

Glidepath

The quarterly newsletter of the
Canadian Museum of Flight

Issue #123
Summer 2015

Hot Airplanes, Stiff Necks, and Cold Lemonade - The Museum Scores Another Airshow Season



Abbotsford, August - Hard on the neck, but no one notices, especially when a vintage airplane is overhead.

Below, left to right: Boundary Bay, June - Stablemates - the Museum Harvard shares the tarmac with a Mustang. Spectator AV gas - Cold lemonade was a welcome relief during the long hot summer. Chilliwack, August - The best free show in town, and the CMF tent always attracts attention. Pointed in the right direction, to the CMF sales tent.



Photo credits: Vic Bentley, Carla Deminchuk, Abbotsford Airshow Society

**Please visit our website www.canadianflight.org for more news and updates on events.
Follow us on the Museum facebook page and twitter.**

The Canadian Museum of Flight

Bringing British Columbia's Aviation Past into the Future

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Museum Hours

Open daily from 10:00 a.m. to 4:00 p.m.

Message from Your Editor – Summer 2015 Issue Highlights

Like many of you, your Glidepath team spent countless hours outside with a camera during one of the hottest summers on record. Since cameras and airshows go hand-in-hand, our cover is devoted to the 2015 air show season. What museum member doesn't bust a few buttons off their shirt when the announcer roars, "Here comes those beautiful vintage airplanes from the Canadian Museum of Flight." Kudos to our supporters and the air/ground crew who keep 'em flying.

Also featured in this issue - "It's Going to be an Incredible Journey"- an interview with Mike Sattler, our new General Manager. If you haven't met Mike, we hope you will make it down to Members' Day on October 17th. We are honouring "A Nation Soars" - our Sopwith Pup project. (Feature article in the next issue!)

We are also a little bit "for the birds" this time around. Brian Croft has written another historically meticulous article about the use of carrier pigeons in the CAF/RCAF. Hey! If it flies, it's all good, man.

It has been said that every landing you walk away from is a good landing. So, this issue's "Then and Now" takes a look at landing gear. The DC-3 vs. the A380. My worn-out copy of "Airplanes for Dummies" only gets me so far. Thankfully, the museum has a bounty of technical experts like Vic Bentley who don't mind being chased by an interloper with notebook in hand.

Oh...someone asked, who is the girl in the vintage aviator's flight bag? (featured in the last Then and Now). The bride of Frankenstein? Frankly, (no pun intended) I don't know who she is. We discovered the photo in a relative's WW2 army kit. She was only wearing a feathered fan (can you see a theme developing here?) from the neck down. I guess she is one of those WW2 hoochie-coochie pin-ups. (Sorry guys, Glidepath is a PG-rated publication - some extensive cropping was exercised).

Finally, who doesn't enjoy good eats? On the back cover you will find a recipe for the delectable "Canadian Museum of Flight Wings." Like our air show season, they are a real crowd pleaser.

Bon Appétit!

Carla Deminchuk, Editor



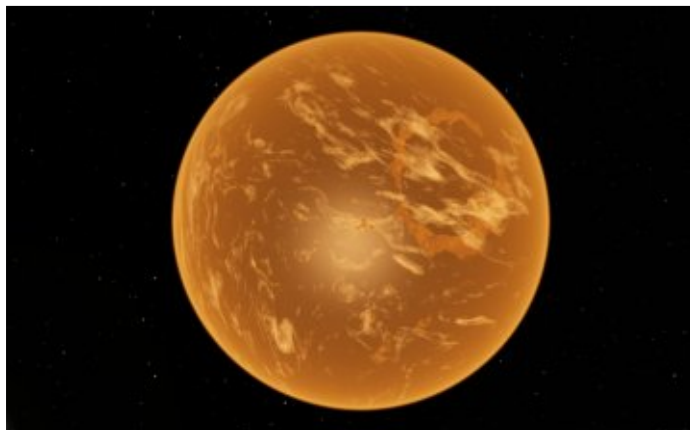
The Glidepath Newsletter is published quarterly by the Canadian Museum of Flight; Editor Carla Deminchuk. Contributions in the form of articles, news items, letters and photos are always welcome, as are comments and suggestions, although no payments are made for manuscripts submitted for publication in the Newsletter.

Your Editor's Rove

Expect the Unexpected!

Water on Mars? Possibly. Mars on water? Absolutley!

(Photo: Heath Moffatt, a talented photographer involved in the "Pilot Project." Watch for an article in the next Glidepath.)



Barbados Day Fundraiser, August 15th at Fort Langley's Birthplace of B.C. Gallery.

A big thank-you to Kurt and Brenda Alberts for donating the proceeds to the museum. Over \$2,700 was raised. The barbequed jerk chicken....sooo good!



If You Flew it, They Will Come

Over 50 museum members and those from the general public packed the DC-3 clubhouse on a hot July morning to listen to former RAF Lancaster instructor, Sydney Marsden. Sydney's WW2 experience was rather unique. Much of his training and instructing was devoted to airborne lifeboat drop exercises over the North Sea. The insert illustration at right shows how the wooden lifeboats were latched into the bomb bay. These lifeboats were motorized so ditched RAF/allied airmen could hasten their retreat from enemy shores.



Membership Benefits!

• **Partnerships!** Members are entitled to visit, free of charge:

- Flight Museum in Seattle
- PBY Memorial Foundation, Oak Harbour WA
- West Coast Rail Museum in Squamish
- Military Education Centre in Chilliwack

• **Discounts in the Gift Shop of 15%**

Volunteers Welcome!

The Canadian Museum of Flight is always looking for new volunteers. We are always in need of history and aviation enthusiasts of all kinds, for aircraft restoration, gift shop operations, facility maintenance, and many other tasks. No experience is necessary. We invite everyone, from students to retirees, to join the team. If interested, please contact the Museum General Manager, Mike Sattler, at 604-532-0035.

"We are About to Embark Upon an Incredible Journey" - an Interview with our new General Manager, Mike Sattler by Carla Deminchuk

Glidepath: Mr. Sattler, why did you leave the affable life of a retiree and part-time museum volunteer for the nine-to-five stress and responsibility that cloaks any managerial position?

Mike Sattler: Truthfully, no idea. It seemed like a good idea at the time. Other than that, it was the challenge. I feel the museum is on the cusp of becoming a much more visible element within the historical society than it is right now, and is posed to become a preeminent player in the restoration of aviation artifacts. I have this very bad genetic failing. I can't resist a challenge.

Thankfully, I haven't had cause to regret it...yet.

Glidepath: In your introduction (Members' June Update) you wrote about your transition from aircraft maintenance specialist to commercial pilot, and the challenge was keeping your past from becoming the present. Conversely, the museum's mandate is bringing the past into the present, and carrying it successfully into the future. What is your plan in that regard?

Mike Sattler: The first thing I'm planning on doing is updating the displays so they are more family friendly. The second part is to update our social media and electronic content so they are also more family friendly. The museum has a huge volume of material that we could use to attract families, tourists, researchers, and movie crews. A lot of it is invisible to the general public. The museum has an incredibly strong foundation. I want to build upon that.

Glidepath: What do you perceive to be the museum's greatest asset?

Mike Sattler: Its volunteers and members.

Glidepath: And its greatest liability?

Mike Sattler: Its invisibility.

Glidepath: How do you plan to attack that invisibility?

Mike Sattler: There is no one answer to that. There is a huge scope of requirements. But as we previously discussed, through an increased presence in social media. Additionally, through large billboarding on major thoroughfares within the local community, and through various industry contacts and symposiums in the

aviation and local business industry. To that end, we are a member of the local chamber of commerce.

Glidepath: You are also an experienced avionics and communication specialist. How are you going to strengthen museum communications, figuratively speaking?

Mike Sattler: We need to get people talking to each other so various groups within the museum do not become isolated or feel

isolated and become self-dissolving. Everyone must know what is going on – have a feel for what the museum is all about so everyone is working towards the museum's long-term viability and expansion.

Glidepath: The museum's pervasive challenge is fundraising. How are we going to raise more money?

Mike Sattler: Again, the first thing we need to attract is corporate sponsorship. On a large scale. I will be presenting a business plan to various companies.

Glidepath: And when the sponsor asks, what am I getting out of this?

Mike Sattler: At the moment, that's open to interpretation – how much of a feel-good project do they want, or are they after a tax incentive. There are also community grants. We will be working with that.

Glidepath: When I asked our former manager, Terry Brunner,

what advice he would give our new manager, he replied, "Sit and listen." You agree?

Mike Sattler: Absolutely.

Glidepath: Can you give us an example?

Mike Sattler: One bit of advice I listened to was about making the displays more kid friendly. Within hours we opened up more aircraft for the kids to explore. This has brought a favourable response from parents and kids alike. It was a quick and easy fix.

Glidepath: How would you describe your style of management?

Mike Sattler: I tell people – and it gets a giggle – I tend to be a lazy person. My role here is not to do everything. It's to make sure everything is done. I have to rely on the team of people around me. We have a phenomenal group of people here. I will delegate,



Mike Sattler, General Manager

Interview with Mike Sattler continued ...

watch and monitor, but you have to trust your people. I have no intention of wasting their time and talents by trying to be them. I want to be able to represent the museum at the drop of a hat. If I am in Ottawa talking to federal ministers, I cannot be worrying about what is happening at the museum. When people put in a tremendous amount of effort and their thank-you is often nothing more than that – just a thank-you – you do not destroy their accomplishments.

Glidepath: You are also a licensed commercial pilot?

Mike Sattler: I am. Don't tell everyone. They will never believe it. We don't want to scare the tourists.

Glidepath: Would you like some stick time on the museum's collection?

Mike Sattler: I've got two answers to that. One you can print. The other you cannot. The printable one – heck, yeah! In a heartbeat.

Glidepath: I guess that was a dumb question to ask any pilot.

Mike Sattler: um, yes.

Glidepath: Okay. Have you been salivating over one aircraft in particular?

Mike Sattler: I used to fly Tiger Moths in Australia back in the 1980s and 90s. I would love to fly a Canadian Tiger Moth, for the comparison.

Glidepath: How does aviation in Canada compare with Australia's industry?

Mike Sattler: Australia's aviation industry is over-regulated, suppressed, and largely devoted to the military and large-scale commercial operations. Canada's industry is much more fluid, diverse, and dynamic. There are areas in Canada that can only be accessed by airplane. One can get pretty well anywhere in Australia by automobile. Smaller aviation companies in Canada can thrive – with the full blessings of the regulatory authorities.

Glidepath: You also stated in your introduction that we will be hearing a lot about Vimy Ridge. Do you have a particular passion for WW1 history?

Mike Sattler: It's becoming a passion for me because the museum is now participating in a programme called A Nation Soars, which is a joint collaboration between the museum, Sound Venture Productions, and the Royal Geographical Society. The purpose is to build two air-worthy Sopwith Pup replicas for the 100th anniversary flyover at Vimy Ridge.

Glidepath: What is the status of the project?

Mike Sattler: Four museum members are in Holden, Missouri. They have started construction of those airplanes. In early October they will be coming back with a truck containing two fuselages and two wing sets, ready for assembly here in Langley.

Glidepath: Why did you start the project down there?

Mike Sattler. It's basically two fold. Firstly, the people in Holden (Airdrome Aeroplanes) have the facilities to make the initial building go faster. They also have the technical expertise to provide the answers to any questions during the initial build. Once the aircraft get back here, covering an airplane with fabric

is something we do rather well. Secondly, there is a production schedule with Sound Ventures who are filming the documentary. It was more sensible to have the guys start down there.

Glidepath: You have also said, "We at the CMF are about to embark upon an incredible journey." Where would you like to see this journey lead in two years?

Mike Sattler: Construction would be started on a new hangar. The Sopwith Pups will be flying in France. More tourists and visitors will be coming through the front doors. And more members will be enjoying themselves and coming through the front doors also.

Glidepath: And in five?

Mike Sattler: Building construction completed.

Glidepath: We look forward to that journey. Thank-you, Mike.

Mike Sattler: Thank-you.

A New Face Behind the Reception Counter - Welcome Sungmo Kang

Sungmo assists Jocelyn as our part-time receptionist. A retired professor of International Relations at Chungang University in South Korea, Sungmo has undertaken pilot training at Skyquest Aviation.

His goal: to purchase and fly his own Harvard around the world so he can "share the dream and give people hope."

Sungmo, you have found the right place. The museum has been sharing those same dreams for over 35 years.



With Feathered Wings we Flew

by Brian Croft

The first Canadian Air Force flying station on Canada's west coast was opened at Jericho Beach Air Station and was initially equipped with several HS-2Ls and a single F.3 flying boat. They were not equipped with radios.

Flight Lieutenant Earl MacLeod was one of the initial cadre of officers that served at Jericho Beach. In December 1921 he was on a flight north of Vancouver. As he passed over the south end of Texada Island, the Liberty engine on his HS-2L flying boat stopped. He went into a glide and managed to land inside a safe bay. His air mechanic quickly found the problem. The magneto (an essential ignition component which sends impulses of high voltage to the spark plugs) had failed and needed to be replaced. While the CAF had yet to install wireless radios, MacLeod had another way of communicating with Jericho Beach Air Station. He quickly wrote out his position, status and a request for a replacement magneto on a small piece of paper which was then rolled up and placed in a tiny aluminum tube attached to the leg of one of his crew. Of course, this was a special crew member: one of six carrier pigeons that were on board in a small wicker basket. In later years MacLeod would relate this story, claiming that the replacement part was delivered to him by another flying boat from Jericho Beach within an hour. "An hour" may have been an exaggeration as MacLeod's position, 45 miles from Jericho would have taken the pigeon about an hour to navigate after which a flying boat would need to be readied for the rescue flight, all of which might have taken a bit more time. Nonetheless, it is a fine example of how the Canadian Air Force pigeon service was intended to work.

Major Claire MacLaurin was the original station Superintendent who oversaw the construction of Jericho Beach Air Station in June 1920. He had many priorities: complete the new station infrastructure, assemble his flying boats and make them operational, train the pilots and airmen and, as quickly as possible, promote the station's capabilities to provincial and federal governments in the hope of securing flying contract work.

But there was another item on his list, the establishment of a carrier pigeon service. MacLaurin was aware of the ragged and isolated nature of British Columbia's coast line where an engine failure or any number of other calamities would leave his crews stranded and unable to communicate their condition or position; he had support from Ottawa! The director of Flying Operations for the Canadian Air Force, Lieutenant Colonel Leckie, after three days adrift in the North Sea during WWI, had been rescued as a result of a message sent by carrier pigeon. Both Leckie and MacLaurin were determined to develop this capability. The operational reach of the CAF in British Columbia depended on the kind of work that governments required such as forestry, fishing and customs patrols. In 1921, these patrol services had not yet been determined but MacLaurin knew that he needed to be able to overfly British Columbia's coast at least as far north as Prince Rupert which was just under 500 miles away. Pigeons, known to be capable of flights over 1000 miles at average speeds of 50 mph, were an ideal fit for the CAF on the West coast.

One of the first buildings to be built at Jericho was a sizeable pigeon loft. A local pigeon expert, Alexander Dickie was hired and given the responsibility of establishing an operational flock of birds. The flock was to be developed for the Jericho Beach station first and eventually enlarged so as to be divided up amongst other CAF stations. Dickie, later promoted to Corporal, succeeded and by 1928 the RCAF had eight lofts, the largest of which was in

Rockliffe, Ottawa with over 2000 birds, many of which were from Dickie's original flock.

It was one thing to release a pigeon while stationary on the ground but it was an important requirement of the CAF pigeon service to be able to release them while in flight at speeds around sixty miles per hour. The fuselage and wings of the HS-2L supported a virtual cobweb of high tensile wires which gave the flying boat structural integrity. It was joked by pilots and airmen, that if a pigeon was released from an HS-2L and subsequently escaped, then there was probably a wire missing somewhere. MacLaurin experimented with various release procedures and finally settled for a paper bag which was carefully torn in strategic places. The pigeon was placed in the bag and was thus briefly protected from the 60 mph slipstream (wind passing over and around the cockpit) when the bag was released. The bag also prevented the pigeon from flailing about, hopefully, long enough to clear the aircraft rigging wires before it managed to free itself and set a heading for Jericho Beach Station. To give the birds regular exercise, they were carried on routine flights in a small wicker basket which could hold as many as 6 birds. It was



customary to use female pigeons with chicks at the Jericho loft as it had been discovered that they were the fastest in returning to the loft.

The use of carrier pigeons likely began some 4500 years ago. Pigeons served effectively with most, if not all, branches of the armed forces on both sides during WWI. In Canada, during the first decades of the twentieth century, pigeon racing clubs could be found in nearly every sizeable town and city. They were popularly called "Flying Clubs", a term that would later be transposed to clubs that flew aircraft. The racing activities of these clubs were regularly reported in newspapers which carried detailed articles on races, naming each bird and their flight time. In 1922 the Provincial Flying Club of B. C. (pigeon club, remember?) organized its first annual long-range race, which started in Sisson, California. Birds from Vancouver Island and all over the lower mainland took part. Distances to home lofts were anywhere between 490 and 546 miles. Ninety birds were liberated in Sisson at 4:24 am on June 30. The winner, Provincial Peeress arrived in Vancouver at 10:30 am the next day.

On the dark side, in the 1920s, pigeons were being smuggled from the USA into Vancouver where drug dealers would "load" them with drugs in close fitting pouches fitting snugly to their

Continued on page 7

THEN and NOW – Landing Gear – The DC-3 vs. A380

THEN: DC-3 - Maximum take-off weight, 24,000 to 31,000 pounds.

The DC-3 was fitted with the first generation of hydraulic semi-retractable landing gear. A tail dragger, the main wheels remained partly exposed under the engines, and the tail wheel did not retract at all. It is hard to know if this was a conservative design decision, in case this new-fangled devices did not extend, or if it was because the designers did not trust the pilots to remember to lower the landing gear! The DC-3's three tires were filled with a nitrogen/oxygen mixture.

NOW: A380 - Maximum take-off weight, 1,268,000 pounds. (Freighter version, 1,348,000 pounds).

As aircraft grew heavier, that weight had to be distributed over more tire area. Otherwise, runways would be torn to shreds. The A380 is an extreme example; it has no less than 22 tires which are filled with pure nitrogen. This is because heat from extreme braking on heavier aircraft releases volatile gasses. These gasses could, when combined with oxygen, cause the tire to explode. The A380's landing gear also works by hydraulic power, and is, of course, fully retractable.

What is most newsworthy about the comparative technology is how little the form to function has changed in 70 years. Both function via hydraulics, have angled stabilizing struts, and are orientated to tuck inside the aircraft in the most space-saving manner possible. However, because of the A380's extremely long wheelbase, its main gear has some steering ability. The DC-3's main gear does not have this ability, but its tail wheel can be locked to maintain some forward directional stability while taking off.



Feathered Wings continued from page 6

necks and fastened with a light wire harness. They were then released to complete a cycle that only took a day or two before the drug carrying pigeons were back in their home-lofts in Tacoma, Portland, Seattle, and other points in Oregon and Washington states.

There were also private pigeon drug-distribution and delivery services in Vancouver. The Vancouver Daily World on Dec 17, 1921 reported that, while Vancouver police detectives Sinclair and Ricci searched a house for hidden drugs at McLean Drive and Powell Street, a carrier pigeon was heard trying to enter a "trap nest" outside beside a window. The detectives opened the trap and let the bird in and found it was carrying two small packets of cocaine attached to the birds legs with rubber bands. The bird's owner, had bought drugs in the city, "loaded" the bird and released it to fly home. Two men were arrested.

Over and over again MacLaurin's pigeon service earned warm attention in the press whenever the tiny messengers proved themselves. The Jericho pigeon loft was strategically located and its pigeons were often recruited outside the CAF for various reasons. On May 16, 1922 Roland Amundsen visited Jericho to discuss his expedition plans to fly over the North pole. Major MacLaurin offered a small cadre of the station's carrier pigeons which the explorer gratefully accepted. In 1924 when four US army aircraft set out on the first leg of their globe encircling flight

they carried RCAF pigeons from Jericho as a back up to their wireless equipment. When the aircraft arrived in Prince Rupert the usefulness of the birds ended and they were released to fly back to Jericho.

Jericho carrier pigeons were consistently portrayed as hero's, even when they weren't. On Dec 13, 1921 Earl MacLeod, attempting to takeoff in the mouth of the Fraser near the Sand Heads Lightship, encountered heavy amplified rolling waves in the tide rip. A huge wave passed over the hull of the twin-engined F.3 flying boat and half filled it with water leaving MacLeod, his mechanic Coupland and two customs officials, adrift well off Steveston. Two of the four carrier pigeons on board were drowned when the wave hit and the two remaining were dispatched immediately to Jericho. The residents of Steveston could clearly see the drifting F.3 and a power boat, King Edward, proceed out and towed it back into Steveston. Although the pigeons did their job, the rescue was already underway and in any case none on-board the F.3 thought they were in any danger.

The Vancouver Sun thought otherwise; the page 14 headline read: "Pigeons Save Party Of Aviators From Death in the Gulf". It goes without saying that we need heroes to look up to and for these rugged navigators, it was all in a days work for the pigeon service of the Canadian Air Force.

TAILWINDS – Bits 'n Pieces Around the Museum (and Beyond)

Better to Remain Silent and be Thought a Fool Than to Speak Out and Remove all Doubt: "The aeroplane is an invention of the devil and will never play any part in such serious business as the defence of the nation, my boy!" - Sir Sam Hughes, Minister of Canadian Militia and Defence, to pioneer aviator J.A.D. McCurdy, who approached the minister in August 1914 with the idea of starting an air service.

Comparative Fountain of Youth: The age of the museum's oldest aircraft (or replica) is 98 (Sopwith Camel); 85 (Waco INF); 78 (Waco Cabin); and 75 (DC-3 and Tiger Moth). And you thought you were feeling old today!

Just Released Historical Bonanza: British Pathe and Movietone News have downloaded 120 years worth of news footage onto YouTube. The aviation content is astounding. Of particular interest: "Bombers and Gunners in the Making (1940); Lysander (1940); King with Bomber Command (1940); RAF Heroes of the Sylt Raid (1940)".....and many more. Just type British Pathe or Movietone News into the YTube search engine.

"Every Time one of These Lancasters Fly Over, my Chickens lay Premature Eggs." – Farmer in The Dam Busters film (1951). Former Lanc pilot, Les Munro, the last of the RAF 617 Dam Buster Squadron, has passed at the age of 97. Munro, a New Zealander, was said to be "a little bit embarrassed" by the subsequent attention he received. The destruction of Hitler's dams was one of the turning points in the war. One-hundred tons of water was required to make one ton of Nazi-purposed steel.

Better than that el Cheapo Wedding Present from Aunt Tillie: Pacific Western Airlines, Canadian Pacific/Canadian Airlines International, and Wardair – our museum has a small collection of memorabilia from these gone but not forgotten carriers. If more airline swag is your thing, you might want to check out the exhibit at Winnipeg's Royal Aviation Museum. It features some pretty impressive stuff: monogrammed wool blankets, decorative bone china, sterling-silver ashtrays and the like that were routinely given away to those flying first class in the 1950s/1960s. Exhibit runs until the end of this year.

Skywriting We Never Want to See: How do I land?

Five Star Reviews: We appreciate those museum visitors who left these comments on the Trip Advisor website: "Fun for the kids and the kid in me. A little piece of aero history that is a must. Small but impressive. A labour of love." We couldn't agree more!

Haunting Last Words on the CVR (Cockpit Voice Recorder): "Seems like a homesick angel here." - TWA 800 during its climb out and a few minutes before exploding over the Atlantic, July 17, 1996.

Actor Harrison Ford's Most Treasured Possession: "My de Havilland Beaver airplane." And His Idea of Perfect Happiness: "A perfect flight to a perfect landing...with witnesses."

Sopwith Pup? Tres Bien!: Did you catch the museum's Sopwith Pup replica project on the CBC's French-language news programme with Dave Arnold, Matt Offer and Bill Butler? Bill Butler responded in French. We are impressed! (Watch for a feature article on the Vimy 2017 Project in the next issue of the Glidepath.)

Good Words to Live By: Life's a short runway - use it all.

Canadian Museum of Flight Members Day 2015

Theme: WWI Aviation

Speical Exhibits and Presentations

WWI "Canteen Style" Dinner

Guest Speakers, featuring the
Honourable Lieutenant-Governor Judith Guichon

October 17, 2015

Doors open at 4:00 pm; dinner at 6:00 pm

Plane Food - Canadian Museum of Flight Wings: A real crowd pleaser, these will fly off the plate!

- 3 lbs. chicken drumettes (about 15)
- 1/2 cup sugar
- 3 Tbs. cornstarch
- 1/2 tsp. salt
- 1/2 tsp. ground ginger
- 1/4 tsp. pepper
- 2/3 cup water
- 1/3 cup lemon juice
- 1/4 cup soya sauce



Place drumettes on broiler rack and bake at 400 degrees for 15 minutes. Turn and bake additional 15 minutes.

Mix the sugar, cornstarch, salt, ginger and pepper. Add liquids. Cook, stirring constantly over medium heat until mixture thickens then boil 2 minutes. Bush over wings. Continue baking at 400 degrees for about 35 minutes, brushing frequently.