
Comox, home of Canadian Rescuers

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In the heart of Vancouver Island in British Columbia in Comox Valley 19 wing on Comox Air Base houses two Canadian Air Force aircraft squadrons. Important missions for the Canadian defence, civilians and people in distress are launched from here. Those who are lucky to visit the base will find bright yellow helicopters and aircraft active on the base. They are the eyes and ears of the Canadian coastal area.

The CH-149 Cormorant or Canadian 'Merlin'

Five of fifteen acquired helicopters are flying with the 442 Transport & Rescue squadron 'City of Vancouver' and replaced since 2001 the CH-113 Labrador, the Canadian version of the famous Boeing Vertol CH-46 Sea Knight in service with the U.S. Navy. The choice for a helicopter from Westland Agusta was not only because of the good design but especially also because of the completeness of the digital equipment, the easy handling and performances of high level. These are required in complicated missions above difficult SAR sites in, sometimes extreme, weather. Together with six CC-115 Buffalo aircraft, a complete zone must be watched from Washington State border in the USA until the arctic region and from the Rocky Mountains in the east 1200 kilometres onwards to the west until 160 kilometres outside of the coastal area above the Pacific Ocean. The range of the three-engine CH-149 is about 1000 kilometres in order to perform this job and the helicopter has a state-of-the-art, four axis flight control computer/director. It is possible after a transit flight to specific coordinates above the search area and setting by computer special search patterns or hover trajectory without touching any button or handle while doing these activities. In situations asking much energy and concentration on navigation and visual detection, this is a fantastic feature. The ice protection system enables the helicopter to work in arctic regions and the helicopter is very stable in strong winds above polar seas. Normally two pilots are flying the CH-146, together with an engineer and two SARTECH's (Search & Rescue Technicians). The cabin can be configured to transport (20 seats) or medevac (max. 40 persons or 12 stretchers) version within a few hours.

The Buffalo, combined searcher/rescuer for the long range

The CC-115 Buffalo has his operations area in British Columbia and Yukon for Surveillance/Search and Rescue operations and sometimes also in the transport task when needed. It is possible to land the Buffalo in arctic weather conditions with limited landing area. The six two engine CC-115 airplanes of the 442 squadron on Comox make sorties of 4,5-6 hours flying with two pilots, a navigator, an engineer and two SARTECH's, this under command of the 1 Canadian Air Division. The rescue operations can involves the dropping of the Survival Kit Air Droppable (SKAD) with surviving equipment like a dinghy or electronic search of ships in difficulties. SARTECH's are dropped above land by parachute when a crash site is located and while on operation, they communicate with both Buffalo and Cormorant at that time. It could also be the case that only some cargo is dropped, like radio equipment for

instance. Above the mountains searching can be an exhausting task, but the crew is well trained and have curious names for there searching patterns like Track Crawl, Creeping Line ahead, Expanding Square & Sector Search. The Buffalo can start under extreme weather its mission and is keeping in perfect condition by the maintenance personnel. This is highly necessary because the British Columbia sector is by all means the busiest part of Canada concerning the aircraft movements, the quantity of tourists but also the amount emergency calls.

A special rescue operation in the mountains

The 442 squadron is cooperating with civil organisations in the Joint Rescue Coordination Centre (JRCC) in Victoria. JRCC coordinates who is going where and who has the most sufficient equipment available at that moment. When a group of mountaineers became in troubles on mount Waddington with a heavy injured person their luck was the precautions they took were sufficient. With GPS and radio, they could exactly locate their position to the JRCC. A Buffalo already in the air for a mission was directed immediately to the spot and dropped two SARTECH's by parachute. They were able to stabilise the injured person who lost much blood. In the meanwhile a Cormorant was approaching and later on hoisted the wounded person inside with a basket. To mention the preparedness of the people doing the job, they were on mission for a memorial jump to honour a crew of a crashed CH-146 from 413 squadron and performed later that day the jump.

The Aurora is watching over the Pacific

The second squadron within 19th wing is the 407th Maritime Patrol Squadron, named 'Demon' is acting with five CP-150 Aurora's (Canadian designation of the Orion) for maritime patrols and watching submarines. During flights of 10-14 hours some 300.000 square metres of Pacific Ocean is guarded. During these missions, ships or airplanes in distress are tracked and offences are observed like illegal fishery, pollution of the water, suspect traffics for drugs or immigration or the presence of foreign military activities. Within those activities, there is a special observation method to track submarines with the MAD equipment (Magnetic Anomaly Detector) in the tail. For rescue missions the airplane has two SKAD survival kits in specific arctic version in the cabin. Normally a crew of 15 persons is doing the several types of work in the cabin, for example controlling the MAD and FLIR, the ESM (Electronic Support Missions), the Night Vision Goggles, the 70 mm camera's but also the gyro stabilised binoculars. For the ASW task, the Aurora is equipped with sono buoys and Mk.46 Mod. V. torpedoes. The airplanes are under command directly with Aircom, responsible for all the military operations in Canadian air space. Aircom is linked with the American NORAD system. The Aurora's are modernised in modular updates from block I to block IV in the period 1998 to 2010 and the operational life is lengthened to approximately 2025. The main changes until block III are concerning navigational equipment, installing Collision Avoidance System, data management systems, imaging radar and improved searching systems. Everything can be discovered on and under the surface of the sea even the recently built 'stealthy class' submarines. Block IV will introduce Defensive Early Warning System (DEWS) and a stand off air-to-ground missile, however the latter is under discussion.

Comox has many activities

It is good to mention the dedicated work of the people on the ground in the 19th Air Maintenance Squadron (19 AMS). When the aircraft are not maintained in perfect condition, a mission could result in a disastrous situation. Not only the Cormorants, the Buffaloes and the Auroras are serviced but also the CH-124 Sea King helicopters of the 443 Maritime Helicopter Squadron of Pat Bay, Shearwater rotating on frigates. The maintenance concerns not only the mechanic parts but the avionics and life support missions as well. An important facility is the Canadian Forces School of Search and Rescue (CFSSAR) where SARTECH's have their course. Mentally it is one of the heaviest courses in the Canadian Air Force but also one of the most thankful jobs to do later, so others may live. The practice following the theory the cadets will receive in the 442 squadron. The base has all the ingredients to attract for a visit. Devotion and professionalism are the most impressive aspects to mark the people of the 19th wing and this we keep in our mind when we leave the base.

Wim Das - Kees Otten – Ronald Stark**Special thanks to: - Ronald Stark - Sgt. Eileen Redding, Public Affairs, 19 Wing****CH-149 Cormorant**

Length	22.8 m.
Rotordiameter	18.5 m.
Height	6.5 m.
Weight	14.600 kg (maximum startgewicht)
Engines	3 General Electric T700-T6A1 turbines
Speed	278 km/u
Range	1018 km.
Equipment	2x 273kg. Hoist, 4.536 cargo hook 12 stretchers and Closets for SAR equipment

CC-115 Buffalo

Length	24 m.
Wingspan	29.25 m.
Height	8.53 m.
Weight	20.454 m.
Engines	2 x General Electric CT64-820-3 turbine 3060 hp each
Cruisespeed	416 km/u
Range	2.240 km.
Load	2727 kg

CP-140 Aurora

Length	35.61m.
Wingspan	30.37m.
Height	10.30m.
Weight	64.410 kg.
Engines	4 x Alison T-56-A-14LFE turboprop
Speed	783 km/u
Ceiling	10.668 m.
Range	9.260 km.
