http://speciesplus.net/#/taxon_concepts/5528/legal
	Acropora palmata	Elkhorn Coral	Critically Endangered	Appendix II	http://speciesplus.net/#/taxon_concepts/3118/legal
	Montastraea annularis	Boulder Star Coral	Endangered	Appendix II	http://speciesplus.net/#/taxon_concepts/11134/legal
Hawks, Kites and Eagles	*Buteo platypterus*	Broad-Winged Hawk	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/3174/legal
	Buteogallus urubitinga	Great Black Hawk	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/6413/legal
Mammals	*Pecari tajacu*	Collared Peccary	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/8246/legal
Marine Turtles	*Chelonia mydas*	Green Turtle	Endangered	Appendix I	http://speciesplus.net/#/taxon_concepts/11071/legal
	Dermochelys coriacea	Leatherback Turtle	Endangered	Appendix I	http://speciesplus.net/#/taxon_concepts/4062/legal
	Eretmochelys imbricata	Hawksbill Turtle	Critically Endangered	Appendix I	http://speciesplus.net/#/taxon_concepts/7257/legal
	Lepidochelys olivacea	Olive Ridley Turtle	Vulnerable	Appendix I	http://speciesplus.net/#/taxon_concepts/6938/legal
Osprey	*Pandion haliaetus*	Osprey	Least Concern	Appendix II	http://speciesplus.net/#/taxon_concepts/10360/legal
Sharks and Rays	*Manta birostris*	Manta Ray	Vulnerable	Appendix II	http://speciesplus.net/#/taxon_concepts/11277/legal
	Sphyrna lewini	Scalloped Hammerhead Shark	Endangered	Appendix II	http://speciesplus.net/#/taxon_concepts/6544/legal
	Sphyrna mokarran	Squat-Headed Hammerhead Shark	Endangered	Appendix II	http://speciesplus.net/#/taxon_concepts/9171/legal
Terrestrial Birds	*Campylopterus ensipennis*	White-Tailed Sabrewing Hummingbird	Near Threatened	Appendix II	http://speciesplus.net/#/taxon_concepts/3652/legal
	Carduelis cucullata	Red Siskin	Endangered	Appendix I	http://speciesplus.net/#/taxon_concepts/7062/legal

REFERENCES

del Hoyo J., N. J. Collar, D. A. Christie, A. Elliott and L. D. C. Fishpool. 2014. HBW and BirdLife International Illustrated Checklist of the Birds of the World. Lynx Edicions BirdLife International.

EDGE. "EDGE of Existence." Accessed October 11, 2015. http://www.edgeofexistence.org/index.php

Government of Trinidad and Tobago. "Endemic Species". Accessed February 04, 2015. http://www.biodiversity.gov.tt/home/trinidad-a-tobago-biodiversity/endemic-species.html

Heard R. W. and R. B. Manning. 2000. A new genus and species of ghost shrimp from Tobago, West Indies (Crustacea: Decapoda: Callianassidae). Proceedings of the Biological Society of Washington, 113: 70-76.

Herpetology of Trinidad and Tobago. "A New Snake Species From Tobago". Last modified October 22, 2013. http://herpetologytt.blogspot.com/2013/10/a-new-snake-species-from-tobago.html

IUCN. "The IUCN Red List of Threatened Species." Accessed February 04, 2015. http://www.iucnredlist.org/search

Species +. "Species +". Accessed October 11, 2015. http://speciesplus.net/

UNEP-WCMC (Comps.) 2014. Checklist of CITES species. CITES Secretariat, Geneva, Switzerland, and UNEP-WCMC, Cambridge, United Kingdom. Accessed February 09, 2015.

Van den Eynden V., M.P. Oatham, and W. Johnson. 2008. How free access internet resources benefit biodiversity and conservation research: Trinidad and Tobago's endemic plants and their conservation status. Oryx **42** (3): 400–07.

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