

# The Vegetation of the Five Islands, Trinidad, W.I.

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The Five Islands - Caledonia, Nelson, Lenagan, Pelican, Craig and Rock<sup>+</sup> - are located just off the north-western peninsula of Trinidad. The Chaguaramas Peninsula and all the off-shore islands are situated in the rain shadow of the Northern Range and receive less than 200 mm of rainfall per annum (Beard 1946). The parent rock is a slow-weathering limestone and the soil is very poorly developed. Because of this combination of poor soil and dry weather, the Five Islands present a rather hostile environment for plant and animal life.

The islands have all had a history of occupation and so the vegetation is not pristine. On the 1974 field course held on Nelson Island by the Zoology Department of The University of the West Indies a plant species list was drawn up. This comprised some 48 species in 30 families. Five of these were noted as introduced. On the 1987 field course held by the Zoology Department in this area, the author set out to draw up species lists for all the islands and to examine some of the adaptive features of the plants found in this harsh environment.

## Methods

Intensive collections were made on all the islands during April 1987. One-day collections were made in September and December 1987 and March 1988. These were identified at the Trinidad and Tobago National Herbarium. Equipment consisted of a plant press and a pair of shears. Nomenclature follows that of the Flora of Trinidad and Tobago (1928 and onwards).

## Results

Refer to Table 1

+ There are really six islands in the "Five Islands"; however Craig is now joined to Caledonia by a narrow man-made causeway (Pers. Obs.). Previously, the only connection between the two islands was a narrow strip of beach which appeared at low tide.

## Discussion

Table I indicates the paucity of the flora. The small island size, the distance from Trinidad and the environmental conditions all influence to some degree the number and kinds of species reaching the islands and successfully invading them.

The vegetation shows some features typical of plants in a xeric environment. There is marked deciduousness during the dry season when most trees shed their leaves to cut down on water loss. The few evergreen trees include *Tecoma stans*, *Ficus* sp. and *Clusia* sp. *Clusia* has large leathery leaves owing to cuticular thickening for reduced water loss. The natural occurrence of cacti and the abundance of *Agave* are indicative of a moisture-stressed environment. The scarcity of epiphytes and ferns also confirms this.

Interestingly, although the number of species recorded in this study is the same as the number recorded in the 1974 study of Nelson Island only about half of them are the same. The possibility exists that some species not in fruit or flower were missed. It is also possible that in the thirteen years since the first study, species represented by only a small number of plants disappeared from the island. Small populations such as cultivated species may be more vulnerable to the adverse effects of competition, disease and other natural phenomena such as a hurricane. It is possible too, that species that have disappeared have since been replaced by more recent invaders. If these islands were to be monitored on a regular basis, one would get a clearer picture of how fast species are disappearing or invading.

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## References

- Flora of Trinidad and Tobago*, 1928 and onwards, Government Printery, Trinidad.  
BEARD, J.S., 1946, *The Natural Vegetation of Trinidad*, Oxford University Press, London.

Table 1: Species List

Family	Botanical Name	Vernacular Name	Caledonia	Nelson	Lenagan	Pelican	Rock	Craig
Agavaceae	<i>Furcraea hexapetala</i>			*	*			
Araceae	<i>Philodendrum acutatum</i>		*	*	*			
Bignoniaceae	<i>Anemopaegma carrerense</i>		*	*		*	*	
	<i>Tecoma stans</i>	bois lezard	*	*	*	*	*	*
Bombacaceae	<i>Ceiba pentandra</i>	silk cotton	*					
Boraginaceae	<i>Cordia curassavica</i>	black sage	*					
Burseraceae	<i>Protium insigne</i>	gommier	*	*		*	*	*
Cactaceae	<i>Acanthocereus pentagonus</i>		*					
	<i>Cephalocereus moritzianus</i>		*	*	*			
	<i>Opuntia</i> sp.		*					
Capparidaceae	<i>Capparis odoratissima</i>			*	*	*	*	
	<i>Capparis</i> sp.		*					
Clusiaceae	<i>Clusia rosea</i>	matapal	*	*	*	*	*	*
Combretaceae	<i>Conocarpus erectus</i>	button mangrove				*		
	<i>Laguncularia racemosa</i>	white mangrove			*	*		
Compositae (Asteraceae)	<i>Bidens pilosa</i>	railway daisy		*				
	<i>Eupatorium odoratum</i>		*	*	*		*	
	<i>Synedrella nodiflora</i>		*					
Cyperaceae	<i>Cyperus ligularis</i>		*	*	*	*	*	*
	<i>Fimbristylis dichotoma</i>		*	*	*	*		
Ebenaceae	<i>Diospyros inconstans</i>	butterwood	*		*	*		
Euphorbiaceae	<i>Euphorbia</i> sp.		*					
Gramineae (Poaceae)	<i>Cenchrus echinatus</i>		*	*				
	<i>Chloris inflata</i>			*				
	<i>Panicum</i> sp.		*	*	*	*	*	*
Leguminosae	<i>Coursetia arborea</i>		*					
	<i>Galactia striata</i>		*					
	<i>Lonchocarpus punctatus</i>	yellow savonette	*		*	*		
	<i>Pithecellobium unguis-cati</i>	bread & cheese	*	*	*	*	*	*
Malvaceae	<i>Malachra fasciata</i>		*					
Moraceae	<i>Ficus</i> sp.	figuier	*	*				
Piperaceae	<i>Pepperomia</i> sp.		*					
Polygonaceae	<i>Coccoloba uvifera</i>	seaside grape		*				
Verbenaceae	<i>Starchytarpheta jamaicensis</i>	verbena	*					
	<i>Citharexylum fruticosum</i>		*					
<b>EPIPHYTE</b>								
Bromeliaceae	<i>Tillandsia</i> sp.		*	*	*	*		
<b>FERN</b>								
Polypodiaceae	<i>Thelypteris</i> sp.		*					
<b>CULTIVATED SPECIES</b>								
Agavaceae	<i>Agave sisalana</i>			*				
Arecaceae (Palmae)	<i>Cocos nucifera</i>	coconut		*				
	<i>Phoenix</i> cf. <i>dactylifera</i>	date palm		*				
Anacardiaceae	<i>Mangifera indica</i>	mango	*					
Commelinaceae	<i>Tradescantia spathacea</i>		*	*				
Liliaceae	<i>Dracaena</i> sp.		*					
	<i>Sansevieria</i> sp.		*					
Musaceae	<i>Musa</i> sp.	banana		*				
Poaceae	<i>Bambusa</i> sp.	bamboo	*					
Rosaceae	<i>Rosa</i> sp.	rose	*					
Malpighiaceae	<i>Malpighia puniceifolia</i>	West Indian cherry	*			*		
<b>TOTAL NUMBER OF SPECIES</b>			37	24	15	15	9	6
<b>AREA (sq. m.)</b>			25 000	16 800	4 500	2 000	1 176	600