

ISSUE # 31
July – Aug 2017
www.DoE.ky

FLICKER



BIMONTHLY BULLETIN of the CAYMAN ISLANDS
DEPARTMENT of ENVIRONMENT 'S
TERRESTRIAL RESOURCES UNIT



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CAYMAN ISLANDS
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@ Charlie Kitchin

A Survey of White-tailed Tropic Birds on Cayman Brac

-by Charlie Kitchin

I have worked for the RSPB since 1985, and one of the perks of the job is that every seven years we are entitled to take a month's sabbatical leave, and I like to make the most of it. The opportunity to survey white-tailed tropic birds in the Cayman Islands sounded perfect, and as it turned out it pretty well was; a gorgeous bird, a genuinely useful piece of work and in a fantastic location. There is considerable concern amongst local naturalists and in the Cayman Islands Government about the decline of the tropic bird in the Caymans. Within living memory they were clearly more abundant and had a wider nesting distribution on Cayman

Brac than they do today and the primary purpose of the survey was to estimate the current size and distribution of the breeding population of white-tailed tropic birds on Cayman Brac. In addition I was asked to find and describe as many nest sites as possible.

My survey was only ever going to be a snap shot of the population. The Cayman Island tropic birds have a distinct but extended nesting season, they appear on the islands between February and July, and my survey from mid-March to early April coincided with the early part of their season when birds appeared to be courting,



A White-tailed tropic bird appears to fly straight into the bluff cliff to a preferred nest site.

Photo by Charlie Kitchin.

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prospecting for nest sites and probably incubating.

I made a few very early starts but found that the birds hardly appeared offshore before 06:30 and had mostly gone back out to sea by 10:30, so this was the short and intensive period of field work. It was not practical to count the whole of Cayman Brac in one day, so I split the island into three: the north coast from Creek to Spot Bay, the Eastern Bluff, and the south coast from Bat Cave to Great Cave. I carried out two full surveys, the first from the 20-22nd March, and the second from the 29-31st March. The birds tended to be offshore opposite their nesting cliffs and on the second survey I counted 184 birds. It is not possible to halve this figure and come up with the breeding population, as there were clearly many birds out of sight incubating in their holes, while some of those counted may not be going to nest. It does, however, give a figure that may be used in the future to give an indication of changes in the size of the population. Talking to locals, particularly in Spot Bay and North-East Bay, the numbers today were a fraction of the "thousands" that were present only 30-40 years ago.


The distribution has also contracted considerably, especially on the north coast where, until recently, they used to be found as far west as Bamboo Bay. Today there is a significant concentration of birds between Spot Bay and Creek, but only a handful of pairs west of the port. On the south coast the main concentration was on the higher cliffs to the east but there were isolated pairs nesting on really

quite small cliffs as far west as the island's rubbish tip. I found 37 apparently occupied nests, and a further 29 probable or possible nest sites. There appears to be an abundance of suitable nest sites so it was surprising to witness several fights where intruding birds appeared to be trying to dislodge the occupant.

It was a shame I was unable to search for nests on the Bluff where it drops straight into the sea, as there was quite a concentration of birds there. However my last few days were spent on Grand Cayman and the DoE took Peter Davey and myself out on a boat to look for nests in the Savannah-Pedro Point area. We only found three nests but one of those was well within the splash zone and we watched with some alarm as a wave engulfed it, presumably somewhere in that hole is a safe, dry niche for a bird to nest on.



The White-tailed tropic bird occurs in the tropical Atlantic, western Pacific and Indian Oceans. It also breeds on some Caribbean islands like Cayman Brac. Photo by Charlie Kitchin.



Cabinet approves the first set of new protected areas under the National Conservation Law

-by Fred Burton

Ninety-seven percent of the Cayman public who participated in a recent survey on protected areas, said they support the idea of setting aside and protecting natural areas for the people of the Cayman Islands.


That's an extraordinary level of community support for one of the major provisions in [the National Conservation Law \(NCL\)](#), which provides for protection of Crown land of environmental importance, and land the government acquires for protection through voluntary purchase.

When part 3 of the NCL came into effect in April 2015, the National Conservation Council (NCC) triggered a careful, multi-

stranded process laid out in the Law, by advertising for nominations for new protected areas.

Over the following months nominations came in from individuals, real estate agents, landowners, local companies, community groups, the National Trust for the Cayman Islands, and from the Department of Environment.

While the nominations were flowing in, DoE's Terrestrial Resources Unit and the Council's Protected Area Planning Committee were working on a technical scoring and ranking system for the Council to use in evaluating the nominations against the purposes, objectives and criteria for protected areas as laid out in the NCL (part 8).



The Central Mangrove Wetland was one of many areas nominated for protection during the first round of TPA nominations in 2016/17. Photo by Jessica Harvey.



In October last year when the nominations period closed, the nominations were run through the scoring system and the Conservation Council agreed on an initial set of twelve top-ranking nominations to advance to the next stage of the process.

Six areas on Grand Cayman and six areas on Little Cayman were chosen to start with, all being predominantly existing Crown land, while high ranking nominations for private land including Cayman Brac were deferred to allow time for outreach to the landowners concerned.

The next stage set out in the law is 90 days of public consultation. The nominations were advertised, and placed online, with print copies lodged


in public places on all three islands. Registered mail notices were sent to owners of all land parcels adjacent to the proposed protected areas. Responses were requested on a standard form to assist analysis, and could be submitted on paper or as an identical online questionnaire.

At the beginning of May this year, the consultation period ended, and the 2016 survey responses were analysed. A truly remarkable level of support emerged, with the various nominations gaining between 72% and 100% support from all of the responders. Half the responders were registered voters, suggesting that a representative cross-section of the community responded.

One of the Little Cayman nominations had to be postponed due to a



The east interior of Little Cayman provides a truly unique ecosystem in the whole of the Caribbean. Part of this magnificent landscape is in the current 2017/18 nominations.



procedural problem with notifications, and the Conservation Council ended up recommending six nominations for Grand Cayman, and five for Little Cayman, to Cabinet.

The timeline brought this step very close to the election, but the Cabinet responded to the high level of public enthusiasm and placed the proposals on their penultimate agenda. The decision came swiftly, and the Cayman Islands can now boast a significant step forward in our protected area system.

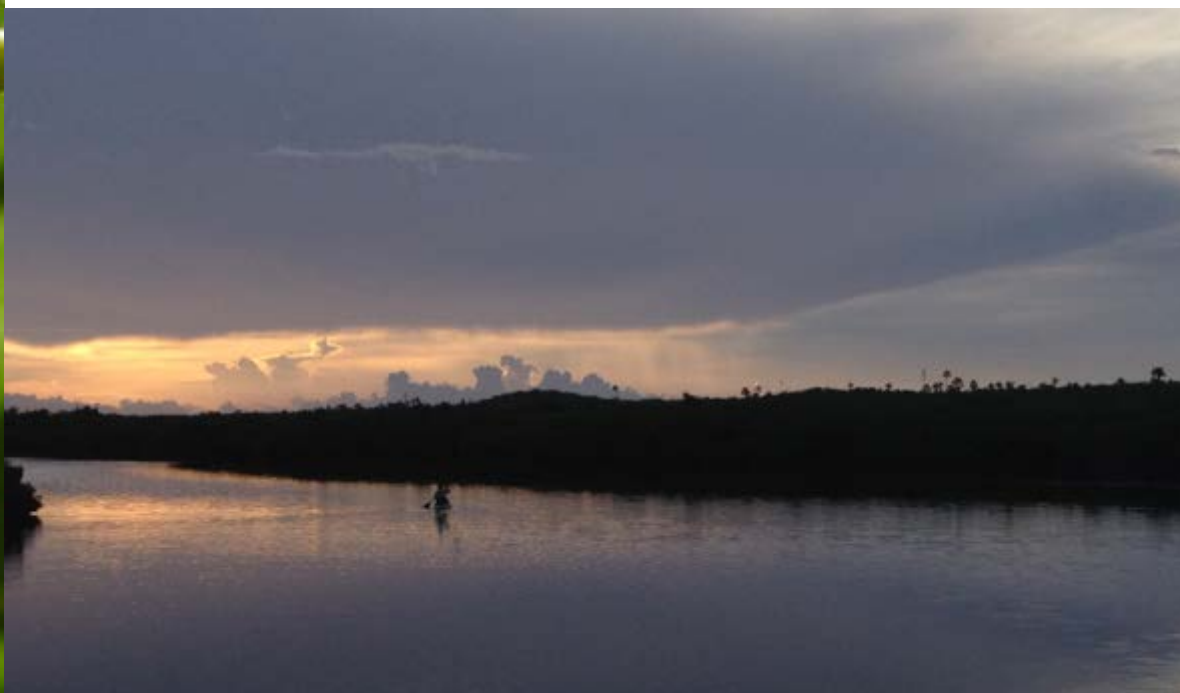
On Grand Cayman, the Crown land in Barkers is now formally a protected area, with a parcel of private land also under negotiation. The Crown land within the Central Mangrove Wetland has been protected. Vidal Cay, plus a series of small mangrove islets along the North Sound coast of the West Bay

Peninsula, and a small part of the remnant Lower Valley Forest make up the balance of five new protected areas on Grand Cayman.

On Little Cayman, Crown land and an associated land purchase on the west side of the Booby Pond Nature Reserve make a significant extension to that protected area, benefiting the Red-footed boobies, rock iguanas and endemic land snails.

Now as this edition of Flicker goes out, the next round of five protected area nominations have been released for public consultation. These include the anticipated nominations for Cayman Brac, and a re-run of the one Little Cayman nomination which was derailed. You can look at these new nominations and please do comment on them here:

[CURRENT TPA NOMINATIONS](#)



Terrestrially protected areas will safeguard the enjoyment and recreational use of some of Cayman's remaining gems. Photo by the editor.

Crabtivating creatures!

-by Kinsey Tedford

It is that time of the year again where everyone is talking about crabs! But how many species of these land-based crustaceans do we have in Cayman and how do they differ? Fear not –here you can brush up on your knowledge with Kinsey Tedford from the University of Central Oklahoma. Kinsey has been studying our crabs since 2015.

There are four species of terrestrial crabs in the Cayman Islands: the hermit crab, the white, the black and the red land crab. All four species follow a similar life cycle where the majority of adult life is on land, though water dependence varies between species.

Caribbean hermit crab or soldier crab (*Coenobita clypeatus*)

The Caribbean hermit crab is the only species of terrestrial hermit crab in the Western Atlantic. These colorful crabs have gills rather than lungs, but are still able to respire in areas of high humidity and through water retained inside their shell. The crabs are mainly nocturnal and will bury themselves beneath leaves, rocks, or sand during the day to avoid desiccation. They feed on fruit and decaying plant and animal material. The Caribbean hermit crab most often uses unoccupied marine gastropod shells, such as periwinkles, top shells, nerites,

© Andrew McLachlan



Caribbean hermit crabs are good climbers but can often be heard in leaf litter and debris on the forest floor as they are searching for food or maybe a new shell.

and whelks, to protect its soft body parts. As the crab grows, it adopts larger shells, abandoning the old ones.

The other three species are all members of the family Gecarcinidae and are commonly referred to as land crabs. During the dry season, land crabs remain relatively inactive, but seasonal rains during May through August initiate migration and the breeding season in the Cayman Islands.

Following mating, the female crab carries her eggs for an allotted incubation period (see below) before migrating and releasing them into the ocean where the larvae undergo planktonic development. 99.7% of mortality occurs during the planktonic stage, thus only a small portion of eggs released will successfully become crabs that will climb back on shore to live their adult life.

White land crab (*Cardisoma guanhum*)

This is the largest species of land crab in the Cayman Islands, with claws exceeding 9cm in length. It is found near mangrove swamps, among fields of tall grass, in open hardwood groves, and sandy areas. This crab is generally a burrower and requires regular access to water in which it can submerge itself to avoid desiccation. This species is mainly nocturnal, except during the breeding season when large numbers may become active during the day. The white land crab feeds on leaf litter, fruits, and carrion, but will occasionally show cannibalistic behaviors. The white land crab is important for shoreline ecosystems as it significantly aids in nutrient recycling by bringing leaf debris into deeper layers of nutrient-poor sandy soils. This, in turn, allows plants to grow and protect our shores.



Female white land crab (*Cardisoma guanhum*) berried with eggs and crossing a dangerous road to reach the sea.



Black land crab
(*Gecarcinus ruricola*)

This genus is the most terrestrial of the land crab species. The black land crab occupies similar habitats to the white land crab, and can also be found in damp and shaded forested areas where they can burrow in soil, but more often shelter under rocks or tree roots. The black land crab is mainly nocturnal and has similar feeding habits to the white land crab. This species shows wide variations in their coloration patterns as individuals may be a combination of black, purple, orange, yellow, white, or red. See the two top photographs to the right.



Red land crab or red shank
(*Gecarcinus lateralis*)

Closely related to the black land crab, the red shank is much smaller and occurs along the dry zone of sandy beaches and throughout forested areas. It is largely herbivorous feeding on plant material and is most commonly seen during the daylight.

In addition to contributing to the biodiversity and performing important ecological services in the Cayman Islands, land crabs are also economically significant as a local food source. Harvesting pressures and rates of roadkill are unknown, but is suspected to be increasing with the island's growing human population and vehicular traffic. Additionally, habitat loss and isolation from resources such as food, shelter, and potential mates continues to be major threats to crabs as development increases.

Both of the above photographs show individuals of the black land crab species. These crabs display the opposite extremes of the colour spectrum characteristic for this species.



This is a red land crab (or red shank). All individuals of this species stay a characteristically small size displaying red claws and legs.



NOW TAKING 2017 NOMINATIONS FOR PROTECTED AREAS



As mentioned in the article on page 4, the National Conservation Council is once again inviting public nominations for new protected areas in the Cayman Islands.

Nominations made in 2016 are still valid, and don't need to be resubmitted. Nominations must be submitted in written form during the nomination period of the 15th June and 15th September 2017. For full instructions on making a nomination and the details your nomination must include [please click here](#).

The Council will assess all new nominations only after closure of the nominations period.

Nominations should be in the form of a letter and sent to conservationcouncil@gov.ky and should include:

- a description of the area sufficient to plot its boundaries on a map or chart

- a statement of reasons why the area should be protected, with reference to section 8 of the Law ([click here for a summary of section 8](#))
- a description of any protected species or species of special concern that reside in or migrate through the area
- a discussion of any conservation problems associated with the area, and any special protective measures that might be required.

Council advises that under section 8 of the Law, nominations should only be for areas which are predominately natural habitat, and reminds nominators that under Section 9 of the Law, in event a nomination is made for land in private ownership, the landowner will be notified, and the nomination cannot proceed without the landowner's agreement.

We hope you will take the time to be actively involved in conserving the natural beauty of the Cayman Islands.



KNOW YOUR NATIVES

Old George

Old George (*Hohenbergia caymanensis*), is a magnificent plant completely unique to western Grand Cayman. It is a critically endangered and endemic species only ever found occurring naturally in undisturbed humid forest in southern George Town.

Hohenbergia is often found as an epiphyte, meaning that it grows on the surface of another plant (often trees) and derives its moisture and nutrients from surrounding air and particles. It can, however, also be found growing on the ground or as an epilithic plant; growing on rocks. It is a large plant with leaves up to 1m (~3.3 ft) long and fruit

capsules of around 4cm with multiple seeds. Budding is also a method of reproduction.

When the plant was first discovered the pristine and rare forest it inhabited was fast disappearing with growing real estate rates in and around George Town. Conservation efforts have now established a subpopulation of Old George growing (but not yet reproducing) in the [Queen Elizabeth II Botanic Park](#) and it still occurs naturally in an extremely small and fragmented piece of forest today. Preserving this species in its natural habitat is of the highest priority.



Old George can be seen here as growing on the ground, and as an epiphyte high up in existing trees. To the right its flower spikes can be seen.