My Visit to Sproat Lake, British Columbia, Canada

written and edited by Stephen Berry



In August 1982 I was fortunate to visit Sproat Lake on Vancouver Island, Canada. Only a few aviation buffs and fire industry veterans will have heard of Sproat Lake, which was, at that time, the home of two extremely rare flying boats, **very big** flying boats. The aircraft in question is the Martin FRM-3 Mars water bomber, operated by Forest Industries Flying Tankers (FIFT) for close on three decades.

Sproat Lake is a lake on central Vancouver Island in British Columbia, Canada. It was known as Kleecoot, meaning "wide open" by local indigenous people. Roughly cross-shaped with four arms, it is over 25 kilometres in length, and has 90.8 kilometres of shoreline. Former home of the last Martin Mars water bombers, and near Port Alberni, Sproat Lake is a popular summer recreational area for the Alberni Valley. Highway 4 runs along its north shore.

Prototype

The story of the Martin Mars flying boats started in 1938, when the United States Navy placed an order to the Martin Aircraft Company for a large maritime patrol bomber. The prototype first flew on July 3, 1942. The Navy was pleased with the flight trials and decided to order twenty production models, designated JRM-1. However, there was no longer a

need for a large patrol bomber in the Atlantic and Pacific theaters, and so these twenty Mars flying boats were to be made in a cargo configuration.

Fleet Names

The first JRM-1 was delivered on July 27, 1945, dubbed *Hawaii Mars*. However, with the war in the Pacific ending only two months later, the Navy downsized their order from twenty aircraft to only five. These followed the Pacific island naming convention, and were christened the *Philippine Mars, Marianas Mars, Marshall Mars, Hawaii Mars II* (the first *Hawaii Mars* had sunk in Chesapeake Bay and was then scrapped), and *Caroline Mars,* which was designated JRM-2, with more powerful engines and larger propellers.

NAS Alameda

The Mars were then used to ferry cargo from the mainland US to Hawaii and other Pacific islands. With their 200-foot wingspan, these were the largest flying boats of their era, capable of carrying up to 133 passengers, eighty-four stretchers and twenty-five passengers, or 32,000 thousand pounds of cargo. Throughout their service lifespan, the three oldest Mars logged between 18,000 and 20,000 flight hours each, carrying a quarter of a million passengers and many tons of freight over the Pacific. Stationed at NAS Alameda, they mainly ferried cargo between San Francisco and Honolulu until their retirement in 1956. During this time, *Marshall Mars* suffered a serious fire due to an engine malfunction. and was deliberately scuttled off Diamond Head, Honolulu. The four remaining aircraft were beached at NAS Alameda and awaited scrapping.

New Life in Canada

In 1959 four logging companies in British Columbia (BC), Canada, formed Forest Industries Flying Tankers (FIFT) and purchased the four surviving Mars airframes before they were scrapped for a total of USD100,000, as well as thirty-five extra engines and crates of new spare parts for a total of USD21,410. These were then stripped of all unnecessary weight and converted into water bombers. Operating out of a new base on Sproat Lake near Port Alberni, BC, they served aerial firefighting duties for the four companies of FIFT. Marianas Mars was lost in 1961 when it crashed on a firefighting run and Caroline Mars was damaged beyond repair in 1962 due to a storm.

Giant Waterbombers

The Mars proved to be true workhorses of aerial firefighting, capable of dropping 7,200 (US) gallons of water over up to four acres of land. The tankers are also capable of dropping firefighting foam, which is mixed from concentrate stored inside the aircraft while it scoops up water from the two underbelly-mounted probes. These probes are capable of taking in almost a ton of water per second as the Mars skims a lake at exactly seventy knots, filling the tanks in approximately twenty-five seconds. With a crew of four, firefighting operations in the Mars were perfectly coordinated operations.

Special Technique

The captain would carry out a normal water landing and keep the aircraft at seventy knots exactly and then pass engine power to the flight engineer while engaging the water scoops. As the aircraft took on more water, the flight engineer would gradually increase power to keep the aircraft at seventy knots to account for the increased weight. With fully loaded tanks, the flight engineer would add extra power to the engines to enable the aircraft to take off. The foam concentrate could then be mixed in, if needed. The concentrate stays in the water until the tanks are emptied, where the churning of the water causes the foam to be created during the drop. If a large enough water source is nearby, this whole process could have been carried out around every fifteen minutes by the crew.

Coulson Aviation

Coulson Aviation is an aviation company headquartered in Port Alberni, British Columbia, Canada. Founded in 1960, the company's fleet specializes in air tankers used for aerial firefighting. It operates in Canada, the United States, Australia and Chile. The company operates both fixed-wing and rotary-wing aircraft. Its operations include helicopter logging, wildfire suppression, power-line construction, airliner passenger transport, and other industrial heavy lift operations. Coulson Aviation (USA) Inc. is a subsidiary of Coulson Aircrane Ltd. Currently, Coulson Aviation contracts rotary and fixed-wing aircraft to Australia and the US from Canada.

In 1987, Coulson Aviation acquired its first helicopter, a Sikorsky S-61N. This helicopter was primarily used for logging support until 1995. During a dry summer, the company began its shift to aerial firefighting operations. Throughout the expansion, Coulson Aviation sold their timberlands and sawmills to focus more funds to firefighting efforts.
In 2007, the Coulson Group acquired the two surviving Martin JRM Mars flying boats, *Philippine Mars* and *Hawaii Mars II* and continued to operate them from Sproat Lake, flying missions in BC and Alberta Canada, as well as in Washington, Oregon and California. 2009 was the first year in their 49 consecutive years of firefighting service that the Mars were not used. As smaller flying tankers prove to be more versatile and efficient while being less costly than the Marses, they have been gradually phased out of service.

In 2015, the *Hawaii Mars II* was briefly used to train Chinese pilots through the International Test Pilot School for the Chinese-made AVIC AG-600 Kunlong flying boat. The *Phillipine Mars* had been repainted in the original US Navy livery as it was intended to be delivered to the National Naval Aviation Museum at NAS Pensacola, Florida in 2016. However, for a variety of reasons, the plan never went ahead. Eventually, after a short hiatus, the *Hawaii Mars* made its final flight on 11 August 2024 to the British Columbia Aviation Museum. The aircraft, which had been used for firefighting missions until 2015, was escorted by the Canadian Forces aerial acrobatic team, the *Snowbirds*. The *Hawaii Mars* was a significant part of aviation history, is now preserved for future generations to see.

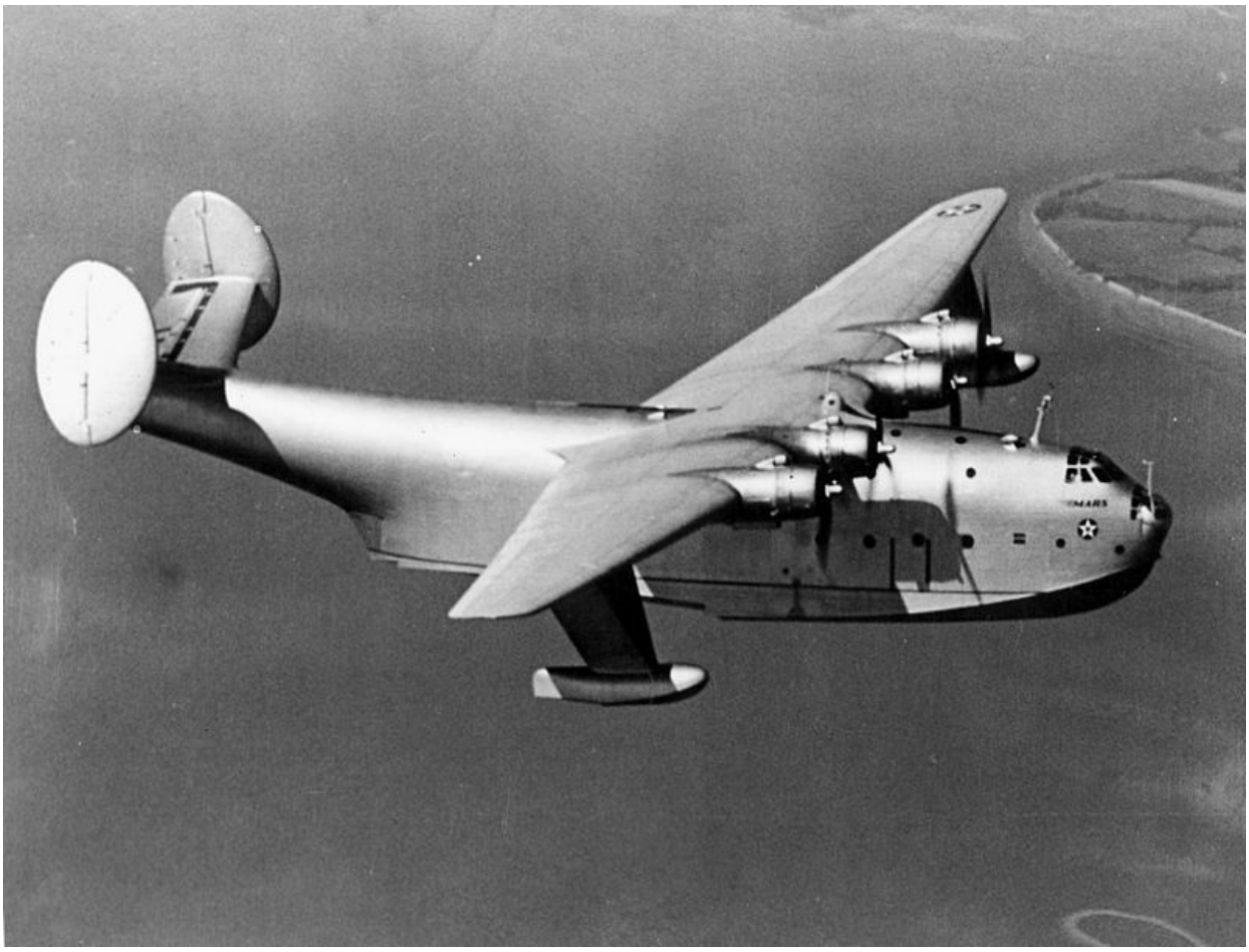
Its sister aircraft, the *Philippine Mars,* arrived at Lake Pleasant, Arizona on February 10, 2025, after flying over 1,500 miles from Vancouver Island, Canada. It marked the

culmination of immense effort, passion, and teamwork to get this legendary flying boat ready for its final flight. The museum's acquisition from Coulson Aviation brought the mighty Martin Mars into its final chapter – preservation at the Pima Air & Space Museum. Before the preparation for its final flight, *Philippine Mars* hadn't flown for 17 years.

On February 12, *Philippine Mars* was pulled up the boat ramp to be prepared for the final leg of the journey to museum immortalization. It was dismantled at Lake Pleasant for trucks to haul it down to Tucson, Arizona. The fuselage arrived at Pima Air & Space Museum just before midnight on May 16th and the aircraft was reassembled for display piece-by-piece over the following months. On the 25th of September 2025, *Philippine Mars* was towed out and secured for display in her permanent home.



First XPB2M-1 Mars flying boat, early 1942. **Photo courtesy of Lockheed Martin**



The prototype Martin XPB2M-1 Mars, 1942



The US Navy Martin JRM-1 *Philippine Mars i*n flight.



Foreground: Martin JRM Mars *Philippine Mars*, *Marianas Mars, Hawaii Mars* and *Caroline Mars* of US Navy transport squadron VR-2 in flight.



Martin JRM-1 *Marshall Mars* burning near Honolulu, Hawaii, 5 April 1950



***Philippine Mars* taxiing on Sproat Lake in August 1982. Photo by Stephen Berry.**



***Philippine Mars* and *Hawaii Mars* together on Sproat Lake.**
Photo by Stephen Berry.



***Philippine Mars* gathers speed ready for takeoff in August 1982.**
Stephen Berry photo.



Philippine Mars **up on the step and about to become airborne.**
Photo by Stephen Berry.



A close-up of *Philippine Mars* taking off from Sproat Lake.
Photo by Stephen Berry.



***Philippine Mars* about to become airborne.** **Photo by Stephen Berry.**



***Hawaii Mars* with *Philippine Mars* moored in the background.**
Photo by Stephen Berry



View across Sproat Lake from *Philippine Mars*. Sister aircraft *Hawaii Mars* is in the background. Photo by Stephen Berry



View of Sproat Lake from the port wing of *Philippine Mars*. Photo by Stephen Berry.



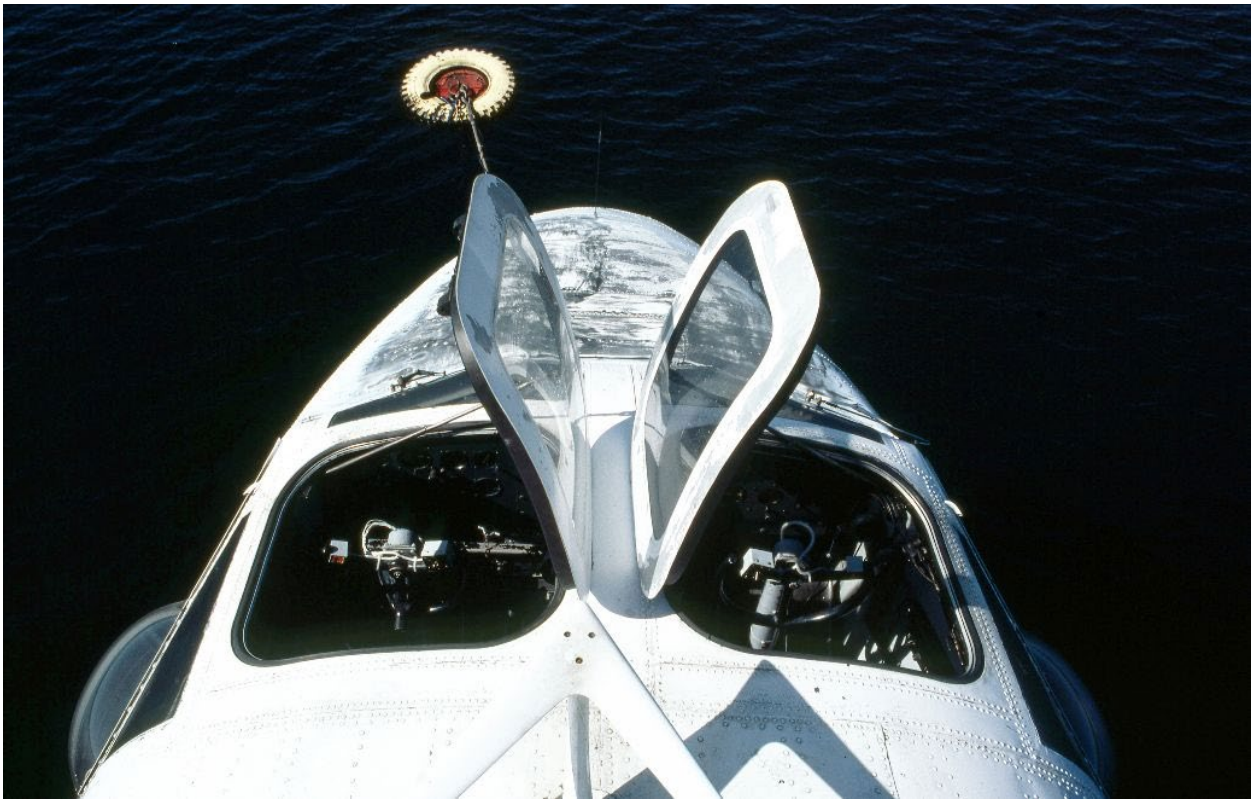
Sproat Lake from under the port wing of *Philippine Mars*. Photo by Stephen Berry.



A placid Sproat Lake from under the stern of *Philippine Mars*.
Photo by Stephen Berry.



View from the port wing of *Philippine Mars* across Sproat Lake in August 1982. Photo by Stephen Berry.



Looking down on the cockpit of *Philippine Mars i*n August 1982. Photo by Stephen Berry.



Interior of cockpit of *Philippine Mars* in August 1982. Photo by Stephen Berry.



Another view of *Philippine Mars* cockpit. **Photo by Stephen Berry.**



View from the bow mooring hatch on *Philippine Mars*. **Photo by Stephen Berry.**



View of starboard wing and engines from the mooring hatch. Photo by Stephen Berry.



***Philippine Mars* taxiing into her mooring in August 1982. Photo by Stephen Berry.**



A close-up view of *Philippine Mars* taxiing to her mooring. Photo by Stephen Berry.



Martin JRM-3 Mars *Hawaii Mars* moored on Sproat Lake in October 2006. Coulson Aviation photo.



Martin JRM-3 Mars *Hawaii Mars* of Coulson Flying Tankers under overhaul at Sproat Lake, BC. Sister aircraft *Philippine Mars* can be seen in the background. Coulson photo.



***Hawaii Mars* and *Philippine Mars* 'up on the hard' for maintenance.**
Photo by Coulson Aviation.



Hawaii Mars **doing what she did best - waterbombing!** **Coulson Aviation photo.**



Hawaii Mars **just after alighting on Sproat Lake.** **Photo by Jim Mumson.**



Bow view of mooring hatch and cockpit of *Hawaii Mars*. Coulson Aviation photo.



***Hawaii Mars* taking off with a 'chase' helicopter leading the way.**
Coulson Aviation photo.



***Hawaii Mars* is just a second from touch down on Sproat Lake.**
Coulson Aviation photo.



Hawaii Mars **on a major water dropping mission.** **Coulson Aviation photo.**



Hawaii Mars **seconds from touchdown while a Twin Turbo Otter floatplane taxis in to its base. Coulson Aviation photo.**



Hawaii Mars **captured seconds after it began a major water dump. Coulson Aviation photo.**



***Philippine Mars* captured mid takeoff from Sproat Lake.**
Coulson Aviation photo.



***Hawaii Mars* at rest on Sproat Lake.** **Coulson Aviation photo.**



***Hawaii Mars* beginning her take-off run at Sproat Lake. Photo by Heath Moffatt.**



***Hawaii Mars* at the BC Aviation Museum looking like she's just become airborne. Coulson Aviation photo.**



Hawaii Mars **on permanent display at the BC Aviation Museum. Photo BCAM.**



The Martin FRM-3 Mars flying boat *Philipinne Mars* is being prepared for display at the Pima Aviation and Space Museum at Tucson, Arizona.
Photo Pima Aviation & Space Museum.



***Philippine Mars* on display at the Pima Aviation & Space Museum.**
Photo by PA&SM.