WELCOME

to our spring edition of Envirotalk.

In this issue –

- Dr. Geoff Smith and Dr. Shaun Lavis share the results of water tank testing around BELCO
- Jameka Smith gives suggestions for attracting butterflies to your garden
- Get an update on invasive Casuarina tree removal at Cooper's Island from our conservation team
- Paul Watson and Erich Hetzel report on the recent competition to count as many bird species as possible in the month of February – spoiler: it was an above-average year!
- Also See:
    - Our **News & Notices** for reminders and upcoming events
    - The **Planting Calendar** to get a head start on what to plant this spring.

Please contact:
Envirotalk mailing list: envirotalk@gov.bm to be placed on the mailing list or for suggestions for future articles.

UPDATE – WATER TANK ANALYSES IN THE BELCO AREA

The autumn 2020 Envirotalk issue covered the air quality complaints made by the public who were affected by BELCO emissions and described an ongoing monitoring study into the quality of water in water tanks of affected properties. This article provides the results of those water tank studies, which assessed the tank water and the sediment at the base of the tanks.

During 2020 the Pollution Control Section (PCS) of the Department of Environment & Natural Resources (DENR) received numerous complaints from the public with respect to soot fallout and engine exhaust odours that required detailed scientific investigation. The BELCO electrical generating facility is licenced under the Clean Air Act 1991 by the Environmental Authority (EA) (a statutory board). The EA required BELCO to facilitate the analysis of pollutants in water tanks of affected areas, using a third party organisation to collect the samples, send them overseas and to generate a report. The Bermuda Institute of Ocean Sciences (BIOS) was the third party organisation chosen to manage the sampling and 'chain of custody' of the samples. The sampling was assisted by DENR/PCS, and Renew Ltd helped undertake the tank sediment sampling. BELCO and iEPC Engineering Services of the Ascendant Group were also present to oversee the sampling operations.

The locations of the water tanks sampled are shown in Figure 1. Additional control sites away from BELCO, but adjacent to busy roads, included the Marine & Ports Mooring Buildings in Paget and Shorelands Building in Flatts.

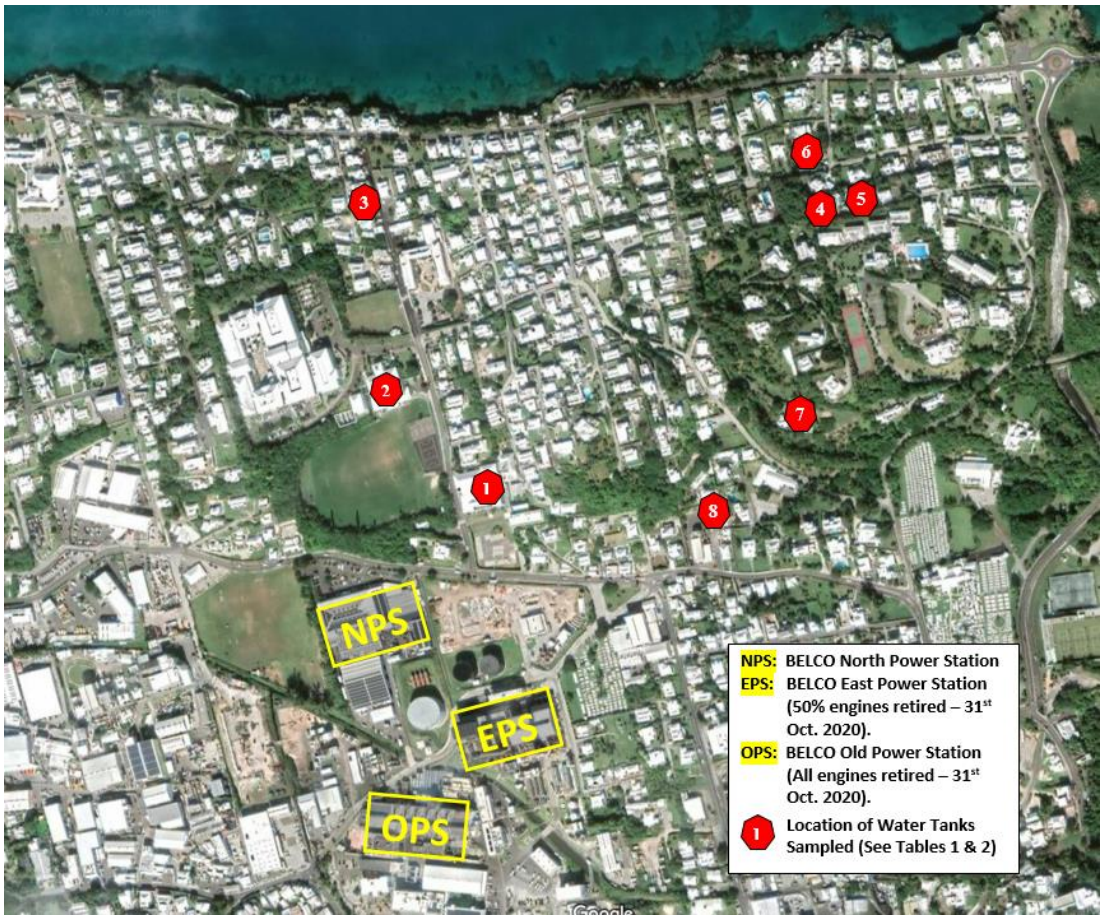


Figure 1. Locations of the water tanks sampled by BIOS at properties verified to be impacted by BELCO.

The laboratory selected for analysis was Bureau Veritas Laboratories (BV Labs), Bedford, Nova Scotia, Canada. 'BV Labs' are accredited by the Standards Council of Canada and conform to the requirements of ISO/IEC 17025:2005. The parameters to be analysed were agreed between DENR/PCS and the Department of Health. The most stringent drinking water standards were selected to compare for each pollutant, which included the UK Water Supply Regulations 2016, US National Primary and Secondary Drinking Water Regulations and the World Health Organization (WHO) drinking water guidelines 2017.

Water Tank – Water Analyses

Potential combustion sources in Bermuda that could produce pollutants that end up in water tanks include; road-vehicles, BELCO, Tynes Bay Waste to Energy Facility (TBWTE) and open fires. As part of this study the water tanks sampled included those located within areas being impacted by BELCO emissions and two control sites, located away from BELCO but adjacent to busy roads. The combustion-related pollutants measured in the tank water were typically present below the detection limit of the analytical method, which itself was well below the most stringent drinking water standards. The detection limits for these methods ranged from below parts per billion (ppb) to below parts per trillion (ppt). This was the case for toxic organic pollutants (i.e. benzene, toluene, ethyl-benzene and xylene, Poly-Aromatic Hydrocarbons (PAHs), and dioxins and furans) and certain heavy metals. This observation was consistent with previous studies commissioned by this department and undertaken by BIOS in 2005, which focussed on emissions from TBWTE and included an island-wide water tank investigation. Generally, the low concentration of combustion-related pollutants results from their very low solubilities in water and their tendency to partition into the organic sediments that collect at the base of the water tanks.

The heavy metals nickel and vanadium are directly associated with the heavy fuel oil currently used by BELCO in their baseload engines. Nickel was detected in only one of the 10 water tanks sampled (i.e. Old Berkeley School) and at 0.0027 mg/l it was over seven times lower than the most stringent drinking water limit of 0.02 mg/l. Vanadium was also measured in tank water sampled around BELCO at concentrations below the standards.

Iron is known to be present in the soot particles emitted from the BELCO stacks, but this also was at concentrations below the detection limits of the analytical method.

The only parameters shown to fail the drinking water standards selected included total coliform bacteria and *E. coli* bacteria. These bacteria are expected to be present in tank water from faecal material from birds and lizards on roofs. Bacteria can be treated through periodic chlorination or filtration technologies as described by the Department of Health: https://www.gov.bm/sites/default/files/Safe%20Water%20-%202017.pdf.

This study therefore highlighted that the emissions from BELCO, including both exhaust fumes and, more recently, soot events, did not compromise the drinking water quality above the most stringent drinking water standards that were compared (i.e. UK, US, WHO). The full data analysis from this study for pollutants associated with combustion sources (i.e. road-vehicles, BELCO, TBWTE) in addition to those from other sources (i.e. pesticides, nutrients, bacteria) have been provided to residents in the neighbourhood of BELCO. This data can also be provided to anyone upon request. Please email pollutioncontrol@gov.bm.

Water Tank - Sediment Analyses

As stated many of the pollutants generated by combustion processes tend to be relatively insoluble in water and as such are expected to predominantly reside within the sediments that collect at the base of the water tanks. Furthermore, a certain group of pollutants known as '*dioxins and furans*' are generated from all combustion processes (i.e. road-vehicles, BELCO, TBWTE, open fires, etc.) in proportions that are

characteristic of their combustion source. Dioxins and furans are a chemically-stable group of compounds that are not readily biodegraded once in the environment and have very low solubilities in water. The dioxins and furan fingerprint is therefore a good indicator of particular combustion sources when detected in environmental samples.

Results of the dioxin and furan fingerprint analysis of the tank sediment are presented in figure 2. Figure 2 shows that a very similar signature exists for all properties sampled near BELCO, the two control sites away from BELCO and by busy roads and also for the results of the larger island-wide study by BIOS in 2005.

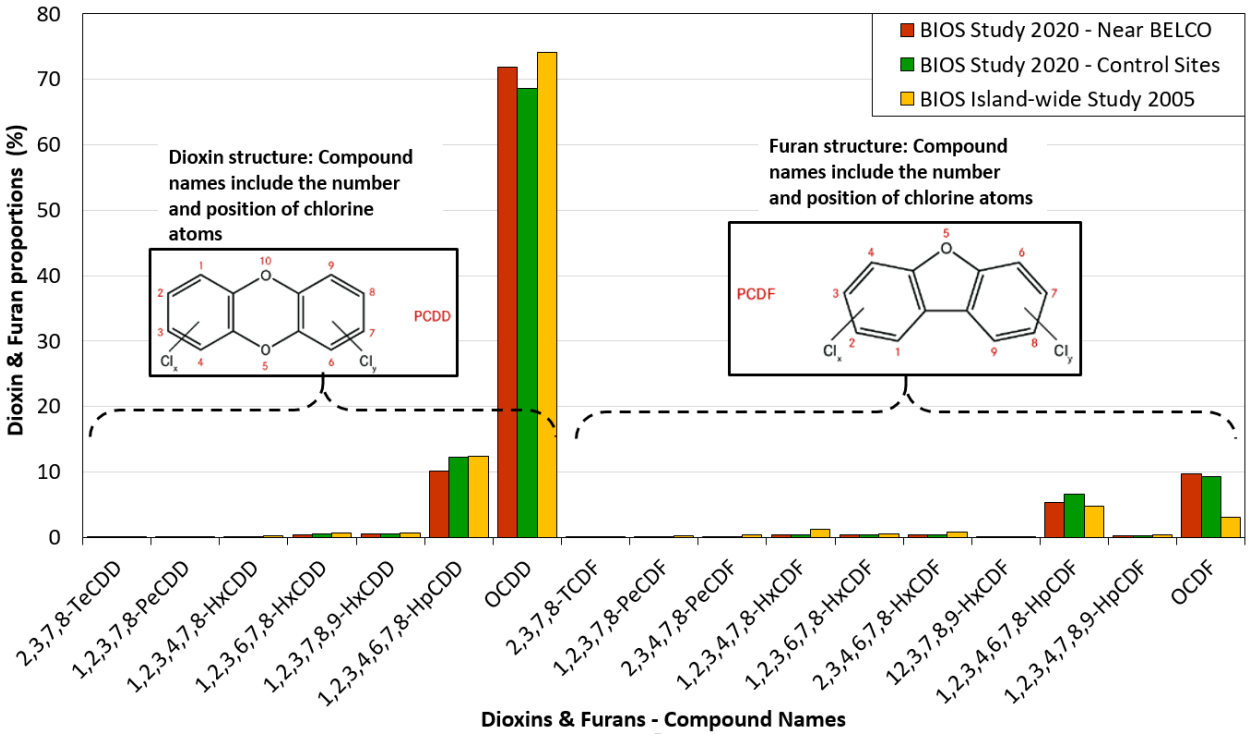


Figure 2. Dioxin and Furan fingerprints in tank sediment – shown as an average for (i) properties near BELCO in 2020 (red), (ii) Control properties away from BELCO and near busy roads in 2020 (green) and (iii) the Island-wide study of 2005 (yellow).

From figure 2 it is apparent that the majority of the dioxins and furans present are the fully-chlorinated and almost fully-chlorinated compounds. For example, dioxin '*1,2,3,4,6,7,8-HpCDD*' corresponds to '*Hepta-Chloro-Diphenyl Dioxin*' where the chlorine atoms are substituted at positions: *1,2,3,4,6,7,8* on the dioxin molecule. As all of the dioxin and furan signatures are similar, whether near to BELCO or at the control sites, this indicates that BELCO emissions are not the primary source of dioxins and furans in the sediments that collected in water tanks close to BELCO (this is discussed further below).

There are strong similarities between the fingerprints of this study and that of BIOS in 2005, which further indicates that there is not any pervasive dioxin and furan signature from BELCO emissions in the water tank sediments of properties near BELCO. Furthermore, the total concentration of dioxins and furans varied considerably over the whole island and did not correlate with sites close to singular pollution sources such as BELCO or TBWTE.

Figure 3 shows further comparison of the dioxin and furan fingerprint from other sources including; (i) BELCO HFO engine exhaust (Engine E-5 – navy blue), (ii) BELCO Road Diesel (Engine D-14 - brown), (iii) North Power Station soot (light blue) and (iv) TBWTE (black). From figure 3 it is apparent that the dioxin and furan fingerprint is very different for the BELCO Baseload Engine (E-5) that operates on Heavy Fuel Oil (HFO) and the TBWTE emissions when compared to that of the tank sediments. Also when comparing the emission data for the now retired BELCO road-diesel engine (D-14) and the soot collected from the new North Power Station engines (HFO) there are still some significant differences when compared to the tank sediments. It is important to note that the dioxin and furan signatures measured in the exhaust of all mass burn incinerators located over the world are very similar, and so the Tynes Bay signature can be considered a "typical" mass burn incinerator fingerprint thereby further highlighting the significance of using dioxin and furan signatures.

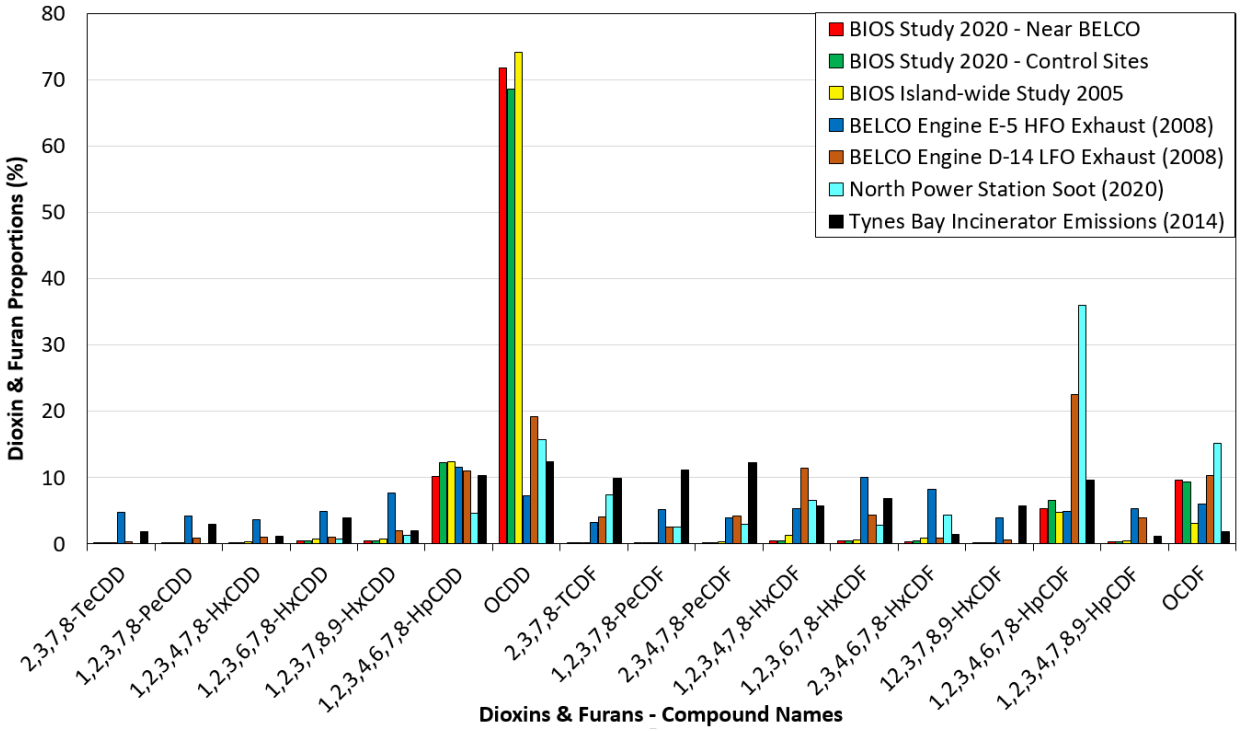


Figure 3. Dioxin and Furan fingerprint – comparison of tank sediment (figure 2) to BELCO exhaust from engine E5 (navy blue), BELCO soot from a North Power Station engine (light blue) and Tynes Bay Waste to Energy Facility (TBWTE) exhaust (black).

Figure 4 shows a comparison of the dioxin and furan fingerprint of the tank sediments with road-vehicle exhaust data collected from international scientific journal publications. It is apparent from figure 4 that the dioxin and furan fingerprint of the water tank sediments closely resemble the total exhaust and particulate emissions that have been measured from the tail-pipes of gasoline and diesel road-vehicles. For example, the dioxin and furan compounds with the highest proportions are the same four that are present in tank sediment and road-vehicle exhaust. *This suggests that soot particles from road vehicles in Bermuda are the predominant source of dioxins and furans in the sediments of water tanks collected for this study.*

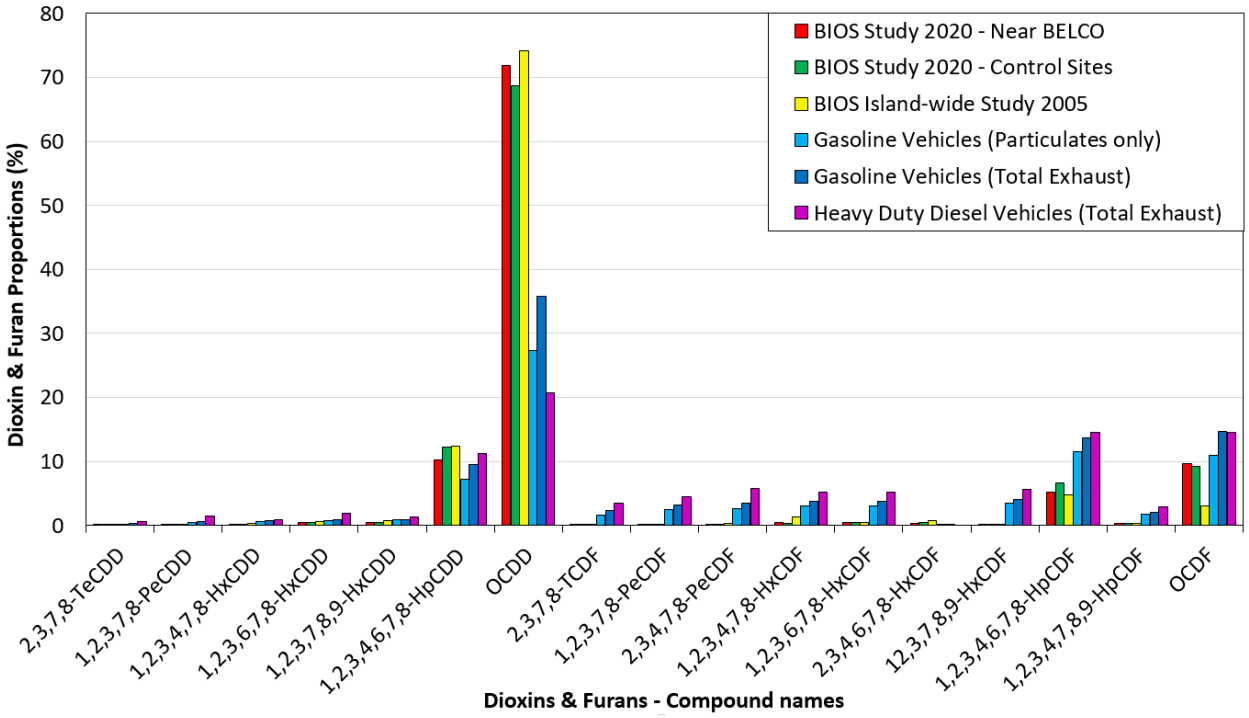


Figure 4. *Dioxin and Furan fingerprint – comparison of tank sediment (figure 2) to overseas road-vehicle data for particulates (light blue) and total exhaust (navy blue) from gasoline vehicles and total exhaust from heavy duty diesel road-vehicles.*

Water Tanks – Risk of Sediment Mixing

The data continues to show that most of the combustion related pollutants that are emitted from sources, such as road-vehicles, BELCO, TBWTE, are largely present in the tank sediments and not in the overlying water at the times when the water sampling has occurred. It is possible for turbulence within the water of a tank to increase during rain events or water truck deliveries, especially when the water level is low in the tank, leading to the sediment becoming suspended. Once suspended, any water pumped from the tank will also transport the sediment.

The amount of sediment in (mg of sediment per litre of water) that would need to be mixed with the overlying water in order to cause an exceedance of the drinking water standards (i.e. UK, US, WHO) was shown to be:

1. 9 mg/l for iron, where iron is on the secondary drinking water lists as high amounts can cause taste quality issues rather than health effects.
2. 25 mg/l for the PAH Benzo[a]pyrene, which originates from many combustion processes.
3. 31 mg/l for lead (Pb), which can originate from plumbing fixtures.
4. 96 mg/l for Nickel, which was shown to be associated with proximity to BELCO.

Suspended particles would typically be readily apparent in the water if present at 20-30 mg/l. It is likely that someone encountering such concentrations would reject the water on the basis of its appearance. To DENR's knowledge, this is a very rare occurrence, which suggests that the risk of mixing sediment in the tank water to the levels described above is unlikely. Nevertheless, the amount of sediment that could be transported from an agitated tank to kitchen or bathroom taps has not been quantified and so DENR is due to start an investigation, which will: 1) determine what factors could lead to sediment being suspended

in the tank water (i.e. turbidity) at the foot valve of the water tank; and 2) whether such mixing could lead to an exceedance of the more stringent drinking water standards investigated.

Dr. Geoff Smith, Environmental Engineer* and *Dr. Shaun Lavis, Hydrogeologist
DENR - Pollution Control Section

CREATING A BUTTERFLY GARDEN

Tucked on the front side of the Commercial Slathouse, located in Botanical Gardens, you will find the Butterfly Garden. Designed and installed in 2005, the garden provides host and nectar plants for resident and migrant butterflies (see Figure 1). It also offers rock outcrops and wood stumps for basking and attaching pupa. On any given day, you will be greeted by a frolicking butterfly.

Creating a butterfly garden at home can be as simple as choosing flowering plants that will invite adult butterflies to your garden to feed. But if you want to create a butterfly garden that will act as a sanctuary, attracting a wide variety of butterflies while also providing a place where butterflies can grow and multiply, you will first need some simple planning. By considering which plants to grow and evaluating your garden site, you can plant a butterfly garden that will help with the creation of more butterflies.

The attached brochure insert (Figure 2 and Table 1) provides a list of recommended plants to incorporate in your home garden. Many flowering plants will attract butterflies to your location, but selecting plants that will feed butterflies while also encouraging them to stick around for a while, lay eggs and create a new generation of butterflies, is your goal. To do this, you will need to choose plants that fall into two groups: nectar plants that will provide adult butterflies with energy and caterpillar food plants that will feed caterpillars. A balanced selection of plants from these two groups will provide for the entire life cycle of butterflies.

Butterflies will linger longer in your garden if there are also areas that provide shelter, water, and sun. Once you have combined careful plant selection with the details of site selection, you will have created a butterfly garden that is a microhabitat providing a unique location where a wide variety of butterflies can live and grow in your home garden.

Jameka Smith, Assistant Park Planner
Department of Parks

Bermuda Botanical Gardens

Butterflies of Bermuda

There are 15 species of butterfly that have been recorded in Bermuda. 7 species are confirmed as regularly breeding residents, 5 species are regular migrants and 4 species are rare migrants. Below are some of the butterflies you may encounter in the garden.

Cabbage White
Pieris rapae
(Resident)

Gulf fritillary
Agraulis vanillae
(Resident)

Buckeye
Junonia coenia
(Resident)

Monarch
Danaus plexippus
(Resident & Migrant)

Red Admiral
Vanessa atalanta
(Regular Migrant)

Little Sulphur
Colias philodice
(Regular Migrant)

Common Sulphur
Colias eurytheme
(Regular Migrant)

Alfalfa
Eurema lisa
(Regular Migrant)

Painted Lady
Vanessa cardui
(Frequent Migrant)

Mourning Cloak
Nymphalis antiopa
(Rare Migrant)

American Painted Lady
Vanessa virginiensis
(Rare Migrant)

Question Mark
Polygonia interrogationis
(Rare Migrant)

Figure 1: Resident and migrant butterflies of Bermuda.

Bermuda Botanical Gardens

Host and Nectar Plants

A good butterfly habitat includes not just nectar plants but also host plants. Nectar plants provide food for adult butterflies, and host plants provide food for butterfly caterpillars.
Butterfly caterpillars require specific host plants to meet their food needs. For example, in this garden, monarch butterflies feed on milkweed, and gulf fritillaries enjoy lantana and passion flowers.

Nasturtium
Cabbage White
Host

Lantana
Gulf fritillary
Nectar

Plantain
Buckeye
Host

Milkweed
Monarch
Host/Nectar

Butterfly bush
Red Admiral
Nectar

White clover
Little Sulphur
Host

Goldenrod
Common Sulphur
Nectar

Globe thistle
Alfalfa
Nectar

Sunflower
Painted lady
Host/Nectar

Shasta daisy
Mourning Cloak
Nectar

Marigold
American Painted lady
Nectar

Stinging nettles
Question Mark
Host

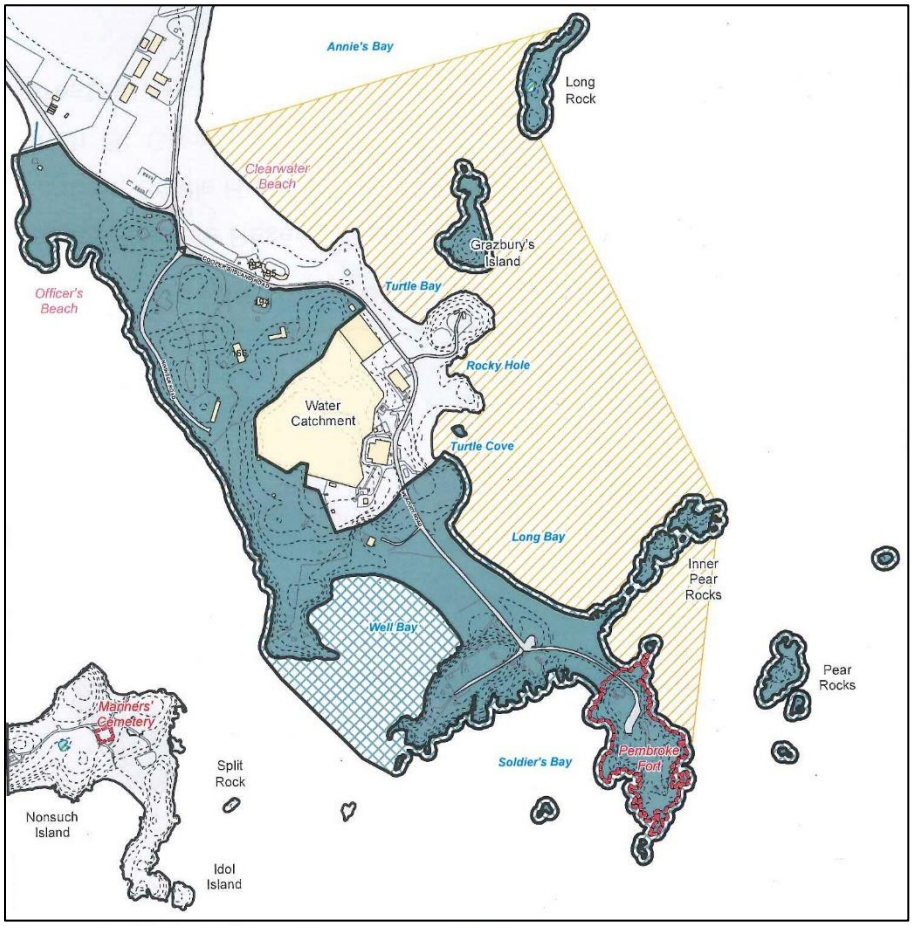
Figure 2: Nectar-providing and caterpillar host plants

Table 1: Recommended plants for butterfly gardens

Botanical Name	Common Name	Butterfly Species	Host/Nectar
Trees			
Cassia fistula	Golden Shower	Little Sulphur	Host
Shrubs			
Asclepias curassavica	Milkweed	Monarch, Alfalfa	Host/Nectar
Buddleia davidii	Butterfly Bush	Monarch, Red Admiral, Painted Lady, Mourning Cloak	Nectar
Hibiscus syriacus	Rose of Sharon	Common Chequered Skipper	Host/Nectar
Lantana camara	Sagebush	Fiery skipper, Gulf Fritillary	Nectar
Sophora tomentosa	Coast Sophora	various	Attractant
Perennials			
Asclepis tuberosa	Milkweed	Monarch, Fiery skipper, Mourning Cloak, Question Mark	Host/Nectar
Anaphalis species	Pearly Everlasting	American Painted Lady	Host/Nectar
Cirsium rivulare	Thistle	Painted Lady	Host/Nectar
Helianthus species	Sunflower	Painted Lady	Host/Nectar
Passiflora caerulea	Passionflower	Gulf Fritillary	Host/Nectar
Plantago lanceolata	Plantain	Buckeye	Host
Trifolium repens	White Clover	Little Sulphur, Alfalfa	Host/Nectar
Tropaeolum majus	Garden Nasturtium	Cabbage White	Host
Annuals			
Brassica oleracea	Ornamental Cabbage	Cabbage White	Host
Tagetes species	Marigolds	American Painted Lady	Nectar
Zinnia elegans	Zinnia	various	Nectar

CASUARINA TREE REMOVAL ON COOPER'S ISLAND

Some members of the public have contacted the Department of Environment and Natural Resources (DENR) with concerns regarding the removal of casuarina trees on Cooper's Island, especially along Mercury Road between Long Bay and Well Bay. DENR has been managing different parts of Cooper's Island (particularly the peninsulas south of the water catchment) since 2008, focusing on the removal of numerous invasive plant species and replanting with salt tolerant natives and endemics in an attempt to restore the area to a more natural state. At present, 64 acres of land on Cooper's Island is designated as Nature Reserve. Nature Reserves are described under the National Parks Act as protected areas managed for the benefit of special or fragile natural features (typically wildlife). It is important to understand that they are different to lands zoned as Amenity Park or Recreational Park – which were created to be used for enjoyment by the general public (e.g. Clearwater Beach).



Class: A - Nature Reserve

Location: Castle Harbour

Parish: St. George's

Terrestrial Area: 64.115 acres

Nature Reserve

Nature Reserve Buffer

Historic area

Marine Board (Prohibited Areas) Notice 2010

Building

Aerial image showing Cooper's Island prior to the creation of the Kindley Field Airport in the 1940s.

Cooper's Island is a very important area not only for its outstanding natural beauty but because it is home to a variety of rare and unique animals which struggle to live across much of Bermuda. These animals include skinks, cahows, leafcutter bees, and land hermit crabs. The beaches on Cooper's Island are used by migratory shorebirds and even by the occasional nesting sea turtle.

The Cooper's Island Nature Reserve Management Plan (see https://environment.bm/coopers-island) explains that '*extensive culling of invasive species will be undertaken* (on the beaches of Well Bay and Long Bay) *followed by the replanting of native and endemic plant species suitable for dune habitat*.' Consequently DENR personnel, with assistance from numerous volunteers, are steadily working from the southern tip of Cooper's Island and moving northwards removing hundreds of casuarinas. We understand that some of the mature casuarina trees provide beach users shade from the summer sun, but this species is considered to be locally invasive and the trees on Cooper's Island are a large source of seeds that sprout seedlings on all the islands within the Castle Harbour Islands Nature Reserve (including Nonsuch Island). The seeds come from small prickly pine cones, a feature that also makes them unpleasant to walk on when barefoot. Therefore, the benefits of removing the casuarina trees outweigh those of leaving them in place.

DENR has planted young buttonwood and bay grape trees along the back of Long Bay beach to replace the casuarinas that were removed, and it has also pruned some of the more mature bay grape trees to create areas of shade for the visitors of Well Bay and Long Bay. Furthermore, DENR has dispersed hundreds of native plant seeds in the area with the hope that dune binding vines and shrubs such as seaside morning glory, bay bean, beach lobelia, and scurvy grass will grow.


Long Bay beach before (left) and after (right) the removal of the casuarina trees.

The casuarina trees that were removed were chipped and trucked to the Bermuda Aquarium Museum and Zoo (BAMZ) where they are used as ground cover in a number of animal exhibits. Creating our own high quality wood chips, instead of buying them, saves Government money. DENR gratefully acknowledges Narciso Daponte of Landscape Gardener's Ltd. who generously provides the chipping service at no cost to the public.

When planning your 2021 summertime visit to these beaches please don't forget to bring beach umbrellas, sun shirts, wide-brimmed hats, and a high SPF number sunscreen.

Radiated tortoises at BAMZ enjoying some breakfast on a fresh bed of new casuarina wood chips

by DENR Terrestrial Conservation and Biodiversity Section staff

BERMUDA'S FEBRUARY BIRDING COMPETITION

February is usually a quiet bird watching month here. Following the Bermuda Audubon Society's annual Christmas Bird Count (CBC), birders try to get their 'year list' off to a good kick start in January with the aim of logging 100 bird species by month's end, a task that is attainable with a lot of time in the field. Many of these same birds remain into February, with the addition of some early spring migrants or northern vagrants arriving during intense winter storms.

For those that think there are no birds around in February, there are more than you may think. The Bermuda February birding competition was created to brighten up what might otherwise have been a dull, rainy, and windy month. The competition was planned to be a fun event designed to get folks out birding and mixing the experienced birders with the not so experienced. We hoped to encourage more people to get out birding on a regular basis, looking for birds and inputting records into eBird (an online database which provides scientists, researchers, and amateur naturalists with real-time data about bird distribution and abundance). It was a handicapped contest designed so that anyone who put in a bit of time could win. Setting handicaps is always a difficult and contentious thing to do. We considered requiring that certain birders wear a single or even two eye patches and block their ears too, but we did not want anyone falling down and hurting themselves and frankly we were not even sure that was enough of a handicap!

A few good bird species were seen in late January, with the hope and expectation they would remain into February (e.g. Snow goose, Northern gannet, Yellow breasted chat and Prothonotary warbler). February started with a bang as almost every birder was out bright and early trying to amass the maximum number of species. In fact, 53 species were seen on the first day, which was a Monday. My personal best bird for that first day was a Yellow Warbler, a rare migrant seen during the spring but a fairly common migrant in August and September. This species has only been seen twice previously in February.

Rare to uncommon birds seen last month included two European Golden Plovers and a very cryptic Ruff, both of which spent the entire time on the airport, and whilst looking for these birds a Lapland Longspur was discovered, a species not seen in Bermuda for about 15 years. A Surf Scoter wintered on Spittal pond and several records of American Robin and Northern Mockingbird were seen at scattered locations around the island. Additionally, a short-eared owl found its way here mid-month and hunted on the airfield and is likely still present. A regular spring migrant seen by several at Warwick Pond was a lovely Purple gallinule, and an early Barn Swallow was found on 22nd February.

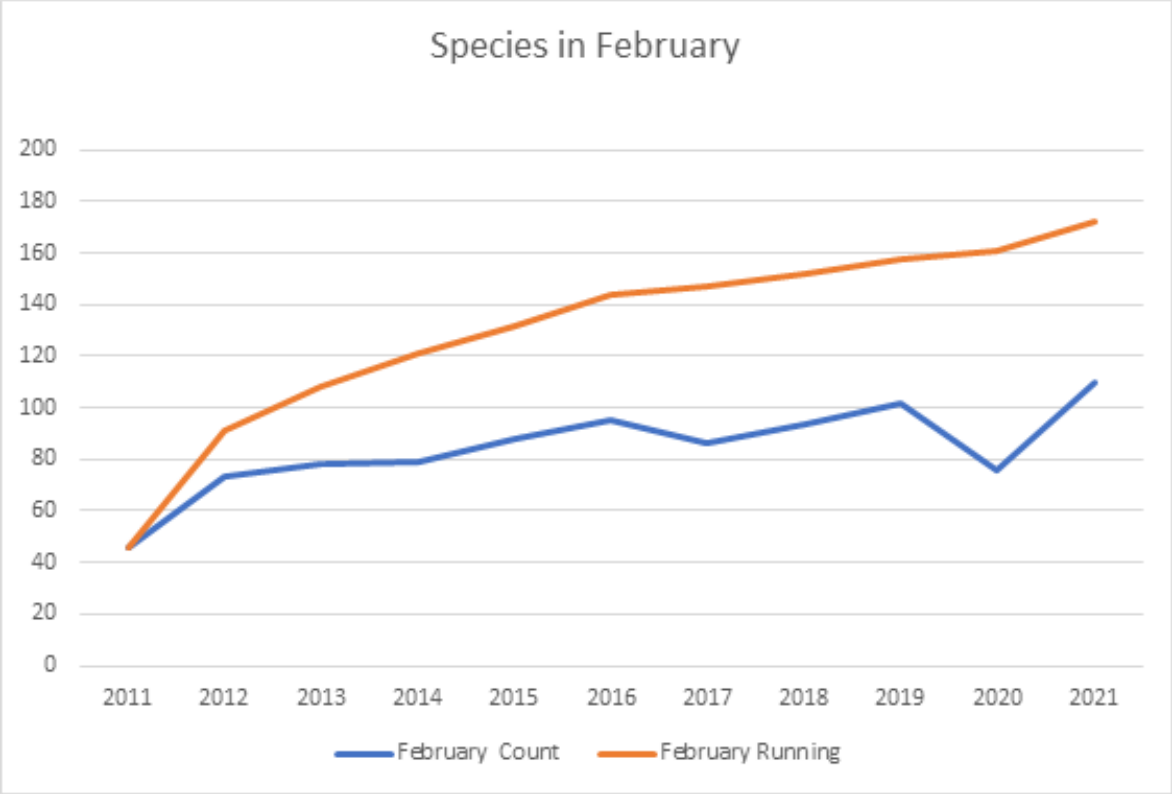
Short eared owl (photo: eBird.org)

The most exciting bird however was 'discovered' by Andrea Webb, a new birder who has been aptly nicknamed 'the bird whisperer'. Andrea photographed a bluebird-like species at the Port Royal golf course which turned out to be a Mountain Bluebird, a species resident in the central and Western mountains of the US and one not previously recorded on Bermuda.

Mountain bluebird (photo: eBird.org)

Mountain bluebird photographed on the Port Royal golf course by Neal Morris

It is not known if more birds were present this winter or more observer sightings occurred due to increased coverage but a total of 110 species were documented here during February 2021, so quite a few more than the resident 20 or so species and a lot more than the usual kiskadees, sparrows, and starlings commonly observed here. To put things into perspective, the average number of species seen in February over the past ten years was 84. The lowest total number observed (46) was in 2011, while 2019 had the highest (102).



Graph showing the total number of bird species observed on Bermuda during the month of February since 2011.

The winner of the competition will be disclosed on 20th March after all eBird records are tabulated, with bragging rights for whomever that may be. One lucky participant also managed to see 95 of the total 110 species seen during the month, I know because that was me (PW).

In all, the competition was a great idea and this past February turned out to be a wonderful birding month. A special thanks is due to Jo Smith, who compiled the results manually every evening from posted eBird records, then updated and published the provision standings on a weekly basis in a creative and humorous format. Jo will also be preparing the final tallies. Further information can be found on www.ebird.org or via the Bermuda Audubon Society website www.audubon.bm

Paul Watson and Erich Hetzel,
Bermuda Audubon Society

News & Notices

Spearfishing Reminder

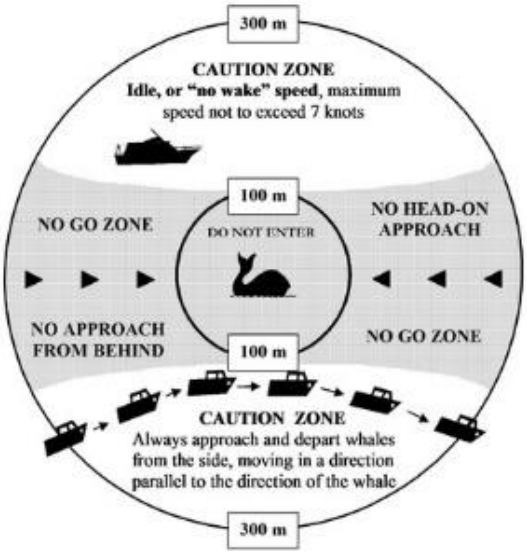
Recreational spear fishers are reminded that spearfishing statistics should be submitted **monthly** using the online portal at www.fisheries.gov.bm. Please call 293-5600 or email fisheries@gov.bm if you are having difficulties accessing the portal.

Lobster Statistics Reminder

Recreational lobster divers are reminded that their catch statistics for the 2020-21 season must be submitted online (using the portal at www.fisheries.gov.bm) **by the end of April**. There should be an entry for each date / location that you fished, and a "No fishing" entry for any month in which you did not fish. Anyone failing to submit catch statistics for the season will not be issued a recreational lobster diver licence for the upcoming 2021-22 lobster season. Please call 2935600 or email fisheries@gov.bm if you are having difficulties accessing the portal.

Whale Watching Guidelines

Whale watching can be enjoyed in Bermuda's waters in winter and spring. The public are reminded that all whales and dolphins are protected by law. Boaters should follow the whale watching guidance located at: https://environment.bm/whale-watching-guidelines



Planting Calendar – What to plant in the spring…

VEGETABLES

March
Beans, Beets, Broccoli, Cabbage, Carrots, Cassava, Cauliflower, Chard, Christophine, Collards, Corn, Cucumber, Eggplant, Kale, Leeks, Lettuce, Muskmelon (Cantaloupe), Mustard Greens, Okra, Pepper, Potatoes, Pumpkin, Radish, Rutabaga, Squash, Sweet Potato, Spinach, Tomato, Turnip, Watermelon

April
Beans, Beets, Broccoli, Cabbage, Carrots, Cauliflower, Chard, Christophine, Collards, Corn, Cucumber, Eggplant, Kale, Muskmelon (Cantaloupe), Okra, Pepper, Pumpkin, Radish, Rutabaga, Spinach, Squash, Sweet Potato, Tomato, Turnip, Watermelon

May
Beans, Cucumber, Okra, Pumpkin, Radish, Squash, Sweet Potato, Tomato

June
Beans, Cucumber, Squash, Tomato

FLOWERS

March/April
Acrolinium, ageratum, alyssum, antirrhinum, aster, aubrietia, baby blue eyes, bachelor's buttons, bird's eyes, blanket flower, begonia, bells of Ireland, calendula, candytuft, carnation, centaurea, chrysanthemum, cineraria, coreopsis, dahlia, African daisy, dianthus, forget-me-not, geranium, gerbera, globe amaranth, globe gilia, godeita, gypsophila, hollyhock, impatiens, larkspur, lathyrus, marigold (African), marigold (French), nasturtium, nicotiana, pansy, petunia, phlox, phlox (annual), red tassel flower, rose everlasting, rudbeckia, salipiglossis, salvia, scabiosa, statice, snow-on-the-mountain, spider flower (cleome), star-of-the-veldt, stock, sweet pea, sweet William, verbena and viola.

May
Amaranthus, balsam, calendula, celosia, coreopsis, cosmos, gaillardia, gazania, globe amaranth, hollyhock, marigold, portulaca, rudbeckia, vinca and zinnia.

June
Amaranthus, balsam, calendula, celosia, coreopsis, cosmos, gaillardia, gazania, globe amaranth, hollyhock, marigold, portulaca, rudbeckia, vinca and zinnia.

GOVERNMENT OF BERMUDA

Department of Environment and Natural Resources

ON HER MAJESTY'S SERVICE

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