The Stormbreaker Project

The 5th year Aeronautical Engineering students of the Philippine State College of Aeronautics had the project of designing, building, and flying an aircraft that could take off (and land) from both land and water. The class drew up a basic concept, and went to Albert Francisco for help. Al referred them to Obi Mapua, who refined their concept, drew up full size plans, and, with the help of Albert Roa, Edwin Fabia, Ernie Abion, Steve Baradas, and Ehjay Abion, built up the scale model.

November 21, 2020: This Saturday, some BARCA members made a trek to the shores of the famous Lake Taal, within sight of Taal Volcano. The main reason for the flying session was to fly the project of the graduating aeronautical engineering students of the Philippine State College of Aeronautics, or PHILSCA, over the water, for their graduation requirement. (The above photo shows how the planes that land far from the shore are retrieved—paddle raft.)

Obi Mapua

Stormbreaker with ground landing gear in flight. The flight tests were very encouraging. The model is very easy to fly.
Pontoons fitted to Stormbreaker and note the water rudder on the left pontoon. It is functional.

Flying on Lake Taal
A flying date at Lake Taal was arranged, on 21 November. Other BARCA members joined us: Mattie Tuazon, Monch Hermoso, Gordon Guy, Al Francisco, Marco Lucena, and Angelito Jantar. Other floatplanes were brought, and all flew successfully, taking off and landing from/on water.

Success
The Stormbreaker flew off water cleanly and landed on water beautifully. The students were elated, because their graduation project was approved! So now we have a new batch of Aeronautical Engineers. BARCA is proud to have assisted the students in their aeronautical “adventure”.

Bridge to water
Photo shows our “Recovery Engineer”, John Lester “Apol” Baradas, bringing up the Stormbreaker after its successful landing.
Stormbreaker basic specs: (approx.)
Wing Span: 70 inches (1.78 meters)
Wing area: 700 sq. inches (4.86 sq. ft)
Est. weight: 7-8 lbs. (3.4 kg approx.)

Flying Session...
The rest of the pack brought out their float planes. It was quite a variety.

The jetty that projected into the lake was very convenient for putting the planes down on the water.

Thunder Tiger ARF on. This plane is made of plastic and is rather heavy. It’s a small plane but to overcome the drag it needs lots of power, so we put in an OS 55 AX.

This RV-8 is a large plane—more than 2 meters wingspan, and is foam. It is very well made. Electric powered, and has a 6-S battery to power it. The model is capable of a very wide range of aerobatics—even with the floats on!

Gordon was doing knife-edge passes, yes, with the floats on. The landing on the water is almost anti-climatic. The model is equipped with a gyro, so when it comes time to land, the flaps are deployed, and Plop! It just settles on to the water as if someone just deposited it there. Unreal.

And after the water flying...
The water flying was only in the morning. The lake side area had no facilities for cooking, eating, or even toilets. So when lunchtime came, as all flying was done, the group motored back to the flying field (only 7 kms away). A sumptuous lunch awaited us at the field.

Obi Mapua takes off his trainer “Easy Flyer” for a flying session. Pandemic badly affected flying time. Need to go back to trainers.