SARASOTA BRITISH CLUB, P.O. BOX 21063,
SARASOTA, FL 34276

JULY 2020

BritClub News

Vol 20, Issue 7

COMING EVENTS

SBC BOARD MEETING

Next meeting will be on Wednesday, July 8th at 6:15 pm, it will be a virtual meeting.

All members will receive emailed invitations to the events shown below in due time. Please look out for them in your inbox and be sure to add "Sarasota British Club" to your safe senders list.

Save the date!

AGM: Saturday, October 10th.

Guy Fawkes: Thursday, November 5th.

Christmas party: December 12th, 2020 at 6:00pm.

Eventbrite

A gentle reminder: please use the Eventbrite system to let us know that you are coming to our events. Many events require us to notify the venue of numbers attending. At several recent events members have arrived without advance notice, and this causes confusion and seating difficulties.

PRESIDENT'S LETTER, JULY 2020

I wrote last month about our lockdown 'routine', and it increasingly looks as though social distancing will continue to be the norm for the rest of 2020. At least my gym has reopened (although now it is a 'private, members-only facility), so I am able to ride my bike up to Siesta Key village most days to work out.

En-route, I can check out the beach, where weekends are packed with people scrambling to find a parking spot at the Public Beach lot.

After lunch, we swim, and the highlight of the day is an hour watching 'Breaking Bad'. I have previously discussed how 'Game of Thrones' was improved by watching every day – so that you can better follow the characters and the plot. The same is true of BB, where the adventures of Walt and Jesse somehow amuse and frighten at the same time.

Last month I shared a picture of a bird's nest, and regrettably the eggs did not survive the weekend rainstorm early this month. However, a friend sent me this fascinating YouTube video of mating Manatees – more active that you have ever seen them! It was taken on Saturday evening (6/28) on Casey Key.

Manatee melee

We follow the British news by reading the Telegraph online and watching the BBC World News at 6:00 pm on PBS. We talk to friends and family and it is interesting to compare the differing approaches to managing the Virus. The mortality in the UK has had a huge impact on those to whom we speak, yet there is a shared indifference by many that is resulting in a spike in cases. I fear that we may only just now be starting to experience the full impact of the pandemic and those of us in high-risk categories should make every effort to isolate and socially distance ourselves from the crowds who appear to think they are invulnerable. I wish I could be more optimistic, but the nightly statistics are alarming.

So, my message to you is to stay safe, wash your hands, and let me know if you need any kind of assistance, I am sure the other members of the Club will be happy to help! I hope you have a happy July 4th!

Paul Wilkinson

BOARD ANNOUNCEMENTS

Précis of the June's Board Meeting

The Treasurer's Report showed a Closing Balance of $4,455.76 on May 31st, 2020.

Our present total membership is 130.

Future event ideas such as a Cooking Demonstration; Social Night; Movie Night and Bingo are being considered for when our lives return to normal.

The Sarasota British Club is celebrating its 20th anniversary this year and

We are still hoping on having a birthday party at the Annual General Meeting in October.

COMING EVENTS

Annual General Meeting:

On Saturday, October 10th, at Village des Pins Clubhouse.

Guy Fawkes Beach Party:

On Thursday, November 5th, at Siesta Key beach.

2020 Annual Christmas party:

December 12th, 2020; at 6:00pm.

Heritage Oaks Golf & Country Club, 4800 Chase Oaks Dr. Sarasota, FL. 34241

CANCELED EVENTS

July luncheon: due to the COVID 19 situation in Florida we regretfully had to cancel our July luncheon.

Open air gathering in July: due to the members' low response.

RECENT EVENTS

One morning at Brohard Paw Park:

On June 3rd, some of us accompanied by our four-legged families, got together at the beach to enjoy some conversation, laughter and the delicious doughnuts that Diana and Paul brought for everyone. Despite being just a few, it was such a warm experience to speak in person and see each other smile again after so many weeks of isolation. We did make the effort to keep physical distance between except for brief moments. We'll definitely do better next time.

COMMUNITY BOARD

From Club member Dr Mary Thompson:

I saw this FREE course title: **Empire: The Controversies of British** Imperialism.
https://www.futurelearn.com/courses/empire?utm_campaign=fl_june_2020&utm_medium=futurelearn_organic_email&utm_source=newsletter_broadcast&utm_term=200612_GNL__0030_&utm_content=copy

What do you think about asking the membership if they would like to take the course at the same time? It is six weeks in length, and estimated study time a week is 3 hours. I have figured out a way to save the written lectures so that I can insert into Word or Google Docs and highlight to my mind's content. I can share this technique with others if they like. An advantage of my copying the lectures is to have these available for later study.

Contact Mary at :
drmaryjthompson@gmail.com

About the Book Club:

Mary is reading the last pages of "A Flash of Green". She happened to find in the 'Siesta Sand' Newspaper, several articles about events on the Key that sound similar to the events in the book. What are your ideas? Who would like to compare and discuss it?

MEDIA MATTERS

As mentioned above, **Breaking Bad** on **Netflix** is worth revisiting even if you have seen it before. I had forgotten how darkly funny it is, and the awfulness of the adventures which the anti-heroes encounter.

I have 20 DVD videos in my Netflix queue, but the first dozen is showing a "Short Wait" and have been since January. That said, we had 2 very good 'sleepers' this past weekend:

Maiden was a documentary of the first all-female crew of a sailboat on the 1989 Whitbread Round the World yacht race. It was a compelling tale of the determination of the skipper, Tracy Edwards, in securing the money, and the team to undertake a voyage that everyone said would fail. A great, uplifting story of what can be achieved through dogged determination.

The Professor and the Madman was an unlikely title for another fascinating movie. A stellar cast (Mel Gibson, Sean Penn, Natalie Dormer) told the tale of the first edition of the Oxford English Dictionary. Apparently, the production itself was very controversial, and the actors distanced themselves from it, but it was one of those films that makes you research it next day to see if it was really true (IT WAS!).

A couple of **Netflix** streaming videos we liked – **Magic for Humans** is a clever magic show, and **Magnetic** has some spectacular photography, both worth watching. **Eurovision**, has just arrived, and was great fun, highly recommended for those who remember the crazy Song Contest and the hype that surrounds it.

Our subscription to **Starz** (via Amazon) is worth the $9 per month, several good series worth watching in addition to Outlander. **The White Queen** was an excellent historical drama about Elizabeth Woodville, the wife of Edward III, and the grandmother of Henry VIII. **Boss** is a well-crafted drama about the mayor of Chicago who faces the double challenges of running the City and dealing with a life-threatening illness.

I see some good new shows on Acorn and **BritBox**, which are both good value even though I note that the price has gone up. Since you can easily turn them on and off inside the **Amazon** app, I shall probably run them one at a time.

Feel free to email or call me with questions – pwilkinson18@gmail.com or

240 432 2851

Paul Wilkinson

From Sandra Cherry:

Hi there!

I Was watching Rachel Ray yesterday and John was making a Gin and Tonic Slush summer drink. Now, I love my G&Ts as is but am going to experiment with this version as it reminded me of making Brandy Slush for years. Here goes the recipe.

Brandy Slush Recipe:

7 cups of water

2 cups of Brandy

1 ½ cup of sugar

1 tsp iced tea: optional

12 oz frozen lemon concentrate

12 oz orange juice concentrate

Mix well together and place in lidded container; freeze overnight or minimum of 12 hrs.

When ready to imbibe, scoop slush into favorite glass and top with 7UP.

Cheers!

From Paul Cassidy:

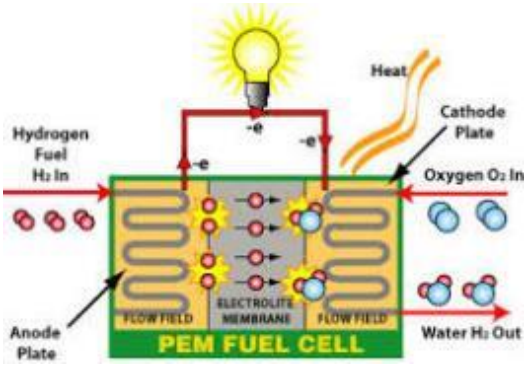
Alternative Energy/Power Systems

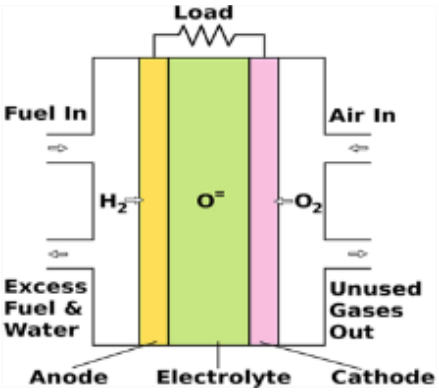
Background – I worked in the internal combustion (IC) engine & applications industry for 46 years then for the last 10 years (until my second or third retirement depending on how one counts these), I worked in the 'Alternative Energy/Power Systems' business and specifically in the **Fuel Cells** and related Electric Power systems arena. Fuel Cell technology research has been underway around the world for decades with recent work being directed towards increasing overall system efficiency and system level cost reduction. Some limited technical background is covered in 4 *italicized* paragraphs below – this will be as technical as my article will get – information regarding the current status of the technology and the many applications that are being developed around the world are the primary objective for this article.

The first fuel cells were invented in 1838, *so the basic technology is hardly new. The first commercial use of fuel cells came more than a century later in NASA space programs to generate power for space vehicles.*

How does a fuel cell work? *A fuel cell converts fuel into Direct Current (DC) electrical power by oxidizing the fuel via electrochemical conversion* ***of*** *pure hydrogen or hydrocarbon fuel, usually* ***with oxygen from air****. This conversion of fuel is significantly advanced compared to a typical IC engine powered generator which* ***burns fuel*** *rather inefficiently to drive the engine plus alternator. Fuel cells provide usable electrical energy directly by eliminating efficiency-robbing mechanical conversion and transforming chemical energy from the input fuel into electricity more efficiently and with no moving parts.* ***Fuel cells can produce electricity*** *continuously for as long as fuel and oxygen are supplied.*

Fuel cells are classified by the type of electrolyte they use*, operating temperatures and by the difference in startup time, which ranges from 1 second for Proton Exchange Membrane Fuel Cells – operating temperature around 60° - 100°C (PEM fuel cells, or PEMFC) to 10 minutes or more for solid oxide cells (SOFC) - operating temperature range - 600° to 800°C*





'Fuel-in' can be one of a number of gaseous hydrocarbon fuels (natural gas, for example) or liquid hydrocarbon fuels such as diesel - which needs an added sub-system to

In addition to electricity, fuel cells produce *water, heat and, depending on the fuel source, small amounts of Nitrogen Dioxide* (*NO2*) *and other emissions, including Carbon dioxide (CO2). The energy efficiency of a fuel cell (based on the energy content of the input fuel vs the electrical energy output) is generally between 50–70%. However, if the waste heat (from the electrochemical reaction) is captured, overall system efficiencies of 90+% can be obtained.*

In recent years, fuel cells have been used in many applications including for primary and backup power for commercial, industrial and residential buildings and in remote or inaccessible areas (such as for cell phone towers where grid electric power can be very intermittent). They are also used to power fuel cell vehicles, including fork lift trucks, automobiles, buses, marine applications, motorcycles, bicycles, rail transportation (especially commuter/light rail), submarines plus (so far), light aircraft and military drones.

A number of rail systems in UK, Germany, Italy, USA & Canada are already deploying hydrogen fuelled PEMFC powered multiple unit trains or evaluating such systems (example, the extensive Toronto, Ontario suburban commuter rail system).

US & Canadian Companies are active in the various developing FC power system markets. These include Plug Power (NY State, – NASDAQ PLUG – a major producer of PEM FC power systems for lift trucks and other vehicles), Ballard (Vancouver, Canada – a major supplier of PEM FC power systems for buses, trucks, rail systems, marine applications – typically ferry boats and for stationary power systems in general) while, in 2019, Cummins, (an important US based global diesel and natural gas IC engine producer acquired Hydrogenics - also Canadian, Toronto area, which produces PEM FC power systems plus hydrogen electrolyzer-based production systems).

Toyota, Honda & Hyundai are currently the most active PEM FC passenger car developers. However, lack of **fueling infrastructure** is a market barrier in the USA, Canada and many parts of Europe & the Rest of the World. It should be noted that H2 used in FC autos and other vehicles is typically supplied & stored on the vehicle at 10000 psi/700 bar pressure. Larger vehicles (trucks, buses, rail units, ships) can use liquid H2 but the pressurization (to 700 bar) and liquefaction (to below minus 253°C) processes are expensive for the specialized equipment

needed and for the process energy. It should be noted that, on a **mass basis**, the stored 'heating value' energy in hydrogen is about 3 to 4 times that of typical fuels such gasoline, diesel, ethanol & natural gas.

The city bus business (largely taxpayer funded in USA, Canada & most of Europe) is an active market for Hydrogen Fuel Cell power. Since city buses typically 'come home to roost' each evening, their (hydrogen) fueling infrastructure needs can be located in one or maybe two fleet service/depot facilities. For passenger cars, many hydrogen fuel stations must be located at consumer accessible sites. California has the most Fuel Cell autos & fuel stations in USA – but they have had issues with operating availability, fuel availability & cost.

In the HD truck business, Nikola (stock symbol NKLA) plans to build hydrogen Fuel Cell HD powered trucks in its new plant in Arizona. Meanwhile, Daimler Trucks (Mercedes in Germany & Freightliner in USA) has announced a JV with Volvo Trucks (Sweden) to develop hydrogen-powered fuel-cell heavy-duty trucks. Toyota (NYSE: TM) is working on PEM FC heavy-duty trucks with Kenworth (U.S) & Hino Trucks (Japan). Hyundai revealed a fuel cell-powered concept truck last year and signed an MOU with US engine maker Cummins (NYSE: CMI) to work on developing and commercializing fuel cell & related electric powertrains plus stationary power systems for data centers.

In stationary power systems markets, Bloom Energy (stock symbol BE) has been developing natural gas fueled SOFC power systems for many years. They supply prime electric power systems from 500KW upwards for industrial and other applications. Watt Fuel Cells (Pittsburgh area) develop and supply small SOFC systems (up to 1.0KW) using propane fuel for stand-by power systems for RV & sailboat auxiliary electric power requirements.

Fuel Cell Energy (FCE) – Danbury, CT (stock symbol FCEL) develops and produce multi-MW stationary power systems using natural gas fuel but a different FC system – Molten Carbonate Fuel Cells – MCFC. Despite the fact that they had a $1.2 billion order backlog, FCE were close to bankruptcy late 2019 but investments by Exxon & Orion Energy Partners appear to have saved them (at least for now).

The US Department of Energy continues to invest taxpayer dollars into Fuel Cell research and development projects (see their website for more information). There are still numerous technical & related cost challenges for the Fuel Cell Industry. Many of the catalyst technologies used in FCs today require 'precious metals' such as platinum. Current research areas include efforts to displace platinum catalysts, especially in PEMFC systems.

China is also emphasizing Fuel Cell applications research to help meet their 'clean air' needs.

Japan announced major investments in FC powered transportation systems including buses and other vehicles to be ready for the now postponed 2020 Olympics. Japan has also been providing taxpayer funding for over 100,000 residential fuel cell (both PEMFC & SOFC) auxiliary power systems (typically under 1.0KW – **very small**).

South Korea has made major investments in PEM FC, SOFC and other FC systems for power generation and other applications. Fuel Cell Energy, Bloom Energy, Hydrogenics and other USA partners are supporting South Korea's shift away from coal-based power generation plants to environmentally cleaner systems based on hydrogen & natural gas. Doosan America (subsidiary of Doosan Korea) produces a 440KW phosphoric acid fuel cell (PAFC) power system (uses natural gas fuel) in Connecticut for US customers and recently, the S. Korean parent built a local facility to increase overall production to support S Korea's 'clean air' goals.

The fuel cell market is growing, and it has been estimated that the value of the global fuel cell market will reach $34 billion by 2027. It is expected that the USA will retain a major portion of this global business.

A few words on Hydrogen (*H2*) required for PEM FC power systems. Hydrogen is the most abundant element on the earth but is basically never found on its own – it is always combined with other elements (with oxygen being one of the most common, as water), all petroleum based fuels contain hydrogen, combined with carbon (hence carbon dioxide emissions when these fuels are burned). The oil refining industry makes/buys millions of tons per year of 'commercial' grade hydrogen (from natural gas) for making sulfur free clean fuels. About 55 % of the hydrogen produced around the world is used for ammonia synthesis (NH3, mostly used in fertilizers) and 35 % in oil refineries & methanol production. Other H2 applications such as food processing and metals production account for about 10 % of global hydrogen production.

Since PEM FCs will not survive with impurities in the input H2 fuel, that fuel must be **99.999% pure**, which requires significant additional processing if the start point is commercial hydrogen. Electrolysis of water can produce clean hydrogen suitable for fuel cells – but this requires electrical energy. Thus, there is a lot of research underway globally to find less costly and less energy intensive methods for producing clean H2. Wind and solar energy are used for electrolysis (better than gas/coal power sources of electrical energy). It is projected that by the end of this decade, H2 fuel for fuel cell vehicles will be cost competitive with typical petroleum fuels (gasoline/diesel) but there's much work still to be done.

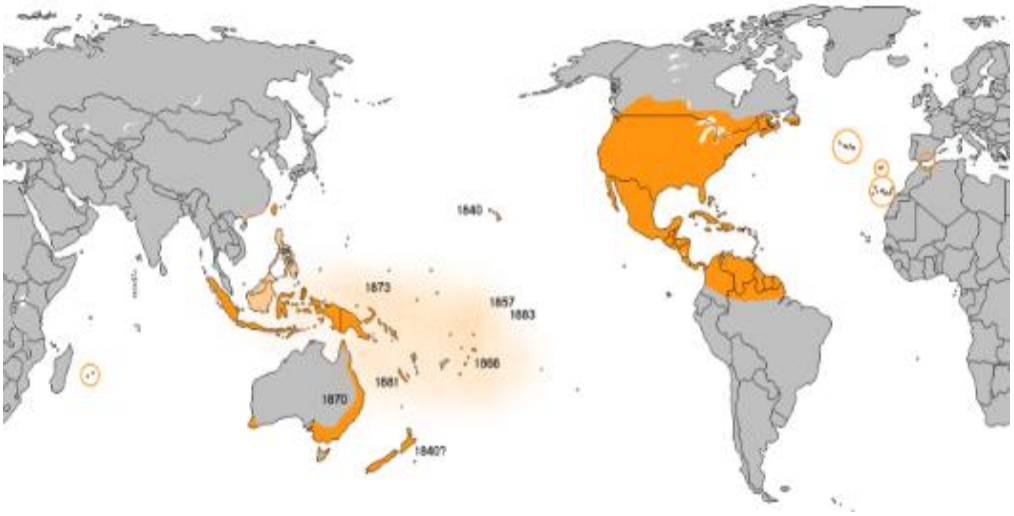
From your editor: Monarch Butterflies, a learning experience

It all started last year when a friend called me to her house to watch a butterfly that just hatched, the beautiful Monarch was getting dry and ready to fly. Recently, I was at a local nursery when I saw next to me two Milkweed plants full of caterpillars eating like there is no tomorrow. Monarch Caterpillars! I brought them home with me. My husband Peter and some neighbors joined me in the experience of seeing them become butterflies, but after days of observing them change their form, attempt to hatch and die, it was clear that we needed more milkweed plants and had a lot of learning to do. Eventually, a few butterflies emerged successfully and flew away.

From the beginning, this is what happens:

The monarch butterfly is one of the most recognizable and studied butterflies on the planet. Its orange wings are laced with black lines and bordered with white dots. The name "Monarch" is believed to be given in honor of King William III of England, whose secondary title 'Prince of Orange' makes a reference to the butterfly's main color.

The Monarch Butterflies are native to North and South America, but they have spread to other places where milkweed grows. No longer found in South America, monarchs in North America are divided into two main groups: The western monarchs, which breed west of the Rocky Mountains and overwinter in southern California and the eastern monarchs, which breed in the Great Plains and Canada, and overwinter in Central Mexico.



The Monarch Butterfly undergoes four stages of complete metamorphosis in its's life cycle.

The butterflies that we see during Spring and Summer are sexually mature and able to reproduce; **the fourth generation that appears at the end of the Summer is the only one that migrates and will be able to mate and reproduce in the following spring.**

EGGS:

The female monarch butterfly lays each of her eggs individually on the underside of a leaf of a milkweed plant, attaching it with a bit of glue she secretes. A female usually lays between 300 and 500 eggs over a two to five weeks period during the spring or summer months. The eggs are cream colored or light green, ovate to conical in shape, and about 1.2×0.9 mm in size. Eggs take 3 to 8 days to develop and hatch into larvae or caterpillars.

LARVAE:

The caterpillar's main job is to grow and will do so eating the milkweed leaves for approximately two weeks.

The Caterpillar goes through five major, distinct stages of growth and after each one, it molts. Each caterpillar, or instar, is larger than the previous one as it eats and stores energy in the form of fat and nutrients to carry it through the nonfeeding pupal stage. Each instar usually lasts about 3 to 5 days, depending on various factors such as temperature and food availability.

The first instar caterpillar that emerges out of the egg is pale green and translucent. It lacks banding coloration or tentacles. The larvae or caterpillar eats its egg case and begins to feed on milkweed. The first instar is usually between 2 and 6 mm long.

The second instar larva develops a characteristic pattern of white, yellow and black transverse bands. It is no longer translucent and pairs of black tentacles begin to grow. One pair grows on the thorax and another pair on the abdomen. Like the first instar, second instar larvae usually eat making holes in the middle of the leaf, rather than at the edges. It measures between 6 mm and 1 cm long.

The third instar larva has more distinct bands and the two pairs of tentacles become longer. Legs on the thorax differentiate into a smaller pair near the head and larger pairs further back. These third-stage caterpillars begin to eat along the leaf edges. The third instar is usually between 1 and 1.5 cm long.

The fourth instar has a different banding pattern. It develops white spots on the prolegs near the back of the caterpillar. It is usually between 1.5 and 2.5 cm long.

The fifth instar larva has a more complex banding pattern and front legs that are small and very close to the head. This caterpillar has an enormous appetite, being able to consume a large milkweed leaf in a day and to chew through the midrib of the leaves. It increases its weight 2,000 times from first instar; its length ranges from 2.5 to 4.5 cm.

At this stage of development, the caterpillar stops eating and moves away looking for a place for pupation

PUPA or CHRYSALIS:

A safe place for pupation is usually the underside of a horizontal surface. Once the caterpillar makes a choice, it spins a silk pad on a downward-facing horizontal surface. At this point, it turns around and securely latches on with its last pair of hindlegs and hangs upside down, in the form of the letter J.

After "J-hanging" for about 12–16 hours, it will suddenly straighten out its body and go into peristalsis for some seconds before its skin splits behind its head. It then sheds its skin over a period of a few minutes, revealing a green chrysalis.

Metamorphosis into pupa

At first, the chrysalis is long, soft, and somewhat amorphous, but over a few hours it compacts into its distinct shape – an opaque, pale-green chrysalis with small golden dots near the bottom, and a gold-and-black rim around the dorsal side near the top. first, its exoskeleton is soft and fragile, but it hardens and becomes more durable within a day. At this point, it is about 2.5 cm (1") long.

At normal summer temperatures, it matures in 8–15 days. During this pupal stage, the adult butterfly forms inside. A day before emerging is due, the exoskeleton first becomes translucent and the chrysalis more bluish.

Finally, within approximately 12 hours, it becomes transparent, revealing the black and orange colors of the butterfly inside before it ecloses (emerges).

ADULT:

An adult butterfly emerges and hangs upside down for a few hours until its wings are dry. Fluids are pumped into the wings, and they expand, dry, and stiffen. The monarch expands and retracts its wings, and once conditions allow, it then flies and feeds on a variety of nectar plants.

During the breeding season adults reach sexual maturity in four or five days. However, the migrating generation does not reach maturity until overwintering is complete. Monarchs typically live for two to five weeks during their breeding season. Commonly fewer than 10% of monarch eggs and caterpillars survive. However, this is a natural attrition rate for most butterflies, since they are low on the food chain.

REPRODUCTION:

Males and females typically mate more than once. Courtship occurs in two phases. During the aerial phase, a male pursues and often forces a female to the ground. During the ground phase, the butterflies copulate and remain attached for about 30 to 60 minutes. During copulation, a male transfers his spermatophore to a female. Along with sperm, the spermatophore provides a female with nutrition, which aids her in egg laying.

THREAT TO SURVIVAL

Western monarchs have declined by more than 99 percent since the 1980s. Eastern monarchs have declined by an estimated 80 percent. The disappearance of milkweed is a major reason for their population decline. Milkweed, which is the only place monarchs will lay their eggs and the only food caterpillars will eat.

The Black Death:

In most cases, black death has two causes: a bacterium in the genus *Pseudomonas* and the *Nuclear polyhedrosis* virus. *Pseudomonas* is an opportunistic bacteria that typically infects caterpillars that are already weakened by other diseases or conditions.

The *Nuclear polyhedrosis* virus is almost always deadly to monarchs. It resides inside the caterpillar's cells, eventually causing it to burst open. The caterpillar or pupa seems to dissolve as the virus ruptures the cells and destroys the structure of the insect.

OE:

A parasite known as *Ophryocystis elektroscirrha* (OE) is most likely to blame for a monarch butterfly with crumpled wings**.** These single cell organisms require a host in which to live and reproduce. *It was* first discovered in butterflies in Florida in the 1960s. Scientists have since confirmed that OE affects monarchs worldwide.

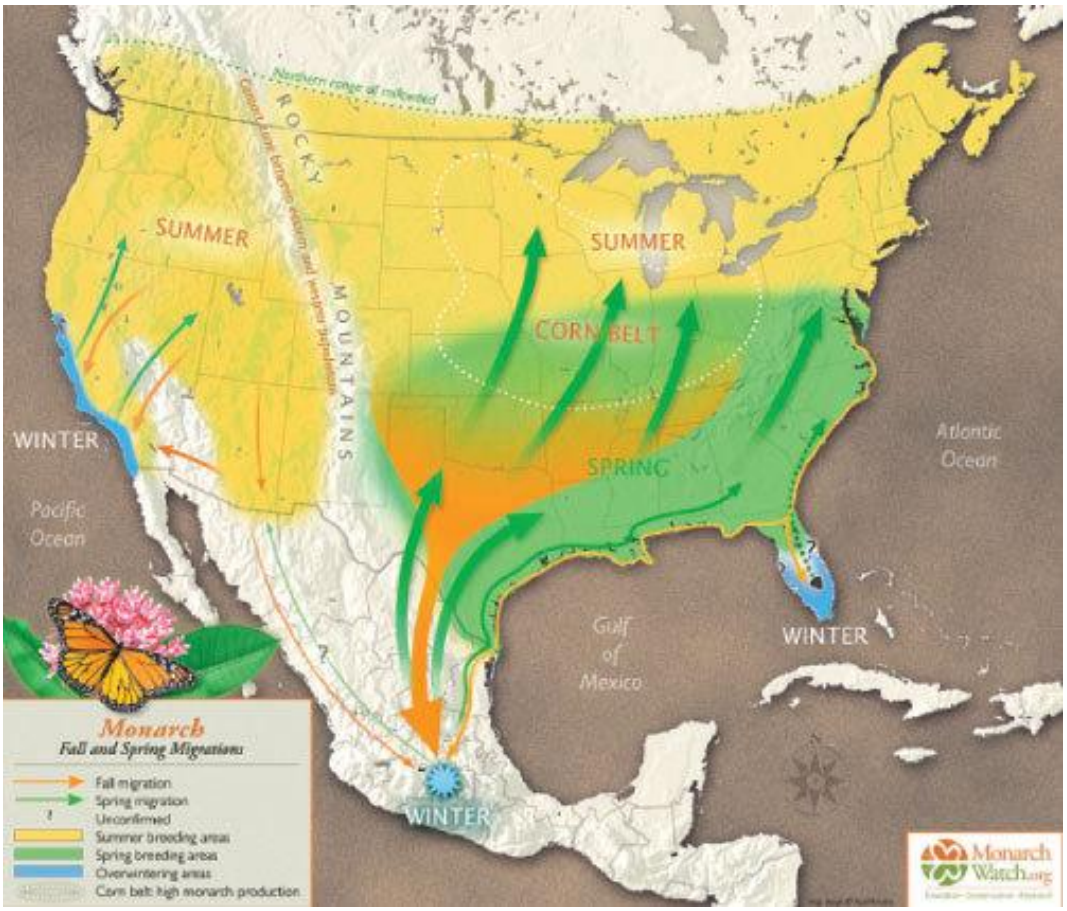
Monarch butterflies with high levels of OE infection might be too weak to emerge completely from the chrysalis and sometimes die during emergence. Those that do manage to break free of the pupal case might be too weak to hold on long enough to expand and dry their wings. An OE-infected adult might fall to the ground before its wings are fully open. The wings dry wrinkled and folded, and the butterfly is unable to fly.

These deformed butterflies won't live long and cannot be saved

The Fall Migration (September – November)

Unlike most other insects in temperate climates, Monarch butterflies cannot survive a long cold winter. Monarchs west of the Rocky Mountains travel to small groves of trees along the California coast.

Those, east of the Rocky Mountains fly farther south to the forests high in the mountains of Mexico. There, they huddle together on oyamel fir trees to wait out the winter.



The monarch's migration is driven by seasonal changes. Daylength and temperature changes influence the movement of the Monarch.

In all the world, no butterflies migrate like the Monarchs of North America. They travel much farther than all other tropical butterflies, up to three thousand miles. They are the only butterflies to make such a long, two-way migration every year.

Amazingly, they fly in masses to the same winter roosts, often to the exact same trees. Their migration is more the type we expect from birds or whales. However, unlike birds and whales, individuals only make the round-trip once. It is their children's grandchildren that return south the following fall.

When the late summer and early fall Monarchs emerge from their pupae, or chrysalides, they are biologically and behaviorally different from those emerging in the summer. The shorter days and cooler air of late summer trigger changes. In Minnesota this occurs around the end of August.

Even though these butterflies look like summer adults, they won't mate or lay eggs until the following spring. Instead, their small bodies prepare for a strenuous flight. Otherwise solitary animals, they often cluster at night while moving ever southward. If they linger too long, they won't be able to make the journey; because they are cold-blooded, they are unable to fly in cold weather.

Fat, stored in the abdomen, is a critical element of their survival for the winter. This fat not only fuels their flight of one to three thousand miles but must last until the next spring when they begin the flight back north. As they migrate southwards, Monarchs stop to nectar, and they actually gain weight during the trip! Some researchers think that Monarchs conserve their "fuel" in flight by gliding on air currents as they travel south. There are many unanswered questions about how they are able to travel so far.

Another unsolved mystery is how Monarchs find the overwintering sites each year. Somehow, they know their way, even though the butterflies returning to Mexico or California each fall are the great-great-grandchildren of the butterflies that left the previous spring. No one knows exactly how their homing system works; it is another of the many unanswered questions in the butterfly world.

The literature and maps for this article were mainly obtained from:

monarchwatch.org; pollinator.org/pollinator-prairie; thoughtco.com;

adver-net.com/aboutFLM.html; nationalgeographic.com and Wikipedia

Photographs: *Olga Stokes*

Before we go!

This is a link to *Sarasota Flash Report,* for updates and information regarding Covid19.

https://www.sarasotafl.gov/home/showdocument?id=5615

Thank you!

The editor wishes to thank all the club members who have contributed to this edition.

Olga Stokes 2020

Sarasota British Club name badges

Please obtain Club badges directly from ***Sarasota Trophy, 6601 Superior Ave, Sarasota, FL 34321. Phone 941 921 4339.***

- $8 plus 56c tax for badge with magnet
- $6 plus 42c tax for badge with pin (no magnet)

Badges can be collected in person (M – F 8.30 – 5pm, Sat 9am – noon) or shipped to your home for $3.75.

SARASOTA BRITISH CLUB BOARD OF DIRECTORS FOR 2020

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Vice President	Paul Cassidy	248-756-0010
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Secretary	Kevin Clayton	941-744-7863
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Director at Large 2	Karen Clayton	941-592-8691
Director at Large 3	Vivienne Sivak	703-626-3562
Director Emeritus	Sandra Cherry	941-921-3162

Don't forget that Sarasota British Club is on Facebook. The Club's logo is the profile picture. Check out numerous photos from recent events.

Why not "friend" us for another way of keeping in touch with the Club and its members; you can add your event photos to the wall.